

Version 2.1

The Rare and Scarce Plants of Caithness

By Ken Butler



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Introduction

Using this document

This is a pdf document to be read with a pdf reader such as Adobe Reader (formerly Adobe Acrobat Reader). It should open with a contents list in the left hand frame. It consists of this Introduction section (with sub headings in red), followed by individual pages devoted to each species, each of which can be accessed by a single mouse click on the bookmark. There is usually a single page (sometimes two) giving all the available information about the occurrence of the species in Caithness. There may be a photo if I have one.

The aim of this document

This document aims to record what is currently known (by the author!) about the rare and scarce plants of Caithness. It is designed to be a document easy to keep up to date and adaptable to modern techniques of promulgation.

It covers the Watsonian Vice-County of Caithness - which fortunately is the same as the county of Caithness as it has been known for many years. So the records contain no points of uncertainty about what was in or out of the county when older records were made. It covers the higher plants; that is all vascular plants - ferns, fern-allies and flowering plants. It does not deal with mosses, liverworts, lichens, fungi, algae and the many simpler forms of plant life which are very interesting in their own right, but not the subject of this tract.

This introduction gives a brief summary of the influences on the vegetation of Caithness. This is largely derived from the documents listed in the Bibliography and referred to in the text.

The document is about **rare** and **scarce** plants, but this has been taken to include not just those that are formally rare or scarce, but also a few that are otherwise particularly interesting and a few that are now extinct. Rare is used in two senses. **Locally Rare** means that there are three or less hectad records in the county (a hectad is an area of ground 10km square in which a record might occur - more detail later). This may be for reasons of real scarcity, or because the plant is under-recorded. I have excluded a few cases where it is just under-recorded but clearly more exists if one merely set out to record it. The second use of **rare** is in the context of National rarity, whereby a species has been declared "rare" by the Joint Nature

Conservation Committee in its Red Data Book. The topic of rarity and the aims of conservation and Biodiversity is a complex subject which I will not delve into. Suffice it to say that the species identified in this document as **Nationally Rare** are the ones that are of prime concern for conservation on a National, European or World scale according to the complex of standards and Agreements that have arisen. A simple view used to be that a Nationally Rare species is one that has less than 15 hectad records in Britain, but nowadays other considerations are included, particularly rate of loss and perceived threats to the species.

Nationally Rare (Red Data Book) plants in Caithness

Calamagrostis scotica	Scottish smallreed
Calamagrostis stricta	Narrow smallreed
Carex recta	Wick sedge or Estuarine sedge
Carex x hibernica	A hybrid sedge
Euphrasia marshallii	A type of Eyebright
Euphrasia rotundifolia	A type of Eyebright
Hierochloe odorata	Holy grass
Saxifraga hirculus	Marsh saxifrage
Trichomanes speciosum	Killarney fern

A **scarce** plant can also be **Locally Scarce** or **Nationally Scarce** but in this case no plants have been included only because they are Locally Scarce. To do so would swamp the document with local plants that are merely under-recorded, because the local flora is not sufficiently well known to identify what is truly scarce. But all Nationally Scarce plants occurring in the county have been included. In 1994 the Joint Nature Conservation Committee published a book by Stewart, Pearman and Preston entitled *Scarce Plants in Britain*. This is the prime source for the inclusion of a scarce species. They are the species for which there are more than 15 but less than 100 hectad records in Britain.

The Scarce Species in Caithness

Ajuga pyramidalis	Pyramidal Bugle
Alchemilla glomerulans	A type of Lady's-mantle
Arctostaphylos alpinus	Alpine bearberry
Betula nana	Dwarf birch
Carex capillaris	Hair Sedge
Carex maritima	Curved Sedge
Centaureum littorale	Seaside Centaury
Cerastium alpinum	Alpine Mouse-ear

<i>Cochlearia scotica</i>	Scottish Scurvy-grass
<i>Coeloglossum viride</i>	Frog Orchid
<i>Corralorhiza trifida</i>	Coral –root Orchid
<i>Deschampsia setacea</i>	Bog Hair-grass
<i>Draba norvegica</i>	Rock whitlow-grass
<i>Equisetum pratense</i>	Shade horsetail
<i>Equisetum variegatum</i>	Variegated horsetail
<i>Euphrasia foulaensis</i>	An Eyebright
<i>Euphrasia ostenfeldii</i>	An Eyebright
<i>Fumaria purpurea</i>	Purple Ramping-fumitory
<i>Goodyera repens</i>	Creeping Lady’s Tresses
<i>Imperatoria ostruthium</i>	Masterwort
<i>Isoetes echinospora</i>	Spring Quillwort
<i>Juncus alpinoarticulatus</i>	Alpine Rush
<i>Juncus balticus</i>	Baltic Rush
<i>Linnaea borealis</i>	Twinflower
<i>Lycopodium annotinum</i>	Interrupted clubmoss
<i>Mertensia maritima</i>	Oysterplant
<i>Meum athemanticum</i>	Spignel
<i>Nuphar pumila</i>	Least Yellow Water-lily
<i>Ophioglossum azoricum</i>	Small Adder's-tongue
<i>Orthilia secunda</i>	Serrated wintergreen
<i>Polygonum boreale</i>	Northern knotgrass
<i>Potamogeton filiformis</i>	Slender-leaved Pondweed
<i>Potamogeton freisii</i>	Flat-stalked Pondweed
<i>Potentilla crantzii</i>	Alpine Cinquefoil
<i>Primula scotica</i>	Scottish primrose
<i>Pyrola media</i>	Intermediate wintergreen
<i>Ribes spicatum</i>	Downy currant
<i>Sagina saginoides</i>	Alpine Pearlwort
<i>Saxifraga nivalis</i>	Alpine saxifrage
<i>Vaccinium microcarpum</i>	Small cranberry

There are 138 species in total addressed in this document, out of the 890 species known in the county.

How to move on

It must be emphasised that this document can only tell the reader what is actually known, and not enough is known about the flora of Caithness. So one of the reasons to publish is in the hope that others will take up the challenge of searching out the lost and questionable records. There is so much in these records that is unknown or uncertain that a plant hunter can have many days of delight in the countryside making our facts better.

Another purpose of this document is to inform various officials and professionals who are charged with taking care of the countryside. These people cannot be expected to know the details of rare plants, yet they have the various duties of giving planning consent, cutting road verges, agreeing to the construction of windmills and other similar tasks that would be better done if they have the facts to hand. I hope this helps a little.

Plant Names

When naming plants it is my preference to use Latin names, because they are unique and not ambiguous; I find English names difficult to work with. So the document has Latin names as the first priority and English added on. This is not a serious drawback to users who prefer English names, since I hope that in most cases both are clear and available. But there are some cases where an English name has not been provided – especially for microspecies, sub-species and hybrids.

The Latin names are, of course notorious for being changed, to add to the frustration of all concerned with using them. It arises from the revision of the classification as botanists try to get a better understanding of the relationships between species and shuffle them from one family to another or split an old species into two or more new species; it even arises, very rarely, from the merging of two species into one species. So we have to put up with it as the price of botanical progress! The Latin names used in this document are those of Clive Stace's *New Flora*. These are the same as the names in the *Flora* by Blamey, Fitter and Fitter and that by Francis Rose quoted in the Bibliography below.

The English names are the ones selected by the *Botanical Society of the British Isles* to best represent the common names used across Britain. I have occasionally added a second local name (but not very often because this document is about rare and scarce plants, while local names are mostly given to commonly known plants).

The County Boundary and Some Features

The county boundary

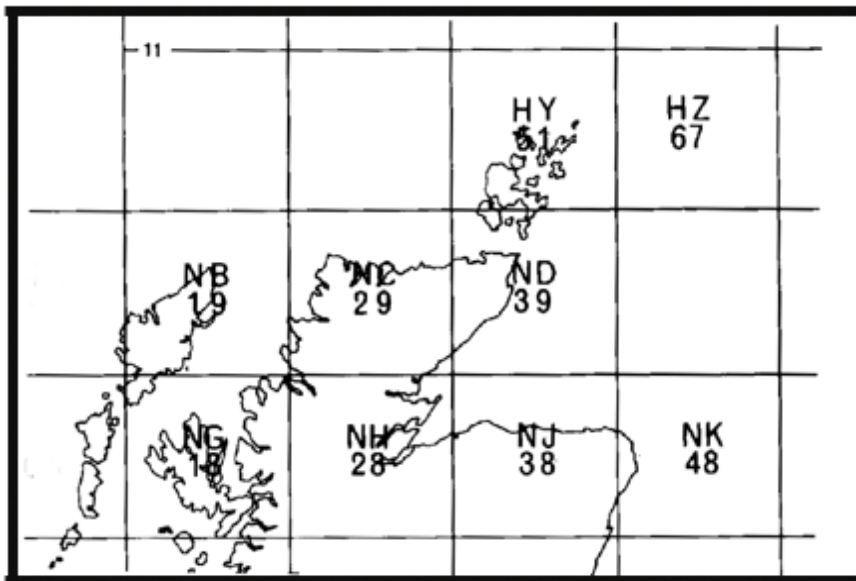
We are indeed fortunate to know what the name “Caithness” represents. The boundary of the county has been stable and unchanged for the last two hundred years at least – apart from a short period at the end of the 20th Century when a part of Sutherland along the north coast was taken into Caithness by the Highland Region Council. Most English and many Scottish counties are not so lucky, with changes at various times in the past that make it difficult to know whether a plant recorded “in the county” some years ago was truly in the county as it is known today. I have never come across a confusion of that sort about a Caithness record.

In 1852 H. C. Watson, who was an early student of plant distributions, proposed that Britain be divided into areas about the size of an English county for the purpose of keeping biological records. Because they did not all line up with counties, he called his new areas *vice-counties* (VC's) and gave each an identity number. Caithness was judged to be a suitable size to be a vice-county as it was, so again we have the simple situation that the county of Caithness is vice-county 109 in the Watsonian VC system. He considered Sutherland to be too big, so divided it into East Sutherland, VC107 and West Sutherland VC108. It is the practice of biological recorders to record using these 1852 vice-county boundaries, ignoring any changes wrought by politicians since that date.

Hectads and Ordnance Survey Maps

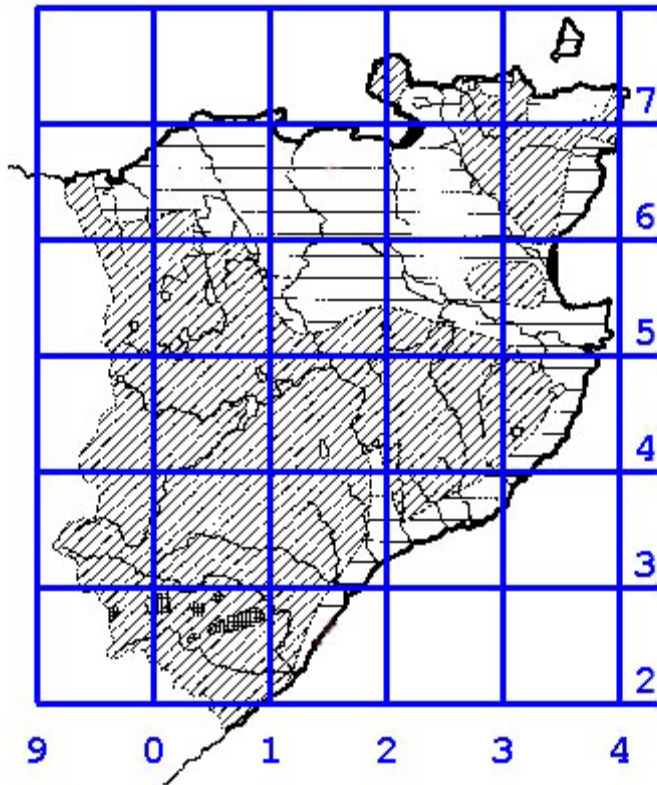
Within the county boundary the flora is recorded in units called *hectads*. These are square areas of ground measuring 10km each side. If a species is found within a hectad it is registered as present and if not it is absent. These records are irrespective of the number of plants to be found in a hectad – it is “present” if there is one found or if there is ten thousand. This is a useful approach when constructing national distribution maps of species but makes it much less meaningful when dealing with rare and scarce plants in a limited locality.

A hectad is identified by the position of its bottom left hand corner on the Ordnance Survey grid. As explained on most OS maps, there is a supergrid of 100km squares. The ones that concern Caithness are the supergrid 39 – otherwise labelled ND and the supergrid 29, otherwise labelled NC. These intersect Caithness as shown below.



100km squares locally

Within a supergrid there are 100 hectads and the hectads overlay on the map of Caithness as shown below



Thus there are 29 hectads that relate to Caithness. Each one is labelled by, first the supergrid number, then the number of the vertical bounding line on the left side of the hectad, then by the number of the bounding line that forms the base of the hectad. For example, the hectad that contains the Isle of Stroma is the hectad ND37.

At the other end of the scale it is now possible to be strikingly accurate with map references. With the use of hand-held satellite navigators, otherwise known as Global Positioning Systems or GPS, locations can be given to ten figures, or a nominal accuracy of within 1 metre. The accuracy and repeatability is often not so good as that and varies according to the number of satellites currently seen, their strength, the amount of reflection off local obstacles and other similar things that reduce performance of the device.

Hence to summarise all these localisation points:

- The Isle of Stroma is in supegrid square ND or 39
- It is in the hectad ND37, otherwise called 3937

- The lighthouse at the north end of the island has a normal six-figure OS reference of ND354792 as determined by reading an OS map of scale 1:50,000
- The rare sedge *Carex maritima* occurs in a very small patch close by the lighthouse at ND35367915 as measured by an eight-figure GPS. In reality it will be within twenty metres of that measured point if you return with a different GPS to refind it.

Geology

Old Red Sandstone

The majority of Caithness is covered with Old Red Sandstone. It is divided, for the most part, into Middle Old Red and Upper Old Red. The Middle Old Red is a fine grained sedimentary rock laid down in the bed of the extensive and shallow Lake Orcadie in Devonian times. It is almost completely impervious to water in the direction perpendicular to the bedding planes, so groundwater travels though the rock along the bedding planes and though cracks in the bed. The rock varies from chemically neutral sand to lime-rich or otherwise mineral-rich and some beds are highly bituminous.

The rocks that promote the greatest natural fertility are the Niandt Limestone Beds and the Achanarras Limestone Beds which approach dolomitic limestone in their composition.

The Thurso and Mey Beds are also able to promote a good degree of fertility and form the basis of the best farming land.

John o'Groats Sandstone is a particular late phase of the Middle Old Red that is medium-grained, cross-bedded with pebbly lenses and laid down in river beds. It is low in minerals and promotes a peaty soil of low fertility.

The Upper Old Red is laid over the Middle Old Red on Dunnet Head but not elsewhere. It is a cross-bedded, pebbly, medium- to coarse-grained material with a low burden of minerals.

Beneath the flagstone beds there are basal breccio-conglomerates, perhaps of Lower Old Red Sandstone age, which outcrop on the surface at the edge of the flagstone beds from Reay to Berriedale and on the east side in the Sarclet and Ulbster areas.

Other rocks

West of a line from Reay to Berriedale the ground is more hilly as the flagstones of the north and east give way to Younger Caledonian igneous intrusions which are part of the Strath Halladale injection complex. The result is that the hills and features have different geologies, viz.

- Morven, Smean and Maiden Pap are basal conglomerate of the Old Red Sandstone
- Scaraben is quartzite
- The western hills from Beinn Ratha to the Knockfinn Heights are of a fine grained acid granite
- The ground immediately north of Helmsdale, including Braigh na h-Eaglaise is of the Helmsdale granite.

Soils

The dominant influence on the soils all over Caithness is the effect of the Pleistocene Glaciation. During this period ice moved from the sea in a north-west direction across the whole of Caithness. It dragged with it a shelly boulder clay from the floor of the sea to become the basis of a till deposit over the land. This till is a moderately fine clay loam with varying amounts of sandy content. Only in the south-west of the county is it a more coarse and sandy till.

Moraines, arising from the deposition of material during the melting of the last ice, occur but are scarce. The Wick and Thurso river valleys have some moraine material.

There is wind-blown sand in the hinterland beyond the beaches associated with bays. This is a strong effect for a few km. inland from Dunnet bay, Sinclair bay, Sandside bay and for about 1 km. inland from Thurso bay and John o' Groats,

On mountain tops the local rock is frost shattered to produce a thin layer of native rock-soil.

Then about 4000 years ago the till was covered by a thick layer of peat. The thickness was variable. In some areas of restricted drainage the climatic conditions permit the continued formation of new peat and there is fresh peat cover. In other areas the peat is no longer forming, usually due to the construction of drains, but often the peat remains in a thick layer. And where the peat was thin it will usually have been incorporated into the underlying till by agricultural practices. Large areas of peat-covered ground remain especially in the central and south-west parts of the county. In places where the underlying rock forms a basin, or where the drainage is restricted, there can be continuing peat formation and the rich peatland flora associated with peat formation. *The Flow Country* is a good monograph published by the Nature Conservancy Council about the peatlands of Caithness and Sutherland.

Today the soils derive from the above components and range from heavy clay, rich in calcium and minerals to thin sandy soils and pure peat cover. The details of this are given in the useful book by Futty and Dry - *The soils of the country round Wick*.

Climate

The source that I consult for climatic information is that classic book *The Ferns of Britain and Ireland* by Clive Page. It is not primarily a book about climate, but since ferns are very sensitive to climate, Clive Page has taken the trouble to collect the relevant data germane to plants.

Temperature

Caithness is a cool county in the summer and mild in the winter. The July maximum mean daily temperature (averaged from 1941 to 1970) ranges from 15.0 to 16.0 °C (cooler round the coast). The February minimum daily mean ranges from 0.0 to 1.0 °C. The annual accumulated temperature (the number of day-degrees above 6 °C) ranges from 600 to 1000 day-degrees per annum - which might be compared to around 1500 day-degrees per annum in

the south of England. Wick and the east coast is warmer than the rest of the county in summer due to a slight continental influence in the east and the slight mildness of the Moray Firth.

Rainfall

Annual rainfall in Caithness is a fairly uniform 1000mm per annum. There are no rain shadow areas and the lack of high mountains means that no areas provoke a high rainfall. But there is some variation in how it falls. A "wet day" is one in which at least 1mm of rain falls. On the east coast 160 wet days was the average (in the period 1951 to 1960) while on the west side 190 wet days was the average.

Wind

The wind is predominantly from the north-west or from the south-east. From the north-west it is generally of higher speed, colder, wetter and more salt-bearing. It gets up to 120 mph in winter, causing structural damage to trees. Cool salty winds in early summer are particularly damaging to young leaves of shrubs and trees. The winds from the south-east bring continental conditions with cold and snow in the winter and warming drier winds in the summer. One particular feature is that the more gentle south-east winds in summer can carry cold damp air from the North Sea to blanket the east coast and the north-east corner in sea fog and mist.

Oceanicity

The term **Oceanity** is intended to convey the idea that the proximity of the Atlantic Ocean to the west of Caithness brings with it a set of influences on the climate. But they are complex influences that are not easily turned into practical numbers. The main factors of oceanicity are:

- Rainfall and other forms of precipitation (dew, snow, fog etc);
- Transpiration - the rate at which water evaporates from the land, driven by temperature, direct sunshine, wind and humidity;
- Cloud cover, which prevents direct sunshine on plants and has secondary effects such as coolness and increased humidity;
- Amelioration of temperature range - making winters milder and summers less warm.

It would be good to have a true numerical oceanicity index that took all the above factors into account, but there are two approximations that seem useful:

- Potential Water Deficit is a measure of the net balance of precipitation and transpiration. Caithness is in the range 1 to 3 inches of excess of transpiration over rainfall with a particularly wet area on the eastern side where the two effects are almost in balance.
- The Temperature Range is the difference between the highest and the lowest average monthly temperatures. The average difference between summer and winter is merely 10°C across most of Caithness and only 8°C around the north-east corner, where there are the most cool summers and mild winters.

Both of these parameters indicate that the oceanicity is highest in the north-east corner and some distance down the east coast.

History of the Land

Early peoples

There is little evidence of significant population of the area before Neolithic times around 3000BC. After that there were sufficient people to have some impact on the natural vegetation, and the population grew as the advance in technology allowed. There is little real understanding of where they lived. It is clear that the peaty and hilly areas had few people. There is evidence of population of land of low but positive fertility in the Neolithic and Bronze Ages, but the coastal and high fertility land has been so much used and modified that evidence of early use has been largely eradicated. These peoples would have been mostly static herders and farmers.

Vikings

Around 875AD the Vikings invaded Caithness; they were farmers and travellers so they changed the agricultural practices and enhanced the likelihood of new plant introductions. Judging by the place-names, they set the pattern of farmland use. Words ending in -bster, for example, indicate a main farm site and many Caithness farms still have this ending and are thought to be of continuous occupation and use since Viking times. Also, until 1750 the dominant type of farm building was a long house of the Viking type - indeed many such long houses survive in modern form today.

Agricultural practices

Until around 1750 the agriculture would have been based on what could be done with the land that nature had provided. There was small scale crop production on the land that was plough-able with simple tools and there was animal grazing on the rest of the land, including migration of families to the more inhospitable places in the summer, to live in sheilings and get the benefit of summer grazings.

Then, between 1750 and 1850 there were large changes. "Town farms" brought initiatives in which the land was modified on a large scale to make improvements to crop production by enclosure of land and major drainage projects. Cottars and small farmers were moved off both common land and fertile parks and large sheep flocks were introduced to the hill land. New crops such as turnips were introduced and crop rotation and fertilisation with guano and lime made a big difference.

Beyond 1850 agriculture became more stable, but a major new industry sprang up to create sporting estates. This involved the regular burning of peatland to get controlled heather growth, some drainage schemes and the elimination of predator animals to maximise deer and grouse populations. This had a big impact on trees and shrubs on the peatlands and on the diversity of plants.

From 1850 to 2000 there has been a steady increase in the control that the farmer and the sporting estate manager has had over the land - and this focussed on productivity, generally at the expense of biodiversity. Drainage of marginal ground has reduced wetland areas, hill drainage has dried out peat bogs and planting of conifer trees has taken large areas of ground out of any normal biological activity since it causes blanket death of the vegetation beneath.

Since 1950 there have been quite significant changes to the grazing regimes in response to agricultural subsidy schemes and also from a general policy of greater enclosure. This produces very noticeable changes to the plant populations year by year in which there are gains and losses in the diversity of plants. But overall it is a detrimental effect. Plants can only react slowly to changes in habitat and each rapid change produces casualties. There may be new opportunist plant species that get a short term benefit, but the long term residents suffer.

Vegetation and Places

Here is a brief review of the main places of botanical interest in Caithness. Such a review has not been published in recent times, so it is my personal review. It was influenced by an old source - Crampton's very good book *The Flora of Caithness considered in Relation to its Geology* published in 1911.

Peatlands

One very good areas of peatland, relatively undamaged by human activities, is the basin around Munsary, Kensary and Shielton which can be pinpointed by the generally central map reference ND210475. Here there is a good range of the *Sphagnum* mosses so characteristic of peatland and the classic vascular plants that live amongst them. One can see the common plants of such a habitat - Common Cottongrass (*Eriophorum angustifolium*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Purple Moor-grass (*Molinia caerulea*), Bog Asphodel (*Narthecium ossifragum*), Heather (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Bell Heather (*Erica cinerea*), Deergrass (*Trichophorum cespitosum*), Mat-grass (*Nardus stricta*), Great Sundew (*Drosera anglica*), Round-leaved Sundew (*Drosera rotundifolia*), Heath Rush (*Juncus squarrosus*), Bulbous Rush (*Juncus bulbosus*), Lousewort (*Pedicularis sylvatica*), Bottle Sedge (*Carex rostrata*), Crowberry (*Empetrum nigrum*) and Cowberry (*Vaccinium vitis-idaeus*) - to name but a few. It is also the location for some rarer species - Fir Clubmoss (*Huperzia selago*), Lesser Twayblade (*Listera cordata*), Few Flowered Sedge (*Carex pauciflora*), Marsh Orchid (*Hammarbya paludosa*) and Marsh Saxifrage (*Saxifraga hirculus*).

I also pick out Blàr nam Faioileag, to the north-west of Loch Ruard around ND130445 as a good example of a pool system, and the Knockfinn Heights ND930430 as a good example of an elevated, exposed habitat of deep wet peat.

Overall the peatlands of Caithness are some of the most superb examples of this type of habitat in the world, worth treating with great respect and repaying detailed study.

River Valleys

The most interesting ones botanically are the Thurso, Wick and Dunbeath river valleys.

Thurso river arises in the acid peatlands of Loch More and the hinterland beyond. North of Loch More the river valley has a more mineral-rich geological base and north of Halkirk it flows through a valley cut into the calcareous clays of the glacial drift that overlays the Old Red Sandstone rock base. At Dirlot (ND126486) the river has cut a gorge through a particularly calcareous sandstone rock. Large bushes of Guelder-rose (*Viburnum opulus*) and a single specimen of Downy Currant (*Ribes spicatum*) are present among a rich tall herb flora on the steep rocky sides. For several miles between Todholes (ND123640) and Thurso town there are colonies of Holy Grass (*Hierochloe odorata*) on the river banks. There are sparse occurrences of the Pyramidal bugle (*Ajuga pyramidalis*) along this same stretch. To the south of Thurso town a Hazel coppice, a colony of Shady Horsetail (*Equisetum pratense*) and a few plants of Wood Vetch (*Vicia sylvatica*) are amongst the rich community of the steep clay slopes.

Wick river arises in good farmland around Watten where the clay soil has a good level of minerals and nutrients. The vegetation is naturally rank but mostly kept low by grazing. It gets interesting at the highest point that sea salt penetrates where the brackish environment supports the rare Estuarine Sedge (*Carex recta*), the Water Sedge (*Carex aquatilis*) and the hybrid between them (*Carex x grantii*). That area also has an isolated northern colony of the Celery-leaved Buttercup (*Ranunculus sceleratus*).

Dunbeath river arises in the peatlands below Ben Alisky (ND 045386). It enters a steep and rugged valley as it passes between the two hills Cnoc Fuarain (ND115345) and Wag Hill (ND108321). The rock is more mineral-rich and better drained between this point and the sea. There are rock exposures, grassy slopes and wooded areas. Where the Achorn Burn joins the river there is a deep and narrow rocky gorge. Notable plants are Broad-leaved Cotton-grass (*Eriophorum latifolium*), Rock Whitebeam (*Sorbus rupicola*), Downy Currant (*Ribes spicatum*), Moschatel (*Adoxa moschatellina*), Guelder-rose (*Viburnum opulus*), Wood Millet (*Milium effusum*), Agrimony (*Agrimonia eupatoria*), Squirrel-tail Fescue (*Vulpia bromoides*) and Goldilocks Buttercup (*Ranunculus auricomus*).

One small but excellent river valley is the Reisgill Burn Gorge at Lybster (ND242351). It is a steep sided gorge from the main road to Lybster harbour, clothed in shrubs. It has the Bloody Cranesbill (*Geranium sanguineum*) at its most northerly location in Britain, and a colony of the rare grass formerly known as Don's Twitch and now considered to be a variant of Bearded Couch (*Elymus caninus*).

Dune Links

The strong tidal currents sweep away sand from most of the coast and deposit it in deep water. However where a bay has been formed by erosion of more erodable rock, the sand, which is a product of that erosion, lies on the sea bed of the bay. Some of it is carried by the waves onto the shore to form a sandy beach if the shape of the bay is amenable to such deposition. The wind then carries the sand inland - it's noticeable for around 2 miles inland in

such a windy county. Close to the beach it remains mobile and forms sand dunes; behind the dunes it forms increasingly stable soil with distance from the beach. The sandy soils are free draining; some are made up of pure silica sand to form an acid soil, while more commonly the sand has calcium and other minerals in it that help to form a good mineral-rich low-nitrogen loam. Caithness has some good examples.

Dunnet and Greenland Links are the best (around ND2269), with a hinterland behind Dunnet Bay 3 miles wide and 2 miles deep of links soil that supports a rich variety of dwarf plants. The soil is a thin layer and damages easily, so it is vulnerable to mechanical damage, grazing and trampling. It is nevertheless in good condition and well worthy of a visit. The water table is quite high due to the impervious rock beneath the sandy layer, so there are pools, slacks and burns running through the area. The high water table causes freshwater flushing on the beach side of the dunes where the scarce subspecies of Whorl-grass (*Catabrosa aquatica* ssp. *uniflora*) occurs. Notable plants on the links are Scottish Primrose (*Primula scotica*), Baltic Rush (*Juncus balticus*), Hair Sedge (*Carex capillaris*), the most northerly Rue-leaved Saxifrage in Britain (*Saxifraga tridactylites*), Early Marsh-orchid (*Dactylorhiza incarnata* ssp. *incarnata*), the northern sub-species of Kidney Vetch (*Anthyllis vulneraria* ssp. *lapponica*), Frog Orchid (*Coeloglossum viride*), the scarce subspecies of Autumn Gentian (*Gentianella amarella* ssp. *septentrionalis*) and Moonwort (*Botrychium lunaria*).

Reay, or Sandside Links (ND965650) were botanically good, but have now largely been taken over by the village and the golf course. The Cowslip (*Primula veris*), which is not common in Scotland, is a prominent species. So is the particular form of Eyebright (it used to be called *Euphrasia borealis* ssp. *reayensis*, but is now *Euphrasia reayensis*; it grows in extensive carpets on the golf course. Tucked in odd corners are the nationally scarce Curved Sedge (*Carex maritima*), Common Cornsalad (*Valerianella locusta*) and Common Stork's-bill (*Erodium cicutarium*).

Keiss and Ackergill Links (around ND3358) is an extensive area behind Sinclair's Bay. It has been much damaged by farming and some of it is a golf course with only small patches of good links turf undisturbed. It is cut by the River of Wester which has at its estuary a particularly fine colony of the nationally scarce Curved Sedge (*Carex maritima*) and the county's only known colony of the Variegated Horsetail (*Equisetum variegatum*).

Coast

Much of the coast is rocky cliff with turf on the top. The brittle Old Red Sandstone rock fractures square giving vertical cliffs which are fissured and creviced. This provides a good surface for plants to get a foothold, but whether they can survive there depends on the exposure to high winds and salt spray. The topping of turf is also exposed to the salt winds and spray and it is usually a very short turf of salt tolerant plants that might otherwise be found in a salt marsh.

The north coast is of this type, with Scottish Primrose (*Primula scotica*) the most notable frequent species. At several points around the coast are small patches of the very rare type of Lesser Spearwort (*Ranunculus flammula* ssp. *minimus*) and the tiny Small Adder's-tongue (*Ophioglossum azoricum*). The cliff-top turf is also the home of the Eyebrights (*Euphrasia* species) which remain a botanical challenge in the county

The rocky shore at the foot of the cliff has its own interest. Most of the Oyster Plant (*Mertensia maritima*) has been eliminated from the beaches and sheltered bays by human disturbance but it remains well established in a few places on the rocky shores and smaller beaches. The Whorl-grass (*Catabrosa aquatica* ssp. *uniflora*) occurs on rocky shores and small beaches in its small form where fresh water is flushing onto the shore. In the extreme south-east of the county the rocky shores have small populations of the scarce Seaside Centaury (*Centaureum littorale*).

The cliffs of the south-east of the county, between Helmsdale and Berriedale, are more sloping faces with a richer mineral content and a grassy flora with Mossy Saxifrage (*Saxifraga hypnoides*).

Places of Interest

The following is a list of sites in Caithness with some botanical merit. This is a personal view and should not be taken to reflect positively or negatively on the sites that SNH has chosen as Sites of Special Scientific Interest, which are declared according to different criteria from those I have used in my selection.

The sites are listed roughly north to south.

- Dunnet Head ND2077
- The whole Dunnet Head coastline
- Loch of Mey shoreline ND2673
- St John's Loch shoreline ND2272
- Links of Dunnet ND2270
- Holborn Head ND1071
- Clardon cliffs ND1570
- Scrabster cliffs ND1070
- Castlehill shore ND1869
- Links of Greenland ND2269
- Thurso riverside (Thurso to Todholes)
- Orlig ND1866
- Freswick Bay ND3767
- Sandside Head and Bay NC9565
- Scrabster Hill ND0769
- Loch of Aukengill ND3565
- Around Stemster House ND1860
- Loch of Wester and river Wester shoreline ND3259
- Keiss Links ND3358
- Beinn Freiceadain ND0655
- Loch Watten round the shore ND2157 etc.
- Loch of Winless ND2954
- Wick river (Wick to Cruives)
- Large areas of the "Flow Country" such as ND04
- Dirlot ND1248
- Dubh Lochs of Sheilton ND2048
- Blar nam Faoileag ND1344

- Munsary ND2146
- Loch Stemster shoreline ND1942
- Yarrows / Warehouse / Ulbster Area e.g. ND3141
- Lybster Gorge ND2435
- Leodebest ND1834
- Latheronwheel Burn ND1832
- Dunbeath river (Dunbeath to Culvid)
- Morven
- Smean
- Langwell water (Ladies Tent to the sea)
- East coast cliffs (Ord to Berriedale)

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Note: References germane to a particular species are given in the accounts of those species.

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Lycopodium annotinum L.

Interrupted Clubmoss



Number of hectads with records in VC 1

Locally rare / Nationally Scarce

History of Discovery: Robert Dick - Morven. Also recorded in error from Smean in 1992 on BSBI card SRN3616.

K Butler – Whaligoe 2005, Murdo Macdonald – Ward Hill 2008.

Descriptions of individual sites:

- On a heathery hillside above Whaligoe at ND31064070, last seen by K Butler 2005
- In a quarry on Ward Hill at ND3721370159, found by Murdo Macdonald. Last seen 2008

Ecological comments: In open sub-alpine vegetation, preferring moist hollows in upland peatmoor.

Conservation Status: Vulnerable

BRC Number 1214 Database number 3 Vice County 109

***Isoetes echinospora* Durieu**

Spring Quillwort

Number of hectads with records in VC: 1

Nationally not Scarce but Locally Rare

History of Discovery: Found in 1973 by ER Bullard in Loch Ruard

Descriptions of individual sites:

- Found as debris on the north shore of Loch Ruard around ND14_43_.

Ecological comments: A plant that lives submerged in nutrient-poor to mesotrophic lochs, usually in a stony or peaty substrate.

Conservation Status: Not threatened

BRC Number 1043 Database number 8 Vice County 109

Ophioglossum azoricum C.Presl

Small Adder's-tongue

Number of hectads with records in VC: **1**

Nationally Scarce / Locally Rare

History of Discovery: Found by members of a BSBI meeting in 1974.

Descriptions of individual sites:

- Found on the clifftop on the west side of Dunnet Head. No precise location available.

Ecological comments: In short turf in exposed places near the sea. Plants are mature by late June and wither during the summer.

Conservation Status: Not threatened.

BRC Number 1381.1 Database Number 940 Vice County 109

Equisetum hyemale L.

Rough Horsetail

Number of hectads with records in VC: 1

Rarity: Nationally not scarce, locally rare or extinct

History of Discovery: “By the Burn of Houstry near Dunbeath” Miss M McCallum-Webster on 30/6/1956. Specimen ED9633 placed in RBG Edinburgh.

Descriptions of Individual Sites: Not refound in that area.

Ecological Comments: Likes a heavy silicaceous permanently moist soil

Conservation status: Extinct?

BRC Number 714 Database Number 9 Vice County 109

***Equisetum variegatum* Schleicher ex Weber & Mohr**

Variegated Horsetail

Number of hectads with records in VC 1

Nationally Scarce and Locally Rare

History of Discovery: Recorded in ND35 North of Wick - probably in Keiss links

Descriptions of individual sites: Not available

Ecological comments: Likes flooded areas of dune slacks.

Conservation Status: Not threatened.

BRC Number 723

Database number 10 Vice County 109

***Equisetum x mchaffieae* C.N.Page**

= *E. fluviatile* x *pratense*

A hybrid horsetail



Number of hectads with records in VC: 1

Rarity: Endemic to Britain and known only from this site in Caithness.

History of Discovery: Found in 2003 by Dr Heather McHaffie on the banks of St. John's Loch. World first discovery of this hybrid.

Descriptions of Individual Sites: At various points on the west shore of St John's Loch not far from the pier ND220722 in the gravel of the shoreline and in the near shore above.

Conservation status: Probably vulnerable

Reference: Page, C.N., McHaffie, H. & Butler, J.K. 2007. A new far northern hybrid horsetail from Scotland: *Equisetum x mchaffieae* C. N. Page (*Equisetum fluviatile* L. x *E. pratense* Ehrh.). *Watsonia* 26, 339-345;

BRC Number N/A **Database Number** 2001 **Vice County** 109

Equisetum x dycei C.N.Page

= *E. fluviatile x palustre*

A hybrid horsetail

Number of hectads with records in VC: 1

Rarity: World rarity known from several sites in Britain. Rare in Caithness.

History of Discovery: On the west bank of St John's Loch by Dr Heather McHaffie in 2003.

Descriptions of Individual Sites: : At various points on the west shore of St John's Loch not far from the pier ND220722 on the bank above the waterline.

Ecological Comments: A weak plant of loch shores and ditches

Conservation status: Probably short lived and needs constant re-creation.

BRC Number 2590 Database Number 1002 Vice County 109

***Equisetum x litorale* Kuhlew. ex Rupr.**

Shore Horsetail

Number of hectads with records in VC: 2

Nationally Scarce/Locally Rare or under-recorded.

Easyview site: ND219723 and extending southwards

History of Discovery: JK Butler, Lady Janet's Wood 1999. Dr H McHaffie St John's Loch 2001.

Descriptions of individual sites:

- In wet ground in Lady Janet's Wood ND134683 July 1999.
- By the shore of St John's Loch on the west shore from ND219723 extending southwards in the shoreline vegetation

Ecological comments: Damp water-edge habitats

Conservation Status: not threatened

BRC Number 715

Database number 16 Vice County 109

Equisetum pratense Ehrh.

Shade Horsetail

Number of hectads with records in VC: 2

Nationally Scarce/Locally Rare

Easyview site: ND112673



History of Discovery: Thurso riverside - Robert Dick. Seen between Wick and Castletown - ES Marshall (1910?); site not refound. No details available for the pre-1970 record in ND12.

Descriptions of individual sites:

- In neutral grassland on the floodplain of Thurso river beside the cemetery. at ND11206728. Thousands of plants present. Last seen 2014

Ecological comments: On undisturbed sandy or clayey river and stream banks, often in lightly shaded situations.

Conservation Status:Thurso riverside population would be threatened by "improvements" to the area.

BRC Number 718

Database number 14 Vice County 109

***Equisetum telmateia* Ehrh.**

Great Horsetail

Number of hectads with records in VC: 2

Nationally not Scarce / Locally rare



Easyview site: Forss river below Bridge of Forss at ND03506858

History of Discovery: ER Bullard 1970 at Forss. Unknown discoverer at Latheronwheel

Descriptions of individual sites:

- On a steep wet bank on a bend in the river at Bridge of Forss ND03506858. A large colony of hundreds of plants. Last seen by JK Butler in 2005.
- On a steep wet cliff face north of Latheronwheel at ND20863303. A colony of about 200 plants. Last seen by JK Butler in 2005.

Ecological comments: It occurs exclusively on steep clay banks which are constantly irrigated with lime rich water from a spring or flush above the site.

Conservation Status: Not threatened

BRC Number 721

Database number 17 Vice County 109

Hymenophyllum wilsonii Hook.

Wilson's Filmy-fern

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

Easyview site: On the tors of Smean; ND 033 277

History of Discovery: ER Bullard and JM Gunn 1974 on Smean.

Descriptions of individual sites:

- Small colonies at the base of rocks and cliffs on Smean around ND033277. Last seen 1995.

Ecological comments: In wet shady situations on mountains.

Conservation Status: Not threatened.

BRC Number 1001 Database number 19 Vice County 109

Trichomanes speciosum* Willd. (gametophyte)*Killarney Fern**

Number of hectads with records in VC: 2

Globally Rare / Locally Rare

History of Discovery: While the fern-like sporophyte stage is very rare in Britain, and "Globally Rare", it was realised in 1989 that the gametophyte stage - a mere network of green threads - was widespread in Britain. A national survey turned up three observations in Caithness. The plants have probably been there undisturbed for thousands of years, though never in recent times transmorphed into the fern.

Descriptions of individual sites:

- ND18_73_ West side of Dunnet Head, S of Dunnet Hill, nr Chapel Geo and W of old chapel, 175m alt, J + RM Walls 1993.
- ND19_76_ Dunnet Head, N of Burifa Hill on coast by Shira Geo, 8m alt, J + RM Walls 1993.
- ND11_22_ On steep banks of Langwell Water, at Berriedale, 17m alt, AC Jermy and RM Walls 1993.

Ecological comments: It requires sheltered, low-light, humid but not wet crevices that have existed in a stable state for thousands of years. Cliff face crevices near the sea are the preferred environment in Caithness.

Conservation Status: Not threatened. The national conservation status of the plant is likely to be revised in the light of recent findings, but meantime it must be treated as a rare, Red Data Book species.

References:

- Rumsey, FJ., Jermy, AC., Sheffield, E. (1998) The independent gametophyte stage of *Trichomanes speciosum* Willd. (Hymenophyllaceae), the Killarney Fern and its distribution in the British Isles. *Watsonia* 22, 1-19.
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BRC Number 2075 Database number 1169 Vice County 109

Asplenium viride Huds.

Green Spleenwort



Number of hectads with records in VC: 1

Rarity: Frequent in Britain, very rare locally

History of Discovery: Smean, CB Crampton 1911, JK and SI Butler 11Aug 1992

Descriptions of Individual Sites: In a horizontal crevice in a rock outcrop on Smean at ND033276. Last seen 1992.

Ecological Comments: Likes moist sheltered crevices in basic rocks.

Conservation status: Not threatened.

BRC Number 195

Database Number 2003

Vice County 109

Ceterach officinarum Willd.

Rustyback fern

Number of hectads with records in VC: 1

Nationally not scarce / Locally Rare

Easyview site: Langwell Garden ND111224

History of Discovery: Reported by the Head Gardener Mr F Higgins in August 2001.

Descriptions of individual sites:

- Long established on a mortared wall in the area of the glasshouses at Langwell Gardens. Growing in the mortared crevices in the wall.

Ecological comments: A plant generally common in SW England and becoming scarce in Scotland. It favours crevices in limestone cliffs and the artificial crevices of mortared walls.

Conservation Status: Not threatened.

BRC Number 473 Database number 1191 Vice County 109

Polystichium lonchitis (L.) Swartz

Holly fern

Number of hectads with records in VC: 3

Nationally not Scarce/Locally rare



History of Discovery: Smean 1889, ND05 (Ben Freiceadain ?) 1900, Smean ER Bullard 1970.

Description of Individual Sites:

- In crevices on the tors on Smean. Seen in 1889, 1970, 1974, 1992 and 2010. Specifically on the tor at ND027277 in 1974. Last seen by BR Macgregor at ND028277 in 2010.
- Recorded from ND05 in 1900. The only likely site is Ben Freiceadain ND061558 and it has not been seen there since, despite a thorough search.
- Recorded from Dirlot Gorge ND128487 prior to 1950 but probably in error for *Polystichium aculeatum* which occurs there in a dwarf form.

Conservation Status: Not threatened

BRC Number 1547

Database number 38 Vice County 109

Dryopteris oreades Fomin

Mountain Male-fern

Number of hectads with records in VC: 1

Nationally not Scarce but Locally Rare

History of Discovery: Reported from Drum Hollistan area prior to 1950. Yarrows, D Oliver 1972, det AC Jermy.

An erroneous record for the plant occurring also in ND13, due to a mistype, occurred in the records at one time.

Descriptions of individual sites:

- Collected from a rock outcrop somewhere in the Yarrows hills and never re-located.

Ecological comments: Occurs at moderate elevations in upland scree and rocky ledges.

Conservation Status: Not known to be threatened.

BRC Number 659

Database number 34 Vice County 109

Dryopteris aemula (Aiton)Kuntze

Hay-scented Buckler-fern

Number of hectads with records in VC: 1

Nationally not Scarce/Locally Rare

Easyview site: Yarrows cairn at ND304434

History of Discovery: Found by JK Butler 1972

Descriptions of individual sites:

- On the rocky spoil of the South Yarrows North long cairn growing among the stones at ND 304434

Ecological comments: Likes moist well drained acid soils and occurs mainly on the hyper-oceanic west coast of the Scottish mainland. It is thus an unexpected outlier in this location. However there are several other records for the Orkney island of Hoy.

Conservation Status: Not threatened except by any interference with the ancient monument.

BRC Number 660

Database number 1099 Vice County 109

Dryopteris expansa (C.Presl)Fraser-Jenkins&Jermy

Northern Buckler-fern

Number of hectads with records in VC: 1

Nationally not Scarce but Locally Rare

History of Discovery: M McCallum-Webster 1972 Morven.

Descriptions of individual sites:

- At the base of a craggy outcrop on Morven, 1972. Not since refound.
- In the Achorn gorge at Dunbeath ND138305 found by a BSBI meeting in 1992. Not refound.
- On Maiden Pap at ND048294 in 1978 by JK Butler (Specimen G75). Not refound.
- Loch Watenan Crag at ND311411 in 1988 by JK Butler. Not refound.
- Old Stirkoke Crag at ND328497 in 1987 by JK Butler. Not refound.

Ecological comments: At low altitude in wet acidic woods and on mountain screes.

Conservation status: Not known to be threatened.

BRC Number 2274 Database number 40 Vice County 109

Polypodium interjectum Shivas

Polypody

Number of hectads with records in VC: 3

Nationally not Scarce but Locally Rare



Easyview site: On a wall at ND184332 along with *P. vulgare* and the hybrid

History of Discovery: Warehouse Hill Rocks ND30.41 JK Butler 1972. Latheronwheel ND184332 JK Butler 1992.

Descriptions of individual sites:

- On mineral-rich rocks near Warehouse Hill ND30_41_.
- On a bridge wall top at Latheronwheel ND184332. It is a moist shaded situation

Ecological comments: On rocks walls and hedgebanks. In more mineral rich situations than *P. vulgare*. On trees in sheltered situations.

Conservation Status: Could be harmed by bridge repairs at Latheronwheel.

BRC Number 1544.3 Database number 44 Vice County 109

Polypodium x mantoniae Rothm. & U. Schneid.

= *Polypodium vulgare* x
interjectum

Hybrid Polypody



Number of hectads with
records in VC: 4

Rarity: Not uncommon in Britain, but scarce in Caithness

History of Discovery: Latheronwheel 1984, JK Butler with subsequent sites

Easyview Site: Roadside wall, Weydale, ND153658.

Descriptions of Individual Sites:

- Wall of bridge at Latheronwheel, ND184332 in a moist and shaded walltop. Last seen 1984 by JK Butler
- In a mortared roadside wall at Weydale, ND153658. Last seen 1998 by JK Butler
- Achvarasdal wood. Details not recorded. JK Butler 1999.
- Near Nipster, ND2259. Details not recorded. JK Butler 1999.

Ecological Comments: Where the parents meet (or used to) usually on a mortared wall.

Conservation status: Not threatened.

BRC Number Database Number 2004 Vice County 109

Juniperus communis L.

Juniper

Number of hectads with records in VC : 19

Internationally Threatened/Locally Frequent

Easyview site: Leodebeste ND185345



Our Juniper divides into two types. On sheltered slopes and crags *ssp. communis* occurs. Lying prostrate in heather on peatmoors is *ssp. nana*, which is more special to this area. However some plants are intermediate and the status of *ssp. nana* is not fully understood.

Descriptions of individual sites:

- On exposed peatmoor on Brims Hill around ND078707 are very prostrate plants of *Juniperus communis ssp. nana* intermingled with the heather. The peat layer is thin and the plants are rooted into the mineral soil beneath. 37 plants were counted in this area in 2003.
- On clay banks of the Thurso river valley at ND120643 and ND117664 there are plants of *Juniperus communis ssp. communis*. They live high on the steep slope out of the reach of grazing cattle. They are bushy plants with some tendency to horizontal striation but are not prostrate.
- On a calcareous rock outcrop at Loedebeste ND185345 there are plants appressed to the rocks and rooted in the mineral soil above the outcrop. They are quite strongly shaped in horizontal striations and it is not obvious which subspecies they are.

Ecological comments: On moors, rocks and well drained clay banks.

Conservation Status: Many plants in Caithness are threatened by agricultural activities.

BRC Number 1080.1 Database number 48 Vice County 109

Nuphar pumila (Timm)DC.

Least Yellow Water-lily

Number of hectads with records in VC: 1

Nationally Scarce and Locally Rare

History of Discovery: A. Davidson 1883 Loch of Winless. Rev. HE Fox 1885 Loch of Winless. Also seen there circa 1950. No recent records.

Ecological comments: Found in oligotrophic or mesotrophic pools and lochs. There are six known sites in East Sutherland.

Conservation Status: Not known.

BRC Number 1357 Database number 64 Vice County 109

Ceratocapnos claviculata (L.) Lidén

Climbing Corydalis

Number of hectads with records in VC: 2

Rarity: Rare in Caithness, frequent throughout UK.

History of Discovery: Found by CB Crampton 1911, ER Bullard and JM Gunn 1973

Descriptions of Individual Sites:

- In the Berriedale river valley at ND112234, seen by ER Bullard and JM Gunn on 29th June 1973 and at ND119229 in 2013 by C Hardyman.

Ecological Comments: Normally found climbing up Bracken stems in free draining acidic soil.

Conservation status: Not known

BRC Number 555 Database Number 70 Vice County 109

***Fumaria bastardii* Boreau**

Tall Ramping-fumitory

Number of hectads with records in VC: 1

Nationally Frequent / Locally Rare

History of Discovery: Dr HS McHaffie found it at Huna on 21st August 2003.

Description of individual site:

- In a turnip field near Huna, Caithness at ND360725. Growing among other weeds of cultivation. Last seen on 21st August 2003.

Ecological comments: A scrambling plant of free draining cultivated ground. In this case the soil is a mixture of wind blown sand and peaty soil. In the rest of Britain it is frequently found with a westerly distribution.

Conservation Status: Threatened by any change of agricultural practice in the area.

BRC Number 845 Database number 72 Vice County 109

Fumaria purpurea Pugsley

Purple Ramping-fumitory

Number of hectads with records in VC: 1

Nationally Scarce / Locally Rare

Easyview site: Field near John o'Groats ND 3627 7302

History of Discovery: First found by John Crossley and Ken Butler Sept 2001.

Descriptions of individual sites:

- Oat and turnip fields on the sandy/peaty soil around John o'Groats. Not found in fields elsewhere in the county.

Ecological comments: In northern Britain it is a plant of disturbed agricultural soil. In Cornwall it is a hedgerow plant.

Conservation Status: Nationally scarce. Locally confined to a particular soil type. Threatened by changes in agricultural practice.



BRC Number 857 Database number 1165 Vice County 109

Anemone nemorosa L.

Wood Anemone

Number of hectads with records in VC: 4

Rarity: Nationally common, scarce in Caithness

History of Discovery:

Descriptions of Individual Sites:

- Recorded from hectad ND05 at an unknown location and time
- Recorded from hectad ND23 at an unknown location and time
- Latheronwheel burn ND1832, seen by JK and SI Butler in 1996
- Dunbeath Strath ND1530, seen by JK and SI Butler in 2003
- Ousdale Burn valley, ND074187, seen by JK and SI Butler in 2005
- Langwell Policies, ND1123, seen by JK Butler in 2009

Ecological Comments: In moist places in woods

Conservation status: At the northern limit of its natural distribution and may be planted except in the very south-east corner. Not of conservation concern.

BRC Number 105 Database Number 52 Vice County 109

***Ranunculus auricomus* L.**

Goldilocks

Number of hectads with records in VC: 2

Rarity: Nationally not scarce / Locally rare

History of Discovery: Beinn Freiceadain by AG Kenneth and AMcG Stirling 1973. Dunbeath Valley by ER Bullard and JM Gunn 1973. Carn Mor by C Hardyman 2014.

Descriptions of individual sites:

- **At the base of the crags of Beinn Freiceadain at ND081559. Last reported in 1973.**
- **At the riverside above the floodline in the Dunbeath river valley at ND144308. Last reported in 1973.**
- **On the lower slopes of Carn Mor at ND027291 in May 2014**

Ecological comments: A plant of grassy places.

Conservation Status: Not threatened.

BRC Number 1645 Database number 56 Vice County 109

***Ranunculus sceleratus* L.**

Celery-leaved Crowfoot

Number of hectads with records in VC: 1

Nationally not scarce / Locally rare

Easyview site: Wick riverside at ND356512 in May before the tall herb vegetation covers it.

History of Discovery: Unknown recorder, 1911, Wick riverside.

Descriptions of individual sites:

- In the muddy margins of the Wick river around ND356512 where it flowers in May and is quickly covered over by tall herbs.

Ecological comments: Likes muddy brackish conditions.

Conservation Status: Not threatened.

BRC Number 1663 Database number 58 Vice County 109

Ranunculus flammula ssp. minimus (A. Bennet) Padm.

Lesser Spearwort

Number of hectads with records in VC: 2

Nationally Rare and Locally Rare

Easyview site: Clifftop east of Ham ND 2440 7370



History of Discovery: Rev. ES Marshall 1897 at Holborn Head - Reported by AR Bennet in 1904;

Descriptions of individual sites:

- A wet slab of rock exposed on the edge of the cliff west of Holborn Head at ND 0986 7154. No associate species.
- A wet flush emerging onto the clifftop east of Ham at ND 2440 7370

Ecological comments: In exposed wet situations, particularly sea cliff flushes in short turf or the bed of a small burn.

Conservation Status: Not threatened at known sites. More sites may exist but have not been found.

Reference: Reviewed by Silverside AJ 1984 BSBI Scottish Newsletter 6: 4-7.

BRC Number 1651.3 Database number 1003 Vi ce County 109

***Ribes spicatum* Robson**

Downy Current

Number of hectads with records in VC: 4

Nationally Scarce/Locally Rare

History of Discovery: In Dunbeath Strath, JF Grant 1883.

Easyview site: Dirlot crags ND126487



Descriptions of individual sites:

- Dirlot, on calcareous crags by the river ND126487 in the gorge section. Last seen 2003.
- Dunbeath Strath, on the stony ground by the side of the river at ND15913001. Found here by JK Butler in 2002.
- There are unlocalised records in NC92 and NC93.

Ecological comments: A plant of rocky woods and crags on basic soil. Scarce in Britain, being mainly confined to some specific areas.

Conservation Status: Not threatened.

BRC Number 1695 Database number 300 Vice County 109

***Saxifraga hirculus* L.**

Marsh Saxifrage



Number of hectads with records in VC: 2

Rarity: Internationally Rare/Nationally Rare/Locally Scarce

History of Discovery: Rev. D.Lillie 1912. Dr F Everingham 2002. Dr A Payne 2009/2010.

Descriptions of individual sites:

- In a flush by the Loop Burn approx. ND165440. Not seen since ~1917.
- In a large flush among *Holcus lanatus* in soft mossy ground on Munsary around ND2342. This site was found in 2002 and there were in excess of 1000 flowering plants in 2002 and in 2004. The site is owned by the plant conservation charity "Plantlife International".
- In flushes on Balharn Hill around ND2442 there are three separate sites also in soft mossy ground with *Holcus lanatus* . Found by A Payne in 2009.
- In flushes near Loch Ruard near to ND1342 in three separate sites also in soft mossy ground. Found by A Payne in 2010.

Ecological comments: In base rich flushes and mires. A rhizomatous perennial spreading vegetatively through the mire.

Conservation Status: The Loop Burn site is presumed lost. The Munsary site is under active conservation and monitored annually. It is a Nationally and Internationally declining species having Red Data Book status in UK.

Reference: J.K.Butler (2004). *A New Site in Caithness for Saxifraga hirculus*. *Watsonia* 25 (2004) 210-211

BRC Number 1832

Database number 1015 Vice County 109

Saxifraga nivalis L.

Alpine Saxifrage

Number of hectads with records in VC: 1

Nationally Scarce/Locally Rare

History of Discovery: Dr John Dunnet, Morven, 1972

Descriptions of individual site:

- A base-rich rock crevice on Morven at ND0028. The rock flake fell down ca 1980 and it is not certain if the plant survives. It was last seen by AG Payne on 23rd May 1979.

Ecological comments: A plant of periodically irrigated rocks, usually shaded and base-rich.

Conservation Status: Threatened or extinct.

BRC Number 1836 Database number 289 Vice County 109

***Saxifraga tridactylites* L.**

Rue-leaved Saxifrage

Number of hectads with records in VC: 1

Nationally not Scarce/Locally Rare

Easyview site: Greenland Links, Dunnet ND220690

History of Discovery: Robert Dick around 1835.

Descriptions of individual sites:

- In dry sandy turf on machair around ND220690. Last seen 2003.

Ecological comments: On bare dry calcareous ground. At its northern limit in Caithness.

Conservation Status: Not Threatened.

BRC Number 1843 Database number 292 Vice County 109

***Sedum forsterianum* Sm.**

Rock Stonecrop

Number of hectads with records in VC: 1

Rarity: Frequent nationally, rare in Caithness

History of Discovery: M. Lunan 2006.

Easyview Site: ND11296812

Descriptions of Individual Sites:

- On the walls of Brownhill quarry, found in 2006 by M Lunan at ND11296812.

Ecological Comments: A native plant in south-west England but a garden escape elsewhere. Rock crevices in neutral to calcareous rock cliffs.

Conservation status: Not of concern.

BRC Number 1879 Database Number 2005 Vice County 109

***Oxytropis halleri* Bunge ex Koch**

Purple Oxytropis

Number of hectads with records in VC: 1

Nationally Rare/Locally Extinct



History of Discovery: Robert Dick, ~1830, Thurso. FJ Hanbury 1885, Dounreay. CB Crampton ~1910, Dounreay

Descriptions of individual sites:

- "restricted to a quarter mile of the cliff top east of Dounreay on the north coast where it favours a habitat similar to Anthyllis (the stony eroded surfaces where surf has found access)" - CB Crampton.

Ecological comments: On dry cliffs by the sea and on sand dunes. Inland on Dalradian limestone and schist at 600m altitude. This is one of the arctic / alpine species isolated on the north coast after the retreat of the last ice age.

Conservation Status: Extinct. Last seen in 1925 and probably lost when the aerodrome was built around 1944.

Reference: CB Crampton. *The Vegetation of Caithness considered in relation to its Geology*. 1911.

BRC Number 1422 Database number 963 Vice County 109

***Anthyllis vulneraria ssp
corbierei***

Kidney Vetch

Number of hectads with records in VC: 1

History of Discovery: TGC Rich, Brimsness, 1988.

This plant is probably mis-identified. Discussed in Rich, TGC., What is *Anthyllis vulneraria ssp. corbierei*? *Watsonia* 23 469-476.

A previous finding is Duncansby Cliff, Col R Meinertzhagen 1928.

Descriptions of individual sites:

- Clifftop turf just east of Port of Brims at ND045710. In the turf just at the cliff edge.

Ecological comments: Confined to grassy seacliffs in west Anglesey, where it is an endemic, geographically isolated variant.

It is similar to *ssp. lapponica*, which is common locally. There are clearly plants that grade towards *ssp. corbierei* in Caithness.

Conservation Status: Not threatened

BRC Number 126.1

Database number 1168 Vice County 109

***Vicia sylvatica* L.**

Wood Vetch

Number of hectads with records in VC: 3

Nationally Frequent but Locally Rare

History of Discovery: Unattributed record for ND12 in 1888. Long known at Thurso riverside. Rediscovered there by Miss ER Bullard in 1974. West of Reay on clifftop Dr REC Ferreira 1998.

Descriptions of individual sites:

- Thurso riverside on the steeply sloping west bank above the footbridge around ND113673. On richly calcareous clay. The sites is subject to burning, vandalism and grazing and there have been gaps of several years when the plant has not been seen. Not found in 2009.
- West of Reay - the site has not been localised.

Ecological comments:A scrambling perennial of wood clearings, scrub and steep ungrazed grassy slopes. It needs a moderately mineral-rich soil.

Conservation Status: Threatened by disturbance and grazing and only just clinging on in Thurso riverside.

BRC Number 2199

Database number 216 Vice County 109

***Holodiscus discolor* (K. Koch)Maxim.**

Oceanspray

Number of hectads with records in VC: 1

Nationally not Scarce Alien / Locally Rare

Easyview site: In a conifer wood on Langwell Estate at ND100223

History of Discovery: Found by F Higgins and JK Butler July 2001

Descriptions of individual sites:

- Planted in a conifer wood at ND100223 and thriving as a single medium size tree in 2001.

Ecological comments:

An alien from western North America which sometimes naturalises and spreads by seed.

Conservation Status: Not threatened or threatening

BRC Number 4316 Database number 1181 Vice County 109

Sorbus rupicola (Syme)Hedl.

Crag Whitebeam

Number of hectads with records in VC: 1

Nationally Scarce / Locally Rare

Easyview site: Dunbeath Strath at ND 1422 3102



History of Discovery: JK Butler May 2003

Description of individual site:

- A single small tree on a high crag known locally as the "Soldier's Leap" beside the Dunbeath River at ND 1422 3102.

Ecological comments: Likes crags with some basic content. Often found as single trees or in small groups. Probably spread by birds eating the fruits.

Conservation Status: Nationally a scarce species. The local single plant is not in a vulnerable place but the species may be lost to the county when it dies.

BRC Number 1974 Database number 282 Vice County 109

***Rubus plicatus* Weihe & Nees**

Folded-leaved Bramble

Number of hectads with records in VC: 1

Rarity: Widespread in Britain, rare in Caithness

History of Discovery: Recorded from Berriedale ND12 in 1988

Ecological comments: Heaths and moors on dry sandy soil.

Conservation status: Least concern

BRC Number 3578

Database Number 1603

Vice County 109



***Rubus septentrionalis* W.C.R.Watson**

Stellately-hairy Bramble

Number of hectads with records in VC: 2

Rarity: Common in Scotland, scarce in Caithness

History of Discovery: Recorded by Alan Newton at Latheronwheel (ND13) and at Dunbeath and Berriedale (ND12) in 1972.

Ecological comments: Open woods, margins of moors, banks of streams

Conservation status: Least concern

BRC Number

Database Number 1602

Vice County 109

***Rubus mucronulatus* Boreau**

Long-pedicelled Bramble

Number of hectads with records in VC: 1

Rarity: Frequent in Scotland, rare in Caithness

History of Discovery: Recorded by Alan Newton at Latheronwheel in 1972

Ecological comments: Woods and hedgebanks.

Conservation status: Least concern

BRC Number 3541 Database Number 1601 Vice County 109

Rubus hartmanii Gand.

Hartman's Bramble

Number of hectads with records in VC: 1

Easy-view site: NC953645

Rarity: Rare in Britain, rare in Caithness – probably bird-sown from Sweden.

History of Discovery: Found at Reay NC953645 by Alan Newton in 1972

Ecological comments: In a plantation at Reay

Conservation status: Vulnerable

BRC Number 3451

Database Number 1604

Vice County 109

***Rubus latifolius* Bab.**

Wide-leaved Bramble

Number of hectads with records in VC: 7

Rarity: Frequent in Britain, under-recorded in Caithness

History of Discovery: Recorded from NC96, ND12, ND13, ND15, ND16, ND25, ND35.

Ecological comments: Hedges, banks and thickets

Conservation status: Least concern

BRC Number 3496

Database Number 1600

Vice County 109



Rubus hartmanii Gand.

Hartman's Bramble

Number of hectads with records in VC: 1

Easy-view site: NC953645

Rarity: Rare in Britain, rare in Caithness – probably bird-sown from Sweden.

History of Discovery: Found at Reay NC953645 by Alan Newton in 1972

Ecological comments: In a plantation at Reay

Conservation status: Vulnerable

BRC Number 3451

Database Number 1604

Vice County 109

***Potentilla crantzii* (Crantz)G.Beck ex Fritsch**

Alpine Cinquefoil

Number of hectads with records in VC: 1

Nationally Scarce/Locally Rare

History of Discovery: ER Bullard at a BSBI meeting, Langwell, 1992

Descriptions of individual sites:

- A base-rich rocky crag by the Langwell river at ND086231.

Ecological comments: A calcicolous alpine of steep dry rock faces.

Conservation Status: Not threatened.

BRC Number 1587 Database number 243 Vice County 109

Humulus lupulus L.

Hop

Number of hectads with records in VC: 1

Rarity: Not scarce nationally, Rare locally

History of Discovery: Watten, 1970 ER Bullard. Castlehill 2005 M Legg.

Easyview Site: Castlehill, Castletown ND19966827

Descriptions of Individual Sites:

- Watten hectad ND25, unlocalised record.
- Castlehill, Castletown at ND19966827 at the edge of the old garden

Ecological Comments: A hedgerow climber on good soil. In this case probably a garden escape.

Conservation status: Not of concern.

BRC Number 996 **Database Number** 2006 **Vice County** 109

***Betula nana* L.**

Dwarf Birch

Number of hectads with records in VC: 3

Nationally Scarce/Locally Rare



History of Discovery: Long known (Adam's List). Bienn nam Bad Beag J Barrett 1981

Descriptions of individual sites:

- On a wet peaty knoll at ND990397, last seen in 1982
- On wet peat at ND018542, last seen in 1981.
- In ND13 but there are no details of the site.

Ecological comments: A circumpolar arctic-alpine species preferring peaty ground or crevices in acidic rocks.

Conservation Status: Not likely to be currently threatened.

BRC Number 238

Database number 370 Vice County 109

***Salix herbacea x repens* = *S.x cernua* E.F. Linton**

Hybrid Willow

Number of hectads with records in VC: 1

Nationally Rare/Locally Rare

Easyview site: Dunnet Hill ND193738



History of Discovery: First Record D McClintock and JK Butler Dunnet Hill 1974.

Descriptions of individual sites:

- **Dunnet Hill ND193738.** Where rock protrudes from heather on high exposed ground at the peak of the hillock. *Salix herbacea* needs to be present as the scarce parent and *S. repens* as the commoner parent.

Ecological comments: A high alpine that occurs infrequently in the presence of the parent. It comes down to sea level in a few places in North Scotland.

Conservation Status: Small unprotected sites, though with no identifiable threat.

BRC Number 2310

Database number 967 Vice County 109

***Radiola linoides* Roth**

Allseed

Number of hectads with records in VC: 2

Nationally frequent but Locally Rare

History of Discovery: Long known in the County. Miss Geldart, Stroma 1899; Reay, JK Butler 1977.

Descriptions of individual sites:

- On the track from Reay to Helshetter around NC964635 on bare gravelly - peaty ground. Last seen 1977.

Ecological comments: An insignificant - difficult to notice - plant of bare, infertile peaty or stony ground. It is mainly near the coast across the whole of Britain.

Conservation Status: Vulnerable due to improvement of the path or ignorance of its existence.

BRC Number 1641

Database number 180 Vice County 109

***Tropaeolum speciosum* Poepp.&Endl.**

Flame nasturtium

Number of hectads with records in VC: 1

Easy-view site: Knockdee ND168612

Rarity: Common garden escape, rare in Caithness

History of Discovery: Found by JM Gunn in 1977

Description of individual sites: Long established in a hedgerow at Knockdee at ND168612 by the roadside.

Conservation status: Least concern

BRC Number 7652

Database Number 1605

Vice County 109

***Tropaeolum speciosum* Poepp. & Endl.**

Flame Nasturtium

Number of hectads with records in VC: 1

Rarity: Nationally scarce, rare locally

History of Discovery: JM Gunn, 1977

Easyview Site: ND168612

Descriptions of Individual Sites:

- In a hedgerow near Knockdee at ND168612, last seen 2010.

Ecological Comments: A long established garden escape

Conservation status: Not of concern

BRC Number 7652 Database Number 2007 Vice County 109

Lepidium heterophyllum Benth.

Smith's pepperwort

Number of hectads with records in VC: 2

Rarity: Nationally common, locally rare

History of Discovery: Helmsdale, Miss M. McCallum-Webster 1956. Thurso, Unknown 1950, refound by Miss ER Bullard 1977.

Easyview Site: ND112672, Thurso riverside

Descriptions of Individual Sites:

- In grass at the base of the slope at ND112672 on Thurso riverside below and among hazel bushes.
- Unlocalised in the Caithness part of ND01 north of Helmsdale.

Ecological Comments: In good grassland on banks and wood margins.

Conservation status: Not currently threatened.

BRC Number 1139 Database Number 2008 Vice County 109

***Arabis hirsuta* (L.) Scop.**

Hairy Rock-cress

Number of hectads with records in VC: 2

Not scarce nationally/Locally rare

Easyview site: Yarrows ND312413

History of Discovery:

- Known to Robert Dick on Dorrery Hill.
- Yarrows ER Bullard 1972.

Descriptions of individual sites:

- Dry rock ledge on Dorrery Crag ND067549
- Dry rock ledge on Yarrows Crag ND312413

Ecological comments: A preference for mineral-rich rocky crags. Not uncommon in richer British rocky grasslands.

Conservation Status: Not threatened.

BRC Number 146

Database number 101 Vice County 109

***Draba norvegica* Gunn.**

Rock Whitlow-grass

Number of hectads with records in VC: 1

Nationally Scarce/Locally Rare

Easyview site: Morven ND003284

History of Discovery: First recorded by Dr R Richter 1960 on Morven.

Descriptions of individual sites:

* A small area of mineral-rich rock on Morven at ND003284. The site is unstable and there has been a substantial rock fall since 1970 but a few plants survived it. Last seen 1992 by a BSBI group who recorded the location as ND004283.

Ecological comments: Calcareous rock crevices on mountains.

Conservation Status: Threatened by unstable rock on its one site in Caithness.

BRC Number 653

Database number 92 Vice County 109

***Polygonum boreale* (Lange) Small**

Northern Knotgrass

Number of hectads with records in VC: 8

Nationally Scarce/Locally Frequent



Easyview site: Almost any turnip field on the north coast of Caithness.

History of Discovery: First described as a recognisable species by Styles in 1962. All Caithness records by JK Butler 1970 onwards.

Descriptions of individual sites: An agricultural weed, common near the coast along the north coast and sparser down the east coast. Mostly in Shetland, Orkney and Caithness. A few sites scattered through Scotland and probably under-recorded.

Ecological comments: It grows on disturbed ground near the sea, particularly tilled open ground such as turnip fields and potato patches.

Conservation Status: Threatened by change to agricultural practices.

Reference: Styles, BT 1962. The taxonomy of *Polygonum aviculare* and its allies in Britain. *Watsonia* 5:177-214

BRC Number 2269

Database number 348 Vice County 109

***Oxyria digyna* (L.) Hill**

Mountain Sorrel

Number of hectads with records in VC: 1

Not scarce nationally/Locally Rare



Easyview site: Near the summit of Morven, on the highest ground.

History of Discovery: Morven 1887. Refound by M McCallum-Webster and JK Butler on Morven in 1972.

Descriptions of individual sites: Several flush and seepage sites on Morven in the high rocks.

Ecological comments: Wet alpine sites. It is frequently found on the higher hills and mountains of Scotland.

Conservation Status: Not threatened.

BRC Number 1420

Database number 356 Vice County 109

***Moehringia trinervia* (L.) Clairv.**

Three-nerved Sandwort

Number of hectads with records in VC: 3

Rarity: Nationally common / rare in Caithness

History of Discovery: Recorded in 1888 in Berriedale area. Refound by ER Bullard in Helmsdale and Dunbeath areas.

Easyview Site: The broch at Dunbeath riverside ND154305

Descriptions of Individual Sites:

- Unlocalised record in ND01
- Unlocalised record in ND12
- On a rocky outcrop below the broch in Dunbeath river valley at ND154305. Last recorded by JK Butler in 1997.

Ecological Comments: Likes moist open ground in woods and

Conservation status: Not known.

BRC Number 1305 Database Number 152 Vice County 109

***Sagina subulata* (Swartz) C.Presl**

Awl-leaved Pearlwort

Number of hectads with records in VC: 3

Not scarce nationally/Locally Rare



History of Discovery: Altnabreac (ND04) 1956 Miss M. McCallum-Webster. Altnabreac to Dalnawhillan (ND04) 1988 TG Rich and G Kay. Also recorded from NC94 and NC95 without details.

Descriptions of individual sites: No specific sites known.

Ecological comments: In dry open ground on sand or gravel. It occurs along the central North Coast and may have migrated north along Strath Halladale. The known locations are places where it is likely to have migrated from the Strath.

Conservation Status: Not threatened.

BRC Number 1769

Database number 148 Vice County 109

***Sagina saginoides* (L.)Karst.**

Alpine Pearlwort

Number of hectads with records in VC: 1

Nationally Scarce/Locally Rare

History of Discovery: Recorded from Reay Golf Course by J Holloway in 1970. Not refound since.

Descriptions of individual sites: Not known

Ecological comments: Bare ground devoid of competing vegetation. An alpine that descends to sea level at a few points around the north Scottish coast.

Conservation Status: Unknown

BRC Number 1768 Database number 147 Vice County 109

Atriplex x taschereaui = *A. glabriuscula x longipes*

Taschereau's Orache



Number of hectads with records in VC: 4

Rarity: Nationally occasional/ locally occasional

History of Discovery: Found at Keiss and Reiss beaches by P. Taschereau in 1975. Found at Thurso and South Wick by JK Butler in 2002.

Descriptions of Individual Sites:

- At the strand line of Keiss beach at ND3461. Last seen by Pierre Taschereau 15 Aug 1975.
- At the strand line of Reiss beach at ND3455. Last seen by P. Taschereau 15 Aug 1975.
- At the strand line of Thurso beach at the west end, ND113687, by JK Butler on 20 Sep 2002.
- At the strand line of the South Wick shore at ND37574952 by JK Butler on 27 Sep 2002.

Ecological Comments: An annual which establishes in sand near the strand line of beaches. The hybrid is fertile and occurs in the absence of *A. longipes*. It usually grows with *A. glabriuscula*

Conservation status: Not of concern.

BRC Number 2509

Database Number 1186

Vice County 109

Atriplex glabriuscula x prostrata

A hybrid Orache

Number of hectads with records in VC: 1

Rarity: Nationally scarce / locally rare

History of Discovery: Found by JK Butler on Dunbeath shore in 2002.

Descriptions of Individual Sites:

- **On the strandline of Dunbeath shore at ND16362937 on 27 Sep 2002 amongst *Atriplex glabriuscula*.**

Ecological Comments: A fertile hybrid which occurs in the absence of the *A. prostrata* parent on sandy shores where it is an annual growing usually with *A. glabriuscula*.

Conservation status: Short-lived and unlikely to be long lasting.

BRC Number 2511 Database Number 2009 Vice County 109

***Impatiens glandulifera* Royle**

Indian Balsam

Number of hectads with records in VC: 2

Rarity: Common nationally, rare locally



History of Discovery: Found by Miss ER Bullard at Keiss 1970+. Found by JK Butler at Reay in 2007.

Easyview Site: At the mouth of the Reay burn NC960652

Descriptions of Individual Sites:

- No information on the Keiss site in ND36.
- On the banks of the Reay burn near the golf course boundary at ND96006518 among grass.

Ecological Comments: A seriously invasive plant imported from Himalayas which is not strongly established and not seriously spreading so far north.

Conservation status: Needs to be watched and preferably removed.

BRC Number 1026 Database Number 190 Vice County 109

Primula x polyantha* Mill. = *P. vulgaris* x *veris

Hybrid Primula



Number of hectads with records in VC: 1

Rarity: Frequent nationally / rare in Caithness

History of Discovery: Found on Reay Golf Course by JM Gunn in 1972

Easyview Site: Reay Golf Course, plentiful around NC964649

Descriptions of Individual Sites:

- In the “rough” of Reay Golf Course around NC964649 and by the Isauld burn around NC968650.

Ecological Comments: A natural hybrid arising where the Primrose and the Cowslip grow together.

Conservation status: Not threatened so long as the present mowing regime continues.

BRC Number 1606

Database Number 1013

Vice County 109

Primula scotica Hooker

Scottish Primrose

Number of hectads with records in VC: 14

Internationally Rare/Locally frequent



Easyview site: Greenland Links, Dunnet ND220690

History of Discovery: Found on Holborn Head by Mr Gibb in 1819. This was the first world discovery of the species. Frequently observed in the county, in West Sutherland and Orkney since that time. Also found at Tarbat Ness E Ross in 1968. This is the total world distribution for the species.

Descriptions of individual sites:

- In short cliff-top turf which is mineral-rich maritime heath with *Carex panicea*. A good example is at Claredon, east of Thurso at ND140700. 50 plants evident in 2004.
- In sandy turf on machair - type vegetation. Greenland Links is a good example at ND218689.
- In isolated inland sites where there are mineral-rich flushes. For example at Hill of Shebster ND004644.
- Inland north-west of Dunbeath in heathland flushes at ND17203127 and ND16163120
- Milltown ND372639.
- Stroma ND350370.
- Swiney ND237343.
- Ness of Litter ND069710.
- Holborn Head ND109714.
- Sandside Head NC946660.
- Achcastle ND320340.
- Hill of Forss ND064684.
- Wester Keiss Links ND336586.
- Latheronwheel ND190320.
- Links of Old Tain ND213684.
- Sarclet Head ND352431.
- Reay Golf Course at NC9649164963

Ecological comments: Endemic to north Scotland. It inhabits the margin between maritime heath and other more mineral-rich habitats. Plants are long lived perennials.

Conservation Status: Most populations reducing through unknown factors.

References:

Hooker in Curtis' Flora Londonensis 133 1819

Bullard, ER., BSE News 48 2-6 1987

BRC Number 1604 Database Number 936 Vice-county 109

Arctostaphylos alpinus (L.) Sprengel

Alpine Bearberry

Number of hectads with records in VC: 8

Nationally Scarce/Locally frequent

History of Discovery:

- A. Bennett and JF Grant reported it from Ben Shurrery and Ben Dorrery (ND062550) in 1889.
- C.B.Crampton 1908 reported the plant on Cnoc an Eireannaich (NC962276), N. of Small Mount (NC981301), Morven (ND0028), East Scaraben (ND099278), Beinn nam Bad Mor (NC999551) and Beinn Ratha (ND954613).
- Reported from Smean (ND027278) and on Morven (ND005285) by a BSBI group in 1992
- The NCC peatland survey in 1989 to 1999 found it near Braehour (ND066512), at Bein nam Bad Mor (NC995543) and at Scotscalder (ND101560).



Easyview site: Summit of Beinn Ratha, south of Reay NC954613

Descriptions of Individual Sites:

- In the thinner and more eroded peat at the summit of Ben Ratha NC954613.
- In the thinner and more eroded peat on the upper slopes of Morven.
- In wind-pruned heather on Dunnet Head at ND2062176451

Ecological comments: Grows on acid mineral or peat soil in exposed situations where it is not overgrown by rank heather. It only grows where the mean July temperature is below 14.5 deg C.

Conservation Status: Not threatened

BRC Number 156

Database number 400 Vice County 109

Empetrum nigrum L. ssp. hermaphroditum (Hagerup)Bocher

Crowberry

Number of hectads with records in VC: 3

Not scarce nationally/Locally rare.

Easyview site: Cnoc na Stri ND0618) at the Ord of Caithness.



History of Discovery:

- Historically known from Morven
- Found by M. McCallum-Webster on Morven in 1972.
- Found by a BSBI group on Smean in 1992
- Found by GM Kay at Cnoc na Stri (ND0618) in 1995

Descriptions of individual sites:

- Much of the crowberry on the high peaty area of Morven is probably of ssp.hermaphroditum.

Ecological comments: The high altitude variant of crowberry. In very exposed peaty places, generally on the deeper layers of peat.

Conservation Status: Not threatened.

BRC Number 683

Database number 413 Vice County 109

Vaccinium microcarpum (Turcz. ex Rupr.) Hooker fil.

Small Cranberry

Number of hectads with records in VC: 11

Nationally Scarce/Locally frequent

Easyview site: Munsary Reserve ND 2310 4347

History of Discovery: Long known as the aggregate "Vaccinium oxycoccus", though it remains unclear whether all the Caithness records are referable to "V. microcarpum". Indeed, there is still debate about the distinctiveness of V. microcarpum as a species.

Descriptions of Individual Sites:

- In a peaty spring on the slopes of the Munsary Plantlife reserve at ND 2310 4347. Last seen 2002
- On the easterly margins of Loch Burifa on Dunnet Head around ND 202762 in hummocks of sphagnum. Last seen 1995.
- At ND213487 in the Dubh Lochs of Sheilton last seen 2005.
- At ND030482.
- At NC965548.
- At ND113469.
- At ND101560
- At NC960410.
- At NC987388.
- At ND097386
- At ND000502

Ecological comments: Grows only in wet sphagnum mires, preferring a drier hummock. Its evergreen creeping stems form small colonies. Pollinated by bees and the berries dispersed by birds.

Conservation Status: Not threatened, though much has been lost due to afforestation of peatland ground.

BRC Number 1418 Databas e Number 407 Vice-county 109

Vaccinium uliginosum L.

Bog Bilberry

Number of hectads with records in VC: 2

Nationally not scarce/Locally rare



History of Discovery: West of Morven, CB Crampton 1908. In Hectad ND02, A. Bennett 1902.

Descriptions of individual sites:

- On the slopes of Small Mount NC991287 on peaty heathery ground. There are no recent records.
- Bennett's record for ND02 has not been refound.

Ecological comments: On sloping peat moor.

Conservation Status: Not threatened

BRC Number 2137

Database number 406 Vice County 109

Pyrola minor L.

Common Wintergreen

Number of hectads with records in VC: 3

Nationally not scarce/Locally rare

History of Discovery:

- Close to County Boundary at Navidale around 1910. Not refound.
- Found in Dunnet forest around 1970 and several places around there subsequently.
- Found near Lybster in ND2435. Finder and date not known. Not refound.



Descriptions of individual sites:

- By the side of a path in Dunnet forest in damp grass at several places - e.g. ND 2260 6969
- By the side of a path in Dunnet forest in the other hectad, in damp grass at ND 2212 7019
- A large colony on Dunnet Links at ND 2260 6907 in short grass.

Ecological comments: On leaf mould in woods, on damp peaty ground on moors.

Conservation Status: Individual locations are vulnerable at Dunnet Forest but now that several sites are known it is considered not threatened.

BRC Number 1631

Database number 408 Vice County 109

Pyrola media Sw.

Intermediate Wintergreen

Number of hectads with records in VC: 2

Nationally Scarce/Locally Rare

History of Discovery: Near Wick, Rev. HE Fox 1885. In hectad ND01, A Bennett 1921, Dunbeath B White 1991.

Description of Sites:

- On open ground west of Knockinnon in ND1731. Needs locating more precisely. (ND16163120 unconfirmed)
- The Wick and ND01 sites have never been refound.

Ecological comments: Occurs on good soil that is slightly acidic in woods and heaths.

Conservation Status: Not known

BRC Number 1630 Database number 409 Vice County 109

***Orthilia secunda* (L.) House**

Serrated Wintergreen

Number of hectads with records in VC: 3

Nationally Scarce/Locally Rare



History of Discovery: Not known. The records are all old and not localised.

Descriptions of individual sites: Not known.

Ecological comments: In humid ravines and gullies and under tall heather.

Conservation Status: Not known.

BRC Number 1410 Database number 410 Vice County 109

Centaureum littorale (D Turner)Gilmour

Seaside Centaury

Number of hectads with records in VC : 1

Nationally Scarce / Locally Rare or absent

Easyview site

History of Discovery: First listed by Adam. No precise location.

Descriptions of individual sites: In saltmarsh just north of Helmsdale village but not specifically known in Caithness. All records are unlocalised in hectad ND01.

Ecological comments: A classic species of saltmarsh based on calcareous sandy turf.

Conservation Status: Not threatened

BRC Number 450

Database number 426 Vice County 109

***Gentianella campestris* (L.) Börner**

Field Gentian

Number of hectads with records in VC: 13

Rarity: Nationally scarce and threatened / locally widespread

History of Discovery: Long known from many places

Easyview Site: plentiful on Greenland Links ND2269

Descriptions of Individual Sites:

- The largest population is on Greenland Links where 837 plants were counted in 2008 on *Festuca rubra* – *Galium verum* links grassland.
- On the grassy verge at the roadside of the Knockally road at ND148300 is a form with white flowers growing in profusion

Ecological Comments: A plant of neutral to mildly acidic places which have a mineral-rich soil.

Conservation status: Not threatened in Caithness.

BRC Number 901

Database Number 427

Vice County 109

Gentianella amarella ssp septentrionalis (Druce)N.Pritch.

Autumn Gentian



Number of hectads with records in VC .014

Nationally Scarce / Locally Frequent

History of Discovery: This sub-species has historically been considered to be local to north-west Sutherland, while a very similar ssp. druceana was considered to be more widespread. Hence one would expect to find ssp. septentrionalis, if at all, to be scarce in Caithness. However there are fourteen old records for the county, spread around the coast. Recently the view has been taken by Stace(1997) that ssp. druceana and ssp. septentrionalis should be considered the same and records merged. This eases the situation in Caithness where most old records probably are for ssp. druceana. I have not seen a plant in Caithness like the ssp. septentrionalis of Strathy East or Invernaver.

Descriptions of individual sites:

- Sandside, especially near the banks of the Isauld Burn at NC971656 in short turf.
- Dunnet and Greenland Links, in short turf, eg. ND220688.
- Sannick Bay in short turf, eg. ND396736.
- Knockally roadside, where it is plentiful, eg ND14612950

Ecological comments: A plant of well-drained calcareous turf in dune links / machair grazed grassland.

Conservation Status: Threatened by over- or under-grazing of the short turf, which can quickly reduce populations of these annual or biennial plants.

BRC Number 904

Database number 955 Vice County 109

Mertensia maritima (L.) S.F. Gray

Oyster Plant

Number of hectads with records in VC: 9

Nationally Scarce/ Locally Frequent but declining.

Easyview site: Castlehill shore around ND185691.

History of Discovery: Long known. Adam's List.



Descriptions of individual sites:

- Dunbeath shore ND16142892. Large colony of small and mid age plants over an area of flat sandy beach. 204 plants counted in 2002. Awkward access makes it a less frequently used beach.
- Dounreay Castle NC983670; a large and stable colony (50 plants in 1990) on the top fringe of a sandy shore. Disturbed in 1999 onwards by civil works.
- John o'Groats ND39087375; small scattered young plants appear each year but make no progress in stabilising on the narrow strip of exposed and unstable sand. 9 plants on 5th August 2001.
- Castlehill shore ND185691; a 1.5 km long beach of sandy and gravelly patches. Plants are mature or mid-aged, scattered along the beach. On 16th July 2002 only 5 plants - ND18666908 (2 plants), ND18496907 (1 plant), ND18346902 (2 plants).
- Freswick shore ND378673; High on the sandy shore of the bay are a few plants which are mature and stable.
- Noss Head ND387532; On a rocky boulder beach more than 700 plants seen in August 2002. The colony is sustained and enhanced by a local person retrieving seed and resowing it in the spring.
- Castle of Mey ND290744; On a rocky boulder beach a few plants are scattered. 6 plants seen in 1992. None seen in 2005
- Sandside Bay NC961653; A few mature plants were established here but disappeared in the late 1970's.

- Thurso Bay ND12336883 last seen 2010.
- Brimsness ND042714; A good colony of mature plants existed until the late 1970's but now extinct.
- Keiss ND356615; Plants were reported here in the late 1970's by DC Manson but have not been seen recently.
- Stroma; Plants were seen in 1899 by Miss M Geldart on the north-east coast.

Ecological comments:

A plant of sandy and sandy/rocky seashores. A perennial with a long taproot which needs a stable sandy site (usually above the strand line) to have a long life. growing among the boulders of a sandy/rocky beach gives it added protection from storms. Produces copious seed that can travel large distances in the sea so small new plants.

Conservation Status:

Seedlings appear on sandy shores but the number of stable mature sites is small and declining due to disturbance. In the past 20 years good sites at Crosskirk and Sandside have disappeared. The activities at Noss Head show that the decline (due largely to negative interference by man) can be reversed by positive interference.

BRC Number 1292 Database number 441 Vice County 109

Plagiobothrys scouleri (Hook & Arn.) IMJohnston

White Forget-me-not

Number of hectads with records in VC: 1

Nationally Scarce / Extinct Alien

History of Discovery: Casual on new-sown ground around west side of the mouth of River Thurso. July 1974, JM Gunn. This was the first record of the plant in Britain.

Descriptions of individual sites:

- On an area of improved ground to the west of a new sewage treatment plant at ND120688. It lasted for the season and was not recorded since.

Ecological comments: In western N. America it is a plant of damp, sandy, sometimes saline ground. In Britain it is the result of sowing grass seed of N. American origin.

Conservation Status: Now extinct in Caithness.

BRC Number 7493 Database number 1027 Vice County 109

Veronica montana L.

Wood Speedwell

Number of hectads with records in VC: 1

Rarity: Frequent in England / Rare in Caithness

History of Discovery: ER Bullard 1972 Thurso, JK Butler 1993 Stemster

Easyview Site: Stemster roadside at ND1833160569

Descriptions of Individual Sites:

- Found by Miss ER Bullard at Thurso in 1972. No precise location recorded.
- Stemster : in the small wood at ND1819160874, in the wood at ND1816660104 and on the roadside at ND1833160569

Ecological Comments: In damp woodland and scrub in basic to mildly acidic soil

Conservation status: Not threatened

BRC Number 2172

Database Number 875

Vice County 109

Chaenorhinum minus (L.)Lange

Small Toadflax

Number of hectads with records in VC: 1

Common in England, Scarce in Scotland, Rare locally

History of Discovery: Found by Dr H McHaffie 2003.

Descriptions of individual sites:

- Several plants on the railway track at ND04064794

Ecological comments: A spring-germinating annual on well-drained, often calcareous soil. It has a strong preference for railway tracks and has probably migrated to Caithness via the railway.

Conservation Status: Not threatened.

BRC Number 474 Database number 1187 Vice County 109

Ajuga pyramidalis L.

Pyramidal Bugle

Number of hectads with records in VC: 6

Nationally Scarce / Locally Scarce

History of Discovery: James Robertson - Ord of Caithness - 1767. Robert Dick - Banks of R. Thurso - 1889. Bennett List 4. Adam List 5.

Descriptions of individual sites:

- Geiselittle ND116646 JK Butler and JM Gunn 1968; On the east bank of River Thurso in hazel scrub just above the river flood level. Only a few plants seen (around 5 simultaneously) over last 10 years.
- Cnoc na Stri ND069181 D.A.Ratcliffe 1961. Not since refound.
- Badbea ND098206 R Payne 1979. Not since refound.
- Berriedale ND085234 ER Bullard and P Collett 1992. Not since refound
- Cnocglass Water ND044523 DA Ratcliffe 1982. Not since refound
- Inver Hill ND1020 DA Ratcliffe 1975. Refound by AG Payne on 3rd July 2005 at ND101207

Ecological comments:

Likes free draining steep sunny slopes with a medium soil alkalinity. Close competition is not welcome so rough ground with incomplete soil cover and grazing is desirable. Sites in Britain are almost all north and west of the Great Glen with a westerly preference.

Conservation Status: The Geiselittle site is threatened by lack of grazing.

Reference:

BRC Number 45

Database number 504 Vice County 109



***Euphrasia reayensis* (Pugsley)PD Sell**

Reay Eyebright

Number of hectads with records in VC:1



Rarity: Endemic only to Reay and perhaps other north coast sites.

History of Discovery: Recognised by H W Pugsley in his 1930 review of *Euphrasia* and named then as *E. brevipila* var *reayensis*. Now accepted as a species by PD Sell.

Easyview Site: Reay Golf Course (NC9665) where it is widespread

Descriptions of Individual Sites:

- Reay Golf Course where it is plentiful in the infrequently mown grassland.
- Other sites probably exist on the north coast (there is a record from Bettyhill) but it needs to be re-surveyed now that the species has been more clearly defined.

Ecological Comments: An annual herb hemiparasitic on grasses such as Red Fescue and apparently confined to coastal grassland.

Conservation status: Endangered by the mowing regime which is primarily to make a good golf course.

References:

Pugsley, HW, 1930, A Revision of the British Euphrasiae. *Journal of the Linnean Society of London, Botany:48: 467-544.*

Sell PD and Murrell G, 2009, *Flora of Great Britain and Ireland, Vol 3 484-485*

BRC Number N/A Database Number 2010 Vice County 109

Euphrasia frigida Pugsley

Eyebright

Number of hectads with records in VC: 1

Nationally Scarce / Locally Rare

History of Discovery:

Descriptions of individual sites:

- On a cliff ledge on the north coast at ND141700. In very short turf on mineral rich rock. A few very small plants.

Ecological comments: A species of wet or damp cliff ledges, often by the sea. A small plant often hidden or obscured in short grass.

Conservation Status: Not threatened.

BRC Number 792

Database number 858 Vice County 109



***Euphrasia marshallii* Pugsley**

Eyebright

Number of hectads with records in VC: 1

Internationally Rare / Locally Rare



History of Discovery: Reay, Graham RA, 1936. East Dounreay, JK Butler 2010

Description of Site:

- In very short turf close to the sea and crevices in sea cliff rocks, often with *Primula scotica* around NC9968

Ecological comments: In clifftop detritus and turf close by acid heath.

Conservation Status: Threatened by industrial development nearby

BRC Number 795

Database number 941 Vice County 109

Euphrasia tetraquetra (Breb.)Arrond.

Eyebright

Number of hectads with records in VC: 2

Euphrasia tetraquetra is a plant of short clifftop turf on the coast of England and Wales and south Scotland, where it is a distinctive plant. In the north of Scotland it has not proved possible to distinguish between *E. tetraquetra* and dwarfed forms of *E. nemorosa*. So at present *E. tetraquetra* is not demonstrated to occur in Caithness and the two records extant will be disregarded. Further work may yet clarify the situation.

BRC Number 799

Database number 950 Vice County 109

***Euphrasia rotundifolia* Pugsley**

Eyebright

Number of hectads with records in VC: 0

Internationally Rare / Locally not known to be present



History of Discovery: Claimed by several botanists to be present in Caithness but not currently known to be in the county.

Descriptions of individual sites: Only known with certainty from Melvich in NW Sutherland.

Ecological comments: It occurs at Melvich in NW Sutherland where it is widespread on mineral-rich short turf by the sea. On acid ground by the sea it is replaced by *E. marshallii*.

Conservation Status: Not known in Caithness

BRC Number 805

Database number 1078 Vice County 109

Euphrasia x difformis F.Towns. = *E. arctica x micrantha*

Eyebright

Number of hectads with records in VC: 1

Nationally Scarce / Locally Rare

History of Discovery: The parents, *Euphrasia arctica* and *E. micrantha* have long been known, and are plentiful in Caithness. They readily hybridise and the hybrid is probably very common. However, such is the confusion and difficulty of determination that this is accepted as the first acceptable record. It was made by P Macpherson and EH Jackson et al near the Wag at Berriedale on 11th August 1992 - determined by AJ Silverside.

Descriptions of individual site:

- Moist acid grassland by the confluence of two upland burns ND016262

Ecological comments: *E. arctica* is a species of neutral to calcareous upland grassland, while *E. micrantha* is a species of acid peat moor. The hybrid was found on neutral grassland.

Conservation Status: Not threatened.

Reference: Source SRN 3613

BRC Number 7314 Database number 1065 Vice County 109

***Utricularia australis* R.Br.**

Bladderwort

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

Easyview site: Loch Stemster ND186424

History of Discovery: Long known to be in the county (Adam's List). Found at Loch Stemster in 1970 by JK Butler.

Descriptions of individual sites:

- In the shallows on the west side of Loch Stemster (ND186424) and in a pond adjacent to the loch. The water is neutral pH and the plant is well established. Last seen in 2010. No flowers have ever been seen.

Ecological comments: An insectivorous plant of acidic to basic water where the microscopic fauna is rich enough to support it. It rarely flowers in the north part of Britain, and in the vegetative state it is impractical to separate *Utricularia australis* from *U. neglecta*. So it is not certain which species it is.

Conservation Status:

BRC Number 2131 Database number 1028 V ice County 109

***Utricularia intermedia* Hayne**

Intermediate Bladderwort

Number of hectads with records in VC: 2

Nationally not Scarce / Locally rare

History of Discovery: Found at Loch Auckengill in 1970 by CA Robertson and Miss M. McCallum-Webster. Found at Ruthers of Howe (Lyth) in 1972 by JK Butler, A Copping and D McIntock.

Descriptions of individual sites:

- At the acid wet margin of Loch of Auckengill in pools at ND351652.
- In calcareous pools from flushed water at Ruthers of Howe ND302626.

Ecological comments: In shallow water that is usually oligotrophic and occasionally more calcareous. It is a plant of the cool high rainfall areas of NW Scotland and is rare in the east.

Conservation Status: Not threatened.

BRC Number 2129 Database number 480 Vice County 109

***Saussurea alpina* (L.)DC.**

Alpine Saussurea

Number of hectads with records in VC: 2

Nationally not Scarce/ Locally Rare

Easyview site: Thurso East coast ND141700



History of Discovery: Found by Horn, Grant and Reeves, undated, early 1900's, at Thurso East. Refound JK Butler 1970. Also claimed to occur on the cliffs at Ramscaigs, but not refound there.

Descriptions of individual sites:

- On a north-facing and a west-facing calcareous crag on the seashore at Thurso East at ND141700 Some 100 plants are there flowering regularly. It only survives where sheep do not graze. Last seen 2014.

Ecological comments: An arctic - alpine species preferring damp or wet calcareous crags. Frequently found in the mountains of north-west Scotland. Its occurrence at sea level in Caithness is unusual and it is probably a relict of the last ice-age that has survived due to the inhospitable nature of its exposed seashore niche. It spreads by both seed and by vegetative reproduction from its stolons that creep through the thin soil of the crags.

Conservation Status: Not threatened, but vulnerable due to being at one accessible site.

BRC Number 1825

Database number 572 Vice County 109

***Cirsium heterophyllum* (L.) Hill**

Melancholy Thistle

Number of hectads with records in VC: 3



Rarity: Frequent in Scotland and N England / Scarce in Caithness

History of Discovery: Long known from the Dorrery area. Lybster 1972, ER Bullard, Latheronwheel 1997 JK Butler.

Easyview Site: Latheronwheel at the burnside, ND18973224

Descriptions of Individual Sites:

- Unlocalised record in the Shurrery / Dorrery area in ND05
- By the side of the burn at Latheronwheel above the harbour in tall vegetation at ND18973224.
- In the upper gorge of the Lybster burn ND2435

Ecological Comments: Streambanks, grassy meadows and woodland margins in hilly areas.

Conservation status: Not threatened.

BRC Number 518

Database Number 571

Vice County 109

***Picris echioides* L.**

Bristly Oxtongue

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

History of Discovery: Found by REC Ferreira on Thurso river bank in 2003.

Descriptions of individual sites:

- In grass by the path along the riverbank at ND 1150 6785, flowering in October

Ecological comments: Probably introduced to Britain and mostly found in waste places and rough ground in the south of England. Rare in Scotland. Likely to have come to Caithness in birdseed and flowered in the warm dry summer of 2003.

Conservation Status: Not likely to survive.

BRC Number 1471 Database number 1189 Vice County 109

***Mycelis muralis* (L.)Dumort.**

Wall Lettuce

Number of hectads with records in VC: 3

Rarity: Nationally common / Scarce in Caithness

History of Discovery: Halkirk, 2008, JK and SI Butler

Descriptions of Individual Sites:

- Roadside weed found in Halkirk in 2008.
- Roadside weed in South Wick ND37094981 in 2009
- Garden weed in Thurso 2009 ND123687



Ecological Comments: Spreading rapidly in Caithness, having arrived in 2008 having been plentiful around Inverness previously.

Conservation status: Not threatened. Not threatening.

BRC Number 1315

Database Number 2011

Vice County 109

***Hieracium aggregatifolium* P.D.Sell**

Rosette Hawkweed

Number of hectads with records in VC: 1

Rarity: Only in N.Coast of Caithness &Sutherland

History of Discovery: not known

Descriptions of Individual Sites: Recorded near Reay

Conservation status: Vulnerable

BRC Number ? Database Number 1500 Vice County 109

***Hieracium aphyllopodioides* F.N.Williams**

Broad-leaved Hawkweed

Number of hectads with records in VC: 2

Rarity: Very rare local endemic of Caithness and Sutherland

History of Discovery: Reported by McCosh & Rich from ND07 (Dunnet Head?) and ND12

Conservation status: Endangered

BRC Number Database Number 1502 Vice County 109

Hieracium argenteum Fr.

Silvery Hawkweed

Number of hectads with records in VC: 4

Rarity: Widespread in Scotland, but scarce in Caithness

History of Discovery: Recorded in McCosh & Rich from NC96, ND01, ND03 and ND13

Description of individual sites: not available

Conservation status: Least concern

BRC Number

Database Number 1503

Vice County 109

Hieracium boswellii E.F.Linton

Boswell's Hawkweed

Number of hectads with records in VC: 1

Rarity: British endemic mostly in Sutherland.

History of Discovery: Recorded in ND03 (Upper Dunbeath Valley?) in 1888 but not seen since.

Description of individual sites: not known

Ecological comments: Cliff ledges, scree and streamside rocks.

Conservation status: Least Concern

BRC Number **Database Number 1504** **Vice County 109**

***Hieracium caesiomurorum* Lindeb.**

Long-stalked Hawkweed

Number of hectads with records in VC: 1

Rarity: Frequent in Scotland, rare in Caithness

History of Discovery: Recorded from ND35 (Wick area)

Description of individual sites: not known

Ecological comments: Riverside rocks and cliff edges

Conservation status: Least Concern

BRC Number

Database Number 1505

Vice County 109

Hieracium caledonicum F. Hanb.

Caledonian Hawkweed

Number of hectads with records in VC: 5

Rarity: Frequent in coastal Sutherland, Skye and Outer Hebrides. Rare in Caithness.

History of Discovery: Recorded from Dunnet Head area (ND07, ND17, ND16) and Helmsdale area (ND03 and ND23)

Description of individual sites: not available

Ecological comments: Cliff ledges, streamsides, grassy slopes and dunes.

Conservation status: Least concern

BRC Number

Database Number 1506

Vice County 109

***Hieracium cerinthiforme* F. Hanbury**

Clasping-leaved Hawkweed

Number of hectads with records in VC: 1

Rarity: Frequent in Scotland but rare in Caithness

History of Discovery: Recorded in Helmsdale area NC92

Description of individual sites: not available

Ecological comments: Cliff ledges and slopes

Conservation status: Least concern

BRC Number

Database Number 1507

Vice County 109

***Hieracium farrense* F. Hanb.**

Farr Hawkweed

Number of hectads with records in VC: 2

Rarity: A Scottish endemic only known from the north coast. Rare in Caithness.

History of Discovery: Recorded from Dunnet area in ND16 and ND15

Description of individual sites: not available

Ecological comments: Banks above River Naver at Bettyhill

Conservation status: Vulnerable, not seen since 1952

BRC Number Database Number 1508 Vice County 109

Hieracium hypophalacrum P.D.Sell

Berriedale Hawkweed

Number of hectads with records in VC: 1

Rarity: A Scottish endemic known only from six sites, one of which is in Caithness

History of Discovery: Recorded from ND12, at or near Berriedale

Ecological comments: Originally described from rocky places near the sea at Berriedale.

Conservation status: Vulnerable

BRC Number

Database Number 1509

Vice County 109

Hieracium iricum Fr.

Erin Hawkweed

Number of hectads with records in VC: 2

Rarity: Widespread in Ireland and north Scotland, but rare in Caithness

History of Discovery: Recorded from Dunnet area ND17, ND16

Ecological comments: Cliff ledges, rocky outcrops and streamsides.

Conservation status: Least concern

BRC Number **Database Number 1510** **Vice County 109**

***Hieracium langwellense* F.Hanb.**

Langwell Hawkweed

Number of hectads with records in VC: 3

Rarity: Frequent in Scotland, rare in Caithness

History of Discovery: Recorded from the east coast ND01,ND12, and ND23

Ecological comments: Cliff ledges and slopes and streamside rocks

Conservation status: Least concern

BRC Number **Database Number 1511** **Vice County 109**

Hieracium latobrigorum

Yellow-styled Hawkweed

Number of hectads with records in VC:5

Rarity: Widespread and frequent in Scotland, but only 5 records in Caithness

History of Discovery: Recorded from NC96,ND07,ND16,ND14,ND12

Ecological comments: Grassy banks and rocks by streams

Conservation status: Least concern

BRC Number **Database Number** 1512 **Vice County** 109

Hieracium maritimum (F. Hanb.)F Hanb.

Maritime Hawkweed

Number of hectads with records in VC: 4

Rarity: A scarce endemic scarce in Caithness

History of Discovery: Recorded from NC96, ND25,ND35 and ND12

Ecological comments: Shingle and sand by lochs, grassy sea cliffs, rock ledges.

Conservation status: Least concern

BRC Number

Database Number 1513

Vice County 109

***Hieracium orcadense* W.R.Linton**

Orkney Hawkweed

Number of hectads with records in VC:3

Rarity: Frequent in Scotland and in Orkney, rare in Caithness

History of Discovery: Recorded from Thurso area ND16, ND25 and ND12

Ecological comments: Cliff ledges and streamsides

Conservation status: Least concern

BRC Number **Database Number 1514** **Vice County 109**

***Hieracium proximum* F.Hanb.**

Caithness Hawkweed

Number of hectads with records in VC: 3

Easy-view site: “by the Isauld Burn in Caithness”

Rarity: A rare Scottish and Irish endemic.

History of Discovery: Recorded in NC96 (Isauld Burn), ND07 and ND16

Description of individual sites:

- A rocky gorge near the sea at Reay
- Cliffs near the sea at Thurso

Conservation status: Vulnerable or Endangered

BRC Number Database Number 1515 Vice County 109

Hieracium reayense(Pugsley)P.D.Sell

Reay Hawkweed

Number of hectads with records in VC: 5

Easy-view site:

Rarity: Frequent in central and northern Scotland but absent elsewhere in the world.

History of Discovery: Recorded from NC96,ND07,ND16,ND12and ND23

Ecological comments: Streamsides and rocky and grassy places

Conservation status: Least concern

BRC Number

Database Number 1516

Vice County 109

***Hieracium reticulatiforme* P.D.Sell**

Reticulate-leaved Hawkweed

Number of hectads with records in VC: 2

Rarity: Widespread in north Britain, Rare in Caithness

History of Discovery: Recorded from NC96 and ND15

Ecological comments: Streamsides and grassy banks

Conservation status: Least concern

BRC Number

Database Number 1517

Vice County 109

***Hieracium scoticum* F.Hanb.**

Scottish Hawkweed

Number of hectads with records in VC: 6

Rarity: A plant of north Scotland and northern Ireland

History of Discovery: Recorded in NC96, ND07, ND17, ND16, ND35 and ND12

Ecological comments: Ledges of low cliffs and riverside rocks

Conservation status: Least concern

BRC Number

Database Number 1518

Vice County 109

***Hieracium shoolbredii* E.S.Marshall**

Shoolbred's Hawkweed

Number of hectads with records in VC:1

Rarity: Common in west and central Scotland, but rare in Caithness

History of Discovery: An old record in ND16

Ecological comments: Rock ledges and boulders, stream banks, river gorges, grassy banks.

Conservation status: Least concern

BRC Number **Database Number 1519** **Vice County 109**

***Hieracium strictiforme* (Zahn)Roffey**

Strict Hawkweed

Number of hectads with records in VC: 6

Rarity: Frequent in north Britain, scarce in Caithness

History of Discovery: Recorded from NC96,ND16, ND47, ND25, ND35 and ND23

Ecological comments: Rocks and grassy banks near streams. Also cliff bases and sandhills.

Conservation status: Least concern

BRC Number

Database Number 1520

Vice County 109

***Hieracium subcrocatum* (E.F.Linton)Roffey**

Dark-styled Hawkweed

Number of hectads with records in VC: 4

Rarity: Frequent in north Britain. Scarce or only old records in Caithness.

History of Discovery: Recorded from NC96, ND35, ND13, ND12

Ecological comments: Mainly on grassy slopes or rocks by streams.

Conservation status: Least concern

BRC Number **Database Number 1521** **Vice County 109**

Hieracium vulgatum Fr.

Common Hawkweed

Number of hectads with records in VC: 7

Rarity: Common in north Britain, but only old records known in Caithness.

History of Discovery: Recorded from NC96, ND25, ND02, ND03, ND13, ND24 and ND23.

Ecological comments: Cliff ledges, grassy places and streamsides.

Conservation status: Least concern

BRC Number **Database Number 1522** **Vice County 109**

***Pulicaria dysenterica* (L.) Bernh.**

Common Fleabane

Number of hectads with records in VC: 1

Rarity: Rare in Scotland, rare in Caithness and probably introduced.

History of Discovery: Found by Tony Bradford in 2013

Description of individual sites: On the banks of Charlie's pond, Shebster at ND0176363316

Ecological comments: Marshes, ditches and wet fields.

Conservation status: Least concern

BRC Number 1625

Database Number 1607

Vice County 109

***Senecio smithii* DC.**

Magellan Ragwort

Number of hectads with records in VC: 4

Nationally Scarce / Locally Scarce



Easyview site: Dunnet Beach, where a burn emerges at ND217709

History of Discovery: Originating in Patagonia and Chile, it was first introduced to Britain in 1895 and is widely believed to have been brought back to croft gardens by whaling men, since it predominantly occurs in Shetland, Orkney, Caithness and Aberdeenshire. It was long known at the croft between Dunnet and Brough at ND216723 but systematic recording of other sites began with E.R. Bullard and JK Butler in the 1970's. It is probably still under-recorded and there will be new sites to find.

Descriptions of individual sites:

- At an abandoned croft by the roadside between Dunnet and Brough at ND216723 in the abandoned garden which is very wet and the plant has occupied an area of many square metres. Last seen 2004.
- In the burn that runs from Dunnet village to the beach at Dunnet. There is a colony that chokes the burn mouth at ND217709. It is of variable size since it is damaged by the winter storms. The plant has spread to other parts of Dunnet dunes at the high water mark. Last seen 2005.
- In damp ground by Mid-Clyth post Office ND2937. Last seen 1974.
- At Bridge of Westfield in wet grassland by the river. Last seen 1974.
- There is an unlocalised record for ND34.

Ecological comments: A vigorous perennial spreading by rhizomes. Prefers rich neutral wet soil such as stream banks, old wet gardens, deep flushes.

Conservation Status: Not threatened. Not threatening.

BRC Number 4436

Database number 1036 Vice County 109

***Petasites fragrans* (Vill.)C.Presl.**

Winter Heliotrope

Number of hectads with records in VC: 2



Rarity: Not scarce nationally / Rare in Caithness

History of Discovery: Long known in Wick and Thurso

Easyview Site: By the roadside opposite Park Hotel, Thurso at ND11906782, best see in early February.

Descriptions of Individual Sites:

- By the roadside in Thurso under a hedge in clay soil at ND11906782. Last seen 2011.
- By the roadside at Haster ND326513. Last seen 1973

Ecological Comments: An invasive, introduced rhizomatous herb first introduced to Britain in 1897 and widely planted

Conservation status: Not threatened.

BRC Number 1446 Database Number 961 Vice County 109

Eupatorium cannabinum L.

Hemp-agrimony

Number of hectads with records in VC: 2

Rarity: Not scarce nationally / Rare in Caithness

History of Discovery: Ramsgraigs, 1911, Anon. refound ER Bullard 1973

Descriptions of Individual Sites:

- Clifftop turf at Ramsgraigs, ND144264, last seen 1973 by ER Bullard.
- There is an unlocalised record in hectad ND01 in 1974.

Ecological Comments: A perennial herb of base-rich soil in wet places including flushed areas of sea-cliffs.

Conservation status: Not known

BRC Number 763 Database Number 877 Vice County 109

***Adoxa moschatelina* L.**

Moschatel

Number of hectads with records in VC: 1

Rarity: Not scarce nationally / scarce in Caithness

History of Discovery: ER Bullard 1977 at Latheronwheel

Easyview Site: Extensive colony in Lower Latheronwheel wood at ND188324

Descriptions of Individual Sites:

- Extensive colony in Lower Latheronwheel Wood at ND188324 in wet ground which is later overgrown with *Rubus spectabilis*
- Dunbeath river valley in old declining woodland at ND131323 last seen by P Collett in 1977.

Ecological Comments: A perennial rhizomatous herb of brown soil woods with good shade.

Conservation status: Not threatened

BRC Number 19 Database Number 532 Vice County 109

***Linnaea borealis* L.**

Twinflower

Number of hectads with records in VC: 1

Nationally Scarce / Locally Rare



History of Discovery: Found by ER Bullard and J Gunn on the railway track in 1973.

Descriptions of individual sites:

- Growing through the cinders of the railway track "near Altnabreac" at ND040479. The area was searched extensively in 2003 by Dr H McHaffie and the plant was not refound.

Ecological comments: A creeping perennial of native pinewoods. It needs at least partial shade to prosper and flower well, so it prefers the forest floor where it can spread to form extensive mats. Mainly confined to the Moray / Grampian area of Britain. The Caithness plant on a railway track is virtually unknown elsewhere and clearly out of its normal range of habitats.

Conservation Status: Threatened or extinct.

BRC Number 1165

Database number 530 Vice County 109

***Valerianella locusta* (L.) Laterrade**

Lamb's-lettuce

Number of hectads with records in VC: 3

Nationally not Scarce / Locally Rare

Easyview site: Dune grassland at Reay around NC9665

History of Discovery: Found by WF Miller in a field at Reay around 1900 (Bennett's List). Refound by ER Bullard in 1973. Found by JK and SI Butler by Ousdale Burn in 2005. There is also an old unlocalised record for Keiss area (ND35).

Descriptions of individual sites:

- In short grass on stabilised dunes in several places around Reay in the 1km square NC9665. It is the dwarf maritime *var. dunensis*.
- On a grassy bank near the sea by Ousdale Burn at ND07461858.

Ecological comments: A common plant of dry thin soils in the south of England, but uncommon and confined to coastal sandy grassland in northern Scotland.

Conservation Status: Not threatened.

BRC Number 2145 Database number 533 Vice County 109

Valeriana dioica L.

Marsh Valerian

Number of hectads with records in VC: 1

Rarity: Frequent in south Scotland, rare in Caithness

History of Discovery: Found at Tacher Wood, Halkirk by David Glass and Karen Bell in 2013.

Description of individual sites: On the riverbank at ND1703446344.

Ecological comments: Marshes, fens and bogs

Conservation status: Vulnerable in Caithness

BRC Number 2139

Database Number 1606

Vice County 109

Smyrniium olustratum L.

Alexanders

Number of hectads with records in VC: 2

Rarity: Scarce in North England and Scotland / Rare in Caithness

History of Discovery: Brough, A McG Stirling 1973

Descriptions of Individual Sites:

- Roadside at Brough ND223734. Last seen 1973.
- There is an unlocalised record in the area of Latheronwheel ND13

Ecological Comments: A robust perennial herb of roadsides, hedges and waste ground, mainly near the sea.

Conservation status: Unknown

BRC Number 1945 Database Number 1022 Vice County 109

***Oenanthe crocata* L.**

Hemlock Water-dropwort

Number of hectads with records in VC: 1

Rarity: Not scarce nationally, rare in Caithness

History of Discovery: Wick River, JK Butler, 2007

Easyview Site: Wick Riverside, north bank at ND35355141

Descriptions of Individual Sites:

- Wick riverside, north bank at ND35355141 in the muddy shallows amongst *Carex recta*. Last seen 2010.

Ecological Comments: In wet muddy places such as lakes, rivers, ponds and marshes.

Conservation status: Not threatened

BRC Number 1363 Database Number 335 Vice County 109

***Meum athamanticum* Jacq.**

Spiguel

Number of hectads with records in VC: 1

Nationally Scarce but Locally Rare

Easyview site: Dunnet Head ND205752



History of Discovery: Found by Mr Phillip Wright in July 2000. No previous records known. It extends the range northwards by 120 miles.

Descriptions of individual sites:

- One site at Dunnet Head ND 205 752 by the side of the road near a small bridge.

Ecological comments: It is a species of acidic grassland and associates with "northern hay meadow" species.

Conservation Status: It is a small patch near a road, vulnerable to roadworks etc.

BRC Number 1294

Database number 1166 Vice County 109

Heracleum mantegazzianum Sommier & Levier

Giant Hogweed

Number of hectads with records in VC: 5

Rarity: Frequent nationally / scarce in Caithness

History of Discovery: Long known as an introduction to large gardens

Descriptions of Individual Sites:

- By the Isauld burn on the margin of Reay Golf Course. Last seen 2007
- Achvarasdal wood. Last seen 1999.
- Unlocalised, south end of Halkirk. Last seen 1986
- In the policies of Stemster House ND1861, last seen in 1980 and probably eliminated now.

Ecological Comments: An invasive introduction spread by seed and thus can be eliminated by persistent removal of flowering heads.

Conservation status: Not threatening.

BRC Number 966 Database Number 1024 Vice County 109

Heracleum sphondylium x mantegazzianum

Hybrid Hogweed

Number of hectads with records in VC: 2

Rarity: Nationally scarce / rare in Caithness

History of Discovery: Bilbster, D McClintock 1972, Achvarasdal, JK Butler 1999.

Descriptions of Individual Sites:

- In the policies of Bilbster House at ND281531 growing with the parents. Last seen 1972.
- In Achvarasdal wood growing with the parents. Last seen 1999.

Ecological Comments: A low fertility hybrid surviving only so long as the parents are present.

Conservation status: Not of concern.

BRC Number 2745 Database Number 1025 Vice County 109

Daucus carota L.

Wild Carrot

Number of hectads with records in VC: 4

Rarity: Not scarce nationally / Rare or extinct locally

History of Discovery: Long known.

Descriptions of Individual Sites:

- At the east end of Reay beach, NC969656 last seen in 1971 and not re-found there.
- Unlocalised records for ND16, ND36 and ND37 during the period 1950 to 1970.

Ecological Comments: Near the coast in mineral-rich sandy soil.

Conservation status: Extinct? Not seen since 1971.

BRC Number 620 Database Number 869 Vice County 109

Lemna trisulca L.

Ivy-leaved Duckweed

Number of hectads with records in VC 2

Locally Rare, scarce in Scotland.

Easyview site: Loch of Winless ND286555

History of Discovery: Upper Gillock (ND35), EC Wallace 1946. Loch Winless (ND25), NF Stewart 2002.

Descriptions of individual sites:

- In 1977 JK Butler looked for the Upper Gillock site and found that a pond and quarry at the farm had been filled in. No other likely site was found. It is presumed extinct at this site.
- In 2002 NF Stewart observed that *Lemna trisulca* was abundant in the remaining open water areas in the Loch of Winless not dominated by swamp or *Potamogeton natans*, either more or less on its own or mixed with peat-stained *Chara* species.
- In 2004 Drs BR & BC Ballinger found the plant in a tributary to Loch of Winless at ND 28638 55537.

Ecological comments: A species of still or slow flowing water. It inhabits the peat or clay bottom (other duckweeds float) in mesotrophic to eutrophic conditions. It cannot survive shadowing by floating plants, so occurs only below clear water. Rare north of the Forth-Clyde valley and stands out as an outlier in Caithness, especially in an apparently "natural" setting in Loch of Winless.

Conservation Status: Susceptible to overshadowing because Loch of Winless is gradually silting up.

Reference: e-mail NFS to JKB 12/03/2003 filed as Input Source 109-401.

BRC Number 1128

Database number 1032

Vice County 109



Tofieldia pusilla (Michx.)Pers.

Scottish Asphodel

Number of hectads with records in VC: 1



Rarity: Not scarce nationally / rare in Caithness

History of Discovery: WSW of Thurso, Anon, 1888. Refound on Hill of Forss around 1980.

Descriptions of Individual Sites:

- A small patch on the hillside ND0668 needs confirming when in flower.

Ecological Comments: By streams and in calcareous flushes, constantly wet but not waterlogged.

Conservation status: Vulnerable

BRC Number 2066 **Database Number** 833 **Vice County** 109

***Elodea canadensis* Michx.**

Canadian Waterweed

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

History of Discovery: Found for the first time by Dr H McHaffie on St. John's loch in 2003.

Descriptions of individual sites:

- Growing beneath the surface of St. John's Loch on the west side. Extent across the loch not known.

Ecological comments: An alien water plant imported into Britain in 1836 and spreading rapidly up as far as Inverness; very scarce north of there though plentiful in Orkney. Vigorously spreading in still or slow waters and becomes a nuisance in some circumstances. It is believed to move from one loch to another on duck's feet. All plants in Britain are female so it can only reproduce vegetatively.

Conservation Status: Not yet a problem in Caithness lochs but could become so.

BRC Number 681 Database number 1188 Vice County 109

***Potamogeton friesii* Rupr.**

Flat-stalked Pondweed

Number of hectads with records in VC: 2

Nationally not Scarce / Locally Rare

History of Discovery:Listed by Adam. Found in Loch Stemster (ND14) by Rev G Lillie in 1913. Found in Loch Heilen (ND26) by RW Butcher. They may be misidentifications of *P. pusillus*.

Ecological comments:A perennial of calcareous still or sluggish waters. Not occurring on the mainland north of Inverness but frequent in Orkney.

Conservation Status:Not known

BRC Number 1567 Database number 1059 Vice County 109

***Ruppia maritima* L.**

Beaked Tasselweed

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

History of Discovery: Nature Conservancy Report on Sinclair's Bay (ND35) 1973 where it was found by P Adam and RA Finch.

Description of Site:

- In a brackish ditch at ND335573 on Keiss Links

Ecological comments: A submerged annual or perennial of brackish water.

Conservation Status: Not known

BRC Number 1758 Database number 652 Vice County 109

Paris quadrifolia L.

Herb Paris

Number of hectads with records in VC: 1

Nationally not Scarce and Locally extinct



History of Discovery: Found by J Grant around 1880 at "Scouthall", presumed to be near present day "Scouthal" at ND237530. Not recorded since.

Ecological comments: A plant of moist limestone ancient woodlands and crevices in limestone pavement. The rock around Scouthal is a very calcareous form of Old Red Sandstone and there are signs from the remnant ground flora that this was once a wooded area. So it is credible that the plant once existed.

Conservation Status: Presumed extinct.

BRC Number 1436 Database number 1039 Vice County 109

Hammarbya paludosa (L.)Kuntze

Bog Orchid

Number of hectads with records in VC: 3

Rarity: Nationally not scarce / Scarce in Caithness

History of Discovery: A Brown, Munsary, 2001. AG Payne, several sites around Strathmore and Dirlot, 2008, 2009.

Descriptions of Individual Sites:

- A single plant at ND22734573 on the Munsary Nature Reserve. Last seen 2002 and not seen since despite searching.
- In the Strathmore / Dirlot area sightings by AG Payne in 2008 and 2009 at the following locations:
 - ND14504637
 - ND14494646
 - ND14344641
 - ND14534638
 - ND11523864

Ecological Comments: In boggy areas where the water is acid but subject to some lateral movement. Grows amongst Sphagnum or on bare peaty mud.

Conservation status: Not threatened.

BRC Number 951 Database Number 683 Vice County 109

***Corallorhiza trifida* Chatel.**

Coral-root Orchid

Number of hectads with records in VC: 1

Nationally Scarce and Locally Scarce

History of Discovery: Found in the Dunbeath River valley in hectad ND03. No details have been tracked down. Not refound

Ecological comments: A saprophytic plant often living on *Salix repens* on sand dunes, heather moors, in willow carr and alder stands. It is inconspicuous and easily overlooked and flowers very variably from year to year.

Conservation Status: Unlikely to be threatened.

BRC Number 545 Database number 684 Vice County 109

Goodyera repens (L.)R.Br.

Creeping Lady's Tresses

Number of hectads with records in VC: 3

Nationally Scarce and Locally Rare.



History of Discovery: Found by S.I. Butler at Aukengill in 1996. Piers Voysey, Dunnet Forest in 2008

Description of individual site:

- In damp lank mossy heather on an open heather moor a long way from the nearest Scot's Pinewood. Six rosettes with three flowering stems were found.
- Under conifer trees in otherwise bare or sparsely vegetated ground in Dunnet Forest; there are two major sites ND22787048 and ND22386990.

Ecological comments: A plant of coniferous woods, especially under *Pinus sylvestris*. Prefers a mossy substrate and partial shade. Mrs Butler also found a similar small colony in open heather moor at Strathy in West Sutherland, so it may be a rare but natural alternative habitat.

Conservation Status: Threatened by muirburn at Aukengill

BRC Number 943 Database number 682 Vice County 109

***Platanthera bifolia* (L.)Rich.**

Lesser Butterfly-orchid

Number of hectads with records in VC: 5

Rarity: National Redlist Vulnerable / Scarce in Caithness

History of Discovery: Reay, 1888, Anon.

Easyview Site: A Meadow at Dunbeath at ND16072999

Descriptions of Individual Sites:

- In a field at Dunbeath at ND16072999 with other orchids and rich meadow plants
- There are other sites scattered around Dunbeath, which is the main centre for the species in Caithness.
- A few plants on a heathy hill at Harpsdale, ND13335475, found by R & M Webster 2010.
- One plant at Leodebeste ND1814635062 found by Karen Bell in 2013

Ecological Comments: A perennial herb of heathy pastures and calcareous soils.

Conservation status: Vulnerable in all its stations.

BRC Number 1492 Database Number 689 Vice County 109

***Coeloglossum viride* (L.)Hartm.**

Frog Orchid

Number of hectads with records in VC: 12



Rarity: Frequent in Caithness / Nationally RedList Vulnerable

History of Discovery: Long known

Easyview Site: Plentiful on Greenland Links in August e.g. ND219689

Descriptions of Individual Sites:

- In short rich grassland at Crofts of Dunn ND18945548
- In short turf close to the cliffedge at Crosskirk ND02987031
- In thin sandy turf on Greenland Links ND219689

Ecological Comments: Tuberos perennial of dry, short, base-rich grassland

Conservation status: Not threatened

BRC Number 537 Database Number 685 Vice County 109

Dactylorhiza x venusta (Stephenson)Soo.

= *Dactylorhiza fuchsii x purpurella*

Hybrid Orchid

Number of hectads with records in VC: 1

Nationally not Scarce but Locally Rare

Easyview site: ND112672

History of Discovery: Found by REC Ferreira in July 2003.

Descriptions of individual sites:

- On steeply sloping calcareous turf in the Thurso river valley at ND112672 in the presence of its parents.

Ecological comments: Often found where the parents grow. This is calcareous wet ground with slope or good drainage.

Conservation Status: Not threatened.

BRC Number 2863 Database number 1184 Vice County 109

Dactylorhiza x formosa (Stephenson)Soo

= *Dactylorhiza purpurea x maculata*

Hybrid Marsh-orchid

Number of hectads with records in VC: 2

Locally Rare

Easyview site: Thurso east cliffs ND140700

History of Discovery: Long known as a hybrid and recognised by Robert Dick (circa 1860)

Descriptions of individual sites:

- On maritime heath with both parents around ND140700 in patchy ground with some peat overlying rich clay.
- On maritime heath with both parents on Ham east cliffs around ND242737. It is in a transition zone from the rich clay soil to an acid heath.

Ecological comments: *D. maculata* prefers an acid peat-based soil, while *D. purpurea* prefers a base-rich mineral soil; they come close enough to hybridise in transition zones from one soil type to the other.

Conservation Status: Not threatened. There are probably many un-recorded hybrids.

BRC Number 2868 Database number 1087 Vice County 109

***Dactylorhiza purpurella* var *cambrensis* (RH Roberts) Bateman & Denholm**

A variety of the Northern Marsh Orchid

Number of hectads with records in VC: 4



Rarity: Occasional in Caithness / Nationally not clear

History of Discovery: Found in 1990 by JK Butler at Thurso castle, named then as *Dact. purp. ssp. majaliformis*

Descriptions of Individual Sites:

- On a fertile mineral-rich slope by Thurso castle at ND12346880. Last seen June 2000 and perhaps lost from there now.
- On a mineral-rich slope by Loch Watenan at ND320412. Last seen 2002 and perhaps lost from there now.
- In a wet field near Scrabster at ND094705. Last seen in 2000.
- South side of Burifa Hill, Dunnet Head at ND200754. Last seen 2001

Ecological Comments: A perennial which likes damp or wet soil and is easily overwhelmed by coarse vegetation if ungrazed.

Conservation status: This may be a very young and unstable variety and vulnerable to grazing regime change.

BRC Number 613 Database Number 988 Vice County 109

***Typha latifolia* L.**

Bulrush

Number of hectads with records in VC: 2

Rarity: Not scarce nationally / Rare in Caithness

History of Discovery: Stirkoke Mill Dam, Anon, 1883.

Descriptions of Individual Sites:

- At Osclay, near Lybster at ND226390, seen in the burn by JM Gunn and A Black. Last seen in 1972.

Ecological Comments: A native perennial of slow flowing water such as ditches, burns, lochs. Perhaps introduced in Caithness.

Conservation status: Not known

BRC Number 2111 Database Number 699 Vice County 109



***Juncus alpinoarticulatus* Chaix**

Alpine Rush

Number of hectads with records in VC: 3

Nationally Scarce / Locally Rare

History of Discovery: Long known. Listed by Adam. Found by Rev G Lillie near Lybster in 1912. There are also anonymous unlocalised records for ND06 and ND35.

Ecological comments: A rhizomatous plant of wet turf in marshes, flushes on base-rich soil. It has been confused with *J. articulatus* in the past so it would be good to re-find these sites and confirm the species.

Conservation Status: Not known

BRC Number 1053 Database number 1033 Vice County 109

***Juncus ranarius* Songeon & EP Perrier**

Frog Rush

Number of hectads with records in VC: 1



Rarity: Occasional round the coast of UK / Rare in Caithness

History of Discovery: Brough Bay slipway, JK Butler, 2009

Easyview Site: Brough Bay slipway, ND22097394

Descriptions of Individual Sites:

- In the crevices of the stone slipway of Brough harbour at ND22097394, last seen 2009.

Ecological Comments: Damp brackish sites or sea coast .

Conservation status: Vulnerable

BRC Number 1057.1 Database Number 2012 Vice County 109

Juncus balticus Willd.

Baltic Rush

Number of hectads with records in VC: 5

Nationally Scarce / Locally Scarce



Easyview site: Dunnet mid-sands car park ND216688 where it is plentiful in the turf.

History of Discovery: Long known. R.Dick circa 1834 - " by Thurso riverside and growing in a small marsh about 6 miles inland" . A. Bennett's List early 1900's "between Ackergill Tower and Wester Water".

Descriptions of individual sites:

- It occurs extensively on the hinterland behind Dunnet Bay on the Links of Old Tain, Links of Greenland and Dunnet Links in the hectads ND26 and ND 27. It is one of the dominant plants of the area and gives the turf a "bristly" look.
- An alien colony occurs on Burifa Hill, ND203754, on Dunnet Head at the old military camp where sand was presumably dumped from Links of Old Tain.
- Extensive colonies occur on Keiss Links, ND35 and around Wester Loch.
- In dune links turf at Sandside Bay at various places in NC96.
- Reported from Brough (ND27) by ER Bullard in 1972.

Ecological comments: A plant of north-easterly distribution based around the Baltic. On sandy soil on dune links, especially damp areas with low fertility where there is less competition from other tall herbs. In Britain it is scarce and confined to Scottish coasts with one outlier in South Lancashire.

Conservation Status: Not threatened

BRC Number 1055

Database number 663 Vice County 109

Juncus x kern-reichgeltii Jansen & Wacht. ex Reichg.

= *J. effusus* x *conglomeratus*

A hybrid rush

Number of hectads with records in VC: 1

Rarity: Scarce in Britain / Rare in Caithness

History of Discovery: Burn of Swartigill, JK Butler, 1977

Descriptions of Individual Sites:

- In wet grassland by the Burn of Swartigill with both parents at ND322458

Ecological Comments: Occurs sporadically with the parents in waterlogged or wet meadows.

Conservation status: Not of concern.

BRC Number 1064 Database Number 1084 Vice County 109

***Eriophorum latifolium* Hoppe**

Broad-leaved Cotton-grass.

Number of hectads with records in VC: 3

Nationally not Scarce / Locally Rare

History of Discovery: Dunbeath Strath, Terry Keatinge Aug 1994; Loch Stempster, REC Ferreira Aug 2002; Ousdale Burn JK Butler 2005.

Easyview Site: Achkinloch ND193426.

Descriptions of individual sites:

- In a large flush at ND141314 in Dunbeath Strath with *Schoenus nigricans* as a dominant companion.
- In a large sloping flush at Achkinloch by Loch Stempster at ND193426 with *Schoenus nigricans*
- In a small flush on the banks of the Ousdale Burn at ND073191 with *Schoenus nigricans*

Ecological comments: A rhizomatous perennial of base-rich meadows and mires. Predominantly a plant of western Scotland and the Cheviot hills

Conservation Status: Not threatened.

BRC Number 743

Database number 701 Vice County 109

Schoenoplectus lacustris ssp tabernaemontani
(C.C.Gmelin)A&D.Love

Grey Club-rush

Number of hectads with records in VC: 1

Nationally not Scarce but Locally Rare



Easyview site: Just upstream of the footbridge on the Wick river at ND357511

History of Discovery: Reported in Ann. Scot. Nat. Hist. in 1900.

Descriptions of individual sites:

- In a few dense clumps in the shallow mud of the Wick river at ND357511 and upstream. Distinctive by its blue-grey colour.

Ecological comments: A perennial with short rhizomes producing dense tufts in brackish mud. Predominantly a plant of English and Irish coasts, rather scarcer in Scotland.

Conservation Status: Could be harmed by any attempts to "tidy up" the banks and shallows of the river.

BRC Number 1852 Database number 705 Vice County 109

Cladium mariscus (L.)Pohl

Great Fen-sedge

Number of hectads with records in VC: 1

Nationally not Scarce / Locally Rare

Easyview site: In Tarroul Forest at ND281553

History of Discovery: Around Loch of Winless, ER Bullard and JM Gunn 1974.

Descriptions of individual sites:

- On the swampy ground to the west of Loch of Winless. Much of this ground is now planted with conifer forest and the plant persists in the broad rides and at the forest margin. Last seen by BR and CB Ballinger in 2005.

Ecological comments: Prefers swampy oligotrophic to mesotrophic peaty ground.

Conservation Status: Threatened by forestry operations.

BRC Number 523

Database number 1085 Vice County 109

***Rhynchospora alba* (L.)Vahl**

White Beak-sedge

Number of hectads with records in VC: 2

Not Scarce Nationally / Locally Rare

Easyview site: Blar Geal ND106511.

History of Discovery: Unlocalised record by M. McCallum-Webster around 1960. Blar Geal by Achlibster, JK Butler 1974.

Descriptions of individual sites: In deep, wet blanket bog in Blar Geal ND106511. Last seen 1974.

Ecological comments: A perennial plant of blanket bog and shallow pools. Mainly in western Britain.

Conservation Status: Now surrounded by conifer plantation and has an uncertain future.

BRC Number 1691

Database number 816 Vice County 109

Carex maritima Gunnerus

Curved Sedge

Number of hectads with records in VC: 5

Nationally Scarce/Locally Scarce



Easyview site: At the mouth of the River of Wester at ND 339575

History of Discovery: Long known. Listed by Adam in 1925.

Descriptions of individual sites:

- Isle of Stroma. A few yards west of the lighthouse tower at ND35367915 in clifftop turf amongst *Armeria*. Seen July 2001 by JK Butler. See field card 109-454.
- At the mouth of the River Wester at ND339575 in sand at the edge of the river. This is an extensive colony of many thousands of plants. Last seen 2005 by JK Butler.
- Amongst the sand dunes at Reay in July 1969 at approximately NC967654. In the turf of a dune hollow. Not refound.
- On Reay Golf Course at NC96446504, found by ER Bullard in 1971. Last seen 2005 by JK Butler
- Near the Isauld Burn at NC969656, found by ER Bullard in 1971. Not refound.
- On Links of Old Tain near Castletown at ND208680, found by RW David in 1977. Not refound.
- In Sannick Bay near John o' Groats at ND396734 where a streamlet enters the shore, found by RW David in 1977. Refound 2006 by JK Butler at ND39787334, with 48 flowering heads.

Ecological comments: It is at its best in wet sandy places where there is sea inundation and fresh water, such as the mouth of a burn where it enters the sea. It also occurs in dune slacks, in golf course and grazed clifftop turf. It spreads vegetatively by long underground rhizomes and forms extensive colonies. In Britain it is confined to the north and east coasts of Scotland

Conservation Status: Not threatened, though the situation at Reay is uncertain.

BRC Number 389

Database number 715 Vice County 109

***Carex acutiformis* Ehrh.**

Lesser Pond-sedge

Number of hectads with records in VC: 2

Rarity: Frequent nationally / Rare in Caithness

History of Discovery: Isauld, Reay, JM Gunn, 1972.

Easyview Site:

Descriptions of Individual Sites:

- On both banks of the Isauld Burn beside The Cottage at NC973655 forming an extensive colony in the wetter ground.
- There is an unlocalised record in hectad ND15 somewhere around Halkirk.

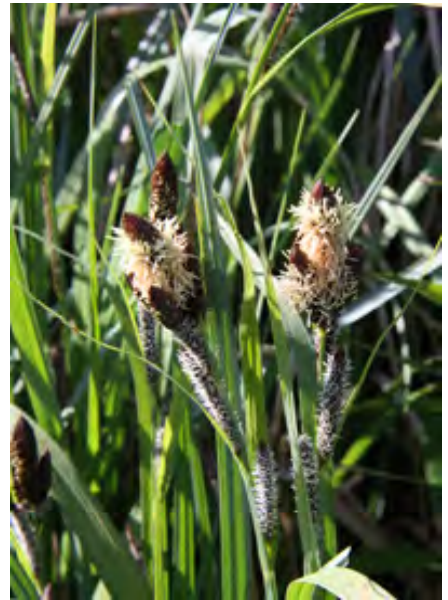
Ecological Comments: A rhizomatous perennial of swampy or marshy ground.

Conservation status: Not threatened.

BRC Number 341

Database Number 995

Vice County 109



Carex capillaris L.

Hair Sedge.

Number of hectads with records in VC: 5

Nationally Scarce and Locally Scarce

Easyview site: Links of Greenland ND220688

History of Discovery: Bennett's List of 1888 "Cliffs near Keiss and Murkle; cliffs at Scrabster".

Descriptions of individual sites:

- Common in the short sandy turf of the Links of Greenland around ND220688
- In short sandy turf on the edge of Freswick Bay ND673376
- In calcareous sloping flushed turf at Achkinloch, Stempster around ND187421

Ecological comments: A perennial in base-rich upland grassland. These can be grasslands flushed with calcareous springs or dune turf dressed by wind blown calcareous sand. In short vegetation in open situations. It predominantly occurs in the mountains of the Central Highlands of Scotland and along the North Coast and is classed as Nationally Scarce.

Conservation Status: Threatened by changes to grazing regimes.

BRC Number 353

Database number 726 Vice County 109

Carex recta Boott

Estuarine Sedge or Wick Sedge



Taxonomic Note: Similar to *Carex aquatilis*. Indeed Faulkner(1972) proposed that the species had arisen by the hybridisation of *C. aquatilis*(which also grows in the Wick river) with *C. paleacea* (which may have also grown in the Wick river at one time, but no longer occurs in Britain at all). The lowest glumes of the flower spikes have long aristate points in *C. recta* but in *C. aquatilis* the glumes are acute or blunt but not aristate. A further difference is that the stem of *C. aquatilis* is brittle, but that of *C. recta* is pliable.

C. recta hybridises with *C. aquatilis* to form a hybrid of intermediate characters, named *C. x grantii* after J Grant, who was the editor of the John o' Groat Journal in the 1880's and a very keen botanist, and probably the original finder of the hybrid. Peter Sell (in Murrell and Sell (1996)) believes that all the sedge in the Wick river has been back-crossed with *C. aquatilis* and that there is no pure *C. recta* left!

Number of hectads with records in VC: 1

Internationally Rare and Nationally Rare and Locally Scarce.

Easyview site: Wick river north bank at ND355513

History of Discovery: A Bennett in Ann. Scot. Nat. Hist. 1904 pp 179-181.

Descriptions of individual sites:

- A mix of *C. recta* and *C. x grantii* occurs in large colonies along the north and south banks of the Wick river from the footbridge, ND358510, to the extent of the tidal influence, at the Fairy Hillock, ND344518. Most are dense stands of hundreds of plants, but on the south bank there are some small groups. The plant occurs in the silty shallows of the river.

Ecological comments: A plant of saline / brackish mud. It multiplies mainly by tillering its short rhizomes to expand the colony over the mud. Confined in Britain to three estuaries - the Wick river, the Beaulieu river and the Kyle of Sutherland where it is the dominant plant in the riverside below Carbisdale castle. Elsewhere it occurs only on the eastern seaboard of North

Conservation Status: Not specifically threatened, but being in one location, is vulnerable to a catastrophe that poisons the river.

References:

- Faulkner J.S. 1972 Chromosome studies on *Carex* Section *Acutae* in north-west Europe. *Botanical Journal of the Linnean Society*, 65: 271-301.

BRC Number 411

Database number 739 Vice County 109

Carex x grantii A.Bennett

Hybrid Sedge

Taxonomic Notes: *C. recta* hybridises with *C. aquatilis* to form a hybrid of intermediate characters, named *C. x grantii* after J Grant, who was the editor of the Northern Ensign in the 1880's onwards and a very keen botanist, and probably the original finder of the hybrid. Peter Sell (in Murrell and Sell (1996)) believes that all the sedge in the Wick river has been back-crossed with *C. aquatilis* and that there is no pure *C. recta* left! There is an account of *Carex recta* in this document. *Carex aquatilis* (the Water Sedge) occurs in quantity in the Wick, Thurso and Forss rivers and elsewhere in the county; it is not sufficiently rare or scarce to appear as a separate entry in this document.

Number of hectads with records in VC: 1

Internationally Rare, Nationally Rare and Locally Scarce. Red Data Book species.

Easyview site: Wick riverbank at ND 3513 5150

History of Discovery: Probably J Grant sometime around 1900.

Descriptions of individual sites:

- A mix of *C. recta* and *C. x grantii* occurs in large colonies along the north and south banks of the Wick river from the footbridge, ND358510, to the extent of the tidal influence, at the Fairy Hillock, ND344518. Most are dense stands of hundreds of plants, but on the south bank there are some small groups. The plant occurs in the silty shallows of the river.

Ecological comments: A plant of saline / brackish mud. It multiplies mainly by tillering its short rhizomes to expand the colony over the mud. Known with confidence only from the Wick river though it may occur at other *C. recta* sites around the world. But at Kyle of Sutherland the *C. recta* hybridises with *C. nigra* predominantly and at Beauly it is mostly pure *C. recta*. At the Wick river the degree of hybridisation is such as to threaten to wipe out the original species.

Conservation Status: Not threatened. Protected by legislation.

BRC Number 2891

Database number 996 Vice County 109

***Milium effusum* L.**

Wood Millet

Number of hectads with records in VC: 1

Rarity: Nationally frequent / Rare in Caithness

History of Discovery: Found at Dunbeath in 1973 by ER Bullard and JM Gunn

Descriptions of Individual Sites:

- On the stony north bank of the Dunbeath Water at ND139307. Last seen 1973.

Ecological Comments: In moist shady situations on humus-rich soil.

Conservation status: Not known.

BRC Number 1296 Database Number 809 Vice County 109

***Puccinellia distans* (Jacq.)Parl. ssp borealis W.E.Hughes**

Northern Saltmarsh Grass



Taxonomic Notes: At first sight it looks like Annual Meadow Grass (*Poa annua*) but is totally prostrate and growing in crevices in rocks on the shore. The detailed description is given in the Reference quoted below. The plant was named as the species *Puccinellia capillaris* but has been relegated to sub-species level in recent floras.

Number of hectads with records in VC: 6

Rarity: Nationally Scarce but not recognised as such because it is a sub-species. Locally frequent.

Easyview site: Keiss harbour ND351609

History of Discovery: E.S. Marshall "cliffs half a mile s. of Wick" 1886 named as *Glyceria distans*. Hubbard & Milne-Redhead 1968. A Copping, Wick Harbour 1972.

Descriptions of individual sites:

- Keiss harbour ND351609, where it is the dominant grass on the pier in crevices between the stones of the paved area. It occurs in this manner on almost every harbour in Caithness.
- Proudfoot rocks ND383510 where there is a large natural sloping platform of Old Red Sandstone rock in which the grass occupies a position about 4m above Ordnance Datum and lives in association with a few salt tolerant associates in the cracks and crevices of the platform. Higher up it gives way to more dominant grasses.
- On sand and silt at the mouth of the River Wester ND340576 where it is sparse and does not prosper so well as in rock crevices.

Ecological comments: This is a plant of high salt tolerance. It is not a strong competitor, so gets confined in natural habitats to the lower levels of the shore. However it has found a natural niche in man made seashore constructions and is the common grass of harbours and piers in NE Scotland, Norway and the Outer Isles. Occasionally found inland on roadsides where salt and local sand has been spread.

Conservation Status: Not protected. Vulnerable to tidying up of piers and harbours.

Reference: Trist P.J.O. and Butler J. K. (1995) *Puccinellia distans* subsp. *borealis* in mainland Scotland and the Outer Isles. *Watsonia* 20, 391-396.

BRC Number 1620.1 Database number 971 Vice County 109

***Trisetum flavescens* (L.)P.Beauv.**

Yellow Oat-grass

Number of hectads with records in VC: 1



Rarity: Common in England / Rare in Caithness

History of Discovery: Lybster, 1950, Miss M McCallum-Webster; Thurso, 2003, JK Butler

Easyview Site: Thurso East Ice-house roof ND12296875

Descriptions of Individual Sites:

- Unlocalised record for Lybster area, found by Miss M McCallum-Webster around 1950 and not refound since.
- In the turf on the roof of the Thurso East ice-house at ND12296875, last seen 2009.

Ecological Comments: In grassy places, especially on base-rich soil.

Conservation status: Not threatened.

BRC Number 2105 Database Number 788 Vice County 109

Deschampsia setacea (Hudson)Hackel

Bog Hair-grass

Number of hectads with records in VC: 2

Nationally Scarce / Locally Rare

History of Discovery: Known since around 1900. Bennett, in List 4, says "Will probably be found in Caithness. I have this marked as a Caithness species but cannot trace it, yet I have some idea that it was gathered by someone at Loch Watten. There is a later record for ND35 that has not been localised. Hence there are no firm known sites at present.

Descriptions of individual sites: None known

Ecological comments:A plant of places that are inundated in winter and drying out in summer, loch margins, coastal cliffs, dune slacks.

Conservation Status: Not known

BRC Number 629 Database number 845 Vice County 109

Hierochloa odorata (L.)P.Beav.

Holy Grass

Number of hectads with records in VC: 2

Nationally Rare / Locally Rare



Easyview site: On the banks of the Thurso river at ND 1165 6470.

History of Discovery: Robert Dick around 1830 on Thurso river opposite Bleachfield and between Geise and Todholes. Dunnet Links JK Butler 1974.

Descriptions of individual sites:

- On the east bank terrace of Thurso river at ND 1165 6470. The soil is rich and intermittently flooded. Prominent species are *Filipendula*, *Iris pseudacorus*, *Ranunculus repens*, *Rumex obtusifolius* and *Trollius*. Above the terrace are steep banks covered with *Salix aurita* and *Ulex*. Upwards of 100 plants can be seen in flower in the last week in May, but it is hard to find the plant by the second week in June due to the growth of rank vegetation.
- On the east bank of Thurso river between ND 1162 6655 and ND 1153 6629 plants are scattered along the bank in places that are seasonally flooded. There were 31 plants at ND 1153 6629 on small islands off the riverbank noted by JK Butler in 2003.
- A single colony was found by JK Butler on Dunnet Links in 1974. A specimen exists and has been confirmed. But the colony has not been refound since. The location is by a burn recorded as ND 217 700.

Ecological comments: It is a rhizomatous perennial grass of northern latitudes, occurring in a wide range of habitats, both maritime and inland. Time of flowering may be controlled by lowering water table, since it often grows in sites fully submerged during the winter.

Conservation Status: Threatened by the advance of shrubs and rank vegetation since the sites are no longer grazed.

BRC Number 977

Database number 1035 Vice County 109

Calamagrostis scotica (Druce)Druce

Scottish Small-reed



Number of hectads with records in VC: 1

Internationally Rare and Locally confined to one site. Indeed, this is the only site in the world for this plant!

History of Discovery: Found by Robert Dick in 1863 - he called it the "Lapland Reed". At that time it was called *Arundo stricta* and not differentiated from the species we now call *Calamagrostis stricta*. Dick's discovery was published by Arthur Bennett in 1885 calling it *Deyeuxia strigosa*. The grass was named *Calamagrostis scotica* by G. C. Druce in 1926 and by doing so Druce made it an individual species that has never been found elsewhere in the world.

Taxonomic note: *Calamagrostis stricta* and *C. scotica* are very similar to *Agrostis canina* and *A. canina* grows with the *Calamagrostis* in all the Caithness sites. The distinguishing feature is that both *Calamagrostis* species have hairs growing from the base of the flowers and extend half the length of the spikelet, while there are no such hairs in the *Agrostis* spikelet.

Calamagrostis scotica differs from *C. stricta* in the length of the spikelets and the shape of the lower glume:

- *C. stricta* has spikelets 3mm to 4mm long and the lower glume is acute at the apex
- *C. scotica* has spikelets 4.5mm to 6mm long and the lower glume is acuminate at the apex.

Description of individual site:

- The site is a drained loch near Castletown where the ground is a neutral or slightly calcareous marsh occupying several hectares. It is flooded in winter and moist, but not inundated in summer. The grass prefers to flower in clumps of *Juncus effusus*. It may be that there is an extensive network of rhizomes throughout the site and flowering culms only appear in places with suitable water table level. In 2002 I. MacDonald

and JK Butler observed thousands of flowering heads spread over a wide area. But reports by previous botanists about the number and location of plants are very variable. It is the author's view that *Calamagrostis stricta* does not occur on this site and all the plants are *C. scotica*.

Ecological comments: A plant of neutral marsh land where it can spread vegetatively. However recent trials at Lancaster University have shown that the seed is viable and germinates easily. It is not clear whether it prefers the congested locality of *Juncus effusus* clumps or whether both plants like the same conditions and compete to use a suitable site. It is not known whether grazing is beneficial or detrimental, but the site is grazed by cattle.

Conservation Status: Not threatened by current activities but vulnerable to all the risks that a single site involves.

References:

- A. Bennett 1885, *Deyeuxia strigosa in Britain*. Journ. Bot XXIII p253
- Samuel Smiles 1878, *Robert Dick, Geologist and Botanist*. John Murray, London -- see Chapter XX.
- G.C.Druce 1926 in Hayward, *The Botanists Pocket Book. edition xviii*.

BRC Number 295

Database number 992 Vice County 109

Calamagrostis stricta (Timm) Koeler

Narrow Small-reed

Number of hectads with records in VC: 2

Nationally Rare / Locally plentiful in a few sites

Easyview site: West shore of St John's Loch e.g. ND221718



History of Discovery: Known to A Bennett in 1892. Details not available for finds but sites were well known by 1930. All re-found by ER Bullard and JK Butler in 1970's.

Descriptions of individual sites:

- A large area on the margins of Loch of Mey on the NW shore, growing in soft mud, around ND265739. Last seen in 2003 by Dr H McHaffie.
- A large area on the western and southern margin of St John's Loch in firm wet peaty ground. To be found from ND220723 to ND225717. Mainly in dense vegetation of *Juncus effusus* and *Filipendula ulmaria*. Last seen in 2003 by Dr H McHaffie.
- Thinly distributed in a marsh on the edge of Loch Watten in the Leans of Quoynee around ND210580 where it grows in *Juncus effusus*. Last seen in 2003 by JK Butler.

Ecological comments: A rhizomatous perennial grass preferring near-neutral bogs and marshes and the edges of lochs. It is very selective in its habitat (as shown at its Leans of Quoynee site which is a very variable site), preferring a similar degree of ground wetness to *Juncus effusus* but a persistent supply of water. Its rhizomes provide a means of spreading and migration, but it may only flower and become obvious in an area when the conditions of water table are suitable.

Conservation Status: Not threatened locally but confined to a few sites, so at risk from whole site damage. Near threatened in UK. Not threatened over Europe.

References:

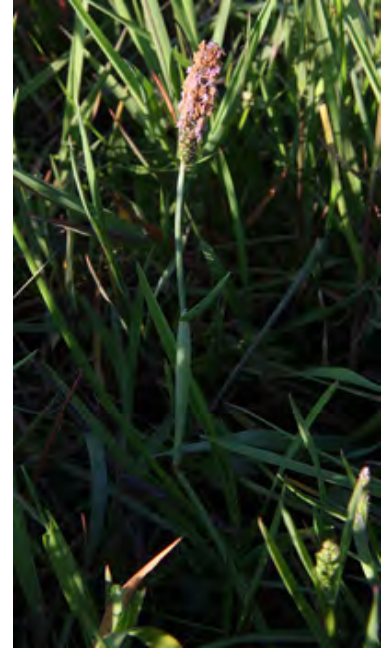
BRC Number 294

Database number 993 Vice County 109

Alopecurus x brachystylus Peterm.

= *Alopecurus geniculatus x pratensis*

Hybrid Foxtail



Number of hectads with records in VC: 1

Rarity: Nationally Scarce and Locally Rare - though probably under-recorded both nationally and locally

History of Discovery: Recorded on the banks of Thurso river in 1861 as “Orange Foxtail”, Anon. Found by JK Butler in July 1974.

Description of individual site:

- On the banks of the Thurso River at the Salmon Pool ND11576673 in wet grassland. It covers an area of 150m x 10m when re-surveyed in 2009.

Ecological comments: A perennial grass of wet meadows arising by the crossing of *Alopecurus geniculatus* and *A. pratensis*. It is always sterile and is an easy cross since both parents have the ovary matured before the stigmas, so the ovary is receptive to alien pollen for a period.

Conservation Status: Threatened locally due to being on a single site with few plants and variable grazing.

BRC Number 83

Database number 984 Vice County 109