

# NATURE OF SNOWDONIA

A GUIDE TO THE UPLANDS FOR HILLWALKERS AND CLIMBERS

SECOND EDITION



MIKE RAINE

Mike started hillwalking on the Yorkshire moors in the early seventies and drifted into rock climbing later that decade. He started working in the outdoors in the early eighties as a freelancer. Mike then went to college to study geography and subsequently trained as a secondary school teacher. After teaching for 12 years Mike was fortunate enough to land a full-time post at Plas y Brenin, the National Outdoor Centre in Snowdonia. He still works at Plas y Brenin as a Senior Instructor with responsibilities that include training mountain leaders, first aiders and environmental education. Mike also runs his own Nature of Snowdonia workshops; details of these can be found on his Facebook page Mike Raine: Notes from the Hill or at [www.mikeraine.co.uk](http://www.mikeraine.co.uk)

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SECOND EDITION

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For Sally

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I should also like to thank those who look after us. The Siabod Café has become a fantastic meeting point and social centre for those of us working in North Wales, I'm not the only one grateful for the patience of Paul, Romina, Gabby, Nick and the rest of the team. A big thanks for the welcome, great service and conversation from Steffan at Penceunant Isaf; a special place. And apologies to Arwel at the Idwal Tea Shack from me for not making more time to linger there, thank you, diolch yn fawr.

As ever with acknowledgements you miss somebody out. To all those who've contributed on my workshops, helped me out when I've been blundering, even helped in the field, to Julian, Robbie, Jo, Keith, Matt, to all of you, thank you. This would be a lesser book without the kindness of strangers and acquaintances.



# INTRODUCTION

When walking and climbing among these hills, it will not be long before you start to wonder about that strange flower or that high-pitched bird call, how the rocks came to be so varied, or why the landscape is so dramatic. How do you find these things out?

I have been frustrated by wading through copious field guides covering lichens, mosses, birds, flowers and rocks to discover more about the things we see around us. I asked myself, what is that pretty yellow flower I see everywhere? Which bird sang that strange high-pitched song? Why does the rock seem so very different on every hillside?

The aim of this small book is to bring together information into one handy guide to help you learn about and appreciate the places we walk and climb. It's a beginner's guide to the four seasons of our small but delightful mountains. I have tried to distil it down to the most common things you will see out and about in the hills of Snowdonia. I can only apologise if I have missed out something you find.

The four sections to this guide are; spring, summer, autumn and winter. There are of course some things you can see all year round. However, while distracted by the beautiful array of wild flowers in the summer you may be forgiven for overlooking your geology. That said, winter is the perfect time for studying rocks and lichens.

I expect that most people know their daisies from their daffodils and their daffodils from their dandelions. But there are many common plants that simply pass unnoticed as we continue on our mountain adventures. I hope a little knowledge of the tormentil, thyme and thrift will enhance your day in the mountains. I have avoided the obscure in favour of the obvious, but have included a note on a handful of Snowdonia's iconic rarities. I've struggled to identify esoteric mosses, lichens and fungi, so apologies if I've overlooked more than I have included.

Alongside many of the species you'll find notes about their culinary and medicinal uses. Most of these are what you might call 'traditional', although none have been tested by me, and none are recommended for experimentation. I include them merely as points of interest to help remember the species. It's considered bad form to pick wild flowers, indeed many are protected by law. Take only photographs and leave things as they are for other people to enjoy.

The second edition of this book has seen quite a major revision, with notes updated and added to, new species introduced, a few removed, and sections tampered with. I've moved some flowers from spring to summer when their official flowering season is June to August – I hope these changes are an improvement. I'm asked occasionally when I'm going to 'do' the nature of the Lake District. It is a tricky question as, for the most part, it would be the same book! Much of the Lake District is given over

### **Warning**

Leave the plants and animals you discover as you find them. Do not pick plants and do not eat them. Traditional medicinal uses mentioned in this book are for interest only.

### **Proper names**

Throughout, I have used the common names. Alongside these names you may often read the scientific Latin name (*in green*) as well as the Welsh name (*in red*).

to sheep grazing and you need to search out the steeper bits to see the range of acidic upland species you'll find in this book; most of them are there, just not so obvious.

It would probably be fair to say that this book is biased towards the northern part of Snowdonia. It is; this is where I live and work. It's also an area where, to some extent, grazing has been managed a little more proactively and this has helped with the abundance of wild flowers available for us to see. It has to be said Cwm Idwal is a very special place. Another name for the book might be the nature of the acidic uplands. I don't think it is quite as catchy a title, but you'll find most of what you will see on most of our uplands in this book. For Scotland you can top up on some the of the specialities in *Hostile Habitats*. For limestone uplands Kevin Walker's *Nature of the Brecon Beacons* (Pesda Press, 2019) will give you a leg up too.

Happy walking and climbing!

Mike Raine

A handwritten signature in blue ink, appearing to read 'Mike Raine', with a stylized, flowing script.



Mossy saxifrage high up in Cwm Idwal.



The view into Cwm Crafnant from Crimpiau.

# SNOWDONIA

It would be fair to note that to many walkers and climbers the area around Snowdon, including the Glyders, the Carneddys and Moel Siabod (to use their anglicised names) is essentially Snowdonia. The evolution of this perception is understandable due to the magnificence of the hills and their accessibility. There is more to Snowdonia; in fact many are surprised to note that the Mid Wales giant of Cadair Idris is actually in the Snowdonia National Park. Walkers of the 3,000 foot peaks, however, might be pleased that it, and the even higher Aran Fawddwy, just fail to reach that landmark height.

It is easy to miss out on some magnificent, quiet, scenery; more of that ahead, but I cannot go on without a word about the Welsh language. I know it's a challenge, but if you follow the simple rules in the annex to this book you should be able to have stab at pronunciation. We could resist that classical English habit of renaming places to suit us too, what's wrong with Glyderau, Carneddau, Moelwynion and Yr Wyddfa? Try thinking of Snowdon as Yr Wyddfa; you might pronounce it *"err"* *"oo-with-va,"* go on, it might open some doors!

## Northern Snowdonia

You will see constant reference to a few special places in this book. Cwm Idwal is at the heart of everything; it has a varied geology due to successive volcanic eruptions of varying sizes interspersed with periods of deposition. Acidic rocks are laid bare in the great Idwal Slabs while relatively lime rich bands can be picked out as they attract a little more vegetation and it is here that the botanist's eye will be drawn. Another important aspect of

Cwm Idwal is its ownership by the National Trust, who work in partnership with Snowdonia National Park and Natural Resources Wales to manage the Cwm for nature. The tenant farmer of the land bordering right up to Cwm Idwal has reduced his stocking densities and works well with the National Trust; he is proud of this place and keen to manage it for the greater good. Gwyn Thomas has changed his farm to an organic one; he has removed sheep from the Cwm and introduced some grazing by Welsh Black Cattle in the vicinity. You will see some sheep from time to time as they stray in from farms on the other side of the range. For walkers this is not too much of a bad thing as it means that currently Cwm Idwal gives us the best of both worlds; somewhere we can walk freely and somewhere we can see most of the plants that will grow on mountains in the UK.

Those same rocks that give Cwm Idwal its special qualities also outcrop in some of the high cwms on Yr Wyddfa. Here they are surrounded by heavy grazing, but the very special plants are hanging on, particularly in Cwm Glas and by Clogwyn Du'r Arddu. The Moel Hebog range is quite heavily grazed but compensates with interesting geology and fascinating evidence of human activity over the years. Look out for the pillow lavas on your ascent of Moel Hebog and if you head north towards Moel yr Ogof there is a particularly interesting outcrop just up from Bwlch Meillionen where the rounded 'pillows' stand out very clearly. As with other ranges, the history of sheep farming and mining have left much historical interest in the form of enclosures, ruins and holes in the ground in these parts. The Moelwynion is well grazed but does have some nice pockets of interest, though its special features are probably its remote, wonderful lakes and its slate-mining history.

The Carneddau is a bit of an enigma; it has some good sites for montane species notably Ysgolion Duon, but this is not the easiest of places to access. One very special feature of the Carneddau is the montane heath or tundra, which occurs on its highest tops. This is a small ecosystem which is genuinely above the tree line. Instead of trees, here you will find the dwarf willow; it is a forest, but a stunted one. Within the ecosystem the dwarf willow is the climax species and it hosts a range of insects, fungi and mosses that grow nowhere else. You find this ecosystem just off the

Above Craig yr Ysfa in the Carneddau.



beaten path around the higher (and more remote) Carneddau summits; tread lightly. There is an outlier of the Carneddau called Crimpiau, which has a special place in the hearts of many mountain leaders as so many of them have learnt the intricacies of contour interpretation here. Crimpiau harbours a great range of upland botany through a few different zones, being a little quieter than the high hills and having woodland on either side means it is one of the best places to see upland birds. The Carneddau is also home to the Welsh Mountain Pony.

## Further south

South of the northern Snowdonia hotspots are some quieter hills. While they rarely exhibit with the exuberance of the northern hills they offer some great walks.

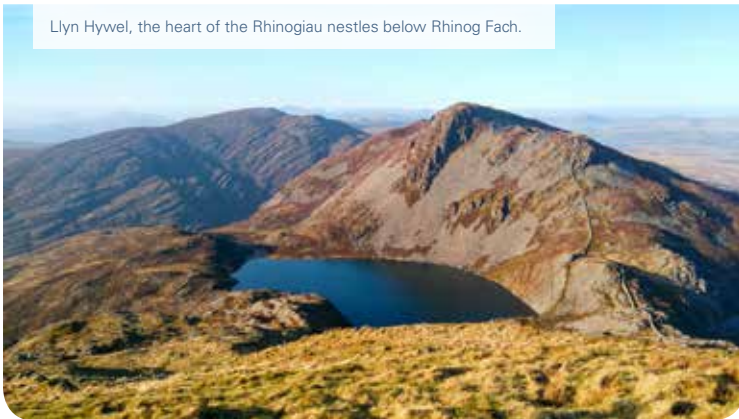
### The Rhinogiau

The Rhinogiau has its champions, people who love its wildness, its ruggedness, its peace. Botanists are probably not among their number for this is a heather dominated landscape. There are few sites where the arctic-alpine species will be found. So, the Rhinogiau must be appreciated for what it is. This is not the manufactured 'strip farmed heather' of the

driven grouse shooting dominated northern and eastern (and western!) Cairngorm or the Yorkshire Moors but a wild, woolly and rugged place with a wilderness feel. Sheep grazing dominates to the south on and around Diffwys, where a typically heavily grazed grassy landscape takes over from the heather. Feral goats graze in the northern part. The heather has an understory of moss and provides a refuge for small rodents and some birds such as stonechat and wheatear, which in turn attract merlin, peregrine, hen harrier and buzzard. The heather gives a home to some wild grouse – a few red and the occasional rare black grouse. Canada geese visit the upland lakes to breed, and disturb wild campers, in spring. This is a good place to see ring ouzel.

Apart from heather, the other stand-out feature of the Rhinogiau is the rock. This Cambrian gritstone is a wonderfully textured, grippy rock that just asks you to feel it. It is a climber's delight and it is only the lack of height which keeps the climbing population down. It can, I'm afraid make the walking difficult. To leave the path in the Rhinogiau is to begin a tussle with heather and a dance with boulders; the maps are complex and route finding tricky around the numerous escarpments. Walk the main ridge and you'll truly enjoy this place; leave the path and you may regret it!

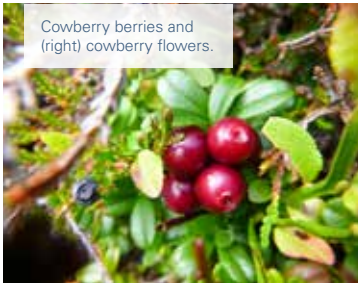
Llyn Hywel, the heart of the Rhinogiau nestles below Rhinog Fach.



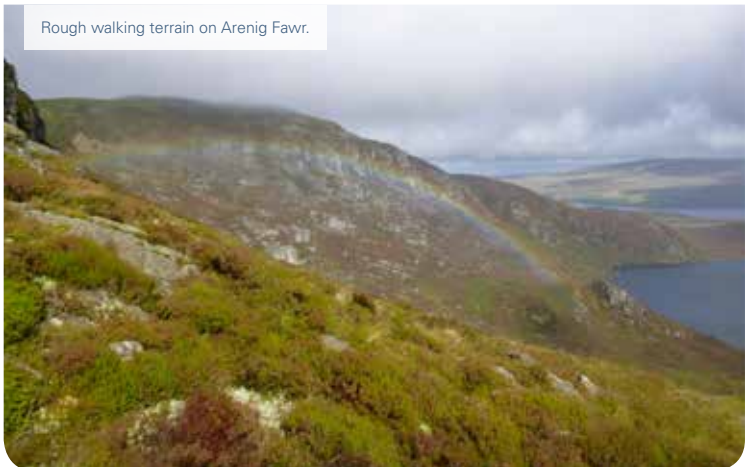


## Arenigau

The Arenigau are another quite wild place. As with the Rhinogiau, leaving the paths needs carefully consideration. There is a good path to the summit of Arenig Fawr from the north, an interesting and varied route, but for me the joy of Arenig Fawr is off the beaten path. Yes, it's hard walking but nowhere else have I encountered such luxuriant growth of cowberries. Mixed in with the heathers and bilberry this is a really good place to get familiar with cowberries, but to repeat myself, it's tough walking! There is some beautiful rock here with ash-fall tuff piled on top of beds of Ordovician sandstone; there are even some fossiliferous beds, look out for brachiopods. Sadly, though, there are no Cwm Idwals here and it is a place where the human imprint over time needs to be appreciated; the bothy, the reservoirs, the aircraft crash, walls, ruins and quarries.

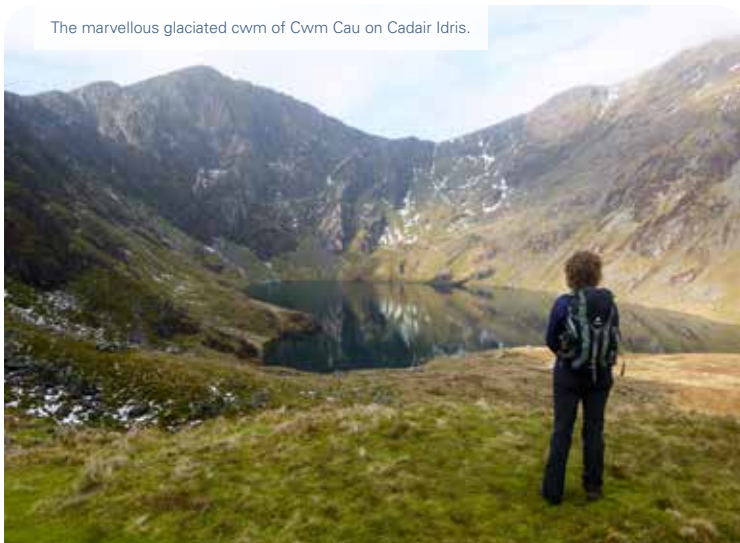


Cowberry berries and (right) cowberry flowers.



Rough walking terrain on Arenig Fawr.

The marvellous glaciated cwm of Cwm Cau on Cadair Idris.



## Cadair Idris

There is a marvellous horseshoe walk around the tops of Cadair Idris from Dôl-y-cae just east of Tal-y-Llyn lake / Llyn Mwyngil. It takes you on a journey from the relatively lush valley floor, through indigenous woodland up to the tops. There is the usual sheep denuded land here but the physical geography has preserved some patches of interesting vegetation. The steep cliffs of Cwm Cae, and again on the north side above Llyn y Gadair, contain most of the montane plants you might expect to see. The geology is a mirror of Yr Wyddfa – Cadair being of the same stone but at the other end of the Harlech dome. Cadair Idris is home to peregrines, ravens and ring ouzels as well as the usual smaller birds such as meadow pipit and wheatear. Along your way you will be comforted by the familiar tormentil, heath bedstraw, butterwort and sundew. In the higher, more arctic-alpine zone look out for thrift, moss campion, parsley fern, and starry, mossy and purple saxifrage. Some of the north-facing cliffs are considered to be a special location for many less common ferns. You may see Cadair Idris spelt Cader Idris; the spelling of Cadair / Cader was a topic of discussion in 2016. The Snowdonia National Park prefer Cader, while others have gone with Cadair.



## **The Aranau**

The Aranau really are one of the quiet backwaters of Snowdonia. This is surprising as the highest mountain in southern Snowdonia is here, and it is excellent walking country. I suspect as many climbers have driven up Cwm Cywarch and, upon sight of the crag from the road, have turned around and driven away as have actually climbed on Craig Cywarch; the crag does not hold the climber's eye! Nature-wise though, the cwm is lovely. There is a good mix of woodland species and it's a beautiful place from which to start a walk. There's a handy car park and new signage. It wasn't always like this and one of the reasons for the solitude here was that before the CROW act (The Countryside and Rights of Way Act 2000), access was not encouraged in this area. I'm glad to say this has now changed and the area should be visited. As you leave the valley look out for aspen, hazel and crab apple. On the tops it's the usual fare of overgrazed areas, some heather moorland and some good sphagnum bogs; you can see alpine and fir clubmoss here. There are some wonderfully steep slopes which frame impressive caldron-like valleys below easy walking across high rocky moorlands. The views are far reaching and excellent.

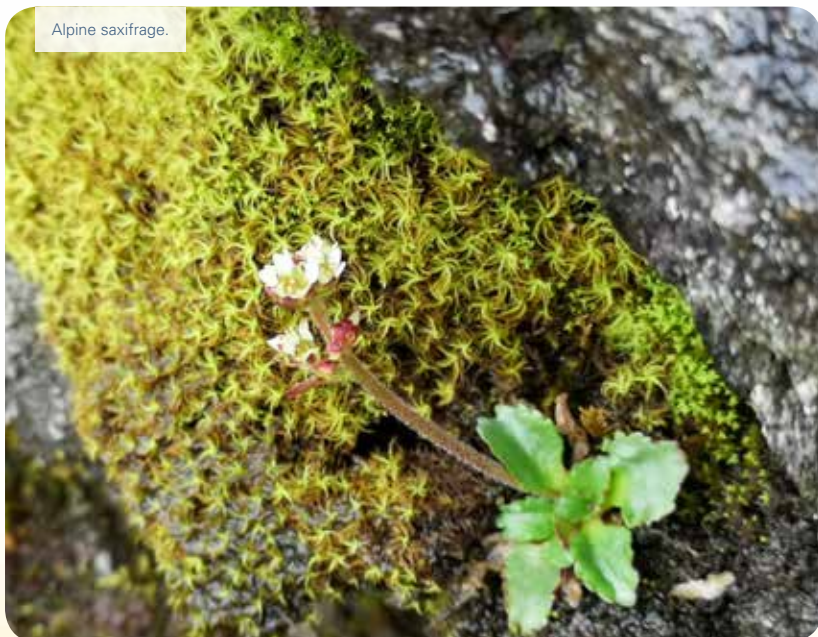


# SUMMER

Bog asphodel in Cwm Idwal.



Alpine saxifrage.





# FLOWERS

Many of the flowers identified in the previous chapter are still in flower in the summer. Included here are those plants which come into flower a little later, usually in July, although one or two of them will make themselves known by the end of June. Hopefully you will have gained some familiarity with spring flowers and anything new, which appears in July and August, can be found here.

## **Alpine saxifrage (*Saxifraga nivalis*) Tormaen yr eira**

It is really unusual to come across alpine saxifrage – it's rare in the Scottish Highlands, known only at two sites in northern England and limited to about three sites in Snowdonia. I include it here as one of those sites, surprisingly, is right next to the path round Cwm Idwal so I need you to be careful as its hold on life looks tenuous. It is bombarded by human impact in all its forms, from climate change through sheep grazing to visitor pressure. How long can it hold on? It grows in damp moss, in shady locations and on rocks which are base rich (not overly acidic). It can flower in June, but more typically in July and August. Its alpine adaptations include a hairy stem and succulent leaves. The flower is unremarkable and struggles to produce seed so keep a sharp eye for its foliage.



Bell heather.



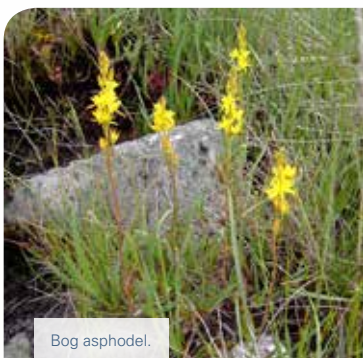
### **Bell heather** (*Erica cinerea*) *Grug y mêl*

Bell heather is common across moorland areas where grazing has been kept to a minimum; sheep love the little *Erica* shoots. Bell heather is an evergreen which erupts into flower towards the end of June and can grow up to around 45cm high. The purple bell-shaped flowers are a popular sight and an indicator of dry ground. All heathers are good producers of nectar and heather clumps are favourite haunts for bees. Run your hand through and see if you can hear the bells a'ringing. Heather has been used as flavouring in both tea and beer – there are some claimed medicinal qualities such as it being a diuretic and an antiseptic, but the same suggestions also occur frequently for ling which is *Calluna vulgaris*, the other common heather. Look out for the heath bumblebee (*Bombus jonellus*) recognisable by its white rear end.

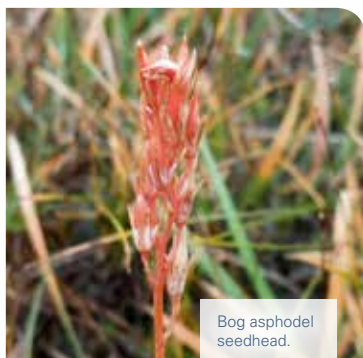
### **Bog asphodel** (*Narthecium ossifragum*) *Llafn y bladur*

As the name suggests, bog asphodel is found in boggy areas. This is a true summer flower and will not be seen flowering before July. It has beautiful bright yellow star-like flowers, but they be dying out before August is over. It grows up to 15cm high and can be found in abundance in Cwm Idwal. It is easily recognised by its flattened, sword-like leaves. Bog asphodel will be seen long after its flowers have gone, its seed heads will hang around for quite a while and the 'dead' stalks will haunt the bogs for most of the year. Bog asphodel has been used as a yellow hair dye and as a substitute for saffron.





Bog asphodel.



Bog asphodel seedhead.



Burnet-saxifrage in Cwm Idwal.

### **Burnet-saxifrage (*Pimpinella saxifraga*) Gwreiddiriog**

Burnet-saxifrage is member of the carrot family and is neither a burnet nor a saxifrage! Quite where the name comes from, I'm not sure. It certainly grows in rocky places and its leaves are similar to those of the salad burnet, a plant it's often confused with prior to flowering. When it flowers in July the umbellifer-style flower heads are pretty unmistakable, especially as we see it in the mountains where there are few, apart from Angelicas (typically more rounded flower heads), other umbellifers. It grows on calcareous soils, a plant of chalk downlands, so finding it in the less acidic areas of rock on Snowdonia is not surprising. It has been thought useful for treating respiratory infections, urinary tract infections and to ease varicose veins when added to bathwater; there is no evidence to suggest it is effective in any of these ways! It was once cultivated for fodder and is highly nutritious for cows and sheep.

### **Climbing corydalis (*Ceratocapnos claviculata*) Mwg-y-ddaeear dringol**

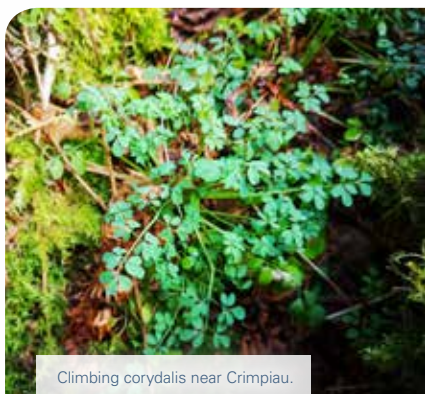
Climbing corydalis is a subtle plant, one you'll probably not notice. It's actually a woodland plant, but it appears among the blocky screes on the lower flanks of Crimpiau and Clogwyn Mawr above Capel Curig. It grows in shady corners, often under bracken and its small white flowers appear from June onwards. Lower down, I have seen it in flower as early as March. Climbing corydalis is a plant of western Britain though it is largely absent from Ireland. While some members of the *corydalis* family are considered of use medicinally, the group is mostly unfavoured for its properties and is considered inedible.

### **Common bird's-foot-trefoil (*Lotus corniculatus*) Pysen-y-ceirw**

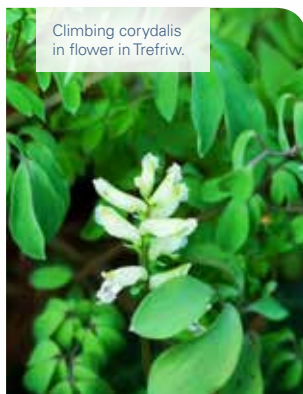
This is a very common flower on the periphery of the uplands flowering from May onwards. It prefers dry areas and can frequently be seen around quarry spoil. It is a low creeping plant and there can be up to eight of the bright yellow flowers on each stem. It is the seed pods which look like a bird's foot. The plant is poisonous as it contains hydrogen cyanide; it has, however, been used to stimulate respiration and improve digestion while also being thought of benefit in cancer treatment. An orange-yellow dye has been obtained from the flowers.

### **Common mouse-ear (*Cerastium fontanum*) Clust-y-llygoden gulddail**

Mouse-ear is found across Britain in range of habitats. This distinctive, pretty little flower can grow up to 30mm tall where grazing doesn't impact upon it. On the mountains it will rarely be more than 5 or 6mm tall. It has no known uses. There are quite a few variants of the *Cerastium* genus and two of them are found in Snowdonia, but are very rare and quite hard to identify. Both arctic mouse-ear (*Cerastium arcticum*) and alpine mouse-ear (*Cerastium alpinum*) have hairier leaves than the common variant and will be small. The common mouse-ear has leaves that look like ears of mice. Don't mistake it for the lilac-coloured small flowering willow herb which is a common wild flower in gardens and has a similarly shaped flower. Common mouse-ear does have some rather more spectacular close relatives. Well, when I say spectacular, I mean unusual and rare. I've never come across the alpine mouse-ear, but I was once privileged to be taken to see the arctic mouse-ear which grows in one place on Snowdonia, and it's not a location you'll chance upon!



Climbing corydalis near Crimpiau.



Climbing corydalis  
in flower in Trefriw.



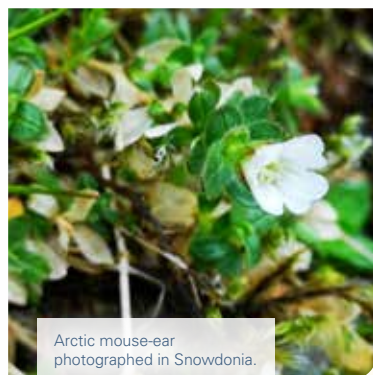
Common bird's-foot-trefoil.



Common bird's-foot-trefoil seed pods illustrating  
how this plant gets its common name.



Common mouse-ear.



Arctic mouse-ear  
photographed in Snowdonia.





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A GUIDE TO THE UPLANDS FOR HILLWALKERS AND CLIMBERS

The revised and expanded 2nd edition of the first complete field guide for the mountains of Snowdonia through the seasons; its plants, animals and rocks. Everything you're likely to see in the hills at any time of year is here in one volume.

Follow the seasons of Snowdonia; winter is the perfect time for studying rocks and lichen; in spring the bog flowers flourish and beautiful orchids bloom; summer brings fruits and flowers, and the trees are in full leaf; in autumn an amazing display of fungi appear, the hill farms are busy again in preparation for winter and as the nights draw in it is time to sit beside the fire and tell tales of local myth and legend.

A little knowledge of thyme, tormentil and thrift will enhance your day in the hills. Fossil trilobites and roche moutonnée, bogbean beer and caterpillar fungus are just some of the fascinating things you will discover.



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