

Cader Idris



Site: Cader Idris National Nature Reserve

Dates of surveys: 19/06/2021 and 27/06/2021

Transect routes: Pony Path, Fox's track and Minffordd Path



A Ring Ouzel (*Turdus torquatus*) gathers food on the flanks of Mynydd Moel.

1. Survey details

Following the same routes set out in 2020, surveys covering Cader Idris were split into two main transects (see figure 1 below): one taking the Pony Path from the north side of Cader at Ty Nant, ascending along its western flank to the summit before returning back into the valley past Llyn y Gader and Llyn Gafr (carried out on 19 June 2021); the second transect took the Minffordd path up through the woodland near Minffordd and into Cwm Cau, before ascending over Craig Cau to Pen y Gader and then traversing across the summit ridge to Mynydd Moel before descending back into the Cwm Cau area (carried out on 27 June 2021).

During these surveys, observers recorded any birdlife seen during the transect (especially signs of breeding activity), mammal activity, litter abundance along footpaths, vegetation diversity along one section of the footpath and several fixed-point images along the pathways (see figure 2 for details of specific survey locations).

Weather conditions: on 19 June conditions were overcast (60% cloud cover clearing to 30% by end of survey), with low cloud and mist obscuring the summit. There was a 15-20mph south-westerly wind, with temperatures of 14°C – 18°C. On 27 June, skies were clearer (30-40% cloud cover), with low winds (<15mph) from the east and temperatures of 12°C – 15°C.

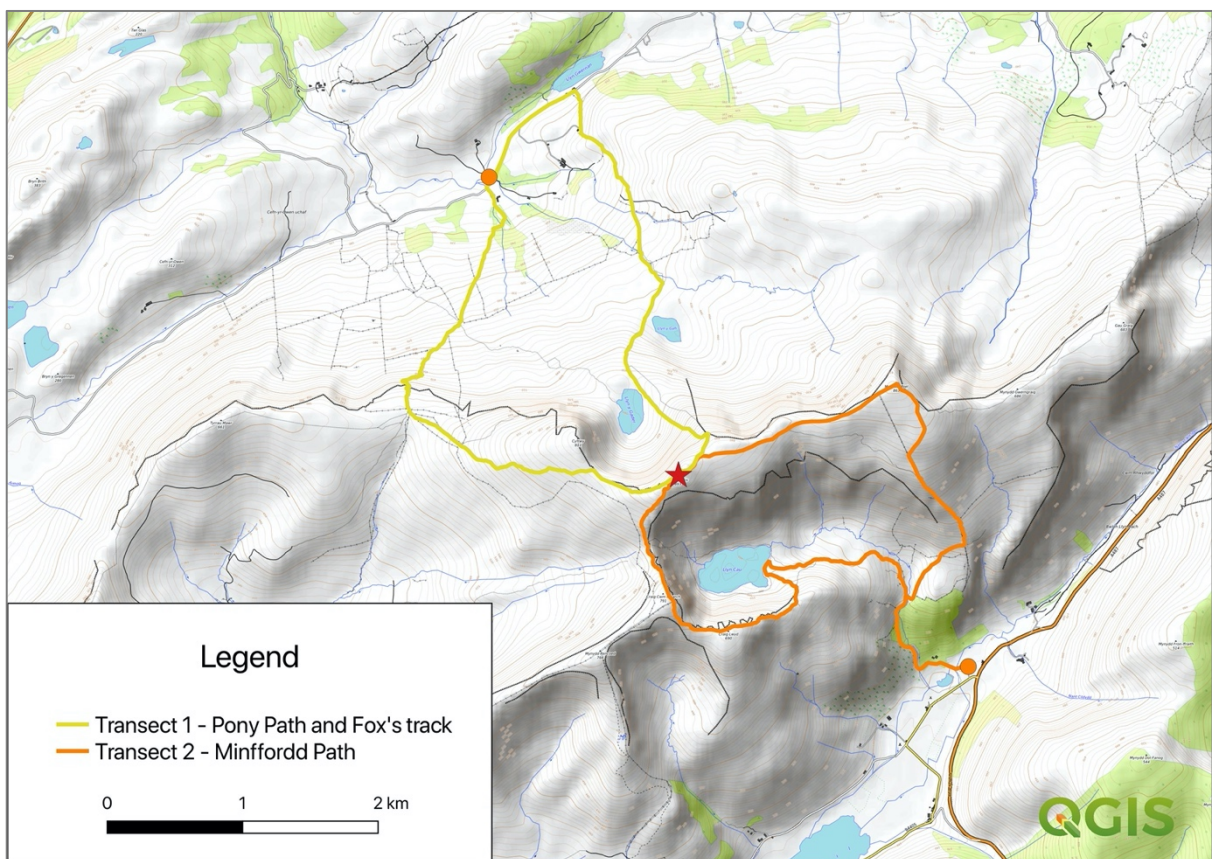


Figure 1. Transect routes for the Cader Idris surveys outlined in orange and yellow tracks; orange dots denote start and end of transect routes; and red star denotes the main summit of Penygadair.

2. Results

A summary of the results for each of the different surveys 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 on the maps are referred to in the results text using parentheses followed by the numbered code, for example '(P3)'.

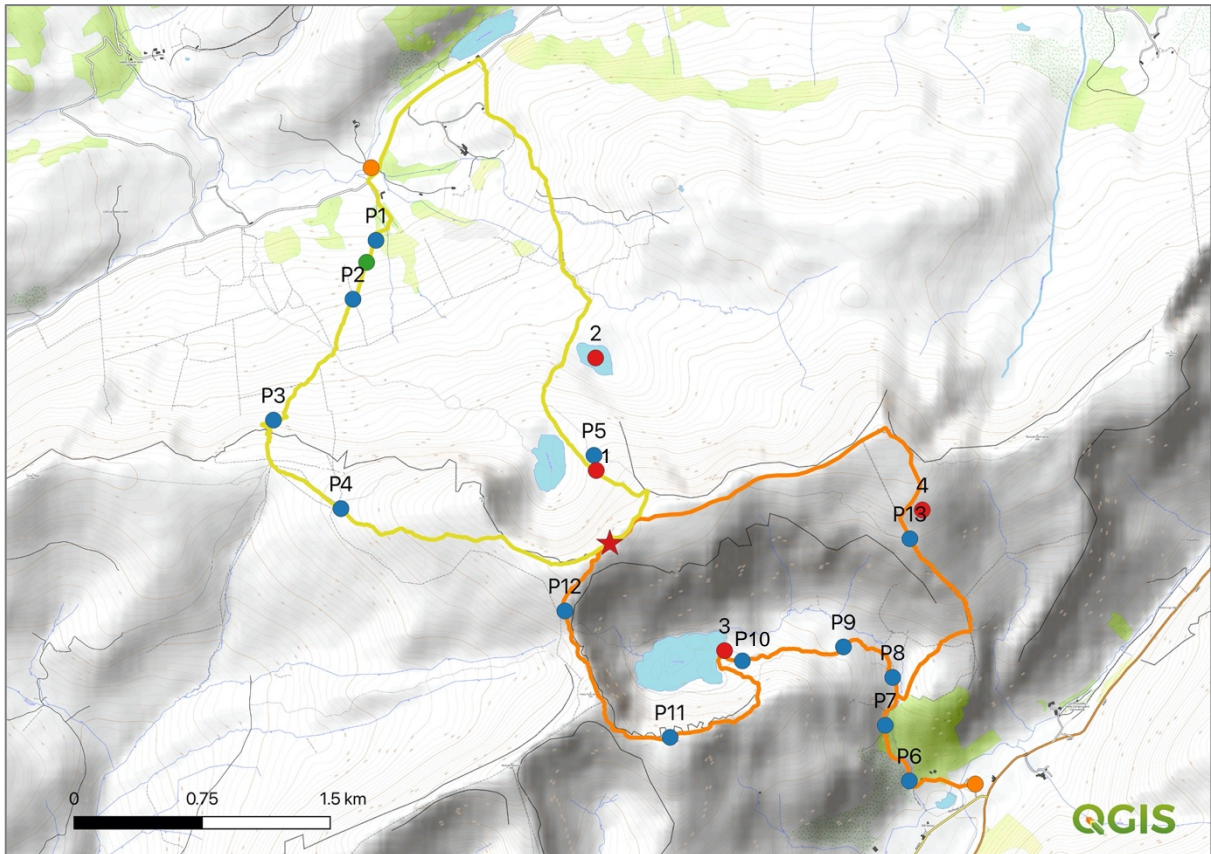
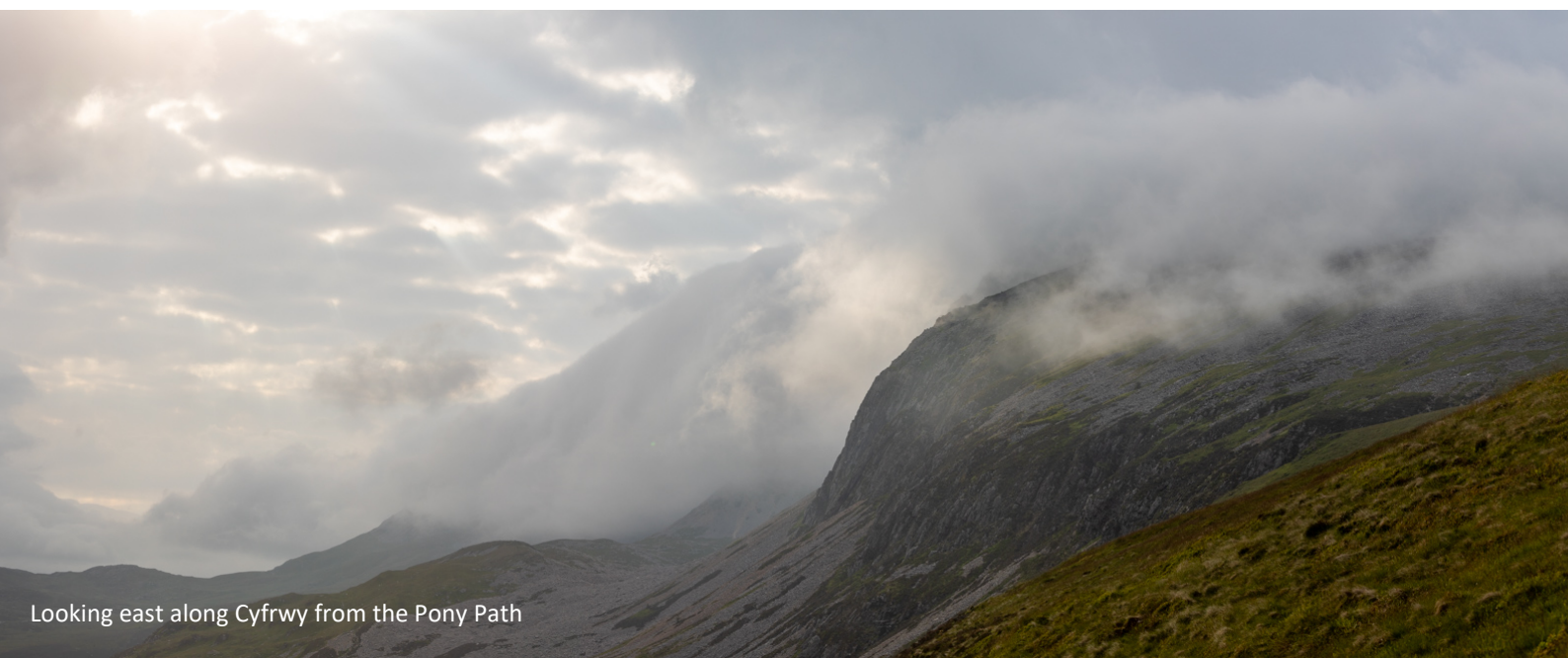


Figure 2: map of the Cader Idris survey area showing the two separate transect routes (yellow line = Pony Path and Fox's track on 19 June; orange line = Minffordd path on 27 June. **Orange** points are the start and end points of the surveys; **red** points are target notes referred to in the results summary below; **blue** points are fixed-point photography sites (see section below) and **green** points are vegetation survey locations.



Looking east along Cyfrwy from the Pony Path

2.1 Birdlife

A total of 35 bird species of 391 individuals were recorded across the transects during the survey (see table 1 below). The most numerous species recorded were Meadow pipits (177 in total), Wrens (43), Carrion Crows (14) and Skylarks (13) in the more upland regions, with Blue Tits (17) and Great Tits (16) the most numerous on the mountain's lower reaches in the ffridd and woodland on its flanks. More noteworthy sightings during the surveys included three Ring Ouzels (two of which were adult birds gathering food), a singing male Cuckoo, a Peregrine Falcon, a Red Kite and two singing Tree Pipits. See figure 3 below for the locations of some of these sightings.

A total of 16 species seen during the 2020 surveys were not recorded in 2021. These were Common Sandpiper, Goosander, Merlin, Grasshopper Warbler, Whinchat, Treecreeper, Nuthatch, Common Whitethroat, Pied Flycatcher, Goldcrest, Common Swift, Kestrel, Swallow, Osprey, Wood Warbler and Spotted Flycatcher. Eleven of these species were recorded with potential evidence of breeding activity (for example, a singing male on territory) during the 2020 surveys, although in very small numbers. Three species were seen during the 2021 surveys that were not recorded in 2020, namely that of Cuckoo, Robin and Great Spotted Woodpecker.

Some observations related to a comparison of key sightings between 2020 and 2021 are outlined below.

- **Birds nesting along paths:** there were noticeably fewer birds nesting close to the main pathways in 2021 compared to the 2020 surveys, when several common species (Meadow pipits, Wheatears and Stonechats) were observed to be nesting close to paths. This difference likely reflects both the overall lower abundance of birdlife recorded in 2021, the later breeding season, and also the greater disturbance along pathways by higher usage in 2021.
- **Ring Ouzels:** there were a total of three Ring Ouzels recorded across the surveys in 2021, including an alarm-calling adult above Llyn y Gadair (**point 1** on the map in figure 2), and two adults gathering food on the lower slopes of Mynydd Moel (**4**). This contrasts to a higher total of five individuals recorded during the 2020 surveys, which involved one bird flushed from near the main path at SH703131; one bird calling from the cliffs below Craig Cau at SH711120; two birds alarm calling from the cliffs to the north-east of Mynydd Moel at SH729136 and a single bird near the main footpath at SH731127.
- **Birds of prey:** very few raptors (two species in total) were seen during the 2021 surveys, compared to six species recorded in 2020. This included a single Peregrine Falcon along Craig Cau, and a Red Kite over the summit ridge. No Merlins were recorded during the two transects, a species which usually nests in this area and was seen in 2020.
- **Birds on Llyn Gafr:** no Common Sandpipers were recorded on this small lake (**point 2**) in 2021, where birds were noted as likely breeding in 2020. Just two Canada Geese were present, with no sign of Goosander (also recorded in 2020).

Table 1. Results from the breeding bird survey across the two transect routes surveyed on Cader Idris in 2021.

Site Name		Cader Idris				
Survey type		Breeding birds				
Surveyors		Ben Porter with the help of Dei Williams and Rachel Porter				
Dates of surveys		19/06/2021 and 27/06/2021				
Species	Scientific name	Transect or site				Evidence of breeding during visits
		Pony Path	Fox's track	Minffordd Path	Total number	
Meadow Pipit	<i>Anthus pratensis</i>	52	38	87	177	Singing males and alarm calling adults
Wren	<i>Troglodytes troglodytes</i>	7	8	28	43	Singing males
Blue Tit	<i>Cyanistes caeruleus</i>	7	1	9	17	Fledged young
Great Tit	<i>Parus major</i>	8	6	2	16	Singing males, fledged young
Carrion Crow	<i>Corvus corone</i>			14	14	
Northern Wheatear	<i>Oenanthe Oenanthe</i>	4	2	4	10	Alarm calling adults and adults with food
Stonechat	<i>Saxicola torquata</i>			2	2	Alarm calling adults
Skylark	<i>Alauda arvensis</i>	7		6	13	Singing males
Raven	<i>Corvus corax</i>		1	3	4	
Herring Gull	<i>Larus argentatus</i>		2	3	5	
Grey Wagtail	<i>Motacilla cinerea</i>	1	1	1	3	Singing males
Pied Wagtail	<i>Motacilla alba yarrellii</i>		4		4	
Ring Ouzel	<i>Turdus torquatus</i>		1	2	3	Alarm calling adult and pair gathering food
Buzzard	<i>Buteo buteo</i>		1		1	
Canada Goose	<i>Branta canadensis</i>		2		2	
Willow Warbler	<i>Phylloscopus trochilus</i>	5	5		10	Singing males
Blackcap	<i>Sylvia atricapilla</i>	3		3	6	Singing males
Blackbird	<i>Turdus merula</i>	1	2	1	4	
Cuckoo	<i>Cuculus canorus</i>	1			1	Singing male
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1			1	
Song Thrush	<i>Turdus philomelos</i>	1		1	2	
Coal Tit	<i>Periparus ater</i>	2		2	4	Singing male
Chaffinch	<i>Fringilla coelebs</i>	1	2	3	6	Singing males
Tree Pipit	<i>Anthus trivialis</i>	1		1	2	Singing male

Dunnock	<i>Prunella modularis</i>	1		1	2	
Mistle Thrush	<i>Turdus viscivorus</i>		3	2	5	
Lesser Redpoll	<i>Carduelis cabaret</i>		1		1	
Common Redstart	<i>Phoenicurus phoenicurus</i>		4		4	Singing male and alarm calling adults
Robin	<i>Erithacus rubecula</i>	3	3	9	15	Singing males and fledged young
Linnet	<i>Carduelis cannabina</i>		3		3	Singing males
Chiffchaff	<i>Phylloscopus collybita</i>	1			1	Singing male
Jay	<i>Garulus glandarulus</i>	1			1	
Siskin	<i>Spinus spinus</i>		1	3	4	
Red Kite	<i>Milvus milvus</i>		1		1	
Peregrine	<i>Falco peregrinus</i>			1	1	
House Martin	<i>Delichon urbica</i>			3	3	
Total number of species		20	22	24	35	
Total number		108	92	191	391	



Female Northern Wheatear (*Oenanthe oenanthe*) on the lower flanks of Cader Idris

In terms of the overall figures, the survey of this area highlighted noticeable differences to the abundance and diversity of birdlife compared to 2020 (see figures 3 and 4 below), as was noted for all of the other upland survey sites in 2021. The total of 391 individual birds is almost 14% fewer than the figure of 453 individual birds recorded in 2020. Similarly, the diversity of 35 different species is 14 species fewer than recorded in 2020. The reasons for this difference are discussed in greater detail in the overall summary for the 2021 surveys, but are more likely linked to markedly different weather conditions in 2021 compared to 2020; particularly the colder conditions and a delayed breeding season for many species in upland areas.

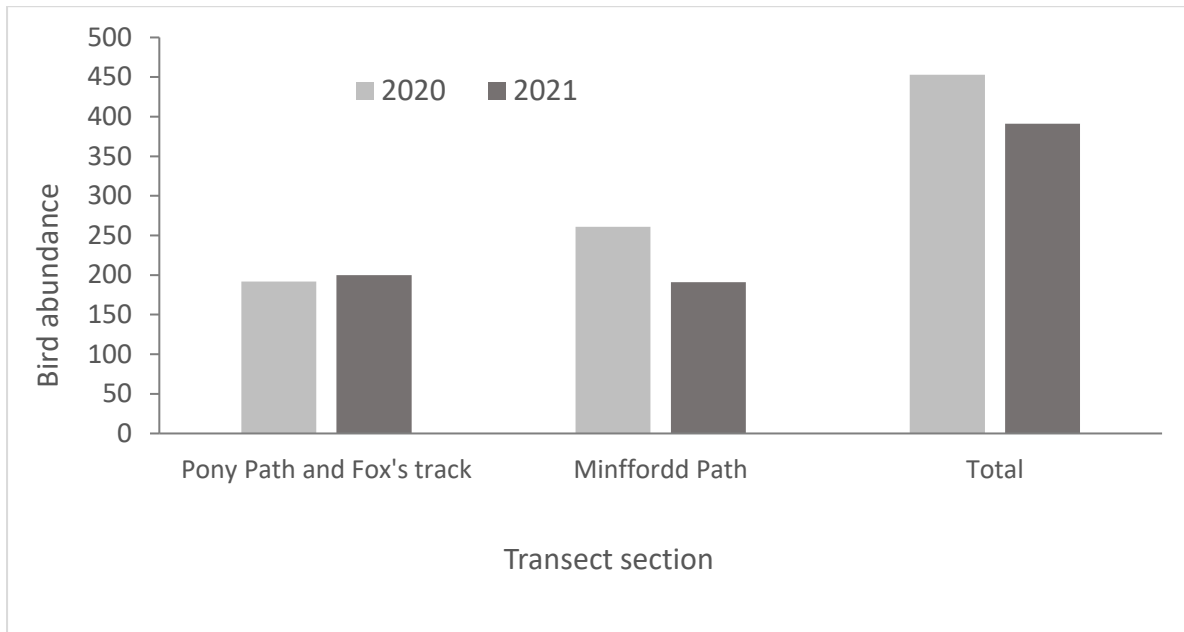


Figure 3. Bird abundance (i.e. number of individual birds recorded) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

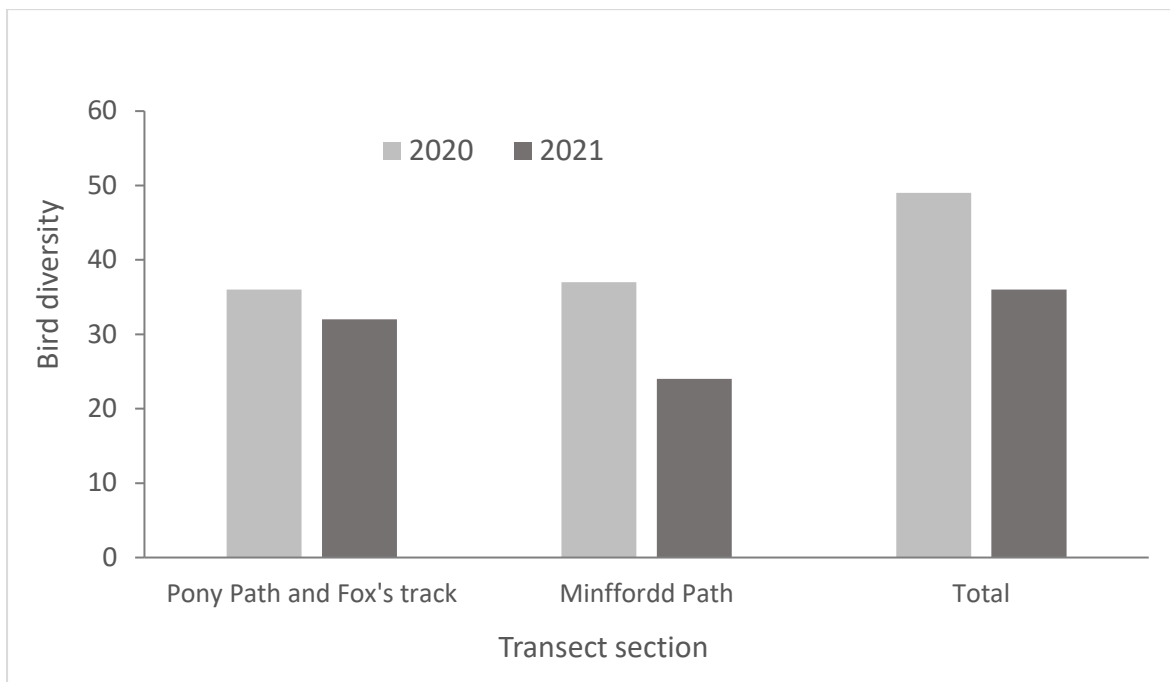


Figure 4. Bird diversity (i.e. total number of species) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

2.2 Vegetation

There was noticeably reduced growth of vegetation along and beside pathways during the 2021 transects compared to that of 2020. A lack of human footfall and a particularly luscious spring growth of vegetation in 2020 resulted in significant growth of vegetation between the cracks in the rocks and beside the track, with foxgloves and bracken and other small herbaceous plants up to knee height in the middle of the path in some areas. This was not observed in 2021, with trampling and a very slow spring growing season combining to provide much less verdant vegetative growth along pathways in all areas surveyed. The fixed-point images (section 2.6 below) give a visual comparison of several sites along the pathways to illustrate such differences.

The return to higher usage of pathways also revealed areas where trampling and some erosion was noticeable, such as along the edge of Llyn Cau (point 3) and on the ascent from Craig Cau to Penygadair (see images below). The latter of these sites is seeing a gradual widening of the ascent path as alternate routes are increasingly being used.



Above: trampling and erosion of the approach path to Llyn Cau (point 3 on the map in figure 2).



Widening footpath and erosion along Craig Cau (P12 on map in figure 2).



A variety of flowering plants were recorded along the transect, including species like this Starry Saxifrage (*Saxifraga stellaris*).

2.3 Litter

A total of 28 items of 8 different litter types were recorded across the transects surveyed in 2021 (see table 3 below). The most litter was recorded along the Minffordd path (21 items of seven types), with only seven items of two types along the Pony Path, and no items along the Fox's track. The commonest items recorded were sweet and plastic wrappers (eight items), discarded tissues (eight) and clothing items (five). A plastic bag full of plastic waste and some tissues was found along the edge of Cwm Cau (point point 3), which accounted for a significant proportion of the total for the Minffordd Path section.

This total of 28 items and eight types compares to five items and five different litter types found during the 2020 surveys, but is substantially lower than the totals found across the Ogwen Valley and Snowdon survey sites covered during 2021.

Table 2. Results of litter survey around Cader Idris.

Site Name	Cader Idris			
Survey type	Litter survey			
Surveyors	Ben Porter with help from Dei Williams and Rachel Porter			
Date(s) of survey	19/06/2021 and 27/06/2021			
Litter type	Quantity			
	Pony Path	Fox's track	Minffordd Path	Total
Clothing item	5			5
Sweet wrapper	2		6	8
Cotton bud plastic stick			1	1
Plastic sandwich box			1	1
Plastic bag			1	1
Tin can			2	2
Tissue			8	8
Cardboard box			2	2
Total number of litter types	2	0	7	8
Total number of litter items	7	0	21	28

2.4 Other sightings and notes from the survey

Insects: a variety of insect species were recorded during the surveys in 2021, including Bilberry Bumblebee (*Bombus monticola*), Brown-silver Line moth (*Petrophora chlorosata*), Small Heath butterflies (23 in total), Dark Green Fritillary butterfly (*Argynnis aglaja*), Common Heath moth (*Ematurga atomaria*) and the micro moths Garden Grass Veneer (*Chrysoteuchia culmella*) and *Clepsis synecionana*.



The common grassland micro moth Garden Grass Veneer (*Chrysoteuchia culmella*).

Camping activity: two tents were recorded on the southern edge of Cwm Cau on the survey visit of 27th June 2021, with evidence of recent camping activity nearby and one bag full of litter removed from the lakeside.

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. The majority of habitats along the upland areas of the transect routes were that of semi-natural grassland. Reduced grazing pressure along the lower section of the Pony Path and the area surrounding Llyn Cau and Nant Cadair was noticeable, with increased amounts of heathers, bilberry (*Vaccinum myrtillus*) and bracken (*Pteridium aquilinum*), an abundance of tall, flowering grasses such as Wavy Hair Grass (*Deschampsia flexuosa*), and a diversity of flowering herbaceous plants such as Heath Bedstraw (*Galium saxatile*), Wild thyme (*Thymus polytrichus*) and Tormentil (*Potentilla erecta*).



Cottongrass (*Eriophorum vaginatum*) on the lower part of the Pony Path on the approach to Cader Idris.



Foxgloves (*Digitalis purpurea*) and bracken (*Pteridium aquilinum*) along the Minffordd Path in Nant Cadair.

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** beginning of Pony Path (P1 on the map in figure 2); **middle row** ascending towards Cader Idris along the Pony Path (P2); **bottom row** mid-way along the Pony Path (P3).



Image locations: **top row** on the Pony Path along the ridge near Cyfrwy (P4); **middle row** at base of scree descent off Cader near Llyn y Gadair (P5); **bottom right** at beginning of Minffordd path in the woodland (P6).



Image locations: **top row** leaving the woodland on the Minffordd path in approach to Nant y Gader (P7); **middle row** on Minffordd path in Nant y Gader (P8); **bottom row** along Minffordd path to Llyn Cau (P9).

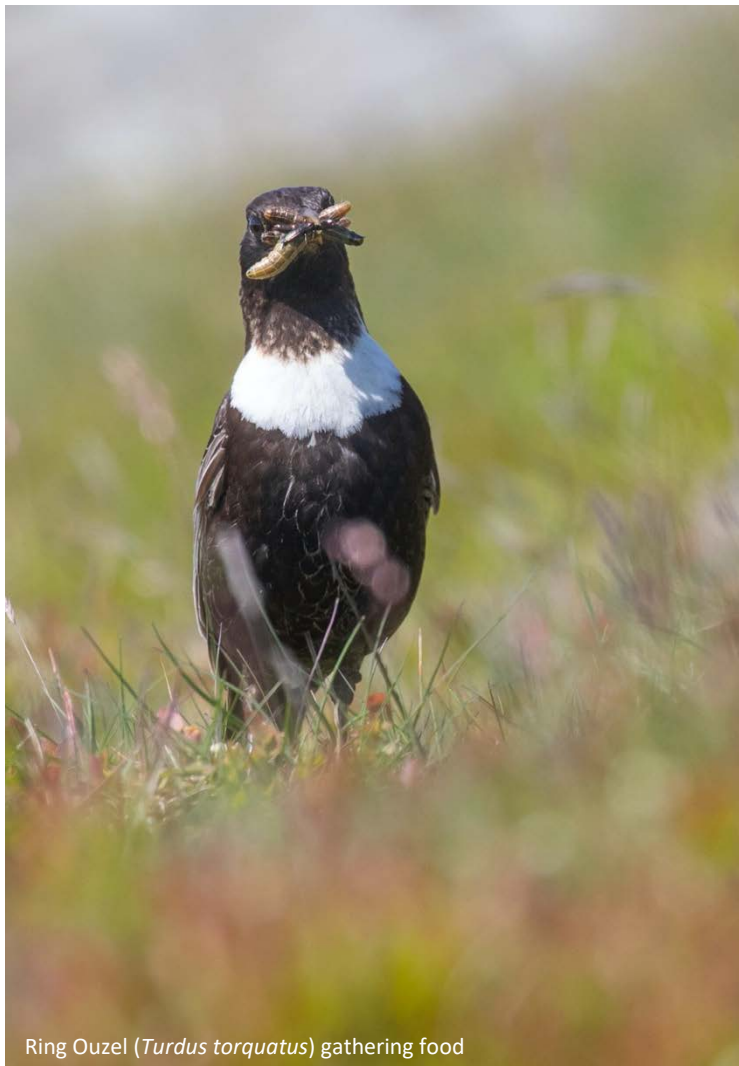


Image locations: **top row** on path approaching Llyn Cau (P10); **second row** on Minffordd path approaching to Craig Cau (P11); **third row** looking towards Craig Cau from the ascent to the summit of Cader (P12); **bottom row** on descent from Mynydd Moel towards Nant y Gader (P13).

2.7 Images from the survey



Looking east from Craig Cau over Llyn Cau



Ring Ouzel (*Turdus torquatus*) gathering food



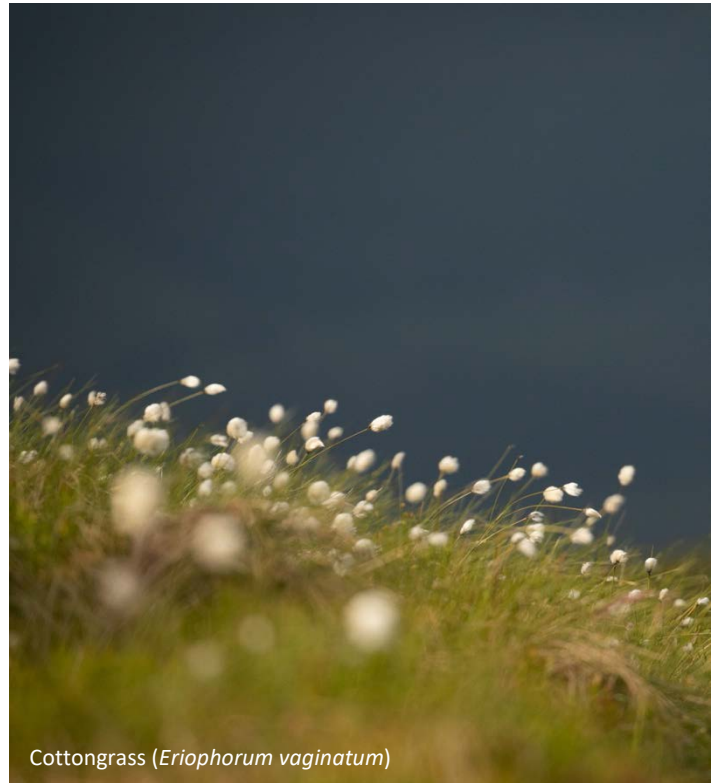
Female Northern Wheatear (*Oenanthe oenanthe*)



Looking north-west over Llyn y Gadair from Penygadair



Birch tree in Ystrad-gwyn



Cottongrass (*Eriophorum vaginatum*)