

Y Carneddau



Site: Y Carneddau (Yr Elen, Carnedd Llewelyn, Foel Grach and Carnedd Gwennlian)

Date of survey: 13/06/2021

Transect routes: circular loop on main footpath from Bathesda



The scarce montane micro moth Northern Grass-veneer (*Catoptria furcatellus*), pictured here on Yr Elen.

1. Survey details

The 2021 survey followed the same route carried out for this site in 2020 (see the map in figure 1 below), with a slight alteration along the summit ridge after the 2020 survey was cut short due to a thunder storm. The route involved a single transect beginning from Bathesda, along the Afon Llafar and ascending over Foel Ganol and Yr Elen to the summit of Carnedd Llewelyn, before taking the main ridge path to Foel Grach and Carnedd Gwenllian (which wasn't covered in 2020), and then descending into the valley along the Afon Wen and contouring along the mountainside above the Afon Caseg back to Bathesda. This survey was carried on 13 June 2021.

During this survey, the observer recorded any birdlife seen during the transect (especially signs of breeding activity), mammal activity, litter abundance along footpaths and several fixed-point images along the pathways (see figure 2 for details of specific survey locations).

Weather conditions: it was overcast (100% cloud cover), very calm (0mph) and mild (15°C) for the beginning of the survey on Y Carneddau, clearing to 30% cloud cover, a light breeze on the peaks (10-15mph from the west) and warmer (18°C) by the end of the survey.

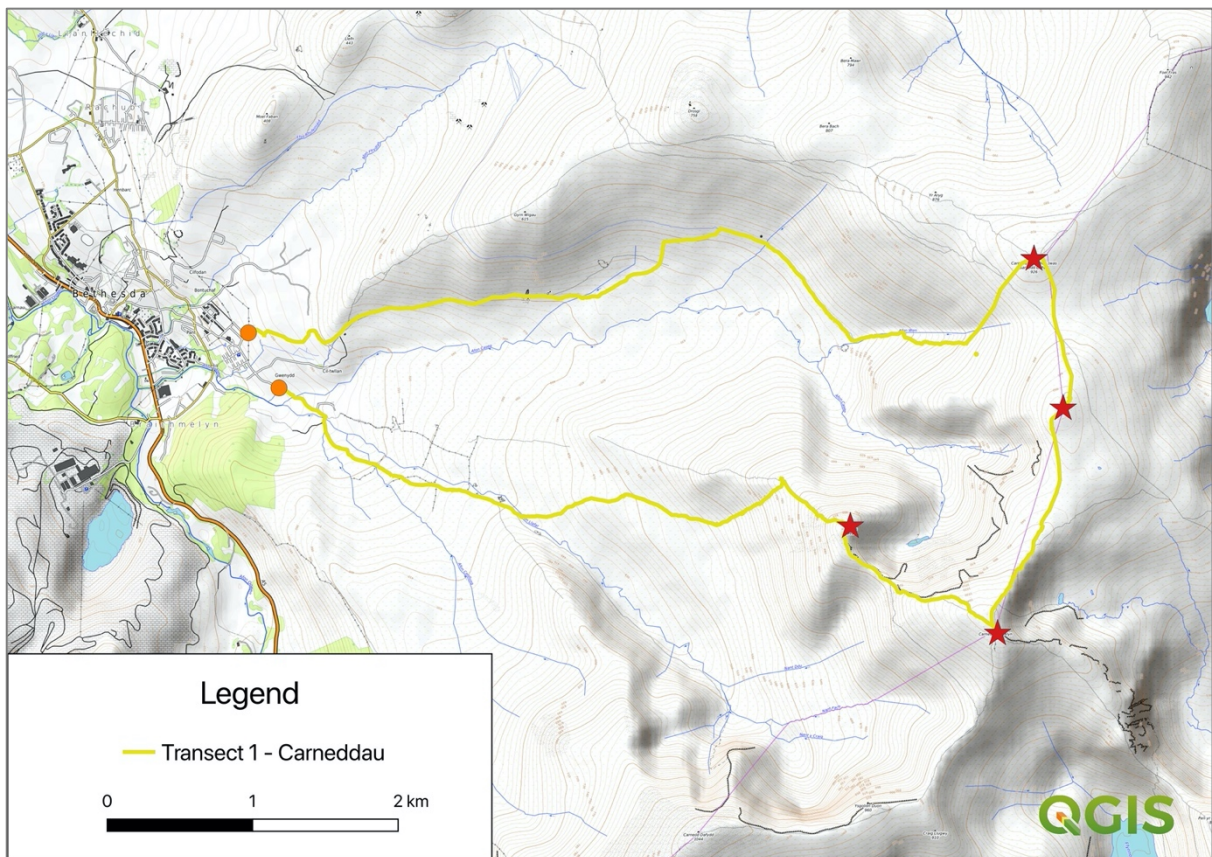


Figure 1. A map of the Carneddau survey area showing the transect route (yellow line); orange points are the start and end points of the survey, red stars are the summit peaks of some of the main mountains covered during the survey.

2. Results

A summary of the results for this survey are given below. Figure 2 below provides an overview of the locations of more noteworthy sightings, the key survey points and the locations of fixed-point images. These numbered points are referred to in the results text using parentheses followed by the numbered code, for example '(P3)'.

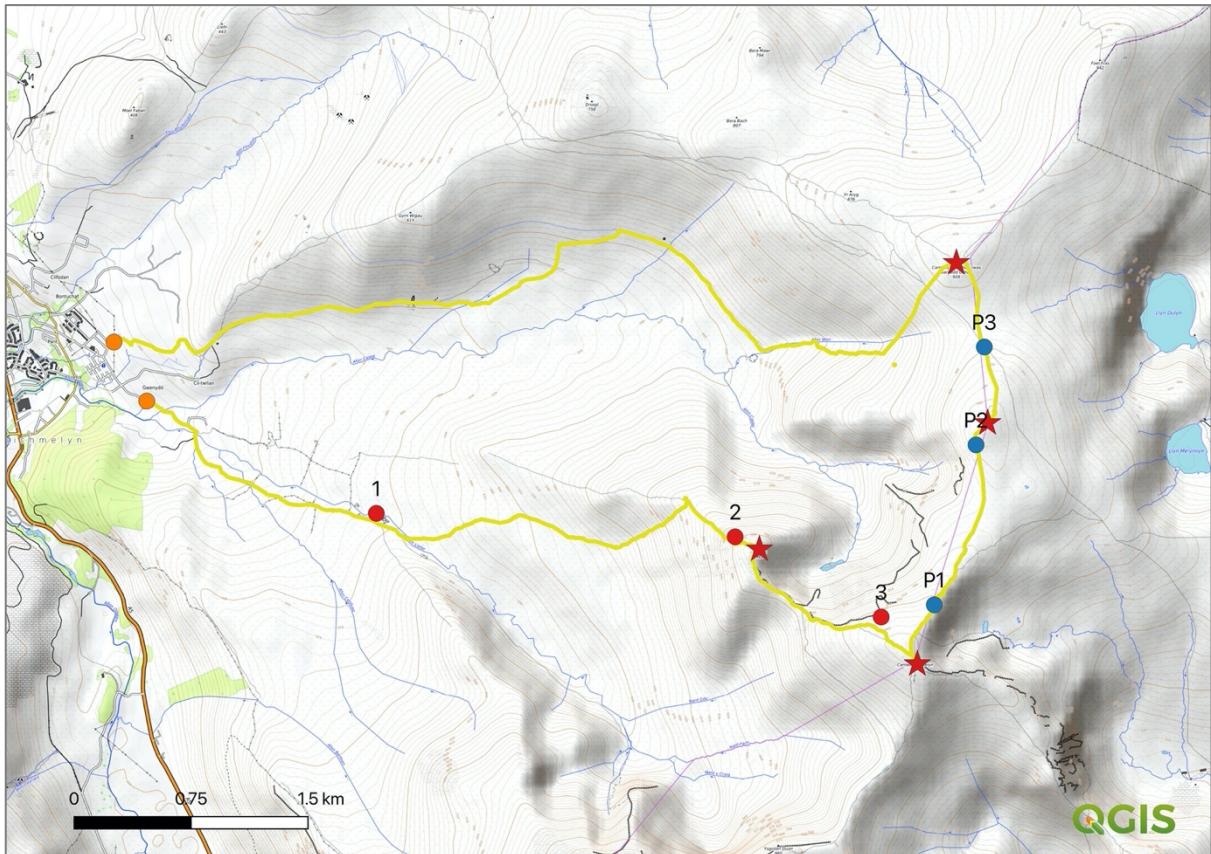


Figure 2. A map of the Carneddau survey area showing the 2021 transect route (yellow line). **Orange** points are the start and end points of the survey, **red** points are target notes referred to in the results summary below, **blue** points are fixed-point photography sites mainly targeted along pathways (see section below) and **red** stars mark the main mountain summits along the transect.



2.1 Birdlife

A total of 25 different bird species and 410 individuals were recorded during the survey (see table 1 below). The most abundant breeding bird species recorded were Meadow Pipits (125), Skylarks (35), Wheatears (28) and Wrens (17). There was an abundance of crows and gulls seen during the survey, involving 72 Carrion Crows, 60 Rooks and 36 Herring Gulls, although these species were not noted as to be breeding in the survey area, and were a mixture of birds passing over or frequenting some of the mountainsides to feed on an emergence of flying ants. More noteworthy species seen during the survey included a single Dipper (point 1 on the map in figure 2), a pair of Choughs near Carnedd Llewelyn summit (point 3) and a single Red Kite flying overhead.

A total of nine species were seen during the 2021 survey that were not recorded in 2020, namely that of Lesser Redpoll, Kestrel, Chough, Common Snipe, Robin, Siskin, Woodpigeon, Great Black-backed Gull and Lesser Black-backed Gull. Conversely, there were seven species seen in 2020 that were not recorded in 2021, including Cuckoo, Linnet, Mistle Thrush, Reed Bunting, Ring Ouzel, Common Swift and Great Tit.

There were no obvious differences noted to the results of the 2020 surveys in relation to the effects of human disturbance in the area. There were no sightings of upland waders such as Dunlins and Dotterels during the survey around the summit plateau, where there were also no sign of these species during the quieter spring of 2020 after the period of lockdown.

Table 1. Breeding bird survey results for Y Carneddau.

Name		Carneddau				
Survey type		Breeding birds				
Surveyors		Ben Porter				
Dates of surveys		13/06/2021				
Species	Scientific name	Transect or site				Evidence of breeding during visits
		Afon Llafar to Yr Elen	Summit plateau	Afon Caseg	Total number	
Meadow Pipit	<i>Anthus pratensis</i>	28	28	69	125	Singing males, alarm calling adults
Wren	<i>Troglodytes troglodytes</i>	11	1	5	17	Singing males
Rook	<i>Corvus frugilegus</i>			60	60	
Carrion Crow	<i>Corvus corone</i>	13	14	45	72	
Grey Wagtail	<i>Motacilla cinerea</i>	3		4	7	Singing male
Northern Wheatear	<i>Oenanthe Oenanthe</i>	1	2	25	28	Singing males, alarm calling adults, fledged young
Stonechat	<i>Saxicola torquata</i>		2	2	4	Singing male
Skylark	<i>Alauda arvensis</i>	11	15	9	35	Singing males
Raven	<i>Corus corax</i>		1		1	

Pied Wagtail	<i>Motacilla alba yarrellii</i>			1	1	
Herring Gull	<i>Larus argentatus</i>	10	8	18	36	
Red-billed Chough	<i>Pyrrhocorax pyrrhocorax</i>		2		2	
Lesser Redpoll	<i>Carduelis cabaret</i>	1			1	
Lesser Black-backed Gull	<i>Larus fuscus</i>			2	2	
Kestrel	<i>Falco tinnunculus</i>			1	1	
Dipper	<i>Cinclus cinclus</i>	1			1	
Blue Tit	<i>Cyanistes caeruleus</i>	5			5	
Chaffinch	<i>Fringilla coelebs</i>	1			1	Singing male
Common Snipe	<i>Gallinago gallinago</i>	1			1	Calling bird in suitable breeding habitat
Dunnock	<i>Prunella modularis</i>	1		1	2	
Great Black-backed Gull	<i>Larus marinus</i>			2	2	
Robin	<i>Erithacus rubecula</i>	3			3	
Red Kite	<i>Milvus milvus</i>		1		1	
Siskin	<i>Carduelis spinus</i>		1		1	
Woodpigeon	<i>Columba palumbus</i>	1			1	
Total number of species		15	11	14	25	
Total number		91	75	244	410	



Male Northern Wheatear (*Oenanthe oenanthe*)

Comparing the abundance and diversity of birdlife between 2020 and 2021 in this survey area, the differences are much less marked than noted in the three other upland sites covered in 2021 (see figures 3 and 4 below). The Carneddau are the only site where abundance of birdlife was higher in 2021 than 2020: 410 individual birds recorded overall compared to 310 in 2020. Similarly, the diversity of bird species was also higher in 2021 than 2020: 25 species and 22 species respectively. However, the higher abundance in 2021 is mostly attributed to a large number of gulls and crows present in one of the transect sections, which involved 72 Carrion Crows, 60 Rooks and 36 Herring Gulls feeding on a flying ant emergence. The difference is also partly explained by an intense thunder-storm which moved into the region half way through the survey in 2020, and reduced the activity of bird and insect life noted for the rest of that survey. Taking these two aspects into account, the actual breeding bird figures for 2021 are comparable and in fact slightly lower than recorded in 2020. For example, 131 Meadow Pipits, 54 Wheatears and 40 Skylarks in 2020, compared to 125 Meadow Pipits, 28 Wheatears and 35 Skylarks in 2021. These differences and confounding variables highlight the importance of multiple surveys and longer-term datasets on which to be able to base comparisons.

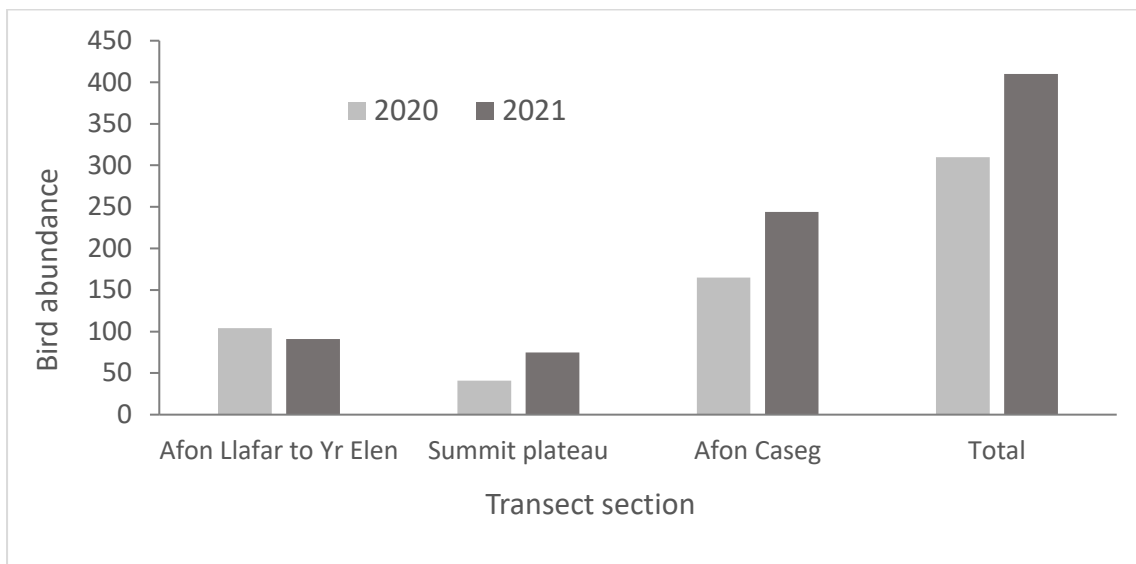


Figure 3. Bird abundance (i.e. number of individual birds recorded) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

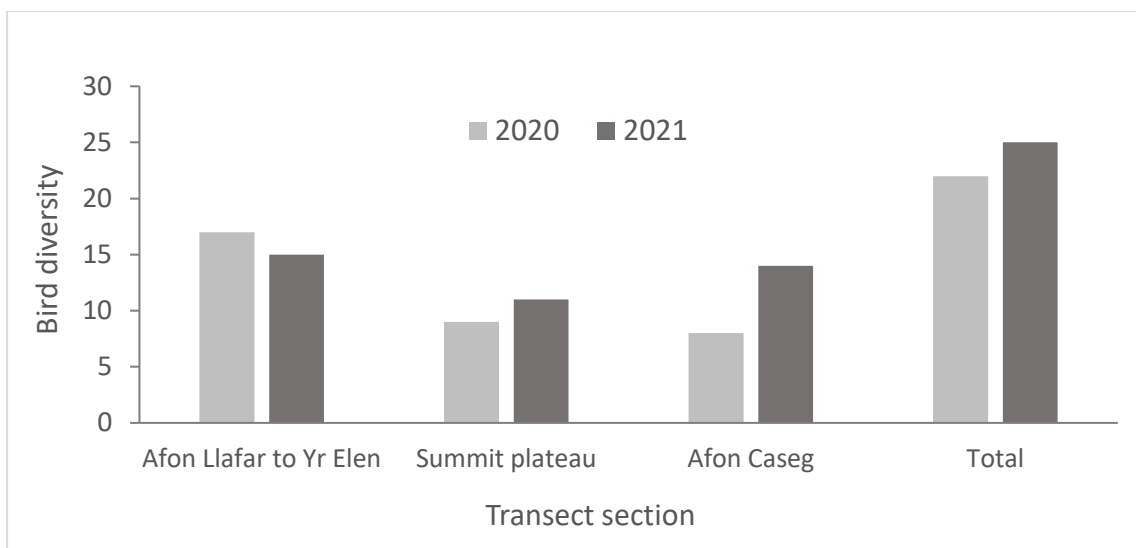


Figure 4. Bird diversity (i.e. total number of species) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

2.2 Vegetation

There was little evidence of significant changes to the vegetation communities along the pathways during this transect when compared to 2020. However, pathways were in general more worn and less vegetated than was noted in 2020 – this aspect is less pronounced than in other sites across Snowdonia due to the fact that most pathways along the Carneddau tend to be a bit more ‘spread out’ in nature and less concentrated along specific routes.

Dwarf Willow (*Salix repens*) was again noted among the rocky terrain north-west of the summit of Carnedd Llewelyn, and in abundance around the peak of Foel Grach. Parsley fern (*Cryptogramma crispa*) and Starry saxifrage (*Saxifraga stellaris*) was noted in abundance along some sections of the transect (such as on the ascent to Yr Elen from Foel Ganol), where these species were also seen in 2020. It was questioned in 2020 whether these species would have been present in these places under increased levels of path usage – the information gathered from 2021 seems to indicate they do indeed still exist in good numbers along these paths and are not heavily impacted by the path use.

2.3 Litter

There was very little evidence of litter and waste along the transect, with just three items recorded in total (see table 2 below). Two of these items were discarded banana peels: whilst many hikers and mountain users might consider these acceptable to discard given that they are organic items, banana peel can in fact take up to two years to break down in the environment, and so frequent littering of such items can lead to a build up across popular areas and paths such as in Eryri.

Table 2. Litter survey results for the Carneddau transect.

Site Name	Y Carneddau
Survey type	Litter survey
Surveyors	Ben Porter
Date(s) of survey	13/06/2021
Litter type	Quantity
Plastic wrapper	1
Banana peel	2
Total number of litter types	2
Total number of litter items	3

2.4 Other sightings and notes from the survey

Insects: particularly noteworthy was the presence of 150-200 Northern grass-veneer (*Catoptria furcatellus*) micro moths along the pathway ascending Yr Elen from Foel Ganol (point 2 on the map in figure 2) and along the ridge between Yr Elen to Carnedd Llewelyn. This is a scarce montane micro moth with a restricted distribution in the UK.

Other species seen included 65 Small Heath butterflies (*Coenonympha pamphilus*), 1 Green-veined White butterfly (*Pieris napi*), a Bilberry Bumblebee (*Bombus monticola*) and the micro moth species *Crambus lathoniellus* and *Bactra lancealana* in abundance in the marshy grassland around Afon Caseg and Afon Llafar.

Camping activity: three tents were noted during the survey visit to this area, located around the small lake below Yr Elen and Carnedd Llewelyn at SH 67955 65040.

Mountain bike usage: one electric mountain bike was recorded on the ridge line, travelling along the ridge between Carnedd Gwenllian and Carnedd Llewelyn along the main pathway.

2.5 Grazing levels

Whilst not specifically monitored during the surveys, the condition of habitats along the transect routes plays a significant role in dictating the abundance and diversity of plantlife, insect life and birdlife existing in these areas. It was noticeable that most areas along the transect route on Y Carneddau supported a much higher density of grazing than the other mountainous sites covered during the 2021 surveys; mainly that of sheep, but also of 30-50 Carneddau ponies between Foel Grach and Carnedd Gwenllian. The habitat throughout the transect route remained largely that of semi-improved grassland, with some flowering plants and flowering grasses in the valleys surrounding Afon Caseg and Afon Llafar. The more exposed summit plateau supported some moss communities of *Racomitrium lagunosum* amongst the shattered rock, with shorter grazed grassland otherwise dominating the habitat of this upland area.



Sheep and the upland habitat along the plateau near the summit of Carnedd Llewelyn.

2.6 Fixed-point pathway images to record vegetation conditions

For this year's report, images from 2020 (left hand column) are shown alongside those from 2021 (right hand column) in the same locations to allow for comparison.



Image locations: **top row** looking towards the summit of Carnedd Llewelyn on the summit plateau (**P1**); **middle row** on the approach to Foel Grach (**P2**) and bottom image between Foel Grach and Carnedd Llewelyn (**P3**), a new fixed-point site added during the 2021 surveys, for which there is no comparison image to 2020.

2.7 Images from the survey



Yr Wyddfa from Carnedd Llewelyn



Cottongrass and Yr Elen



Northern Grass-veneer (*Catoptria furcatellus*)



Male Northern Wheatear (*Oenanthe oenanthe*)