

# NATURE OF THE BRECON BEACONS

A BEGINNER'S GUIDE TO THE UPLAND ENVIRONMENT



KEVIN WALKER

Kevin Walker lives in the Brecon Beacons, and has been a professional mountain leader and hill guide for almost four decades. A self-confessed mountain addict, he ran ML training courses for several years, and has written many books including *Wild Country Camping*, *The Essential Hillwalkers' Guide*, *Undiscovered Wales*, and *Mountain and Moorland Navigation*. He runs a wide range of navigation and hill skills courses, as well as offering personal tuition, 1:1 coaching, and private guiding. Further details of his courses are available on his web site at [www.mountain-activities.com](http://www.mountain-activities.com).

When not teaching or guiding, he spends most of his free time exploring, photographing and writing about the lesser-known parts of Wales, with occasional trips to further flung hills, most recently in Australia and New Zealand.

KEVIN WALKER



# NATURE OF THE BRECON BEACONS

A BEGINNER'S GUIDE TO THE UPLAND ENVIRONMENT

KEVIN WALKER

Published in Great Britain 2019 by Pesda Press

Tan y Coed Canol

Ceunant

Caernarfon

Gwynedd

LL55 4RN

© Copyright 2019 Kevin Walker

ISBN: 9781906095659

The Author has asserted his right under the Copyright, Designs and Patents Act, 1988, to be identified as Author of this Work. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the Publisher.

Printed and bound in Poland, [www.hussarbooks.pl](http://www.hussarbooks.pl)





# CONTENTS

- Introduction ..... 6
- Acknowledgements ..... 8
  
- ROCKS ..... 11
  - Setting the scenes ..... 13
  - A quick guide to the sedimentary rocks ..... 19
  - Common rock types ..... 27
    - Fossils ..... 34
  - Caves and cave formation ..... 37
  - The Ice Age and beyond ..... 45
  
- PLANTS ..... 55
  - Mosses ..... 57
  - Liverworts ..... 67
  - Clubmosses ..... 71
  - Lichens ..... 75
  - Fungi ..... 83
  - Ferns ..... 95
  - Grasses, rushes and sedges ..... 103
  - Flowers ..... 109
    - Upland habitats ..... 110
    - Wet and boggy areas ..... 129
    - Woodland and hedgerow ..... 143
  - Trees and shrubs ..... 155
  - Invaders ..... 169

<b>ANIMALS</b>	175
<b>Insects</b>	177
Bumblebees	177
Dragonflies and damselflies	179
Butterflies	182
Caterpillars	186
Moths	188
Beetles	190
Spiders	192
<b>Amphibians</b>	195
<b>Reptiles</b>	199
<b>Slugs and snails</b>	203
<b>Birds</b>	205
<b>Mammals</b>	223
Small mammals	223
Large mammals	230
<b>Nocturnal wanderings</b>	235
Bats	236
Owls	238
 <b>HUMANS</b>	 241
<b>Farming</b>	243
<b>Archaeology</b>	247
<b>Industry</b>	251
<b>Countryside pressures</b>	257
<b>Myths and legends</b>	261
 <b>LAST THOUGHTS</b>	 271
<b>Welsh place names</b>	271
<b>Further information</b>	278
<b>Index</b>	280

# INTRODUCTION

Few people who have wandered through the hills of the Brecon Beacons National Park (BBNP) can fail to have been stirred by their surroundings ... not just the shape of the land, but the rocks, plants and animals. Some are familiar – such as buttercups and blackbirds – but there are numerous others that lie unrecognised or overlooked, and plenty of facts about the familiar that are unfamiliar. This book is about those unfamiliar facts and less well-known common items; it is my attempt to bring the landscape to life. This book will not tell you everything you need to know; it isn't supposed to be an all-encompassing guide. Far from it. It's more concerned with those everyday objects that often go unremarked – such as the familiar yellow flower that you see everywhere but cannot easily identify. Indeed, any attempt at a reasonably portable, comprehensive guide is doomed to failure from the start, simply because there is just so much to see. My difficulty has been not so much what to include (I was spoilt for choice), as what to leave out! What I have tried to do is gather together information about the more common things – the ones you are most likely to see while wandering across these delightful hills – and in doing so I've relied heavily on my own experiences of guiding and instructing throughout the area over the past four decades. Because it's a personal list, there will inevitably be things you come across that are not included – indeed, I may well have

missed your personal favourites – but I make no apology for any omission as that is in the nature of the book. So, don't throw away your detailed comprehensive manuals on birds and flowers, because you will need them to identify the more obscure species ... and if you do see something that I haven't mentioned, please indulge your curiosity and refer to one of the books or websites listed in the 'Further information' section at the back of this book, for it's only through knowledge that we can understand, and only through understanding that we can truly appreciate.

The Brecon Beacons National Park is a wonderful area in which to walk; full of contrasting scenery and hidden delights. Tough or gentle, it makes no difference – there is something here for everyone.

I wish you happy and inspirational walking, with clear skies and wide views.  
Kevin Walker, Llangattock, 2018.

Note: Although I've used common names throughout the book, where possible I have also included the scientific (Latin) name (*in green italics*) and the Welsh name (*in red*). However, it has not been possible to find an accurate Welsh name for every species, and this is particularly true of mosses, lichens and fungi.



# ACKNOWLEDGEMENTS

This book could not have been written without the help of many people, several of whom are recognised experts in their fields. In particular (and in no particular order) I must acknowledge the help, advice and encouragement given by Alan Bowring (BBNP Geopark Officer) – his vast knowledge and boundless enthusiasm for the landscape and geology of the area is an inspiration to us all, and Nicola Davies (BBNP Ecologist), who pointed me in the right direction to get specialist advice on plants and animals. Sam Bosanquet gave me valuable information and insights about mosses, liverworts and lichens, and Graham Motley helped me choose the most appropriate flowering plants. Andrew King was a mine of useful information about birds and butterflies, Norman Lowe pointed me in the right direction for moths and caterpillars, and Keith Noble helped me select the right dragonflies. These people also helped me ensure I had identified the correct species in my photographs.

Three personal friends (all Mountain Leaders) have given immense help and encouragement. Paul Williams (<http://bit.ly/PaulWilliamsBirds>), who runs brilliant bird walks, advised on my choice of upland birds; Julie Bell (<https://simplystrolling.com>), whose walks always seem to have an element of foraging, opened my eyes to the vast range of plants and fungi in the area; and Sarah Maliphant (<http://more-to.org>) offered good advice and relaxed walking in the Black Mountains.

Several people, including all those mentioned above, provided photographs, and these are credited individually throughout the book. All the pictures of birds were provided by Steve Wilce (<https://www.breconbeaconsbirder.com>).

The Pesda team have, as ever, been brilliant. Many thanks to Franco for his comments and suggestions, to Ros for proof-reading, and to Vicky for the superb layout. I would also like to thank Professor David Thorne and Dr Rhian Parry of The Welsh Place-Name Society for their help and advice in the Welsh place-names section in the final chapter.

I must also mention the book 'Nature of Snowdonia' by Mike Raine (Pesda, 2010), which in many ways was the inspiration for this volume.

It would also be remiss not to acknowledge the unwitting contribution of the hundreds of clients who, over the years, have asked searching questions about the environment through which we walk, arousing my innate curiosity and making me research the things we see and often take for granted. I have learned much from them. If, God forbid, something happened that prevented me from visiting the hills, what I would miss the most is not the physicality of walking, the adrenaline of climbing or the majesty and joy of the wide views – what I would miss the most is the camaraderie ... the shared experience with like-minded souls.

Last, but by no means least, I must mention Tina, who provided encouragement, copious hot drinks and supper, and put up with my increasing irritability as the deadline approached.

To all those people I have mentioned – my grateful thanks. To any I have neglected, my humble apologies.



# ANIMALS

The range of fauna in the region is just as extensive as that of the flora, and the variety of species is an important part of the area's biodiversity.

Common carder bee.



Heath bumblebee.







# INSECTS / TRYCHFILOD

There are so many insects out there, it's difficult to know where to start! What follows is merely a tiny selection of some of the more common and is by no means representative. Indeed, I have not included any information about flies (of which there are hundreds) or ants (of which there are a few); nor about wasps, lacewings, earwigs, grasshoppers, and a whole host of other creepy crawlies. Those alone would fill an entire book! Think of this as a good start.

## **Bumblebee / Cacwn**

Bees turn up everywhere, even in our everyday sayings: 'as busy as a bee'; 'make a bee-line'; and 'getting a bee in your bonnet'. The term 'bee's knees' is now used to refer to something excellent, although originally it meant something small and insignificant. In Wales it was once considered lucky if bees set up home near a house as they were believed to bless it with prosperity. In modern folk magic, bumblebees act as charms for health and wealth, and bee stings are used to treat rheumatism and arthritis.

There are currently 22 species of bumblebee found in Wales, including some important rarities. The list below includes four of the more commonly seen in the Brecon Beacons.

### **Common carder bee (*Bombus pascuorum*) Gwennyneyn Gribob**

One of our most common bumblebees, the common carder bee is brown and orange, sometimes with darker bands on its abdomen. It can be seen from March to November. It nests in cavities, such as old mouse runs, and nests may contain up to 200 workers.

### **Heath bumblebee (*Bombus jonellus*) Cacyneyn y rhos**

A common sight on heath land between March and early September, this small bumblebee has a white tail and three yellow bands – one at the front and two at the back. It nests in a variety of habitats including old bird nests, old mouse runs, and among moss and leaf litter. The nests are generally small with fewer than 50 workers.

### **Red-tailed bumblebee (*Bombus lapidarius*) Cacyneyn dingoch**

The red-tailed bumblebee can be seen feeding on flowers from March until November. The black females are very large with a big red tail. Males are smaller and have two yellow bands on their thorax, and one at the base of their abdomen. The nest size varies considerably, some containing over 200 bees, while other have less than 100.

### **White-tailed bumblebee (*Bombus lucorum*) Cacyneyn gynffonwen**

One of the first bees to emerge from hibernation, the white-tailed bumblebee has black and lemon bands and a pure white tail. It is very common and can be seen right through to late November, wherever there are flowers. They nest in holes in the ground, often using old mouse or vole nests, and nests may contain as many as 400 workers.



Red-tailed bumblebee.



White-tailed bumblebee.

## Dragonflies and damselflies / *Gwlyb y neidr a melinogion*

More than twenty species of dragonflies and damselflies can be seen in the National Park between May and October. Their larvae develop in clean water (both still and running), so lakes, ponds, streams, rivers, canals and bogs are good places to look for flying adults. The best time to see them is a couple of hours either side of noon on warm calm days.

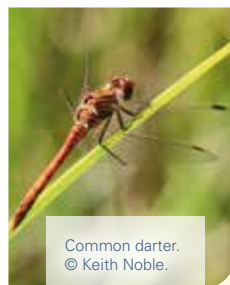
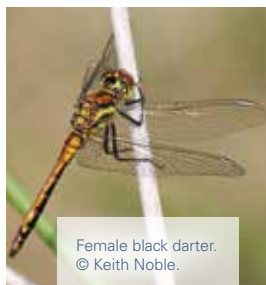
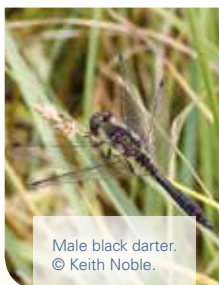
**Damselflies** (*Zygoptera*) have a weak, fluttering flight. They close their wings when resting, and their eyes do not touch at the top of their head.

**Dragonflies** (*Anisoptera*) have a strong, purposeful flight. They hold their wings open when resting, and their eyes touch at the top of their head. Here are a few of the more common.

**Black darter** (*Sympetrum danae*) *Picellwr du*

**Common darter** (*Sympetrum striolatum*) *Picellwr cyffredin*

These small, narrow-bodied dragonflies are common on moorlands, heaths and bogs from the end of June until late October. The **black darter** is the only small dragonfly that is almost entirely black – males are black with dark yellow spots along the sides; females and juveniles are brownish-yellow. Male **common darters** are bright red; females and juveniles are golden-brown. They hover in a stationary position, then suddenly dart forward to catch their small insect prey which they then consume on a favourite perch.



**Broad-bodied chaser (*Libellula depressa*) *Picellwr boliog***

This medium-sized dragonfly is noticeably 'fat'. Common around pools from the end of May to August, it uses a perch in vegetation on the side of the pool as a base from which to make swift flights out over the water looking for insects. The male is powder-blue with yellow spots along its sides, and the female is greenish-brown.

**Common blue damselfly (*Enallagma cyathigerum*) *Mursen las gyffredin***

There are seven species of small blue damselflies, of which this is the most common. The male is blue; the female is either blue or grey-green. Both have bands of black along their body. When common blues mate they form a 'mating wheel' in which the male clasps the female by the neck and she bends her body around in response.

**Common hawkler (*Aeshna juncea*) *Gwas-neidr glas***

This large dragonfly can be seen around upland pools from late June until October. The largest and fastest flying dragonflies, they can hover or fly backwards, and like all dragonflies they catch their prey in flight. Mostly black in colour, the male has dark-blue eyes and pale-blue spots and yellow flecks all along its body; the female has yellowish spots and brownish eyes.

**Emerald damselfly (*Lestes sponsa*) *Mursen werdd***

The metallic-green, emerald damselfly is a medium-sized damselfly which can be distinguished from other damselflies by their habit of holding their wings half-open, rather than closed. The last species of damselfly to emerge each year, they can be seen from the end of June to September.

**Four-spotted chaser (*Libellula quadrimaculata*) *Picellwr pedwar nod***

A medium-sized, broad-bodied dragonfly that can be seen around upland pools from early June to August, this is a very active dragonfly, spending much of the day hunting or marking out their territories. They are golden-brown with yellow spots along their sides, and have two distinctive dark spots at the front edge of each wing.

## Golden-ringed dragonfly (*Cordulegaster boltonii*) *Gwas-neidr eurdorchog*

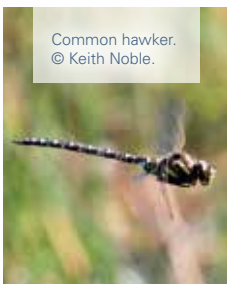
A common sight along rocky sections of upland streams from May to September, this very large dragonfly is a fast and powerful flyer. Black with yellow bands along the body and bright-green eyes, they are fierce predators, feeding on large insects such as damselflies, other dragonflies, wasps, beetles and bumblebees. The female is the UK's longest dragonfly and can be 8.5cm long.



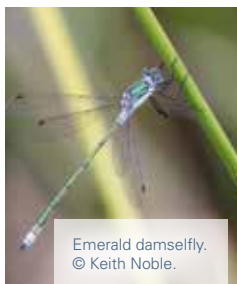
Broad-bodied chaser. © Keith Noble.



Common blue damselfly.



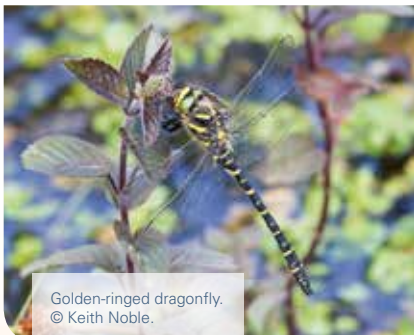
Common hawkfly.  
© Keith Noble.



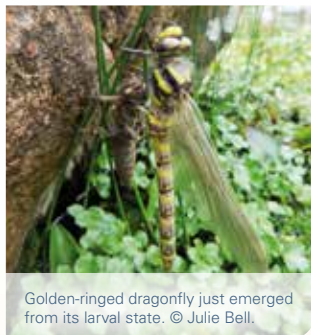
Emerald damselfly.  
© Keith Noble.



Four-spotted chaser.  
© Keith Noble.



Golden-ringed dragonfly.  
© Keith Noble.



Golden-ringed dragonfly just emerged from its larval state. © Julie Bell.



## Butterflies / Gloënnod byw

In recent years approximately 30 species of butterfly have been recorded here, including the very rare marsh fritillary, which you are unlikely to see. The list below includes some of the species you are most likely to see in the uplands and along the upland edges.

### **Comma** (*Polygonia c-album*) *Mantell Garpïog*

You can sometimes see these rich orangey-brown butterflies on the upland edge close to hill gates or handling pens, or anywhere where there are nettles. They have a distinctive ragged edge to their wings. Once in severe decline, they are now making a comeback, and are responding to climate change by moving to more northern habitats.

### **Common blue** (*Polyommatus icarus*) *Glesyn cyffredin*

This butterfly can be seen in a variety of grassy habitats all over the Park, particularly in conjunction with common bird's-foot-trefoil (see page 115), its main foodplant. The male has blue wings with a black-brown border and a thin white fringe, while the female is brown with a blue dusting near its body and a few orange spots along the lower edges of its wings.

### **Grayling** (*Hipparchia semele*) *Gweirlöyn llwyd*

Although not common and sadly in decline, this large, brown butterfly can sometimes be seen in summer in disused limestone quarries along the southern boundary of the Park. It is well-camouflaged when on the ground, but if you follow one in flight it usually soon settles with its wings held tightly together.

### **Green hairstreak** (*Callophrys rubi*) *Brithribin gwyrdd*

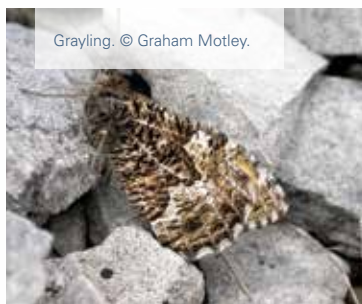
The only green butterfly in the UK, the green hairstreak is aggressively territorial. Although the undersides of its wings are metallic green, the upper surface is brown. Look for it from late-April until mid-July on heather and bilberry moors and along the upland edge where there is hawthorn, rowan or gorse.



Comma.



Common blue. © Sarah Maliphant  
[www.more-to.org](http://www.more-to.org)



Grayling. © Graham Motley.



Green hairstreak. © Keith Noble.



Green-veined white.

### **Green-veined white (*Pieris napi*) Gwyn gwythiennau gwyrddion**

This butterfly is widespread along the edges of upland commons and rhôs pasture, and most white butterflies in the uplands will be this species. It can be distinguished from other 'whites' by the green veins on the underside of its hind-wing. If you time it right, you may be lucky enough to see several hundred in the air at the same time as they emerge from their pupae.

**Painted lady (*Vanessa cardui*) Mantell Dramor**

This hill-topping migrant can be seen flying swiftly across the uplands in spring (heading north) and autumn (heading south). It has orange-brown wings with black and white spots on the forewing; the undersides are mottled brown with spots.

**Red admiral (*Vanessa atalanta*) Mantell goch**

Another hill topping migrant, large numbers of red admirals can be seen heading north in late-spring and south in autumn as they fly in a direct manner across even the highest hill-tops. They are easily recognised by their red and black wings with a white band near the tip of the fore-wing.

**Ringlet (*Aphantopus hyperantus*) Gweirlöyn y glaw**

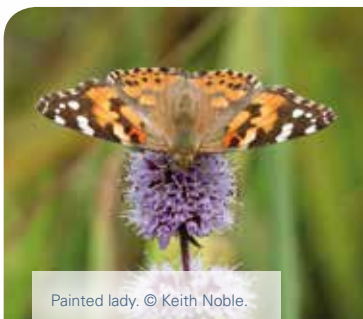
A medium-sized, dark brown butterfly, often seen in rhôs pasture, its wings usually have a creamy edge, with several small pale spots underneath. It has a low, lazy flight, moving only short distances, then settling with open wings. Sometimes confused with the meadow brown, the latter is larger with an obvious single spot on each forewing.

**Small heath (*Coenonympha pamphilus*) Gweirlöyn bach y waun**

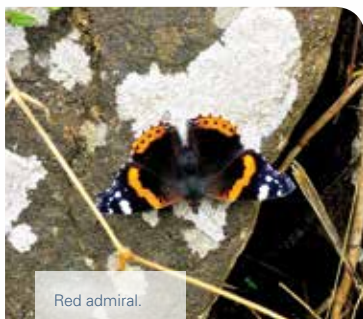
This small butterfly is predominantly pale-orange in colour, and always settles with closed wings, which have several black spots on the underside. It flies in a slow, lazy way for only a short distance before touching down again. Although in decline, it is still the commonest butterfly of upland acid grasslands from mid-June until early August.

**Small tortoiseshell (*Aglais urticae*) Trilliw bach**

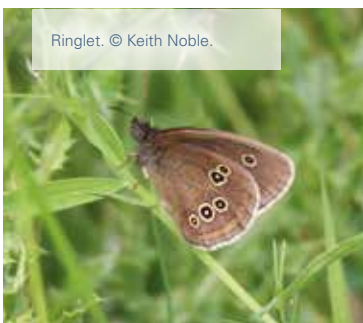
This well-known hill-topping butterfly has orange and black patterned wings with a white spot at the tip of the forewing. It is one of the first butterflies to be seen in spring.



Painted lady. © Keith Noble.



Red admiral.



Ringlet. © Keith Noble.



Small heath. © Keith Noble.



Small tortoiseshell.

## Caterpillars / Lindysyn

You are more likely to see the caterpillar than the moth!

### Beautiful yellow underwing (*Anarta myrtilli*) *Ôl-adain felen hardd*

This striking caterpillar is bright green with white and yellow dashes along its body. It can be seen on heather moorland from May to September.

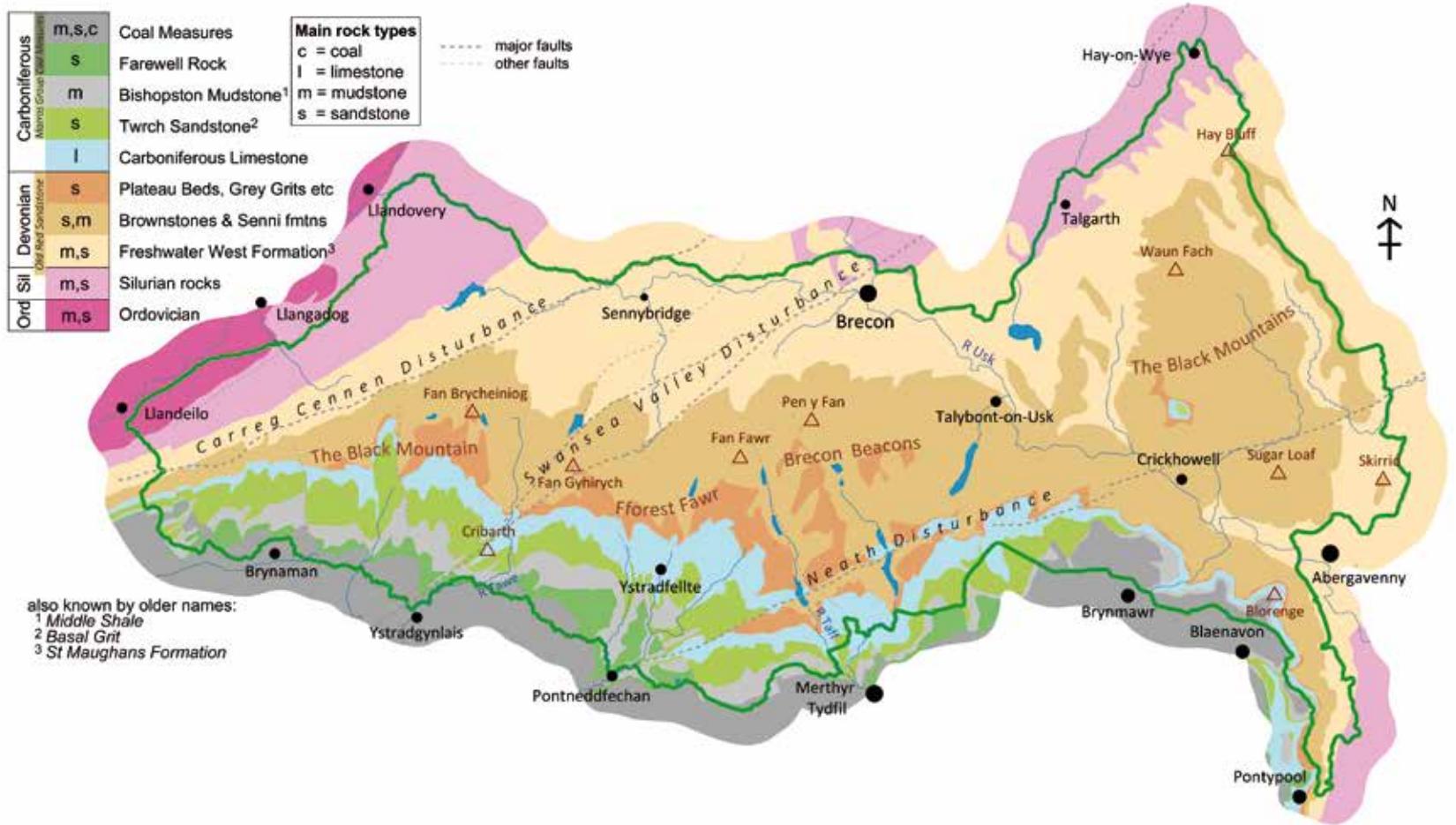
### Emperor moth (*Saturnia pavonia*) *Ymerawdwr*

This slightly hairy caterpillar can be found on heather between June and August. Initially black, it becomes greener as it gets older, with black bands around each segment of its body. Dots on its back mimic heather buds and change colour as the heather grows, starting greenish-yellow and becoming purple.

### Fox moth (*Macrothylacia rubi*) *Gwyfyn y cadno*

This large, hairy caterpillar can be seen from July to April on upland grassland and moorland. Fully grown caterpillars can be 7cm long, with long brown hairs on the sides of the body and shorter dark orange hairs along the back. The hair tips are toxic and can cause skin irritation, and although the severity of the reaction varies and some people seem to be immune. It is probably best not to handle them.

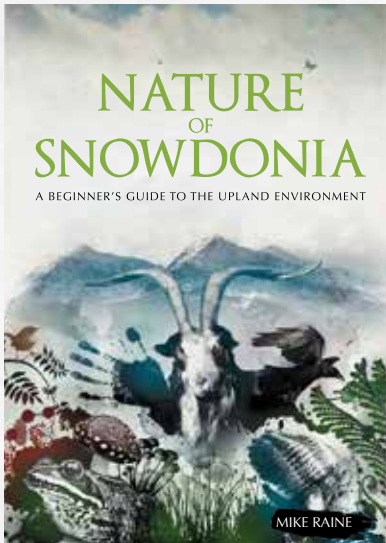




Contains geological data from the British Geological Survey © UKRI 2018

Map © Alan Bowring

ALSO AVAILABLE IN THIS SERIES



KEVIN WALKER

## NATURE OF THE BRECON BEACONS

A BEGINNER'S GUIDE TO THE UPLAND ENVIRONMENT

For most people wandering through the beautiful landscape of the Brecon Beacons is pleasure enough, but sooner or later you may ask yourself what is that little bird or flower that you regularly see on your walks?

The problem with most guides is that many of the animals, insects, rocks or plants in them are rarities, and therefore probably not the one you have just seen. This guide will help you to identify the ones that you are likely to see on your walks in the uplands of the Brecon Beacons.

Don't throw your comprehensive guides away though! Once you can easily identify the things you're familiar with, the rarities will stand out and be much easier to pin down.



[www.pesdapress.com](http://www.pesdapress.com)

