



Ayrshire Vice-county 75

Scarce, Rare, Threatened & Extinct Vascular Plant Register



Hypopitys monotropa at Barony Bing, Auchinleck
© Carol Crawford

Dave Lang
BSBI Recorder Ayrshire
2020

These records have been selected from the databases held by the Botanical Society of Britain & Ireland.

The records that form the basis for this work were made by botanists, most of whom were amateur and some of whom were professional, employed by government departments or undertaking environmental impact assessments.

This publication is intended to be of assistance to conservation and planning organisations and authorities, district and local councils and interested members of the public.

My thanks go to all those who have contributed records over the years – particularly Carol Crawford, Angus Hannah and Gill Smart - and to Chris Metherell, supported by the BSBI, for help with the original layout of this report.

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Introduction

This Register is intended to record details of the occurrence of rare plants in vice-county 75, Ayrshire. It has been produced as part of a national initiative based on the Botanical Society of Britain and Ireland (BSBI) vice-county system.



This map includes Ordnance Survey OpenData © Ordnance Survey

Ayrshire is a large vice-county occupying much of the western seaboard of Scotland's midland valley. With the exception of one or two tiny corners it includes all of the mainland areas administered by the North, East & South Ayrshire local authorities along with the island of Ailsa Craig. As such it contains extensive lengths of coastal habitat – with the coast in the northern half of the vice county being particularly urbanised. From the coast, the river valleys of the Garnock, Annick, Irvine, Ayr, Doon, Girvan and Stinchar run up to the plateau moorlands & rugged uplands of the Clyde Muirshiel Regional Park and the Southern Uplands. In addition, Ayrshire is also noted for its raised bogs in the north and its calcareous upland habitats to the south – with a series of Special Areas of Conservation designated to protect these internationally threatened habitats. However opencast mining, commercial forestry and – more recently – wind energy development - have all left their mark on Ayrshire's landscape and habitats.

The Register is intended to provide a snapshot of the known distribution of rare plants up to the end of December 2019. Some records are now somewhat old, and at low (typically 10km) resolution. However, it was considered important to include some of these records as a springboard for further recording.

Criteria for inclusion in the Register

The principal criteria used for inclusion in the main portion of the Register are:

a) International Criteria. Native and archaeophyte vascular plant species believed to be extant in the vice-county that are currently internationally rare. These are species which:

- Are endemic to Britain (a list is available in Cheffings & Farrell 2005);
- Are of restricted distribution internationally. These are as listed/occurring in EC Habitats and Species Directive Annex IIb, IVb or Vb; or Appendix I of the Bern Convention or Appendix I or II of CITES;

a) National Criteria. Native and archaeophyte vascular plant species believed to be extant in the vice-county that are currently scarce or rare in Britain. These are species which:

- Are listed in Schedule 8 of the Wildlife and Countryside Act 1981;
- Are listed as occurring in IUCN categories CR (critically endangered), EN (endangered), VU (vulnerable) and NT (near threatened) in the British Red Data Book for vascular plants (Cheffings & Farrell 2005);
- Are nationally rare, occurring in 15 or fewer 10km squares in Britain;
- Are nationally scarce, occurring in between 16 and 100 10km squares in Britain.

a) Local Criteria. Native and archaeophyte vascular plant species that:

- Are locally rare, being recorded in 3 sites or fewer within the vice-county since 1987. In this context a 'site' is generally a discrete area within a moveable kilometre square, though in some cases (noted in the text) larger 'populations' may be considered to account for more than one 'site'. Judgement has also been exercised to allow for the geographical imprecision of many records.
- Are locally scarce, being recorded in 4-10 sites within the vice-county since 1987. Judgement has been exercised to allow for the geographical imprecision of many records.

Archaeophytes are alien species known or suspected to have been introduced before AD 1500, whereas neophytes are more recent introductions (Preston et al. 2002).

The cut-off date of 1987 – records from which year onwards are included for all taxa in this Register - perhaps requires some explanation. This has been selected mainly as this was the beginning of the latest date class (1987-1999) used for the *New Atlas of the British & Irish Flora* (Preston, Pearman & Dines, 2002). The main records left by botanists working in the county during this time are unfortunately only checklists for each hectad along with notebooks listing a few more details (mainly the names of the location and recorder) for those species that were considered to be notable at the time. Subsequent to that time period Ayrshire was very poorly recorded for several years – prior to the more recent attempts to record its flora in a more dedicated and systematic fashion for the BSBI's Atlas 2020 project. However, a few areas of the County still remain that have not been visited for the purposes of botanising in a good number of years. Where a site has not been well recorded since 1999, it has therefore been assumed for the purposes of this Register that any record for the location prior to 1987 which does not then also appear on the relevant *New Atlas* 1987-1999 hectad checklist is therefore now gone. Conversely, any 1987-1999 date class record for such a site has been assumed for the purposes of this Register still to be present. Additionally, some records from the 1987-1999 date class have been retained in this Register even if post-1999 recording visits have in fact taken place but the taxon in question has not been refound, provided there is thought to be any possibility that it may have been missed. It is intended that the next revision of this Register will however remove all pre-2000 records that have not been refound since.

A list of species believed to be extinct in the vice county – i.e. no reliable records from 1987 on - has also been included.

Exclusions

Records which refer to planted specimens have been excluded. Additionally, records for taxa which would fit the National Criteria for inclusion listed above within their native British range, but which are considered to be neophyte introductions to VC75 Ayrshire, have also been excluded.

Hybrids, subspecies and - although not strictly speaking vascular plants in any case - charophytes have been omitted for now, as limited dedicated recording means that their distribution is inadequately understood in the vice-county at the present time. Microspecies of *Hieracium*, *Taraxacum* and *Rubus* are also omitted for the same reason.

Appendix A lists species which might otherwise have been included but which appear to have been recorded in error, or as garden escapes in the vice-county, or for which the true number of records is unknown due to either recording approaches or to recent changes in taxonomy.

Confidentiality

Restriction of access to rare plant records is an issue which has caused much debate over the years. If detailed locations are given, plants may be at risk from collectors or even from those who simply wish to photograph them but may damage plants by trampling. On the other hand, many more are at risk from neglect of habitat or potential development and if their locations are unknown their conservation becomes more difficult if not impossible. In general the policy in this Register is to give the fullest information.

All users of this Register are requested to respect the fact that rare and scarce plants may grow on private property. Many are also found on SSSIs and other areas of conservation where visitor pressure can be an issue. National and local conservation organisations are usually only too pleased to show visitors plants of interest if contacted in advance.

The Records

Records held by the BSBI at 31 December 2109 have been included.

For each taxon included in this Register, both national and local threat and/or rarity status is given; followed by a more detailed summary of national status, distribution, trends etc. to provide context - based on the text for the relevant species found in the *New Atlas of the British & Irish Flora*.

The records then listed are the last known for each site. Unlike many county Rare Plant Registers, 10km records have not generally been omitted where these are the most recent records for a site or area. This is due to the fact (also discussed above) that recorders in Ayrshire prior to 2000 (and some even later) tended not to use OS Grid references at all - only site/location names. And it is not always easy to assign even a tetrad reference to a named location. Furthermore, many records prior to 2000 are only known to exist on the hectad checklists prepared for publication in the *New Atlas* of 2002, with no further details appearing in the recorders' notebooks that accompany these lists. In these cases, even the precise location(s) and recorder(s) are not currently known with any certainty. Recently however, most rare and scarce species have been recorded at much finer resolution. Site names, as far as they are known, are given in all cases to assist in providing an overall picture.

Records within tables are sorted by hectad (10km square), then by grid reference. Recorder names are provided where known and further information on sources is also available from the author in many cases. Please note however that due to a number of instances where the most recent record for a taxon continues to be an undetailed 1987-1999 date class record from the *New Atlas* project for which no recorder is noted (again see the discussion given above) this fact is noted by an asterisk – ‘*’ - in the ‘Recorder’ column of the table.

Finally, the tables are followed by any further relevant information. In most cases this is no more than a list of other locations from which the species in question has previously been recorded but is now thought to be lost, but in a few instances some additional information on the local status of the species is also given.

Updating

As has already been pointed out, this Register is intended to provide a snapshot of available records up to the end of December 2019. To become in any way effective as a conservation tool any Rare Plant Register needs to be kept up to date. This is the second published version of the Register coinciding with the end of field recording for the *Atlas 2020* project.

The Species List

***Aethusa cynapium* L.**

Fools Parsley

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An annual of hedge banks, waste places, arable fields and other cultivated ground. Declining in N. & W. Britain, and in Ireland, although the reasons for these losses are unclear.

Subspecies *cynapium* is considered native, whereas the subspecies *agrestis* is thought to be an archaeophyte.

Site	Hectad	Gridref	Latest Date	Recorder
Dailly, West End	NS20	NS2669401356	2017	MacKinnon, D. & Smart, G.
Near Hillhead Farm, Stevenston	NS24	NS27724339	2018	Mackie, P.
Kilwinning, west	NS24	NS24W	2018	Mackie, P.
Hannah Research Institute Estate	NS32	NS32	2008	Miller, T.
River Irvine	NS33	NS31963868	2019	Mackie, T.
Shewalton Wood	NS33	NS3470635727	2000	Colvin, J.
Knockentiber, northwest of	NS34	NS34	2007	McNeill, J.
Ailsa Craig	NX09	NX09	1990	Zonfrillo, B.

No Ayrshire records have been recorded to subspecies level. Earlier records for the species, now thought to be lost, also exist for hectads NS25, NS26, NS31, NS33 (at Symington), NS42, NS44, NX08 and NX19.

Agrostemma githago L.

Corncockle

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An annual weed of cereal and other arable crops, tolerant of various soil types, with its distribution largely mirroring that of the crops in which it grew. Introduced as a grain contaminant it has been present in Britain since the Iron Age. Although common until the 20th century, it has dramatically declined with improved seed cleaning. It is now extinct as an arable weed, but is a frequent component of wild-flower seed mixtures.

Site	Hectad	Gridref	Latest Date	Recorder
Prestwick	NS32	NS32	1987-1999	* The exact location is derived from an earlier record.
Irvine Beach Park	NS33	NS311379	2017	Smart, G.

Though known from the Prestwick area since the 1830s, this species has not been confirmed at any other Ayrshire locations.

Agrostis gigantea Roth.

Black Bent

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An archaeophyte, *A. gigantea* has a Eurasian southern temperate distribution, but it is naturalised in N. America so its distribution is now Circumpolar southern temperate. A perennial herb, behaving as a rampant weed in cornfields and neglected arable land, particularly on lighter soils, where it spreads by seed and by rhizomes. In wetter habitats, where it is much rarer, it can persist in taller, closed vegetation by rhizomatous growth.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer	NS23	NS2989039203	2006	Dargie, T.
Ardrossan	NS24	NS2242	2014	Rich, T. C. G.
Dean Castle Country Park	NS43	NS44043960	2016	Lochrie, N.

This species has never been confirmed from any other Ayrshire locations.

Allium scordoprasum L.

Sand Leek

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A bulbous, perennial herb spreading mainly by bulbils in rough grassland and waste ground, on road verges and track sides and by railways. It sometimes occurs in more natural habitats such as sandy river banks, open woodlands on well-drained soils and a variety of coastal situations. Nationally its distribution seems to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross, near pier	NS14	NS1714	2007	McNeill, J.

One 1970s record, now thought to be lost, also exists for hectad NS33.

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

Green Winged Orchid

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Native. A tuberous perennial herb of damp to dry, base-rich to mildly acidic soils. It is most frequent in hay meadows and pastures, but also grows on sand dunes, heaths and roadsides, and in quarries, gravel-pits, churchyards and lawns. Nationally the steady decline of this species is thought to be due to the ploughing and improvement of grasslands.

Site	Hectad	Gridref	Latest Date	Recorder
Downan	NX08	NX074808	1988	Walls, R. C.
Bennane Lea	NX08	NX094855	2004	Tattersall, B.
Bennane Head	NX08	NX08Y	2012	Crawford, C., Lang, D. A. & Smart, G.
Troax	NX18	NX18D	2016	Fisher, F.
Balsalloch Burn	NX18	NX18E	2016	Fisher, F.

This species has its only Scottish locations in Ayrshire – all on the South Ayrshire coast. As such the main populations are protected as VC75 Ayrshire's only Site of Special Scientific Interest designated specifically for its vascular plants – Bennane Head Grasslands. Some Grid references given are central points for sub-populations of hundreds. This species has never been recorded at any other Ayrshire locations.

Anacamptis pyramidalis (L.) Rich.

Pyramidal Orchid

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A tuberous perennial herb of well-drained calcareous soils. It is found in shortly grazed downland, dune-slacks and on cliff-tops; as well as in the longer grass of semi-stable dunes, scrub, roadside verges and churchyards. It also grows in the grikes of limestone pavement and can colonise the disturbed ground of abandoned quarries, industrial waste land & railway embankments. Can be found at heights of up to 350 metres. The overall distribution of this species is stable, although it has been lost from some sites, particularly in Ireland, largely due to agricultural improvement.

Site	Hectad	Gridref	Latest Date	Recorder
Lendalfoot	NX18	NX1290489651	2015	Crawford, C., Pankhurst, A. & Wilson, A.

This species has never been recorded at any other Ayrshire locations and is a recent addition to the county flora (this being the 1st record).

Anagallis tenella L.

Bog Pimpernel

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A creeping, evergreen perennial of wet open sites. In S. and E. Britain it is mostly restricted to bare soil or bryophyte mats in calcareous dune-slacks and short-sedge fens, and sometimes on acidic bogs. In the west it also occurs in a variety of soligenous and peaty mires, hillside flushes and rush-pastures, and relying on cattle, sheep or periodic flooding to keep sites open. Nationally many southern sites have been lost to grassland improvement, eutrophication and drainage.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry – wee ponds	NS20	NS202075	2004	Woods, J.
Finnarts Point - Portandea	NX07	NX07M	2018	Gaskell, L. & Miles, C.
Currarie Point	NX07	NX05507785	2018	Crawford, C.
Downan, Ballantrae	NX08	NX08	1992	Stirling, A. McG. & Thompson, B.
Liggetcheek, roadside at	NX18	NX1127585725	2015	Gardner, Z., MacKinnon, J. & McIntosh, J.
Littleton Hill	NX18	NX1231186388	2015	Dodd, M., Hawker, D. & McTeague, E.

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS15, NS21 & NS24.

Apium inundatum (L.) Reichenb.fil.

Lesser Marshwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native perennial herb, favouring shallow water sites, both still and slow moving, together with those which periodically dry out such as the edges of pools and dune slacks. Although widely distributed over the UK, it appears to be in potentially substantial decline as a result of drainage and the eutrophication of its habitats.

Site	Hectad	Gridref	Latest Date	Recorder
Auchenharvie, Stevenston	NS24	NS24	2000	Rutherford, A. & Stirling, A. McG.
Glenburn Reservoir	NS25	NS218519	1987-1999	* The Grid reference is derived from an earlier record.
Martnaham Loch & Woods SSSI	NS31	NS3817	2004	Darwell, A. & Fisher, J.
Cuff Hill, east of	NS35	NS35	1987-1999	* The exact location is derived from an earlier record.
Bogton Loch	NS40	NS46510568	2019	Crawford, C., Hannah, A. C. & Lang, D. A.
Kilantringan Loch	NX07	NX090790	1996	Day, J., Duncan, W. & Willby, N. J.
Girvan – Lendalfoot	NX19	NX19	1987-1999	*
Loch Maberry	NX27	NX2875	1991	Rutherford, A. & Stirling, A. McG.
Linfen Loch	NX39	NX367980	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS24 (at Ardeer Sands), NS34, NS52, NS54, NX08 & NX27 (at Drumlamford Loch).

Apium nodiflorum Lag.

Fool's Water-cress

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A native perennial herb found in shallow water in streams, ditches, swamps and marshes – as well as on seasonally exposed mud at the edges of ponds, lakes, rivers and canals; sometimes scrambling into nearby vegetation. It is characteristic of nutrient-enriched sites. The distribution of this species is stable. There has been confusion between this species and *Berula erecta*, particularly in the far south of Scotland where some of the older records may be erroneous.

Site	Hectad	Gridref	Latest Date	Recorder
Finnarts Point - Portandea	NX07	NX07M	2018	Gaskell, L. & Miles, C.

This species has never been recorded at any other Ayrshire locations and is a recent addition to the county flora (this being the 1st record).

Arabis hirsuta (L.) Scop.

Hairy Rock Cress

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A biennial or perennial herb growing in dry, sunny, exposed situations on rock outcrops and in grassland on base-rich substrates, particularly chalk and limestone; also occurring on sand dunes and on bridges and walls. A species which is still widespread over much of the UK.

Site	Hectad	Gridref	Latest Date	Recorder
Pinbain Burn, Lendalfoot	NX19	NX19	1991	Glasgow Natural History Society excursion.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS30, NS71 & NX08.

Armoracia rusticana P.G. Gaertn., B. Mey. & Scherb.

Horseradish

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A long-lived archaeophyte perennial herb, persisting in old gardens and allotments and spreading by root fragments to roadsides, waste ground, railways, sandy seashores and river-banks. The plant is highly sterile, and seed-set is unknown in our area. The species was introduced before 1500, initially as a medicinal herb. It spreads wherever there is cultivation or dumping of soil, but its national range now seems to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross, north of Seamill	NS14	NS14	1987-1999	* The exact location is derived from an earlier record.
Dalry, near station	NS24	NS24	1987-1999	* The exact location is derived from an earlier record.
Fairlie	NS25	NS2054	2012	Rutherford, A.
South of Ayr	NS31	NS31	1987-1999	*
Pow Burn, Prestwick Dunes	NS32	NS3433027676	2019	Whytock, R. T.

Earlier records for the species, now thought to be lost, also exist for hectads NS26, NS33 & NS34.

Artemisia absinthum L.

Wormwood

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An archaeophyte aromatic perennial herb of waste and rough ground, waysides, railway sidings, rubbish tips, gravel-pits, quarries and other manmade habitats. This species, which was being grown in British gardens by 1200, was formerly cultivated for medicine and flavouring. It is often persistent, especially in urban and maritime locations where it is less at risk from frost damage, and nationally the distribution is more or less stable.

Site	Hectad	Gridref	Latest Date	Recorder
The Ayrshire Golf Course site, south of Irvine	NS33	NS3136	2010	Crawford, C.
Barassie shore	NS33	NS33G	2010	Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS25, NS31 (both at Doonfoot and at Nether Auchendrane) & NS33 (at Troon).

Asplenium viride Huds.

Green Spleenwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An evergreen fern of moist, sheltered crevices in basic rocks, and very rarely also on mortared walls. It is occasionally a colonist of old metal mine workings.

Site	Hectad	Gridref	Latest Date	Recorder
Ardrossan	NS24	NS24G	2012	BSBI excursion.
Largs – Fairlie	NS25	NS25	1987-1999	*
North Rotten Burn	NS26	NS2568	1989	Stirling, A. McG.
Ness Glen SSSI	NS40	NS4775802530	2017	Whytock, R.T.
Farroch Brae, roadside at foot of	NS40	NS40900093	2013	Lang, D. A. & Smart, G.
Stey Amry	NS60	NS6205	1987	Stirling, A. McG.
Wall on Furnace Road, Muirkirk, where it passes through disused railway line	NS62	NS6959926581	2014	Lang, D. A. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS26 (on each of the Upper Noddsdale, the Gogo Water and the headwater of the Riveer Garnock), NS71 & NS72.

Atriplex portulicoides L.

Sea Purslane

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A low shrub of muddy or sandy saltmarshes, commonly fringing intertidal pools and creeks, and often forming extensive stands on ungrazed saltings. In western Britain and Ireland it also occurs locally on coastal rocks and cliffs. This species markedly extended its range northwards in the British Isles during the 20th century.

Site	Hectad	Gridref	Latest Date	Recorder
Stinchar mouth	NX08	NX079815	1999	From SNH data, recorder not noted.

This is the only known record for this species in Ayrshire. It should be noted however that it was not refound during a dedicated recording visit to the relevant tetrad in 2019.

Avena fatua L.

Wild Oat

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An archaeophyte annual grass which is a common weed on arable land, especially in cereals, seeding before the cultivated crops. It is also found on roadsides and waste ground.

Nationally its distribution appears to be expanding.

Site	Hectad	Gridref	Latest Date	Recorder
Horse Island	NS24	NS210429	2019	Smart, G.
Kilwinning, off Byrehill Road	NS24	NS296423	2017	Mackie, P.
South of Ayr	NS31	NS31	1987-1999	*
Seafield, Ayr	NS32	NS32	2000	Rutherford, A. & Stirling, A. McG.
Irvine – Troon	NS33	NS33	1987-1999	*
Coast south of Girvan	NX19	NX1795	1995	Rutherford A., Simpson B. & Stirling A.McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS32 (both at Monktonhill and Auchincruive) & NS43 (both at Hurlford, east of and Galston, southwest of). It should be noted that the coast south of Girvan record was not refound during a dedicated recording trip to the relevant tetrad in 2008.

Avenula pratensis (L.) Dumort

Meadow Oat Grass

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb of calcareous rendzina and brown earth soils, usually over chalk or limestone, but also over glacial deposits and basic igneous rocks. It is characteristic of well-grazed chalk and limestone downland, but is also found on screes, cliffs and limestone pavements, and occasionally in open woods, on sand dunes and on montane ledge communities.

Site	Hectad	Gridref	Latest Date	Recorder
Dunure, cliffs south of	NS21	NS21	1988	Stirling, A. McG.
Ballantrae area	NX08	NX08	1987-1999	*
Knockdaw Hill, southern cliffs	NX18	NX15758865	2015	Hannah, A., Lang, D. A. & Middleton, A.
Knockdolian, north side	NX18	NX1160985002	2015	Gardner, Z., MacKinnon, J. & McIntosh, J.
Balcreuchan Port – Games Loup	NX18	NX18D	1987	Rutherford A., Simpson B. & Stirling A. McG.
Pinbain Hill – Lochton Hill	NX19	NX19L	2002	McLeary, J.
Grey Hill, near	NX19	NX19R	2015	Averis, B.
Aldons Hill	NX19	NX19V	2015	Fraser, J., Gaskill, L. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS24, NS25, NS61, NX07 & NX19 (at Byne Hill). It should be noted that the Balcreuchan Port – Games Loup record was not refound during a dedicated recording trip to the relevant tetrad in 2012.

Baldellia ranunculoides (L.) Parl.

Lesser Water Plantain

National Status: *Not Scarce, Near Threatened*.Local Status: *Rare*.

Native. Perennial typically of strongly calcareous or brackish waters, requiring sites at the water's edge where competition is restricted by fluctuating levels or other disturbance. Has declined in southern Britain over many years, probably due to the decrease in small water bodies combined with greater competition.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch & Woods SSSI	NS31	NS393173	1996	Day, J., Duncan, W. & Willby, N. J.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS21, NS24 & NS33.

Berberis vulgaris L.

Barberry

National Status: *Not Scarce, Least Concern*.Local Status: *Rare*.

Archaeophyte. A deciduous shrub found in hedgerows and coppices, and on banks, cliffs and waste ground. Generally lowland. *B. vulgaris* has been recorded from Neolithic deposits in eastern England and might be native in England and Wales. However it was cultivated in medieval times and later widely planted for hedging. It was believed to have a deleterious effect on wheat crops even before it was known to be a host of the rust *Puccinia graminis* – and the species was consequently eradicated from many hedgerows in the 19th century.

Site	Hectad	Gridref	Latest Date	Recorder
Lugton Water	NS34	NS3344	2015	Watson, K. J.
West of Galston – ex works site ponds	NS43	NS43Y	2017	Hannah, A. C. & Lang, D. A.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NX18, NX19 & NX28.

Berula erecta (Huds.) Coville

Lesser Water Parsnip

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

This native stoloniferous perennial occurs as a submerged aquatic in rivers and streams, and as an emergent species at the edges of lakes, ponds, rivers, ditches and canals, and in marshes. It is also found on seasonally flooded wet ground, and usually roots into fine silt or mud. Vegetative spread is by short-lived stolons or rhizomes, but little is known of the frequency of reproduction by seed. Nationally the species may be declining, probably caused by drainage and habitat destruction.

Site	Hectad	Gridref	Latest Date	Recorder
West Kilbride Golf Course shore	NS14	NS1947	2010	Smart, G.
Culzean	NS20	NS20J	2010	Averis, B.
Culzean Country Park	NS21	NS24201010	2001	Thurston, J.
Tributaries to Smithstone Burn	NS24	NS2934	2017	Mackie, P.
Monkredding & Seven Acre Wood	NS34	NS3245	2015	Watson, K. J.
High Gooseloaan	NS34	NS32534624	2016	Crawford, C. & Lang, D. A.
Dusk Water	NS34	NS34J	2015	Watson, K. J.
Ballantrae area	NX08	NX08	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both near Seamill & at Ashgrove Loch SSSI) & NS43.

Bidens cernua L.

Nodding Bur Marigold

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual, growing on a wide range of damp or wet substrates on the margins of slow-flowing rivers and streams, by ponds and meres, often in places subject to winter flooding; also in ditches and marshes. Although not scarce the species has declined over the last 70 years mainly due to drainage and habitat destruction.

Site	Hectad	Gridref	Latest Date	Recorder
Heart Loch, Maybole	NS30	NS313096	1996	Day, J., Duncan, W. & Willby, N. J.
Cunning Park, Ayr	NS31	NS3219	1992	Nugent, E.
Martnaham Loch & Woods SSSI	NS41	NS401176	1996	Day, J., Duncan, W. & Willby, N. J.

This species has never been confirmed from any other Ayrshire locations. It should be noted that all of the Ayrshire locations in which this species has been found were revisited for recording between 2015 and 2019, and the species was not refound during any of these trips. However at least in the case of the Heart Loch, Maybole record the water was very high at the time - so the species may still be present at this location.

Bidens triparta L.

Trifid Bur Marigold

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual of nutrient-rich mud or gravel by ponds, occurring in wet pits, by slow rivers and streams, often in areas wet in winter but exposed in summer; also found in ditches, peat workings and other damp places. Nationally this species is decreasing; drainage, the infilling of ponds and ditches, and the canalisation of watercourses have all contributed to its decline.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch & Woods SSSI	NS41	NS4017	2004	Darwell, A. & Fisher, J.
Burnfoot Reservoir, Fenwick	NS44	NS44M	1996	Day, J., Duncan, W. & Willby, N. J.

The Martnaham Loch station could not be refound during a visit in 2016. However in 1996 the Martnaham Loch station had been found a little further west, just inside hectad NS31 and additionally the water was very high during the 2016 visit. So the species may well still be present at this location. In 1996 the Martnaham Loch station was found a little further west, just inside hectad NS31. Earlier records for the species, now thought to be lost, also exist for hectads NS25, NS32 & NS42.

Blysmus rufus (Huds.) Link

Saltmarsh Flat Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial herb, found in sandy or gravelly wet runnels and depressions in saltmarshes, and in brackish ditches and dune-slacks. It also occurs on rocky shores, in freshwater seepages and beside streams where they debouch onto the beach. Nationally its distribution now appears to be generally stable.

Site	Hectad	Gridref	Latest Date	Recorder
Knock Castle, shore below	NS16	NS19226331	2017	Hannah, A.C.
Shore south of Meigle Bay	NS16	NS19116472	2017	Hannah, A.C.
Ardrossan coast (North tetrad)	NS24	NS24D	2015	Watson, K. J.
The Pencil, Largs	NS25	NS2057	2017	Crawford, C. & Hannah, A. C.

Earlier records for the species, now thought to be lost, also exist for hectads NS15, NS24 (at Ardeer in Stevenston), NS25 (at Southannan/Fairlie – possibly – originally recorded as *B. compressus*), NS32, NS33 & NX19.

Calamagrostis epigejos (L.) Roth.

Wood Small Reed

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A tufted rhizomatous perennial, occurring in damp woods, ditches, fens, ungrazed or lightly grazed grasslands, and on sheltered sea-cliffs and sand dunes; also as a colonist of artificial habitats such as old quarries, roadsides and railway banks. It usually grows on light sands or heavy clays. Nationally the species appears to be increasing although this may be an artefact of better recording.

Site	Hectad	Gridref	Latest Date	Recorder
Ashcraig	NS16	NS16X	2015	Watson, K. J.
Bogton Loch SSSI	NS40	NS40	2005	Hawker, D.

Earlier records for the species, now thought to be lost, also exist for hectads NS26, NS31 & NS41.

Calamagrostis stricta (Timm) Koeler

Narrow Small Reed

National Status: *Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.*

Native. A tufted rhizomatous perennial herb of near-neutral mires and lake margins. It is hard to assess trends in the distribution of this taxon as it has been confused in the past with other species. It has certainly been lost from some sites through drainage, but is easily overlooked.

Site	Hectad	Gridref	Latest Date	Recorder
River Doon near Dalmellington	NS40	NS40N	2015	Dadds, N.
Doon Bridge to Bogton Loch SSSI	NS40	NS4605	2015	Gaskill, L., Lang, D. A. & Middleton, A.

The Doon Bridge to Bogton Loch SSSI records are scattered either side of the Doon and Loch throughout this monad. This species has never been confirmed from any other Ayrshire locations.

Callitriche hermaphroditica L.

Autumnal Water-starwort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This species occurs in mesotrophic lakes, canals and gravel-pits. It is usually annual, although some populations may perennate.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch & Woods SSSI	NS31	NS394174	1996	Day, J., Duncan, W. & Willby, N. J.

The Grid reference given for the record above is a central one for a population that spreads to the east into hectad NS41. Earlier records for the species, now thought to be lost, also exist for hectads NS20 & NX27.

Calystegia soldanella (L.) R.Br.

Sea Bindweed

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.**Calystegia soldanella* at Lendalfoot © Carol Crawford

Native perennial herb of sand dunes, and sand and shingle beaches. Common around the coast of England, Wales and southern Scotland.

Site	Hectad	Gridref	Latest Date	Recorder
Dipple shore	NS10	NS10W	2019	Crawford, C.
Prestwick Dunes	NS32	NS3448226867	2019	Grace, J.
Corseclays	NX08	NX09118520	2019	Crawford, C.
Lendalfoot	NX18	NX1301489838	2015	Crawford, C.

Earlier records for the species, now thought to be lost, also exist for hectads NS20 & NS32 (at Ayr).

Carduus crispus L.

Welted Thistle

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A biennial herb of woodland margins, ditch-banks, damp hedge bottoms, streamsides, tall grassland, roadsides, railway banks and waste places, especially on clay soils with a high nutrient status.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens Bay	NS20	NS20	1988	Rutherford, A. & Stirling, A. McG.
Saltcoats – Dalry	NS24	NS24	1987-1999	*
Shewalton Moss, Irvine	NS33	NS3435	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS25, NS43 & NX09. It should be noted that the Shewalton Moss, Irvine site has been regularly recorded up to 2019 and this species has never been refound post-1999.

Carduus tenuifolius Curtis

Slender Thistle

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.**Carduus tenuifolius* at Horse Island © Smart, G.

Native. An annual or biennial herb of dry, coastal grasslands, sea-bird colonies, sea-walls, upper edges of beaches, sandy waste ground and roadsides. Inland, it occurs on well-drained soils. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Horse Isle	NS24	NS213428	2019	Smart, G.
Ailsa Craig	NX09	NX09	1992	Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS22, NS25, NS32 & NS33.

Carex acuta L.

Slender Tufted-sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A rhizomatous native perennial of shallow water or wet ground. At the edges of rivers, streams, canals and lakes & ponds; as well as in swamps, ditches, unimproved flood meadows and marshland. It usually grows in calcareous and mesotrophic or eutrophic conditions, in areas subject to frequent flooding. It is shade-tolerant and sometimes grows under riverside trees or in wet woodland. Lowland – but formally recorded up to 335m. Though now much better recorded than it was fifty years ago, *C. acuta* has declined in many areas – principally due to the drainage and canalisation of rivers and streams.

Site	Hectad	Gridref	Latest Date	Recorder
Barr, Water of Gregg	NX29	NX275940	2018	Calvey, C., Crawford, C. & Hannah, A. C.

One 1960 record, now thought to be lost, also exists for hectad NX39 – also on the River Stinchar catchment as with the 2018 record above.

Carex bigelowii Torr. Ex Schwein

Stiff Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Carex bigelowii at Kirreoch Hill © Whytock, R.

Native. A perennial herb of well-drained montane grassland and sedge-heath, of open stony ground, in corries where snow lies late, and gullies subject to flushing. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Blackcraig Hill, Glen Afton	NS60	NS60N	1987-1999	* The Grid reference is derived from an earlier record.
Shalloch	NX38	NX36388835	2009	Averis, B.
Shalloch, north slope	NX39	NX3828992866	2015	Dodd, M., Fraser, J. & Lang, D. A.
Kirriereoch Hill, west ridge	NX48	NX419871	2019	McIntosh, J. W. & Moir, I.
Carmaddie Brae	NX48	NX4188	2019	McCleary, J.
Castle on Oyne – Rig of Millmore	NX48	NX48J	1988	Stewart, O. M. & Stirling, A. McG.
West of Loch Doon	NX49	NX49	1987-1999	*

This species has never been confirmed from any other Ayrshire locations.

Carex diandra Schrank.

Lesser Tussock Sedge

National Status: *Not Scarce, Near Threatened.*Local Status: *Scarce.*

Native perennial sedge of peaty areas, able to tolerate both acidic soils and those which are flushed by calcareous springs. Also found in wet woods, fen carr and swamps. Nationally *C. diandra* has been lost as a result of drainage and scrub encroachment from many lowland sites. Most losses occurred before 1930, but are still continuing in southern Britain.

Site	Hectad	Gridref	Latest Date	Recorder
East of Turnberry	NS20	NS20	1987-1999	*
Cullochknowes	NS30	NS330030	1987-1999	* The Grid reference is derived from an earlier record.
Widows Loch	NS40	NS440018	2015	Dadds, N.
Littleton & Balhamie Hills SSSI	NX18	NX18I	2015	Dodd, M., Hawker, D. & McTeague, E.
Grey Hill, near	NX19	NX19R	2010	Averis, B.
Loch Gower	NX27	NX29007724	2016	Floyd, J., MacKinnon, D. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 (at each of Brown Carrick, Red Moss Loch and Drumshang Loch), NS24, NS25 & NX28.

Carex extensa Gooden.

Long-bracted Sedge

National Status: *Not Scarce, Least Concern*Local Status: *Scarce*.

Native. A perennial herb, mainly confined to areas within reach of sea water or spray. It is found on muddy or sandy estuarine flats, at the uppermost levels of saltmarshes and the edges of brackish ditches, and on moist coastal rocks and low cliffs. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Shore north of Largs	NS16	NS1962	2017	Hannah, A. C.
Shore south of Meigle	NS16	NS1964	2017	Hannah, A. C.
Chapelton, Seamill	NS24	NS2033046331	2018	Mackie, P.
Troon Ballast Bank, south of	NS33	NS31543065	2019	Mackie, P.
Downan, Ballantrae	NX08	NX08Q	1992	Stirling, A. McG. & B. H. T.
Kennedy's Pass	NX19	NX19L	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS16 (at Skelmorlie), NS24 (at Ardrossan), NS25 & NS32.

Carex lasiocarpa Ehrh.

Slender Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial which grows in reed-swamps and other vegetation at the edges of lakes, pools and slow-flowing streams and rivers, and in flushes and wet hollows in fens; it can also colonise old peat workings and drainage channels. It generally occurs in nutrient-poor water, which may be base-rich or base-poor.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch & Woods SSSI	NS31	NS394174	1996	Day, J., Duncan, W. & Willby, N. J.
Widow's Loch & Little Loch	NS40	NS4401	2015	Dadds, N.
Chirmorie	NX27	NX21317695	2016	Crawford, C., Hannah, A. & Philip, M.
Long Loch	NX27	NX238763	1996	Day, J., Duncan, W. & Willby, N. J.
Black Loch	NX27	NX240762	1996	Day, J., Duncan, W. & Willby, N. J.
Wauk Mill Wood pond, Barrhill	NX28	NX23198287	2019	Lang, D. A., McCleary, J. & Smart, G.
Cammock Burn	NX28	NX268832	2008	BSBI excursion.
Kirriereoch Hill, northwest of	NX38	NX3988	1988	Stewart, O. M. & Stirling, A. McG.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS40 (at Baing Loch), NX18 & NX49 (at Loch Ballochling).

Carex limosa L.

Bog Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb of *Sphagnum* mires and the wet, peaty margins of pools, often growing in standing water. Most of its sites are acidic and oligotrophic and it tends to occur in areas subject to some mineral enrichment. Generally lowland and somewhat declining to drainage, afforestation and, in Ireland, peat extraction.

Site	Hectad	Gridref	Latest Date	Recorder
Knockewart IOCH	NS24	NS2447	2019	Whytock, R. T.
Knockewart Hills	NS24	NS2347	2017	Hannah, A. C & Mackie, P.
Auldraigoch plantation, near corner of	NS40	NS438017	2015	Dadds, N.
Widow's Loch	NS40	NS440018	2015	Dadds, N.
Widow's Loch, near	NS40	NS442020	2015	Dadds, N.
Chirmorie Loch, near	NX27	NX21647686	2016	Crawford, C., Hannah, A. & Philip, M.
Loch Meraddie	NX18	NX153834	2019	McLeary, J.
Half Merk Loch	NX28	NX279851	1987	From SWT data, recorder not noted.
East of Barr	NX39	NX39	1987-1999	*
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (Knockewart Loch), NS35, NS40 (at Baing Loch), NS42 & NX28 (near Eyes Loch). The three records in hectad NS40 – despite each being in a different tetrad – could potentially be considered as the one population, as could the two records in hectad NS24.

Carex magellanica Lam.

Tall Bog Sedge

National Status: *Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial of wet ground, pools and hummocks in *Sphagnum* bogs, or at the edges of gently sloping mires where there is slight lateral water movement; such sites often occur on watersheds. It generally occurs in open ground, but sometimes persists in carr.

Site	Hectad	Gridref	Latest Date	Recorder
Dalmellington, south of	NS50	NS5143701507	2006	Gallacher, J.
Dalfad Moss	NS62	NS626220	1996	Hankinson, G. K.
Waterhead	NX39	NX361911	1990	Counsell, D.
Eldrick Hill, northeast of	NX39	NX3788593741	2015	McIntosh, J., W., McTeague, E. & Smart, G.
Shalloch on Minnoch	NX49	NX4091	1988	McTeague, E.

Earlier records for the species, now thought to be lost, also exist for hectads NS40, NS54 & NS63.

Carex muricata L.

Prickly Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A tufted perennial herb of well-drained, light, sometimes sandy, soils. It is found on hedge banks, earth-filled walls and roadsides, in rough meadows, heathland and on rocky slopes, and is somewhat intolerant of shade. Generally lowland.

Site	Hectad	Gridref	Latest Date	Recorder
South West of Ayr	NS21	NS21	1987-1999	*

One very early 20th century record, now almost certainly lost, also exists for hectad NX08.

Carex oederi Retz.

Small-fruited Yellow-Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This perennial herb occurs in open, damp or wet habitats, including dune-slacks, the upper edge of saltmarshes and on the stony margins of lakes or pools, and in open fens and marshes in the lowlands. It usually occurs on flushed acidic soils, but also locally on base-rich substrates. A diminutive plant which is easily overlooked, *C. oederi* appears to be more frequent than it was 25 years ago and is probably still under-recorded in W. Scotland.

Site	Hectad	Gridref	Latest Date	Recorder
Ayr	NS32	NS32	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS16, NS24, NS25 & NS33. In addition, there are a further seven records from the 1950s and 1960s which were recorded as being part of the yellow-sedge complex but which cannot now be assigned to a specific species. It is therefore at least possible that some of these may also refer to *C. oederi*.

Carex pauciflora Lightf.

Few Flowered Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb of wet, acidic, oligotrophic raised and blanket bogs, often growing on and around hummocks and usually in association with *Sphagnum* species. It is a very inconspicuous species and is easily overlooked.

Site	Hectad	Gridref	Latest Date	Recorder
Seamill – Portencross	NS14	NS14	1987-1999	*
East of Darvel	NS63	NS63	1987-1999	*
Eldrick Hill, northeast of	NX39	NX3760593637	2015	McIntosh, J., W., McTeague, E. & Smart, G.
Castle on Oyne, north of Merrick	NX48	NX4288	1988	Stewart, O. M. & Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS41, NS62, NX17 & NX49. Due to the lack of suitable habitat, it is possible that the record in hectad NS14 is an error.

Carex riparia Curtis

Greater Pond-sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A rhizomatous native lowland perennial found in reed-swamps, on the edges of pools & lakes, in marshy areas, in wet woodland and along the banks of slow flowing rivers and canals. It is a species of base-rich, mesotrophic or eutrophic sites. Reproduction is mainly vegetative, but new colonies can arise from seed. GB distribution has remained largely unchanged from that of fifty years ago. It is sometimes planted by ponds, and some records considered native may refer to such introductions.

Site	Hectad	Gridref	Latest Date	Recorder
Knockdaw Farm by tributary to Water of Lendal	NX18	NX151899	2015	Hannah, A., Lang, D. A. & Middleton, A.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS24 (both at Kilwinning and at Munnoch Burn in West Kilbride), NS42 & NS52.

Carlina vulgaris L.

Carlina Thistle

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A monocarpic perennial herb, typically occurring in well-grazed grassland on dry, infertile calcareous or base-rich soils, but also in more open habitats, including dry rock ledges, screes, quarry floors, coastal cliffs and sand dunes. A widespread decline has taken place, since 1950. Losses are partly due to habitat destruction and a lack of grazing.

Site	Hectad	Gridref	Latest Date	Recorder
Craigie	NS32	NS3521	2014	Mutch, C.
Portandea, north of	NX07	NX04927561	2018	Gaskell, L. & Miles, C.
Glenapp	NX08	NX091810	2012	Harrison, V.
Pinbain Shore, Lendalfoot	NX19	NX19	1991	Natural History Society of Glasgow excursion.

One early 1980s record, now thought to be lost, also exists for hectad NX07 (at Currarie Glen). There is also a 1950s record from hectad NS41, but this was marked doubtful by the recorder and has never been refound.

Catapodium marinum (L.) C.E. Hubbard

Sea Fern Grass

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.**Catapodium marinum* at Troax © Carol Crawford

Native annual grass growing in dry habitats near the sea, including cliff tops, dunes, shingle and increasingly inland by salt-treated roads. Nationally it is found all round the coasts of England and Wales and to a lesser extent Scotland.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr	NS21	NS2839418699	2015	Crawford, C., Fraser, J. & Hannah, A.
Ardrossan	NS24	NS2242	2014	Rich, T. C. G.
Old ICI works, Ardeer	NS24	NS2754540140	2019	Smart, G.
A77 road verge at Troax	NX18	NX106880	2017	Crawford, C.
Lendalfoot – Carleton	NX18	NX1389	2015	Crawford, C., Pankhurst, A. & Wilson, A.
Pinbain, Lendalfoot	NX19	NX19	1992	Stirling, A. McG. & B. H. T.
Feoch Meadows to Darnaconnar	NX28	NX28R	2008	BSBI excursion.

The Grid reference given for the A77 road verge at Troax record above is a central one for a population that spreads to the adjacent tetrad NX18D. Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS15 & NS32.

Centaurea cyanus L.

Cornflower

National Status: *Not Scarce, Least concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.**Centaurea cyanus* at Stevenston © Mackie, P.

C. cyanus is an archaeophyte which formerly occurred as an annual weed of arable habitats. It is now found in very few arable fields, but it is now frequent in waste places, on roadsides and on rubbish tips as a casual arising from gardens and wild-flower seed mixtures. *C. cyanus* was a serious weed until seed cleaning began a rapid decline, accelerated by the use of herbicides. Recently it has increased through wild-flower seed.

Site	Hectad	Gridref	Latest Date	Recorder
Near Hillhead Farm, Stevenston	NS24	NS27724339	2018	Mackie, P.
Ayr	NS31	NS31	1987-1999	* The exact location is derived from an earlier record.
Milgarholm Park	NS33	NS325377	2019	Smart, G.
Blae Loch	NS35	NS3953	2015	Watson, K. J.
Caprington	NS43	NS401342	2018	Kolodziej, M.
Stewarton, southwest of	NS44	NS44C	2016	Crawford, C., Krause, A. & Smart, G.
Knockshinnoch Lagoons	NS61	NS60751327	2019	Smart, G.
Kennedy's pass, south of Girvan	NX19	NX1593	1987	Stanley, P. D.

Earlier records for the species, now thought to be lost, also exist for hectad NS14.

Centaureum littorale (Turner ex Sim.) Gilmour

Seaside Centaury

National Status: *Scarce, Least concern.*Local Status: *Rare.*

Native. This biennial herb is confined to coastal dunes, the uppermost levels of saltmarshes and calcareous, humus-rich turf near the sea where competing vegetation is checked and the habitat kept open by grazing or trampling. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Hunterston Power Station, south of	NS15	NS175495	2013	Longrigg, S.
Shore south of Meigle Bay	NS16	NS19186487	2017	Hannah, A.C.
Nobel Works Area, Ardeer	NS23	NS23	1988	Stirling, A. McG.

The Grid reference for the Hunterston Power Station, south of, is a central one for a population that spreads into hectad NS15 to the north. One additional record for hectad NS33 (at Dundonald) was made in 2014, but it has since been considered doubtful. Earlier records for the species, now thought to be lost, also exist for hectads NS16 (at Knock near Largs), NS25 & NX19.

Cerastium arvense L.

Field Mouse Ear

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This perennial grows mainly on dry, calcareous to slightly acid, sandy soils, occurring in pastures, on dry roadsides, wayside banks, the margins of arable fields, sandy or gravelly waste ground, sand dunes and sand-pits. Nationally the species has declined, particularly at the edges of its range.

Site	Hectad	Gridref	Latest Date	Recorder
Hunterston	NS15	NS15	1988	Stirling, A. McG.
Prestwick	NS32	NS345277	1988	Stirling, A. McG.
Carlin's Stone, Dunlop	NS44	NS4171549474	2019	Hogg, A. G. L.

One pre-1970 record, now thought to be lost, also exists for hectad NS52. It should be noted that the Prestwick record was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Ceratocapnos claviculata (L.) Liden

Climbing Corydalis

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Ceratocapnos claviculata at the south end of Loch Doon © Mackie, P.

Native. A climbing or scrambling annual of freely-draining acidic, mineral or peaty soils. It occurs in deciduous and coniferous woodland, especially in clearings and in recently felled areas and occasionally over rock outcrops. The overall distribution of this species is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Kilruskin	NS25	NS25A	2017	Hannah, A. C.
Rye Water (upper)	NS25	NS25R	2015	Watson, K. J.
Maybole – Straiton	NS30	NS30	1987-1999	*
Cuff Hill area	NS35	NS3855	2015	Watson, K. J.
King Cole's Grave wood	NS42	NS44442644	2019	Crawford, C., Hannah, A.H., Mackie, P. & Smart, G.
Ayr Gorge Woodlands	NS42	NS461255	2016	Smart, G.
Little Eriff Hill & Loch Muck	NS50	NS50A	2014	BSBI Excursion.
Loudoun Hill	NS63	NS60733776	2015	Crawford, C., Lang, D. A. & Smart, G.
Loch Doon Castle car park	NX49	NX48389498	2018	Crawford, C., Lang, D. A. & Mackie, P.

The Ayr Gorge station has previously been recorded with a Grid reference that falls within tetrad NS42M immediately to the west. One 19th century record, now thought to be lost, also exists for hectad NS41.

Ceratophyllum demersum L.

Rigid Hornwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.**Ceratophyllum claviculata* from Trabboch © Crawford, C.

An aquatic which grows submerged in still or slowly flowing, eutrophic water - in lakes, ponds, rivers, canals and ditches. It may be so abundant in ponds and ditches that it forms dense masses which rise above the water surface. Reproduction is mostly by vegetative fragmentation, but seeds are produced in still-water habitats in some years. This species appears to be more frequent than fifty years ago. This probably partly reflects better recording of aquatic plants - but there is little doubt that because this species grows in eutrophic water its distribution is stable and may even be increasing.

Site	Hectad	Gridref	Latest Date	Recorder
Swan Pond, Culzean	NS20	NS2209	2019	Crawford, C.
Coodham Lake	NS33	NS3932	2019	Crawford, C., Lang, D. A. & Mackie, P.
Jamestown Quarry	NS34	NS3146	2015	Watson, K.
High Gooseloan	NS34	NS3246	2015	Watson, K.
Trabboch, around small pond	NS42	NS4321	2019	Crawford, C., Hannah, A. C. & Smart, G.

One 1970s record, now thought to be lost, also exists for hectad NS61.

Chelidonium majus L.

Greater Celandine

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

This perennial lowland archaeophyte is widely naturalised by roadsides and paths, in the crevices of old walls, on waste ground and in hedge-bottoms. It was at one time cultivated as a medicinal plant, and most localities are near habitation. Fossil evidence shows that *C. majus* has been present in Britain since Roman times. Although it is better recorded now than fifty years ago, its distribution suggests a decline at the edges of its range.

Site	Hectad	Gridref	Latest Date	Recorder
Dalrymple Primary School, near	NS31	NS3591014596	2015	Hawker, D., Pankhurst, A. & Wilson, A.
River Doon, Dalrymple	NS31	NS3605914443	2015	Hawker, D., Pankhurst, A. & Wilson, A.
Ayr Town Centre	NS32	NS3320	2018	Rutherford, A.
Catrine, River Ayr Way, road to sewage works	NS52	NS5225	2018	Cobb, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS30, NS43 & NX39.

Chenopodium rubrum L.

Red Goosefoot

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An annual of nutrient-rich mud around the dried-up margins of freshwater or brackish ponds and ditches trampled by livestock; also, more widely, in cultivated and waste ground, on manure heaps and farm tracks and in field gateways. Nationally increasing.

Site	Hectad	Gridref	Latest Date	Recorder
Horse Isle	NS24	NS2142	2019	Smart, G.
Near Hillhead Farm, Stevenston	NS24	NS27724339	2018	Mackie, P.
South of Ayr	NS31	NS31	1987-1999	*
Nessan Bridge dump, Garleffin	NX08	NX08648171	2017	Crawford, C. & Soutar, R.

One 1970s record for the species, now thought to be lost, also exists for hectad NS24 – on the coast north of Ardrossan.

Cichorium intybus L.

Chicory

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

Cichorium intybus at Seamill © Mackie, P.

A perennial archaeophyte of roadsides, field margins and rough grassland on a wide range of soils. Lowland. Though *C. intybus* was formerly regarded as a native, at least in England and Wales, doubt is now cast on that status by most modern local floras, which suggest it is always a relic of its former cultivation as a fodder crop. This species has declined as it is now rarely cultivated.

Site	Hectad	Gridref	Latest Date	Recorder
North Inch, Seamill	NS24	NS205461	2018	Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS10, NS20, NS42, NX08 & NX18.

Cicuta virosa L.

Cowbane

National Status: *Scarce, Least Concern.*Local Status: *Scarce.*

Native. This perennial herb grows in shallow water on the margins of standing or slowly flowing water, including lakes, ponds, rivers, streams, ditches and canals, or in deeper water on floating mats of vegetation. It also occurs in tall-herb fen, in marshy pasture and on damp mud. Despite losses in the first half of the 20th century the population of this species appears now to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Ashgrove Loch SSSI	NS24	NS2744	2019	Crawford, C., Hannah, A. C. & Smart, G.
Todhills Farm, Dubbs Road, Kilwinning	NS24	NS28924199	2019	Walker, G.
Bogside Race Course	NS33	NS3039	2019	Smart, G.
Blae Loch	NS35	NS3953	2015	Watson, K. J.

Earlier records for the species, now thought to be lost, also exist for hectad NS24 (from Ardrossan Parish).

Cladium mariscus (L.) Pohl.

Great Fen Sedge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A rhizomatous perennial of oligotrophic to mesotrophic habitats, usually growing on peat. It is found in swamps at the margins of lakes and ponds and along streams, and in tall-herb fens and open fen carr. *C. mariscus* has declined because of drainage, and some lowland sites are currently threatened by eutrophication and scrub invasion. However, it is probably under-recorded in Scotland.

Site	Hectad	Gridref	Latest Date	Recorder
Tranew Flushes, Crosshill	NS30	NS3407	1987	Blane, J.
Loch Nahinnie, Drumlamford	NX27	NX278771	1999	DCG Countryside Services

Earlier records for the species, now thought to be lost, also exist for hectads NS20 & NX18.

Clinopodium vulgare L.

Wild Basil

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A rhizomatous perennial herb of hedges, woodland margins, coarse scrubby grassland, coastal cliffs and sand dunes; typically on dry calcareous soils. It is also found on waste ground, old quarries and railway-sides. There is no evidence of a change in the distribution of *C. vulgare* in southern England over the last fifty years, although it is apparently decreasing in the northern half of its British range.

Site	Hectad	Gridref	Latest Date	Recorder
Ballantrae	NX08	NX0882	2014	Rutherford, A.
Balnowlart	NX18	NX1083	2014	Rutherford, A.

One pre-1970 record, now thought to be lost, also exists for hectad NS25. A previous VCR for Ayrshire also noted in a personal notebook from the 1960s that there were a number of locations for this species in the county, though the records – if there are any – have not yet been found.

Coeloglossum viride (L.) Hartman

Frog Orchid

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Native perennial herb growing in dry grassland, dunes and chalkpits, but also flushes, scree and even roadsides. Nationally this species declined throughout the twentieth century, mainly due to ploughing and grassland improvement.

Site	Hectad	Gridref	Latest Date	Recorder
Auchalton Meadows SSSI	NS30	NS33550363	2011	Smart, G.
Ballantrae area	NX08	NX08	1987-1999	*
Troax, Ballantrae	NX18	NX18	1991	Counsell, D.
Feoch Meadows SSSI	NX28	NX2682	2009	Smart, G.

On one occasion the Feoch Meadows population has been recorded as extending just into tetrad NX28Q immediately to the south. Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS33, N53, NS63, NX19 & NX28 (at Laggan in Barrhill).

Coincya monensis (L.) Greuter & Burdet

Isle-of-Man Cabbage

National Status: *Scarce, Least Concern.*Local Status: *Not Scarce.*

Subspecies *monensis* – Isle-of-Man cabbage – is native to the UK and Nationally Scarce, whereas the subspecies *cheiranthos* (wallflower cabbage) is a neophyte. All Ayrshire records are almost certainly *C. monensis* subsp. *monensis*. This is an annual or short-lived perennial herb, mainly found by the sea on open dunes and on the strand-line, and only rarely in bare fields and hedge banks near the sea. There is recent evidence to suggest that seed might be dispersed by sea. This subspecies is stable or even increasing in the centre of its range – which is in N.W. England – but is slowly declining elsewhere. Endemic.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross to Seamill	NS14	NS14	1987-1999	*
Nobel Site, Ardeer	NS23	NS2839	2019	Smart, G.
Seamill, West Kilbride	NS24	NS2046	1990	Stirling, A. McG.
Stevenston Dunes LNR	NS24	NS2640	2018	Mackie, P.
Pow Burn estuary, south of Troon	NS32	NS3397128259	2015	Gardner, Z., Smart, G. & Wilson, A.
St. Nicholas Golf Club pond, by	NS32	NS3420824639	2019	Crawford, C. & Smart, G.
Prestwick Dunes	NS32	NS32N	2015	Hawker, D., McKinnon, J., McTeague, E. & Pankhurst, A.
Western Gailles Golf Course	NS33	NS3135	2019	Smart, G.
Irvine beach front	NS33	NS33D	2019	Smart, G.
Bogside	NS33	NS33E	2019	Mackie, P.
Troon North Sands and town	NS33	NS3230	2014	Rutherford, A.
Gailles – railway access track	NS33	NS3235	1997	Blane, J.
Shewalton Sandpits SWT Reserve	NS33	NS322370	2012	Smart, G.
Eglinton roundabout, Irvine	NS34	NS315418	1993	Watson, K.
Ballantrae area	NX08	NX08	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS32 (at Low Green in Ayr, at Newton Parish and at Monkton), NS41, NX09 & NX19. The pattern is therefore one of this taxon having been lost from most of its southern locations along the vice-county's coast (with the exception of the station thought to persist at Ballantrae) while persisting further to the north.

Corallorhiza trifida Chatel

Coralroot Orchid

National Status: *Scarce, Vulnerable*.Local Status: *Rare*.

Native. A saprophytic herb usually found in shaded, damp carr on raised mires and lake margins, but which also occurs in dune-slacks. More rarely, it grows in tall-herb fen, in woods and on moorland. It may colonise secondary habitats, including plantations and quarries. Previously overlooked its national distribution is probably stable.

Site	Hectad	Gridref	Latest Date	Recorder
Craufurdland Castle Loch	NS44	NS4541	1987-1999	* The Grid reference is derived from an earlier record.

One 1910 record, now thought to be lost, also exists for hectad NS24. It should be noted that this species was not refound during a dedicated recording trip to the relevant tetrad in 2012.

Crambe maritima L.

Sea Kale

National Status: *Not Scarce, Least Concern*.Local Status: *Scarce*.

Native. A long-lived perennial herb of shingle and boulder beaches, very occasionally found on dunes (but only where these overlay shingle) and on cliffs. Nationally it has declined in parts of its British range, probably because of sea-defence works which have destroyed its shingle habitats. On the other hand it has increased elsewhere, perhaps because it is now rarely gathered as a vegetable and its habitats are usually ungrazed.

Site	Hectad	Gridref	Latest Date	Recorder
Girvan Mains, north of	NS10	NS1900	1993	Stirling, A. McG.
Dunure Harbour, north of	NS21	NS256165	1988	Stirling, A. McG.
Ardrossan Harbour	NS24	NS2242	2003	Zonfrillo, B.
Girvan	NX19	NX184971	2018	Grace, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (in Stevenston Parish) & NS33. It should be noted that the Girvan Mains, north of, record was not refound during a dedicated recording trip to the relevant tetrad in 2019.

Crithmum maritimum (L.)

Rock Samphire

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Cruciata laevipes at Troon © Mackie, P.

Native. A fleshy perennial herb of spray-drenched rock crevices and ledges on sea-cliffs, coastal rocks and on stabilised shingle; also in maritime grassland and artificial habitats like harbour walls and stone sea defences. It appears indifferent to soil reaction, being found on many rock types from chalk and limestone to granite. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Barwhin Point	NS20	NS2209	2000	NTS staff
Dunure, cliffs south of	NS21	NS2414	1988	Stirling, A. McG.
Heads of Ayr	NS21	NS21Z	2008	Rutherford, A.
Troon, near ballast bank	NS33	NS3073531271	2018	Mackie, P.
Bennane Head SSSI	NX0986	NX0986	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS14 & NS21 (in the Culzean Castle Grounds). It should be noted that the Bennane Head SSSI record was not refound during a short recording trip to the relevant monad in 2012.

Cruciatum laevipes Opiz

Crosswort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Cruciata laevipes at Kilwinning © Mackie, P.

Native. A perennial herb of deep, well-drained neutral or calcareous soils, typically occurring in ungrazed grassland, open scrub, hedge banks, woodland rides and edges, and on waysides. Generally its national distribution remains stable.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer, Stevenston	NS24	NS24	1993	Miller, E.
Stevenston to Whitehirst Road	NS24	NS2830744237	2017	Mackie, P.
Stewarton, southwest of	NS44	NS44C	2016	Crawford, C., Krause, A. & Smart, G.
Balloch Burn, road verge near	NX39	NX33429496	2019	Crawford, C., Hannah, A. C. & MacKinnon, D.

Earlier records for the species, now thought to be lost, also exist for hectads NS31, NS32, NS34 & NS43.

Dactylorhiza incarnata (L.) Soó.

Early Marsh Orchid

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.**Dactylorhiza incarnata* at Grey Hill © Cozzolino, N.

Native. A tuberous perennial herb of calcareous fens, ditches, marshes, wet meadows and upland flushes on base-rich or calcareous soils. It can be a robust plant, especially in the south, and may be abundant in suitable habitats. Nationally it has suffered losses due to drainage and agricultural improvement of fens and marshes.

Site	Hectad	Gridref	Latest Date	Recorder
Auchalton Meadows SSSI	NS30	NS335036	2006	Smart, G.
Boghead Burn, Cumnock	NS62	NS62	1996	From 'consultant's report', recorded not noted.
Bennane Burn	NX08	NX0976686236	2012	Crawford, C., Lang, D. A. & Smart, G.
Bennane Head	NX18	NX1062488007	2012	Jannink, M. & Stanley, P. D.
Liggetcheek, roadside at	NX18	NX1126385709	2015	Gardner, Z., MacKinnon, J. & McIntosh, J.
Balhamie & Littleton Hills	NX18	NX18I	2015	Dodd, M., Hawker, D. & McTeague, E.
Pinbain Burn, near	NX19	NX157922	2002	Lang, D. A.
Grey Hill Grasslands SWT Reserve	NX19	NX19R	2017	Cozzolino, N.

On the occasions where the subspecies has been recorded for these records, all are subsp. *incarnata*. Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS30 (at Knockinculloch), NS31, NS40 & NS44.

Descurainia sophia (L.) Webb ex Prantl

Flixweed

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An archaeophyte annual, or rarely biennial, herb which is locally abundant as a weed in arable fields in light soils in eastern England. Elsewhere, it can occur in long-established populations, but is usually a casual in waste places. This species suffered a considerable decline in lowland Britain before 1930, but there has been little change subsequently. It appears to be resistant to many herbicides.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry Golf Course dump	NS20	NS20130722	2011	Crawford, C.

This species has never been confirmed from any other Ayrshire locations.

Diphasiastrum alpinum (L.) Holub

Alpine Clubmoss

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An evergreen herb of short acidic grassland on mountains and moors, where it grows on moist but well-drained, thin peaty soils, especially those directly overlying rocks. More rarely it occurs on acidic sands. Vegetative propagation is much more frequent than sexual reproduction, which usually takes place on bare, disturbed ground. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
South of New Cumnock	NS60	NS60	1987-1999	*
East of Muirkirk	NS72	NS72	1987-1999	*
Shalloch on Minnoch	NX39	NX3992490833	2019	Jury, S.
Kirrieroch Hill, west ridge	NX48	NX419871	2019	McIntosh, J. W. & Moir, I.
Tarfessock	NX48	NX48E	2019	McCleary, J.
Mullwharchar	NX48	NX48N	1994	McCosh, D. J.
Loch Bradan Reservoir, disused pit to northwest of	NX49	NX4080897964	2015	Fraser, J., Hawker, D., Lang, D. A. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS26 & NX39 (at Rowantree Hill, Barr).

Diplotaxis tenuifolia (L.) DC.

Perennial Wall-rocket

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A perennial archaeophyte most common in warm, dry habitats - occurring in waste ground, on walls & banks, and in quarries & railway sidings. Lowland. The range of *D. tenuifolia* underwent a marked spread westwards in the late 19th century, and this is still continuing albeit at a slower rate. Remarkably, the distribution is still centred on ports and industrial areas.

Site	Hectad	Gridref	Latest Date	Recorder
Stevenston site, Ardeer	NS23	NS2815139753	2000	Dargie, T.

The Grid reference given for the Ardeer site is a central one, in tetrad NS23Z, for a large population that just straddles the tetrad boundaries to the west (NS23U) and to the northeast (NS24V) – therefore also straddling the NS23/NS24 hectad boundary. The only other earlier Ayrshire record for the species, now thought to be lost, was from NS32 in 1901.

Drosera anglica Huds.

Great Sundew

National Status: *Not Scarce, Near Threatened.*Local Status: *Scarce.**Drosera anglica* at Low Moss © Smart, G..

A native insectivorous, rosette-forming perennial herb growing in the wetter parts of raised and blanket bogs (often in standing water), in flushed valley bogs, on stony lake shores and, more rarely, in calcareous mires. Generally lowland, it has been declining since the 19th century due to drainage, eutrophication and peat extraction.

Site	Hectad	Gridref	Latest Date	Recorder
Dalmellington Moss	NS40	NS465064	2017	Smart, G.
Low Moss, Lugar	NS62	NS62A	2019	Shanks, S.
Airds Moss	NS62	NS63702573	2019	Harding, M.
Loch Skelloch	NX49	NX49D	2001	Stanley, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS33, NS40, NS53, NS62 (elsewhere within the Muirkirk Uplands SSSI) & NS63.

Drosera intermedia Hayne

Oblong Leaved Sundew

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An insectivorous, rosette-forming perennial herb found on wet heaths, valley- and raised bogs, and in a band at the edge of oligotrophic lochs, most often on acidic peat over which water continuously seeps. Nationally it is decreasing through drainage, afforestation, peat extraction and the loss of lowland heath.

Site	Hectad	Gridref	Latest Date	Recorder
North East of Largs	NS26	NS26	1987-1999	*
Dalmellington Moss	NS40	NS464064	2008	Smart, G.
Airds Moss SAC	NS62	NS61462456	2016	Cozzolino, N. & MacGregor, A.

Earlier records for the species, now thought to be lost, also exist for hectads NS50 & NX27.

Dryopteris expansa (Sw.) Underw.

Northern Buckler Fern

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. A deciduous fern found growing in open wet woodland and around rock outcrops at low altitudes, and in damp, sheltered hollows of upland boulder scree. Its substrates are usually mildly acidic, but it can grow in scree derived from quite base-rich mica-schists. Not mapped as a separate species until the late 1970s. Some lowland sites have been lost to woodland clearance, but upland sites are relatively stable. The species is, however, difficult to identify and is almost certainly under-recorded.

Site	Hectad	Gridref	Latest Date	Recorder
South of New Cumnock	NS60	NS60	1987-1999	*

This species has never been confirmed from any other Ayrshire locations.

Dryopteris oreades Fomin

Mountain Male Fern

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. This deciduous fern grows in colonies on well-drained rocky ledges, steep, loose scree slopes and in gullies. Substrates include relatively acidic sandstones, slates and mica-schist. It is very sensitive to grazing, often becoming confined to inaccessible ledges and unstable scree slopes in heavily grazed areas. Nationally the species is probably stable, although it still remains under recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer	NS33	NS30323812	2006	Dargie, T.
Stey Amry, New Cumnock	NS60	NS60	1988	Stewart, O. M. & Stirling, A. McG.
Tarfessock – Kirriereoch Hill	NX48	NX4088	1987	Stirling, A. McG.

The Grid reference given for the Ardeer record is a central one for a population that has previously been recorded as just straddling the hectad boundary into NS23 to the west. Earlier records for the species, now thought to be lost, also exist for hectads NS30 & NS60 (at Blackcraig Hill, Glen Afton).

Elatine hexandra (Lapierre) DC.

Six-stamened Waterwort

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.*

Native. *E. hexandra* grows as an annual on exposed mud at the edge of lakes, reservoirs, ponds and flooded gravel-pits, or submerged on open substrates in shallow, oligotrophic to eutrophic water. When submerged it may sometimes persist as a short-lived perennial. Like many species in this habitat, it is subject to large annual fluctuations in numbers.

Site	Hectad	Gridref	Latst Date	Recorder
Martnaham Loch	NS31	NS31Y	1996	Day, J., Duncan, W. & Willby, N. J.
Irvine Beach Park pond	NS33	NS3037	2019	Crawford, C., Hannah, A. C. & Smart, G.
Loch Muck	NS50	NS51290118	2019	Crawford, C., Hannah, A. C. & Lang, D. A.
Kilantringan Loch	NX07	NX090790	1996	Day, J., Duncan, W. & Willby, N. J.
Linfern Loch	NX39	NX367980	1996	Day, J., Duncan, W. & Willby, N. J.

One pre-1970s record, now thought to be lost, also exists for hectad NS20. It should be noted that the Kilantringan Loch record was not refound during a dedicated recording trip to the relevant tetrad in 2019 – though this may have been due to higher water levels at that time.

Elatine hydropiper L.

Eight Stamened Waterwort

National Status: *Scarce, Least concern.*Local Status: *Rare.*

Native. This is an annual which grows in shallow water or on damp mud or silty sand exposed at the water's edge. It is confined to mesotrophic or eutrophic habitats. Although the species has disappeared from S.E. England, it was first recorded in Scotland in 1968 and has since been found in many more sites there.

Site	Hectad	Gridref	Latest Date	Recorder
Kilbirnie Loch	NS35	NS35H	2015	Watson, J. K.
Martnaham Loch SSSI	NS31	NS394174	2019	Crawford, C., Hannah, A. C. & Smart, G.

The Grid reference given for the Martnaham Loch record is a central one for a population that spreads to the east into hectad NS41. This species has never been confirmed from any other Ayrshire locations.

Eleocharis acicularis (L.) Roem. & Schult.

Needle Spike Rush

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. A rhizomatous perennial herb growing on the margins of lakes, ponds, reservoirs and rivers, in sites subject to winter flooding, and fully aquatic in shallow, still or slow-moving mesotrophic to eutrophic water. Nationally its distribution is probably stable.

Site	Hectad	Gridref	Latest Date	Recorder
Loch Spallander	NS30	NS30	1995	Blane, J.
Bogton Loch	NS40	NS468055	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS35, NS50 & NX49. It should be noted that the Bogton Loch record was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Eleocharis multicaulis (Sm.) Desv.

Many Stalked Spike Rush

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. A densely tufted perennial herb mainly of acid bogs, wet heath, valley mires, pools and wet hollows over peat, and at the edge of acidic lakes; also occurring in coastal dune-slacks. Nationally much better recorded than previously.

Site	Hectad	Gridref	Latest Date	Recorder
South West of Ayr	NS21	NS21	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS25, NS30 & NX49.

Eleocharis uniglumis (Link) Schult

Slender Spike Rush

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial herb, predominantly of coastal habitats, growing in damp dune-slacks, saltmarshes, short, brackish grassland and pools in the spray zone. It also occurs inland in base-rich, wet meadows and calcareous marshes. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry coast	NS10	NS10	1987-1999	*
Ardrossan coast (north tetrad)	NS24	NS24D	2015	Watson, K. J.
Irvine – Garnock estuary	NS24	NS2941	2011	Strachan, I.
Largs – Fairlie	NS25	NS25	1987-1999	*
Troon Ballast Bank, south of	NS33	NS31473065	2019	Mackie, P.

One pre-1970 record, now thought to be lost, also exists for hectad NS22.

Eleogiton fluitans (L.) Link

Floating Club Rush

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. A perennial herb found mainly on peaty, acidic substrates in, or on the margins of, slow-flowing streams, ditches, pools and the sheltered shores of some larger lakes and tarns, often in seasonally flooded sites. Nationally declining due to drainage and loss of lowland heaths.

Site	Hectad	Gridref	Latest Date	Recorder
Feoch Meadows to Darnaconnar	NX28	NX28R	2008	BSBI excursion.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

The Loch Doon population spreads across from hectad NX49 to hectad NS40. Earlier records for the species, now thought to be lost, also exist for hectads NS35 & NX27.

Epilobium roseum Schreb.

Pale Willowherb

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb of damp disturbed places, found near streams and canals, in woods, on shaded banks, and in street gutters and gardens. Nationally any distributional trends are difficult to discern.

Site	Hectad	Gridref	Latest Date	Recorder
Culzean walled garden	NS20	NS2309	1998	Stanley, P. D.
South West of Ayr	NS21	NS21	1987-1999	*
Hawkhill Ave, Ayr	NS32	NS34482250	2008	Green, P. R.
Hannah Research Institute Estate	NS32	NS32	2008	Miller, T
Cockenzie Disused Railway	NS34	NS34C	2015	Watson, K. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 & NS43. It should be noted that the Culzean walled garden record was not refound during a dedicated recording trip to the relevant tetrad in 2019.

Equisetum hyemale L.

Rough Horsetail, Dutch Rush

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native evergreen herb, growing in permanently moist soils, typically in shady woodland beside streams and rivers. Also occurs in flushes and on sand dunes. Nationally although many sites were lost to drainage, many new sites are known due to better recording.

Site	Hectad	Gridref	Latest Date	Recorder
Hamilton Bridge, Water of Girven	NS30	NS30C	1998	From SWT data, recorder not noted.
Barnsheen Burn, west of Patna	NS31	NS3710	1996	From SWT data, recorder not noted.
River Ayr at Auchincruive	NS32	NS32W	2015	Crawford, C.
Ayr Gorge Woodlands	NS42	NS458259	2017	Philp, B.
Failford, woodland by River Ayr	NS42	NS4626	2018	Cobb, P.
Cessnock Water, Carnell	NS43	NS43R	1999	Mackie, P.
Craigenconnor	NS43	NS43W	2009	Green, P. R.
Dumfries House	NS52	NS538207	2017	Philp, B.
Glenmuir Water, woods at Wallaceton	NS62	NS60482145	2018	Crawford, C., Hannah, A. & Mackie, P.

The Grid reference for the Ayr Gorge Woodlands population is the most recently recorded for a population that has often been found extending into monad NS4625 to the east (Tetrad NS42S). This species has never been confirmed from any other Ayrshire locations. It should be noted that the Hamilton Bridge, Water of Girvan record was not refound during a dedicated recording trip to the relevant tetrad in 2019.

Eriophorum latifolium Hoppe

Broad Leaved Cottongrass

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial herb of open sites, growing in wet, base-rich lowland meadows and mires, and in fens and calcareous flushes in the uplands. Nationally declining due to afforestation and agricultural improvement.

Site	Hectad	Gridref	Latest Date	Recorder
Knockdon Craig	NS40	NS445017	2015	Dadds, N.
Auldraigoch plantation, near corner of	NS40	NS438017	2015	Dadds, N.
Glen Afton	NS60	NS6306	1987	Stirling, A. McG.
Shiel Burn and surroundings	NS62	NS6611424353	2019	Harding, M.
Auldhouse Water Treatment Works, above	NS72	NS7126	2015	Crawford, C., Fraser, J. & McIntosh, J.
Littleton Hill	NX18	NX1231186388	2015	Dodd, M., Hawker, D. & McTeague, E.
Knockormal Hill	NX18	NX1388	2019	Whytock, R. T.
Grey Hill, near, Lendalfoot	NX19	NX19	1988	Blane, J. & Stirling, A. McG.
Penkill-Barr-Pinmore	NX29	NX29	1987-1999	*
East of Barr	NX39	NX39	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS30, NS40 (to the southeast of Dalmellington), NS50, NS72 (to the north of Connor Hill), NX18 (near Moak Hill in Lendalfoot) & NX49. The Knockdon Craig and corner of Auldraigoch plantation records could potentially be considered as parts of the same population. It should be noted that the Glen Afton record was not refound during a dedicated recording trip to the relevant tetrad in 2013.

Erophila glabrescens Jord.

Glabrous Whitlow Grass

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This segregate has been recorded from limestone rocks, pavements and hill-slopes, chalk downland, rocky river- and streamsides, river shingle, sand dunes and sandy grassland, walls, roadside verges, crevices in concrete and in pavements, loose road metal and gravelly paths. Not recognised in national floras in 1987. It is not always easy to separate this species from *E. verna sens. str.* It is very under-recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Kilmarnock	NS43	NS43J	2013	Hannah, A. C.
Stewarton, northwest of	NS44	NS44D	2016	Cozzolino, N., Hannah, A. & Lang, D. A.

Though the Kilmarnock location has been known since at least 2000, this species has not been recorded at any other Ayrshire locations.

Eryngium maritimum L.

Sea Holly

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

Native perennial herb occurring on coastal sites, mainly on mobile dunes and occasionally on shingle. Although known in Scotland before 1930 it seems to have almost disappeared from most of its sites there. This species disappeared from most of its sites in N.E. England and E. Scotland before 1930, for reasons which are unclear. There has evidently been some further national decline since then.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens shore	NS20	NS2008	2010	Smart, G.
Stevenston shore	NS24	NS24	1998	Frew, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS20 (to the north of Maidens), NS24 (both at West Kilbride and at Ardrossan), NS25, NS32 (at each of Monkton, Prestwick and Ayr), NX08 & NX19.

Erysimum cheiranthoides L.

Treacle Mustard

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An annual archaeophyte, locally frequent in arable fields but common also as a weed of waste ground, roadsides and railways. It prefers sandy ground. There is archaeological evidence of this species in Bronze Age and Roman Britain. It is susceptible to herbicides and has declined since 1950 as an arable weed, but in other habitats it seems stable or is even increasing as a contaminant of clover- or grass-seed.

Site	Hectad	Gridref	Latest Date	Recorder
Ardneil Bay	NS14	NS1848	2010	Smart, G.
South Seamill shore	NS24	NS2046	2010	Smart, G.
Greenock Mains, B743 roadside	NS62	NS63112720	2016	Cozzolino, N. & Lang, D. A.

Earlier records for the species, now thought to be lost, also exist for hectads NS32 & NX08.

Erysimum cheiri (L.) Crantz.

Wallflower

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An archaeophyte perennial herb widely naturalised on cliffs, old walls and rocks, particularly on calcareous substrates where it is often very persistent. It tolerates poor, thin, dry soils, but a warm site is essential. *E. cheiri* has been cultivated since medieval times, and its first record as a wild plant was as long ago as 1548. Nationally it appears to be increasing, although this may reflect the more enthusiastic recording of non-native species in recent years. A plant of early garden origin.

Site	Hectad	Gridref	Latest Date	Recorder
Carleton, Lendalfoot	NX18	NX1389	2013	Rutherford, A.

Earlier records for the species, now thought to be lost, also exist for hectads NS20 & NS21.

Euphorbia lathyris L.

Caper Spurge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A biennial archaeophyte of disturbed ground and waste places, including roadsides, abandoned gardens, old quarries and rubbish tips, often near human habitation; it also occurs in open woodland. The seeds are very long-lived. Nationally it is persistent in a few woods in southern England, and a casual or naturalised alien in other areas, originating as an escape from cultivation or from bird-seed. It is often grown in gardens as an ornamental, and has a reputation for deterring moles.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine – Troon	NS33	NS33	1987-1999	*

This species has never been confirmed from any other Ayrshire locations.

Euphorbia paralias L.

Sea Spurge

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.**Euphorbia paralias* at Dipple shore © Crawford, C.

Native. A deep-rooted perennial herb, thriving on free-draining mobile or semi-stable sand dunes, often in the company of *E. portlandica*. It also occurs along the drift-line of sandy foreshores and less frequently on shingle. Nationally its distribution is stable, though there have been some local losses, due to excessive disturbance of its coastal habitats.

Site	Hectad	Gridref	Latest Date	Recorder
Dipple shore	NS10	NS19880227	2019	Crawford, C.
Stevenston Beach LNR	NS24	NS24Q	2019	Smart, G.
Ballantrae	NX08	NX0814682750	2014	Crawford, C.

This species has never been confirmed from any other Ayrshire locations.

Euphrasia arctica Lange ex Rostrup

Arctic Eyebright

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Uncertain – but Scarce on the basis of available records.*

Native. An annual, often common in damp, rough grasslands, pastures, hay meadows, river banks and on roadsides. This is a very variable tetraploid taxon, and is under-recorded both because of recent changes in the taxonomic treatment of *E. arctica sens. lat.* And through confusion with *E. nemorosa* and hybrids with that species.

Site	Hectad	Gridref	Latest Date	Recorder
Chapelton Wood	NS30	NS322039	1987-1999	* The Grid reference is derived from an earlier record.
Patna – Dalmellington	NS40	NS40	1987-1999	*
Dalmellington – New Cumnock	NS50	NS50	1987-1999	*
Thirdpart	NS52	NS527213	2015	Crawford, C.
Drumlamford Loch	NX27	NX27	1987-1999	* The exact location is derived from an earlier record.
Feoch Meadows SSSI	NX28	NX28	1995	Stirling, A. McG.
Barr	NX29	NX29S	2018	Calvey, C., Crawford, C. & Hannah, A. C.
Balloch Plantation	NX38	NX374873	2019	Crawford, C., Hannah, A. C. & Lang, D. A.
Dalquhairn	NX39	NX3296	2018	Hannah, A. C., Lang, D. A. & Mackie, P.
South of Loch Macaterick	NX48	NX48	1987-1999	*

Most recorders in Ayrshire – especially in recent years – have tended to record all eyebright taxa as *Euphrasia* agg. As a result, it is possible – even likely – that this taxon is more common in the vice-county than the existing records would suggest. All Ayrshire records for this taxon are considered to be of subspecies *borealis*. Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both at Ardeer – though unconfirmed – and at an old railway cutting near Kilwinning), NS26, NS31, NS43, NS52 & NS62.

Euphrasia confusa Pugsley

Confused Eyebright

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Uncertain – but Rare on the basis of available records.*

Native. An annual of grazed pasture and grassy heathland on free-drained, acidic or calcareous soils. It is especially characteristic of hill pastures in N. & W. Britain, but is occasionally found in open vegetation on sandy soils elsewhere. *E. confusa* is a widespread and frequent tetraploid species which has not changed appreciably in its British distribution in recent years although it is now better recorded. As with other *Euphrasia* taxa, however, extensive hybridisation makes identification difficult and it is likely to be under-recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Littleton Hill	NX18	NX129863	2015	Dodd, M., Hawker, D. & McTeague, E.
Loch Maberry, near	NX27	NX286760	1987-1999	* The Grid reference is derived from an earlier record.
Dalquhairn	NX39	NX3296	2018	Hannah, A. C., Lang, D. A. & Mackie, P.

Most recorders in Ayrshire – especially in recent years – have tended to record all eyebright taxa as *Euphrasia* agg. As a result, it is possible – even likely – that this taxon is more frequent in the vice county than the existing records would suggest. Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS16, NS20, NS21 (unconfirmed), NS24, NS32, NS33, NS40, NS50, NS62, NX29 (both at Penkill and to the south of Dalfask Hill) & NX49. This would suggest a significant decline at county level, however the under-recording of *Euphrasias* to species level as noted above makes this difficult to verify.

Euphrasia micrantha Reichenb.

Slender Eyebright

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Uncertain – but Scarce on the basis of available records.*

Native. An annual of dry or damp places on acid heaths and moorland. It also grows on open clay and sandy substrates in disturbed habitats, such as disused gravel-pits and old airfields. Nationally this species has declined in S.E. England, where it may now be almost extinct. Elsewhere, many apparent losses are due to under-recording or former confusion with other taxa, and it is likely to be largely stable.

Site	Hectad	Gridref	Latest Date	Recorder
Kilruskin	NS25	NS20945141	2017	Hannah, A.C.
Patna – Dalmellington	NS40	NS40	1987-1999	*
Dalhanna Hill	NS60	NS619109	2019	Crawford, C., Hannah, A. C., Lang, D. A. & McCleary, J.
Littleton Hill	NX18	NX129863	2015	Dodd, M., Hawker, D. & McTeague, E.
Loch Maberry, near	NX27	NX2876	1987-1999	* The Grid reference is derived from an earlier record.
Feoch Meadows SSSI	NX28	NX2699982058	2004	McLeary, J.
East of Drumlamford	NX37	NX37	1987-1999	*
Kirriereoch	NX38	NX38	1988	Stirling, A. McG.
South of Loch Macaterick	NX48	NX48	1987-1999	*

Most recorders in Ayrshire – especially in recent years – have tended to record all eyebright taxa as *Euphrasia* agg. As a result, it is possible – even likely – that this taxon is more frequent in the vice-county than the existing records would suggest. Only one additional record for *E. micrantha* specifically, now thought to be lost, also exists for hectad NS21 in 1970.

Euphrasia scottica Wettst.

Scottish Eyebright

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Uncertain – but Scarce on the basis of available records.*

Native. An annual which is particularly associated with flush communities and wet moorland in upland areas. The distribution of this tetraploid species is somewhat uncertain because of confusion with other taxa and hybridisation. It is certainly under-recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Rowantree Hill – Tourgill Burn	NS26	NS26G	2017	Hannah, A. C.
Patna – Dalmellington	NS40	NS40	1987-1999	*
Loch Muck	NS50	NS5100	2014	Hannah, A. C.
Meadowhead	NS53	NS5431	2017	Hannah, A. C. & Mackie, P.
New Cumnock area	NS61	NS61	1987-1999	*
Girvan – Lendalfoot	NX19	NX19	1987-1999	*
Carmaddie Brae & Cross Burn	NX48	NX48	1988	Stewart, O. M. & Stirling, A. McG.

Most recorders in Ayrshire – especially in recent years – have tended to record all eyebright taxa as *Euphrasia* agg. As a result, it is possible – even likely – that this taxon is more frequent in the vice county than the existing records would suggest. Earlier records for the species, now thought to be lost, also exist for hectads NS30 & NX29.

Euphrasia tetraquetra (Breb.) Arrond.

Western Eyebright

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Uncertain – but Scarce on the basis of available records.*

A native annual of short turf on exposed coastal cliffs and sand dunes, but also locally inland on chalk and limestone pastures. This species is often confused with other *Euphrasia* taxa, particularly in N. Scotland and this is reflected its known national distribution.

Site	Hectad	Gridref	Latest Date	Recorder
Meigle Shore	NS16	NS1965	1995	Stirling, A. McG.
East of Turnberry	NS20	NS20	1987-1999	*
North East of Largs	NS26	NS26	1987-1999	*
Glen App	NX07	NX07	1987-1999	*

Most recorders in Ayrshire – especially in recent years – have tended to record all eyebright taxa as *Euphrasia* agg. As a result, it is possible – even likely – that this taxon is more frequent in the vice-county than the existing records would suggest. Earlier records for the species, now thought to be lost, also exist for hectads NS21 & NX19.

Festuca altissima All.

Wood Fescue

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A long-lived perennial herb of moist, wooded valleys, on rocky slopes, deciduous wood margins and streamsides, especially on seepage lines or by waterfalls. Nationally better recording has revealed the species to be more frequent than has previously been thought.

Site	Hectad	Gridref	Latest Date	Recorder
River Ayr, near Holmston	NS32	NS32	1996	McAllister, H. A.
Ness Glen	NS40	NS4778402378	2015	Crawford, C., Fraser, J., Hawker, D. & McTeague, E.
Ayr Gorge Woodlands	NS42	NS455247	2015	Smart, G.
Ayr Gorge Woodlands	NS42	NS463255	2016	Smart, G.
Crosshill, Barskimming	NS42	NS42	1993	Tanner, I.

One pre-1970 record, now thought to be lost, also exists for hectad NS30.

Festuca arenaria Osbeck

Rush Leaved Fescue

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An extensively rhizomatous perennial found on sand dunes and open sandy shingle; also, more rarely, on cliff-tops, ledges and rough ground near the sea. On sand dunes it typically occurs on semi-mobile foredunes. Nationally its distribution is uncertain as it is now taken to include *F. juncifolia* and *F. rubra* subsp. *arenaria* which have not been well documented in the past.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine	NS33	NS3043437932	2012	Jannink, M. & Stanley, P.D.
Troon north shore	NS33	NS3231	2010	Smart, G.

One 1970s record, now thought to be lost, also exists for hectad NS14.

Festuca filiformis Pourr.

Fine-leaved Sheep's Fescue

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This densely tufted perennial grass occurs on heaths and moors, in open woodland and parkland and other grassy places, usually on acidic, sandy, well-drained soils.

In recent years *F. filiformis* has become more widely known, and has become much better recorded. There has, however, been much confusion between it and other taxa within with *F. ovina* species-complex, and it may in fact be over-recorded in some areas but overlooked in others.

Site	Hectad	Gridref	Latest Date	Recorder
Renfrewshire Heights SSSI, Rotten Burn	NS26	NS2568	1989	Stirling, A. McG.
West of Loch Doon	NX49	NX49	1987-1999	*

This species has never been confirmed from any other Ayrshire locations.

Filago minima (Smith) Pers.

Small Cudweed

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An annual of dry, open, infertile, acidic to neutral soils in a wide range of habitats, including arable fields, open grassland, quarries and mine spoil, woodland tracks, sandy heaths, sand-pits and dunes. Nationally the species is nowhere particularly frequent, and is in continuing slow decline across much of its British and Irish range.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry Golf Course	NS20	NS20C	2011	Crawford, C.
Turnberry Golf Course	NS20	NS2006	2011	Crawford, C.
Ardeer	NS23	NS23Z	2019	Smart, G.
Saltcoats – Dalry	NS24	NS24	1987-1999	*
Kilruskin	NS25	NS20985140	2017	Hannah, A. C.
Ardeer-Bogside	NS33	NS33E	2019	Mackie, P.
Dundonald Links – Gailies Marsh	NS33	NS33H	2019	Smart, G.
Oldhall Ponds	NS33	NS3382036590	2005	Loizou, T.
Loudoun Hill	NS63	NS604373	2019	Smart, G.
Glenbuck	NS72	NS7529729461	2018	Crawford, C., MacIver, C., Mackie, P. & Philip, M.

The two Turnberry Golf Course records may in fact be better considered as part of the same population. This species has never been confirmed from any other Ayrshire locations.

Filago vulgaris Lam.

Common Cudweed

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Rare.*

Native. An autumn- or spring-germinating annual of dry, open, acidic to neutral and occasionally calcareous habitats including open grassland, quarries and rocky ledges, sand-pits and dunes, sandy heaths and tracks, and arable and other cultivated ground. Nationally declining due to changes in agricultural practice.

Site	Hectad	Gridref	Latest Date	Recorder
Asselfoot	NX29	NX20179010	2008	Green, I. P.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24 (both from Kilbride Parish and from Stevenston Parish), NS34 & NX08. All but the last of these were recorded in the 19th century however.

Filipendula vulgaris Moench

Dropwort

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*
Local Status: *Rare.*

Native. A perennial herb, mainly occurring in calcareous grassland on chalk and limestone downs, and in rough pasture; also found on coastal and inland heaths over limestone, chalk and other basic rocks, including serpentine. Nationally, apart from some losses in southern England because of the lack of grazing or conversion of grassland to arable, its distribution seems unchanged. It is grown in gardens, sometimes escaping and becoming naturalised.

Site	Hectad	Gridref	Latest Date	Recorder
Knockdaw Hill, southern cliffs	NX18	NX15758865	2015	Hannah, A., Lang, D. A. & Middleton, A.
Knockdaw Hill SSSI	NX18	NX164889	2002	Lang, D. A.

One 19th century record, now almost certainly lost, also exists for hectad NS20.

Fumaria capreolata L.

White Ramping Fumitory

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.**Fumaria capreolata* at Barr © Crawford, C.

Native. A scrambling endemic annual of open scrub, hedge banks and cliffs, and only occasionally found in arable land and gardens. Unlike most other species of *Fumaria*, it can be a winter-annual. *F. capreolata* has declined in its inland sites, where it may only have been casual, but the distribution is stable on or near the coast.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer Road, Stevenston	NS24	NS2758541930	2018	Mackie, P.
Kilwinning, Byrehill Road	NS24	NS2957042303	2018	Mackie, P.
Woodfield, St. Nicholas Golf Club	NS32	NS34102413	2019	Crawford, C. & Smart, G.
Ballantrae area	NX08	NX08	1987-1999	*
Ailsa Craig	NX09	NX0199	1992	Stirling, A. McG.
Girvan, Kennedy's Pass	NX19	NX19	1989	Rutherford, A.
Stinchar Bridge, Barr	NX29	NX273940	2018	Calvey, C., Crawford, C. & Hannah, A. C.

One pre-1970 record, now thought to be lost, also exists for hectad NS20.

Fumaria purpurea Pugsley

Purple Ramping Fumitory

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Native. A scrambling annual of hedge banks, earth-core walls, arable land and gardens on acidic, freely-draining soils, usually most abundant in disturbed places, or in habitats opened up by summer drought. Most occurrences are in spring-sown crops. This species is erratic in its appearance at some sites, and is probably unfamiliar to many recorders. Trends in its distribution are therefore difficult to ascertain, but it seems to be stable in its core areas. Elsewhere it may be declining or overlooked, and at some sites it may have only been casual. Endemic.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr	NS21	NS21Z	2015	Crawford, C., Fraser, J. & Hannah, A.
Limekiln Rd, Ayr	NS32	NS340231	2008	Green, P. R.
Irvine	NS33	NS3138	2019	Mackie, P.
Mauchline, northeast of	NS52	NS5027	2015	McIntosh, J. W., McTeague, E. & Middleton, A.
Barony Bing	NS52	NS5265221752	2015	Crawford, C.

One pre-1970 record, now thought to be lost, also exists for hectad NS33 (at Troon).

Gagea lutea (L.) Ker-Gawler.

Yellow Star of Bethlehem

National Status: *Not Scarce, Least Concern.*

Local Status: *Rare.*



Gagea lutea at Waulkmill Bridge, Blairquhan © Smart, G.

Native. A bulbous perennial herb of moist, base-rich, shady habitats including woods, hedgerows, limestone pavements, pastures, riverbanks and stream banks; sometimes washed down on alluvium in riverine woodland subject to seasonal flooding. Nationally its distribution appears to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Waulkmill Bridge	NS30	NS34420788	2018	Allan, A., Mackie, P., Manas, N. & Smart, G.

One 1950s record, now thought to be lost, also exists for hectad NS25.

Galeopsis speciosa Miller.

Large Flowered Hemp Nettle

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

An archaeophyte annual weed of cultivated, marginal and waste ground, often within root-crops (especially potatoes) on peaty soils. Nationally this species has declined markedly in the last 50 years. It is often associated with traditional arable farming and has suffered where modern methods of cultivation and weed control have been introduced.

Site	Hectad	Gridref	Latest Date	Recorder
Ayr	NS32	NS32	1987-1999	*
Barony Bing	NS52	NS5265221752	2015	Crawford, C.
Auchmannoch	NS53	NS5431	2017	Hannah, A.C. & Mackie, P.
Carslipan Wood, barley field by	NS62	NS62932735	2016	Hannah. A. & Philip, M.
Upper Wellwood track	NS62	NS679261	2017	Philip, M.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24, NS31, NS34, NS41, NS42, NS43, NS51 & NS54.

Gentianella campestris (L.) Börner

Field Gentian

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Not Scarce.*

A native biennial, occasionally annual, herb of mildly acidic to neutral soils in a variety of open habitats, including pastures, hill grassland, grassy heaths, sand dunes, machair and road verges. On limestone it probably indicates surface leaching or the presence of non-calcareous superficial deposits. Nationally *G. campestris* had already suffered a marked decline before 1930 and sites are still being lost through overgrazing in the uplands and the neglect of lowland pastures.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry 'dump'	NS20	NS20250749	1996	Blane, J.
Heads of Ayr	NS21	NS2818	1987-1999	* The Grid reference is derived from an earlier record.
Stevenston shore	NS24	NS275401	1998	Frew, J.
Ardeer	NS24	NS2947840158	2000	Dargie, T.
Auchalton Meadow SWT Reserve	NS30	NS335035	2010	Smart, G.
Straiton, south east	NS40	NS40	1987	McTeague, E.
Nith Bridge SSSI	NS51	NS595139	2000	From SWT data, recorder not noted.
Darvel area	NS53	NS53	1990	From SWT data, recorder not noted.
Loudoun Hill, near	NS63	NS6236	1990	Blane, J.
Troax Farm	NX18	NX1087	2009	Crawford, C.
Rea Glen	NX19	NX1593	1998	Blane, J.
Grey Hill	NX19	NX1706393241	2004	McCleary, J.
Feoch Meadows SSSI	NX28	NX2682	2011	Smart, G.

In some previous years the population at Feoch Meadows has been recorded extending just into the monad & tetrad (NX28Q) to the south of the one noted above. Earlier records for the species, now thought to be lost, also exist for hectads NS21 (at Dunure), NS26, NS34, NS35, NS62 (both at Wellwood, Muirkirk and at Glenmuir Water, Lugar), NX18 (north of Colmonell), NX19 (at Byne Hill) & NX29. It should be noted that the Heads of Ayr record was not refound during a dedicated recording trip to the relevant tetrad in 2015, while the Stevenston shore record was not refound either during similar dedicated recording of the relevant tetrad in 2018.

Geranium pusillum Burm. Fil.

Small Flowered Cranesbill

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual of cultivated land, open summer-droughted grasslands, roadsides and waste places, thriving in well-drained, sandy soils. Nationally its distribution appears stable although because of its similarity with *G. molle*, it may have been overlooked in some areas.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens	NS20	NS2191508564	2011	Smart, G.
Troon north shore	NS33	NS3231	2010	Smart, G.

One 1950s record, now thought to be lost, also exists for hectad NS32.

Glebionis segetum (L.) Fourr.

Corn Marigold

National Status: *Not Scarce, Vulnerable.*Local Status: *Scarce.*

Glebionis segetum at Kilwinning, off Byrehill Road © Mackie, P.

A mainly spring-germinating archaeophyte annual of light, sandy or loamy soils deficient in calcium, found in arable fields and other disturbed habitats, on roadsides, waste ground and rubbish tips. It was a serious weed in Victorian times, but is now much reduced due to improved seed cleaning, liming, herbicides and the shift to autumn-sown crops.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry coast	NS10	NS10	1987-1999	*
North of Largs	NS16	NS16	1987-1999	*
Kilwinning, off Byrehill Road	NS24	NS2957242296	2017	Mackie, P.
Prestwick	NS32	NS32	1987-1999	* The exact location is derived from an earlier record.
Milgarholm Park	NS33	NS325377	2019	Smart, G.
Garnock Floods	NS34	NS30704154	2005	Loizou, T.
Corsehillmuir Wood	NS34	NS3143	2019	Smart, G.
Colmonell area	NX18	NX18	1987-1999	*
Girvan – Lendalfoot	NX19	NX19	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS20, NS21, NS25, NS26, NS30, NS31, NS33 (at Troon), NS34 (at Altonhead Farm), NS41 (both at Coylton and at Patna), NS42, NS43, NS44, NS52, NX07, NX08 & NX09 – suggesting a significant decline at county level.

Glyceria notata Chevall.

Plicate Sweet-grass

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A stoloniferous perennial herb of ditches, streams and muddy pond margins – occurring on more calcareous substrates than other British *Glyceria* species. It reproduces by seed and by detached stolons. Although it was probably under-recorded in the past, there are sufficient older records to suggest that it has declined in parts of southern Britain because of drainage.

Site	Hectad	Gridref	Latest Date	Recorder
Annick Water, south	NS34	NS34K	2015	Watson, K.
Mauchline, northeast of	NS52	NS5027	2015	McIntosh, J. W., McTeague, E. & Middleton, A.
Dumfries House – Auchinleck, south of	NS52	NS52K	2015	Gardner, Z., Gaskell, L. & Pankhurst, A.

This species has never been recorded at any other Ayrshire locations and is a recent addition to the county flora (the 2015 records being the first for the VC).

Gnaphalium sylvaticum L.

Heath Cudweed

National Status: *Not Scarce, Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.*

A short-lived native perennial herb of open communities on dry, acidic, often sandy or gravelly soils. Habitats include heaths and heathy pastures, sand-pits, dunes, tracks and, especially, open woodland and forestry rides in areas of former heathland. Nationally it appears to be declining throughout its range, despite probably being one of the few native vascular plant species to benefit from the extensive afforestation programmes of the 20th century.

Site	Hectad	Gridref	Latest Date	Recorder
ICI Site, Ardeer	NS24	NS24	1993	Stirling, A. McG.
Asselfoot	NX28	NX201898	2008	Green, I. P.

An accepted record also existed from Mochrum Hill, Maybole (NS20) in 1995. However extensive efforts to relocate this station in 2013 failed and it would appear that the habitat is no longer suitable for the species at that site due to undergrazing. Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS26, NS33, NS40, NS53 & NX29.

Goodyera repens (L.) R. Br.

Creeping Ladies Tresses

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Goodyera repens at Darley Plantation © Stobbs, A.

Native. A creeping, evergreen perennial herb of semi-natural and planted coniferous woodland, usually of *Pinus sylvestris*, where it grows in slight to moderate shade in moist layers of moss and pine-needles. Nationally, felling and replanting woodland has caused losses of the species from many sites, as has increased shading and scrub encroachment.

Site	Hectad	Gridref	Latest Date	Recorder
Darley Plantation north, Troon	NS33	NS3330	2019	Stobbs, A.

One 1980s record, now thought to be lost, also exists for hectad NS32. However as this was around a kilometre away from the known station above (in South Wood, Troon) it may have been part of the same population.

Hammarbya paludosa (L.) Kuntze

Bog Orchid

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A native pseudobulbous herb of boggy areas where the water is usually acidic but subject to some lateral movement. Typically it grows amongst saturated *Sphagnum*, but also on peaty mud and among grasses on the edges of runnels and flushes. There has been a dramatic decline in this species caused by drainage of bogs, particularly in the lowlands.

Site	Hectad	Gridref	Latest Date	Recorder
Eldrick Hill, northeast of	NX39	NX372935	1994	From SNH data, recorder not noted.

Two 19th century records, now almost certainly lost, also exists for hectad NS21 – though as both are from the Maybole – Dunure area they may represent the same station. It should be noted that this species was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Hymenophyllum wilsonii Hook.

Wilson's Filmy Fern

National Status: *Not Scarce, Near threatened.*Local Status: *Scarce.*

A native rhizomatous perennial fern, forming dense colonies on a variety of substrates, including sheltered acidic or, rarely, mildly basic rocks, and trees in humid sites. It also occurs on damp upland cliffs, boulder scree and, rarely, old walls. Nationally its distribution is largely stable.

Site	Hectad	Gridref	Latest Date	Recorder
Gogo Water	NS25	NS25	2014	Averis, B.
Paduff Burn & Pundeavon Burn	NS25	NS25Y	2005	From Wind-Hydrogen Ltd. Environmental Statement, recorder not noted.
Upper Garnock	NS26	NS2877560732	2005	From Wind-Hydrogen Ltd. Environmental Statement, recorder not noted.
South Black Burn	NS26	NS24016570	2017	Hannah, A. C.
Glen Garnock	NS35	NS3157	1987	New Atlas date class record, recorder not noted.
Ness Glen SSSI	NS40	NS4702	2017	Whytock, R.T.
Knockburnie Glen	NS50	NS5587209295	2019	Whytock, R.T.
Kilbride Knowe waterfall	NX28	NX2460588045	2018	Whytock, R.T.
Fairy Knowe / Changue Plantation	NX29	NX295925	2019	Whytock, R.T.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both in Ardrossan Parish and in Kilbride Parish), NS25 (both at Hindog Glen, Dalry and at Kairn Hill), NS26 (at Upper Noddsdale), NS40 (both at Benbeoch and near Dalmellington), NS53, NX18, NX39 & NX49 – suggesting a potentially significant decline at county level. It should also be noted that the Glen Garnock record was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Hypericum hirstum L.

Hairy St John's Wort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A perennial herb of well-drained, neutral to basic soils in open or partially shaded habitats including rough and un-grazed grassland, woodland rides and clearings, river banks, roadside banks and verges. Nationally this taxon's distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Kelburn	NS25	NS25	1987-1999	* The exact location is derived from an earlier record.
River Ayr from Oswald's Bridge to Tarholm Bridge	NS32	NS32W	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS42 & NX19. It should be noted that the River Ayr from Oswald's Bridge to Tarholm Bridge record was not refound during a dedicated recording trip to the relevant tetrad in 2012.

Hypochaeris glabra L.

Smooth Cat's-ear

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.*

Native. An annual of open summer-parched grasslands and heathy pastures - on usually acidic, nutrient-poor, sandy or gravelly soils. Also occurring in dune grassland and on sandy shingle. It was formerly widespread as a weed of arable fields and as a wool-shoddy alien. Lowland. *H. glabra* is declining in semi-natural habitats, even though there have been many new records since its full distribution was mapped (Stewart *et al.*) in 1994. It has been lost from some squares as a result of agricultural improvement or loss of grazing. It can easily be overlooked, however, particularly as the flowers close in the afternoon.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer	NS24	NS2778440020	2000	Dargie, T.

Records for a location in hectad NS32, now thought to be lost, also exist up until the 1970s.

Hypopitys monotropa L.

Yellow Bird's-nest

National Status: *Not Scarce, Endangered.*Local Status: *Rare.**Hypopitys monotropa* at Barony Bing, Auchinleck © Carol Crawford

Native. A saprophytic perennial herb usually of leaf litter in shaded woodland; most frequently under *Fagus* and *Corylus* when on calcareous substrates, and under *Pinus* on more acidic soils. It also grows in damp dune slacks, where it is usually associated with *Salix repens*. This species demonstrates a polyploidy complex with two subspecies in Britain and Ireland which are not easily separable morphologically. Although many sites were lost before 1930, the species has suffered further marked decline, particularly in southern Britain, since 1960.

Site	Hectad	Gridref	Latest Date	Recorder
Barony Colliery (disused)	NS52	NS5221	2015	Phelps, B.

This can be a large population scattered throughout the above monad. This species has never been confirmed from any other Ayrshire locations.

Inula helenium L.

Elecampane

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A rather robust, conspicuous and persistent perennial archaeophyte herb, widely if sparsely established from garden outcasts on road- and lane-sides and by woodland margins, but seldom far from habitation. The species has been grown in gardens for its medicinal and ornamental value since at least 995. It is very persistent but it may be in gradual decline.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine Golf Club, Bogside	NS33	NS30723995	2019	Mackie, P.
Barassie Station, north of	NS33	NS33	2009	Rutherford, A.
Treesbanks, Kilmarnock	NS43	NS43	1996	From SWT data, recorder not noted.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS31, NS33 (at Troon) & NS44.

Isoetes echinospora Durieu

Spring Quillwort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A submerged aquatic perennial usually found in nutrient-poor lakes over a wide range of substrates, from rocks and stones to silt and peat. It also grows in more mesotrophic water, such as coastal lakes enriched by wind-borne base salts, lowland reservoirs, slow-flowing rivers and flooded gravel- and clay-pits.

Site	Hectad	Gridref	Latest Date	Recorder
Loch Muck, Dalmellington	NS50	NS5100	1996	Day, J., Willby, N. J. & Duncan, W.
Bogton Loch	NS40	NS468055	1996	Day, J., Willby, N. J. & Duncan, W.

This species has never been confirmed from any other Ayrshire locations.

Isoetes lacustris L.

Quillwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A submerged aquatic perennial found in oligotrophic lakes with a rocky or skeletal substrate. It frequently forms extensive lawns of many square metres at depths up to 2.5 m and rarely deeper. It also occasionally colonises artificial reservoirs. Nationally there is little evidence of change in its distribution, although a few lowland sites have been lost through agricultural eutrophication. Eurosiberian boreal montane element; also in N. America.

Site	Hectad	Gridref	Latest Date	Recorder
Craigdow Loch	NS20	NS2606	1998	From SWT data, recorder not noted.
Martnaham Loch & Woods SSSI	NS31	NS3817	2004	Darwell, A. & Fisher, J.
Loch Doon SSSI	NS40	NS40	2004	Darwell, A. & Fisher, J.
Loch Muck	NS50	NS512007	1996	Day, J., Willby, N. J. & Duncan, W.
Black Loch	NX27	NX240762	1996	Day, J., Willby, N. J. & Duncan, W.
Loch Riecawr	NX49	NX4393	1998	From SWT data, recorder not noted.
Loch Brechowie, near	NX49	NX432958	2018	McCleary, J.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exists for hectads NS40 (at Black Loch) & NX49 (at Loch Macaterick).

Isolepis cernua (Vahl) Roem. & Schult.

Slender Club-rush

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A lowland perennial found in wet coastal grassland, in bare or open sites over damp sand, in peat & mud, in short turf and sometimes in flushes & trickles on rocky cliffs. Some sites for *I. cernua* were lost before 1930, but the distribution appears to be little changed over the last fifty years – even though the recording of this inconspicuous species has improved.

Site	Hectad	Gridref	Latest Date	Recorder
Finnarts Hill burn, top of	NX07	NX048744	2018	Gaskell, L. & Miles, C.

Earlier records for the species, now thought to be lost, also exist for NS24 & NX08.

Juncus inflexus L.

Hard Rush

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A clump-forming perennial herb of wet places by rivers, ponds and lakes, and in marshes, wet fields, ditches and occasionally dune-slacks and fens. It is almost always on base-rich soils, frequently on heavy clays. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr	NS21	NS2932818498	2015	Crawford, C., Fraser, J. & Hannah, A.
Blairland bing and marshy grass	NS24	NS2948	2015	Watson, K. J.
Shewalton Moss	NS33	NS3435	2015	Watson, K.
Mossblown – Mauchline	NS42	NS42	1987-1999	*
Dean Park, Kilmarnock	NS43	NS4339	1987-1999	* The Grid reference is derived from an earlier record.
Tormitchell Quarry	NX29	NX23139417	2018	Lang, D. A., Mackie, P. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at West Kilbride) & NS35. It should be noted that the Dean Park, Kilmarnock record was not refound during a dedicated recording trip to the relevant tetrad in 2013.

Juncus maritimus Lam.

Sea Rush

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A native rhizomatous, clump-forming perennial herb of saltmarshes and saline dune-slacks. It also occurs in areas subject to freshwater seepage on low, exposed rocky cliff-tops and stony sea-loch shores. It is tolerant of a wide range of salinities and soil moisture, occurring at all levels in saltmarshes and in both silty and sandy substrates. Nationally its distribution is generally stable outside of southeastern England where it has declined.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry coast	NS10	NS10	1987-1999	*
Portencross	NS14	NS14U	2015	Watson, K. J.
Hunterston area	NS15	NS15	1987-1999	*
Largs, shore north of	NS16	NS1961	2017	Hannah, A. C.
Largs, coast north of	NS16	NS16W	2011	Hannah, A. C.
Meigle, shore at	NS16	NS16X	2017	Hannah, A. C.
South West of Ayr	NS21	NS21	1987-1999	*
Irvine-Garnock estuary	NS23	NS29863995	2011	Strachan, I.
Garnock Estuary, east	NS24	NS2940	2015	Watson, K. J.
Monkton	NS32	NS32	1987-1999	* The exact location is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at Seamill), NS25, NS33 & NX08.

Juniperus communis L.

Common Juniper

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

A member of a distinctive shrub community on the chalk in southern England, generally growing on shallow rendzinas. Elsewhere it occurs on both acidic and basic soils on rocky hillsides, moorland and maritime heaths, and in *Betula*, *Quercus* and *Pinus* woods. Nationally many stands have an even-age structure and plants may therefore become moribund together. Regeneration is often poor as reproduction from seed is dependent on disturbance or a sudden cessation of grazing. Stands have been eliminated by over-grazing, burning and afforestation.

Site	Hectad	Gridref	Latest Date	Recorder
Ardneil Bank Wood	NS15	NS1750	2004	Hawker, D.
Blackcraig Hill, south of New Cumnock	NS60	NS60	1987-1999	* The exact location is derived from an earlier record.
Portandea	NX07	NX0475	1987-1999	* The Grid reference is derived from an earlier record.
Bennane Head	NX08	NX08Y	1990	Rutherford, A. & Stirling, A. McG.
Knockdaw Hill, southern cliffs	NX18	NX15878865	2015	Hannah, A., Lang, D. A. & Middleton, A.
Pinbain Burn, around	NX19	NX19F	2014	Lang, D. A. & Rutherford, A.
Grey Hill Grasslands	NX19	NX15859226	2014	Smart, G.
Grey Hill	NX19	NX19R	2018	Whytock, R.T.

Many planted juniper bushes can also be found in Ayrshire and not listed above – particularly in hectads NS40 & (to an even greater extent) NS43. Earlier records for the species in the wild flora, now thought to be lost, also exist for hectads NS53, NS63, NX08 (at the coast south of Ballantrae) & NX19 (at Byne Hill). It should be noted that the Portandea record was not refound during a dedicated recording trip to the relevant tetrad in 2018.

Knautia arvensis L.

Field Scabious

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A perennial herb of calcareous and neutral grassland on well-drained, especially basic soils. It is found in chalk and limestone grassland, in rough pasture, open hedgerows and wood borders, and as a colonist on roadside verges, railway embankments and grassy waste ground. It is also a locally common weed of cultivation, especially in field-borders on the chalk. Nationally it has declined during the last half of the 20th century.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer Park	NS24	NS2741	2018	Mackie, P.
Hessilhead	NS35	NS3853	2015	Watson, K. J.
Armsheugh, Galston	NS43	NS43	1991	Griffith, R. S. Ll.
North of Kilmarnock	NS44	NS44	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS32, NS33 (both at Bogside Flats and at Bartonholm, Irvine), NS34, NS35 (at each of Cuff Hill near Beith, near the loch at Kilbirnie and near the railway at Barrmill), NS43 (at Woodhill Quarry, Kilmaurs) & NX17 – suggesting a potentially significant decline at county level.

Lamium hybridum Vill.

Cut Leaved Dead Nettle

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An annual archaeophyte of cultivated, waste and disturbed ground on dry soils, often occurring as a weed of heavily fertilised, broad-leaved crops. Nationally expanding its range, presumably due to its ability to exploit conditions of high fertility. However, it is often confused with *L. purpureum*, so may previously have been under-recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Ardneil coast	NS14	NS18074861	2018	Smart, G.
Heads of Ayr	NS21	NS21Z	1989	Rutherford, A. & Stirling, A. McG.
Saltcoats – Dalry	NS24	NS24	1987-1999	*
Shewalton Sandpits SWT Reserve	NS33	NS327370	2009	Silverside, A.
Trindle Moss Loch, Irvine	NS33	NS3239	2014	Hannah, A. C.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 (at Dunure) & NS32. It should be noted that the Heads of Ayr record was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Lathraea squamaria L.

Toothwort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual or perennial herb, parasitic on the roots of a range of woody plants. Its typical habitats include deciduous woodland, hedgerows, and river and stream banks. Nationally there have been losses throughout its range, the reasons for which are unclear.

Site	Hectad	Gridref	Latest Date	Recorder
Auchincruive	NS32	NS387231	2015	Wilkinson, G.
Dundonald Woods SSSI	NS33	NS33	2000	Mackie, P.
Glen Afton	NS61	NS614115	2006	Woods, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS31, NS42, NS43 & NS52.

Leontodon hispidus L.

Rough Hawkbit

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb of dry, neutral or calcareous soils, occurring in hay meadows, pastures and other grasslands, on roadside verges, railway banks, rock ledges and in quarries. It readily spreads by wind-dispersed seeds into open habitats. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Tourgill Burn	NS26	NS228638	2017	Hannah, A. C.
Shewalton	NS33	NS331	2004	Crawford, C.
Hannah Research Institute Estate	NS32	NS32	2008	Miller, T.
Creoch, near, New Cumnock	NS51	NS592141	1987	Stirling, A. McG.
Auchinleck	NS52	NS547216	2015	Gardner, Z., Gaskell, L. & Pankhurst, A.
Smallburn, south of	NS62	NS6826	2014	Lang, D. A. & Smart, G.
Greenock Water at Blackside	NS63	NS69933029	2019	Crawford, C. & Lang, D. A.
River Ayr & Ayr Walkway	NS72	NS7027	2015	Crawford, C., Fraser, J. & McIntosh, J.
Balhamie Burn, by upper stretch	NX18	NX1289586426	2015	Dodd, M., Hawker, D. & McTeague, E.
Duisk Bridge, Barrhill, around stretch of disused road	NS28	NX23848208	2019	Lang, D. A., McCleary, J. & Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS31, NS43, NS61 & NS62 (at Low Moss, Lugar).

Lepidium campestre (L.) W.T.Aiton

Field Pepperwort

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

An annual or, occasionally, biennial lowland archaeophyte of open grassland and arable fields – particularly on sandy or gravelly soils. Also found on roadsides & walls, in gardens and in waste places. It is often persistent, but occurs just as frequently as a casual. Most losses appear to have occurred since 1950, with a marked decline in some areas.

Site	Hectad	Gridref	Latest Date	Recorder
Barony Bing	NS52	NS5281421833	2015	Crawford, C.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 & NS61.

Lepidium coronopus (L.) Al-Shehbaz.

Swine Cress

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An archaeophyte annual, rarely biennial, herb of nutrient-rich, often compacted soils in open, dry or winter-wet habitats. Typical sites include farmyards, waste ground, paths and particularly gateways. Nationally the distribution of this species is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross Castle	NS14	NS175489	1988	Stirling, A. McG.
Troon	NS33	NS3130	2012	Rutherford, A.
Bankhead Moss, around	NS35	NS35K	2014	Crawford, C.
Downan Farm, Ballantrae	NX08	NX0780	1992	Stirling, A. McG. & B. H. T.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS32 & NX08 (at Bennane Head).

Limosella aquatica L.

Mudwort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual of the muddy edges of rivers, lakes, reservoirs, pools, ditches, rutted tracks and roadsides. It may prefer mildly acidic, nutrient enriched soils. Plants reproduce by seed and also spread by stolons. Though this species is erratic in appearance, and is increasing in Scotland, nationally it appears to be declining in overall terms. Reasons for this include drainage, the infilling of ponds, and lack of grazing.

Site	Hectad	Gridref	Latest Date	Recorder
North Craig Reservoir, Kilmarnock	NS44	NS437414	1991	Griffith, R. S. Ll.

One 1930s record, now almost certainly lost, also exists for hectad NS25.

Linaria repens L.

Pale Toadflax

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

This rhizomatous archaeophyte perennial herb is found on rough and waste ground, stony and cultivated land, grassy banks and along railway tracks, usually on dry, calcareous or base-rich soils. Nationally its population appears stable, losses in some areas being offset by increases in others.

Site	Hectad	Gridref	Latest Date	Recorder
Nobel Site, Ardeer	NS23	NS2815339809	2012	BSBI excursion.
Troon	NS33	NS3330	1999	Blane, J.
Bogton Loch – Dalcairnie – River Doon	NS40	NS40S	2015	BSBI excursion.
Crosshouse, Kilmarnock	NS43	NS43	1999	Mackie, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both at Ardrossan Harbour and at West Kilbride) & NX39.

Lysimachia thyrsiflora L.

Tufted Loosestrife

National Status: *Scarce, Least Concern.*Local Status: *Rare.*

Native. The small colonies of this perennial herb grow in shallow water in permanently wet places. Typical habitats are fens on the flood plains of rivers, lake margins, ditches, canal sides and colliery subsidence ponds. Nationally this species is maintaining its range in its Scottish strongholds, but in other areas it is declining. These losses may be attributed to drainage and the degradation or loss of its habitat. It can be shy-flowering, and may be overlooked in places where it is infrequent.

Site	Hectad	Gridref	Latest Date	Recorder
Ashgrove Loch SSSI	NS24	NS274443	2004	Darwell, A. & Fisher, J.

One 1930s record, now thought to be lost, also exists for hectad NS62. Additionally, two 19th century records, now almost certainly lost, also exist for hectad NS24 (for both Stevenston Parish and Ardrossan Parish).

Malva arborea (L.) Webb & Berthel.

Tree Mallow

*National Status: Not Scarce, Least Concern.**Local Status: Rare.*

A monocarpic herb, rarely native more than 100 m from the coast. It usually grows in shallow, nutrient-enriched soils, occurring most frequently amongst vegetation in sea-bird roosts, and on ground enriched by garden waste. Plants are killed by severe frost and the species is therefore restricted to mild micro-climates near the sea. Nationally it is difficult to define the native range of this taxon as it is taken from the wild into gardens in some areas and escapes from gardens in others. Although there are local losses, these are more than offset by the spread of plants from coastal gardens into nearby ruderal habitats.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens shore	NS20	NS20E	1995	Rutherford, A. & Stirling, A. McG.
Ailsa Craig, The Trammins	NX09	NX0299	2018	Hannah, A. C. & Philip, M.

This species has never been confirmed from any other Ayrshire locations.

Malva neglecta Wallr.

Dwarf Mallow

*National Status: Not Scarce, Least Concern.**Local Status: Rare.*

An annual archaeophyte which sometimes overwinters, occurring in waste places, gateways, paths, rough ground and on roadsides (often near habitation), occasionally on coastal drift-lines. It favours shallow, dry soils, and is tolerant of grazing and mowing, but not of competition with more vigorous species. The species was present in Britain in Roman times. It is often casual in all but southern England. Nationally it is probably declining in the west and north of its range.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens shore	NS20	NS20E	1995	Rutherford, A. & Stirling, A. McG.
Ardstinchar, Ballantrae	NX08	NX0882	1995	Rutherford, A. & Stirling, A. McG.
Girvan, south shore	NX19	NX1897	2001	Rutherford, A. & Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS31 & NS32.

Malva sylvestris L.

Common Mallow

*National Status: Not Scarce, Least Concern.**Local Status: Scarce.*

A drought tolerant archaeophyte perennial herb of well-drained, often nutrient-enriched soils in unshaded situations, found on roadsides, railway banks, waste ground and field-borders, often near settlements, around farms and in the shelter of walls, occasionally on sea-cliffs. It reproduces freely from seed. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross	NS14	NS14U	1988	Stirling, A. McG.
Ardrossan	NS24	NS2342	1989	Rutherford, A. & Stirling, A. McG.
Little Woodside, Kilwinning	NS24	NS2957444494	2018	Mackie, P.
Prestwick	NS32	NS3425	2017	Rutherford, A.
The Ship Inn, Irvine	NS33	NS3091638174	2019	Mackie, P.
Ardstinchar, Ballantrae	NX08	NX0882	1992	Rutherford, A. & Stirling, A. McG.
Girvan shore	NX19	NX19	1991	Rutherford, A. & Stirling, A. McG.
Lendalfoot	NX19	NX1390	2013	Rutherford, A.

Earlier records for the species, now thought to be lost, also exist for hectads NS33 (at Troon) & NX18. It should be noted that the Ardrossan record was not refound during a dedicated recording trip to the relevant tetrad in 2012.

Matricaria chamomilla L.

Scented Mayweed

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An aromatic archaeophyte annual of arable land, especially in cereal crops, and waste places. It usually occurs on light soils, but is sometimes found on loams and heavy clays. Nationally increasing although in arable fields it has decreased because of herbicides. It is now more frequent in field gateways and margins than actually within the crop. However, it may now be better recorded.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine Sports Club	NS33	NS31573967	2019	Mackie, P.
Eglinton Country Park Visitor Centre	NS34	NS31884194	2017	Lang, D. A.
Grassmillees	NS52	NS5096126437	2015	McIntosh, J. W., McTeague, E. & Middleton, A.
Drumrannie - Girvan Mains	NX19	NX19Z	2015	Hannah, A., Pankhurst, A. & Wilson, Z.

Earlier records for the species, now thought to be lost, also exist for hectads NS31 & NS32.

Melica nutans L.

Mountain Melick

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A native rhizomatous, perennial grass of basic soil over limestone and other base-rich rocks, occurring in shady places in deciduous woodland, on woodland margins, in the grikes of limestone pavement and on rock ledges. Nationally the distribution of this species remains more or less stable.

Site	Hectad	Gridref	Latest Date	Recorder
Gogo Water	NS25	NS25	2014	Averis, B.
Upper Noddsdale	NS26	NS26	1987-1999	* The exact location is derived from an earlier record.
Maybole – Straiton	NS30	NS30	1987-1999	*
Ness Glen	NS40	NS40	1995	McCleary, J.
Girvan Water at Tairlaw Bridge	NS40	NS4000	1989	Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS40 (at Glenmuck Craig, Dalmellington) & NS50, NS71 & NX39.

Melilotus altissimus Thuill.

Tall Melilot

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An archaeophyte biennial or short-lived perennial herb occurring in disturbed grassland and on roadsides, field-borders and waste places. The species has been known in Britain since the 16th century. Nationally its distribution is probably stable.

Site	Hectad	Gridref	Latest Date	Recorder
Kilwinning Station car park	NS24	NS2956343632	2017	Mackie, P.
Troon north shore	NS33	NS3231	2014	Rutherford, A.
Shewalton-Oldhall	NS33	NS33I	2017	Smart, G.
Shewalton Wood	NS33	NS3435	2015	Watson, K.

One very early 20th century record, now almost certainly lost, also exists for hectad NS32.

Mertensia maritima (L.) S.F. Gray

Oysterplant

National Status: *Not Scarce, Near Threatened.*Local Status: *Scarce.*

A native perennial herb, usually found on gravelly beaches and shingle but sometimes on sand. It can also colonise earth and rocks tipped at the coast. Seeds can survive prolonged immersion in sea water, and dispersion in sea currents enables colonisation of new, but sometimes transient, sites. Nationally the distribution of *M. maritima* has varied markedly since 1800. In Britain expansion in the far north has been balanced by contraction in the south. In Ireland it declined during the 19th century, but is now increasing. Losses result from storms, recreational pressures, shingle removal and grazing.

Site	Hectad	Gridref	Latest Date	Recorder
Girvan Mains, shore north of	NS10	NS1900	1992	McHardy, C.
Dunure	NS21	NS2495515623	2015	Crawford, C.
Ballantrae Shingle Beach SSSI	NX08	NX078814	2002	Hutcheon Bros.
Ballantrae Shingle Beach SSSI – Stinchar Shingles south	NX08	NX08458167	1996	Blane, J.
Ballantrae – Stinchar Shingles north	NX08	NX081824	2019	Crawford, C., Hannah, A. C. & Lang, D. A.
Girvan to Ballantrae Coast Section SSSI – Bennane Lea	NX08	NX0986	1990	Stirling, A. McG.
Kennedy's Pass	NX19	NX19L	1995	Stirling, A. McG.
Pinbain Burn mouth	NX19	NX137914	2012	Smart, G.

A number of additional 19th century records for the species, now almost certainly lost, also exist for hectads NS16, NS23, NS24 (in both Kilbride Parish and in Stevenston Parish) & NS25. No further sites appear to have been lost for 120 years – though it should be noted that the then VCR marked the shore north of Girvan Mains record as “unconfirmed”.

Meum athamanticum Jacq.

Spiguel

National Status: *Not Scarce, Near Threatened.*Local Status: *Not Scarce.*

Native. A perennial herb of deep brown-earth neutral or mildly acidic soils occurring in dry, unimproved grassland in pastures, hay meadows and on roadside-banks. Nationally it appears to be declining.

Site	Hectad	Gridref	Latest Date	Recorder
Straiton	NS30	NS30	1989	Stirling, A. McG.
Barcraigs, Beith	NS35	NS3856	1987	Stirling, A. McG.
Dalcairnie Linn, field east of	NS40	NS4661104201	2015	Gaskill, L. Lang, D. A. & Middleton, A.
Black Loch, northeast of	NS40	NS44770251	2012	Hawker, H.
Tairlaw – Glenuchie	NS40	NS4100	2013	Lang, D. A. & Smart, G.
Dunston Hill	NS41	NS41	2005	Findlay, M.
Low Overmuir, near	NS54	NS578428	2005	Simpson, B. & Tittensor, R.
Glen Afton	NS60	NS62760874	2017	Calvey, C. & Crawford, C.
Penbreck Burn	NS72	NS730207	1995	Hawker, D.
South of Barrhill	NX27	NX27	1987-1999	* May in fact be outwith VC75 Ayrshire.
Feoch Meadows SSSI	NX28	NX28R	2008	BSBI excursion.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24 (both at Coalhill, Ardrossan and at a site near Dalry), NS26, NS34, NS35 (both at Brownmuir Plantation, Beith and at Glengarnock, Beith), NS42, NS44 (at each of Drumboy, Stewarton Parish and Fenwick Water), NS50, NS53, NS60 (near Loudoun Hill), NS61, NS62, NS63 & NX29 (at both the A714 Viaduct, Pinmore and at Minuntion, Stinchar Valley) – suggesting a potentially significant decline at county level.

Minuartia verna (L.) Hiern

Spring Sandwort

National Status: *Not Scarce, Near Threatened.*Local Status: *Scarce.*

Native. A perennial, basicolous, cushion-forming herb, characteristic of Carboniferous limestone districts where it is found in short grassland, on scars, on limestone pavement and scree. It also grows on base-rich volcanic rock and basalt, on metal-rich soils, including those derived from serpentine, and on mining spoil. It prefers open sites with reduced competition, but may suffer from drought in very exposed conditions. Nationally its distribution is broadly stable.

Site	Hectad	Gridref	Latest Date	Recorder
Pinbain Burn to Cairn Hill SSSI	NX19	NX1516198	2002	Lang, D. A.
Pinbain Burn	NX19	NX155921	1988	Burlison, J.
Straid Farm	NX19	NX19Q	2012	Crawford, C.
Grey Hill Grasslands SWT Reserve	NX19	NX19R	2017	Cozzolino, N.

Arguably the 2002 and 1988 records, while in different tetrads, could be considered to be from the same sub-population – rendering this species County Rare rather than Scarce/ Further records for the species, now thought to be lost, exist for hectad NX19 – at Byne Hill, Girvan and at Knocklaugh Farm, near Pinmore.

Mycelis muralis (L.) Dumort.

Wall Lettuce

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A winter-green perennial herb of shaded walls, rock outcrops and hedge banks, and in woodland, wood margins and scrub, especially on chalk and limestone but also on acidic rocks in some areas. The distribution of *M. muralis* has remained largely unchanged in recent decades, though there are now more records from Scotland and Ireland.

Site	Hectad	Gridref	Latest Date	Recorder
Cliff Wood, Halket	NS16	NS1967	2015	Watson, K. J.
Wemyss Bay, south of Kelly Burn	NS16	NS19306818	2017	Hannah, A. C.
West Kilbride	NS24	NS20824845	2017	Hannah, A. C.
Blair Estate	NS34	NS34D	2015	Watson, K. J.
Crow Grove, wall at north of	NS34	NS30634876	2018	Calvey, C., Coomber, J., Hannah, A. C., Lang, D. A. & Mackie, P.

Further records for the species, now thought to be lost, exist for hectads NS21 & NS25.

Nasturtium microphyllum (Boenn.) Rchb.

Narrow-fruited Watercress

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Perennial herb growing in and beside streams, ditches, ponds and canals, and in marshes. Almost certainly under-recorded; it may be more frequent in northern England and eastern Scotland than current information suggest. It is not commercially cultivated as watercress.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry coast	NS10	NS10	1995	Rutherford, A. & Stirling, A. McG.
North of Largs	NS16	NS16	1987-1999	*
South West of Ayr	NS21	NS21	1987-1999	*
Saltcoats – Dalry	NS24	NS24	1987-1999	*
Heart Loch, Maybole	NS30	NS3109	1987-1999	* The Grid reference is derived from an earlier record.
Snipe Loch	NS31	NS385173	1996	Day, J., Duncan, W. & Willby, N. J.
Irvine – Troon	NS33	NS33	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS42 & NS43. It should be noted that neither the Heart Loch, Maybole nor the Snipe Loch records were refound during recording visits to the sites in 2019.

Neottia nidus-avis (L.) L.C.M.Richard

Bird's-nest Orchid

National Status: *Not Scarce, Near Threatened.*Local Status: *Not Scarce.**Neottia nidus-avis* at Newbarns Wood © Wilkinson, G

This native obligately myco-heterotrophic herb is most frequent in the deep humus of densely shaded *Fagus* woods on chalky soils. Less commonly it occurs in mixed deciduous woodland and mature *Corylus* coppices, on soils derived from limestones and base-rich clays and sands. Nationally this species suffered a considerable decline throughout the 20th century, but particularly between 1930 and 1970. It is very vulnerable to habitat disruption, and most losses are probably due to changes in woodland management and conifer planting.

Site	Hectad	Gridref	Latest Date	Recorder
Culzean	NS20	NS233098	2014	McInerny, C.
Kilkerran Estate	NS30	NS30	1987-1999	* The exact location is derived from an earlier record.
Belleisle Park, Ayr	NS31	NS31J	2015	Dodd, M. & McIntosh, J.
River Ayr, Bloombank, Ayr	NS32	NS35642170	1997	Blane, J.
Newbarns Wood	NS32	NS375223	2015	Wilkinson, G.
Tarbolton	NS42	NS42	1987-1999	* The exact location is derived from an earlier record.
Cessnock Water, near Carnell	NS43	NS4632	1987-1999	* The Grid reference is derived from an earlier record.
Dean Park, Kilmarnock	NS44	NS4440	1987-1999	* The Grid reference is derived from an earlier record.
South of Cumnock	NS51	NS51	1987-1999	*
Woodroad Liesure Park, Cumnock	NS52	NS52	1992	McHardy, C.

Auchinleck	NS52	NS504233	2017	Smart, G.
Sorn	NS52	NS5526	2014	Crawford, C., Lang, D. A. & Smart, G.
Big Wood	NS53	NS51623774	2009	Green, P. R.
Cumnock – Muirkirk	NS62	NS62	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24, NS26, NS31 (at Auchendrane), NS32 (both at Underwood, Prestwick and at Auchincruive), NS33 (both at Symington Parish and at Dundonald Wood), NS41, NS42 (at Stair Parish), NS43 (at Polbaith Glen, Galston), NS44 (both at Dunlop Parish and at Craufurdland) & NS53 (in the Darvel area) – suggesting a potentially significant decline at county level despite the fact it is still relatively abundant. It should be noted that the Cessnock Water, near Carnell, record was not refound during a dedicated recording trip to the relevant tetrad in 2012.

Noccaea caerulea (J. & C. Presl) F.K. Mey.

Alpine Pennycress

National Status: *Scarce, Least Concern.*

Local Status: *Rare.*

A native perennial, or rarely biennial, herb almost confined in Britain to rocks or soils enriched with lead or zinc, being found on spoil heaps and mine waste and on metalliferous river gravels. It is also found, rarely, on outcrops and scree of limestone and other base-rich rocks, particularly in Scotland. Nationally the distribution of the species appears to be stable, although reworking of lead mine spoils may have destroyed some populations.

Site	Hectad	Gridref	Latest Date	Recorder
Pinbain Burn to Cairn Hill SSSI	NX19	NX167920	1990	Counsell, D.

One 1970s record, now thought to be lost, also exists for a more southerly part of the above SSSI in NX19. It should be noted that this species was not refound during a dedicated recording trip to the relevant tetrad in 2008, nor in other periodic visits to the area – and there is concern that it may now be lost from the County.

Ophioglossum vulgatum L.

Adder's Tongue

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Ophioglossum vulgatum by A77 at Troax © Natalie Cozzolino

Native. A rhizomatous, deciduous fern found on mildly acidic to base-rich soils in open woodland, meadows and damp pastures, and on sand dunes, under *Pteridium* on heaths, and on peat in regularly mown fen. Nationally it has been lost from many lowland sites where the intensification of agriculture, grazing and drainage have contributed to its decline.

Site	Hectad	Gridref	Latest Date	Recorder
Dalry, near cemetery	NS24	NS2849	1987-1999	* The Grid reference is derived from an earlier record.
Auchalton Meadow	NS30	NS3354103620	2015	Crawford, C.
Burn Anne	NS53	NS53013450	2007	Green, P. R.
Knockshinnoch Lagoons	NS61	NS611132	2017	Smart, G.
A77 road realignment at Troax	NX18	NX1057287950	2017	Cozzolino, N.
Minuntion	NX29	NX29	1987-1999	* The exact location is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS24 (at each of Annbank Wood, Gadgirith; Caaf Water, Dalry and Glenhead, Seamill), NS32, NS34 (both at Annick Lodge, Irvine and at Sevenacres & Clonbeith, Kilwinning), NS41, NS42 & NS44 – suggesting a potentially significant decline at county level.

Ophrys apifera Huds.

Bee Orchid

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.**Ophrys apifera* at Barony Bing © Carol Crawford

Native. A tuberous perennial herb of calcareous, well-drained soils. Habitats include grasslands, scrub, railway banks, roadsides, lawns, sand dunes and limestone pavement; also disturbed sites such as quarries, gravel-pits and industrial waste ground. The overall distribution of this species in Britain is stable. It readily colonises newly available sites and is now spreading northwards into Scotland, from where it was previously thought to be absent.

Site	Hectad	Gridref	Latest Date	Recorder
A77 road realignment at Troax	NX18	NX106879	2017	Cozzolino, N.
Barony Colliery (disused)	NS52	NS52462179	2014	Crawford, C.
Darnconner Farm, near	NS52	NS577233	2019	Shanks, S.

This species has never been confirmed from any other Ayrshire locations and is a relatively recent addition to the county flora (1st record in 2003).

Osmunda regalis L.

Royal Fern

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.**Osmundia regalis* at the south end of Loch Doon © Mackie, P.

Native. A large fern found on neutral or acidic substrates in fen-carr woodland and ditches, and on riverbanks and rocky lake shores. It is often confined to inaccessible sites in grazed areas. Nationally the species was heavily collected in Victorian times for cultivation and fibre. This, and habitat loss, caused its decline – though it is now recovering in some areas. It is also planted and occurs as a garden escape.

Site	Hectad	Gridref	Latest Date	Recorder
Cliff Wood, Morland	NS16	NS1968	2015	Watson, K. J.
Culzean Swan Pond	NS20	NS226096	2014	Crawford, C.
Kirktonhall Glen	NS24	NS2047	2015	Watson, K. J.
Ardeer Park	NS24	NS2744641873	2018	Mackie, P.
Nobel site, Ardeer	NS33	NS3038	2006	Dargie, T.
Dundonald Links	NS33	NS3335	2019	Smart, G.
Gailes Marsh SWT Reserve	NS33	NS325360	2019	Smart, G.
Bogside Golf Course, near	NS34	NS34A	1997	Mackie, P.
Loch Doon shore at Craigmalloch	NX49	NX48299469	2018	Crawford, C., Lang, D. A. & Mackie, P.

The Grid reference given for the Nobel site, Ardeer record is a central one for a population that straddles the hectad boundary into NS23 to the west. Earlier records for the species, now thought to be lost, also exist for hectads NS24 (in the Dubbs Quarry area), NS32 & NS43.

Papaver argemone L.

Prickly Poppy

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.*

An annual archaeophyte of arable crops, usually found on field edges and in unsprayed corners, often in small numbers. It is most frequent on light sandy, gravelly and chalky soils. Rarely, it occurs on waste ground. The species is susceptible to herbicides and has declined nationally because of this. Some marginal losses may only have been casual populations.

Site	Hectad	Gridref	Latest Date	Recorder
Shewalton roadside	NS33	NS324371	2009	Dawkins, B.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS31, NS32, NS33 (at Troon) & NX19.

Papaver rhoeas L.

Common Poppy

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

An annual archaeophyte of arable fields and other disturbed and open habitats in the lowlands. It is most frequent on light, calcareous soils. It is sensitive to herbicides, but can be abundant in unsprayed strips in fields. Its seed can be very long-lived. It is also frequent in wild-flower seed mixtures and occurs as a garden escape. Although there have been losses around the edges of its range since the middle of the 20th century, the overall distribution is remarkably stable.

Site	Hectad	Gridref	Latest Date	Recorder
Hillhead Farm, near, Stevenston	NS24	NS27724339	2018	Mackie, P.
Fairlie	NS25	NS2054	2011	Crawford, C. & Smart, G.
Doonfoot, bridge at	NS31	NS3261619045	2015	Gaskell, L., McIntosh, J. & Middleton, A.
Prestwick	NS32	NS3425	2017	Rutherford, A.
Dundonald Links & Shewalton Moss	NS33	NS33H	2019	Smart, G.
Shewalton Sandpits & Oldhall Ponds	NS33	NS33I	2017	Smart, G.
Eglinton Park	NS34	NS32054198	2019	Mackie, P.
New Cumnock	NS61	NS618135	2018	Grace, J.
Lendalfoot	NX19	NX19	1991	Rutherford, A.
Girvan	NX19	NX19Z	2015	Hannah, A., Pankhurst, A. & Wilson, Z.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at Auchendarvie), NS32 (at Auchincruive), NS42 & NX08.

Parentucellia viscosa (L.) Caruel

Yellow Bartsia

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

A hemiparasitic annual of damp, open grassy places on sandy soils, often by tracks. It normally occurs in drier dune-slacks and in reclaimed heath-pasture, but is also found on pathsides, rough and scrubby grassland and field-borders, and increasingly in re-seeded amenity grasslands and waste places. It thrives on disturbance. It is suggested in the 2002 *New Atlas* that Ayrshire is outwith the geographic range within which this taxon can be considered native. However it is not clear upon what this view is based. Nationally the species has increased northwards and eastwards in Britain, largely through introductions from seed mixtures; while conversely, the re-seeding of old pasture has led to some decline at a number of inland sites over the same period. Yet in Ayrshire it appears to have colonised the county by natural processes in relatively recent times – and it is considered as a native in nearby vice counties to the north.

Site	Hectad	Gridref	Latest Date	Recorder
Shewalton Sandpits SWT Reserve	NS33	NS327370	2019	Smart, G.
Gailes Marsh SWT Reserve	NS33	NS327356	2012	Smart, G.

This species has never been confirmed from any other Ayrshire locations.

Parietaria judaica L.

Pellitory of the Wall

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A much-branched perennial herb growing from the cracks and mortar crevices of brick and stone walls, on building rubble, rocks, cliffs and steep-sided hedge banks. It prefers dry, sunny, sheltered spots, and is often found in built-up areas or not far from habitation. Nationally its distribution is stable. Its frequent occurrence on the walls of abbeys and priories is possibly connected to its use by medieval herbalists as a remedy for urinary disorders.

Site	Hectad	Gridref	Latest Date	Recorder
Kelburn	NS25	NS2156	1989	Stirling, A. McG.
Tarbolton, walled garden at Middlemuir	NS42	NS43952628	2019	Hannah, A.C. & Smart, G.

19th century records for the species, now almost certainly lost, also exist for hectads NS43 & NS44.

Paris quadrifolia L.

Herb Paris

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.**Paris quadrifolia* at Carnell © Dave Lang

A native rhizomatous, perennial herb of moist, calcareous, usually ancient, woodland, and occasionally found in grikes on open limestone pavement. It flowers and fruits most freely in the open stages of the coppice cycle, but persists in deep shade, and is well adapted to such conditions in managed woodland. Nationally declining through the destruction of woodland and conifer planting. However, it may spread into secondary woods that are adjacent to primary woodland.

Site	Hectad	Gridref	Latest Date	Recorder
Carnell woodlands	NS43	NS46553228	2017	Crawford, C., Hannah, A.C., Lang, D. A. & White, T.
Little Sorn Burn, south bank near confluence with Cessnock Water	NS43	NS4932032735	2016	Lang, D. A., MacKinnon, D. & Smart, G.

This species has never been confirmed from any other Ayrshire locations.

Persicaria lapathifolia (L.) Delarbre

Pale Persicaria

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A native annual of open and disturbed ground on a wide range of soils ranging from sand to clay and peat. It is a poor competitor, found in cultivated fields, on the open margins of lakes, ponds, streams and rivers, and on waste ground. Robust adventive variants have been recorded in waste places and fields treated with wool shoddy. The distribution of *P. lapathifolia* has not changed appreciably over the last 50 years.

Site	Hectad	Gridref	Latest Date	Recorder
Culzean Country Park	NS20	NS20	2010	Averis, B.
South Seamill shore	NS24	NS2046	2010	Smart, G.
Knockrivoch	NS24	NS2544	2015	Watson, K. J.
Near Hillhead Farm, Stevenston	NS24	NS27724339	2018	Mackie, P.
Largs, near railway station	NS25	NS204592	2017	Mackie, P.
Maybole – Straiton	NS30	NS30	1987-1999	*
Gailes Marsh	NS33	NS32563616	2018	Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS41 (both at Patna and near Coylton), NS42, NS43, NX07, NX08 & NX39.

Persicaria minor (Hudson) Opiz.

Small Water Pepper

National Status: *Not Scarce, Vulnerable.*Local Status: *Scarce.**Persicaria minor* at Martnaham Loch © Carol Crawford

Native. An annual of wet marshy places, winter-flooded ground beside ponds, lakes and ditches, or damp pastures. It is found on a wide range of soils, from nutrient-rich muds in pastures to sandy and gravelly lake shores. Nationally the plant appears to have slightly increased its range westwards and northwards, although this may be an artefact of better recording.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch, mid section	NS31	NS394174	1996	Day, J., Willby, N. J. & Duncan, W.
Martnaham Loch, east end	NS41	NS4017	2019	Crawford, C., Hannah, A. C. & Smart, G.
East of Loch Doon	NS50	NS50	1987-1999	* The location is derived from an earlier record.
Loch Maberry, north end of	NX27	NX286759	1998	Rutherford, A. & Stirling, A. McG.
Linfern Loch	NX39	NX367980	1996	Day, J., Willby, N. J. & Duncan, W.
Loch Doon SSSI – shore at Craigmalloch	NX49	NX48719528	2018	Crawford, C., Lang, D. A. & Mackie, P.
Loch Doon SSSI – shore at Lambdoughty	NX49	NX4997	1996	Day, J., Willby, N. J. & Duncan, W.

The Grid reference given for the Loch Doon record above is a central one for a population that spreads to the east into hectad NS40. Though it is not stated, the East of Loch Doon record was almost certainly from Loch Muck. This species has never been confirmed from any other Ayrshire locations.

Pilularia globulifera L.

Pillwort

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
 Local Status: *Rare.*

Native. A small, rhizomatous fern growing on the edges of non-calcareous lakes, reservoirs, ponds or slow-flowing rivers, and sometimes on damp mine workings or as a submerged aquatic. It requires areas where competition is reduced by fluctuating water levels or disturbance. Nationally the species was lost from many sites before 1930 due to habitat destruction. Eutrophication and reduced disturbance have led to further losses in E. Britain and Ireland. In the west, many new sites have been found since 1980. It has been re-introduced to some former native sites.

Site	Hectad	Gridref	Latest Date	Recorder
Loch Maberry, north shore	NX27	NX285759	1987-1999	* The Grid reference is derived from an earlier record.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS31 & NS41.

Platanthera bifolia (L.) L.C.M.Richard

Lesser Butterfly Orchid

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

A native perennial herb of heathy pastures, grassland, open scrub, woodland edges and rides, and on moorland, often amongst *Pteridium*; it is found on a wide variety of acidic and calcareous soils overlying sands, gravels and clays. It is tolerant of considerable soil moisture, also being found in acidic bogs and calcareous fens. Nationally this species has suffered a considerable decline caused by drainage, woodland disturbance and agricultural intensification, and upland populations have also been lost to increased grazing.

Site	Hectad	Gridref	Latest Date	Recorder
Broadsheen	NS20	NS252061	1995	Blane, J.
Brown Carrick	NS21	NS297157	1987-1999	* The Grid reference is derived from an earlier record.
Auchalton SSSI	NS30	NS3354803619	2015	Crawford, C.
Dundonald	NS33	NS33H	2019	Smart, G.
Kilbirnie Golf Course	NS35	NS3045454221	2018	Calvey, C.
Newmilns, near	NS53	NS53E	1990	From SWT data, recorder not noted.
Knockshinnoch Lagoons	NS61	NS6113	2019	Smart, G.
Borland Mains	NS61	NS603186	2014	Wesley, L.
Littleton Hill	NX18	NX123863	2015	Dodd, M., Hawker, D. & McTeague, E.

In 2012 the Knockshinnoch Lagoons station was found a little further west, just marginally inside monad NS6013 (tetrad NS61B) – however all other records from this site place it within NS6113. Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS31, NS34, NS35 (at Cuff Hill, Beith), NS43, NS44, NS52 & NS62.

Platanthera chlorantha (Custer) Rchb.

Greater Butterfly Orchid

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*Local Status: *Not Scarce.**Platanthera chlorantha* at Feoch Meadows © Cozzolino, N.

This native perennial herb is found in a wide variety of habitats, usually on well-drained calcareous soils. Typical habitats include downland, rough pasture, hay meadows, scrub, woodland and young plantations. It sometimes occurs on sand dunes and railway embankments. Rarely, it grows on slightly acidic soils in moorland and wet, heathy pasture. Nationally *P. chlorantha* was lost from many sites during the 20th century. Reasons include the felling, disturbance and coniferisation of woodland, and the agricultural improvement of pasture and scrub. It may be lost from woodland if the canopy becomes too dense.

Site	Hectad	Gridref	Latest Date	Recorder
East of Turnberry	NS20	NS20	1987-1999	*
Kilwinning	NS24	NS284427	1995	Blane, J.
Auchalton Meadow	NS30	NS3303	2019	Smart, G.
Culroy Burn, Blackbyres	NS31	NS32571455	2017	MacMillan, A.
Belleisle	NS31	NS33601948	2015	Gaskell, L. & Middleton, A.
Gailes Marsh	NS33	NS3235	2019	Smart, G.
Hallyards, Dundonald	NS33	NS3533	1992	Nugent, E.
Corsehillmuir Wood	NS34	NS31754362	2003	Thurston, J.
Dykeneuk Moss SAC	NS34	NS342474	1997	Walker, G.
Dusk Water	NS34	NS34J	2015	Watson, K. J.
Glengarnock Steelworks site	NS35	NS32025426	2013	Smart, G.
Disused railwayline east of Barrmill	NS35	NS3751	2013	Crawford, C.
Cuff Hill area	NS35	NS3855	2015	Watson, K. J.
Newhouse, Barcraig	NS35	NS3856	2015	Watson, K. J.
Dunaskin	NS40	NS437088	2018	Smart, G.

Waterside	NS40	NS4408	2015	Gardner, Z., Gaskell, L. & MacKinnon, J.
Patna – Drongan	NS41	NS41	1987-1999	*
Water of Coyle north of Drongan	NS42	NS42F	2018	Mackie, P.
Fenwick	NS44	NS4651444074	2006	Redmayne, G.
Knockmade, near	NS45	NS42965289	2018	Crawford, C. & Lang, D. A.
Skares	NS51	NS51I	2015	Hannah, A., MacKinnon, J. & McTeague, E.
Nith Bridge	NS51	NS594137	1995	Blane, J.
Little Creoch, near, New Cumnock	NS51	NS592141	1987	Stirling, A. McG.
Ryderston Belt	NS51	NS588184	2014	Wesley, L.
Mauchline Mains	NS52	NS50512779	2015	McIntosh, J. W., McTeague, E. & Middleton, A.
Sorn	NS52	NS55332667	2019	Shanks, S.
Woodroad Leisure Park, Cumnock, near	NS52	NS5711820767	2012	Davidson, B.
Killoch	NS53	NS518316	2009	Green, P. R.
Newmilns, near	NS53	NS5138	1990	From SWT data, recorder not noted.
Burn Anne	NS53	NS53H	2007	Green, P. R.
Bowhill	NS53	NS522395	2007	Green, P. R.
Darvel	NS53	NS557375	2007	Green, P. R.
Priestland	NS53	NS57803774	2009	Green, P. R.
Glen Water, Darvel	NS53	NS5739	1990	From SWT data, recorder not noted.
Ladystone Linn, near, Darvel	NS53	NS5935	1990	From SWT data, recorder not noted.
High Newton, near Darvel	NS53	NS5936	1990	From SWT data, recorder not noted.
Lower Glen Afton	NS61	NS61A	2019	McLeary, J.
Muirkirk	NS62	NS62	1987-1999	* The location is derived from an earlier record.
Dykehill	NS73	NS567358	2009	Green, P. R.
Feoch Meadows SSSI	NX28	NX2682	2019	Clegg, A.
River Stinchar, near Barr	NX29	NX270936	2011	Jones, A. & Jones, A.

In 2005 and 2015 the Feoch Meadows SSSI station was found a little further south, just marginally inside monad NX2681 (tetrad NX28Q) – however all other records from this site place it within NX2682. Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both in Kilbirnie Parish and in Kilbride Parish), NS43, NS44 (both in...

...Stewarton Parish and in Dunlop Parish), NS52 (in the Lugar area), NS60, NX07, NX18, NX19 & NX39 – suggesting a substantial decline at county level despite the fact it is still abundant. It should be noted that neither the Kilwinning record, the Glen Water, Darvel record, nor the Hallyards, Dundonald record were refound during dedicated recording trips to the relevant tetrads between 2016 and 2019.

Poa angustifolia L.

Narrow Leaved Meadow Grass

National Status: *Not Scarce, Least Concern.*

Local Status: *Rare.*

Native. A rhizomatous perennial herb of dry grassland, wall-tops, rough ground and railway embankments – typically on relatively infertile chalky, sandy or gravelly soils.

Historically it has been confused with other members of the *Poa pratensis* group. Nationally it is probably decreasing in semi-natural habitats, but trends are difficult to assess given the lack of historical data.

Site	Hectad	Gridref	Latest Date	Recorder
Ailsa Craig	NX09	NX09	1992	Zonfrillo, B.

Earlier records for the species, now thought to be lost, also exist for hectads NS32, NS33, NS41, NS42, NS43, NS52 & NS61.

Poa compressa L.

Flattened Meadow Grass

National Status: *Not Scarce, Least Concern.*

Local Status: *Scarce.*

Native perennial herb of dry rough ground, banks, waysides and walls. Probably under-recorded and thus difficult to assess in terms of national distributional trends.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross Road near Yonderfield	NS14	NS195484	2018	Smart, G.
Ardrossan	NS24	NS2242	2014	Rich, T. C. G.
Kilbirne	NS35	NS32255507	2005	Green, I. P.
Polnessan, Patna	NS41	NS4111	1993	Watson, K. J.
Kilmarnock – Galston	NS43	NS43	1987-1999	*
South of Cumnock	NS51	NS51	1987-1999	*
Pinbain Shore, Lendalfoot	NX19	NX136912	2008	Stanley, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS31 & NS52.

Polypodium cambricum L.

Southern Polypody

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.**Polypodium cambricum* at the Heads of Ayr © Carol Crawford

Native. A perennial, rhizomatous fern of well-drained base-rich rocky substrates, often found on sheltered limestone cliffs, old quarry faces, castle walls built of limestone, and on old mortared walls. It is also found as an epiphyte, especially in Ireland, and on road banks. Nationally its distribution is probably stable, although better recent recording may mask changes.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr	NS21	NS288186	2016	Crawford, C., Hannah, A. & Lang, D. A.

Accepted records also existed for Northbank – Portencross Castle (NS14) in 1990 and Lendalfoot, southwest of (NX18) in 1987. However extensive efforts to relocate these stations in 2015 failed, so the species would appear to have been lost from both locations – though there is no obvious reason for this. This species has never been confirmed from any other Ayrshire locations.

Potamogeton alpinus Balb.

Red Pondweed

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.*

Native. A perennial of still or slow-flowing water in lakes, rivers, canals, ditches and flooded mineral workings. It is often found in sites where silt accumulates, such as lake inflows or backwaters in rivers. It characteristically grows in mesotrophic, often neutral or mildly acidic water. Many of the sites from which the species has been lost are small ponds, pits and ditches where it was last seen in the 19th century. There have been some further losses from eutrophication, but the distribution elsewhere appears to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Fisherton Hill Plantation pond	NS21	NS277150	1996	Day, J., Duncan, W. & Willby, N. J.
Black Loch	NS51	NS590162	1996	Day, J., Duncan, W. & Willby, N. J.
Glen App Sawmill pond, Smyton	NX08	NX098800	1996	Day, J., Duncan, W. & Willby, N. J.
Aldinna Loch, near	NX39	NX365937	2015	McIntosh, J., W., McTeague, E. & Smart, G.
Linfearn Loch	NX39	NX367980	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS31, NS40 (both at Black Loch and at Wee Berbeth Loch) & NS51 (to the southwest of Benston). It should be noted that the Black Loch record was not refound during a dedicated recording visit to the relevant tetrad in 2019, while the Glen App sawmill pond record in Symington was also not refound during a similar dedicated recording visit to the relevant tetrad in 2017.

Potamogeton pusillus L.

Lesser Pondweed

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial found in standing or slowly flowing water in sheltered lakes and reservoirs, ponds, rivers, canals, ditches and flooded mineral workings. It favours mesotrophic to eutrophic water and tolerates slightly brackish conditions. Because of confusion with *Potamogeton berchtoldii* prior to the 1930s, assessments of changes in distribution are based on very limited evidence. However the species may have increased in some areas, perhaps in response to eutrophication.

Site	Hectad	Gridref	Latest Date	Recorder
Swan Lake	NS20	NS224096	1996	Day, J., Duncan, W. & Willby, N. J.
Stevenston or Ashgrove Loch	NS24	NS274443	1996	Day, J., Duncan, W. & Willby, N. J.
Martnaham Loch & Woods SSSI	NS31	NS394174	2004	Darwell, A. & Fisher, J.
Irvine Beach Park pond	NS33	NS307377	1996	Day, J., Duncan, W. & Willby, N. J.
Coodham Lake, Symington	NS33	NS395327	1996	Day, J., Duncan, W. & Willby, N. J.
Eglinton Castle pond, Kilwinning	NS34	NS326422	1996	Day, J., Duncan, W. & Willby, N. J.
Pond at Trabboch	NS42	NS436218	1996	Day, J., Duncan, W. & Willby, N. J.
Black Loch	NS51	NS590162	1996	Day, J., Duncan, W. & Willby, N. J.
Lugar Water oxbows	NS52	NS530206	1996	Day, J., Duncan, W. & Willby, N. J.

The Grid reference given for the Martnaham Loch record is a central one for a population that spreads to the east into hectad NS41. Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at Ardrossan) & NS41. It should be noted that visits to the specific sites in 2019 failed to result in any of the Stevenston/Ashgrove Loch, Irvine Beach Park pond, Coodham Lake at Symington or Trabboch records being refound. Similarly, the Black Loch record was also not refound during a dedicated recording visit to the relevant tetrad in 2019.

Pseudorchis albida (L.) Á. and D. Löve.

Small White Orchid

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.**Pseudorchis albida* at Feoch Meadows © Cozzolino, N.

A tuberous native perennial herb of well-drained hill pastures, streamsides, mountain grasslands and cliff ledges on a range of dry, acidic or calcareous soils; also on recently burnt moorland, but not persisting when *Calluna* regrows. Rarely, it occurs in acidic *Quercus* woodland. Nationally many lowland sites for *P. albida* were lost before 1930 due to habitat destruction, agricultural improvement and overgrazing. There have been continued losses since then, although it is now much better recorded. However, it is inconspicuous and may be under-recorded in some areas, especially in the uplands.

Site	Hectad	Gridref	Latest Date	Recorder
Feoch Meadows SSSI	NX28	NX26118212	2019	Smith, A. & Smith, H.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS44 & NX39.

Pulicaria dysenterica (L.) Bernh.

Common Fleabane

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A perennial of damp or wet, open habitats including marshy places, water- and fen-meadows, tall-herb fens, by rivers, streams, canals and ditches, in dune-slacks, wet hollows and seepages on sea-cliffs, damp woodland rides and roadside verges. It is found on a wide range of acidic and base-rich soil types. Nationally the distribution of *P. dysenterica* is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Kilbirnie, NCN 7 stretch 13	NS35	NS3154	2016	Maund, J.
Kilbirnie, east of, NCN 7 stretch 13	NS35	NS3254	2016	Maund, J.
Kennedy's Pass	NX19	NX19L	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NX07, NX08 & NX18.

Ranunculus aquatilis L.

Common Water Crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. This is an annual or short-lived perennial which grows in shallow water in marshes, ponds and ditches, and at the edge of slow-flowing streams and sheltered lakes. It occurs chiefly in water which is eutrophic and at least mildly base-rich, and is favoured by a degree of disturbance. Nationally probably stable.

Site	Hectad	Gridref	Latest Date	Recorder
Shore at Chapeldonan	NS10	NS191004	1996	Day, J., Duncan, W. & Willby, N. J.
Kirktonhall Glen	NS24	NS2047	2015	Watson, K. J.
Irvine Beach Park pond	NS33	NS3037	2019	Crawford, C., Hannah, A. C. & Smart, G.
Gailes Marsh	NS33	NS3259035894	2000	SWT data
Annick Water (lower)	NS33	NS3538	2015	Watson, K. J.
Bogton Loch	NS40	NS468055	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS30, NS31, NS41 & NS51. It should be noted that the Bogton Loch record was not refound during a specific visit to the site in 2019.

Ranunculus baudotii Godr.

Brackish Water Crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This annual or perennial herb grows in coastal water bodies, including lagoons, machair lochs, ditches, pools, dune-slacks and borrow-pits. It is most frequent in water 0.5-1m deep, but can grow in shallower water or as a dwarf terrestrial form on wet mud. Its inland sites include flooded mineral workings and canals, some receiving saline drainage water but others lacking any saline influence. Nationally this species is now known to be much more frequent than was appreciated in the past.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine Beach Park pond	NS33	NS307377	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both at Ardeer/Stevenston and at Horse Isle), NS31 & NX08. It should be noted that the Irvine Beach Park pond record could not be refound during a specific visit to the site in 2019.

Ranunculus fluitans L.

River Water Crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Perennial species which grows in large, rapidly flowing rivers with a stable substrate. It is usually found in base-rich and meso-eutrophic water. This is not a well-understood species and in some areas of Britain it may be under-recorded whereas in others it may be reported in error for other taxa.

Site	Hectad	Gridref	Latest Date	Recorder
Ardrossan	NS24	NS239422	2019	Mackie, P.
Seafeld Golf Course – Slaphouse Burn	NS31	NS336198	2015	Gaskell, L. & Middleton, A.
River Ayr a Mainholm Ford	NS32	NS363215	2008	Coy, C., Foster, T. & McLeman, A.
River Irvine at Shewalton Wildlife Reserve	NS33	NS326372	2011	Coy, C., Foster, T. & McLeman, A.
Annick Water at Broomlands Bridge	NS33	NS337385	2007	Coy, C., Foster, T. & McLeman, A.
River Irvine at Dreghorn	NS33	NS3537	2007	Coy, C., Foster, T. & McLeman, A.
River Irvine, u/s STO Gatehead Tank	NS33	NS397363	2007	Coy, C., Foster, T. & McLeman, A.
Lugton Water at B785 Road	NS34	NS326431	2009	Coy, C., Foster, T. & McLeman, A.
South of Barrhill	NX27	NX27	2012	BSBI excursion.

One 1980s record, now thought to be lost, also exists for hectad NS34 (on the River Garnock).

Ranunculus lingua L.

Greater Spearwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A stoloniferous perennial herb which grows in fens and marshes, on ditch, canal and pond edges, around reservoirs and in flooded gravel-pits and quarries. It is normally found in base-rich, still or slowly flowing water. Nationally the species decline substantially until the second half of the 20th century since when the situation has been transformed by its increased popularity as an ornamental plant. It is frequently introduced to ponds and other wetlands in the wild and the distinction between native and alien populations is now hopelessly blurred.

Site	Hectad	Gridref	Latest Date	Recorder
Culzean	NS20	NS232097	2010	Averis, B.
Stevenston or Ashgrove Loch	NS24	NS274443	1996	Day, J., Duncan, W. & Willby, N. J.
Heart Loch, Maybole	NS30	NS310094	1996	Day, J., Duncan, W. & Willby, N. J.
Tranew Flushes, Crosshill	NS30	NS347073	1995	Blane, J.
Martnaham Loch & Woods SSSI	NS31	NS394174	1996	Day, J., Duncan, W. & Willby, N. J.
High Gooseloan	NS34	NS3246	2015	Watson, K. J.

The Grid reference given for the Culzean record is a central one for a population that can be scattered across up to three monads, and on one occasion this included a record from monad NS2310 (tetrad NS21F) in hectad NS21 to the north. The Grid reference given for the Martnaham Loch record is also a central one for a population that spreads to the east into hectad NS41. Earlier records for the species, now thought to be lost, also exist for hectads NS30 (at Chapelton Loch in Maybole) & NX18. It should be noted that neither the Stevenston/Ashgrove Loch record nor the Heart Loch, Maybole record were refound during specific visits to the relevant sites in 2019.

Ranunculus peltatus Schrank

Pond Water Crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. Perennial or sometimes annual species growing in slow-flowing streams and rivers, coastal lagoons, shallow lakes, ditches, ponds and dune-slacks. It grows in the upper reaches of highly calcareous rivers but in some areas favours base-poor waters; it has a broad trophic range. Due to identification difficulties and taxonomic uncertainty changes in distribution are difficult to assess.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch & Woods SSSI	NS31	NS394174	1996	Day, J., Duncan, W. & Willby, N. J.
Glen App	NX07	NX07	1987-1999	*
Glen App Sawmill pond, Smyton	NX08	NX098800	1996	Day, J., Duncan, W. & Willby, N. J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS34 & NS35. It should be noted that the Glen App Sawmill Pond at Symington record was not refound during a dedicated recording visit to the relevant tetrad in 2017.

Ranunculus pencillatus (Dumort.) Bab.

Stream Water Crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This is the dominant plant in many British base-rich rivers and streams, favouring moderately or rapidly flowing, mesotrophic or meso-eutrophic water, and being most frequent where the water flow is broken by riffles. In sluggish eutrophic rivers it is replaced by other species. The taxonomy of this subspecies has only been clarified recently and it is probably still under-recorded in some areas of Britain.

Site	Hectad	Gridref	Latest Date	Recorder
Kilwinning area	NS34	NS34	1987-1999	*

This species has never been confirmed from any other Ayrshire locations.

Ranunculus trichophyllus Chaix

Thread-leaved Water-crowfoot

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Ranunculus trichophyllus at Ashgrove © Mackie, P.

Native. A small annual or perennial which grows in shallow, still or very slowly flowing water. It is most frequent in ponds, dune-slacks and drainage ditches – but it is also found in larger sites if they are sheltered. It tolerates a range of water chemistry but is most frequent in mesotrophic or eutrophic water. The various aquatic *Ranunculus* species are difficult to identify, and this early-flowering plant is easily overlooked. Under-recording rather than decline may therefore be the reason for the concentration of pre-1970 records in some areas as there is little evidence of decline in neighbouring counties.

Site	Hectad	Gridref	Latest Date	Recorder
Old Ashgrove walled garden	NS24	NS2803044352	2018	Mackie, P.
Meadowhead	NS33	NS335362	2018	Smart, G.
Glenbuck Loch	NS72	NS757287	1996	Dines, C. & Lassier, O. L.

One pre-1970 record, now thought to be lost, also exists for hectad NX19. It should be noted that the Glenbuck Loch record was not refound during a dedicated recording visit to the relevant tetrad in 2018.

Rorippa islandica (Oeder) Borbás

Northern Yellow Cress

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual or short-lived perennial herb found in open, muddy habitats such as lake, pond and pool margins, ditch banks, depressions in pasture, in turloughs and rarely on rocks by rivers. There are also records from waste ground and tips. Not recognised as a separate species until 1968. Nationally some sites have been lost through the canalisation of rivers and pond drainage.

Site	Hectad	Gridref	Latest Date	Recorder
Shewalton Wood SWT Reserve	NS33	NS344359	2010	Smart, G.

One 1960s record, now thought to be lost, also exists for hectad NS24.

Rosa rubiginosa L.

Sweet Briar

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.*

Native. Deciduous shrub, characteristically found in scrub and hedgerows on chalk and limestone, but also found in quarries, on railway embankments and on waste ground. It is often frequent as a colonist of under-grazed chalk grassland. Nationally some populations have been lost, probably through habitat destruction. However alien occurrences are increasing.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens to Culzean	NS20	NS20J	1987	Stirling, A. McG.
South of Ayr	NS31	NS31	1987-1999	*
River Ayr	NS32	NS3421	2009	Rutherford, A.
Oswald's Bridge	NS32	NS384231	2018	Cobb, P.
Shewalton	NS33	NS33	1991	Rutherford, A. & Stirling, A. McG.
Dunaskin Heritage Centre	NS40	NS4408	2012	Crawford, C. & Smart, G.
Gadgirth Bridge, near Annbank	NS42	NS4122	2018	Cobb, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS14 & NS21.

Rubus chamaemorus L.

Cloudberry

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.*

Native. A dioecious herb of wet, base-poor peats on moorland and blanket mire, spreading by extensively creeping rhizomes and by seed. The overall distribution of the species is stable, although there have been losses on the edges of its range, particularly in W. Scotland. These losses may be due to drainage, afforestation and moor-burning.

Site	Hectad	Gridref	Latest Date	Recorder
Gogo Lodge	NS26	NS25506095	2019	Hannah, A. C.
Windyrise	NS26	NS269604	2000	Mackie, P.
West Girt Hill – Hill of Stake	NS26	NS26R	2010	Hannah, A. C.
Wedder Hill	NS53	NS53V	2017	McCleary, J.
Hare Hill	NS60	NS654087	2016	McCleary, J.
The Knipe	NS61	NS6510	2014	Crawford, C., Lang, D. A. & Smart, G.
Cairn Hill north	NS62	NS6623	2019	Harding, M.
Stony Hill	NS72	NS7221	1999	McCleary, J.
Panbreck Hill	NS72	NS7222	1999	McCleary, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS26 (in the Upper Noddsdale), NS60 (at Blackcraig Hill south of New Cumnock) & NS72 (at Cairn Table).

Rumex conglomeratus Murray

Clustered Dock

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A short-lived perennial herb of wet meadows, stream and river banks, ditches, muddy pathsides and field margins and gateways, often in places flooded or waterlogged in winter. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Irvine – Troon	NS33	NS33	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS24, NS25, NS26, NS30, NS31, NS32, NS34, NS42, NS43, NS51 & NX18 – suggesting a potentially significant decline at county level.

Rumex hydropathum Huds.

Water Dock

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A tufted perennial herb found, usually as an emergent, on the margins of slow-flowing rivers and streams, by canals, lakes and ponds, and in ditches. It can also colonise bare ground in marshes and fens, but does not survive in closed vegetation. Nationally the taxon has significantly extended its range in northern England, Scotland and Ireland, although some records in these areas may be escapes from sites where it was originally planted for ornament.

Site	Hectad	Gridref	Latest Date	Recorder
Fairlie	NS25	NS2054	2011	Crawford, C. & Smart, G.
Meadowhead	NS33	NS3336	2018	Smart, G.
High Monkredding Plantation Pond, High Gooseloa	NS34	NS32854631	2016	Crawford, C. & Lang, D. A.

One 1911 record, now almost certainly lost, also exists for hectad NS61.

Rumex pseudoalpinus Höfft.

Northern Dock

National Status: *Not Scarce, Near Threatened.*Local Status: *Rare.*

An archaeophyte rhizomatous perennial herb found growing near farm buildings, by streams and on roadsides, especially in places manured by animals. There is archaeological evidence that the species has been present in Scotland since the medieval period. It remains locally common in E. Scotland, but it has declined in the Peak District as farms are converted to non-agricultural residences and tidied up.

Site	Hectad	Gridref	Latest Date	Recorder
Crossraguel Abby, near	NS20	NS20	1992	Stirling, A. McG.
Straiton	NS30	NS30	1987-1999	* The exact location is derived from an earlier record.
North of Kilmarnock	NS44	NS44	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS31, NS43, NS53 & NS61.

Ruppia maritima L.

Beaked Tasselweed

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. A submerged, annual or perennial aquatic of brackish waters, *R.maritima* grows in shallow water in coastal lakes, pools on saltmarshes, rock pools, creeks and ditches near the sea. It is also found as a dwarf variant on tidal mud-flats, especially in N.E. Scotland. *R. maritima* had been lost from many sites before 1930, and this loss has continued in the southern part of its range around coastal developments.

Site	Hectad	Gridref	Latest Date	Recorder
Chapelton	NS24	NS2046	1987-1999	* The Grid reference is derived from an earlier record.
Stinchar mouth, Ballantrae	NX08	NX08	1988	Counsell, D.
Ballantrae, pool behind shingle beach	NX08	NX08178248	2019	Crawford, C., Hannah, A. C. & Lang, D. A.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at both Horse Isle and at Misk/Bogend in Stevenston) & NS33.

Salicornia dolichostachya Moss

Long Spiked Glasswort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual of open mud and muddy sand on intertidal flats and in the lowest parts of saltmarshes, and occasionally in the mid-marsh along the banks of saltmarsh creeks and runnels. Nationally there is no reliable information on trends in its distribution. It is almost certainly under-recorded, being overlooked or else dismissed, along with other glassworts, as '*Salicornia* agg'.

Site	Hectad	Gridref	Latest Date	Recorder
Gull's Walk, Hunterston	NS15	NS193522	1990	Rutherford A., Simpson B. & Stirling A.McG.
Bogside Flats SSSI	NS33	NS33	1987	Griffith, R. S. Ll.

This species has never been confirmed from any other Ayrshire locations.

Salicornia europaea L.

Common Glasswort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Salicornia europaea at the Garnock Estuary © Mackie, P.

Native. An annual found at all levels of sandy or muddy saltmarshes, in saltmarsh-sand dune transitions and wet, tidally inundated dune-slacks; also, more rarely, in relict saltmarsh and other open saline areas behind sea-walls. A taxonomically uncertain taxon and thus national distributional trends are uncertain.

Site	Hectad	Gridref	Latest Date	Recorder
Hunterston area	NS15	NS15	1987-1999	*
South Seamill shore	NS24	NS202464	2019	Smart, G.
Horse Island	NS24	NS211429	2019	Smart, G.
Garnock estuary	NS24	NS29874000	2018	Mackie, P.
Prestwick Promenade	NS32	NS3452825347	2019	Mackie, P.
Pow Burn	NS32	NS3428	2011	Strachan, I.
Irvine – Garnock estuary	NS33	NS33E	2019	Mackie, P.

The Irvine Garnock Estuary population has once been recorded with an individual falling within tetrad NS23Z immediately to the west. This species has never been confirmed from any other Ayrshire locations.

Salix herbacea L.

Dwarf Willow

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.**Salix herbacea* near Balminnoch © Whytock, R.

Native. A dwarf shrub of open, often bryophyte-rich communities in areas of late snow-lie, or in conditions of extreme exposure. It grows on erosion surfaces or stony ground on windswept ridges and cols, on screes, in corries and hollows, and locally on ledges and in montane grass-heath. Nationally there has been no significant overall change in its distribution.

Site	Hectad	Gridref	Latest Date	Recorder
Blackcraig Hill, south of New Cumnock	NS60	NS60	1987-1999	* The exact location is derived from an earlier record.
Balminnoch Brae – Kirrieroch Hill, west ridge	NX48	NX4187	2019	McIntosh, J. W. & Moir, I.
Mullwharchar	NX48N	NX48N	1994	Stewart, O. M.
Shalloch on Minnoch	NX49	NX4070790556	2019	Jury, S.

This species has never been confirmed from any other Ayrshire locations.

Salix lapponum L.

Downy Willow

National Status: *Nationally Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*

Local Status: *Rare.*

Native. A low shrub of moist or wet, moderately base-enriched sites on rocky mountain slopes and cliffs. This species tolerates a wider range of soil conditions than most montane *Salix*, but is now largely confined to cliffs. Trends in the distribution of this species are unclear. Some small, ungrazed colonies appear to be producing no or very few seedlings, and may be in decline. Further work will be needed to establish whether it has really been lost from all of the hectads for which only pre-1987 records exist.

Site	Hectad	Gridref	Latest Date	Recorder
Balminnoch Brae	NX48	NX4136987322	2010	Soutar, R.

This species has never been confirmed from any other Ayrshire locations.

Salix myrsinifolia Salisb.

Dark Leaved Willow

National Status: *Not Scarce, Least Concern.*

Local Status: *Scarce.*

Native. A shrub, or less often a small tree, which grows mainly on rocks or on gravelly river-banks and lake shores, less frequently in thickets on marshy ground or by wet woodland margins. In Scotland it sometimes grows in wet dune-slacks and as a dwarf, spreading shrub on wet rock ledges. Nationally there has been no significant recent change in the distribution.

Site	Hectad	Gridref	Latest Date	Recorder
New Cumnock area	NS61	NS61	1987-1999	*
Muirkirk disused workings	NS62	NS693270	2014	Lang, D. A. & Smart, G.
Loudoun Hill	NS63	NS63D	2015	Crawford, C., Lang, D. A. & Smart, G.
Grey Hill, near	NX19	NX19R	2008	BSBI excursion.

This species has never been confirmed from any other Ayrshire locations.

Salix triandra L.

Almond Willow

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Archaeophyte. A shrub or small tree which grows in damp or wet places, by lowland rivers, streams and ponds and in marshes and osier-beds. A species which has been much planted for basketry, often as distinct cultivars. Its distribution is not thought to have significantly changed in the last 50 years.

Site	Hectad	Gridref	Latest Date	Recorder
Stevenston Beach LNR	NS24	NS26404105	2018	Cobb, P.

This species has never been confirmed from any other Ayrshire locations.

Salsola kali L.

Saltwort

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Not Scarce.**Salsola kali* at Stevenston © Mackie, P.

Subspecies *kali* – prickly saltwort – is native to the UK and Red Data List Vulnerable, whereas the subspecies *ruthenica* (spineless saltwort) is a neophyte. All Ayrshire records are almost certainly *S. kali* subsp. *kali*. This is a somewhat woody native annual of sand and shingle beaches, usually on the drift-line with *Atriplex laciniata*, *Cakile maritima* and *Honckenya peploides* as typical associates. Nationally *S. kali* subsp. *kali* has declined over the last 50 years. Many populations, though mostly in southern England, have been lost due to excessive recreational pressures, and in some areas there has been a drastic decline.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry	NS10	NS19980557	1996	Blane, J.
Seamill, north	NS14	NS1947	2019	Smart, G.
Maidenhead Bay	NS20	NS22000920	2001	Thurston, J.
Nobel Site, Ardeer	NS23	NS23Z	2012	BSBI excursion.
Seamill, south	NS24	NS20474608	2019	Smart, G.
Stevenston – Ardeer	NS24	NS2640	2018	Mackie, P.
South of Ayr	NS31	NS31	1987-1999	*
Monkton	NS32	NS32	1987-1999	* The exact location is derived from an earlier record.
The Ayrshire Golf Course site, south of Irvine	NS33	NS3155836401	2010	Crawford, C.
Bogside	NS33	NS33E	2019	Mackie, P.
Barassie – Gailies shore	NS33	NS33	1994	Stirling, A. McG.
Ballantrae area	NX08	NX08	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS25 & NS33 (at the Troon south shore).

Sambucus ebulus L.

Dwarf Elder

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

A robust archaeophyte perennial rhizomatous herb occurring infrequently in hedgerows, on roadsides and waste ground, usually in small numbers but locally forming thickets. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Martnaham Loch, near	NS41	NS41	1993	Tanner, I.
Catcraig Quarry, Craigton	NS43	NS4231	1992	McHardy, C.

This species could not be refound during a 2016 visit to the area around Martnaham Loch that extends into hectad NS41 – so it may now be lost from that location. Earlier records for the species, now thought to be lost, also exist for hectads NS31 & NS33.

Samolus valerandi L.

Brookweed

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A native deciduous short-lived perennial found in small colonies by permanently wet and often seasonally flooded springs, flushed sea-cliffs, puddles, ditches, lagoons and lake shores. Populations are often impermanent, colonising the small and transient specialised habitats which change as spring lines and water levels shift. Individuals are usually monocarpic, but may take several years to flower. Nationally its distribution is fairly stable.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross	NS14	NS1760849352	2013	Longrigg, S.
Hunterston area	NS15	NS15	1987-1999	*
Auchengarth, shore below	NS16	NS19016437	2017	Hannah, A. C.
Dunure	NS21	NS21	1987-1999	* The exact location is derived from an earlier record.
Saltcoats – Dalry	NS24	NS24	1987-1999	*
Portandea	NX07	NX048753	2018	Gaskell, L. & Miles, C.
Downan, Ballantrae	NX08	NX08	1992	Stirling, A. McG. & B. H. T.
Lendalfoot	NX19	NX19	1987-1999	* The exact location is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 (at Heads of Ayr), NS25, NS31 & NX18.

Saussurea alpina (L.) DC

Alpine Saw-wort

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A perennial herb of damp, base-rich cliffs, screes and other open ground, occasionally found in flushed areas and sometimes washed down mountain streams to become established on rocky stream banks and riverside shingle. It reproduces by seed, and spreads vegetatively by new rosettes arising from stolons. Though the map of *S. alpina* show no discernible change in distribution over the last 50 years, there is evidence of local declines in England and Ireland since the 1950s.

Site	Hectad	Gridref	Latest Date	Recorder
Balminnoch Brae	NX48	NX414873	2010	Soutar, R.

This species has never been confirmed from any other Ayrshire locations.

Saxifraga aizoides L.

Yellow Saxifrage

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A perennial herb usually found by the side of mountain streams, in open stony flushes on gently- or steeply-sloping ground, or sprawling over wet rocks; less commonly, on wet screes and sand dunes. It may rapidly colonise disturbed soil, such as newly dug cuttings on forestry tracks, in the vicinity of natural habitats. Whilst not strictly a calcicole, it avoids the most base-poor substrates. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr	NS21	NS28108118211	2016	Corner, R.
Martin Glen, near Skelmorlie	NS26	NS229669	2019	Shanks, S.
Kelly Burn & reservoir, south side	NS26	NS22066832	2017	Hannah, A. C.

Earlier records for the species, now thought to be lost, also exist for hectads NS25 & NS26 (in the Rowantree Hill – Girtley Hill area).

Saxifraga hypnoides L.

Mossy Saxifrage

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *None.*

A native perennial, stoloniferous herb growing on moist rocks, screes, cliffs and by mountain streams, rarely on sand dunes, often in partial shade. Substrates are frequently base-rich, although it can grow on acidic rocks. It is also cultivated and sometimes escapes. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Gogo/Greeto near confluence	NS25	NS22895971	2019	Hannah, A. C.
King's Burn	NS25	NS2883259274	2005	Wind-Hydrogen Ltd.
Greeto Water, slope west of	NS26	NS22736006	2015	Crawford, C., Hannah, A. & Smart, G.
Greeto Water	NS26	NS25546239	2019	Hannah, A. C.
North Rotten Burn	NS26	NS251682	2003	Watson, K. J.
Straiton, crags south east of	NS30	NS30	1987-1999	* The exact location is derived from an earlier record.
River Garnock	NS35	NS30635769	2015	Crawford, C., Hannah, A. & Lang, D. A.
Ness Glen SSSI	NS40	NS40	1987-1999	* The exact location is derived from an earlier record.
Muck's Water, Darvel	NS54	NS54	1987-1999	* The exact location is derived from an earlier record.
Millaneoch Hill, south of	NS60	NS6201	1995	Hawker, D.
The Knipe	NS61	NS6588610367	2014	Crawford, C., Lang, D. A. & Smart, G.
Grey Hill Grassland	NX19	NX1706393241	2019	McCleary, J.
Changue Forest, Linn of the Darkness	NX39	NX33129179	2012	Waddell, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS25 (both at Hindog Glen in Dalry and at Fairlie Glen), NS26 (at Upper Noddedale in Largs), NS42, NS51, NS52, NS53, NS61 (at Glen Afton), NS71 & NX39 (at Haggis Hill) – suggesting a potentially significant decline at county level.

Saxifraga stellaris L.

Starry Saxifrage

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial, stoloniferous herb found in open (rarely shaded), wet flushes, growing by mountain streams or on wet rock ledges and cliff-faces, usually in base-poor soil.

Nationally its distribution appears stable.

Site	Hectad	Gridref	Latest Date	Recorder
South Black Burn, Noddsdale	NS26	NS24376553	2017	Hannah, A. C.
Millaneoch Hill, south of	NS60	NS6201	1995	Hawker, D.
The Knipe	NS61	NS6510	2014	Smart, G.
Nick of the Balloch	NX39	NX3492	1987	McTeague, E.
Changue Forest, Linn of the Darkness	NX39	NX33129179	2012	Waddell, J.
Shalloch – Caerloch Dhu	NX39	NX3892592358	2015	Dodd, M., Fraser, J. & Lang, D. A.
Balminnoch Brae	NX48	NX414873	2016	Soutar, R.
Shalloch on Minnoch	NX49	NX49	1987	McTeague, E.

This species has never been confirmed from any other Ayrshire locations.

Saxifraga tridactylites L.

Rue Leaved Saxifrage

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Saxifraga tridactylites at Kilwinning © Smart, G.

Native. A winter-annual that occurs in dry, open habitats such as sandy grassland, limestone pavement and rock ledges, cliffs and screes, and on man-made structures like mortared walls, pavements and railway tracks. It is most commonly found on base-rich substrates, often on skeletal soils or virtually bare rock. Nationally populations appear to be stable, other than a widespread decline in southern and eastern England.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer Peninsula	NS23	NS28343970	2019	Smart, G.
Ardeer	NS24	NS299412	2009	Smart, G.
Ardeer Industrial Estate roundabout	NS24	NS2758841319	2018	Mackie, P.
Heister site, Irvine	NS33	NS314375	2019	Smart, G.
Kilwinning	NS34	NS307420	2017	Smart, G.
Kilwinning ex-Volvo site	NS34	NS320414	2019	Smart, G.

The Grid reference given for the Ardeer Peninsula record is a central one for a population that just straddles the hectad boundary into NS24 to the north. Whereas the Grid reference given for the Kilwinning ex-Volvo site record above is a central one for a population covering that site and straddling the tetrad boundary in this location into NS34A to the west. This species has never been confirmed from any other Ayrshire locations.

Schoenoplectus tabernaemontani (C.C.Gmel) Palla.

Grey Club Rush

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A rhizomatous native perennial herb, most frequent in coastal sites where it grows in brackish water in rivers, dykes, tidal channels, lagoons and dune-slacks; also in depressions in saltmarsh and in wet pasture. Inland, it occurs by lakes, ponds, slow-flowing rivers, streams and canals, and in flooded quarries and pits. Nationally the plant is increasing. This might, in part, be due to better recording now that its ability to grow inland is appreciated. It has also colonised newly created gravel-pits, and may have been planted at some of its inland sites.

Site	Hectad	Gridref	Latest Date	Recorder
South Seamill shore	NS24	NS202464	2019	Smart, G.
Irvine Beach Park	NS33	NS307378	2018	Smart, G.
River Irvine	NS33	NS3123239028	2019	Mackie, P.
Dundonald Links Golf Course	NS33	NS325355	2013	Hannah, A.C.
Knockshinnoch Lagoons SWT Reserve	NS61	NS606134	2012	Smart, G.
Ballantrae Bay	NX08	NX08118227	2012	Beal, S.

One 1970s record, now thought to be lost, also exists for hectad NS15.

Scilla verna Hudson.

Spring Squill

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

A bulbous native perennial herb of short turf and maritime heath on exposed cliff-tops and on rocky slopes near the sea, sometimes within the zone regularly affected by sea-water spray. In areas with a pronounced oceanic climate (e.g. Anglesey) it can occur on heathland well inland. Nationally there is no evidence of any significant change in the distribution of *S. verna* over the last 50 years.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry Castle & Turnberry Ports	NS10	NS1907	2010	Crawford, C.
Maidens, south of	NS20	NS2007	2010	Crawford, C.
Barwhin, Culzean	NS20	NS22010956	2015	Crawford, C.
Dunure cliff tops	NS21	NS24951564	2015	Crawford, C.
Portandea	NX07	NX07M	2014	Lang, D. A. & Rutherford, A.
Craigangal	NX07	NX0577	2018	Crawford, C.
Bennane	NX08	NX0986	2012	Crawford, C., Lang, D. A. & Smart, G.
Downan, Ballantrae	NX08	NX08Q	1992	Stirling, A. McG. & B. H. T.
Bennane Head Grasslands SSSI	NX18	NX18D	2014	Lang, D. A.
Grey Hill, near	NX19	NX19R	2008	Smart, G.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 (at Heads of Ayr) & NX18 (at Lendalfoot).

Scleranthus annuus L.

Annual Knawel

National Status: *Not Scarce, Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Scarce.**Scleranthus annuus* at Chirmorie © Philip, M.

Native. An annual or biennial herb found in soil pockets on summer-droughted rocks, and on disturbed sandy soil on heaths, commons, waste places, arable fields and, rarely, river or maritime shingle. It has declined significantly throughout its range.

Site	Hectad	Gridref	Latest Date	Recorder
Dundonald Links Golf Course	NS33	NS32563554	2013	Hannah, A.C.
Kinniegair	NX08	NX07968142	2019	Crawford, C.
Big Park Quarry, disused	NX08	NX08508098	2017	Crawford, C. & Soutar, R.
Standard Knowe, track by railway	NX17	NX19947775	2017	Crawford, C., Lang, D. A., Mackie, P. & Soutar, R.
Knockdaw farmyard	NX18	NX15028944	2015	Hannah, A., Lang, D. A. & Middleton, A.
Chirmorie, roadside by	NX27	NX20727746	2016	Crawford, C., Hannah, A. & Philip, M.
Craigcannochie Hill	NX28	NX22348644	2008	Green, I. P.
Linfen Loch, near	NX39	NX373984	2006	Stanley, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24, NS25, NS31, NS33 (at Shewalton Sand Pits), NS34, NS42 & NX29.

Scrophularia umbrosa Dumort

Green Figwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial herb which grows on fertile soils by streams and rivers, and in damp woodland, in both open and shaded places. Nationally increasing.

Site	Hectad	Gridref	Latest Date	Recorder
Dalgarven Mill	NS24	NS296459	2017	Mackie, P.
Rosemount, Monkton	NS32	NS3728	1993	Tanner, I.
River Irvine at Shewalton	NS33	NS3237	2019	Smart, G.
River Irvine	NS33	NS346369	1993	Watson, K.
River Irvine	NS33	NS360377	1993	Watson, K.
Kilwinning area	NS34	NS34	1987-1999	*

In 1993 the River Irvine at Shewalton population was found a little further east, just marginally inside monad NS3337 – however all other records from this location place it within NS3237 – and for the most part on the Shewalton Sandpits (southern) side of the river. 19th century records for the species, now almost certainly lost, also exist for hectads NS33 (at Symington), NS35 & NS43.

Scutellaria minor Huds.

Lesser Skullcap

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. Perennial herb of wet heaths, bogs, marshes and moist, heathy woodlands on acidic, oligotrophic or slightly mesotrophic soils. Nationally declining as a result of drainage and habitat loss.

Site	Hectad	Gridref	Latest Date	Recorder
Penwhapple Reservoir, near	NX29	NX266976	1999	Blane, J.
Bogton Loch SSSI	NS40	NS40	2004	Lang, D. A.

This species has never been confirmed from any other Ayrshire locations.

Sedum rosea (L.) Scop.

Roseroot

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A rhizomatous perennial herb which grows on sea-cliffs and in mountains in rock crevices and on moist rock ledges. In montane habitats it usually occupies sites which are at least slightly base-enriched. Nationally the species' distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Heads of Ayr cliffs	NS21	NS2818	2016	Corner, R.
Stey Amry	NS60	NS6205	1987	Stirling, A. McG.
Craigantezart – Portandea	NX07	NX07M	2018	Gaskell, L. & Miles, C.
Ballantrae, Stinchar Shingles	NX08	NX080820	1987-1999	* The Grid reference is derived from an earlier record.
Balminnoch Brae	NX48	NX414873	2016	Soutar, R.

Earlier records for the species, now thought to be lost, also exist for hectads NS20 & NX18.

Sedum villosum L.

Hairy Stonecrop

National Status: *Not Scarce, Near Threatened.*Local Status: *Rare.*

Native. A small biennial or perennial herb which grows in at least slightly base-enriched, wet, stony ground and on streamsides in hilly areas, and in montane, often bryophyte-rich, flushes. Nationally there has been a decline in more lowland areas and it may be under-recorded in many upland parts of Scotland.

Site	Hectad	Gridref	Latest Date	Recorder
Harelaw	NS25	NS2953357811	2005	Wind-Hydrogen Ltd.
Tourgill Burn	NS26	NS23166371	2017	Hannah, A. C.
Upper Noddsdale Glen	NS26	NS245662	2011	Lang, D. A. & McKenzie, L. Y.
Ashmark Hill	NS60	NS60750934	2017	SLR Consulting Ltd.
Garepool Burn, New Cumnock	NS61	NS61	1987-1999	* The exact location is derived from an earlier record.
Greenock Water at Waterhead	NS63	NS69713102	2019	Crawford, C. & Lang, D. A.
Muirkirk Uplands SSSI, Leaze Burn	NS73	NS7269532915	2017	Walton, C.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at each of Stevenston Parish, Knockewart in West Kilbride and Ardrossan), NS25 (at both Dalry Parish and at Fairlie Glen), NS30, NS32, NS35, NS40, NS50, NS62, NS63 (near Loudoun Hill) & NS71 – suggesting a potentially significant decline at county level.

Sherardia arvensis L.

Field Madder

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Native. An annual of open, droughted grasslands, sheltered cliffs, sand dunes, arable fields, waste ground, waysides and verges. Formerly frequent, this species is now much decreased due to agricultural intensification. Whilst remaining common in some coastal localities and locally inland, it is now no more than a rare casual over parts of its range.

Site	Hectad	Gridref	Latest Date	Recorder
Ardeer Youth & Community Centre, Grounds of	NS24	NS269412	2015	Walker, G.
Kilwinning, Whitehirst Park Road	NS24	NS28924372	2019	Mackie, P.
Irvine Low Green	NS33	NS31853899	2019	Mackie, P.
Loudoun Acedemy, near	NS53	NS503375	2017	Philip, M.
Ballantrae area	NX08	NX08	1987-1999	*
The Dam, north of Knockdolian	NX18	NX1142585473	2015	Gardner, Z., MacKinnon, J. & McIntosh, J.
Girvan Harbour, north side	NX19	NX182983	2015	Hannah, A., Pankhurst, A. & Wilson, Z.

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS20, NS21, NS24 (at West Kilbride), NS32, NS52 & NX29.

Silene noctiflora L.

Night-flowering Catchfly

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Rare.*

This spring-germinating annual archaeophyte occurs mainly on cultivated land, but sometimes also on open waste ground. It is mostly found on dry, sandy and calcareous substrates, but also on heavier soils over oolitic limestone. Nationally the species has declined markedly with the increased use of herbicides and fertilisers, and the shift from spring-sown to autumn-sown crops.

Site	Hectad	Gridref	Latest Date	Recorder
Auchenroy, Dalmellington	NS40	NS4506	1987-1999	* The Grid reference is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24 (both at Ardrossan and at Ardeer) & NS32.

Silene vulgaris (Moench) Garcke

Bladder Campion

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A perennial herb found in a wide range of soils in open and grassy habitats, including cultivated and abandoned arable fields, rough pasture, roadside verges, quarries, gravel-pits, railway banks, walls and waste places. It is able to tolerate partial shade and may grow in open woodland and on hedge banks. Nationally declining.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry	NS20	NS2005	2012	Rutherford, A.
Turnberry Golf Course	NS20	NS20D	2011	Crawford, C.
Dunure Castle	NS21	NS2515	2012	Rutherford, A.
Ardeer	NS24	NS24	1988	Stirling, A. McG.
Low Green, Ayr	NS32	NS3321	1987-1999	* The Grid reference is derived from an earlier record.
Kilwinning	NS34	NS34	1987-1999	* The exact location is derived from an earlier record.
River Irvine, east of Galston	NS43	NS43Y	2017	Hannah, A. C. & Lang, D. A.
Lendalfoot – Carleton – Balsalloch – Knockormal	NX18	NX18J	2015	Crawford, C., Pankhurst, A. & Wilson, A.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at West Kilbride), NS25, NS44, NS53, NS61 & NX19.

Smyrniolus olusatrum L.

Alexanders

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

A robust perennial archaeophyte herb naturalised in hedge banks, on cliffs, at the base of walls, and on grassy roadsides, pathsides and waste ground, mainly near the sea. *S. olusatrum* was introduced in Roman times, and was widely cultivated until displaced by celery in the 15th century. Nationally it appears to be increasing in some inland areas. There is no satisfactory explanation for its predominantly coastal distribution as some inland populations have persisted for many decades.

Site	Hectad	Gridref	Latest Date	Recorder
East of Turnberry	NS20	NS20	1987-1999	*
Culzean	NS21	NS2310	1987-1999	* The Grid reference is derived from an earlier record.

One pre-1970 record, now thought to be lost, also exists for hectad NX08.

Sorbus rupicola (Syme) Hedl.

Rock Whitebeam

National Status: *Scarce, Least Concern.*Local Status: *Rare.*

A native shrub or small tree of cliffs and rock outcrops, generally found on hard limestones or other basic rocks, most often in exposed sites but also in less exposed rocky woodland.

Nationally this is the most widespread apomictic *Sorbus* species in Britain, but many populations are small, sometimes consisting of only a single tree. The distribution appears to be stable.

Site	Hectad	Gridref	Latest Date	Recorder
Ardneil Bank Wood	NS15	NS1770450019	2004	Hawker, D.

The Grid reference given for the record above is a central one for a population that spreads marginally to the south into hectad NS14. This species has never been confirmed from any other Ayrshire locations.

Sparganium natans L.

Least Bur Reed

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. This species grows in shallow, sheltered waters at the edges of lakes, or in ponds, slowly flowing streams and drainage ditches. It is found in mesotrophic, highly calcareous to acidic waters. Nationally many populations were lost in the lowlands, in the first half of the 20th century and this decline has continued. These losses are attributable to the drainage of wetlands in historic times, and perhaps to eutrophication of surviving sites. The distribution elsewhere appears to be more stable.

Site	Hectad	Gridref	Latest Date	Recorder
Red Moss Loch, Maybole	NS21	NS269126	1987-1999	* The Grid reference is derived from an earlier record.
Loch Doon	NX49	NX4997	1996	Duncan, W., Willby, N. J. & Day, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS30, NX19 & NX28.

Spergula arvensis L.

Corn Spurrey

National Status: *Not Scarce, Vulnerable.*Local Status: *Not Scarce.*

The only native populations of this annual appear to be those of the genetically dwarf var. *nana* on granite cliff ledges in the Channel Islands. Elsewhere it is an archaeophyte found in open, disturbed habitats on light, often sandy soils, most frequently in arable fields but also on seashores, roadsides and waste ground. It tends to avoid calcareous soils. Nationally it has markedly declined as a result agricultural intensification and the loss of arable land in the uplands.

Site	Hectad	Gridref	Latest Date	Recorder
Burnside Farm, track to	NS10	NS19480134	2018	Crawford, C.
Dipple shore	NS10	NS10W	2019	Crawford, C.
Portencross	NS14	NS1748	2019	Smart, G.
Thirdpart – Carlung – Yonderfield	NS14	NS14Z	2018	Smart, G.
West Kilbride Golf Course shore	NS14	NS1947	2010	Smart, G.
Hunterston area	NS15	NS15	1987-1999	*
Turnberry Golf Course	NS20	NS20C	2011	Crawford, C.
Maidens – Turnberry	NS20	NS20D	2012	Rutherford, A.
Mochrum	NS20	NS2609	2013	Crawford, C., Lang, D. A. & Smart, G.
Glenlea	NS21	NS2564013130	2013	Crawford, C., Lang, D. A. & Smart, G.
Brown Carrick Hill, north of	NS21	NS21Y	2017	Crawford, C.
Heads of Ayr	NS21	NS2818	2015	Crawford, C., Fraser, J. & Hannah, A.
South Inch to Glenfoot Coast	NS24	NS24C	2010	Smart, G.
South Seamill shore	NS24	NS2046	2019	Smart, G.
Ardrossan-Whitlees	NS24	NS24G	2012	BSBI excursion.
Rowanside Burn	NS24	NS2345	2015	Watson, K. J.
Saltcoats	NS24	NS2441	2011	Rutherford, A.
Knockrivoch	NS24	NS2544	2015	Watson, K. J.
Knockewart	NS24	NS2447	2017	Hannah, A. C. & Mackie, P.
Stevenston - Ardeer	NS24	NS24Q	2018	Mackie, P.
Kilwinning, west	NS24	NS24W	2017	Mackie, P.
Largs	NS25	NS25E	2016	Hannah, A. C.
Dalry, northwest of	NS25	NS25Q	2012	Smart, G.
North East of Largs	NS26	NS26	1987-1999	*
Dalmorton	NS30	NS3801	2015	MacKinnon, J., McIntosh, J. & Smart, G.

Balbeg – Water of Girvan	NS30	NS30W	2015	Gardner, Z., Hannah, A. & Pankhurst, A.
Greenan	NS31	NS31E	2017	Rutherford, A.
Ayr Race Course	NS32	NS32	2003	Miller; T
Troon Golf Course and shore	NS32	NS32J	2015	Gardner, Z., Smart, G. & Wilson, A.
St. Nicholas Golf Course, around	NS32	NS3424	2019	Crawford, C. & Smart, G.
Troon Harbour	NS33	NS33A	2018	Mackie, P.
The Ayrshire Golf Course site, south of Irvine	NS33	NS33D	2010	Crawford, C.
Bogside	NS33	NS33E	2019	Mackie, P.
Dundonald – Gailes	NS33	NS33H	2019	Smart, G.
Shewalton Wood	NS33	NS3470635727	1996	Smart, G.
Broomlands	NS33	NS3438	2014	Rutherford, A.
Kilwinning area	NS34	NS34	1987-1999	*
Pundeavon Burn, roadside near	NS35	NS309561	2015	Crawford, C., Hannah, A. & Lang, D. A.
Kilbirnie Loch (north)	NS35	NS35H	2015	Watson, K. J.
Barcraigs Reservoir, edge of	NS35	NS38395666	2010	Lang, D. A.
Ness Glen – River Doon	NS40	NS40R	2015	Crawford, C., Fraser, J., Hawker, D. & McTeague, E.
Belston	NS41	NS472169	2019	Hannah, A. H., Lang, D. A. & Smart, G.
Mauchline, south of	NS42	NS42X	2015	Dodd, M., Hawker, D. & Middleton, A.
Kilmarnock – Galston	NS43	NS43	1987-1999	*
Dalmellington – New Cumnock	NS50	NS50	1987-1999	*
Mauchline, east of	NS52	NS52D	2015	McIntosh, J. W., McTeague, E. & Middleton, A.
B743 near Wyndy Burn Bridge	NS52	NS59342725	2018	Crawford, C. & Lang, D. A.
Darvel, east of	NS53	NS53Y	2018	McTeague, E. & Philip, M.
North East of Kilmarnock	NS54	NS54	1987-1999	*
Glen Afton	NS60	NS62310936	2017	Calvey, C. & Crawford, C.
Dalhanna	NS61	NS614112	2019	Crawford, C., Hannah, A. C., Lang, D. A. & McCleary, J.
Garepool Burn	NS61	NS6516812916	2014	Crawford, C., Lang, D. A. & Smart, G.
Greenock Mains – Airds Moss SAC, northeast end	NS62	NS62I	2016	Hannah, A. & Philip, M.

Loudoun Hill	NS63	NS60753724	2015	Crawford, C., Lang, D. A. & Smart, G.
Glen App	NX07	NX07	1987-1999	*
Downan Hill, north of	NX08	NX08Q	2019	Crawford, C.
Ballantrae	NX08	NX0866282315	2014	Crawford, C.
East of Glen App	NX17	NX17	1987-1999	*
Knockdolian	NX18	NX18C	2015	Gardner, Z., MacKinnon, J. & McIntosh, J.
Knockdaw Hill & Farm	NX18	NX18P	2015	Hannah, A., Lang, D. A. & Middleton, A.
Garnaburn	NX18	NX1586	1987	Stirling, A. McG.
Pinwherry Castle, near	NX18	NX19728678	2010	Rutherford, A.
Laggansarroch Bridge	NX18	NX19948882	2010	Rutherford, A.
Byne Hill, west of	NX19	NX19S	2008	BSBI excursion.
Girvan	NX19	NX19Z	2015	Hannah, A., Pankhurst, A. & Wilson, Z.
Feoch Meadows	NX28	NX2699982058	1993	SWT data
Minuntion, Stinchar Valley	NX29	NX2291	2010	Lang, D. A. & Smart, G.
River Stinchar, at Balloch	NX39	NX322958	2019	Lang, D. A., McLeary, J. & Smart, G.
Loch Doon shore at Craigmalloch	NX49	NX48719528	2018	Crawford, C., Lang, D. A. & Mackie, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS22, NS41 (at each of Rakninston, Patna and near Coynton), NS51, NX09 & NX27. Despite declines at a GB level leading to a threat classification of nationally Vulnerable for this species, as can be seen it remains abundant in Ayrshire. It should be noted however that despite regular recording at both sites since the 1990s, neither the Shewalton Wood record nor the Feoch Meadows record have been refound.

Spergularia rupicola Lebel ex Le Jol.

Rock Sea Spurrey

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce**Spergularia rupicola* at Ailsa Craig © Smart, G.

Native. A perennial herb of maritime rocks and cliffs, growing in crevices, on ledges and on friable rock surfaces, sometimes in guano-enriched sites near sea-bird colonies. It also grows in short cliff-top grassland and on the masonry of piers and walls near the sea. It is indifferent to soil reaction. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Coastline from Dophine House to Culzean Harbour	NS21	NS2310	2001	Thurston, J.
South of Ayr	NS31	NS31	1987-1999	*
Downan Hill & Point	NX08	NX0680	1992	Stirling, A. McG. & B. H. T.
Ailsa Craig	NS00	NS02280011	2018	Crawford, C., Hannah, A. C., Philip, M. & Smart, G.
Carleton	NX18	NX1261989438	2015	Crawford, C., Pankhurst, A. & Wilson, A.
Ardwell, Girvan	NX19	NX19	1989	Stirling, A. McG.

The Grid reference given for the Ailsa Craig site record is a typical one for a population that straddles the hectad boundary into NX09 to the south. This species has never been confirmed from any other Ayrshire locations.

Spiranthes romanzoffiana Cham.

Irish Ladies Tresses

National Status: *Scarce, Least Concern. Also appears on the Scottish Biodiversity List.*
Local Status: *Rare.*



Spiranthes romanzoffiana near Barrhill © Bates, M.

Native. A rhizomatous herb of acidic, nutrient poor, periodically flooded or flushed vegetation, often growing on peaty soils by rivers, streams and lake margins. Nationally some sites have been lost to drainage and reclamation.

Site	Hectad	Gridref	Latest Date	Recorder
Barrhill, south of	NX28	NX2284280828	2009	Bates, M.

This species has never been confirmed from any other Ayrshire locations.

Stachys arvensis (L.) L.

Field Woundwort

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
 Local Status: *Scarce.*



Stachys arvensis in Seanill © Smart, G.

An archaeophyte summer- or winter-annual of arable fields, allotments and gardens, waste ground and road verges, usually on non-calcareous soils. It occurs on limestone outcrops in W. Ireland. *S. arvensis* was formerly a frequent weed of arable land which is now declining nationally.

Site	Hectad	Gridref	Latest Date	Recorder
Seamill, Pantonville Road	NS24	NS20184745	2019	Smart, G.
South of Ayr	NS31	NS31	1987-1999	*
Lochgoin Reservoir – boathouse	NS54	NS534472	2010	Mason, R.
Lendalfoot	NX19	NX19	1989	Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS25, NS42, NX08 & NX18.

Stellaria neglecta (Weihe.) Murr.

Greater Chickweed

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Rare.*

Native. 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 from stiff, poorly-drained clays to damp sand and peaty alluvium. Generally lowland but reaching 440m in Perthshire. *S. neglecta* is known to be much more frequent in some parts of Great Britain than was appreciated fifty years ago. Conversely, there is some evidence for losses in other areas. Some GB records may be errors for the variable *S. media*.

Site	Hectad	Gridref	Latest Date	Recorder
Noddsdale Water at Brisbane Mains	NS26	NS2107562220	2015	Hannah, A. C., Krause, A. & Smart, G.

This species has never been confirmed from any other Ayrshire locations.

Suaeda maritima (L.) Dumort.

Annual Sea Blite

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An annual found in the middle and lower parts of saltmarshes, often with *Salicornia* species. It is an early colonist of intertidal mud- and sand-flats, sometimes also occurring higher up in salt-pans and drift-lines, on shell and shingle banks, and in thinly vegetated brackish areas behind sea-walls. Nationally there is no evidence of any change in the distribution of this species.

Site	Hectad	Gridref	Latest Date	Recorder
Hunterston	NS15	NS1952	1990	Rutherford, A. & Stirling, A. McG.
Meigle	NS16	NS1965	2011	Crawford, C. & Smart, G.
Seamill shore	NS24	NS20264628	2019	Smart, G.
Horse Island	NS24	NS211429	2019	Smart, G.
Fairlie	NS25	NS2054	2011	Crawford, C. & Smart, G.
Troon Harbour	NS33	NS3130	2018	Mackie, P.
Ardeer-Bogside	NS33	NS33E	2019	Mackie, P.
Ballantrae	NX08	NX082825	2014	Crawford, C.

In 2019 the Bogside population was recorded for the first time as extending up the River Garnock into monad NS2939 (tetrad NS23Z) immediately to the west. Earlier records for the species, now thought to be lost, also exist for hectads NS14 & NS32.

Subularia aquatica L.

Awlwort

National Status: *Scarce, Least Concern.*Local Status: *Rare.*

Native. An annual aquatic plant, sometimes overwintering as a rosette, growing on silt, gravel or stony substrates in acidic, oligotrophic lakes. It is normally a plant of water shallower than one metre, and is only rarely found in other water bodies, such as outfall streams. Nationally eutrophication seems to have caused declines along the eastern fringe of its range, and also in the Lake District and N. Ireland.

Site	Hectad	Gridref	Latest Date	Recorder
Loch Muck	NS50	NS512007	1996	Day, J., Duncan, W. & Willby, N. J.
Loch Macaterick	NX49	NX49	1987-1999	* The exact location is derived from an earlier record.

Earlier records for the species, now thought to be lost, also exist for hectad NX49 (at each of Loch Finlas, Loch Riecawr and Loch Doon). It should be noted that the Loch Muck record was not refound during a dedicated recording visit to the site in 2019.

Teesdalia nudicaulis (L.) R. Br.

Shepherd's Cress

National Status: *Not Scarce, Near Threatened*.Local Status: *Scarce*.

Teesdalia nudicaulis at Ardeer, Stevenston © Mackie, P.

Native. A winter-annual of acidic, well-drained sandy soils on heathlands, sand dunes, shingle and gravels, by railways and on coal and cinder tips. It prefers bare or disturbed ground. Nationally it is declining probably due to scrub invasion and afforestation.

Site	Hectad	Gridref	Latest Date	Recorder
Nobel Site, Ardeer	NS23	NS28733938	2019	Mackie, P.
Ardeer, Stevenston	NS24	NS2776340040	2017	Mackie, P.
Chapelton	NS24	NS2046	1990	Stirling, A. McG.
Prestwick Dunes	NS32	NS3427	1990	Stirling, A. McG.
Darley Golf Course	NS33	NS33G	1999	Blane, J.
Gailes Marsh & Shewalton SWT Reserves and Dundonald Links	NS33	NS33H	2019	Smart, G.
Oldhall Ponds and Shewalton Sandpits SWT Reserves	NS33	NS33I	2019	Smart, G.
Irvine Golf Course	NS34	NS311401	1993	Watson, K.

Earlier records for the species, now thought to be lost, also exist for hectads NS14 (both at Seamill and at Ardeuil Bay), NS21, NS24 (near Dalry), NS32 (at each of Monkton, Newton Parish and along the railway line by Troon Golf Course), NS33 (at each of Barassie, Dreghorn, Western Gailes and Shewalton Moor) & NS34 (at Kilwinning) – suggesting a potentially significant decline at county level. It should be noted that the Chapelton record has not been refound during several recording visits to the site since the 1990s. The Prestwick Dunes site was also not refound during a dedicated recording trip to the relevant tetrad in 2015.

Thalictrum alpinum L.

Alpine Meadow-rue

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A small, rhizomatous perennial of mountain habitats. It is found on damp rock ledges, at the open edges of stony streams and flushes and in thin grassland. It is a good indicator of substrates which are at least slightly base-rich. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Shalloch on Minnoch	NX39	NX39	1987-1999	* The exact location is derived from an earlier record.
Balminnoch Brae	NX48	NX414873	2016	Soutar, R.
Craiglee, Carrick Forest	NX49	NX4796	1987	SNH data

This species has never been confirmed from any other Ayrshire locations.

Thalictrum minus L.

Lesser Meadow Rue

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A morphologically variable, native perennial herb found in calcareous or other base-rich habitats where competition is low, including fixed dunes, scrubby banks, rocky lake and river edges, limestone and serpentine cliffs, limestone grassland and pavement and montane rock ledges. It also occurs in other habitats, including churchyards, hedge banks and roadsides, as a garden escape. Nationally its native distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Prestwick	NS32	NS32N	1989	Rutherford, A. & Stirling, A. McG.
Loch Riecawr	NX49	NX44079364	2018	Cobb, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS21, NS24, NS25 & NS43.

Thlaspi arvense L.

Field Pennycress

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

An archaeophyte annual found as an arable weed, particularly with broad-leaved crops and mainly on heavier soils. It is also a frequent weed on disturbed roadsides, and in waste places and gardens. Nationally the plant has increased in frequency in the north and west of its range over the last few years.

Site	Hectad	Gridref	Latest Date	Recorder
Ayr	NS32	NS32	1987-1999	*
Ballantrae area	NX08	NX08	1987-1999	*
Lendalfoot - Carleton - Balsalloch - Knockormal	NX18	NX18J	2015	Crawford, C., Pankhurst, A. & Wilson, A.
Water of Girvan near Girvan Mains	NX19	NX197991	2015	Hannah, A., Pankhurst, A. & Wilson, Z.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS24, NS25, NS31 & NX19 (at Lendalfoot).

Trientalis europaea L.

Chickweed Wintergreen

National Status: *Not Scarce, Least concern.*Local Status: *Rare.*

Native. Perennial herb of moist, acidic and humus-rich, but often fertile, soils and on moorland; less commonly on heaths. It is highly localised, colonies often being separated by much apparently suitable ground. Nationally, while the species is declining in the north of England, it is stable elsewhere.

Site	Hectad	Gridref	Latest Date	Recorder
Mochrum Hill & Wood	NS21	NS265102	1995	Blane, J.

This species has never been confirmed from any other Ayrshire locations.

Trifolium micranthum Viv.

Slender Trefoil

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Scarce.*

Native. A winter-annual of neutral or moderately acidic soils, found on the coast in open, sandy or gravelly grassland rich in annuals and inland in drought-prone pastures, on paths and verges, and as a weed in lawns. It is tolerant of grazing, mowing and heavy trampling. *T. micranthum* is frequently confused with depauperate specimens of *T. dubium*, and its distribution may be somewhat obscured by this, but it is undoubtedly much better recorded now than previously. Even allowing for this, however, it is likely that it has undergone a considerable increase in England and Wales particularly since 1950.

Site	Hectad	Gridref	Latest Date	Recorder
Culzean Castle	NS21	NS234103	2012	Stanley, P. D.
Doonfoot	NS31	NS3219	1997	Alcorn, S. & Thurston, J.
Seafield	NS32	NS3220	2017	Rutherford, A.
Auchinleck	NS52	NS547216	2015	Gardner, Z., Gaskell, L. & Pankhurst, A.
Lendalfoot – Carleton – Balsalloch – Knockormal	NX18	NX18J	2015	Crawford, C., Pankhurst, A. & Wilson, A.
Girvan Harbour	NX19	NX182982	2015	Hannah, A., Pankhurst, A. & Wilson, A.
Barr	NX29	NX275941	1998	Stirling, A. McG.

This species has never been confirmed from any other Ayrshire locations. It should be noted that the Doonfoot record was not refound during a dedicated recording trip to the relevant tetrad in 2015, while the Barr record was not refound during a dedicated recording trip to the relevant tetrad in 2018.

Trifolium striatum L.

Knotted Clover

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A winter-annual occurring in short, open communities around rock outcrops and on thin, relatively infertile drought-prone soils. Habitats include well-drained pastures, grassy banks and road verges. Although often growing in acidic sites, it is also found on base-rich neutral or even highly calcareous soils. Nationally some sites have been lost owing to the improvement or abandonment of pastures and other developments.

Site	Hectad	Gridref	Latest Date	Recorder
Dunure Castle	NS21	NS2515	1993	Stirling, A. McG.
Irvine Sports Club	NS33	NS315396	2019	Mackie, P.
Bennane Head	NX08	NX0986	1987-1999	* The Grid reference is derived from an earlier record.
Colmonell area	NX18	NX18	1987-1999	*
Straid, near, Lendalfoot	NX19	NX19	1991	Natural History Society of Glasgow excursion.

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS20, NS24, NS25, NS31, NS32 & NS33 (at Dundonald).

Trisetum flavescens (L.) P. Beauv.

Yellow Oat Grass

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Perennial of well-drained neutral and calcareous grassland, found in lowland pasture and hay meadows, on downland, banks and roadsides, and occasionally rocks. It is most abundant in old, ungrazed hay meadows. Nationally its distribution is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Gailes Marsh	NS33	NS3264535655	2003	Findlay, M.
Kilmarnock – Galston	NS43	NS43	1987-1999	*
Dumfries House	NS52	NS54022042	2015	Gardner, Z., Gaskell, L. & Pankhurst, A.
Balhamie & Littleton Hills	NX18	NX18I	2015	Dodd, M., Hawker, D. & McTeague, E.

Earlier records for the species, now thought to be lost, also exist for hectads NS24, NS25 & NS32.

Trollius europaeus L.

Globe Flower

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Perennial herb of cool, damp habitats, including hay meadows, stream and river banks, lake margins, open woodland and rock ledges. It prefers basic soils, and is often associated with limestone. It is sensitive to grazing, but can persist as small. Declining nationally due to agricultural improvement of hill land by drainage and the application of fertiliser.

Site	Hectad	Gridref	Latest Date	Recorder
Brisbane Glen, Largs	NS26	NS26	1988	Simpson, B.
Tranew Flushes	NS30	NS30N	1987-1999	* The Grid reference is derived from an earlier record.
Craigengillan	NS40	NS473025	2009	McGavigan, F., MacGregor, A. & Laue, B.
Troston Knowe	NS50	NS515019	2012	Hawker, D.
Feoch Meadows SWT Reserve	NX28	NX28R	2010	Averis, B
Penkill to Pinmore road	NX29	NX215936	2012	Arneill, B.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS25, NS30 (at both Wallets Bank and on the River Girvan south of Straiton), NS31, NS32, NS35 (both at Blaeloch near Beith and at Glengarnock), NS40 (at Bogton Loch SSSI), NS52, NS53, NS61, NX19, NX27, NX29 (at Minuntion) & NX39 – suggesting a potentially significant decline at county level.

Ulex galii Planchon.

Western Gorse

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. A shrub of heaths on infertile acidic soils, including leached soils overlying chalk and limestone; also found on sea-cliffs, in under-grazed or abandoned pastures, and on scrubby banks and waste ground. Nationally its distribution is probably stable.

Site	Hectad	Gridref	Latest Date	Recorder
West Gailies	NS33	NS3136	2015	Watson, K. J.
March Burn falls	NX07	NX047750	2018	Gaskell, L. & Miles, C.
Linfern Loch, near	NX39	NX370985	2006	Stanley, P.

Earlier records for the species, now thought to be lost, also exist for hectads NS44 & NX08.

Utricularia intermedia *sens. lat.* Hayne

Intermediate Bladderwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Perennial, insectivorous herbs, most frequent in shallow, oligotrophic water in acidic and peaty sites, though also occurring in calcareous sites. They rarely flower. A poorly known aggregate of three species which all appear to be in decline nationally due to habitat loss and eutrophication.

Site	Hectad	Gridref	Latest Date	Recorder
Long Loch – Black Loch	NX27	NX238763	1996	Day, J., Duncan, W. & Willby, N. J.
Aldinna	NX39	NX3794	1987	McTeague, E.
Shalloch on Minnoch	NX39	NX39	1987	McTeague, E.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.
Cornish Loch, near	NX49	NX41349399	2016	Miles, C.
Loch Skelloch	NX49	NX49D	2001	Stanley, P.
Craiglee	NX49	NX4696	1987	McTeague, E.

The Long Loch – Black Loch record and the near Cornish Loch record are the only ones identified to full species level – as *U. stygia*. Earlier records for the species, now thought to be lost, also exist for hectads NS24, NX18, NX27 & NX39 (near Stinchar Bridge to the southwest of Loch Bradan).

Utricularia minor L.

Lesser Bladderwort

*National Status: Not Scarce, Least Concern.**Local Status: Scarce.*

Native. Perennial herb of nutrient-poor, acidic, or sometimes base-rich, shallow water in bog pools and abandoned peat cuttings, at the edges of lakes amongst emergent vegetation, in ditches and small ponds, and in fens. Nationally the species appears to be declining – particularly in southern and eastern England, and perhaps also in southeastern Ireland – due to habitat destruction and eutrophication. However it may still be under-recorded in the northern and western parts of its range.

Site	Hectad	Gridref	Latest Date	Recorder
Knockewart Hills	NS24	NS2347	2017	Hannah, A. C. & Mackie, P.
Loch Muck	NS50	NS512007	1996	Day, J., Duncan, W. & Willby, N. J.
Grey Hill, near	NX19	NX16949307	2008	BSBI excursion.
Aldinna Loch	NX39	NX36549374	2015	McIntosh, J., W., McTeague, E. & Smart, G.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.
Rowantree Craig	NX49	NX41459454	2016	Miles, C.
Loch Skelloch	NX49	NX49D	2001	Stanley, P.

One pre-1970 record for the species, now thought to be lost, also exists for hectad NX39. It should be noted that the Loch Muck record was not refound during a dedicated recording trip to the site in 2019.

Utricularia vulgaris sens. lat. L.

Greater Bladderwort

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. Insectivorous perennials found in shallow water in peaty bogs and marshes. Flowering is irregular. An aggregate of two species, it has declined in many areas – mainly due to drainage, peatland destruction and eutrophication.

Site	Hectad	Gridref	Latest Date	Recorder
Ashgrove Loch SSSI	NS24	NS2744	2004	Darwell, A. & Fisher, J.
Shewalton Sandpits SWT Reserve	NS33	NS327370	2018	Smart, G.
Merkland Loch	NS33	NS3533	2019	Lang, D. A. & Mackie, P.
Bogton Loch SSSI	NS40	NS468055	1996	Day, J., Duncan, W. & Willby, N. J.
Auchinleck House & Mains	NS52	NS52B	2015	Crawford, C.
Drumbracken – Studie Knowe	NX17	NX17M	2018	Crawford, C., Dodds, M., MacKinnon, J. & McCleary, J.
Balhamie & Littleton Hills	NX18	NX18I	2015	Dodd, M., Hawker, D. & McTeague, E.
Long Loch – Black Loch	NX27	NX238763	1996	Day, J., Duncan, W. & Willby, N. J.
Loch Doon SSSI	NX49	NX49	2004	Darwell, A. & Fisher, J.

Earlier records for the species, now thought to be lost, also exist for hectad NS24 (at each of Loch Ewart in West Kilbride, Ardeer Mains and Loch Jeorgan in Ardrossan). It should be noted that the Bogton Loch record was not refound during a dedicated recording trip to the site in 2019.

Veronica agrestis L.

Green Field-speedwell

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.**Veronica agrestis* at Kilwinning © Mackie, P.

This spring-germinating annual is a colonist of cultivated land, waysides, gardens and allotments. It prefers soils which are well-drained and acidic, occurring on calcareous substrates only when there is surface leaching. It has been decreasing for many years, mainly due to changing agricultural practices, and is no longer a familiar cornfield weed.

Site	Hectad	Gridref	Latest Date	Recorder
Kilwinning, near Whitehirst Park Road underpass	NS24	NS2873343321	2017	Mackie, P.
Largs	NS25	NS203587	2016	Hannah, A. C.
Prestwick	NS32	NS32	1989	Rutherford, A. & Stirling, A. McG.
Irvine Low Green	NS33	NS31833903	2019	Mackie, P.
Belston	NS41	NS47401708	2019	Hannah, A. H., Lang, D. A. & Smart, G.
Colmonell area	NX18	NX18	1987-1999	*
Girvan – Lendalfoot	NX19	NX19	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS31, NS32 (at Auchincruive), NS42 & NS43.

Veronica anagallis-aquatica L.

Blue Water Speedwell

National Status: *Not Scarce, Least concern.*Local Status: *Scarce.**Veronica anagallis-aquatica* at Bennane Lea - Corseclays © Crawford, C.

Native. An annual found on fertile substrates by rivers, streams and ponds, in ditches and in flooded clay- and gravel-pits. It grows as a vegetative plant submerged in shallow water, or as a flowering emergent, or as a terrestrial plant in marshy habitats and disturbed ground at the water's edge. Reproduction is by seed and by rooted stem fragments. Nationally its distribution is probably stable, though the species may be over-recorded for its hybrid with *V. catenata* in some areas.

Site	Hectad	Gridref	Latest Date	Recorder
From Heart Loch up to Crosshill Road, Maybole	NS30	NS310094	1996	Day, J., Duncan, W. & Willby, N. J.
River Doon at Doonholm	NS31	NS337176	2010	Bell, A., Sadler, E.-J. & Quinn, L.
Doon mouth foreshore	NS31	NS32201949	2015	Gaskell, L., McIntosh, J. & Middleton, A.
Adamton Mains, Monkton	NS32	NS378287	2000	Blane, J.
Dippol Burn, Auchinleck	NS52	NS5523	2000	Blane, J.
Bennane Lea - Corseclays	NX08	NX08X	2019	Crawford, C.
Loch Nahinie, near, Barrhill	NX27	NX27	1990	Stirling, A. McG.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS21, NS25, NS30 (both at Auchalton and at Auchenairney), NS31 (at Auchendrane Mill), NS43 & NX18. It should be noted that the Heart Loch record was not refound during a dedicated recording trip to the site in 2019.

Vicia lathyroides L.

Spring Vetch

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. An annual of sand dunes and short, summer-parched grasslands on sandy soils by the coast; also on disturbed ground, old walls, and in dry heathland on sands and gravels inland. Often overlooked because of its small size and early flowering habit. Nationally its population is stable.

Site	Hectad	Gridref	Latest Date	Recorder
Turnberry	NS20	NS20	1987	Stirling, A. McG.
Croy, Dunure	NS21	NS2412	1987-1999	* The Grid reference is derived from an earlier record.
Prestwick Dunes	NS32	NS32	1988	Stirling, A. McG.
Ardeer	NS33	NS30243867	2006	Dargie, T.
Shewalton Sandpits SWT Reserve	NS33	NS327370	2009	Silverside, A.
Troon	NS33	NS33	1987	Rutherford, A. & Stirling, A. McG.
Ailsa Craig	NX09	NX09	1991	Zonfrillo, B.
Colmonell area	NX18	NX18	1987-1999	*
Girvan - Lendalfoot	NX19	NX19	1987-1999	*

Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS24 (both near Saltcoats and near Seamill), NS31, NS32 (at Monkton) & NX08.

Vicia sylvatica L.

Wood Vetch

National Status: *Not Scarce, Least Concern.*Local Status: *Scarce.*

Native. A climbing or scrambling perennial of hedges, wood-borders and clearings, scrub, rough ungrazed grassland on cliffs, wooded gorges and also on shingle, screes and railway banks. Apparently declining nationally, perhaps due to a reduction in coppicing.

Site	Hectad	Gridref	Latest Date	Recorder
Portencross	NS14	NS14	1987-1999	* The exact location is derived from an earlier record.
Goat's Green, Culzean	NS21	NS24341099	2013	Crawford, C.
Glenlinn, near	NS30	NS3805401474	2015	MacKinnon, J., McIntosh, J. & Smart, G.
Kelse Burn Glen, Straiton	NS30	NS3607	1995	From SWT data, recorder not noted.
Portandea, south of	NX07	NX04847525	2018	Gaskell, L. & Miles, C.
Currarie Glen - by rough trackside on southern bank of Ballochdowan Burn	NX07	NX06647831	2017	Crawford, C., Hannah, A. C., Lang, D. A. & Smart, G.
A77 road verge at Troax	NX18	NX10388791	2017	Crawford, C.
Barniecairn Glen	NX19	NX158937	2006	Smart, G.
Grey Hill Grassland	NX19	NX1706393241	2004	McCleary, J.

Earlier records for the species, now thought to be lost, also exist for hectads NS20, NS31, NS34, NS40, NS42, NS43, NS52, NS53, NS62, NX08 & NX19 (at Kennedy's Pass) – suggesting a potentially significant decline at county level.

Viola canina L.

Heath Dog Violet

National Status: *Not Scarce, Near Threatened.*Local Status: *Not Scarce.*

A native perennial herb of a variety of acid habitats, including heaths, coastal dunes, stony riversides and lake shores, especially in Scotland. It can also occur on thin, heavily leached substrates overlying. Nationally this species has declined severely since 1950, mainly due to habitat loss, drainage and agricultural improvement, but also over- and under-grazing and possibly hybridisation with other *Viola* species.

Site	Hectad	Gridref	Latest Date	Recorder
Seamill coast	NS14	NS14Y	2015	Watson, K. J.
Turnberry	NS20	NS20	1995	From SWT data, recorder not noted.
Craigdow Hill	NS20	NS20S	2009	Hawker, D.
Nobel Site, Ardeer	NS23	NS298389	2000	Dargie, T.
Ardeer Point	NS24	NS24	1997	Walker, G.
Troon	NS32	NS3328	1990	Hedley, S. & Woolven, S.
Western Gales	NS33	NS3136	2015	Watson, K. J.
Bogside	NS33	NS33E	2019	Mackie, P.
Allanton	NS63	NS620368	2009	Green, P. R.
Ballantrae area	NX08	NX08	1987-1999	*
Colmonell area	NX18	NX18	1987-1999	*

All Ayrshire records for this taxon are of subspecies *canina*. Earlier records for the species, now thought to be lost, also exist for hectads NS24 (at Seamill), NS25, NS32 (at Prestwick Dunes), NS41, NS50 & NX09. It should be noted that the Troon record was not refound during a dedicated recording trip to the relevant tetrad in 2015.

Viola tricolor L.

Mountain Pansy

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Not Scarce.*

An annual or perennial native herb, found on dunes and other sandy areas, on acidic grassland on heaths and hills, and in cultivated ground, gardens and waste places. Nationally a widespread decline has occurred over the last 50 years.

Site	Hectad	Gridref	Latest Date	Recorder
Maidens shore	NS20	NS2008	2010	Smart, G.
Ardeer – Irvine mouth	NS23	NS2991838791	2000	Dargie, T.
Ardeer	NS24	NS24	1993	Miller, E. & Stirling, A. McG.
South of Ayr	NS31	NS31	1987-1999	*
Prestwick Dunes	NS32	NS3437127514	2015	Hawker, D., McKinnon, J., McTeague, E. & Pankhurst, A.
The Ayrshire Golf Course site, south of Irvine	NS33	NS33D	2010	Crawford, C.
Oldhall Ponds	NS33	NS3336	1992	Watson, K.
Western Gailies SSSI	NS33	NS33	1995	Stirling, A. McG.
Troon	NS33	NS33	1994	Stirling, A. McG.
West of Galston - ex works site ponds	NS43	NS43Y	2017	Hannah, A. C. & Lang, D. A.
North of Kilmarnock	NS44	NS44	1987-1999	*
Dinnafind Knowe	NS54	NS535440	2011	Mason, R.
Garepool Burn	NS61	NS6564012232	2014	Crawford, C., Lang, D. A. & Smart, G.
Loudoun Hill	NS63	NS63D	2015	Crawford, C., Lang, D. A. & Smart, G.
Corseclays	NX08	NX091848	2019	Crawford, C.
Colmonell area	NX18	NX18	1987-1999	*

Both subspecies *tricolor* and subsp. *curtsii* are present in Ayrshire. The Grid reference given for the Ardeer – Irvine mouth site record is a central one for a population that straddles the hectad boundary into NS33 to the east. Earlier records for the species, now thought to be lost, also exist for hectads NS14, NS21, NS24 (at West Kilbride), NS30, NS35, NS52 & NX19. It should be noted that the Oldhall Ponds record has not been refound during numerous recording trips to the site since the 1990s.

Vulpia myuros (L.) C.C. Gmel.

Rat's-tail Fescue

National Status: *Not Scarce, Least Concern*Local Status: *Rare*.

An annual archaeophyte growing by railways, on walls and waysides, in pavement cracks and on waste ground in built-up areas. Occasionally found as a weed of cultivation and as an introduction from wool shoddy, grain and grass-seed mixtures. Even allowing for the possibility that this species was under-recorded in the past, it is clear that *V. myuros* has become increasingly frequent across much of its range over the last 50 years. It is likely that the plant has colonised many areas via the rail network.

Site	Hectad	Gridref	Latest Date	Recorder
Kilwinning	NS24	NS24W	2018	Mackie, P.
River Irvine	NS33	NS3139	2019	Mackie, P.
Ayrshire College, opposite	NS43	NS42763829	2019	Mackie, P.

This species has never been recorded at any other Ayrshire locations and is a recent addition to the county flora.

Zannichellia palustris L.

Horned Pondweed

National Status: *Not Scarce, Least Concern*Local Status: *Scarce*.

Native. This submerged, perennial aquatic grows in a range of shallow-water habitats. The most characteristic include clear chalk streams, eutrophic lakes and ponds, and brackish lagoons, ponds and ditches. It is a frequent colonist of disused mineral workings. Nationally increasing although decreasing in southern England.

Site	Hectad	Gridref	Latest Date	Recorder
Auchenharvie, Stevenston	NS24	NS2541	1987-1999	* The Grid reference is derived from an earlier record.
Martnaham Loch & Woods SSSI	NS31	NS3817	2004	Darwell, A. & Fisher, J.
Coodham Lake, Symington	NS33	NS395327	1996	Day, J., Duncan, W. & Willby, N. J.
Martnaham Loch & Woods SSSI	NS41	NS4017	2004	Darwell, A. & Fisher, J.
Craigie Hill, south of Kilmarnock	NS43	NS43	1991	Ader, K.

Earlier records for the species, now thought to be lost, also exist for hectads NS24 (both near Ardrossan Reservoir and on the Stevenston Burn) & NS34. It should be noted that the Coodham Lake, Symington record was not refound during a dedicated recording trip to the site in 2019.

Zostera noltii Hornem.

Dwarf Eelgrass

National Status: *Not Scarce, Least Concern.*Local Status: *Rare.*

Native. Although a coastal species, this perennial is found at higher levels of the shore than *Zostera marina*. It grows in sheltered estuaries and harbours, where it is found on mixed substrates of sand and mud. Plants are often concentrated in pools or runnels on the shore. Although declining in some restricted areas overall its distribution is stable nationally.

Site	Hectad	Gridref	Latest Date	Recorder
Southannan Sands	NS15	NS15W	2016	Clarke, J.
Fairlie Sands	NS25	NS2054	2016	Clarke, J.
Irvine – Garnock estuary	NS33	NS30743896	2011	Strachan, I.

Earlier records for the species, now thought to be lost, also exist for hectads NS21 & NS24.

Extinct Species

Adonis annua L.

Pheasant's-eye

National Status: *Not Scarce, Endangered.*Local Status: *Extinct.*

An archaeophyte arable weed of dry soils on chalk and limestone; can also be recorded from tracks, chalk pits and other disturbed habitats. Seed production is low but there is a long-lived soil seed bank. Most GB populations are small and restricted to lowland field edges. This species is known from Iron Age deposits. It underwent a catastrophic decline from 1880 to 1950, and has apparently been lost from a further 30% of its range since the 1960s. This decline is due to improved seed cleaning methods, increased usage of agrochemicals and the density of modern crops. Some recent GB records are likely to be deliberate introductions. The last and only Ayrshire record was at Craigend, Troon (NS33) in 1894.

Agrimonia procera Wallr.

Fragrant Agrimony

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. An erect perennial herb found in habitats including hedgerows, woodland margins and roadside verges – generally on soils which are neither strongly calcareous nor strongly acidic. *A. procera* has been much confused in the past with a superficially similar variety of the related native *A. eupatoria*. The overall range is little changed in the last fifty years, with apparent increases in some areas probably attributable to recorders' increased familiarity with this species.

The last and only Ayrshire record was at Tairlaw Bridge (NS401009) in 1960.

Alisma lanceolatum Withering

Narrow-leaved Water-plantain

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. An emergent perennial herb, found in shallow water or on exposed mud at the edge of a wide range of water bodies – although in many areas it is particularly frequent in canals. It most commonly occurs in eutrophic, calcareous water in the lowlands and rooted in fine substrate. *A. lanceolatum* was not consistently recognised by British botanists as a distinct species until 1952, so distributional trends are difficult to assess. May still be overlooked in some areas as *A. plantago-aquatica*, but current GB records may also include some narrow-leaved plants of the latter erroneously recorded as *A. lanceolatum*.

The last and only Ayrshire record was from the Kilwinning area (NS34) - a 1970 to 1986 Atlas date class record.

Alopecurus myosuroides Huds.

Black-grass

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

An annual archaeophyte of rank and neglected grassland and arable land, rapidly increasing by seed in south-east England to become a pest – particularly of cereal crops. It grows on both light and heavy soils in the lowlands. *A. myosuroides* has maintained, or slightly increased, its core distribution in the last fifty years, where it is a frequent and troublesome weed of arable land. Some strains have evolved specific resistance to several commonly used herbicides and the species has benefited in some areas from the increased planting of winter cereal crops and the decline of stubble burning.

The last and only Ayrshire record was from the South of Cumnock area (NS51) - a 1950 to 1969 Atlas date class record.

Anthemis arvensis L.

Corn Chamomile

National Status: *Not Scarce, Endangered.*Local Status: *Extinct.*

An aromatic annual archaeophyte of light calcareous or sandy soils, growing in arable fields - especially cereals – as well as in leys, field-borders and waste places; and on roadsides and disturbed ground near the sea. It is occasionally introduced as a contaminant of grass-seed or in wild-flower seed mixes. This species declined substantially in the 20th century – especially over the last fifty years. It was fairly resistant to the first phenoxy herbicides but is more susceptible to other, more recently developed, compounds. Many northern occurrences are casual.

The last Ayrshire record was from the Mauchline – Cumnock area (NS52) - a 1950 to 1969 Atlas date class record. All other county records are from the 19th century.

Astragalus danicus Retz.

Purple Milk-vetch

National Status: *Not Scarce, Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

Native. A perennial herb of short, unimproved turf on well-drained calcareous soils – predominantly on old chalk and limestone, but also on sand dunes and machair. In some areas of Scotland it also grows on Old Red Sandstone sea-cliffs and on mica-schists. Prior to 1930 *A. danicus* showed only modest losses in GB extent. However since then it has declined substantially in southern England and northeastern England – largely due to agricultural improvement or lack of grazing. Elsewhere it is still more stable.

The last and only Ayrshire record was from Bower Hill at the Heads of Ayr (NS2818), published in the New Statistical Account of 1845.

Ballota nigra L.

Black Horehound

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

A foetid perennial archaeophyte of hedgerows, field-borders, walls, waysides and waste ground; often on disturbed, nutrient-rich soils near habitations. Lowland – though it has been recorded as a casual at heights of up to 480m. There is archaeological evidence to suggest that *B. nigra* has been associated with human settlements since the Iron Age. It appears to show some small declines in the north and west of GB, but many of these populations may only have been casual.

The last Ayrshire record was from the Maybole - Straiton area (NS52) - a 1970 to 1986 Atlas date class record. Earlier records also exist from the Irvine – Troon area.

Blysmus compressus (L) Panz. Ex Link

Flat Sedge

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

Native. A rhizomatous perennial of open areas in marshes and fens, and in short, sedge-rich, damp grassland, calcareous flushes and stream borders which are subject to flooding. The species has suffered a severe decline throughout its range. Much of the decline has been due to drainage, the loss of unimproved damp grasslands, falling water-tables, eutrophication and the cessation of grazing.

This species was recorded on two occasions at the Pencil in Largs (NS25) – most recently in 2008. However despite these records being made by competent botanists, it is now confidently believed that the species being found at this site was in fact the closely related *B. rufus*. Pre-1980s records of *B. compressus* exist for Meigle (NS16) and Southannan/Fairlie (NS25). However as these are both areas where *B. rufus* has also been recorded – particularly the former – some doubt must also be cast on the veracity of these records too. It may therefore be the case that this species has never in fact been truly present in Ayrshire.

Bromus secalinus L.

Rye Brome

National Status: *Not Scarce, Vulnerable.*Local Status: *Extinct.*

An annual or biennial archaeophyte of cereal fields, which is also found as a casual on waste ground, and occasionally in improved leys. *B. secalinus* has probably been present in Britain since prehistoric times, initially as an arable weed or perhaps as an alternative source of grain when the main crop failed. It was frequent in the 19th and early 20th centuries, but has since undergone a dramatic decline. However, it appears to be making a comeback in a few areas of southeastern Britain. *B. secalinus* evolved in cultivation or spread in prehistory as a weed, perhaps a mimic of rye, from an unknown native range. *B. secalinus* has sometimes been confused with *B. pseudosecalinus* – though the latter has never been recorded from Ayrshire. The last Ayrshire record was from ‘Ayr’ (NS31) in 1963. Some doubts have been raised elsewhere (e.g. *Watsonia* vol. 28 part 1) regarding the identification of notable VC records by the particular recorder concerned. However the only other Ayrshire record is also from the Ayr area, with a voucher in the herbarium of Glasgow University dated to 1854.

Carex maritima Gunnerus

Curved Sedge

National Status: *Scarce, Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

A rhizomatous native perennial found in the short vegetation of dune-slacks and on open sand at the coast – often close to freshwater seepages or where streams debouch onto the shore. It is mobile and can colonise new sites with suitable habitat. Populations can be very large. *C. maritima* suffered a considerable decline prior to 1930. Assessments of more recent trends are difficult as it is a very inconspicuous and under-recorded species. Further fieldwork is therefore required to properly establish its current distribution.

The last and only Ayrshire record was from Bogside Flats SSSI (NS33) in 1975.

Carex x beckmannii Keck ex F. Shultz*C. diandra* x *paniculata*National Status: *Rare, Vulnerable.*Local Status: *Extinct.*

A hybrid between two generally lowland wetland sedges. Both parents are considered to have a relatively stable distribution in Scotland, though *C. diandra* is declining elsewhere in GB and is considered to have a Near Threatened conservation status at this level.

An exception to the exclusion of hybrid taxa from this Rare Plant Register has been made in this particular case due to the decision to include *C. x beckmannii* as a taxon of conservation concern in the current Vascular Plant Red Data List for Great Britain (Cheffings & Farrell, 2005).

Both parents are Ayrshire Scarce. The last and only confirmed Ayrshire record for the hybrid was from Loch Lochton (NX1792) within the Pinbain Burn to Cairn Hill SSSI – itself a constituent site of the wider Lendalfoot Grasslands Complex European Special Area of Conservation – in 1978.

Carum carvi L.

Caraway

National Status: *Scarce, Endangered. Also appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

A monocarpic perennial archaeophyte found naturalised in meadows, on sand dunes, on roadsides and along railway banks; as well as as a casual in waste places and on rubbish tips. Generally lowland, but formally recorded up to 425m. *C. carvi* was introduced from Europe before 1375. It is well naturalised in Shetland but is uncommon elsewhere within the British Isles where it is much less frequently cultivated than formally. Many occurrences are casual – presumably arising from fruits imported as flavouring agents.

The last Ayrshire record was from the Largs – Fairlie area (NS25) - a 1950 to 1969 Atlas date class record. It was previously widespread in the northern half of the vice-county but Scarce.

Centunculus minimus (L.) E.H.L. Krause

Chaffweed

National Status: *Not Scarce, Near Threatened.*

Local Status: *Extinct.*

Native. An annual of open places of damp, sandy sites – often near the sea and usually on acidic soils. Habitats include sand dunes, sandy cliffs, along paths & tracks on heathland and in forest rides. It is a poor competitor where grazing is relaxed and general disturbance ceases. Many sites, especially lowland ones, were lost before 1930. In England these losses have continued or accelerated – possibly through changes in heathland management – but the distribution is stable elsewhere. It is also very easily over-looked and so probably under-recorded.

The last Ayrshire record was from the Saltcoats – Dalry area (NS24) - a 1970 to 1986 Atlas date class record. All other county records are from the 19th century.

Cephalanthera longifolia (L.) Fritsch

Narrow-leaved Helleborine

National Status: *Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

Native. A rhizomatous perennial herb found in a variety of woodland types on calcareous soils, usually on chalk and hard limestone but also on calcareous schist in Scotland. It prefers permanent patches of light and is most frequent on steep, rocky slopes with an open tree canopy. However it is also found along woodland edges & rides and in scrub. This species declined markedly in the 19th and 20th centuries, especially prior to 1970. Although collecting may have contributed to some losses, the cessation of woodland management and coniferisation – both of which lead to denser canopies – has been much more significant.

The last Ayrshire record was from Auchans Woods at Dundonald (NS3534) in 1972. Some doubts have been raised elsewhere (e.g. *Watsonia* vol. 28 part 1) regarding the identification of 1st and rare VC records by the particular recorder concerned – so it is possible that this record may be an error. However the plant was also reported as growing at Annick Lodge, Cunninghame Head (NS34) in 1879 – although *Botany of Ayrshire 2nd edition* (Smith 1896) reports that these particular plants were later removed by the Lodge's gardener in 1887.

Chenopodium bonus-henricus L.

Good-King-Henry

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

A perennial archaeophyte forming patches on disturbed, nutrient-rich soil around farm buildings and ruins – as well as on roadsides and waster ground. It also sometimes occurs in limestone grassland up to 455m. This species, present in Roman times, was once grown for its edible leaves. It can persist for many years but has decreased over the last fifty years - perhaps because it is no longer being introduced and populations are gradually lost through a general tidying of ruderal habitats.

The last Ayrshire record was from Fenwick (NS4643) – published in *The Flora of the Clyde Area* (Lee 1933). It was previously widespread mainly in the northern half of the vice-county but Scarce.

Chenopodium vulvaria L.

Stinking Goosefoot

National Status: *Scarce, Endangered, Schedule 8 of the Wildlife & Countryside Act.*

Local Status: *Extinct.*

A foetid, often prostrate lowland annual archaeophyte of disturbed, nutrient-rich soil on sandy shingle beaches, sand dunes and coastal cliffs where the soil is enriched by the droppings of sea-birds. It was formerly a ruderal of places enriched with animal dung. This species had declined dramatically before 1930, perhaps because of the change from horse to tractor power and the declining use of dung as a fertiliser. By 1930 it was virtually confined to coastal habitats, and even here it has continued to decline for reasons which are currently unclear. The last and only Ayrshire record was from Auchincruive (NS32 – notably a relatively inland site) in 1950.

Circaea alpina L.

Alpine Enchanter's-nightshade

National Status: *Scarce, Least Concern.*

Local Status: *Extinct.*

Native. A perennial herb typically associated with seepage areas within rocky, bryophyte-rich oak woodland; but also found amongst boulders and scree by the sides of streams & waterfalls, under *Pteridium*, and even amongst *Sphagnum*. It probably spreads by rhizomes and stolons as well as by seed. *C. alpina* was formerly confused with *C. x intermedia*, and its status and distribution were not clarified until 1963. The overall distribution is probably stable.

The last Ayrshire record was from Kilbride Parish (NS24) in 1894 – published in the *Botany of Ayrshire 2nd edition* (Smith 1896). There was also an even older record from Beith referred to in an earlier publication but both may conceivably be incorrectly identified examples of *C. x intermedia* - as is discussed above - as this hybrid is widespread in Ayrshire even today (though now Scarce).

Cuscuta epithymum L. (L.)

Dodder

National Status: *Not Scarce, Vulnerable.*Local Status: *Extinct.*

Native. An annual - rarely perennial - rootless twining herb parasitic on the stems of a wide variety of small shrubs and herbs (most frequently *Calluna vulgaris*, *Thymus polytrichus*, *Ulex gallii* and *U. minor*) on lowland heaths, chalk downland and fixed dune grasslands. It is also casual on field crops and in arable field-borders at the northern and western extent of its range. The loss of lowland heath, ploughing of chalk downlands and an increase in scrub have caused a decline in this species since 1930. Whilst it is still locally abundant, its distribution suggests a continuing substantial decline.

The last and only Ayrshire record was from Troon (NS33) in 1894 – published in *The Botany of Ayrshire 2nd edition* (Smith 1896).

Dianthus deltoides L.

Maiden Pink

National Status: *Not Scarce, Near Threatened.*Local Status: *Extinct.*

Native. A perennial herb of dry, usually base-rich, soils overlying chalk and limestone, mica-schist or basalt; sometimes on metal-rich mining spoil or sandy soils and dunes. It can occur in short, closed grassland but prefers an open sward broken by bare rock or soil. It also occurs as a garden escape. Much of the decline of *D. deltoides* took place before 1930. Further losses have been offset by new discoveries. Nonetheless many colonies are small and suffer from overgrazing and nutrient enrichment, or from undergrazing and scrub encroachment.

The last and only Ayrshire record was from Castle Hill, Ardrossan (NS2342) in 1900.

Dryopteris cristata (L.) A.Gray

Crested Buckler-fern

National Status: *Rare, Critically Endangered.*Local Status: *Extinct.*

Native. This deciduous fern grows in mildly acidic `floating` fens that develop within, or from, more base-rich fens. It is characteristic of *Sphagnum* lawns, where it can tolerate the shade of invading *Phragmites* and *Salix & Betula* scrub. It can persist in fen carr. Lowland. *D. cristata* was lost from most English sites by 1970 through drainage, scrub encroachment and the loss of mown fen. Since then, losses have continued in Scotland and England.

The last and only Ayrshire record was from Galston Parish (NS53) in 1894 – published in *The Botany of Ayrshire 2nd edition* (Smith 1896).

Equisetum pratense Ehrh.

Shady Horsetail

National Status: *Not Scarce, Least Concern.*

Local Status: *Extinct.*

Native. An evergreen herb, typically found on sloping sites where the substrate is derived from calcareous alluvial silts or sand - especially lightly wooded stream banks in the lower parts of upland valleys. It can also extend onto open moorland and is found on grassy slopes beneath base-rich upland cliffs. The considerable increase in records in the last fifty years is due to better recording. Although most populations are long-lived, cone production is usually very poor - possibly because of climatic conditions, and some research has suggested that the species is in slow decline.

The last Ayrshire record was from Lanfine (NS543371) in 1959. The only earlier record was also from the same hectad.

Erodium moschatum (L.) L'Hér.

Musk Stork's-bill

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

An annual of archaeophyte of barish places near the sea, in disturbed sand dunes, on roadsides, wall-tops, field margins and waste ground. In the Isles of Scilly it is a frequent bulb-field weed. It is recorded inland as a casual, sometimes introduced with wool shoddy. Lowland. This species is well-established in the coastal regions of Southwest England, Wales and Ireland, where it is often considered a native. In these areas it is now more frequent than fifty years ago. It remains an uncommon casual elsewhere.

The last and only Ayrshire record was from Kilwinning (NS34) in 1980.

Euphorbia exigua L.

Dwarf Spurge

National Status: *Not Scarce, Near Threatened.*

Local Status: *Extinct.*

An annual archaeophyte of arable land; less frequently occurring in other areas of disturbed ground such as gardens, waste ground and bare patches in dry grassland. It favours dry, light and base-rich soils in sunny situations. Lowland. This species was lost from many areas of Ireland and Britain before 1930. In the last fifty years it has declined further. Most losses are due to the intensification of agriculture - particularly the increased use of herbicides.

The last Ayrshire record was from the South West of Ayr area (NS21) - a 1950 to 1969 Atlas date class record. The species has been reported from this particular hectad from as far back as 1894, but it has never been recorded from any other in the vice-county.

Galium mollugo L.

Hedge Bedstraw

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. A stoloniferous perennial herb of well-drained, calcareous or base-rich soils. Habitats include rough & permanent grassland, waysides, railway banks, roadsides, hedge banks, woodland edges, scrub and waste ground. *G. mollugo* shows little change in GB distribution in the last fifty years, although it is now much better recorded. It is common in wild-flower seed mixtures, and may be increasing on roadsides.

The last and only Ayrshire record was from the Large – Fairlie area (NS25) - a 1950 to 1969 Atlas date class record. However *G. album* was previously considered a subspecies of *G. mollugo* (subsp. *erectum*), and it is therefore possible that some older Ayrshire *G. mollugo* records – not recorded to sub-species at the time but since considered most likely to have been of *G. album* – could conceivably have in fact been of *G. mollugo*.

Galium tricornutum Dandy

Corn cleavers

National Status: *Scarce, Critically Endangered.*Local Status: *Extinct.*

An annual archaeophyte of cereal fields and disturbed ground, chiefly on dry calcareous soils. Rarely, it can arise as a casual from the seed bank during earth-moving. Lowland. The very substantial decline, already apparent by 1930, has continued ever since due to the intensification of arable farming. Populations are usually very small, and large ones tend to be transient. Re-introduction into protected sites is occasionally attempted.

The last Ayrshire record was from the banks of the River Ayr (NS32) – published in the Proceedings of the BSBI in 1952. The species had been reported from this particular hectad from as far back as 1910, but it has never been recorded from any other in the vice-county.

Geranium columbinum L.

Long-stalked Crane's-bill

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

Native. A lowland annual of dry grasslands and grassland-scrub mosaics. Its habitats include sand dunes, scrubby cliff slopes, hedge banks, field margins, chalk & limestone downland, railway banks and old quarries. It is usually on calcareous soils, and is often a pioneer on disturbed sites. It favours warm, sheltered, often south-facing banks and hollows. Losses since 1950 (mainly in England) are probably due to habitat destruction, intensification of grassland management and scrub encroachment.

The last Ayrshire record was from the Girvan – Lendalfoot area (NX19) in 1949 – the only other being from further south in the vice-county during the 19th century.

Glaucium flavum Crantz

Yellow Horned-poppy

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. A short-lived perennial herb of shingle banks and stony beaches - also, more rarely, amongst loose rock, on eroding cliffs of sand & clay and on the bare tops of chalk cliffs. The few inland records are of casual occurrences. Lowland. *G. flavum* has been lost from some sites in Britain in recent years as a result of coastal defence work and trampling pressures on tourist beaches. However, its overall distribution shows little change over the last fifty years or more.

The last and only Ayrshire record was from the Ballantrae area (NX08) – published in *The Flora of the Clyde Area* (Lee 1933).

Groenlandia densa (L.) Fourr.

Opposite-leaved Pondweed

National Status: *Not Scarce, Vulnerable.*Local Status: *Extinct.*

Native. A perennial herb of shallow, clear, base-rich water which may grow in lakes and rivers but is more frequent in smaller waters such as streams, canals, ditches and ponds. It rarely colonises newly available habitats, although it is sometimes found as an introduction in ponds. Generally lowland, but reaching 380m. *G. densa* has declined in Britain due to urbanisation (which has led to its loss from the London area), eutrophication and the loss of spring-fed streams & ditches due to falling water tables. This decline began before 1930, but is still continuing.

The last and only Ayrshire record was from the pond at Culzean Country Park (NS2209) in 1949, however it was thought to be artificially introduced to this water body.

Hordeum murinum L.

Wall Barley

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

An annual archaeophyte growing in all kinds of fertile, disturbed ground - on roadsides, pavements, walls, railway banks and rough grassland. Generally lowland, but reaching heights of 450m. The distribution of this species is stable in Britain, but shows some increase in Ireland. Three subspecies occur in our area: subsp. *murinum* is common throughout the range, while subsp. *glaucum* and subsp. *leporinum* are infrequent casuals from wool shoddy and esparto.

The last and only Ayrshire record was from the Ballantrae area (NX08) - a 1950 to 1969 Atlas date class record.

Hymenophyllum tunbrigense (L.) Sm.

Tunbridge Filmy-fern

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. A rhizomatous perennial fern of very sheltered, often deeply shaded, humid habitats. These include acidic rock faces, humic banks & tree trunks (particularly in deep stream valleys) and crevices on upland boulder scree. Can be found up to 760m. The distribution of *H. tunbrigense* is largely stable, although until recently many small populations have been overlooked.

The last and only Ayrshire record was from the Poteath area (NS2052) in 1982.

Hyoscyamus niger L.

Henbane

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

A biennial archaeophyte herb of dry, calcareous soils - particularly those overlying chalk and, on coastal sandhills, sandy open areas & waste ground. It prefers disturbed ground, including rabbit warrens and building sites. Lowland. There is a continuous archaeological record of *H. niger* in Britain from the Bronze Age onwards. Declines before 1930 are evident and they have continued markedly since then - mostly through the increased use of herbicides.

The last Ayrshire record was from Greenan Castle (NS3119) in 1947. It was previously widespread in the vice-county but Scarce.

Hypericum maculatum subsp. maculatum Crantz

Imperforate St John's-wort

National Status: *Not Scarce, Data Deficient – thought to be threatened.*Local Status: *Extinct.*

Native. A shortly rhizomatous perennial herb, mainly found in damp or shaded habitats such as woodland margins, hedgerows and streamsides. Generally lowland, but its upper altitudinal limit is uncertain. Early distribution maps of *H. maculatum* subsp. *maculatum* were incomplete, being based only on records confirmed by one individual (N.K.B. Robson), and the taxon remains under-recorded. It is not clear whether scattered English populations are casual introductions or relics left behind by a northward-retreating population.

An exception to the exclusion of subspecies level taxa from this Rare Plant Register has been made in this particular case due to the decision to include *H. maculatum* subsp. *maculatum* as a taxon thought to be of potential conservation concern in the current Vascular Plant Red Data List for Great Britain (Cheffings & Farrell, 2005).

The last and only Ayrshire record was from Bogside Flats SSSI (NS33) in 1969. However in many cases records of *H. maculatum* in Ayrshire have not been identified to subspecies level – so there may be others.

Hypericum montanum L.

Pale St John's-wort

National Status: *Not Scarce, Near Threatened.*Local Status: *Extinct.*

Native. This perennial herb is almost confined to chalk and limestone districts, and only occasionally found over other substrates. It prefers well-drained soils, and grows by hedges & in thickets, amongst scrub, in rough grassland, open woodland & rides and the grikes of limestone pavement. Reproduction is by seed, and vegetative spread is very slow. Habitat loss or degradation accounts for much of the loss of this species from former sites, most of which occurred before 1930. This remains the main threat to its populations, which tend to be small and therefore vulnerable.

The last and only Ayrshire record was from Maybole Parish (NS21) in 1894 – published in *The Botany of Ayrshire 2nd edition* (Smith 1896).

Imperatoria ostruthium L.

Masterwort

National Status: *Not Scarce, Near Threatened.*Local Status: *Extinct.*

A perennial archaophyte herb naturalised in moist or damp grassy areas - including marshy pasture - on hillsides, by streams & rivers and sometimes established around farm buildings. Generally lowland. *P. ostruthium* was formerly cultivated as a pot-herb or for veterinary purposes. It is very persistent and shows no sign of a change in its British distribution over the last 50 years.

The last Ayrshire record was from the Saltcoats to Dalry area (NS24) - a 1970 to 1986 Atlas date class record. It could previously be found in a number of areas in northeastern Ayrshire but was always Scarce.

Isatis tinctoria L.

Woad

National Status: *Scarce, Least Concern.*Local Status: *Extinct.*

A biennial or perennial lowland archaeophyte found only in ruderal habitats such as quarries, bare cliffs, arable fields, docks and waste places. It is usually casual, but persists at a few sites in England. *I. tinctoria* has been used as a dye plant in Britain since the Iron Age. In the 1930s however, the world's last two woad mills - in Lincolnshire - were closed and since then it has become a rare casual.

The last and only Ayrshire record was from Kilmarnock (NS43) in 1907.

Juncus compressus Jacq.

Round-fruited Rush

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. A compact to spreading, rhizomatous perennial herb found in marshes, wet meadows and pastures - often near the sea and sometimes in brackish conditions, but up to 370 metres. *J. compressus* is regularly confused with *J. gerardii*, especially on the coast. As such it could well be under- or over-recorded. Many recent county floras record a decline because of drainage and the loss of permanent pastures. Conversely, it has appeared in new sites on the edges of reservoirs.

The last and only Ayrshire record was from Fairlie (NS25) in 1884.

Juncus filiformis L.

Thread Rush

National Status: *Scarce, Least Concern.*
Local Status: *Extinct.*

Native. A rhizomatous perennial lowland herb, restricted in Britain to the edges of lakes or reservoirs - mostly in a narrow fringing zone of periodically flooded, wet marshy pasture or more open ground. *J. filiformis* evidently disperses effectively as it can appear in newly available habitats far from known sites. It is, however, very easily overlooked due to its thin, often short, (and heavily grazed) stems which are rather sparsely distributed on extended rhizomes. For this reason it may be somewhat under-recorded. Fifty years ago its British distribution included only five hectads outwith the Lake District. Since that time however there have been records from several other widespread locations.

The last and only Ayrshire record was from Barcraigs Reservoir (NS387568) in 1982.

Kickxia elatine (L.) Dumort.

Sharp-leaved Fluellen

National Status: *Not Scarce, Least Concern.*
Local Status: *Extinct.*

An annual lowland archaeophyte of basic soils, including light soils over chalk and calcareous boulder-clay, found on the headlands and margins of arable fields (particularly cornfields) and - less commonly - on tracks, waste ground & in gardens. It is also found on sandy soils and has also been recorded on open peaty ground. Although this species is often only present in small and scattered populations, its overall distribution shows only limited losses over recent decades. It has been suggested that some *Kickxia* seeds germinate in late summer and may therefore escape herbicides.

The last and only Ayrshire record was from the Saltcoats - Dalry area (NS24) - a 1970 to 1986 Atlas date class record.

Lactuca virosa L.

Great Lettuce

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. An annual or biennial lowland herb, sensitive to grazing, which can be found on coastal cliffs, inland rock outcrops and perhaps sand dunes; but which is much more widespread as a plant of rank calcareous grassland, woodland margins, road-banks, quarries, tracks and rough ground. *L. virosa* was first recorded in Britain in 1570 but it was often recorded in error for *L. serriola* forma *integrifolia* before 1930 - so it may have been rarer than records suggest. Road development has greatly assisted its spread since 1980. Recorders have generally not distinguished between native and alien sites and all records are therefore considered as native by default.

The last and only Ayrshire record was from Ayr (NS32) – published in *The Botany of Ayrshire 2nd edition* of 1896.

Lithospermum arvense L.

Field Gromwell

National Status: *Not Scarce, Endangered.*Local Status: *Extinct.*

An annual lowland archaeophyte of arable fields - occasionally found on waste ground and in other disturbed habitats - favouring light, dry, calcareous soils. Seed is short-lived and populations depend upon regular disturbance for survival. Archaeological evidence suggests that this species has been an arable weed in Britain since the Bronze Age. It has declined substantially since the 1950s because of agricultural intensification, and in many areas it is now uncommon in arable fields. Seed can be transported with grain, resulting in casual populations outside its core range.

The last and only Ayrshire record was from Doonfoot (NS31) in 1898.

Lycopodiella inundata (L.) Holub

Marsh Clubmoss

National Status: *Not Scarce, Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

Native. A prostrate perennial herb of wet, bare, peaty or sandy margins of lakes, pools, flushes and trackways. It can rapidly colonise substrates kept open by winter inundation, cattle poaching or peat cutting. Many sites for *L. inundata* were lost before 1930, and losses have continued due to drainage, a lack of grazing, disturbance, and conversion to scrub. However, it is easily overlooked and new sites have been found outside England in the last fifty years.

The last Ayrshire record was from Ardeer, Stevenston (NS2740) in 1903, with some earlier records further in land in the north of the vice county.

Melampyrum sylvaticum L.

Small Cow-wheat

National Status: *Scarce, Endangered. Also appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

Native. An annual hemiparasite found in humid, lightly shaded situations on damp, usually somewhat enriched, acidic soils. Occurs in wooded ravines, in grassy hollows, on banks in woodlands and on upland cliff ledges. This species has declined most in the southern and lowland parts of its range, and especially in N. Ireland where many losses occurred before 1930. Afforestation, nutrient enrichment, grazing and trampling by livestock have contributed to its decline. However, it is almost certainly under-recorded. It has been confused with some forms of *M. pratense*.

The last and only Ayrshire records were from Auchendrane (NS31) and Ness Glen (NS40) – both published in the *Supplement to the Botany of Ayrshire* (Smith 1898).

Mentha pulegium L.

Pennyroyal

National Status: *Not Scarce, Endangered & Schedule 8.*

Local Status: *Extinct.*

Native. A short-lived lowland perennial herb of seasonally inundated grassland overlying silt and clay. The majority of native populations are now confined to pools, runnels, ruts and poached areas on heavily grazed village greens - but habitats also include damp heathy pastures, lake shores and coastal grassland. *M. pulegium* was lost from many sites before 1930, but has declined further since then due to habitat destruction and the loss of traditional grazing on village greens. A robust variety has been introduced with N. American seed mixtures to a number of sites, and the species certainly appears to be increasing as an alien. The last and only Ayrshire record was from Dunlop Parish (NS44) in 1894 – published in *The Botany of Ayrshire 2nd edition*.

Mespilus germanica L.

Medlar

National Status: *Scarce, Least Concern.*

Local Status: *Extinct.*

A long-lived lowland archaeophyte shrub or small tree occasionally found in hedges or woods, and as a relic of cultivation. In Britain, regeneration from seed appears to be very rare - but vegetative spread by suckering has been recorded. *M. germanica* has been grown in Britain since the 10th century and was later much planted in gardens & orchards for its fruits. It has apparently been less often planted in recent years, but trends in its distribution are difficult to discern.

The last and only Ayrshire record was from Largs (NS25) in 1862.

Onopordum acanthium L.

Cotton Thistle

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

A tall biennial archaeophyte of fields, hedgerows, rubbish tips and other waste places - often near market gardens & farm buildings and perhaps dispersed to new sites with manure or contaminated straw. There is archaeological evidence for the presence of *O. acanthium* in Britain from the Iron Age onwards. It appears to have increased in frequency over the last fifty years, possibly as an escape from gardens where it is frequently grown for ornament. The last and only Ayrshire record was from the Largs – Fairlie area (NS25) – published in *The Botany of Ayrshire 2nd edition* (Smith 1896).

Origanum vulgare L.

Wild Marjoram

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. This herbaceous perennial herb of dry, infertile, calcareous soils is found in grassland, hedge banks and scrub - and is a colonist of bare or sparsely vegetated ground, including quarries and road verges. It is occasionally naturalised from gardens. The species is intolerant of heavy grazing. In the last fifty years it has declined slightly - except in the main GB areas of chalk and limestone soils.

The last and only Ayrshire records were from the Largs – Fairlie area (NS25) and the Irvine – Troon area (NS33) - both 1950 to 1969 Atlas date class records.

Parapholis strigosa C.E. Hubb.

Hard-grass

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. A lowland annual of damp, barish places by the sea - especially characteristic of the upper parts of grazed *Festuca rubra*-*Puccinellia maritima* saltmarshes; but also on mud banks, shingle ridges, saltmarsh-sand dune transitions and sea walls. In West Britain and Ireland it mainly occurs along rocky coasts in beach-head saltmarshes. Rarely, it grows inland by salt-treated roads. There is no evidence of any appreciable change in the distribution of *P. strigosa* in recent decades. Apparent gains in some areas - especially in Ireland - may be due to it having been overlooked by earlier recorders. The species is inconspicuous and is probably still somewhat under-recorded.

The last Ayrshire record was from the Saltcoats – Dalry area (NS24) - a 1970 to 1986 Atlas date class records. One other earlier date class record was also known further to the north.

Pinguicula lusitanica L.

Pale Butterwort

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. An insectivorous perennial herb which retains its insect-trapping leaves through the winter. It grows on damp bare peat and - at the bases of grass, rush or sedge tussocks - beside moorland rills, drainage ditches on former bogs, acidic flushes and wet heaths. Often it occurs in places trampled by livestock or deer. *P. lusitanica* is an easily overlooked species which has declined in some areas since the 1960s - largely through loss of habitat, changes in management and scrub encroachment.

The last Ayrshire records were from the Patna – Dalmellington area (NS40) and by a track to the Water Works at Fence of Knockdon (NX435999) – both in 1960. One other earlier date record is also referred to further to the north.

Potamogeton filiformis Pers.

Slender-leaved Pondweed

National Status: *Not Scarce, Least Concern.*Local Status: *Extinct.*

Native. This rhizomatous herb usually grows in open vegetation in the shallow edges of lakes. It is typically found over gravel, sand, silt or mud in sites where the water is base-rich, eutrophic or slightly brackish. It also occasionally grows in rivers, streams and ditches. *P. filiformis* was last collected in Anglesey in 1826, and may have decreased in eastern Scotland since 1960 as it can no longer be found at some sites. However, there is little evidence for any decline in northern Scotland or Ireland, where it may in fact be under-recorded. Elsewhere there have never been more than scattered records.

The last Ayrshire record was from Horse Isle (NS2142) in 1894 – published in *The Botany of Ayrshire 2nd edition*. There is also one earlier mainland record.

Potamogeton praelongus Wulfen

Long-stalked Pondweed

National Status: *Not Scarce, Near Threatened.*Local Status: *Extinct.*

Native. No *Potamogeton* species is more characteristic of deep water than *P. praelongus*. It is a rhizomatous perennial that usually grows at depths greater than 1 m in clear, mesotrophic water - in lakes, rivers, canals and major drains. It has only rarely been recorded from shallow water. *P. praelongus* appears to have been lost from many waters in the southern half of its range since 1930. The most likely cause of this decline is eutrophication. As a species of deeper water it can be inconspicuous, and it may be under-recorded in Scotland and Ireland particularly.

The last and only Ayrshire record was from Old Cumnock Parish (NS51) in 1894 - published in *The Botany of Ayrshire 2nd edition* (Smith 1896). There is also one earlier mainland record.

Potentilla argentea L.

Hoary Cinquefoil

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. A perennial herb of dry, freely-draining, gravelly or sandy soils; found in open grassy swards on commons, in pastures, on banks, in pits and on tracks and waste ground. Reproduction is by seed, but it does not readily colonise new sites. Fifty years ago the species had already been identified as having declined before 1930, and more sites have been lost subsequently. It may still be in slow decline, largely due to habitat loss. However, although populations can fluctuate dramatically in size, they can be extremely long-lived. The last and only Ayrshire record was from Darvel (NS53) in 1899.

Pyrola media Sw.

Intermediate Wintergreen

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. A rhizomatous, mycorrhizal, evergreen perennial herb of well-drained, mildly acidic to slightly basic soils in woods and on heaths. It is characteristic of *Arctostaphylos-Calluna* submontane heath derived from former woodland. *P. media* has been much over-recorded in the past for *P. minor*, with which it often grows. This may, in part, account for apparently substantial historic declines. It is also very shy-flowering and may be under-recorded. Recently unfavourable woodland management and increased moorland grazing may have contributed to some losses. The last Ayrshire records were from Maybole (NS30) and Galston (NS43) – both in 1896. One other earlier record is also referred to.

Pyrola rotundifolia subsp. rotundifolia L. Round-leaved Wintergreen subspecies

National Status: *Scarce, Near Threatened.*
Local Status: *Extinct.*

Native. A rhizomatous, mycorrhizal, evergreen perennial herb. In Scotland it inhabits open *Pinus sylvestris* woodland, river banks and gullies in open moorland, and montane cliff ledges. At a GB level this subspecies has undergone a marked decline since 1930, despite some local increases in disused quarries. Reasons for the losses include afforestation and rubbish tipping, but the most serious declines - leading to near extinction in some areas of eastern England - result from changes in fen management.

An exception to the exclusion of subspecies level taxa from this Rare Plant Register has been made in this particular case due to the decision to include *P. rotundifolia* subsp. *rotundifolia* as a taxon thought to be of conservation concern in the current Vascular Plant Red Data List for Great Britain (Cheffings & Farrell, 2005). That said - subsp. *rotundifolia* is the only subspecies of *P. rotundifolia* to occur in Scotland, so the species as whole is also considered to be extinct in Ayrshire.

The last Ayrshire record was from Beith (NS35) in 1896. Previously the species was never known to be any more than rare at County level.

Radiola linoides Roth

Allseed

National Status: *Not Scarce, Near Threatened.*Local Status: *Extinct.*

Native. A small lowland annual of damp, bare, infertile, peaty or sandy ground - in acid grasslands & heaths, by ponds, on tracks and in woodland rides. Near the coast it occurs in dune-slacks, sandy grassland, on machair, and in soil-filled rock cracks. *R. linoides* suffered a considerable decline before 1930, largely due to the loss of lowland heaths or a lack of grazing and disturbance on them. These losses have continued in England, but its distribution seems to be stable elsewhere. It is easily overlooked and may be under-recorded in some areas.

The last Ayrshire record was from the Irvine – Troon area (NS33) – a 1970 to 1986 Atlas date class record. It could previously be found in a number of areas in northern and central Ayrshire but was always Scarce.

Ranunculus arvensis L.

Corn Buttercup

National Status: *Not Scarce, Critically Endangered. Also appears on the Scottish Biodiversity List.*Local Status: *Extinct.*

An annual archaeophyte of arable land on loams, sands, clays and chalk. The seeds are long-lived - and plants sometimes reappear on disturbed waste ground, or in gardens or new roadside verges on former arable land. *R. arvensis* has been present in Britain since Roman times. Analysis of trends fifty years ago showed that a decline in this species was only apparent at the northern fringe of its range including Scotland. But since then it has declined further dramatically. The losses reflect the intensification of arable farming, and in particular improved seed screening and herbicide treatments.

The last Ayrshire record was at Doonfoot (NS3219) in 1899. One earlier record is also referred to further north in the vice county.

Ribes spicatum E.Robson

Downy Currant

National Status: *Scarce, Least Concern.*Local Status: *Extinct.*

Native. A shrub of northern limestone woods, streamsides, ravines and deep grikes in limestone pavement. Generally in lowland areas. The native distribution of this species is difficult to ascertain as cast-outs from cultivation have occasionally become established in the wild. Because identification of this species can only be certain when flowers are present, it has been under-recorded in the past. This is probably still the case, as the flowering season is early.

The first and only Ayrshire record was from the Largs – Fairlie area (NS25) – a 1950 to 1969 Atlas date class record.

Rubus caesius L.

Dewberry

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. A deciduous shrub of hedges, woodland borders & rides, scrub, dry grassland and semi-stable dunes - mainly on basic soils, but also in fen carr. In the past *R. caesius* has been much confused with forms of *R. fruticosus* (series *Corylifolii*), which are sometimes regarded as having originated from hybrids between *R. caesius* and other microspecies of the *R. fruticosus* aggregate. There seem to have been declines in the north and west of its range, and in Ireland.

The last Ayrshire record was from near Coylton (NS41) in 1960. One other earlier Ayrshire record is also referred to further south.

Ruppia cirrhosa (Petagna) Grande

Spiral Tasselweed

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. *R. cirrhosa* is a perennial aquatic which occurs in similar habitats to *R. maritima*, including coastal lakes, tidal inlets, creeks and brackish ditches. It usually grows in deeper water than *R. maritima* and tolerates more saline conditions, even growing with *Zostera* species. *R. cirrhosa* is now much better recorded than it was fifty years ago. Most of the known losses took place before 1930.

The last and only Ayrshire record was from West Kilbride (NS24) in 1888.

Scandix pecten-veneris L.

Shepherd's-needle

National Status: *Not Scarce, Least Concern.*
Local Status: *Extinct.*

An annual archaeophyte of arable fields, particularly on calcareous clay soils. Occasionally found on paths and banks beside current or former arable sites - and rarely on waste ground, coastal cliffs and in gardens. Generally lowland. This species has decreased very greatly since 1950 as a result of modern agricultural methods, especially herbicide treatments. It now appears to be extinct in Ireland, but is still occasionally seen in large numbers in parts of England.

The last Ayrshire record was in the Ayr area (NS32) – a 1950 to 1969 Atlas date class record. It was previously widespread, mainly throughout the north of the vice county, but scarce.

Silene gallica L.

Small-flowered Catchfly

National Status: *Not Scarce, Endangered. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

A winter-annual archaeophyte of cultivated and disturbed ground - mainly in arable fields on (often acidic) sandy or gravelly soils, and on old walls & waste ground. It also mainly occurs in open, drought-prone coastal grassland on banks and cliffs. It is sensitive to low winter temperatures. *S. gallica* had been lost by 1930 from many inland sites. Since then it has declined further in response to agricultural intensification, especially from the increased use of herbicides and fertilisers. Many populations are now very small. The last and only Ayrshire record was near Ayr (NS32) in 1921.

Sinapis alba L.

White Mustard

National Status: *Not Scarce, Least Concern. Appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

An annual lowland archaeophyte - abundant as a persistent weed or a casual in arable fields, as well as on waste ground & roadsides. Often on calcareous soils. *S. alba* was formally more widely grown for mustard, but it is still frequent as an escape from that source. It is also grown as a 'green manure' and a salad plant – and it occurs as a bird-seed alien. The last and only Ayrshire records was from the Irvine – Troon area (NS33) – a 1950 to 1969 Atlas date class record.

Stellaria palustris Hoffm.

Marsh Stitchwort

National Status: *Not Scarce, Vulnerable. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. This perennial, rhizomatous herb is a species of damp and wet places including pastures, grassy fens and marshes - especially in areas with standing water in winter. It is also able to colonise artificial habitats such as old peat diggings. Many sites were lost in southern Britain before 1930, and losses have continued in most parts of its range. The last confirmed Ayrshire record was from the Ayr area (NS32) – a 1950 to 1969 Atlas date class record, although there is also a record from near Irvine (NS33) in 1968 marked doubtful. One other earlier record is also referred to from the northwest of the vice county.

Trichomanes speciosum Willd.

Killarney Fern

National Status: *Rare (sporophyte), Least Concern & Schedule 8. Also appears on the Scottish Biodiversity List.*

Local Status: *Extinct.*

Native. A rhizomatous fern - restricted to humid, winter-warm sites. The sporophyte occurs only in constantly damp, shaded localities. Usually found on acidic, but often base-flushed, rocks - but rarely on damp humic banks and, exceptionally, as an epiphyte. This species has declined due to collecting and habitat disturbance. One site has been confirmed as lost since the 1960s, but recent fieldwork has revealed several new populations. A number of known sites (all in England) are not mapped in the *New Atlas of the British & Irish Flora* (Preston, Pearman & Dines, 2002) to avoid collection, and there are rumours of other sites elsewhere. The last confirmed Ayrshire record was from Ayr (NS32) – published in the *Transactions of the Stirling Field Club Vol. 3* in 1880. One other earlier record is also referred to further to the southeast of the vice county – and yet Smith's *Botany of Ayrshire 2nd edition* published less than two decades later states that the species has never been known from Ayrshire.

Trifolium ornithopodioides L.

Bird's-foot Clover

National Status: *Not Scarce, Least Concern.*

Local Status: *Extinct.*

Native. A winter-annual of acidic sands, gravels and compacted shingle - occurring on bare ground in disturbed, often much trampled, places like car parks, tracks & paths and (occasionally) in lawns & on heavily grazed commons. It prefers sites that are moist in winter and parched in summer. This inconspicuous species has been under-recorded in the past and it is now certainly much better recorded than fifty years ago. Inland, it may be declining at some sites due to lack of management or building developments.

The last Ayrshire record was from the Seamill to Portencross area (NS14) – a 1970 to 1986 Atlas date class record. It previously occurred southwards along the Ayrshire coast as far as the mouth of the Doon but was Scarce.

Valeriana dioica L.

Marsh Valerian

National Status: *Not Scarce, Least Concern.*

Local Status: *Extinct.*

Native. A perennial herb of calcareous mires, marshy grassland, water-meadows, flushes, *Salix* fen-carr and *Alnus* woods. This species showed some losses before 1930 when analysed in the 1960s, and this decline has accelerated since then. This has followed the degradation or loss of its wetland habitats.

The last and only Ayrshire records was from Galston Parish (NS53) in 1872.

Vicia lutea L.

Yellow-vetch

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

A lowland annual found as a native in a variety of coastal habitats - including scrubby grassland & cliffs and on open yet consolidated shingle. In southern Scotland it is confined to sheltered sea-cliffs. Inland it is found as a casual - or sometimes in persistent populations - on roadsides, quarries and railway banks. The native distribution of *V. lutea* is probably stable. However, it can be difficult to separate alien and native records on the coast, which may mask any changes in the distribution of native populations. Recent mapping suggests an overall decline in alien occurrences.

The last Ayrshire record was from Ballantrae (NX08) in 1902. There are also references to an earlier record much further north up the Ayrshire coast.

Vicia orobus DC.

Wood Bitter Vetch

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Rare.*

A native perennial herb of grassy, often slightly base-enriched habitats on banks and the edges of fields, particularly amongst stones, boulders or bushes. Nationally this species is adversely affected by overgrazing and undergrazing, both of which have contributed to its decline, though losses have also resulted from grassland improvement and land reclamation. Britain has a significant proportion of the world population of this species.

The last Ayrshire record was from Stey Amry (NS60) in 1987, however by 2010 this was confirmed as having been lost to commercial forestry. The only other County record, also now thought to be lost, was from Glenmuck, Slown's Cairn (NS50) in 1958.

Wahlenbergia hederacea (L.) Rchb.

Ivy-leaved Bellflower

National Status: *Not Scarce, Near Threatened. Also appears on the Scottish Biodiversity List.*
Local Status: *Extinct.*

Native. A small, low-growing perennial herb found in damp, wet or boggy places on acidic soils. It occurs on heaths, heathy pastures, moors, open woodland & *Salix* carr, by streams and in flushes. It prefers areas with moving, rather than standing, water. The decline in this species from the edges of its range was already apparent in the 1960s, and has continued since then. Reasons for losses include habitat destruction, improvement of pastures, increased grazing and peat extraction.

The last Ayrshire record was from Lanfine, Darvel (NS53) – published in *The Flora of the Clyde Area* (Lee 1933). One additional earlier record is also referred to several kilometres further east.

Zostera marina L.

Eelgrass

National Status: *Not Scarce, Near Threatened.*

Local Status: *Extinct.*

Native. *Z. marina* is a perennial which grows in the subtidal zone - on substrates of gravel, sand or sandy mud - in areas which are protected from full exposure. It descends to depths of about 4 metres. This species declined throughout its European range after a major outbreak of wasting disease in the 1930s. It has never fully recovered, and a further outbreak of disease was noted in the 1980s. However, there are obvious physical/practical difficulties in recording this marine species - and many old and recent records are based on stranded plants. The extent to which records obtained in this manner will reflect the actual subtidal distribution of rooted plants is difficult to assess.

The last Ayrshire records were from Dunure (NS21) and Largs (NS25) – both in 1968.

Previously it was known from a number of sites along the northern half of the Ayrshire coast as well as from Ailsa Craig – though it was never more than scarce.

Appendix A. Excluded Species

The following may otherwise have been included on the foregoing list, but have been excluded for one of the following reasons.

1. Records of species that were once native to Ayrshire, but where all current locations are believed to be either deliberately introduced or are escapes from gardens.
2. Records of taxa that were until recently (at the time of writing) considered as subspecies of other species within the relevant genus for which, historically, the subspecies was rarely (if ever) recorded. The true number of records is therefore unknown.
3. Taxa that in Ayrshire have generally not been identified to species level but instead recorded as part of aggregates. The true number of locations is therefore unknown. An exception has been made however for any such taxa that have a national threat or rarity status.
4. Records for which there is good reason to believe that errors of identification have been made, almost all from the mid-seventies or earlier – though a few may turn out to be correct.

*Anthemis cotula*⁴

*Arenaria leptoclados*²

*Bromopsis benekenii*⁴

*Bromus secalinus*⁴

*Callitriche platycarpa*³

*Chenopodium urbicum*⁴

*Cochlearia pyrenaica*³

*Gymnadenia borealis*²

*Gymnadenia densiflora*²

*Lolium temulentum*⁴

*Myosotis sylvatica*¹

*Potamogeton coloratus*⁴

*Ranunculus sardous*¹

*Sagina filicaulis*²