

Yr Wyddfa



Site: Yr Wyddfa (including Yr Wyddfa National Nature Reserve)

Dates of surveys: 08/06/2021 and 26/06/2021

Transect routes: Miner's track, Llanberis path, Watkin path and Rhyd Ddu path



Moss Campion (*Silene acaulis*) along the Miner's track above Glaslyn.

1. Survey details

The 2021 surveys on Yr Wyddfa were divided into two visits: one to cover the Miner's track and Llanberis path (on 8 June 2021) and the other to cover the Cwm Llan area by taking the Watkin path to the summit of Yr Wyddfa and then the Rhyd Ddu ridge path along to Bwlch Cwm Llan and back into the cwm (on 26 June 2021). See the map below (figure 1) for a more detailed overview of the exact routes.

As outlined in the project methodology, this survey involved noting down any birdlife seen during the transect (especially signs of breeding activity), any mammal activity, litter abundance along footpaths, vegetation condition at several points and fixed-point imagery.

Weather conditions: on 8 June there were calm winds from the south-west (15mph), temperatures of 10°C on the mountain summit, and a mixture of clear, sunny skies at lower altitude, with low cloud and mist obscuring the summit. On 26 June there was a brisk east wind (25mph), a low cloud base over the summit but clearer skies at lower levels, and temperatures of 10°C – 16°C.

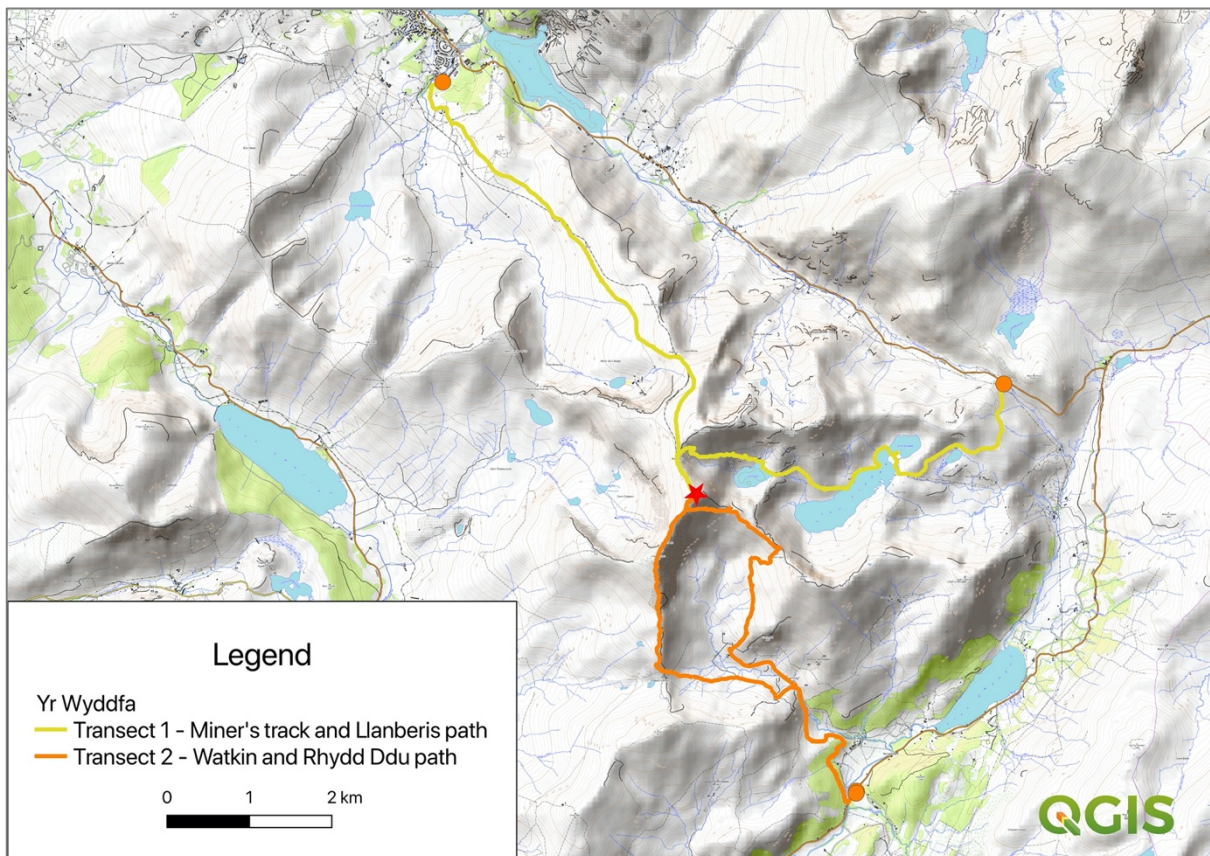
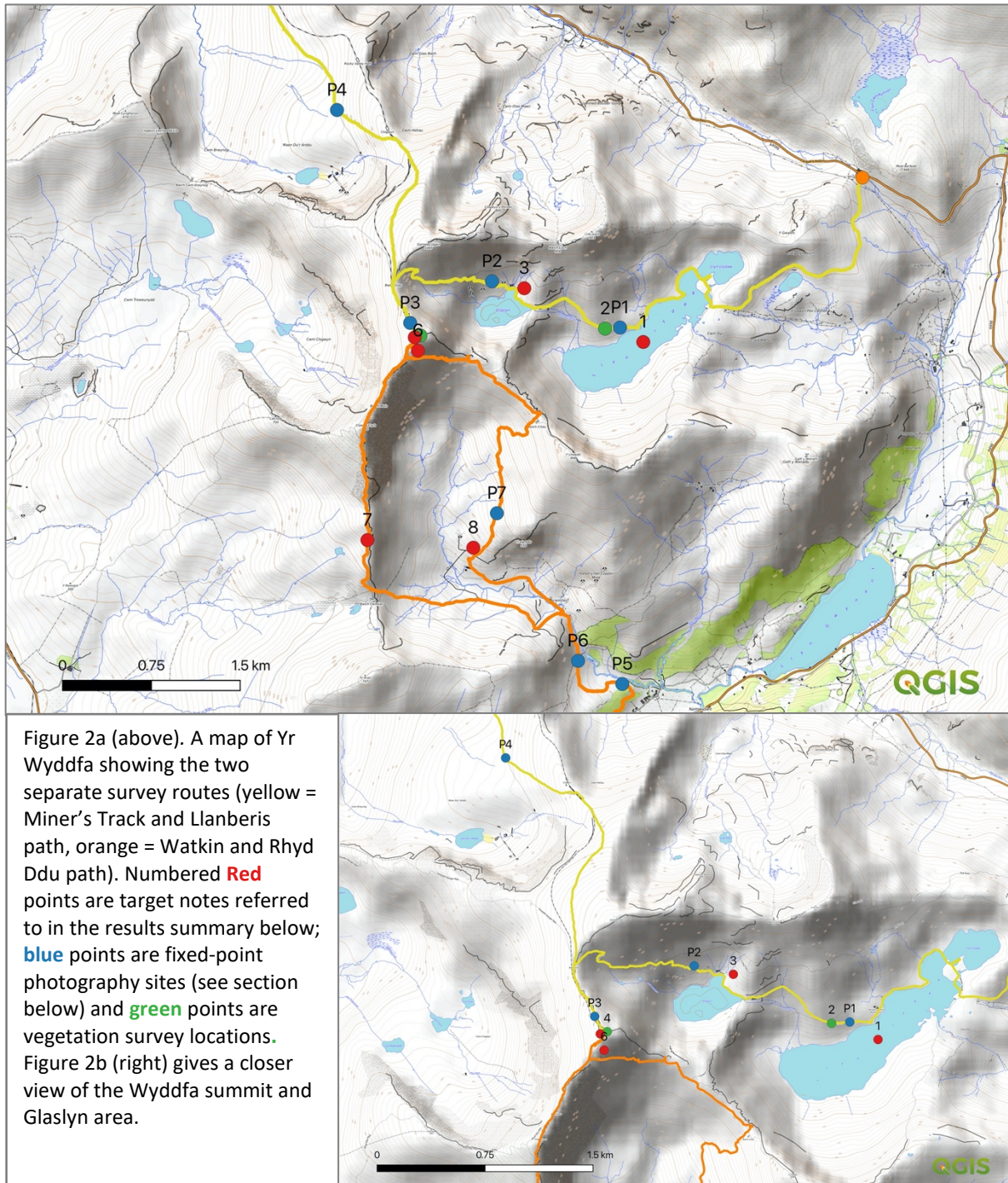


Figure 1. Transect routes for Yr Wyddfa surveys outlined in orange and yellow tracks; orange dots denote start and end of transect routes; red star denotes Yr Wyddfa summit.

2. Results

A summary of the results for each different 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)'.



2.1 Birdlife

A total of 30 different bird species and 391 individual birds were recorded across the different transect sections of Yr Wyddfa over the two survey visits (see table 1 below). The most abundant species recorded were Meadow Pipits (a total of 170 individuals), Wrens (48 individuals), Carrion Crows (24 individuals) and Northern Wheatears (23 individuals). More noteworthy sightings included six Ring Ouzels spread across the survey area (several of which showed indications of breeding activity), a Goosander on Llyn Llydaw and four Common Sandpipers on Llyn Llydaw.

A total of eleven species recorded during the 2020 surveys were not seen in 2021. These included Common Swift, Cuckoo, Canada Goose, Chough and Dipper in the higher elevation areas, and Pied Flycatcher, Bullfinch, Spotted Flycatcher, House Sparrow, Nuthatch and Siskin in the woodland area of Coed Parc Hafod-y-Ilan. Just one species not recorded in 2020 was seen in 2021: a Goosander on Llyn Llydaw.

Whilst no direct impacts were observed regarding the effects of increased human visitation on the birdlife of the area, some general observations were recorded and are summarised below:

- **Common Sandpipers** on Llyn Llydaw (**point 1** on the map in figure 2): in 2020, a total of eight individuals were observed on this lake, involving at least three pairs likely to be breeding. Only four individuals of two pairs were recorded in 2021, which could indicate a reduction due to disturbance, given that these species are prone to disturbance from people and lakes such as this are popular sites for people to gather around.
- **Herring Gulls** around Yr Wyddfa summit. It was thought that 2020 would see a reduction in the numbers of this generalist scavenger, given that birds gathering around the summit are reliant mostly on the food waste and discards from visitors. Indeed, only 16 birds were recorded around the summit during the 2020 surveys. Given the return to more 'normal' numbers of people visiting the mountain in 2021, it was expected that Herring Gull numbers would have rebounded as scrabs and discarded waste increased. However, only 13 birds (maximum count) were recorded in 2021, even fewer than seen in 2020.
- **Ring Ouzel territories**: this scarce upland breeding bird is in decline across its range in the UK, and Snowdonia is an important stronghold for many pairs. This year, four main sites were identified where birds were present, demonstrating breeding activity at three of these. The sites included Glaslyn (**point 3** in figure 2); south of Yr Wyddfa summit (**6**), along the Rhyd Ddu ridge (**7**) and in Cwm Llan (**8**). Several of these birds were very close to main footpaths and did not demonstrate visible disturbance from the traffic of people on the pathways. In 2020, only three Ring Ouzels were seen across this survey area during the survey visits: one singing male on the cliffs below the summit and above Glaslyn, another bird gathering food (and therefore potentially breeding) near the Llanberis path near the halfway house and another on the scree near the summit at the top of the Watkin path.
- **Nesting birds along pathways**: in 2020, a particularly noteworthy effect of lockdown was the presence of many nests and breeding birds close to main pathways. This was due partly to the lack of path usage, and also due to the profuse growth of vegetation near paths usually compacted by human footfall, allowing more locations for birds to nest. Few birds were recorded nesting close to pathways in 2021. This absence, however, could reflect the fact that the abundance and diversity of birdlife over all upland survey locations in 2021 was lower than 2020 – most likely linked to the colder spring and delayed breeding season.

Table 1. Breeding bird survey results for Yr Wyddfa transects.

Site Name		Yr Wyddfa					
Survey type		Breeding birds					
Surveyors		Ben Porter with help from Billy Dykes					
Dates of surveys		08/06/2021 (transect 1) and 26/06/2021 (transect 2)					
Species	Scientific name	Transect or site					Evidence of breeding during visits
		Miner's Path	Llanberis Path	Watkin Path and Cwm Llan	Coed Parc Hadod-y-llan	Total number	
Meadow Pipit	<i>Anthus pratensis</i>	53	29	88		170	Singing males, pairs alarm calling and one fledged juvenile
Northern Wheatear	<i>Oenanthe Oenanthe</i>	8	2	13		23	Pairs on territory, adults with food and two fledged young
Wren	<i>Troglodytes troglodytes</i>	11	1	27	9	48	Singing males
Stonechat	<i>Saxicola torquata</i>	2		4		6	Singing males, pairs on territory and carrying food
Skylark	<i>Alauda arvensis</i>		11			11	Singing males
Raven	<i>Corus corax</i>	3	3	4		10	
Pied Wagtail	<i>Motacilla alba yarrellii</i>	5		4		9	Pairs in nesting habitat
Herring Gull	<i>Larus argentatus</i>	13	3	2		18	
Common Sandpiper	<i>Actitis hypoleucos</i>	4				4	Two pairs on Llyn Llydaw alarm calling
Grey Wagtail	<i>Motacilla cinerea</i>	4		3		7	Singing males
Ring Ouzel	<i>Turdus torquatus</i>	2	1	3		6	Pairs gathering food (Glaslyn) and alarm calling (Cwm Llan)
Carrion Crow	<i>Corvus corone</i>	3	4	17		24	Fledged young and pairs in nesting habitat
Goosander	<i>Mergus merganser</i>	1				1	
Mistle Thrush	<i>Turdus viscivorus</i>		1	2	2	5	Pair alarm calling
Kestrel	<i>Falco tinnunculus</i>	1				1	
Buzzard	<i>Buteo buteo</i>			1	1	2	
Robin	<i>Erithacus rubecula</i>				6	6	Alarm calling adults

Duncock	<i>Prunella modularis</i>				1	1	
Coal Tit	<i>Periparus ater</i>				1	1	Singing male
Willow Warbler	<i>Phylloscopus trochilus</i>			4	2	6	Singing males and alarm calling adults
Blue Tit	<i>Cyanistes caeruleus</i>				7	7	Fledged young
Great Tit	<i>Parus major</i>			1	3	4	
Treecreeper	<i>Certhia familiaris</i>				6	6	Singing males
Blackcap	<i>Sylvia atricapilla</i>				1	1	Female with nest
Song Thrush	<i>Turdus philomelos</i>				6	6	Two fledged juveniles
Goldcrest	<i>Regulus regulus</i>				1	1	Singing male
Blackbird	<i>Turdus merula</i>				2	2	Alarm calling
Tree Pipit	<i>Anthus trivialis</i>			3		3	Singing male and adults with food
Long-tailed Tit	<i>Aegithalos caudatus</i>				1	1	
Great Spotted Woodpecker	<i>Dendrocopos major</i>				1	1	
Total number of species		13	9	15	16	30	
Total number of birds		110	55	176	50	391	



Male Stonechat (*Saxicola torquata*) along the Watkin Path

The two figures below provide a broad comparison between the breeding bird survey results of 2020 and 2021, allowing the differences in abundance (figure 3) and diversity (figure 4) to be assessed.

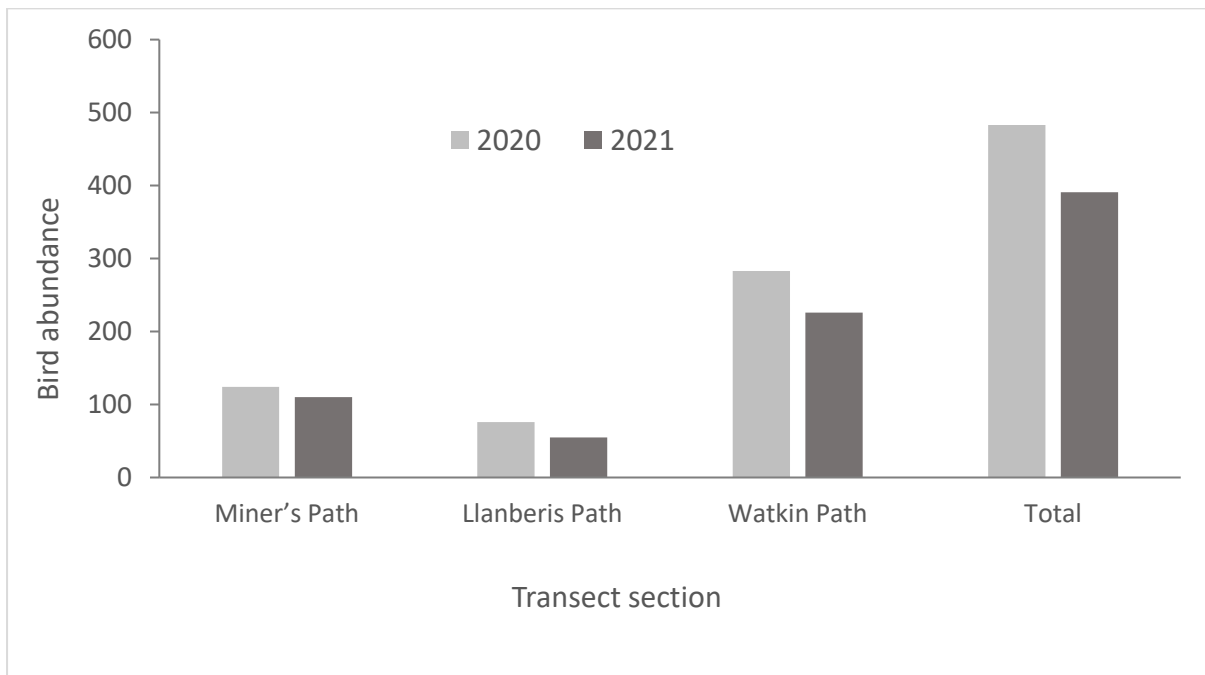


Figure 3. Bird abundance (i.e. number of individual birds recorded) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

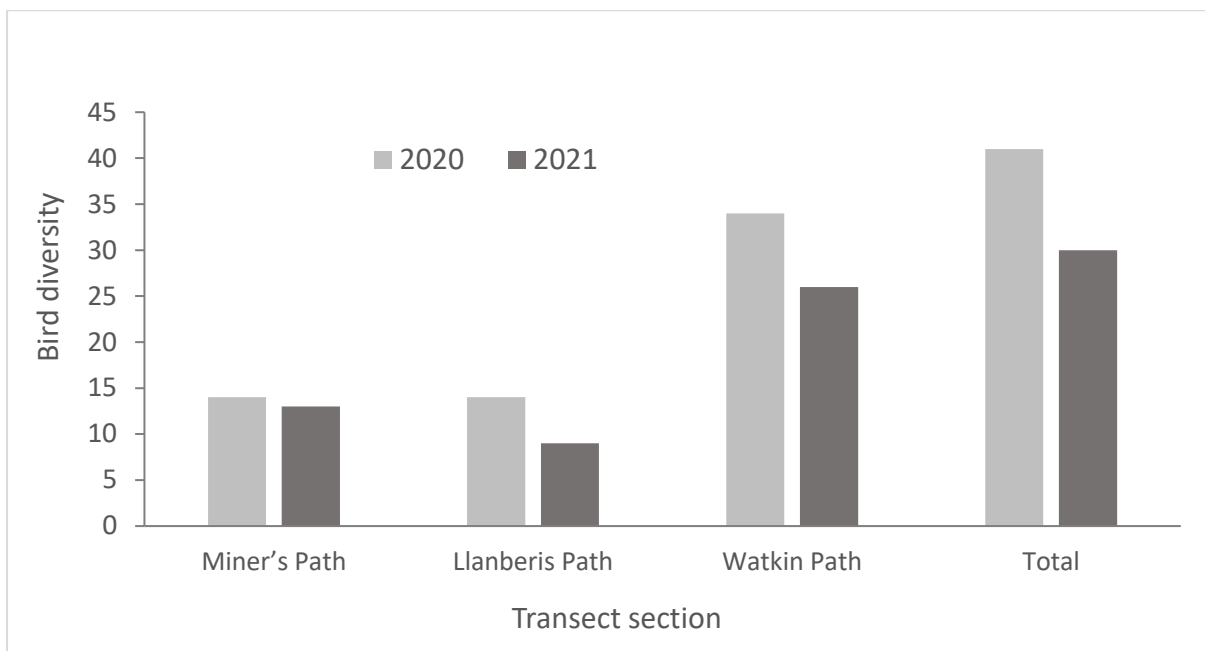


Figure 4. Bird diversity (i.e. total number of species) along the main transect routes in 2020 (pale grey) and 2021 (darker grey).

2.2 Vegetation

Vegetation along the pathways was less noticeable compared to the abundant growth which emerged along many of the paths during the spring of 2020, although this difference was subtle and could also be influenced by the delayed growing season due to cold weather conditions in spring 2021. The fixed-point images (section 2.6 below) give a visual comparison of several sites along the pathways to illustrate any differences. There were some sections of the paths (particularly along parts of the Rhyd Ddu and Llanberis paths) where a lack of hardcore rock delineating paths meant that paths were widened by alternate routes being walked on the verges, causing more erosion than is perhaps necessary, and impacting more vegetation communities through the widening of these pathways. The sides of some areas surrounding the Afon Cwm Llan Waterfalls were subject to much compaction and usage by many people visiting this increasingly popular site. Several shortcut pathways were visible leading off the main Watkin Path, leading down to the river and showing signs of significant usage (see image below).



A section of the Rhyd Ddu path where the path is widening and cutting into the surrounding vegetation.



A pathway leading off the main Watkin Path at SH 62470 51401 towards Afon Cwm Llan waterfalls.

A repeat of the vegetation survey around the summit cairn (table 2 below; point 4 on the map in figure 2b) revealed 15 different plant species present, which is the same as that recorded last year. Due to the rocky nature of the summit plateau, the existence of plantlife is limited, and therefore compaction and degradation due to the pressure of footfall may be negated by this aspect of the site's geology to some degree.

Table 2. Results of a summit vegetation survey on Yr Wyddfa summit (point 4 on the map in figure 2b)

Site name	Yr Wyddfa	
Survey type	Summit vegetation survey (10m radius around summit)	
Surveyors	Ben Porter and Billy Dykes	
Date(s) of survey	08/06/2021	
Species	Scientific name	DAFOR score
English Stonecrop	<i>Sedum annuum</i>	Frequent
Mossy Saxifrage	<i>Saxifraga bryoides</i>	Frequent
Moss sp.	<i>Polytrichum</i> sp.	Frequent
Mouse-ear sp.	<i>Cerastium</i> sp.	Occasional
Heath Bedstraw	<i>Gallium saxatile</i>	Occasional
Juniper Haircap	<i>Polytrichum juniperinum/piliferum</i>	Frequent
Sheep's Fescue	<i>Festuca ovina</i>	Frequent
Annual Meadow Grass	<i>Poa annua</i>	Occasional
Creeping Buttercup	<i>Ranunculus acris</i>	Rare
Wild Thyme	<i>Thymus polytrichus</i>	Rare
Sorrell sp.	<i>Rumex</i> sp.	Occasional
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	Frequent
Parsley fern	<i>Cryptogramma crispa</i>	Occasional
Dog Lichen	<i>Peltigera</i> sp.	Occasional
Woolly Fringe Moss	<i>Racomitrium lanuginosum</i>	Frequent
Total number of species	15	



Moss Campion (*Silene acaulis*) flowers above Glaslyn

2.3 Litter

A total of 299 litter items of 18 different types were recorded across the main pathways and survey areas covered in this study (see table 3 below). The summit of Yr Wyddfa was by far the worst site for the presence of litter, with a total of 165 different items of nine types recorded, particularly around the sides of the Café building, which was not operating at the time of the surveys. The commonest litter items recorded around the summit area included cigarette butts (55), sweet wrappers (25), plastic bottles (20), plastic packets (16) and pieces of tin foil (14).

Along the main pathways, the Miner's track (which included the edges of Llyn Llydaw) was the worst path for litter, with 67 items found; 26 litter items were found along the Watkin path, 24 along the Llanberis path, and 17 items were present around the edge of Llyn Glaslyn (see table 4).

The total number of litter items found during the 2021 surveys are far greater than those in 2020: 299 compared to 75 respectively. However, 22 different types of litter were found in 2020, compared to 18 in 2021. Plastic and sweet wrapper pieces were the most abundant litter items in both years, but very few of the items discovered in abundance in 2021 were present during the 2020 lockdown period, illustrating the real issue of littering even with the continued clearing of volunteer litter pick groups and individuals. For example, two facemasks were found in 2021 (none in 2020) and 82 cigarette butts were found in 2021 (none in 2020).

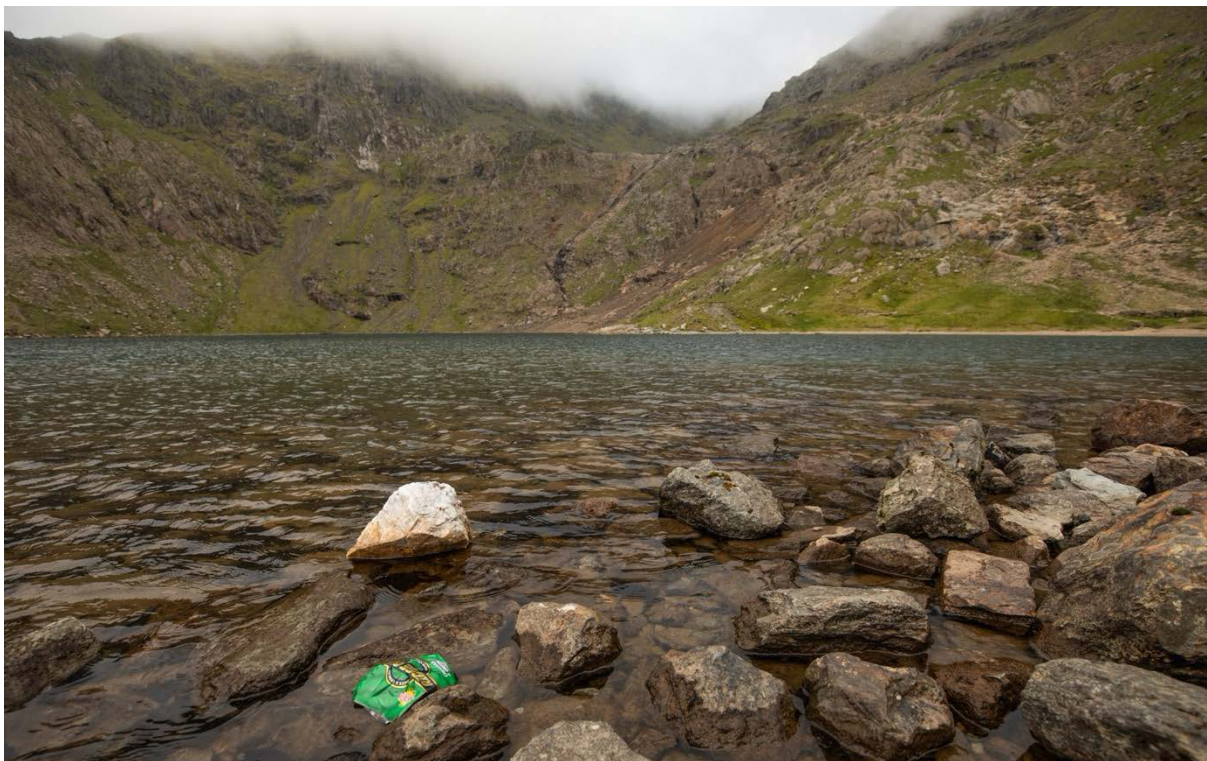
Table 3. Results of the litter survey along the three different routes on Yr Wyddfa

Site Name	Yr Wyddfa					
Survey type	Litter survey					
Surveyors	Ben Porter with help from Billy Dykes					
Date(s) of survey	08/06/2021 and 26/06/2021					
Litter type	Quantity					
	Miner's track	Llanberis path	Watkin Path & Cwm Llan	Y Wyddfa summit	Glaslyn	Total
Cigarette butt	21	5		55	1	82
Plastic packet			4	16		20
Sweet wrapper	23	5	9	25	5	67
Plastic bottle	7	5	6	20	3	41
Plastic bag	4	1		8		13
Crisp packet					1	1
Bottle cap		1				1
Dog poo bag		1			1	2
Face mask	1	1				2
Glass drinks bottle	2				1	3
Hard plastic pieces	1		2			3
Clothing items	1	1	2			4
Plastic tub	1			4		1
Tin can	1		2	10		13
Tin foil pieces	1	2		14		17

Banana peel	4	2		13	4	23
Cigarette packet					1	1
Earphone cable			1			1
Total number of litter types	12	10	7	9	8	18
Total number of litter items	67	24	26	165	17	299



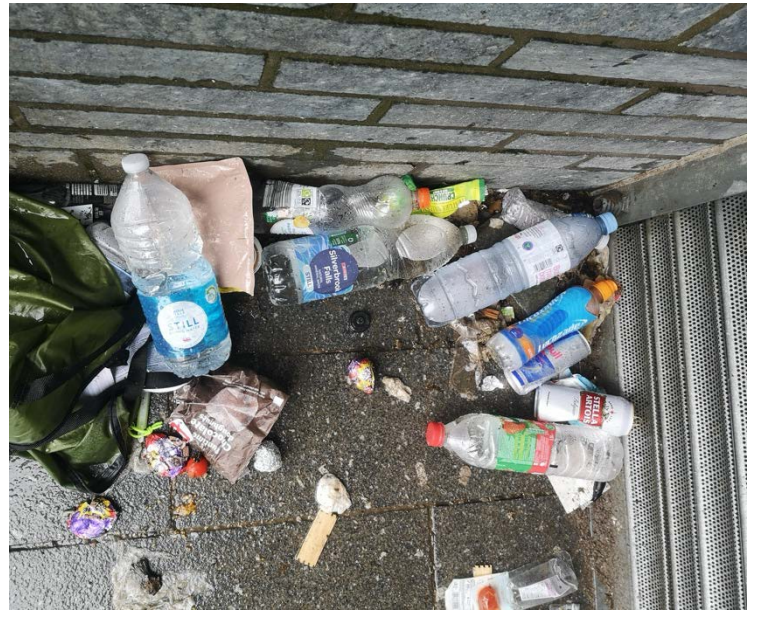
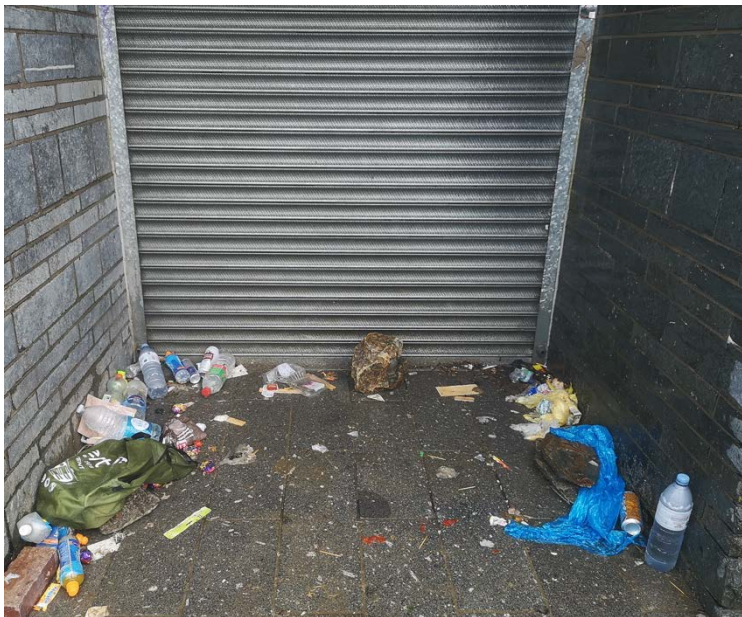
A plastic bag floating in Llyn Llydaw.



A crisp packet along the shore of Glaslyn.



Above left: Plastic bag along the shore of Llyn Llydaw. Above right: plastic bottle on Miner's track.



Above: litter and waste left in the side of the summit café (recorded on 26 June 2021).



Above: cigarette butts were particularly numerous in the 2021 surveys.

2.4 Other sightings and notes from the survey

Feral mountain goats: a total of 12 Feral goats were recorded during the surveys, located on the slopes above Llyn Llydaw. This compares to 35 seen across the area in 2020.

Starry and Mossy Saxifrage (*Saxifraga stellaris* and *Saxifraga bryoides*): it seemed to be a particularly good year for the flowering of these Arctic-Alpine plants, with hundreds of plants visible alongside the path of the Miner's track in particular.

Insects: due to the poorer weather conditions during the 2021 surveys (colder temperatures, stronger winds and overcast skies), few insects were recorded during the survey visits. This absence of insect life is likely also linked to the delayed season due to a cold spring, and subsequently likely links to the lower abundance and diversity of birdlife recorded during the survey period.

Camping activity: there were no tents or evidence of camping activity noted along the transects covered over the two survey visits to this area.

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. Across the majority of the survey routes, the habitat was largely that of semi-natural grassland grazed by sheep, with lighter grazing levels noted between Pen-y-Pass and Glaslyn along the Miner's track, where flowering plants, flowering grasses, heather and bilberry were present. The Cwm Llan area and land either side of the Llanberis path seemed to support higher levels of sheep grazing and less diversity of plantlife. The image below was taken near Llyn Llydaw at SH 63533 54654, where a fenced enclosure excluding grazing pressure illustrates the effect of reduced grazing pressure in these area.



An image of a fenced enclosure near Llyn Llydaw at SH 63533 54654.

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 (numbers referencing the map in Fig. 2 at beginning of report): **top row** above Llyn Llydaw on Miner's track (**P1**); **middle row** above Glaslyn looking towards Lliwedd (**P2**) and **bottom row** looking along the Llanberis path c. 100 metres from the summit (**P3**).



Image locations (numbers referencing the map in Fig. 2 at beginning of report): **top row** half-way along the Llanberis path (P4); **middle row** beginning of the Watkin path in Cwm Llan (P5); **bottom row** Watkin path on approach to Bwlch Ciliau (P6).

2.7 Images from the survey



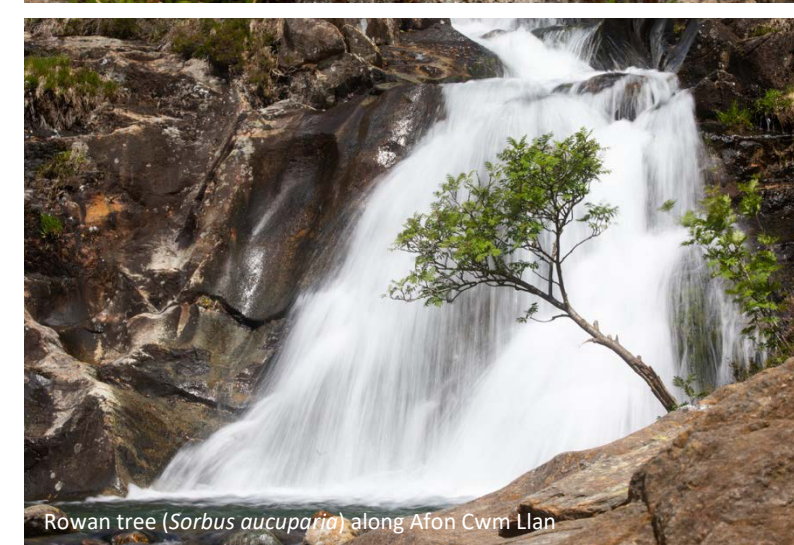
Raven (*Corvus corax*) near Llyn Llydaw



Moss Campion (*Silene acaulis*)



Starry Saxifrage (*Saxifraga stellaris*) near Glaslyn



Rowan tree (*Sorbus aucuparia*) along Afon Cwm Llan



Alpine Clubmoss (*Diphasiastrum alpinum*) near Rhyd Ddu path