Plants of Conservation Concern in the Isle of Man 2022

Lossreeyn ta Feme Coadey ayns Ellan Vannin 2022

Plants of Conservation Concern in the Isle of Man (PoCCIoM) 2022 is the first comprehensive assessment of the conservation status of all native and naturalised higher plant species in the Isle of Man.

The primary purpose of this document is to highlight species which are declining in range or are threatened with extinction on our Island.

This assessment uses plant records dating back centuries, along with decades of more recent research including the data gathered from the *New Flora of the Isle of Man* project. A traffic light system of Red (greatest concern), Amber (unfavourable) and Green (least concern) is used to indicate the conservation status of each species or subspecies. Those considered extinct in a Manx context are placed on the Black-list.

Identifying the Manx species of greatest concern enables national prioritisation of conservation strategies, policies, projects and funding. As the comprehensive, up-to-date account of the conservation status of plants in the Isle of Man, PoCCIoM 2022 is an essential resource for conservationists, planners, policy makers and land managers wishing to understand and conserve Manx plants, their habitats and the wider biodiversity that depends upon them.

PoCCIoM 2022 is a Manx Wildlife Trust publication, endorsed by <u>Manx BirdLife</u>, <u>Manx National</u> <u>Heritage</u> and the <u>Department for Environment</u>, <u>Food and Agriculture</u> of the Isle of Man Government.



1. Methodology

Data

PoCCIoM 2022 uses the data gathered during the *New Flora of the Isle of Man* project (part funded by DEFA), the botanical 'Rare Species Action Plan' (also funded by DEFA through the *Wildflowers of Mann* initiative), decades of research and centuries of biological records. Despite the large amount of data available, owing to data deficiency in some areas there remains a high level of author subjectivity.

Assessment

The assessment of conservation status includes recent and historical changes in population and range; localisation of species distribution and the rarity of species (with three sites or fewer resulting in Redlisting and seven sites or fewer resulting in Amber-listing). In addition, the importance of our Manx population in an international context has been assessed. Furthermore, species have been reviewed for critical ecosystem roles and any significant threats posed to them by invasive species or climate change. Those species or subspecies which are outlined below are primarily listed for being found at only a small number of active sites. This is a proxy indicator of abundance, rarity and localisation and is therefore the default criterion for listing.

Listing

Each species or subspecies is listed on only a single list (Red, Amber or Black) and for only a single reason. Where ambiguity exists, author subjectivity has been used.

For brevity, the Green-list is not included in this document, therefore if a species is not mentioned below, it is either assessed as having *favourable conservation status* or is not considered to be native.

Definitions

- 'Extinct in the wild' refers to a species or subspecies that is no longer recorded in the wild but is held in cultivation as a Manx native plant by Manx Wildlife Trust for reintroduction projects. Reintroductions will not result in removal from the Black List until populations are shown to be selfsustaining.
- 'Extinct' refers to a species or subspecies that is no longer recorded in the wild.
- 'Active' refers to a site where a plant has been known to occur since the year 2000 (or since 1990 for longer-lived plants in stable habitats). Some records from the various datasets have been excluded at the discretion of the authors as they cannot be verified, for example, populations that were recorded without the use of a 6-figure grid references (or better), those with no recorder name associated with them and those with no descriptive notes attached to the record.
- 'Site' refers to discrete, named sites such as 'Scarlett' or 'Ballaugh Curragh'. Where sites are very extensive such as the 'Ayres Coast' or 'Central Valley', their subdivision may be warranted. Where sites can reasonably be grouped together into a single ecological unit (such as adjacent fields) they may be treated as one site. Such use of 'sites' is preferable to the use of alternatives, including

Ordnance Survey grid squares, as this avoids a genuinely rare plant appearing to be more common through virtue of growing on both sides of the boundary of a grid square.

- 'Threatened' refers to species or subspecies that occur in more than 3 sites, but where an identified and likely danger of extinction exists, for example modest rises in sea-level, the shading of habitats by vegetation growth, or the drying up of wetlands.
- 'Rare status uncertain' refers to species or subspecies that are believed to be very rare, but survey data does not yet exist to confirm this. This can be for reasons such as a recent taxonomic change or identification difficulties in certain taxonomic areas.
- 'Significant decline' refers to a species or subspecies that has an ongoing trend of decline but is found in more than seven sites and is not yet considered 'threatened'.
- 'Ecosystem significance' refers to a keystone species or subspecies of plant for an important habitat that would not be satisfactorily substituted for by another species or subspecies.
- 'International significance' refers to an important population in a British Isles, European or global context.

Supplementary information

Although not forming part of the listing criteria, the subjective 'primary reason for decline', and where appropriate, miscellaneous information on the latest population trend or status of a species is also stated.

Nomenclature

Nomenclature follows Stace, C.A. (2010) *New Flora of the British Isles*, 3rd Ed., Cambridge. For ease, any reference to 'species' in this document may also refer to subspecies.

Sources of data

The various lists are primarily derived from the 'Recorder 6' live database that is under continuous update and review and which feeds into the <u>NBN Atlas Isle of Man</u> database. In addition, a wide variety of recently published reports and journal articles were used. The full source data that have been critically examined are:

Publications:

- Sayle, T., Lamb, J., Colvin, A., Harris, B. (1995), *Isle of Man Ecological Habitat Survey Phase 1* <u>Report</u> (1991-94), DAFF
- Dubbeldam, A. & Tomlinson, P. (2013), Phase 2 Botanical Re-Survey Report, DEFA
- Ryan, F. (2001), River Corridor Survey 2000, Vol. 1-17, Manx Wildlife Trust
- Manx Nature Conservation Trust (1997), Road Verge Survey, MNCT
- Dubbeldam, A. (2010), *Conservation and Sensitive Verges: Condition Report 2010*, Manx Wildlife Trust
- Lamb, J. (1995), Ramsey Wildlife Report 1993-4, Manx Nature Conservation Trust

- Lamb, J. (1999), A Terrestrial Survey of the Coast of the Isle of Man, Manx Wildlife Trust
- Dubbeldam, A. (2011), Oak/Hazel Woodlands on the Isle of Man, Manx Wildlife Trust
- Ayres National Nature Reserve Annual Report (various), DAFF/DEFA
- Spencer, E.L. (2005), Saltmarshes of the Isle of Man, DPhil thesis, University of Liverpool
- Garrad, L.S. (1972), The Naturalist in the Isle of Man, David & Charles
- Allen, D.E. (1984), Flora of the Isle of Man, Manx Museum & National Trust

Surveys, datasets and herbaria:

- Additional data from the Phase 2 (1994-96) Ecological Survey, DAFF
- New Flora of the Isle of Man project; a detailed all-Island survey from 2008-2022
- Botanical Society of Britain & Ireland's recorder paper and card records
- L.S. Garrard's neophyte archive
- Manx Museum & National Trust herbarium
- Royal Botanic Gardens (Kew) herbarium
- Natural History Museum (London) herbarium

Updates

PoCCIoM will be periodically updated in order to remain abreast of future survey, analysis, indigenous status and taxonomic updates. As our taxonomic understanding of micro-species such as hawkweeds and eyebrights becomes clearer, these will be included at micro-species rather than aggregate level. It is hoped that future work can be extended into lower plants.

Feedback

Manx Wildlife Trust, the authors, and those organisations which have endorsed this document recognize that this work is not perfect and will contain errors. All feedback and records of listed species are gratefully received; please contact andree@mwt.im

2. Key findings

Data deficiency, recent and ongoing taxonomic changes and identification uncertainties of the most complex groups (where 'aggregate species' are often used) makes determining the exact number of Manx species of flora very difficult. This project has found that the Manx flora comprises approximately 500 species of native and naturalised species. All 500 species, along with selected subspecies, were assessed for their conservation status for PoCCIoM 2022:

41% (207 species) were found to be of conservation concern:

• Y Rolley Doo

9% (45 species) of our flora that largely arrived after the last Ice Age and before the severance of the Island from the surrounding landmasses are **extinct** (or **extinct in the wild**) and placed on the Black List. While some of these losses are historical, almost half of our known local extinctions have taken place since protection of our native plants was provided by law in 1990 by the Wildlife Act. It is considered highly likely that others have gone extinct before being recorded. Our rarest plant, the Spindle, survives as just a single tree. However, there is hope; three species extinct in the wild still exist in cultivation and Juniper has recently been reintroduced.

- **Y Rolley Jiarg** 15% (78 species) were placed on the Red List and are of **greatest** conservation concern.
- **Y Rolley Amber** 17% (84 species) were placed on the Amber List and are of **unfavourable** conservation status.
- Y Rolley Glass

59% (293 species) were placed on the Green List and are of **least** conservation concern.

3. The Red List Y Rolley Jiarg

Species of wild plant in the Isle of Man that are of **greatest** conservation concern:

Со	mmon Name	Scientific Name	Legal Protection	Primary Reason for Decline/Status	Reason for Listing
1.	Allseed	Radiola linoides		Habitat change	3 or fewer
				Ŭ	active sites
2.	Annual knawel	Scleranthus		Changes in farming	3 or fewer
		annuus		practices, Habitat loss	active sites
3.	Blunt-flowered	Juncus		Habitat change	3 or fewer
	rush	subnodulosus			active sites
4.	Blunt-leaved	Potamogeton	Schedule 7	Stable	3 or fewer
	pondweed	obtusifolius			active sites
5.	Common cow-	Melampyrum	Schedule 7	Habitat change	3 or fewer
	wheat	pratense			active sites
6.	Common sea-	Limonium vulgare	Schedule 7	Habitat change,	3 or fewer
	lavender			Climate change	active sites
7.	Cowberry	Vaccinium vitis-		Habitat change	3 or fewer
		ideea			active sites
8.	Crab apple	Malus sylvestris		Habitat change	3 or fewer
	(native				active sites
	population)				
9.	Cranberry	Vaccinium	Schedule 7	Stable	3 or fewer
		охусоссоя			active sites
10.	Divided sedge	Carex divisa		Stable	3 or fewer
					active sites
11.	Dwarf willow	Salix herbacea	Schedule 7	Stable	3 or fewer
					active sites
12.	Dyer's	Genista tinctoria		Habitat loss	3 or fewer
	greenweed				active sites
13.	Early dog-violet	Viola		Unknown	3 or fewer
		reichbenbachiana			active sites
14.	Early marsh-	Dactylorhiza	Schedule 7	Habitat change	3 or fewer
	orchid coccinea	incarnata coccinea			active sites
15.	Early-purple	Orchis mascula	Schedule 7	Stable	3 or fewer
	orchid				active sites
16.	Fat duckweed	Lemna gibba		Increasing	3 or fewer
					active sites
17.	Few-flowered	Eleocharis	Schedule 7	Stable	3 or fewer
	spike-rush	quinqueflora			active sites
18.	Field gentian	Gentianella	Schedule 7	Habitat change, Habitat	3 or fewer
		campestris		loss	active sites
19.	Flattened	Poa compressa		Habitat change	3 or fewer
	meadow-grass				active sites

20. Floating bur-reed	Sparganium	Schedule 7	Habitat change	3 or fewer
	natans			active sites
21. Greater	Utricularia	Schedule 7	Habitat change	3 or fewer
bladderwort	vulgaris			active sites
22. Greater pond-	Carex riparia		Habitat change	3 or fewer
sedge				active sites
23. Hare's-foot	Trifolium arvense	Schedule 7	Habitat change	3 or fewer
clover				active sites
24. Hawkweed (all	Hieracium		Habitat change	3 or fewer
species)				active sites
25. Heath cudweed	Gnaphalium		Habitat change	3 or fewer
	sylvaticum		Ŭ	active sites
26. Hybrid tufted-	Carex acuta x		Stable	3 or fewer
sedge	nigra			active sites
27. Isle of Man	Coincya monensis	Schedule 7	Habitat change,	3 or fewer
cabbage			Climate change	active sites
28. Ivy-leaved	Wahlenbergia	Schedule 7	Habitat change	3 or fewer
bellflower	hederacea			active sites
29. Juniper	Juniperus	Schedule 7	Increasing	3 or fewer
Lor Jumper	communis		(reintroduced)	active sites
30. Killarney fern	Trichomanes	Schedule 7	Unknown	3 or fewer
So. Rindricy ferri	speciosum	Selleduic /	Chanoun	active sites
31. Knotted	Sagina nodosa		Habitat change	3 or fewer
pearlwort	Sugina nouosu		Habitat change	active sites
32. Least bur-reed	Sparganium		Habitat change	3 or fewer
JZ. Least bui-reeu	minimum		Habitat change	active sites
33. Lesser pond-	Carex acutiformis		Habitat change	3 or fewer
sedge	curex acutijorniis		Habitat Change	active sites
34. Lesser tussock-	Carex diandra	Schedule 7	Habitat change	3 or fewer
sedge	Curex alumara	Schedule 7	Habitat Change	active sites
35. Lesser twayblade	Listera cordata		Habitat change	3 or fewer
55. Lesser (Wayblade			Habitat Change	active sites
26 Lossor water	Paldollia	Schodulo 7	Habitat abanga	
36. Lesser water- plantain	Baldellia ranunculoides	Schedule 7	Habitat change	3 or fewer active sites
	Geranium		Unknown	3 or fewer
37. Long-stalked crane's-bill	collumbinum		Onknown	active sites
38. Long-stalked			Hobitot ober se	3 or fewer
	Carex lepidocarpa		Habitat change	
yellow-sedge 39. Lords-and-ladies	A mum un a su la tura		Stohlo	active sites 3 or fewer
59. Lords-and-ladies	Arum maculatum		Stable	
40 Maidaulatin far	A disease with	Calculate T	Threatened	active sites
40. Maidenhair fern	Adiantum capillus-	Schedule 7	Threatened	Threatened
	veneris		C 1 1	2
41. Marsh yellow-	Rorrippa palustris		Stable	3 or fewer
cress				active sites
42. Meadow oat-	Helictotrichon		Increasing (recent	3 or fewer
grass	pratense		coloniser)	active sites

43.	Narrow buckler-	Dryopteris	Schedule 7	Habitat change	3 or fewer
	fern	carthusiana			active sites
44.	Nodding bur-	Bidens cernua	Schedule 7	Habitat change	3 or fewer
	marigold			Ŭ	active sites
45.	Northern	Polygonum		Unknown	3 or fewer
	knotgrass	boreale			active sites
46.	O'Kelly's	Dactylorhiza	Schedule 7	Data deficient	Rare – status
	common spotted	fuchsii okellyi			uncertain
	orchid				
47.	Oysterplant	Mertensia	Schedule 7	Climate change	3 or fewer
		maritima			active sites
48.	Pale butterwort	Pinguicula	Schedule 7	Habitat change	3 or fewer
		lusitanica			active sites
49.	Pale flax	Linum bienne		Habitat change	3 or fewer
					active sites
50.	Pedunculate	Callatriche brutia		Data deficient	Rare – status
	water-starwort				uncertain
51.	Pennyroyal	Mentha pulegium	Schedule 7	Habitat change, Habitat	3 or fewer
				loss	active sites
52.	Pink water-	Veronica catenata	Schedule 7	Stable	3 or fewer
	speedwell				active sites
53.	Purple milk-vetch	Astragalus danicus		Habitat change,	Threatened
				Climate change	
54.	Purple ramping-	Fumaria purpurea		Data deficient	Rare – status
	fumitory				uncertain
55.	Quaking-grass	Briza media		Habitat change, Habitat	3 or fewer
	(Shaking-grass)			loss	active sites
56.	Reflexed	Puccinella distans		Stable	3 or fewer
	saltmarsh-grass				active sites
57.	Sea wormwood	Seriphidium	Schedule 7	Stable	3 or fewer
		maritimum			active sites
58.	Seaside pansy	Viola tricolor		Habitat change	3 or fewer
		curtisii			active sites
59.	Shepherd's cress	Teesdalia	Schedule 7	Habitat change	3 or fewer
		nudicaulis			active sites
60.	Slender sandwort	Arenaria		Unknown	3 or fewer
		leptoclados			active sites
61.	Smooth cat's-ear	Hypochaeris	Schedule 7	Habitat change	3 or fewer
		glabra			active sites
62.	Southern	Polypodium		Stable	3 or fewer
	polypody	cambricum			active sites
63.	Spindle	Euonymus		Habitat change	3 or fewer
		europaeus			active sites
64.	Spring sandwort	Minuartia verna	Schedule 7	Stable	3 or fewer
	<u></u>				active sites
65.	Strawberry clover	Trifolium	Schedule 7	Habitat change, Habitat	3 or fewer
		fragiferum		loss	active sites

66. Subterranean	Trifolium		Habitat change, Habitat	3 or fewer
clover	subterraneanum		loss	active sites
67. Suffocated clover	Trifolium		Habitat change, Habitat	3 or fewer
	suffocatum		loss	active sites
68. Thread-leaved	Ranunculus		Stable	3 or fewer
water-crowfoot	trichophyllus			active sites
69. Tubular water-	Oenanthe fistulosa	Schedule 7	Habitat change	3 or fewer
dropwort				active sites
70. White sedge	Carex curta	Schedule 7	Habitat change	3 or fewer
				active sites
71. White waterlily	Nymphaea alba		Habitat change, Habitat	3 or fewer
			loss	active sites
72. Wilson's filmy-	Hymenophyllum	Schedule 7	Stable	3 or fewer
fern	wilsonii			active sites
73. Wood fescue	Festuca altissima	Schedule 7	Habitat change	3 or fewer
				active sites
74. Wood melick	Melica uniflora	Schedule 7	Habitat change	3 or fewer
				active sites
75. Wood vetch	Vicia sylvatica	Schedule 7	Habitat change, Impact	3 or fewer
			of invasive species	active sites
76. Yellow bartsia	Parentucellia		Habitat change	3 or fewer
	viscosa			active sites
77. Yellow water-lily	Nuphar lutea	Schedule 7	Habitat change	Threatened
78. Common cord-	Spartina anglica	Schedule 8	Stable	3 or fewer
grass *				active sites

* Common cord-grass *Spartina anglica* meets the red-list criteria but has harmful ecological impacts elsewhere.

4. The Amber List Y Rolley Amber

Species of wild plant in the Isle of Man that are of **unfavourable** conservation status:

Со	mmon Name	Scientific Name	Legal	Primary Reason for	Reason for
			Protection	Decline/Status	Listing
1.	Annual sea-blite	Suaeda maritima		Habitat change	4-7 active sites
2.	Bay willow	Salix pentandra		Stable	Significant decline
3.	Bee orchid	Ophrys apifera	Schedule 7	Increasing	4-7 active sites
4.	Beech fern	Phegopteris connectilis	Schedule 7	Habitat change	4-7 active sites
5.	Bitter-vetch	Lathyrus linifolius		Stable	4-7 active sites
6.	Black bog-rush	Schoenus nigricans		Habitat change	4-7 active sites
7.	Black mustard	Brassica nigra		Stable	4-7 active sites
8.	Black nightshade (native population)	Solanum nigrum		Increasing	4-7 active sites
9.	Blue water- speedwell	Veronica anagallis- aquatica		Stable	4-7 active sites
10.	Blunt-fruited water-starwort	Callatriche obtusangula		Stable	4-7 active sites
11.	Bog-myrtle	Myrica gale		Habitat change	4-7 active sites
12.	Brown sedge	Carex disticha		Stable	4-7 active sites
13.	Bur chervil	Anthriscus caucaulis		Stable	4-7 active sites
14.	Common broomrape	Orobanche minor		Stable	4-7 active sites
15.	Common club- rush	Schoenoplectus lacustris		Habitat change	4-7 active sites
16.	Common fleabane	Pulicaria dysenterica		Stable	4-7 active sites
17.	Common glasswort	Salicornia europaea		Stable	4-7 active sites
18.	Common milkwort	Polygala vulgaris		Habitat change	Significant decline
19.	Common twayblade	Listera ovata	Schedule 7	Habitat change, Habitat loss	Significant decline

20. Corn mint	Mentha arvenis		Impact of invasive	4-7 active sites
			species	
21. Creeping yellow- cress	Rorippa sylvestris		Stable	4-7 active sites
22. Dotted sedge	Carex punctata		Stable	4-7 active sites
23. Dune cornsalad	Valeriana locusta var. dunensis		Stable	4-7 active sites
24. Dune fescue	Vulpia fasciculata	Schedule 7	Stable	4-7 active sites
25. Early forget-me- not	Myosotis ramosissima		Stable	4-7 active sites
26. Early marsh- orchid <i>incarnata</i>	Dactylorhiza incarnata incarnata	Schedule 7	Habitat change	Significant decline
27. Eelgrass	Zostera marina	Schedule 7	Increasing	Ecosystem significance
28. Elm (all species)	Ulmus		Disease	International significance
29. Fennel pondweed	Potamogeton pectinatus	Schedule 7	Stable	4-7 active sites
30. Fenugreek	Trifolium ornithopodiodes		Stable	4-7 active sites
31. Field mouse-ear	Cerastium arvense		Habitat change	Significant decline
32. Floating club- rush	Eleogiton fluitans	Schedule 7	Increasing	4-7 active sites
33. Giant fescue	Festuca gigantica		Increasing	4-7 active sites
34. Grass-leaved orache	Atriplex littoralis	Schedule 7	Stable	4-7 active sites
35. Greater butterfly-orchid	Platanthera chlorantha	Schedule 7	Stable	Significant decline
36. Greater spearwort	Ranunculus lingua	Schedule 7	Habitat change	4-7 active sites
37. Greater tussock- sedge	Carex paniculata		Stable	4-7 active sites
38. Grey club-rush	Schoenoplectus tabernaemontani		Habitat change	Significant decline
39. Hard-grass	Parapholis strigosa		Stable	4-7 active sites
40. Hard shield-fern	Polystichum aculeatum		Stable	4-7 active sites
41. Hay-scented buckler-fern	Dryopteris aemula	Schedule 7	Stable	4-7 active sites
42. Heath pearlwort	Sagina subulata		Stable	4-7 active sites

43. Hybrid water-	Veronica x		Stable	4-7 active sites
speedwell	lackschweitzii		Stubic	4 7 delive sites
44. Ivy broomrape	Orobanche hederae		Increasing	4-7 active sites
45. Ivy-leaved duckweed	Lemna triscula		Habitat change	4-7 active sites
46. Knotted hedge- parsley	Torilis nodosa		Stable	4-7 active sites
47. Lesser marshwort	Apium inundatum		Habitat change	4-7 active sites
48. Lesser skullcap	Scutellaria minor		Stable	Significant decline
49. Mare's-tail	Hippuris vulgaris		Habitat change	4-7 active sites
50. Marsh hawk's- beard	Crepis paludosa	Schedule 7	Stable	4-7 active sites
51. Moonwort	Botrychium lunaria		Habitat change	4-7 active sites
52. Narrow-fruited water-cress	Nasturtium microphylum		Habitat change	4-7 active sites
53. Native oak	Quercus x rosacea		Stable	Ecosystem significance
54. Northern yellow-cress	Rorippa islandica	Schedule 7	Increasing	International significance
55. Pale sedge	Carex pallescens	Schedule 7	Stable	4-7 active sites
56. Parsley fern	Cryptogramma crispa	Schedule 7	Habitat change	4-7 active sites
57. Parsley water- dropwort	Oenanthe Iachenalii	Schedule 7	Stable	4-7 active sites
58. Pond water- crowfoot	Ranunculus peltatus		Habitat change	4-7 active sites
59. Portland spurge	Euphorbia portlandica	Schedule 7	Stable	4-7 active sites
60. Purple glasswort	Salicornia ramosissima		Stable	4-7 active sites
61. Purple willow	Salix purpurea		Stable	4-7 active sites
62. Rough chervil	Chaerophyllum temulum		Habitat change	4-7 active sites
63. Rough clover	Trifolium scabrum		Stable	4-7 active sites
64. Saltmarsh flat- sedge	Blysmus rufus	Schedule 7	Stable	4-7 active sites
65. Sand cat's-tail	Phleum arenarium		Habitat change	4-7 active sites

66. Sea aster	Aster tripolium		Stable	4-7 active sites
67. Sea club-rush	Bolboschoenus maritimus		Stable	4-7 active sites
68. Sea-purslane	Atriplex portulacoides	Schedule 7	Stable	4-7 active sites
69. Sea spurge	Euphorbia paralias		Stable	4-7 active sites
70. Slender club- rush	Isolepis cernua		Stable	4-7 active sites
71. Slender spike- rush	Eleocharis uniglumis	Schedule 7	Stable	4-7 active sites
72. Small-fruited yellow-sedge	Carex viridula viridula		Habitat change	4-7 active sites
73. Spiked water- milfoil	Myriophyllum spicatum		Stable	4-7 active sites
74. Spotted medick	Medicago arabica		Stable	4-7 active sites
75. Spring vetch	Vicia lathyroides		Habitat change	4-7 active sites
76. Sticky stork's- bill	Erodium lebelii		Changes in farming practices	4-7 active sites
77. Various-leaved water-starwort	Callatriche platycarpa		Stable	4-7 active sites
78. Whorled caraway	Carum verticillatum		Habitat change, Habitat loss	Significant decline
79. Wood small- reed	Calamagrostis epigejos	Schedule 7	Stable	4-7 active sites
80. Wood speedwell	Veronica montana	Schedule 7	Stable	4-7 active sites
81. Woodruff	Galium odoratum		Stable	4-7 active sites
82. Yellow horned- poppy	Glaucium flavum		Stable	4-7 active sites
83. Yellow loosestrife	Lysimachia vulgaris		Increasing	4-7 active sites
84. Yellow oat-grass	Trisetum flavescens		Habitat change	4-7 active sites

5. The Black List Y Rolley Doo

Species of wild plant thought to be **extinct** on the Isle of Man:

*Denotes 'extinct in the wild' which are maintained only in captive cultivation by Manx Wildlife Trust, or are undergoing reintroduction but are not yet self-sustaining.

Common Name	Scientific Name	Legal	Suspected Primary	Approximate
Common Name	Scientific Name	Protection	Reason for Extinction	Date of
		FIOLECTION		Extinction
1. Agrimony*	Agrimonia	Schedule 7	Habitat loss	2010s
I. Agrimony	eupatoria	Schedule /	Habitat 1055	20105
2. Alpine clubmoss	Diphasiastrum	Schedule 7	Habitat change	1920s
2. Alpine clubinoss	alpinum	Schedule /	nabitat change	19205
3. Autumn lady's-	Spiranthes spiralis		Habitat change	2000s
tresses	opiralities spiralis			20003
4. Bladder-sedge	Carex vesicaria		Habitat change	1910s
5. Burnet-saxifrage	Pimpinella	Schedule 7	Habitat change	2010s
	saxifraga			
6. Carline thistle	Carlina vulgaris	Schedule 7	Habitat change	2000s
7. Celery-leaved	Ranunculus	Schedule 7	Habitat change	2010s
buttercup*	sceleratus			
8. Chalk fragrant-	Gymnadenia	Schedule 7	Habitat change	1990s
orchid	conopsea			
9. Common	Pyrola minor	Schedule 7	Impact of invasive	2000s
wintergreen			species (suspected)	
10. Cowbane	Cicuta virosa		Habitat change	1880s
11. Dense-flowered	Neotinia maculata	Schedule 7	Unknown	1980s
orchid				
12. Deptford pink	Dianthus armeria		Habitat change,	1870s
			Habitat loss	
13. Dioecious sedge	Carex dioica	Schedule 7	Habitat change,	1990s
			Habitat loss	
14. Dodder	Cuscuta	Schedule 7	Habitat change	1990s
	epithymum			1010
15. Field-rose	Rosa arvensis		Habitat change	1910s
	C		Habitat abawaa	1000-
16. Frog orchid	Coeloglossum viride	Schedule 7	Habitat change	1960s
17. Golden dock*	Rumex maritimus		Habitat change	2010
17. Golden dock	Kumex manumus		Habitat change	2010s
18. Greater	Orobanche	Schedule 7	Unknown	1950s
broomrape	rapum-genistae	Senedule 7		19903
19. Hairy-brome	Bromopsis ramosa		Habitat change	2000s

20. Horned	Zannichellia	Schedule 7	Habitat change	1950s
pondweed	palustris			20000
21. Lesser	Utricularia minor		Habitat change	1900s
bladderwort				
22. Lesser butterfly-	Platanthera bifolia	Schedule 7	Habitat change	2000s
orchid				
23. Lesser clubmoss	Selaginella	Schedule 7	Habitat change	1980s
	selaginoides			
24. Mountain	Antennaria dioica		Habitat change	1930s
everlasting				
25. Mountain pansy	Viola lutea	Schedule 7	Habitat change	1880s
26. Mousetail	Myosurus		Habitat change	1810s
	minimus			
27. Oak fern	Lymnocardiid		Habitat change	1990s
	dryopteris			
28. Pale dog-violet	Viola lactea		Habitat change	1880s
29. Perfoliate	Potamogeton		Habitat change	1990s
pondweed	perfoliatus			4000
30. Pillwort	Pilulifera	Schedule 7	Habitat change	1860s
21 Ded sendured	globulifera Determonister			1000-
31. Red pondweed	Potamogeton		Habitat change	1990s
32. Rock sea-	alpinus Limonium	Schedule 7	Habitat change,	2000s
lavender	binervosum agg.	Schedule /	Climate change	20005
33. Rue-leaved	Saxifraga		Habitat change	1900s
saxifrage	tridactylites		nasitat change	19003
34. Seaside	Centaurium		Unknown	1970s
centaury	littorale			20700
35. Stag's-horn	Lycopodium	Schedule 7	Habitat change	2000s
clubmoss	clavatum			
36. Stone bramble	Rubus saxatilis		Habitat change	1930s
37. Three-nerved	Moehringia		Habitat change	2000s
sandwort	trinervia			
38. Variegated	Equisetum		Habitat loss	1850s
horsetail	variegatum			
39. Viper's-bugloss	Echium vulgare	Schedule 7	Habitat change,	1920s
			Habitat loss	
40. Viviparous	Festuca vivipara		Habitat change	1770s
sheep's-fescue				
41. Whorl-grass	Catabrosa		Habitat change	2000s
	aquatica			
42. Whorled water-	Myriophyllum		Habitat loss	1970s
milfoil	verticillatum			

43. Wood stitchwort	Stellaria nemorum	Habitat change	1850s
44. Yellow saxifrage	Saxifraga aizoides	Habitat change	1830s
45. Yellow-vetch	Vicia lutea	Unknown	1900s

6. Further Information

<u>NBN Atlas Isle of Man</u> is the central repository for Manx flora data and can be searched by species or by area. General enquiries should be directed to lead author Andree Dubbeldam, andree@mwt.im

7. Acknowledgements

<u>Manx Wildlife Trust</u> is grateful to the many recorders who, over many years, have undertaken the fieldwork and reporting required to amass the extensive datasets used in this first ever PoCCIoM assessment, and those who have funded this work.

We are also extremely grateful to <u>Manx BirdLife</u> for kindly providing the graphical formatting for PoCCIoM 2022, which builds upon their comprehensive <u>Birds of Conservation Concern in the Isle of Man</u> 2021.

Plants of Conservation Concern in the Isle of Man 2022 would not have been possible without the significant contribution of generations of botanists and their biological records contained within the Isle of Man NBN Atlas. We are therefore grateful to the Manx Biological Recording Partnership including its funders, DEFA and MNH.

The authors are indebted to the volunteers and fieldworkers for the *New Flora of the Isle of Man* project, along with Graham Makepeace-Warne, Tricia Sayle and Liz Charter for their inputs to the PoCCIoM publication.

Translation into Manx Gaelic has been kindly provided by Culture Vannin.

Finally, we thank <u>Manx BirdLife</u>, <u>Manx National Heritage</u> and the <u>Department for Environment</u>, <u>Food and</u> <u>Agriculture</u> for their endorsement of the project and its results.

Andree Dubbeldam & David Bellamy August 2022