



**WHINLATTER FOREST
MOUNTAIN BIKE TRAIL PROJECT**

ORNITHOLOGICAL SURVEY 2004

**A BREEDING BIRD SURVEY OF THE
UPLAND FOREST EDGE
AND ADJACENT FOREST ENTERPRISE
AGRICULTURAL UPLAND**

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SANDERSON GILL, WHINLATTER

Whinlatter Forest Mountain Bike Trail Project 2004

Ornithological Survey Checklist.

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Maps supplied – available to view at NW England FD Offices, Grizedale

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ORNITHOLOGICAL SURVEY 2004

**A BREEDING BIRD SURVEY OF THE UPLAND FOREST EDGE AND
ADJACENT FOREST ENTERPRISE AGRICULTURAL UPLAND**

The Brief

Following a meeting with the Area Forest District Manager, Recreational Manager, and Recreational Ranger, at Whinlatter in February 2004, I was commissioned to carry out a breeding bird survey of the forest edge and adjacent Forest Enterprise upland.

Survey effort was targeted at the following species:

Merlin

Red Grouse

Ring Ouzel

Skylark

These species were chosen due to conservation concerns countywide and/or nationally. See enclosed booklet, '*The population status of birds in the UK, Birds of conservation concern: 2002- 2007*' which gives details of the conservation status of British birds.

1. SPECIES STATUS

1.1 Merlin – Falco columbarius

Conservation status

Amber List species of medium conservation concern – Amber listing criteria due to historical decline – Hdrec

[1.1.1] Due to Historical decline during 1800-1995, but recovering; population size has more than doubled over last 25 years. Merlin previously was a red list species of high conservation concern. British population 1,300 pairs.

[1.1.2] *The Breeding Birds of Cumbria – A tetrad atlas 1997-2001* gives a population of around 50 pairs for Cumbria. Prior to 1980 breeding had been recorded at 115 locations in Cumbria. The biggest declines in the county over the last sixty years have occurred in Lakeland. Significant loss of heather moorland over this period is the major factor, traditionally this being the preferred nesting habitat. In Lakeland many former haunts remain unoccupied, however there is some room for optimism with some traditional sites having been re-occupied recently.

Merlin is a schedule 1 species and is accordingly afforded the highest conservation protection under the *Wildlife and Countryside Act of 1981* making it an offence to knowingly disturb a bird at the nest.

Human disturbance in such a busy area as the Lake District could have an impact on re-colonisation; it could also be a factor in nest failure or desertion.

[1.1.3] Ecology

Merlin nest on the ground in heather, and increasingly in old crows' nests either in conifer plantations or trees such as hawthorn. They require open ground, preferably heather moorland where they hunt small passerines such as Meadow Pipit. Birds return to the upland breeding grounds in early April. Displaying birds at this time of year are particularly noticeable. A clutch of 3-5 eggs is laid in late April/early May and young normally fledge in early to mid July.

1.2 Red Grouse Lagopus lagopus a subspecies of Willow Ptarmigan

Conservation status

Amber list species of medium conservation concern -- Amber listing criteria due to a moderate decline – BdMp

Moderate (25-49%) decline in UK breeding population over last 25 years

[1.2.1] *The Breeding Birds of Cumbria – A tetrad atlas 1997-2001* shows a distinct contraction of distributional range over the last 30 years in Cumbria, with the majority of the population of this game bird not surprisingly to be found on the Pennine Grouse Moors.

[1.2.2] The situation in Lakeland is worrying, with several scattered and isolated populations having died out due to loss of habitat over the last forty years.

Some of the remaining peripheral Lakeland sites run a very high risk of going the same way. Red Grouse numbers at many of these sites are at dangerously low levels. It is only when positive management is carried out to improve habitat for Red Grouse that populations stand a chance of being safeguarded.

[1.2.3] Ecology

Just as Merlin, Red Grouse depend on heather moorland for nesting and feeding. Birds are relatively sedentary and very hardy. They are one of very few birds capable of surviving winter in the uplands.

Males usually display from mid February to late April, and are accordingly best located at this time. 6-11 eggs are usually laid at the end of April/early May in a scrape on the ground hidden amongst vegetation such as heather, rushes or tussocks.

Adults feed mainly on heather and other vegetation. A plentiful supply of insect food is essential for young chicks.

Grouse moors, managed primarily for rearing large numbers of Grouse, maintain these populations well above the levels of those in unmanaged populations. These small fragmented “natural” populations are, not surprisingly, susceptible to extinction particularly as this is a sedentary species.

1.3 Ring Ouzel Turdus torquatus

Conservation status

Red list species of high conservation concern – criteria for red listing due to recent rapid decline – BDP

Rapid (>50%) decline in UK breeding population over last 25 years.

Additional Amber-listing criteria – Amber listing criteria due to moderate recent decline – BDMr

Moderate (25-49%) contraction of UK breeding range over last 25 years.

[1.3.1] *The Breeding Birds of Cumbria – A tetrad atlas 1997- 2001* confirms that in Cumbria Ring Ouzels are also experiencing a worrying contraction of range over the past thirty years. The British population is believed to be around 8,000 pairs.

The causes of the decline are not clear, although increased disturbance, acidification and warmer temperatures have been suggested, as well as possible problems in the wintering grounds of Southern Spain and Northern Africa.

About 280 locations are documented as having held breeding Ring Ouzels in the Cumbrian High Fells of Lakeland. No full survey has yet been undertaken. The Lake District population could well be higher than this. It is the most important area in England and still one of the main strongholds in Britain.

[1.3.2] Ecology

Birds nest above the 250m contour on crags, in gullies and on the ground of steep-sided valleys. The nest is well concealed, often by overhanging heather. Pairs are best located in April when the males sing from prominent rocky outcrops or the Tops of small trees. However they can easily be overlooked as they can be silent and inactive for long periods. Two broods are often reared with birds being particularly vocal at the end of May when second broods are started.

In the breeding season worms and insects are the staple diet. In the late summer/early autumn, birds switch to berries, with bilberry, rowan and juniper berries favoured.

Adult birds often descend from the higher breeding slopes with their juveniles to feed in the valley bottoms below.

1.4 Skylark Alauda arvensis

Conservation status

Red list species of high conservation status – Red list criteria due to rapid recent decline --BDp

Rapid (>50%) decline in UK breeding range over last 25 years.

Additional Amber-listing criteria

SPEC cat 3 Species with unfavourable conservation status in Europe.

Population in Britain - pairs 1,046,000

Cumbria – pairs 28,000

[1.4.1] Skylark is fundamentally a grassland specialist. In the Cumbrian lowlands, agricultural intensification such as silage production and loss of winter stubbles has had a significant detrimental impact on the breeding populations over the last thirty years. Conversely, agricultural intensification in the uplands has been beneficial for Skylark. This paradoxical situation can be explained by the increased stocking levels of sheep on the fells since the war. The resultant overgrazing has converted large tracts of heather moorland to grassland, ideal habitat for breeding Skylark. It is therefore not surprising that Skylark is one of the commonest breeding birds of the fells.

[1.4.2] Ecology

Birds return to the fells in spring. Their presence is easily detected by the males' characteristic song-flight. Nests are located on the ground hidden amongst grass.

2. BREEDING BIRD SURVEY METHODOLOGY

[2.1] Aims

To locate and map Merlin, Red Grouse, Ring Ouzel and Skylark breeding near/or using the upland forest edge and/or Forest Enterprise agricultural upland and to consider the potential effects of the proposed Whinlatter Mountain Bike Trail Project on these populations.

[2.2] Methodology

A readily repeatable method was devised which was considered to be a practicable and effective way of surveying the four target species. Upland forest edge for the purpose of this survey was defined as that bordering upland heather or upland grass moorland. Forest edges bordering roads, forest rides, forest clear-fell and lowland forest were excluded from the survey. See ROUTE MAP 1 for extent of survey area.

- [2.2.1] The survey to follow the upland forest edge and/or Forest Enterprise boundary fence. Route indicated on field maps.
- [2.2.2] The survey to include an East to West transect count on Whinlatter Top and a South to North transect count on Ullister Hill. These transects are shown on TRANS MAP 1.
- [2.2.3] Vantage point observations to be carried out across areas of heather moorland and steep broken craggy areas. If a forest edge is considered too steep to walk and therefore potentially dangerous then a vantage point observation along its length is employed. The location and duration of each vantage point observation indicated on VAN MAP 1.
- [2.2.4] Get to within 500m of every spot in the survey site.

[2.3] Number and timing of visits

[2.3.1] It was decided that two visits were required to each part of the site to ensure that the site was adequately covered.

Visit 1 in April

Visit 2 in May

For the purpose of this survey the important issue was to map and locate territories and not to investigate breeding success and productivity. Therefore survey effort was concentrated on the early part of the breeding season in April and May, when displaying/singing birds are more readily detectable. At least 3 weeks separated visits 1 and 2 on the same block of land.

[2.3.2] It was agreed that 3 days survey work was required to cover the whole site on visit 1 in April, and 3 days survey work to cover the whole site in May. Additionally if signs of Merlin activity were detected on visits 1 and 2 then an additional 2 days of survey work would be available to locate the nest site(s) in June.

Surveys – Between 6.00hrs and 18.00hrs.

[2.4] Weather constraints:

No surveys were carried out in winds greater than Force 5, in heavy rain, low cloud/fog or lying snow and were suspended during showers.

[2.5] Locating and mapping:

[2.5.1] All locations of Red and Amber listed birds of conservation concern were mapped using the standard BTO Common Birds Census notation. The commoner Green listed species such as Chaffinch, Wren and Robin were not recorded.

[2.5.2] Birds were located by walking, listening, scanning by eye and with binoculars. Timed vantage point counts were particularly useful for locating Merlin and Ring Ouzel. In addition Red Grouse droppings and feathers were noted and their location mapped.

[2.6] Specifically for Merlin

[2.6.1] *In moorland habitat*, checks were made along fence-lines and around crags, steep stream banks, rocks, Grouse butts, stone walls / dykes, hummocks, recently burned areas, isolated trees and other perches for whitewash (faeces), prey remains, pellets and moulted feathers. Old crows' nests were searched for and checked.

[2.6.2] *At sites with forest edge and open areas within afforested blocks*, fence posts were inspected for feathers and whitewash. Forest rides were checked to a distance of 100m into the forest and also perches such as boulders and walls in moorland near the forest edge.

3. SURVEY RESULTS

3.1 Preliminary surveys:

A pre-survey visit was carried out in Hobcarton Gill on 15/02/04. A pre-survey visit was also undertaken to Whinlatter Top on 29/02/04 in perfect conditions. Given the conditions, I had hoped that displaying Red Grouse would be located on Whinlatter Top, no signs of Red Grouse found. See preliminary maps P 1 & P2.

These preliminary visits were useful to illustrate the lack of birds in this area during the late winter. They were also useful to select vantage points and routes for the forthcoming survey.

3.2 Survey results for Merlin

No Merlin were located during the course of this survey. Maps S 1-8 show the survey effort. See also Merlin summary map. There is no shortage of potential nesting habitat given that extensive areas of tall shrubby heather still exist in Grisedale Gill, Sanderson Gill and Whinlatter Top. All these sites have a history of nesting Merlin. In 1991 a pair nested in Sanderson Gill and in 1992 a pair nested in Grisedale Gill. A single bird was also seen on Whinlatter Top in 1991. No search for Merlin was carried out between 1995-2002 at Whinlatter, so their status here in recent years is unknown. Particular attention was paid to these traditional sites during the survey. A Meadow Pipit pluck was found on the fence-line in Sanderson Gill on 11/05/04, (MAP S5) which was a likely indicator of the presence of a Merlin. However further visit on 18/05/04, 13/06/04 and 07/07/04 proved fruitless. (See maps MAP S6 – MAP S8) Merlin however do breed in an adjacent locality with a traditional site recolonised in 2003. It is possible that the pluck was a kill from this pair. Alternatively a nomadic Merlin could have been responsible.

As large areas of Whinlatter Forest, border either heather or grass dominated moorland, there is a distinct possibility of conifer nesting Merlin at this site. The forest edge and boundary fences were searched for signs of Merlin activity, but without success, apart from the already mentioned Meadow Pipit pluck.

3.3 Survey results for Red Grouse

Red Grouse were found in the following locations:

Ullister Hill	1 pair
Whinlatter Top	2 pairs
Swinside	1 pair
Hobcarton End/Sanderson Gill	1 pair
Grisedale Gill	1 pair (possibly) feathers found, but no birds seen.

A Total of 5 pairs of Red Grouse were located at Whinlatter during the course of this survey, with the possibility of another pair in Grisedale Gill.

3.4 Survey results for Ring Ouzel

2 Ring Ouzel territories were located, both on Hobcarton Crag at an altitude of approximately 600m. These pairs are 500m from the forest edge. The pair feeding young at a nest in a rocky gill on 11/05/04 (MAP S5) were foraging on ledges on the crags at a similar altitude to the nest site. However, it is likely that when the chicks have fledged the adults will accompany the juveniles to feed at lower levels on the sheepwalk below, (personal observation at other sites) and thus closer to the forest edge.

3.5 Survey results Skylark

Maximum counts of displaying male Skylark on Forest Enterprise land, or within 100m of the Forest Enterprise boundary.

A displaying male was taken to indicate the presence of a pair of Skylark.

Swinside	6 pairs (11/05/04)
Whinlatter Top	3 pairs (07/04/04)
Graystones and Widow House	3 pairs (05/05/04).

4. DISCUSSION

[4.1] To consider potential impacts of the Mountain bike trail project on breeding bird populations of the forest edge and adjacent Forest Enterprise agricultural upland with particular attention to be paid to Merlin, Ring Ouzel, Red Grouse and Skylark.

[4.2] Breakout

[4.2.1] Evidence of breakout from existing tracks was recorded at Widow House on 07/04/04 where bicycle tracks were seen along the forest edge and also on the path along Hobcarton End on 11/05/04. There are already small numbers of “adventurers”, who want to experience the “freedom” of the fells on mountain bike. Breakout is likely to occur more regularly given the increase in mountain bikers attracted to the site. The challenge will be to minimize breakout and resultant disturbance to breeding and foraging birds. The design and management of the mountain bike trail will be the important factors here.

[4.2.2] There is potential for breakout occurring at Hospital plantation at the 527m viewpoint at Sleet How. The temptation to continue along the ridge, having broken the back of the Grisedale ascent will prove too much for some, and will provide easy access to the open fells. A circuit could also develop from the Sleet How vantage point involving the ascent of Grisedale Pike and back to Whinlatter via the descent of Hobcarton End with resultant disturbance of Sanderson Gill, a particularly sensitive area.

[4.2.3] Every effort should also be made to avoid breakout onto Whinlatter Top, another sensitive “heather” fell with 2 pairs of Red Grouse in residence here. Although Whinlatter Top was surveyed for Merlin, none were found despite good habitat around Willybrag Gill and Drycliff Gill. However, chances of finding birds here were slim as large scale felling operations around Willybrag Gill were taking place through the winter and spring period of 2004. The resultant disturbance this year would have been likely to deter the establishment of a Merlin territory at this site rendering Merlin survey results for Whinlatter Top inconclusive.

[4.2.4] Breakout from Swinside plantation on to the fells above is not thought to be as likely, given the design of the route. In addition to substantial fencing and signage, a further tool to limit the likelihood of breakout could be achieved by excluding sheep from the Forest Enterprise enclosure above Swinside plantation and encouraging the re-establishment of heather moorland here. A coarse ungrazed grass and heather sward unsuitable for cycling on, could be useful in deterring the adventurous from striking out for the fell Tops, and also provide better habitat for Red Grouse, and also increased feeding opportunities for Owls and Raptors as the coarse sward would encourage increased densities of small mammals.

[4.2.5] Breakout on to Lords Seat is easily achieved presently via Ullister Hill and thus on to the Wythop fells. These grassy fells are not likely to hold important bird populations, although as a result of years of overgrazing, Skylark

do breed in good numbers here. Breakout on these fells could result in increased incursions into the woods near the Osprey nest site in Thornthwaite Forest.

[4.2] Mountain Bike trails along the Forest Edge

[4.2.1] Routes along the Forest Edge would result in some increased disturbance to nesting and foraging moorland birds, however every effort has been taken in the design of the route to take this in to account, with most of the route away from the Forest Edge. Sensitive areas such as Sanderson Gill and Whinlatter Top should be avoided. If this can be achieved then disturbance is not likely to have a huge impact on potential Merlin sites or the Red Grouse population.

[4.3] Potential impact of proposed Mountain Bike Trail on Merlin

[4.3.1] Although no Merlin were found at Whinlatter in 2004, the potential for future nesting attempts here is high for the following reasons:

- [4.3.2] Breeding Merlins appear to be recovering in the Lake District. The author knows of two traditional sites in Western Lakeland which have been recently recolonised, a neighbouring site was recolonised in 2003 and another western site in 2004. Both these sites have been unoccupied in recent years. The Cumbria Raptor Study Group has evidence of further recolonisation of traditional sites in Lakeland. The second national Merlin survey in 2005- 2006 will no doubt clarify the situation in Lakeland. It will be interesting to compare results with the first national survey of 1993-1994.
- [4.3.3] Sanderson Gill, Grisedale Gill and Whinlatter Top are all traditional sites still with prime habitat suitable for nesting Merlin. Although the upper slopes at these sites are presently showing signs of overgrazing. Large areas of these sites have remarkably survived the degradation of heather so prevalent in many other parts of the Lakes.
- [4.3.4] Forest edge nesting is always a possibility.
- [4.3.5] A healthy food supply (Meadow Pipit) exists in the surrounding moorland.

[4.4] Conclusions:

[4.4.1] The future prospects of Merlin at Whinlatter probably rely on positive action being taken on their behalf. If this action is not taken, then disturbance due to recreational activity could be the deciding factor as to whether Merlin return to Whinlatter or not.

[4.4.2] In 2004 a neighbouring site failed at the egg stage. This site is adjacent to a well used footpath. As a ground nester at this site, birds are particularly prone to disturbance. Unintentional disturbance by passing walkers cannot be ruled out as a contributory factor in the lack of breeding success at this site in 2004.

[4.4.2] It would be prudent to take this into account now. I would suggest that Sanderson Gill and Whinlatter Top are the sites most likely to suffer from disturbance. Sanderson Gill could easily be designated a quiet zone for nature conservation with no access for cyclists and walkers. A conversation with the Mountain Bike Trail Designer indicated that this is a feasible option. Equally the northern slopes of Whinlatter Top could be designated a quiet zone with recreational routes kept at a distance. Recent changes to the Mountain Bike Trail north of Whinlatter Top are seeking to address this issue.

[4.4.3] Positive measures to limit disturbance could make the difference between Merlin recolonising Whinlatter or not.

[4.5] Potential impact of proposed Mountain Bike Trail on Ring Ouzel.

[4.5.1] There is no foreseeable impact of the proposed Mountain Bike project on the two pairs of Ring Ouzel located on Hobcarton Crag. Although birds are likely at times to forage on the lower ground adjacent to Hobcarton Plantation, as this area is likely to be designated as a quiet zone for stalking then little disturbance of foraging birds is anticipated.

[4.6] Potential impact of proposed Mountain Bike Trail on Red Grouse.

[4.6.1] Whinlatter with 5/6 pairs, has probably the most important “unmanaged” Red Grouse population in Lakeland, a generic survey focusing totally on Red Grouse might turn up even more pairs. Although there is a real charm in experiencing Red Grouse in semi-natural conditions, there is a danger that without targeted management this small but important population could die out. Targeted management and biodiversity action plans came too late for the Black Grouse, which has quietly slipped off the Lakeland map in the last thirty years into local extinction. We would do well not to repeat the mistakes of the past.

[4.6.2] Although it could be argued that the proposed Mountain Bike trail does not in itself pose a significant threat to this important Red Grouse population, increased general disturbance could potentially be a contributory factor in the demise of this species at Whinlatter. It would be prudent and beneficial to carry out measures to limit disturbance. The designation of Sanderson Gill and

Whinlatter Top as quiet zones would be one measure to ensure that a healthy population of Red Grouse is maintained at Whinlatter.

[4.7] Potential impact of proposed Mountain Bike Trail on Skylark.

[4.7.1] The Skylark summary map is very interesting, as it not only shows where the Skylark populations are concentrated, but it also acts as an indicator of grazing pressure. Whinlatter Top (west half) and Swinside are the best sites for Skylark. These sites are both showing signs of conversion from heather moorland to grassland due to grazing pressure. The small Skylark populations found during the survey are not significant given that the extensive Lakeland sheepwalk is a stronghold for this species.

[4.7.2] For many areas in Lakeland conversion from heather moorland to grassland is complete and the process is hard to reverse, however at Whinlatter, given its potential for Merlin and its locally important Red Grouse population it would be preferable to increase the ratio of heather cover to grass on Forest Enterprise moorland areas, rather than decrease it.

[4.7.3] No significant impact on Skylark by the proposed Mountain Bike Trail is envisaged.

5. RED AND AMBER LISTED SPECIES OF WHINLATTER

[5.1] Although not part of this study the following Red and Amber listed species were recorded during the survey (See field maps S1 – S6):-

[5.2] British Trust for Ornithology (BTO) codes are shown in brackets.

[5.3] Red list

Song Thrush (ST)

Bullfinch (BF)

[5.4] Amber list

Kestrel (K)

Cuckoo (CK)

Tree Pipit (TP)

Meadow Pipit (MP)

Stonechat (SC)

Mistle Thrush (M)

Willow Warbler (W)

Goldcrest (GC)

[5.5] As many of these species and many other commoner species nest in the woodland, it is suggested that felling operations and other associated construction of the trail, likely to be detrimental to nesting birds, are carried out in the period outside the breeding season.

6. SUMMARY

[6.1] No Merlin were located, however recolonisation by an expanding population back to the traditional sites at Whinlatter remains a distinct possibility. To avoid potential disturbance in the future between people and nesting birds I recommend keeping routes out of Sanderson Gill and away from the northern forest edges of Whinlatter Top. See CONS MAP 1 for proposed locations of quiet zones.

[6.2] It is likely that Whinlatter holds the largest unmanaged population of Red Grouse in the Lake District. Given that this population is only in the order of 5/6 pairs, it is particularly vulnerable to extinction and every measure available should be considered to enhance and safeguard this population. The recommended quiet zones in Sanderson Gill and Whinlatter Top would prevent increased disturbance of this fragile population.

[6.3] It was considered that the proposed Mountain Bike Route poses no significant threat to Ring Ouzel or Skylark populations.

7. PROPOSALS

[7.1] The proposed Mountain Bike Trail at Whinlatter is undoubtedly a defining moment in the development of Whinlatter. Decisions made now will effectively map out the future of Whinlatter, not only recreationally and economically, but also ecologically.

[7.2] As this is such a large scale project with long term and far reaching consequences for the environment this is the appropriate point in time to pause and consider the future of the Avifauna of Whinlatter. For this project to be a complete success it needs to do more than limit impact on the natural environment. A holistic approach would address the question of what this project could do to deliver positive benefits for wildlife.

[7.3] Nature conservation as an integral part of the project would assure the enhancement and protection of Whinlatter's natural environment. Forest Enterprise as one of the members of the Lake District Osprey Project has already demonstrated what can be achieved through positive management for wildlife, i.e. the successful re-colonisation of the Lake District by Ospreys after over 150 years!

[7.4] This project offers Forest Enterprise a unique opportunity to further enhance its reputation as a leader in both recreation and nature conservation.

8. STRATEGIES FOR THE ENHANCEMENT OF THE NATURAL ENVIRONMENT AT WHINLATTER

Strategies achievable in the short term:

- Designate Sanderson Gill, Whinlatter Top and Swinside as Nature Conservation/Quiet Zones.
- Monitor Breeding Bird populations regularly – Monitor Merlin and Red Grouse annually, use same transects as used on this survey.
- Set up a working party to achieve these goals.

Consider the following longer term goals:

- Review stocking levels on Moorland on Forest Enterprise ground, with the possibility of reinstating existing but dilapidated boundary walls and fences so that stock can be excluded, to rejuvenate heather moorland habitat.
- Manage Nature Conservation/ Quiet Zones for Red Grouse and Merlin.