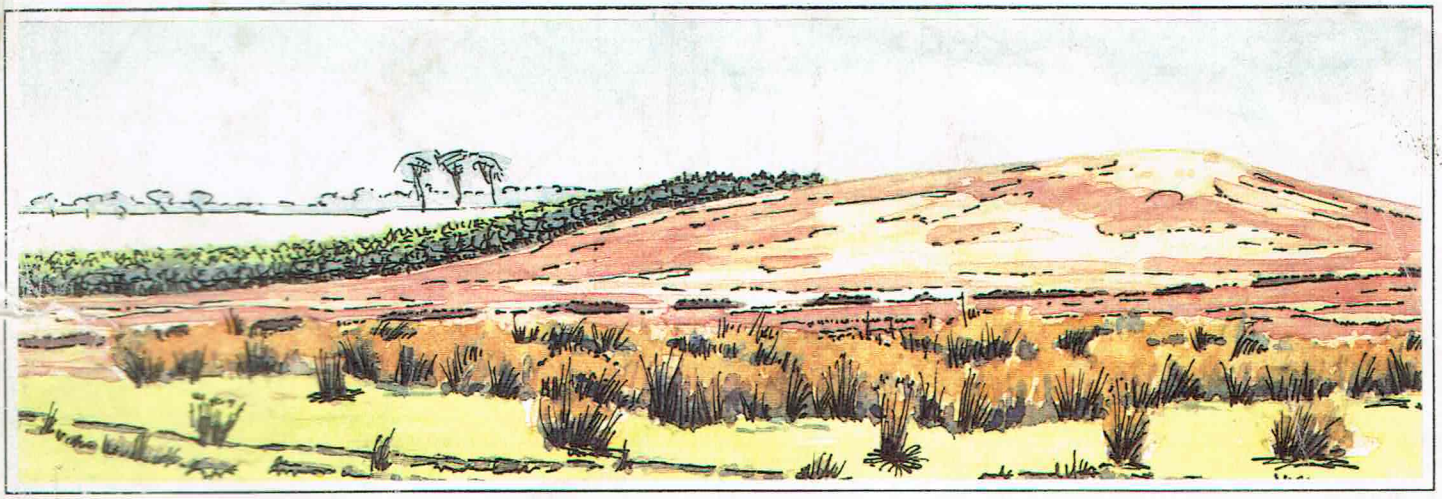
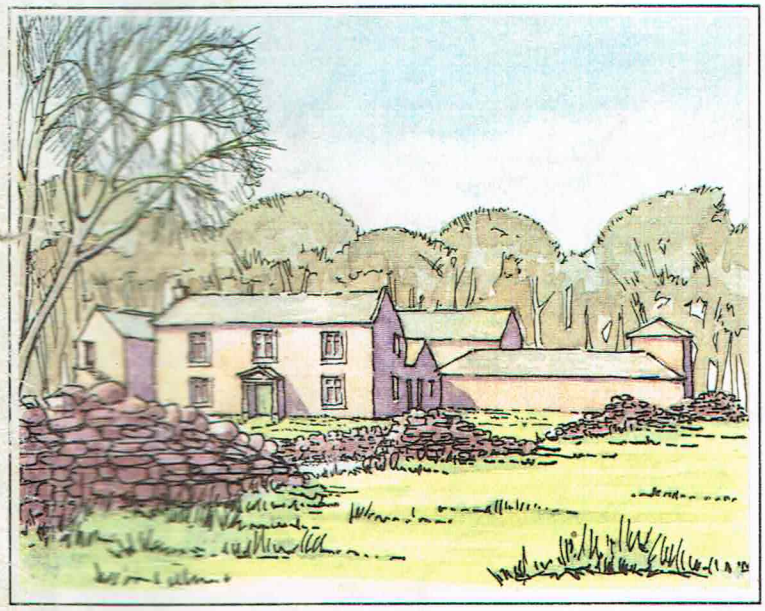


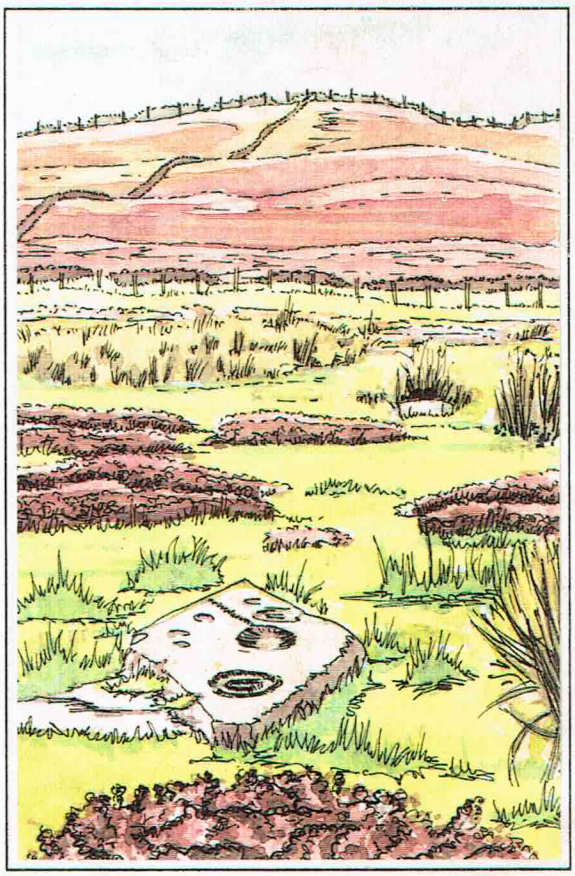
PIN HILL

WEST FELDOM

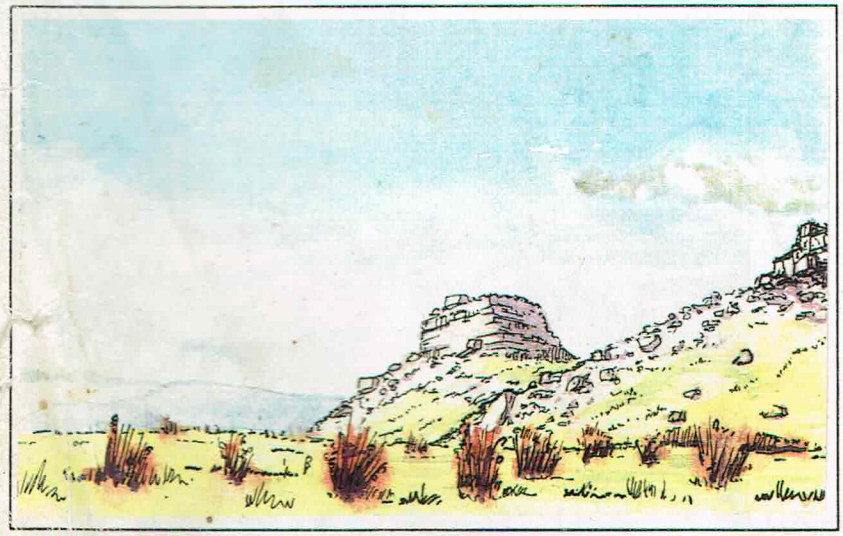
CATTERICK & FELDOM CONSERVATION GROUP



CORDILLERAS FARM



CUP AND RING STONE



DICKY EDGE

Looking NW
Cordilleras with Holgate Moor behind

CONTENTS

EDITORIAL

It has been, for some time now, my contention that an MOD Conservation Group should actively improve the environment, constructively improve the habitat such that the MOD lands over which military training takes place can be enhanced for long term future training. In this respect a study of an area such as West Feldom or The Downholme Valley cannot directly be said to enhance the environment. Has it therefore some purpose and value?

Apart from the regular conservation group meetings where contact with members is maintained and the impact on the environment of changes for military training can be discussed and assessed and reports by members can be considered for further protection and control, there is little apparent constructive work carried out by the group. On deeper thought this now can be shown to be a shallow, surface view. The Downholme Valley report would have sold like 'hot cakes' had there been a price tag - we were continuously asked for spare copies by schools, conservation organizations and individuals. We 'sold out' very shortly after publication and had to disappoint many. Clearly there was great interest and considerable value in publishing the report. A new interest in the caring and thoughtful development of the training areas requires a detailed knowledge of what is worth while protecting and this above all is what is acquired and recorded for the future in such a study.

The West Feldom Project report is no less interesting nor less valuable than its predecessor. Group members have taken a great deal of time and trouble in pursuing areas of great interest within their subjects and have provided a clear, interesting and informative account and record of the area in both laymans and scientific terms. There clearly is more that needs to be done in terms of further study but there is also much that can be done in terms of protection and this practical work will be exciting to carry out in the future.

Many of the archeological finds and records of Tim Laurie, who has an uncannily adroit 'educated' eye for the ancient signs of man's habitation, will remain recorded for future visitors to see but it is certain that no development will take place now without due care being taken to preserve valuable archeological remains and preferably a more detailed scientific examination taking place. Ian Findlay's work in preserving, recording and developing Waitgate Wood is a prime example of conservation leading development and at the same time providing an ideal environment for bird nesting boxes and detailed study of the indigenous and visiting birds by David Oldham. Don Brown's attempts to regenerate sessile oak in this wood mean that we have a continued involvement of the DLA forestry section in preservation of our ancient woodlands.

We are indebted to our less militarily involved members for their study and reports, particularly Richard Almond, Deborah Millward, David Henshaw, Arnold Robson and Tim Laurie who have given up so much of their spare time on our behalf. We are always grateful for the knowledgeable input of Lawrence Barker, an acknowledged authority on mining in the Dales and a warden of the National Park and to Ian Findlay, particularly on mammals, as a busy officer of the NCC. The quality of the work by all of them can be judged by the brilliance of the record.

Hugh Le Messurier's obvious love for history and the Feldom plateau is apparent in his illuminating account of the development of Cordilleras Farm which bears careful reading.

Finally, Bryan Wilson's vibrant record of a heather moorland management plan shows the practical drive for conservation at its best.

We are indebted to Robert Shopland-Reed for his help, advice and photography in carrying out this project and compiling this report.

Without the active constructive work of the Defence Land Agent and his staff very little practical work would be done. It is they and their forestry section and the tenant farmers over whose land training takes place who make practical conservation possible.

We are fortunate, once again, in having the coincidence of a visit of the Yorkshire Naturalist Union to West Feldom on 18 August under the guidance of Deborah Millward. Thanks to them we are able to add to the authoritative scientific knowledge of the report.

I hope that this report will be an inspiration to the youth of today to protect and preserve their natural and historical environment and act as a guide to military training planners and developers for the future.

P W WADE

ACKNOWLEDGEMENTS

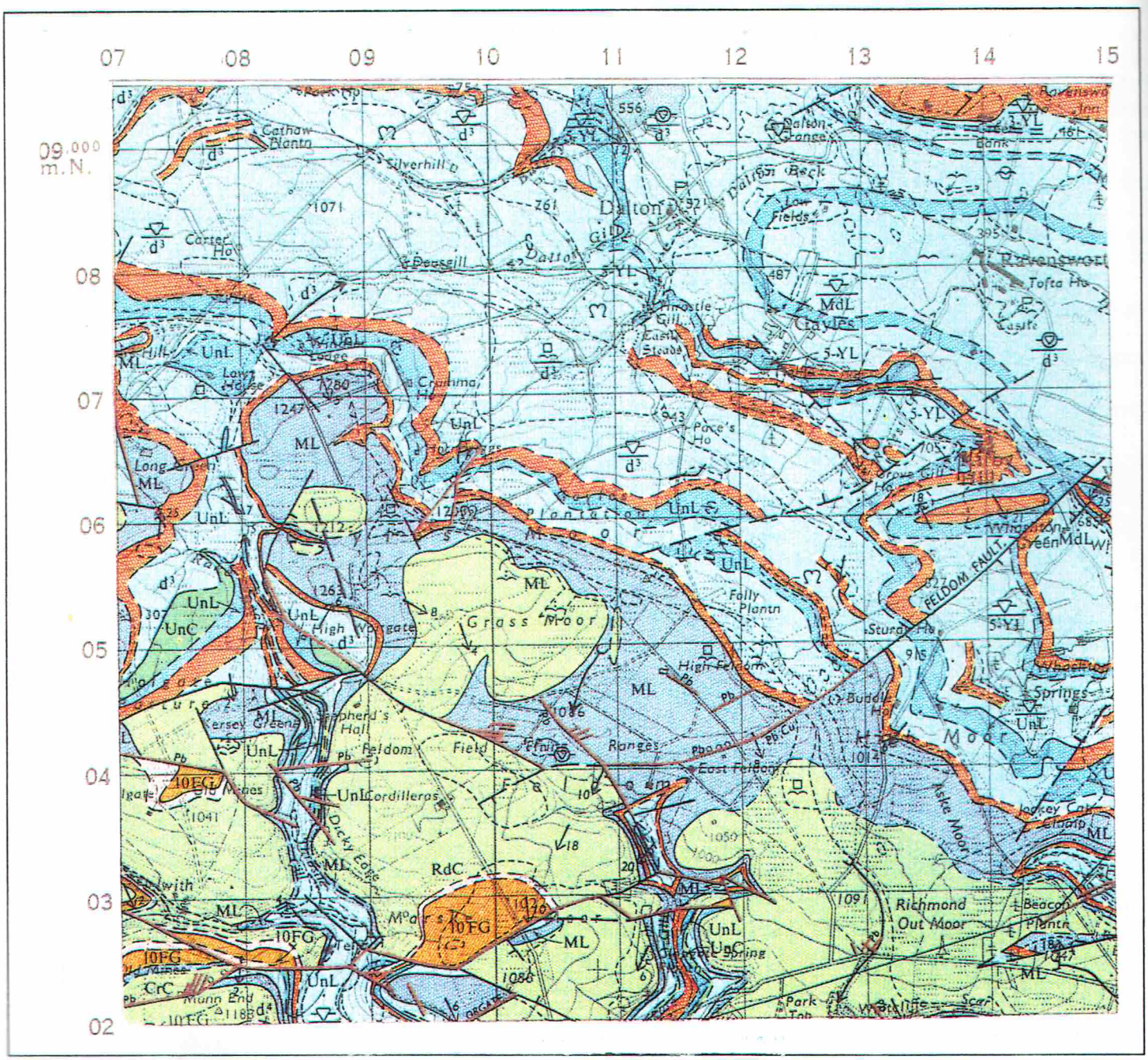
We are indebted to all our material source persons. In particular Elizabeth Ross on birds and Ian Spensley on archeology, Miss Vera Chapman for allowing us to use material from her history of Cordilleras Farm, Lt Col Bruce Donald for recording the triangulation that, 'put Feldom on the Map', Defence Land Agents' Staff, Mrs Brown and her sister-in-law of Cordilleras farm Aldborough St John, Mr Alan Metcalfe of Marske and Mr Dick Lawson the last tenant of Cordilleras farm. Robert Shopland-Reed, Bryan Wilson and Ken Naylor took many of the photographs. Richard Almond gives credit and thanks to Dr John Almond (his cousin) of Cambridge and Dr Gilbert Larwood of Durham for their help in identifying an unusual fossil found at Dicky Edge.

THE GEOLOGY OF FELDOM WEST

By R L Almond BSc FGS

Feldom Training Area is a vast tract to geologically survey and interpret in detail. It comprises over thirty square kilometres of rough upland country, a great deal of which is inhospitable and difficult of access. Therein, of course, lies much of its charm and fascination. Like many upland areas of Northern England of similar character, Feldom's solid geology is partly hidden by the thick deposits of boulder clay, morainic material and glacial lake deposits, all deriving from the various incursions of ice during the Great Ice Age of Pleistocene Period. Detail and complication are added by localized peaty deposits and the alluvial deposits of streams. There are many exposures of the solid geology, varying in scale from small ice-striated rock surfaces to rocky crag, all of which have made geological interpretation of the sub-surface beds and strata, and particularly the surface geology, reasonably accurate. A glance at the Ordnance Survey Geology of Richmond (Sheet 4) clearly shows that limestone is the main formative and most important structural rock of the area. The various limestones and associated sandstones, shales and cherts date from the upper part of the Carboniferous Limestone Series, or upper Lower Carboniferous Period (d3 on the geological map) and the lower part of the Millstone Grit Series, or lower Upper Carboniferous Period (d4 on the geological map). All the beds are fairly horizontal, gently dipping by about 6° towards the south east. The solid geology dates from about 340 million years ago, whereas the glacial deposits and associated features date from between 2 million and 12,000 years ago. Feldom is thus basically of fairly ancient origin, an uplifted and eroded landscape, partially obscured and overlain by very recent, unconsolidated glacial material originating in the Northern Pennines, Lake District and even parts of Scotland.

GEOLOGICIAL SUCCESSION



EXPLANATION OF GEOLOGICAL SYMBOLS AND COLOURS

DRIFT
Not drawn to scale

PLEISTOCENE AND RECENT

GLACIAL

- Peat
- Hill Peat
- Alluvium, Undifferentiated
- Alluvial Fan
- River Terraces, Undifferentiated
- Fluvio-glacial gravel / Older River Gravel
- Glacial Sand and Gravel
- Boulder Clay / Glacial drift, Undifferentiated
- Glacial Lake Deposits
- Moraimic Drift

SOLID GENERALIZED VERTICAL SECTION
Scale: 1 Inch to 150 Feet

TRIASSIC

PERMIAN

- Bunter Sandstone
- Upper Permian Marl with evaporites at base
- Upper Magnesian Limestone
- Middle Permian Marl with evaporites
- Middle Magnesian Limestone
- Lower Magnesian Limestone
- Basal Permian Breccia

Unconformity

CARBONIFEROUS

MILLSTONE GRIT SERIES (d¹)

- Sandstone
- Sandstone
- Sandstone
- Sandstone
- COAL
- Sandstone
- Sandstone
- COAL
- COAL
- Sandstone
- Sandstone
- Sandstone
- Crow Cherts (CrC)
- Crow Limestone (CrL) in places represented by chert
- Ten Fathom Grit (10FG)
- Richmond Cherts (RdC)
- Little Limestone (LtL)
- Sandstone
- Main Chert (MnC)
- Main Limestone (ML)

GENERALIZED VERTICAL SECTION
(Continued on same scale)

CARBONIFEROUS LIMESTONE SERIES (d²)

CARBONIFEROUS

- base of Main Limestone Sandstone
- Underset Chert (UnC)
- Underset Limestone (UnL)
- Sandstone
- Three-Yard Limestone (3-YL) Sandstone
- Five-Yard Limestone (5-YL)
- Sandstone
- MdL — Middle Limestone (MdL)
- Sandstone
- Gillingwood Limestone (not shown on map)
- Sandstone
- Sandstone
- Simonstone Limestone (SIL)
- Sandstone
- Hardraw Scar Limestone (HScL)
- Gayle Limestone (GyL)
- Hawes Limestone (HwL)
- Great Scar Limestone (GScL)

- Horizontal strata
- Inclined strata, dip in degrees
- Gently inclined strata
- Glacial striae, arrow in direction of ice flow
- Glacial drainage channel (only major ones shown)
- Geological boundary, Drift
- Geological boundary, Solid
- Coal-crop
- Fault, crossmark on downthrow side
- Material vein (copper and lead ores); crossmark indicates vein occupies a fault zone

Broken lines denote uncertainty

- Borehole
- Water well or borehole
- Pit or mine shaft, abandoned
- Photograph of, or taken from, this locality in Survey Collection

All amounts of inclination indicated are measured from the horizontal.

THE GEOLOGY OF FELDOM WEST

Flat plateau surface near Cordilleras (North)

Much of present day Feldom is a rather monotonous flat plateau surface, lying at over 1,000 feet and rising in places to over 1,200 feet. It is dissected by several north-south running streams, principally Rake Beck/Waitgate Gill/Throstle Gill which flow into Marske Beck, and Clapgate Gill which becomes Clapgate Beck before joining the Swale. There are many minor streams flowing outwards from Feldom in a radical pattern, and Dousgill/Scar Gill/Dalton Gill flowing west-east drain the northern part of the area.

These gills, deeply incised into the plateau surface, assisted no doubt by glacial melt-water during the melting of Pleistocene ice, conveniently show good exposures of Carboniferous rocks, particularly the many beds of limestone, including the thickest and most important, the Main Limestone. This bed forms the characteristic scarp features of Dicky Edge and Orgate Scar.

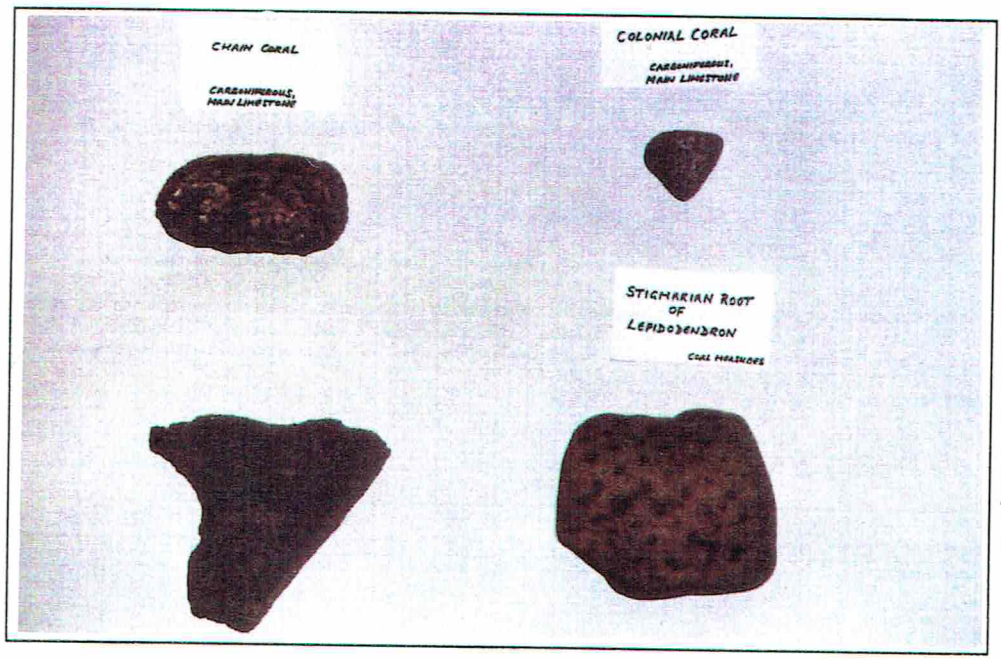
The dominant limestones represent calcitic deposition in a clear, shallow, sub-tropical sea. Some are inorganic in origin and are massive with no bedding or real structure apparent. Many are organic and contain marine fossils, particularly Crinoids, (sea-lilies) colonial and solitary corals and Brachiopods, (bi-valves). There are huge quantities of Productid Brachiopods, of various sizes. Field-work has revealed many good examples of these zonal facies, so typical of fossil reefs from this period. Bryozoans, in particular Fenestella sp, have also been found, plus the lamina trace Zoophycos sp, which proved not only an exciting find but also difficult to identify.

Thanks are due to Dr John Almond of Cambridge and Dr Gilbert Larwood of Durham on this task. All the fossils mentioned can be seen in the fossil case at Wathgill Camp.

The sandstones represent riverine and deltaic deposits formed on the margins of a large continental land-mass which lay to the north. Fossils do occur in the various sandstones but they tend to be small in size, indicating less favourable habitats. The shales, some of which are black in colour, are thin and friable, crumbling and splitting easily under pressure. These paper shales represent deposits of marine muds in deeper waters, probably local subsistence trenches. The chert beds, so prominent on the geological map, (upper d3 and lower d4) are not as horizontally continuous as indicated. However, the Main and Richmond Cherts are found widely on the hill tops and plateau surface. The resistance to erosion of this flint-like siliceous rock is undoubtedly responsible for the flat character of Feldom. Naturally black or greenish in colour, chert weathers to a white or light-grey, very similar in appearance to limestone. However, chert is harder, yields a spark when struck and does not react with acid. A former use was gun-flints for flint-locks.

Limestone Scars at Dicky Edge

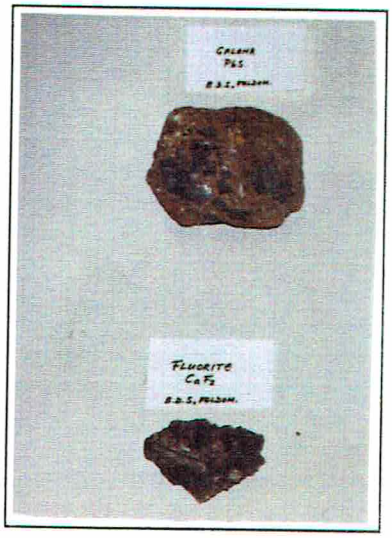
THE GEOLOGY OF FELDOM WEST



Fossils

Feldom is greatly faulted as is apparent from the geological map. This occurred during the Carbo-Permian earth movements of about 270 million years ago. There are two major groups of faults in the southern part of Feldom; the Feldom Fault System runs from north-east to south-west and the Clapgate Gill System trends from north-west to south-east. Other minor faults are found throughout the area. Fortunately for the past economy of Feldom and Swaledale, mineralization is associated with faulting of this age. Galena - the sulphide ore of Lead, Malachite and Azurite - the carbonate ores of Copper, and Chalcopyrite - a sulphide of Copper and Iron and the principal source of commercial Copper, were all exploited on Feldom. Lawrence Barker's paper gives expert and interesting details of the Lead-mining industry. Spoil-heaps are visible small-scale features of Feldom's landscape, as are bell pits and adits.

Gangue minerals of Barite, Calcite and Fluorite are found in spoil, the Bomb Demolition Site, Area 3D, yielding good speciments some of which can be seen in the specimen case at Wathgill Camp.

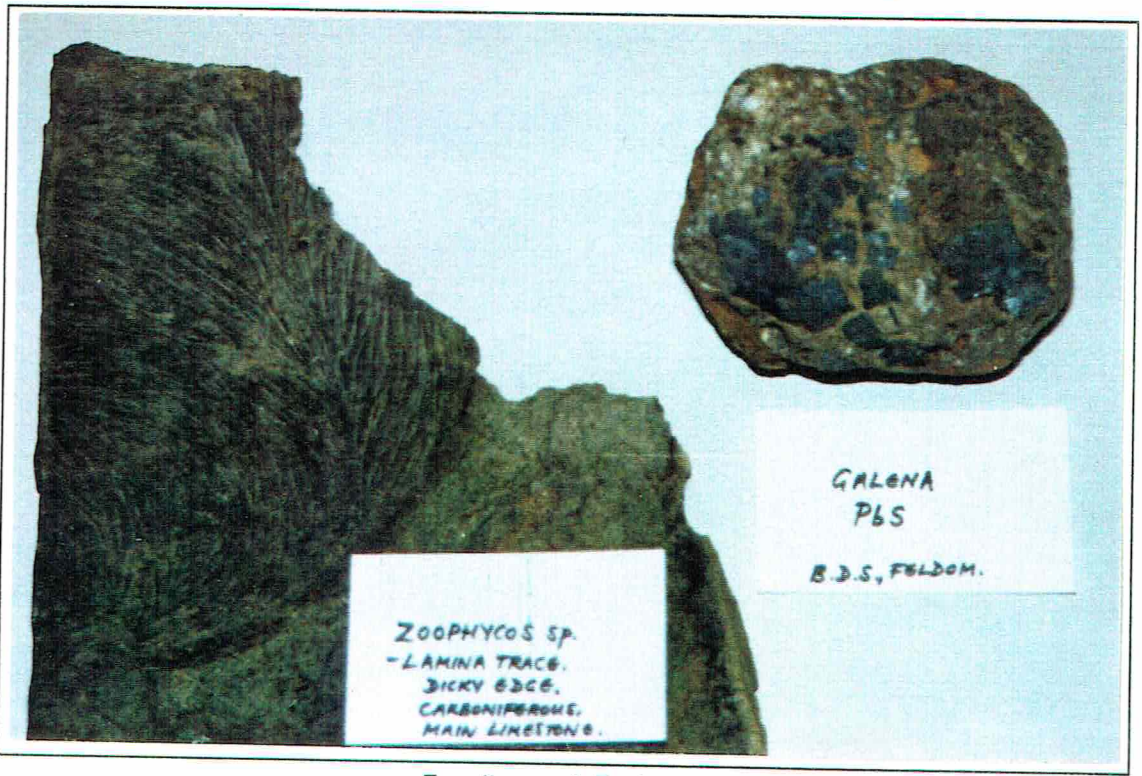


Gangue Minerals

The Pleistocene Ice Age greatly affected large areas of Feldom as has already been mentioned. Some examples will suffice to demonstrate this. Clapgate Gill flows in a deep, relatively wide valley. The stream is far too small to have excavated such a large feature since the end of the Ice Age, even given immediate post-glacial high water levels. It is thus very likely that ice erosion modified an existing valley. Deposits of boulder clay found on the valley floor and sides support the idea of ice occupation and modification.

To the east and north-east of Cordilleras is a boulder clay deposit of considerable size, roughly 1,000 metres in length by 400 metres in width. This impervious plaster accounts for the boggy character of the surface and the juncus sedge vegetation.

Undoubtedly the outstanding glacial feature of Feldom is Feldom Rigg. This is an excellent example of a lateral, or side, moraine



Fossils and Galena

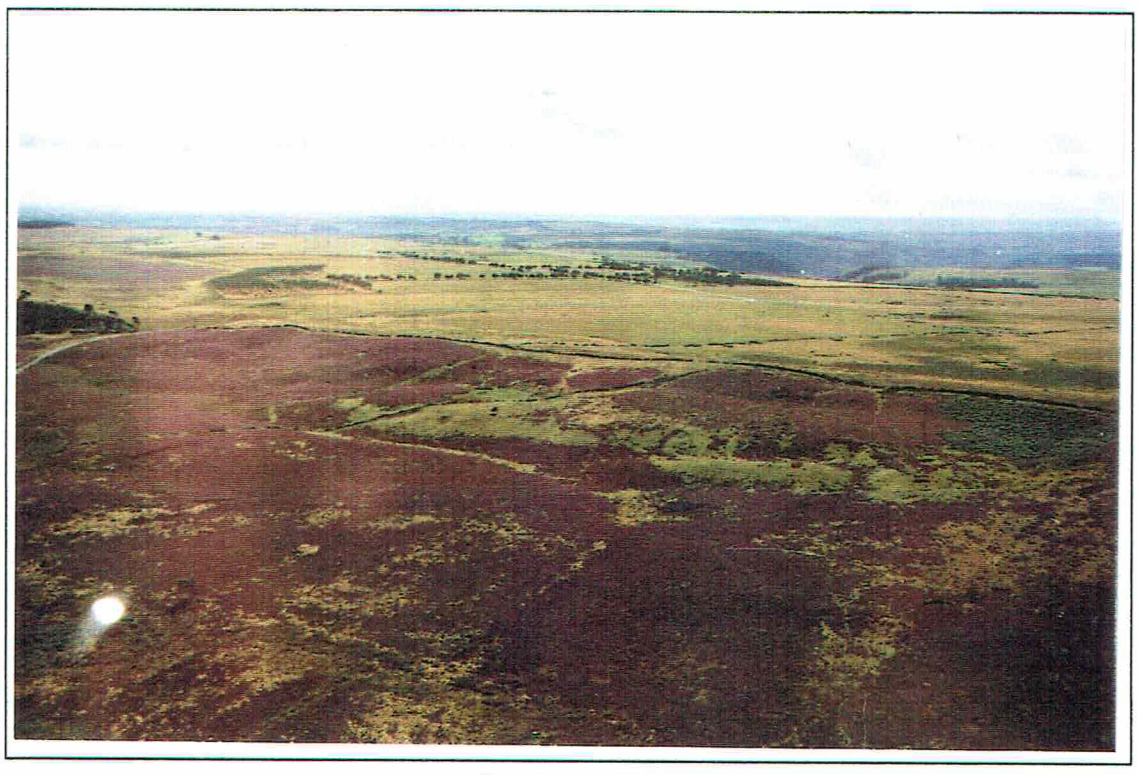
THE GEOLOGY OF FELDOM WEST

of a glacier, in this case the Stainmore Ice which originated in the Lake District.

Moraine is the term used to describe the mixed rock debris deposited by moving ice. Analysis of the sub-soil of Feldom Rigg shows a great mixture of broken rock of various calibres - typical of morainic material.

This moraine marks the western boundary of the glacier before its amalgamation with the Swaledale Glacier east of Deepdale. A considerable relief feature, being approximately one mile in length and 50 feet high with a distinct crest, Feldom Rigg is best viewed from the moor road near the transmitting station at 136024. It is orientated north-west to south-east with a steep ice-contact east-facing slope and a gently dipping west-facing slope. A distinct boggy channel runs directly along the foot of the dip slope, closely following the moraine's orientation. This is probably the remnants of the former melt-water drainage channel which carried melt-water southwards to Deepdale, (itself a grossly over-deepened glacial melt-water channel) and into the Swale Valley. Post-glacial movement of debris under the force of gravity, the slumping process, has occurred on steep slopes, particularly below the scarps of West Feldom. In Clapgate Gill in particular, and in Dousgill, the lower slopes are marked by slumped material. This process removes the weathered mantle of soil, rock and scree exposing the geological succession.

Mining at East Feldom, line of Bell Pits following a mineral vein near the surface.



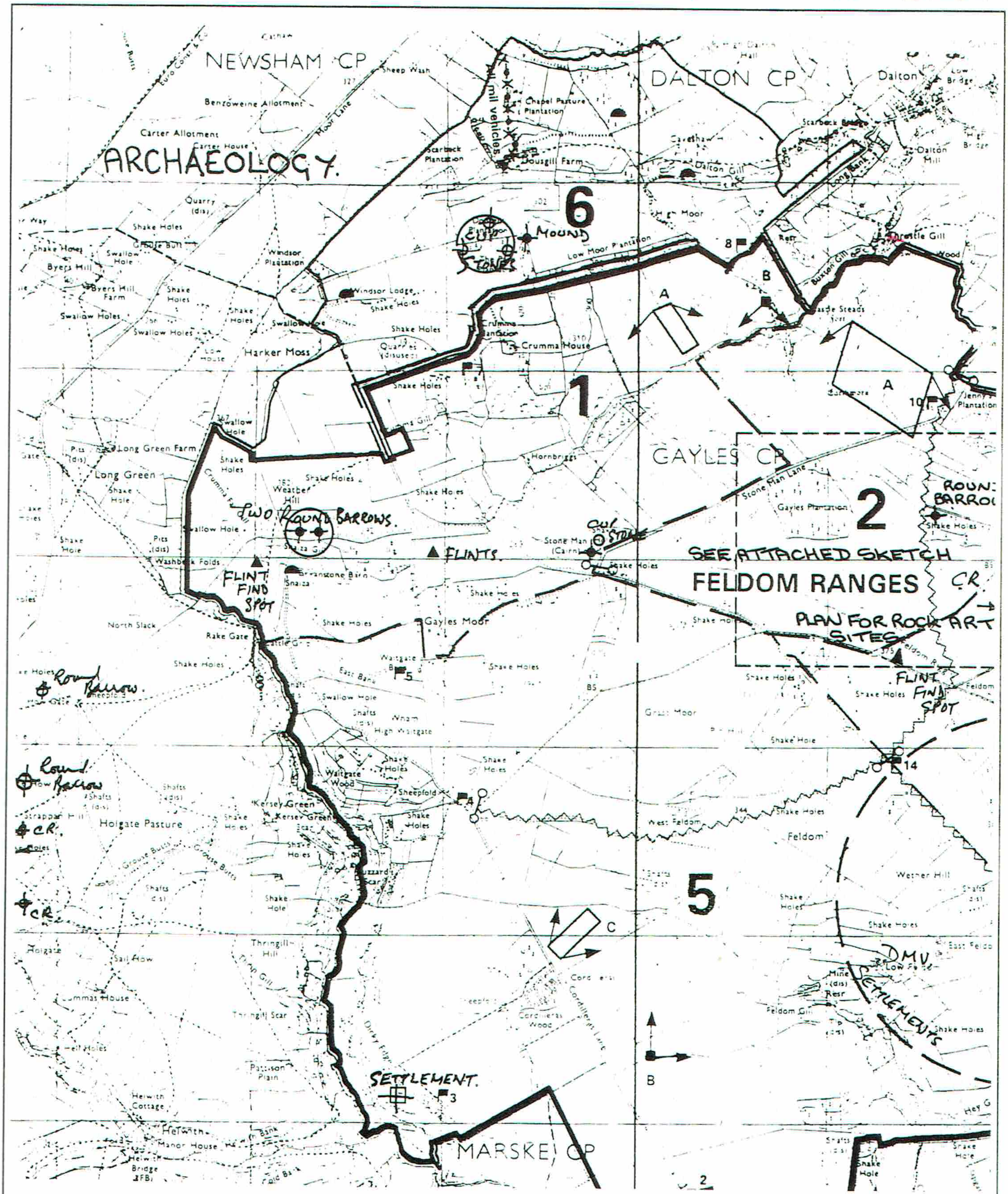
Feldom Rigg

Editor's Note:
The beck that runs down the west side of Feldom Ranges is variously called Rake Beck where it flows through Snaiza Gill as far as Rake Gate then Waitgate Beck past Waitgate Wood, then Throstle Gill down past Dicky Edge until it becomes Marske Beck below Dicky Edge.

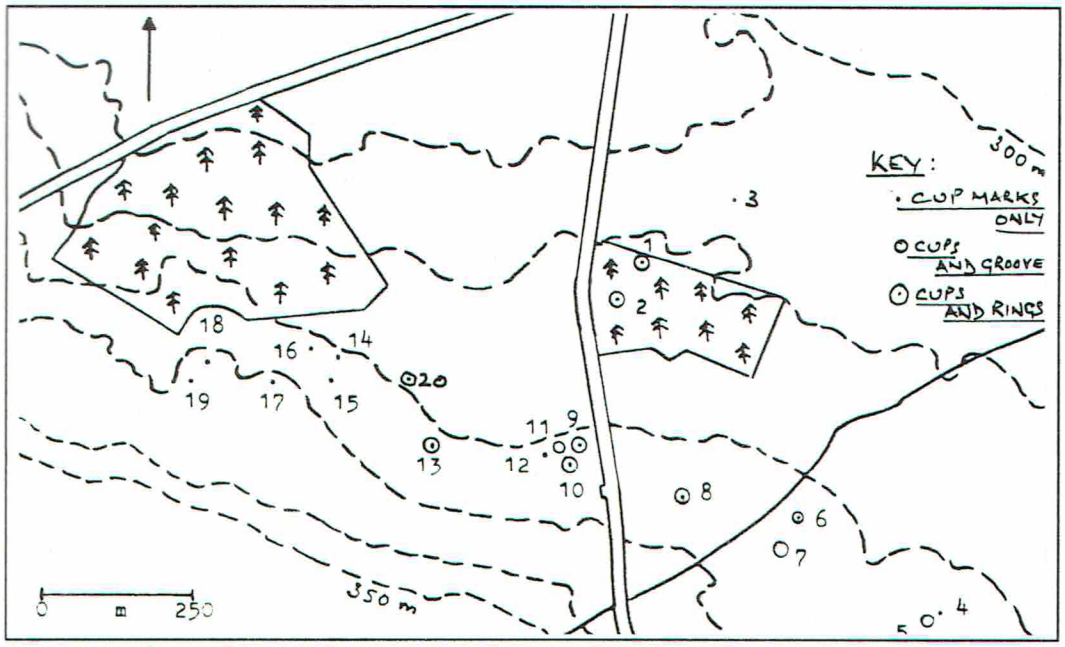
ARCHAEOLOGICAL
THE PREHISTORIC BACKGROUND

By T Laurie

Feldom Ranges occupy a strategic location astride the most attractive route for the traveller on foot through the Pennines from the Vale of Mowbray (from the south and east) to the Vale of Eden (to the northwest and to Ireland via Galloway). This early route known as the Badger Way, traverses West Feldom from Long Green Gate to Feldom Rigg (map B).



PROJECT FELDOM WEST (Map B)



GAYLES MOOR NZ 115 060 (CENTRE) ROCK ART SITES

Site No. 13

Site No. 9

The existence of this route may account for the concentrations of prehistoric sites on Gayles Moor and on Barningham Moor to the west of Feldom.

The prehistoric sites which have been located by field walking within the area of the West Feldom survey, include tumuli on skyline hills north of Snaiza Gill and at Stone Man on Feldom Rigg. These tumuli or round barrows are to be expected in these locations in view of the presence of similar features on Barningham Moor eg: How Tallon. Similarly, 3 small cup marked rocks near the Park Plantation and Snaiza sites near the (glacial?) mound at NZ 094 077 have their parallels on Gayles Moor near Hill 99 which may also be glacial though the mound at Hill 99 could be a round barrow.

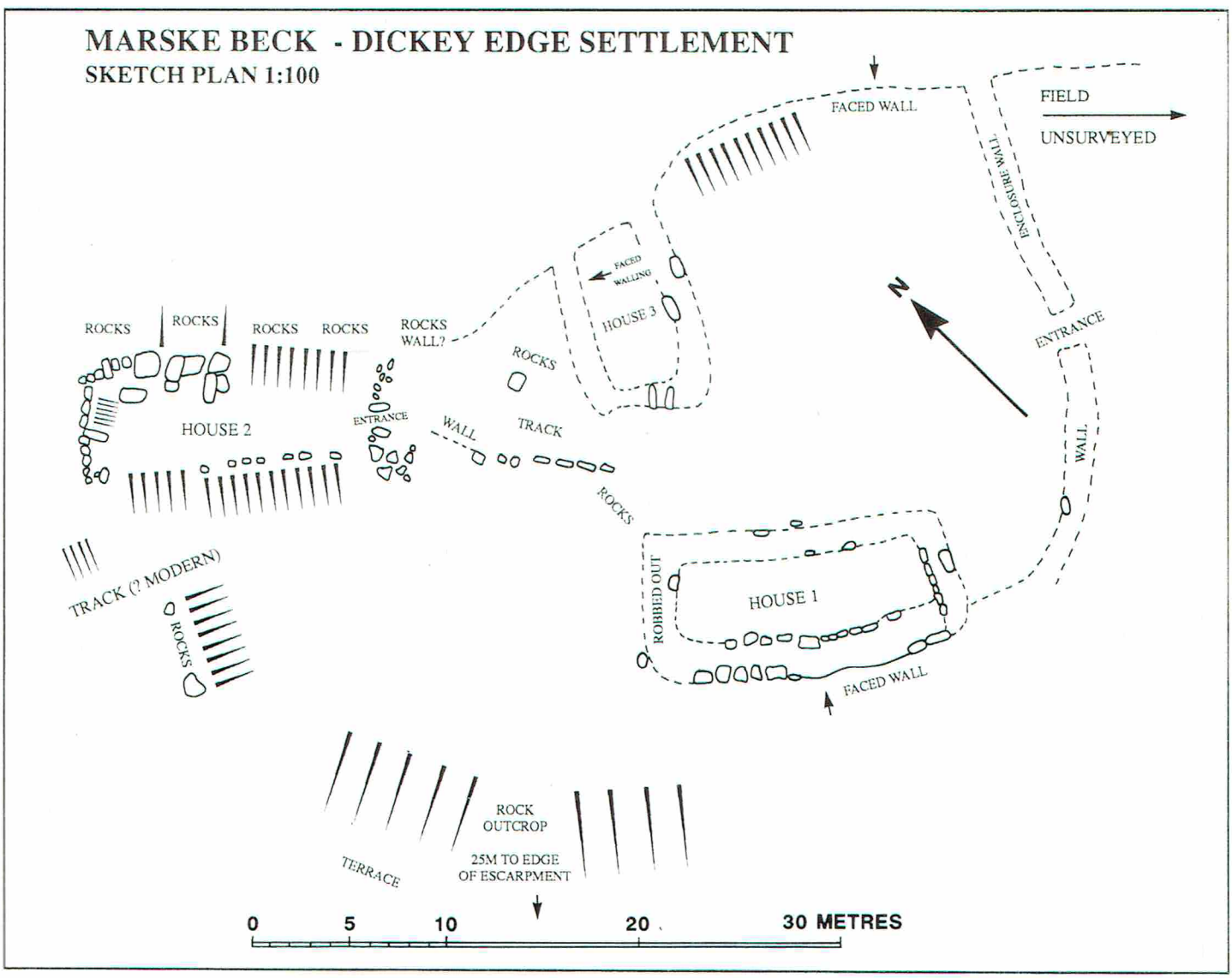
A few flints of undiagnostic character have been found Snaiza Gill and on Feldom Rigg a flint core of Mesolithic Age has been found. Lack of open ploughland on erosion patches prevents recognition of further Mesolithic flint scatter sites. The nearest such site is just outside the Range Boundary above Windsor Lodge and many such sites have been located at similar elevations on Barningham High Moor.

At Dicky Edge, (Grid Reference NZ 088 032, Plan C) a small farmstead settlement of 3 rectangular buildings each with entrances in the end (gable) walls and enclosed within a thick stone wall with small paddock fields close by, can be closely compared to settlements dated to the 8th-9th Century AD at Ribblehead and in Upper Teesdale.

ARCHAEOLOGICAL
THE PREHISTORIC BACKGROUND

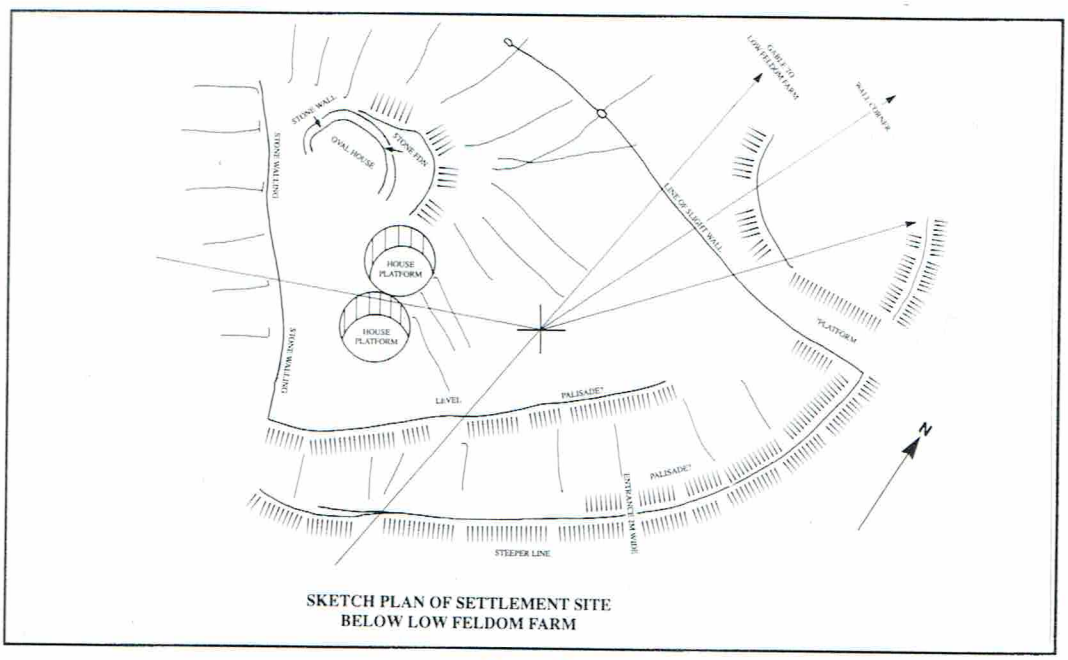
Site No. 10

Below Low Feldom Farm, (Plan D) on a small knoll within Clapgate Gill a small settlement comprising 2 small scooped house platforms and an oval stone founded house protected by 2 lines of Palisade may be similar to a settlement of 7 scooped house platforms excavated in 1989 at Healaugh in Swaledale. This Healaugh settlement has been securely dated to the 2nd Century AD. In low sun, field banks can be seen in steep pasture southeast of Low Feldom Farm and these small fields may be contemporary with the Palisade settlement. Well



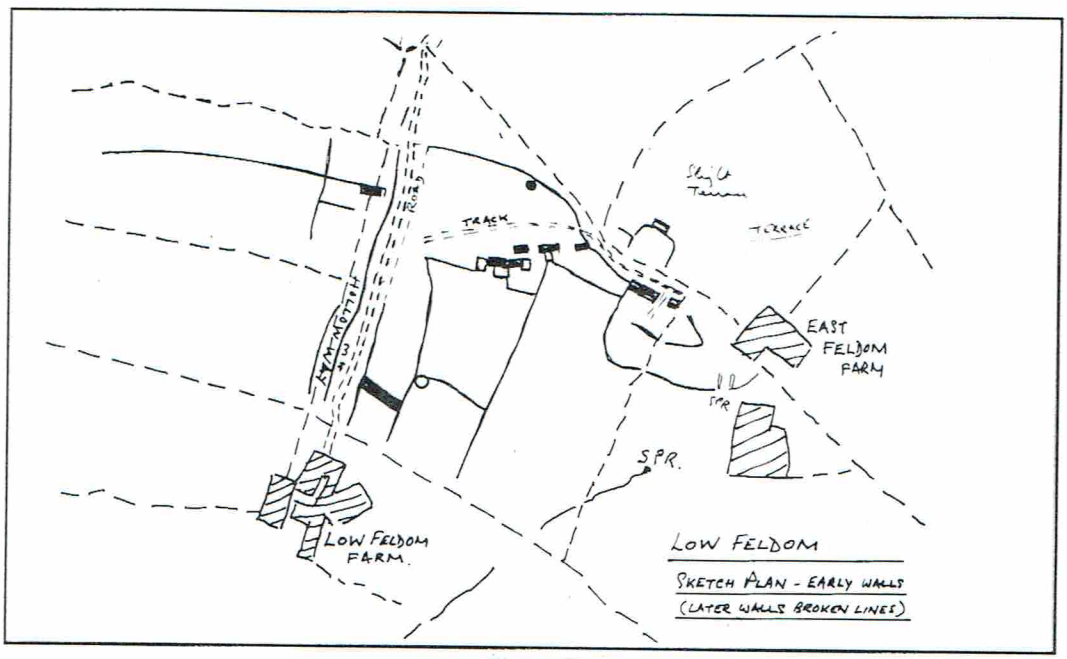
Plan C

ARCHAEOLOGICAL
THE PREHISTORIC BACKGROUND



SKETCH PLAN OF SETTLEMENT SITE
BELOW LOW FELDOM FARM

Plan D



Plan E

defined terraces below the Palisaded site may also be fields or, equally, could be stances for further settlement buildings.

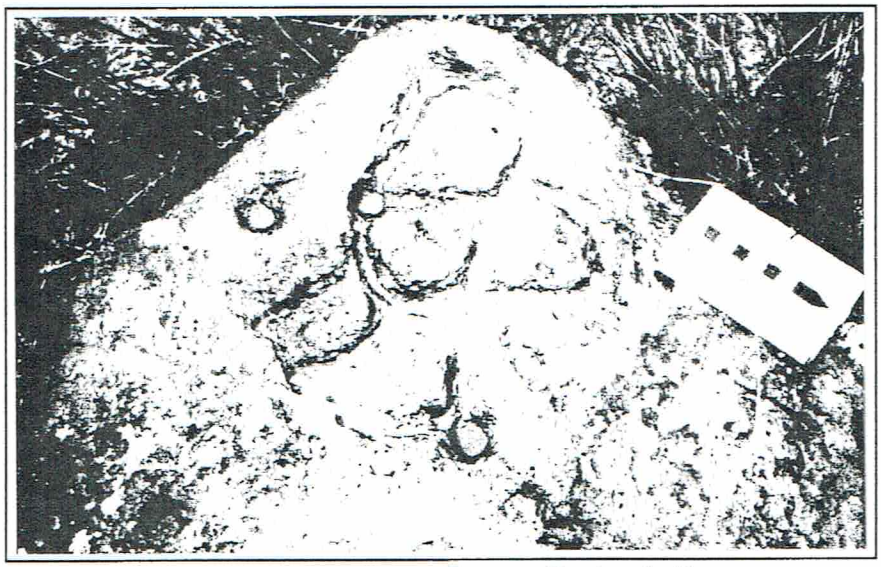
In permanent pasture between Low Feldom and East Feldom Farms an abandoned village of stone founded rectangular cottages is well preserved together with stone field banks and garths. This deserted village may be of medieval or of later date. Victoria County History records settlement at Feldom with arable land from the end of the 13th Century AD. A sketch plan of the ruined walls in the pastures between Low Feldom and East Feldom is at (Plan E).

The settlement on the terrace below a limestone scar or cliff within Clapgate Gill at NZ 113 035 includes one rectangular stone founded building partly covered by limestone scree from the cliff above. This settlement may be of early medieval or Dark Age date - as that below Dicky Edge.

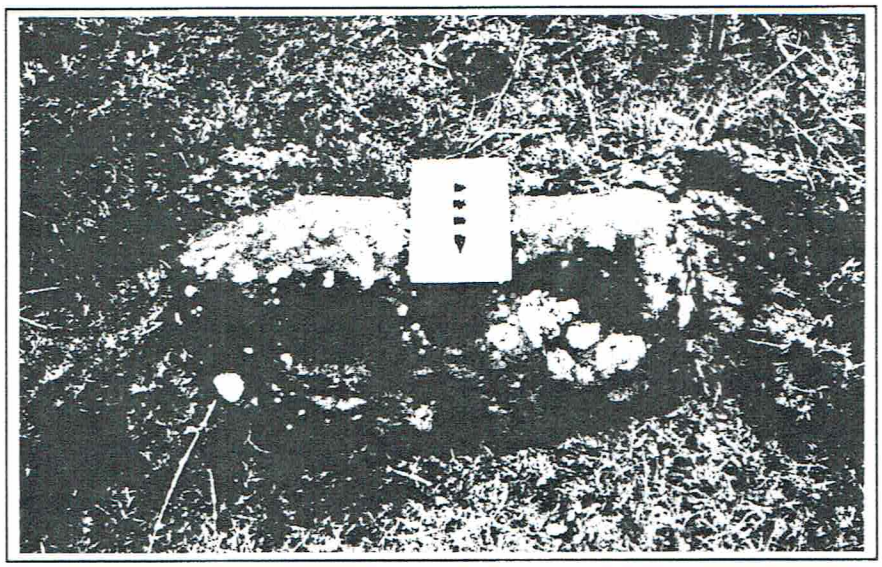
APPENDIX 1 TO PLAN D
LOW FELDOM
NOTES ON SETTLEMENT SITE SITUATED ON A SMALL KNOLL IMMEDIATELY BELOW LOW FELDOM FARM IN FELDOM (CLAPGATE) GILL (PLAN D)

The sketch plan at D shows 2 small platforms which would have been stances for timber houses and the foundations of an oval stone founded house on the summit of a small knoll. A platform very similar to those shown here was excavated at Healaugh this year and found to have 3 separate buildings on a levelled and paved area approximately 12 m x 6 m on plan. The last phase of these rebuilds was an oval house. This small settlement appears to have been protected by 2 lines of fence or Palisades (against 2 or 4 legged threats). Below and just to the west of this knoll are 2 much larger levelled (platforms) which could well be the site of timber buildings although there is no trace of any structure to be seen on these areas.

ARCHAEOLOGICAL
THE PREHISTORIC BACKGROUND



Carved rocks near Dousgill plantation



Carved rocks near Dousgill plantation

ANNEXURE

A GLOSSARY OF SITES

a. SITE LOCATION Dicky Edge, Marske.

GRID REFERENCE NZ 0800 0315 280 MOD Sketch Plan 1:100 attached (Plan C).

CLASS OF SITE Settlement of possible Anglo-Scandinavian (8th-9th Century AD) date.

SITE DESCRIPTION Group of 3 stone founded 'long' houses partly enclosed within a stone wall situated on a broad terrace below a limestone scar high above the glacially enlarged valley of Marske Beck.

The 3 houses are 10 m, 13 m and 14 m in length each 4 m wide internally with massive orthostatic walled foundations which are slightly bowed ie: while the houses can be described as sub-rectangular the walls are definitely not straight. Two of the houses have well defined entrances in the gable or end walls, the entrance of the third house was also in the end of gable wall but has been robbed out. There is a possibility that this third house has been re-built at a later period - some of the walling of this house is more sophisticated than the other two. Other features within the settlement include small stores and a track or passage. To the east of the settlement the terrace has been entirely cleared of rocks to form one or 2 small fields or paddocks bounded by stone clearance walls. Several more roughly constructed huts and enclosures have been recognised in the vicinity of the settlement on the terrace below.

At NZ 083 029 on the floor of the valley of Marske Beck there is an isolated heap of iron slag - the first such deposit that I have found in Swaldale. This iron slag is definite evidence for iron working in the vicinity of this settlement (iron-stone nodules occur in local shales and provided the source of raw material).

This settlement shares the following characteristics with the 3 (only) other settlements in Upland Northern England known to date to the 8th/9th Centuries AD namely at Gauber High Pasture, Ribblehead (A King, 1978), at Simey Folds, Upper Teesdale (D Coggins, et al 1983) and on Lindisfarne (Bervitt, O'Sullivan and Young 1985).

1. Doors or entrances in the end or gable walls.
2. No internal partitions or divisions.
3. Houses placed at right angles, partly enclosed, ie: within a farmyard.
4. Evidence for iron working.
5. Irregular (bowed) walls (with orthostats - always an early feature).

The site at Ribblehead was dateable from the presence of 4 contemporary coins (Stycas or Northumbria - Aethelred 11 by the Moneyer Odilo and for Archbishop Wulfare by the Moneyer Wulfred). No pottery was present either at Ribblehead or at Simey Folds - these sites may therefore be aceramic.

It follows therefore that a single visit by our itenerant 'treasure hunter' armed with metal detector could remove the only dating evidence of this site and the precise location of this site should therefore be withheld except to any bona fide enquirer.

The importance of this site can be judged from the fact that only 2 other sites of this dae are known to exist. A visit to this site which is so complete and undamaged is a cultural and aesthetic experience of great value. The

terrace overlooks the confluence of Throstle Gill with Marske Beck and is a most airy situation.

Note: Orthostat - unworked rock set on end or on edge as a wall facing stone or as an entrance jamb.

b. SITE LOCATION Low Feldom Farm, Marske.
GRID REFERENCE NZ 114 039 320 MOD Sketch Plan attached (Plan E).

CLASS OF SITE Deserted Medieval Village.

SITE DESCRIPTION House foundations with associated enclosures and field walls are very well preserved in grass meadowland between the present farms of Low Feldom and East Feldom (also deserted, except for stock).

A further medieval settlement is situated on a terrace on the east side of Clapgate Gill at NZ 113 035.

Victoria County History records the existence of one carucate of (arable) land at Feldom held of Ronald de Richmond in 1286-7. Also that Feldom was held by the Scropes of Bolton to the time of Henry VII.

Jervaulx Abbey held land on Feldom in demesne from the Scropes.

c. SITE LOCATION Low Feldom Farm, Clapgate Gill.

GRID REFERENCE NZ 1125 0375 975' OD (Plan D).

CLASS OF SITE Possible Prehistoric Settlement.

SITE DESCRIPTION Two small scooped house platforms and one stone founded house base on a small knoll on the southern side of Clapgate Gill near springs. These possible houses are protected by 2 small banks which may have been Palisades. Below the knoll on which the houses are sited that are well defined terraces or larger levelled platforms upon which further houses could have been sited. See notes at Appendix 1 to Plan D.

d. SITE LOCATION Snaiza Gill.

GRID REFERENCE NZ 080 060.

CLASS OF SITE Flint Find Spot.

SITE DESCRIPTION Erosion patch below bank of small stream. Single flint flake of grey mottled flint, not patinated. Possibly a snapped blade of Mesolithic character.

e. SITE LOCATION Snaiza Gill.

GRID REFERENCE NZ 080 060.

CLASS OF SITE Ring Bank.

SITE DESCRIPTION On west bank of small stream a long bank with short length of lock walling. Possible prehistoric site of enigmatic purpose but may be of any age. A stone founded building is sited on a moraine hillock lower down the stream - at 080 058.

f. SITE LOCATION Snaiza Gill, North Side of New Plantation.

GRID REFERENCE NZ 086 062.

CLASS OF SITE Two Round Barrows.

SITE DESCRIPTION One of earth with an apparent ditch, the other stone built and in part quarried away.

g. SITE LOCATION Snaiza - East of New Plantation.

GRID REFERENCE NZ 090 061.

CLASS OF SITE Flint Scatter.

SITE DESCRIPTION On erosion patches, a thin scatter of flint flakes which could be of almost any prehistoric age.

h. SITE LOCATION Stone Man on Feldom Rigg.

GRID REFERENCE NZ 10/06 Area.

CLASS OF SITE Stone Cairns Destroyed.

SITE DESCRIPTION Three stone cairnsd destroyed in the early 19th Century. (1) Castle Steads, Dalton - accidental discovery of skeletons. (2) At the 'Stone Man' - a cairn destroyed for wall stone, a skeleton discovered. (3) Tumulus 3/4 mile southeast of Stone Man, a stone cist with a 'cael pot' within - (Maclaughland 1859 in YAS6, 213-25 and 334-49). Also at NZ 098 061 - cup marked stone, an outliner to the Gayles Moor concentration of cup and ring stones.

i. SITE LOCATION Dousgill Plantation.

GRID REFERENCE NZ 094 077 (Centre) (Photographs 8 and 9).

CLASS OF SITE Cup Marked Rocks.

SITE DESCRIPTION Two cup marked rocks and one rock with cups and grooves forming small chequerboard pattern (see photographs 8 and 9). Mound at angle of new plantation with old plantation is most likely glacial in origin.

MAMMALS

By Ian Findlay.

The Feldom West area comprises several habitats. The valley bottom of Waitgate Gill is wooded along its banks and has several wet/boggy areas. The ground then rises steeply with outcrops of sandstone and limestone which dominate the western edge of the Feldom Ranges. This sloping ground is partly covered by bracken during the summer months which is, unfortunately, an ever increasing problem. The whole area is also heavily grazed by rabbits. At the northern end of this Gill is Waitgate Wood (fenced in 1987). This relic broadleaf woodland is all that remains of a once extensive wooded area.

The ground above the western ridge is a mixture of semi-improved grassland/pasture, acid pasture with wet juncus/cotton grass areas and heather moorland. Around Cordilleras Farm is a stand of semi-natural wood-land and young conifer plantations. A further 3 plantations are situated in the northern half of the Feldom Range West area.

This matrix of habitats maintains a good cross-section of mammals although the numbers within the species are on the low side. This upland site is very open and exposed to the elements and does not lend itself to the mammal populations.

Mammals resident or seen within the Feldom West area:

HEDGEHOG - Erinaceus europaeus

Very few records of this species. The lack of deciduous woodland and the upland situation do not provide the ideal habitat for the Hedgehog.

MOLE -Talpa europaea

Active in the improved grassland areas and around Cordilleras Farm. These areas support the deeper soils where the Moles diet of worms are found in their greatest numbers. This species has taken advantage of the last 3 mild winters and numbers are increasing. Very few Moles are active on the steep ground below the Dicky Edge/Waitgate area where the soil is too shallow.

COMMON SHREW - Sorex aranus

The young conifer plantations with large areas of ungrazed grassland provide the ideal habitat for this species, as do the scree slopes in the Dicky Edge/ Waitgate Wood area. Trapping in Waitgate Wood produced: November 1988 - 2, November 1989 - 3.

PYGMY SHREW - Sorex minutus

Although this species is Britain's smallest mammal it survives very well at all altitudes and is equally at home on the low ground as well as the heather moorland. One was seen within the heather area at Dicky Edge.

WATER SHREW - Neomys fodiens

Only found in the low lying wet areas at Waitgate Gill where there is adequate vegetation cover. No species seen but tracks and droppings were in evidence.

PIPISTRELLE BAT - Pipistrellus pipistrellus

Seen in the evenings on several occasions in the Waitgate Gill area hunting for flying insects. The roost for this small Bat will be found in the confined spaces of the cliff/scree on the west bank of the Gill.

RABBIT - Oryctolagus cuniculus

The Rabbit or Coney to give this mammal its original name - the word Rabbit is derived from the smallest in the litter - has gone unchecked for the last 3 mild winters, resulting in very large populations. A count in January 1990 produced a total of over 200 in an area approximately 200' x 150' below Dicky Edge. This rocky outcrop/scree provides an ideal habitat and so unfortunately, the limestone vegetation is under severe pressure. Although the annual myxomatosis epidemic does take its toll on rabbit numbers a good hard snowy winter would have the desired cull effect on the species.

BROWN HARE - Lepus capensis

Several have been seen on the ground above Dicky Edge. This area with improved grassland and rough pasture on the edge of the moorland, is the ideal habitat for the Brown Hare. The mild winters over the last few years will have helped this species to build its numbers back up.

A wily Fox pads alongside a drystone wall, ever alert to danger and the chance of prey, yet within a stones throw of military activity on our ranges.

MAMMALS

GREY SQUIRREL - Sciurus carolinenis

Very active in Waitgate Wood where much damage has been inflicted on the nesting bird population who use the nest boxes. A programme of baiting 2 or 3 boxes with poison will hopefully control this problem. The Grey Squirrel is considered a pest species because of the damage it does to young trees and nesting birds and eggs.

BANK VOLE - Clethrionomys glareolus

A common species usually found in the wooded/scrub areas and in the young conifer plantations. The main difference between this species and the Field Vole is the tail length. Bank Vole 2" long, Field Vole 1" long. Trapping in Waitgate Wood produced: November 1988 - 3, November 1989 - 5.

FIELD VOLE - Microtus agrestis

The young conifer plantations with rough ungrazed grassland provide the best habitat for this species. This herbivore is a very prolific breeder. A female can produce up to 7 litters in one season, with as many as 7 young per litter. Trapping in Waitgate Wood produced: November 1988 - 4, November 1989 - 5.

WOODMOUSE - Apodenus sylvaticus

Found wherever there is cover in the form of trees or scrub. All the small mammals species are at their peak numbers September/October time when there is an abundance of food ie: berries, seeds, nuts, fungi etc. The life expectancy of these small mammals is between 15 and 18 months so it enjoys a short but very active life. Trapping in Waitgate Wood produced: November 1988 - 4, November 1989 - 4.

FOX - Vulpes vulpes

No evidence of breeding in the Feldom West area although the Fox will traverse the ranges on its nocturnal travels. The Rabbit population on Dicky Edge will be a good food source.

STOAT - Mustela erminea

The most common of the predatory species found in the Waitgate Wood area, rock/scree outcrop of Dicky Edge and around the Cordilleras Farm/young conifer plantation. One was seen in ermine January 1989. As there was no snow it was very conspicuous.

WEASEL - Mustela nivalis

Not as numerous as the Stoat but found in the same areas. The Weasel also likes to hunt within the fallen walls. One observed in Waitgate Wood with a mouse but the Weasel dropped the catch because of the human intrusion. After much 'swearing' from behind a rock it eventually plucked up courage, grabbed the mouse and disappeared.

BADGER - Meles meles

A Badger sett within Waitgate Wood was not active for several years. A dead Badger was found at the lower end of the wood in 1987. Badgers have now taken up residence again. Bedding changes and fresh dung pits have been found on several occasions during 1989. Breeding cannot be proved but there is hope for the future. Clapgate Wood, also supports an active Badger sett.

ROE DEER - Capreolus capreolus

Several observations in the Waitgate Wood area where the fence line causes no problem to the agile Roe Deer. The very open area of Feldom West restricts Roe Deer to the wooded valley and conifer plantations.

OTHER SPECIES - Include: The feral Ferret/Polecat, the Brown Rat and the House Mouse are to be found in the Cordilleras Farm area where the presence of man and food always attracts these species. Mink will surely have travelled the Waitgate Beck in its relentless spread of the countryside. The Domestic Cat, although not wild in this case, has travelled from the nearby farm to Waitgate Wood in the pursuit of food.

Editor's Note: An almost black mink was killed in Clapgate Gill in 1988 by W Metcalfe.

A pair of well grown Badger cubs in August at the entrance to their sett. Some of the setts on our ranges are very old and their locations are kept discreet.

BIRDS OF FELDOM

By Major W D Oldham GM RAOC

For the birdwatcher, Feldom Ranges are a challenge. There is always omething to see, but never in abundance whatever time of year you may visit, except for a short period at the height of the breeding season from mid-May to early July. It is during this time that the greatest number and variety of birds may be recorded, but the checklist is unlikely to exceed 60 species.

Feldom is a habitat of the hardy for bird and birdwatcher alike. Winters can and do produce sub-arctic conditions lasting several months, the severest weather being most likely to occur from January through to April. It is not unusual to witness the last of snowdrifts sheltered by drystone walls in May. However, recent winters have been relatively mild with limited snowfalls of short durations. There is more significantly an almost constant north-westerly wind that can chill the bones, blowing from November through to April and it is this above all that influences the number of birds that remain resident and the species that visit during the winter months. Fieldfare, Redwing, Siskin, Brambling and the occasional Snow Bunting, all accustomed to the severe conditions of Scandinavia, are our most frequent winter visitors, along with the lone Hen Harrier in search of easy prey. During milder spells, parties of tits accompanied by Tree Creepers and the tiny Goldcrest, forage amongst the mixed woodland plantations. The only true residents however, are the Red Grouse, Black Grouse, Grey Partridge, Pheasant and the ubiquitous Carrion Crow, and even these species will forsake the high ground during prolonged periods of severe winter weather, moving to lower ground often well outside the range boundaries.

Spring, which invariably appears late, heralds the arrival of a host of attractive long distance migrants. Wheatear are the first to appear, the Spotted Flycatcher the last. Considerable local movement or short distance migration to the moorland habitat occurs at the same time. Curlew, Redshank, Lapwing, Golden Plover and Snipe move from winter quarters around our coasts, estuaries and arable land. Passerines from lower sheltered woodlands move up into the range gills and water birds that winter on reservoirs and large stretches of water move into the range becks to breed. All this movement attracts the predators and as their successful breeding season is dependent upon a good crop of adult and juvenile small birds to satisfy their every hungry young, so the Sparrowhawk, Peregrine and Merlin join the large influx of spring birds to Feldom Ranges.

As the warmth of spring brings the moorland to life, Short-eared Owls, Tawny Owls and Little Owls join other predators, but with an emphasis of voles, shrews and field mice on their menu.

By early summer young birds abound. Curlews form nursery groups, while juvenile passerines are concentrated in mature wooded areas where the insect supply is plentiful. Their stay is not long and by early August the Spotted Flycatcher is in a migratory mood again, shortly followed by the Wheatear which moves from the tops to lower ground. Occasionally, a Wheatear can be seen as late as early November. However, a closer look will reveal it to be a Greenland sub-species on its way to its winter quarters in Africa, pausing only to refuel before continuing its 15,000km journey.

Just occasionally, a rarity will stop over for a day or two, such as a migratory Dotterel on its way south from its breeding grounds in the Highlands of Scotland, or in times of hard weather in Scandinavia, a small flock of very colourful Waxwings.

These birding highlights are few on Feldom, but the rewards are there for the observant and hardy watcher.

The systematic list that follows, with status notes, has been compiled from observations covering a five year period during the years 1985 to 1990.

Grey Heron (Ardea cinerea) -

Adult birds visit the range becks and dew ponds in spring feeding on small fish, frogs and water voles. The nearest herony is some 10km distant.

Teal (Anas crecca) -

Small numbers visit the dew ponds in late summer and autumn, particularly during the period of their eclipse, possibly because the area suffers little disturbance during their flightless period.

Mallard (Anas platyrhynchos) -

Several pairs breed in Clapgate Gill and Waitgate Gill. Adult birds present throughout the milder months and can be found feeding on dew ponds in late autumn.

Goosander (Mergus Merganser) -

The population of this species has increased markedly in recent times. Recorded on Feldom in the breeding season only. Ducks with average broods of eight can be seen in May in Clapgate Gill beck and Rake Beck. Nest boxes have been erected to encourage this species which perhaps interestingly nests in hollow trees on our ranges.

Buzzard (Buteo buteo) -

One pair have been present for several years now. Their breeding has been intermittent but in '89 two young successfully fledged. The Buzzards are attracted to our area by the considerable rabbit population on which they depend throughout the year, their favourite hunting area being around the gills of Dicky Edge.

Hen Harrier (Circus cyaneus) -

Single adult females or juveniles visit Feldom in late autumn and early winter stopping over to hunt the area before continuing their southerly migration. The absence of adult male birds is mystifying.

Goshawk (Accipiter gentilis) -

Present throughout the year. Elusive and difficult to locate. Breeding has occurred, but nest sites and information on this species is kept discreet. The British breeding population is small, possibly less than 200 pairs.

Sparrowhawk (Accipiternisus) -

Occasionally seen soaring over Dicky Edge, but generally confines its hunting activities to the wooded gills particularly in late spring and early summer. A female is quite often seen hunting in Waitgate Wood, where thrushes and finches feature amongst her prey.

Kestrel (Falco tinnunculus) -

Our commonest bird of prey. Pairs have readily taken to nest boxes positioned in suitable areas on the ranges. A ringing programme of young birds is in being

and although no recoveries have yet been made it is evident that the ranges provide a stronghold for this species. The untreated grasslands and high vole population make ideal habitat for this attractive falcon.

Merlin (Falco columbarius) -

This small dashing falcon is a passage bird to Feldom Ranges. Best chance of a sighting is in late summer, early autumn, around the area of Cordilleras Farm where the Merlin, usually juvenile, may be seen chasing Meadow Pipits, its favourite moorland prey.

Peregrine (Falco peregrinus) -

Occasionally sighted stooping on prey in the Dicky Edge area. Breeds locally but unfortunately suffers from persecution by egg collectors.

Red Grouse (Lagopus lagopus) -

Due entirely to expert habitat management Red Grouse thrive on the range moorlands. A healthy population has steadily increased in numbers in recent years in line with the improved and expanding areas of carefully managed ling. Sheep grazing has been sensibly controlled and an ongoing programme of bracken eradication has made significant improvements to the habitat; this has been achieved against a background of general decline in Red Grouse numbers on nearby moorlands.

Black Grouse (Tetrao tetrix) -

A small and viable population of Black Grouse can be found on Feldom Ranges. The population has increased in recent times and this species, which favours young mixed tree plantations for cover and feeding, has taken advantage of the spread of these plantings and new territories have been established. There is one main lek (communal display and mating area) and upwards of a half dozen Blackcock can be witnessed performing the ritualistic displays accompanied by noisy hissing and bubbling calls. Winter is the best time to get a good look at Black Grouse as they favour the berries of hawthorn and can often be seen ungainly perched high in a tree, silhouetted against a wintry sky.

Pheasant (Phasianus colchicus) -

Common introduced resident that may be found through the year in sheltered plantations and wooded gills.

Grey Partridge (Perdix perdix) -

The untreated grasslands of the range area is ideal habitat for the Grey Partridge. Coveys of twenty or more birds are not an uncommon sight in winter. Frequently seen around the Cordilleras Farm area throughout most of the year. Breeding takes place in the young plantations which provide both cover and a food source for their young.

Moorhen (Gallinula chloropus) -

A pair regularly breed on the dew pond near to High Waitgate, forsaking the area with the approach of winter for wetlands lower down in Marske.

Golden Plover (Pluvialis apricaria) -

Flocks of 100 or more may be seen of this most attractive plover on open grassland during passage times in early spring and late autumn. A few pairs stay to breed, choosing the rough grasslands and area of ling in which to conceal their nest sites. The territories of breeding birds can readily be identified from the plaintive musical 'tooee' call of the male in spring.

Lapwing (Vanellus vanellus) -

The range areas are a stronghold locally for breeding Lapwings. Whereas modern farming methods have been instrumental in the decline of this species, the untreated grasslands and controlled grazing on Feldom continue to provide suitable habitat for successful breeding. The Lapwing however, along with other ground nesting birds, suffers from predation by Crows of eggs and young alike.

Jack Snipe (Lymnocryptes minimus) -

This small migrant snipe is a winter visitor during mild spells to damp area on Feldom. One favourite feeding site is near to Andrew Markham Wood.

Snipe (Gallinago gallinago) -

Resident on the ranges except in harsh weather when the ground becomes frozen and the birds can no longer probe for food. In spring the snipe can often be seen prominently on a post

A Snipe pauses for a moment on a drystone wall beside the IBSR at Cordilleras, before returning to probing the soft ground with its long bill in search of food.

or drystone wall along Cordilleras Lane or can be heard flying overhead producing the characteristic 'drumming' sound.

Woodcock (Scolopax rusticola) -

Generally a silent bird except when display flighting or roding on early summer evenings. Can be found in Waitgate Wood and Clapgate Gill, but invariably the bird is flushed before it is seen, its colouration camouflaging the bird perfectly with its surroundings.

Curlew (Numenius arquata) -

One can never tire from the evocative calls of breeding Curlew. Possibly as many as 40 pairs breed on Feldom as a whole. Watch for boundary marking flights indicating the extent of the breeding territory. Young birds may form into nursery groups by mid summer, before moving off to our seashores and estuaries for the winter.

Redshank (Tringra totanus) -

Another bird more often associated with the seashore than the moorland. It does, however, breed in small numbers on Feldom, its favourite site being on the damp area between High Waitgate and Waitgate Barn. Like the Snipe, look along drystone walls and at posts for perching birds, a habit not seen outside the breeding season.

Black-headed Gull (Larus ridibundus) -

Common Gull (Larus canus) -

Herring Gull (Larus argentatus) -

These species are grouped together because their visiting habits to Feldom are similar and, more often than not, they can be seen in mixed groups scavaging over open grasslands particularly in late autumn. The Black-headed Gull does breed locally on wetland areas on the moors, but have not been recorded on Feldom for some years.

Stock Dove (Columba oenas) -

Breeds on the cliffs of Kersey Green Scar and has taken to nest boxes erected in trees around the range. More often seen feeding in small groups in fields in the area of Marske during late summer and early autumn.

Woodpigeon (Columba palumbus) -

Quite common. More often seen overflying the range area, this species prefers the lower habitat of wooded slopes and arable land beside the River Swale.

Cuckoo (Cuculus canorus) -

The familiar call of the Cuckoo and the bubbling call of the female feature in spring in Waitgate Wood and Clapgate Gill. Favourite hosts to incubate their eggs are Meadow Pipits and Tree Pipits in the area.

Tawny Owl (Strix aluco) -

In early spring, some 5 to 10 pairs of Tawny Owls leave their winter quarters in lower sheltered woodland and move up into the gills and wooded areas of Feldom, attracted by a high vole and mouse population. An average of three owlets are raised, although the winter mortality rate is high. Tawny Owls take readily to nest boxes and that has aided the study of this pecies on Feldom.

Short-eared Owl (Asio flammeus) -

Two to three pairs regularly bred on Feldom, choosing deep heather or young plantations for their nest sites. Was a familiar bird to be seen quartering the moorlands with its butterfly-like flight, but suddenly and inexplicably this species disappeared in March '89 from our ranges and has not been sighted for some 12 months now.

Little Owl (Athene noctua) -

Subject to considerable population variation in the area commensurate with the severity of our weather. Look for sightings along the drystone walls, within which they will breed.

Kingfisher (Alcedo atthis) -

Absent throughout most of the year except during the breeding season when a pair ventures up Clapgate Gill beck to breed. For such a colourful bird, surprisingly it is easily overlooked when perching. Feeds on the many small fly present in the beck.

Green Woodpecker (Picus viridis) -

Does not breed on West Feldom, but the occasional adult bird moves up into Waitgate Wood in early autumn to feed.

Great Spotted Woodpecker (Dendrocopos major) -

Three pairs known to breed in the area, in Waitgate Wood, Andrew Markham Wood and in Clapgate Gill. More often located by the sound of its rapid drumming or by its sharp 'keck' call.

Skylark (Alauda arvensis) -

One of the first species to return to the moorland in spring. On any fine day from April through to mid summer a Skylark can be heard singing high in the heavens above Feldom.

Swallow (Hirundo rustica) -

To suggest that Swallows breed successfully on open moorland may seem absurd, but they do. On East Feldom, within range bunkers below the natural ground level, several pairs of Swallows have bred successfully during the past five years. In the West they take to more natural sites where farm buildings are available.

House Martin (Delichon urbica) -

Frequently seen flying over Waitgate Wood during the summer months, their nest sites being in the buildings of Kersey Green Farm.

Tree Pipit (Anthus trivialis) -

In Waitgate Wood from early May, the Tree Pipit can be heard in full song display flighting between conveniently spaced sessile oaks. The Cuckoo will also be present and watching too, as the Tree Pipit is a favourite host.

Meadow Pipit (Anthus pratensis) -

By far the most numerous breeding species on Feldom. Like the Tree Pipit, it can be seen and heard display flighting in spring, but over the moorland habitat. It also is a favourite host of the Cuckoo, and a favourite prey of the falcons.

Grey Wagtail (Motacilla flava) -

This most attractive water bird moves up into the range becks during the breeding season. Best chance of a sighting is in Clapgate Gill where a pair or two breed as far up into the range area as Feldom Gill.

Pied Wagtail (Motacilla alba) -

Absent in the winter months, but can be seen throughout most of the year around Cordilleras Farm and High Waitgate. Nests within the buildings and drystone walls.

BIRDS OF FELDOM

Dipper (Cinclus cinclus) -

The presence of the Dipper is indicative of the purity of the water, as they move territories at the first sign of pollution. The Dipper breeds in Rake Beck and Clapgate Beck and will take to suitably positioned nest boxes beneath bridges and overhanging banks. The Dipper is more easily spotted in early spring when it takes to noisy territorial display flights. Perhaps surprisingly, the Dipper has a most pleasant song, when it can be heard above the rush of water!

Wren (Troglodytes troglodytes) -

A common resident on Feldom only moving to lower ground in the severest of weather. Extremely hardy for such a small bird, but numbers can be decimated by sudden severe conditions. However, the Wren ventures high up onto the moor following the drystone walls in which it will nest and shelter from bad weather.

Dunnock (Prunella modularis) -

Easily overlooked as it is a quiet brown-grey bird usually seen hopping along the ground in woods and hedges. Males sing loudly in spring and on Feldom this species keeps to sheltered areas in Waitgate and Clapgate Gills.

Robin (Erithacus rubecula) -

Like the Dunnock, the Robin keeps to be lower sheltered areas in wooded parts of the range. Two to three pairs breed on West Feldom.

Redstart (Phoenicurus phoenicurus) -

The Male Redstart is a handsome bird with a distinctive reddish tail, hence its name. Both sexes are shy and retiring in habit and often difficult to spot in their favoured habitat of old and mature woodland. There are some 20 pairs on West Feldom and their numbers have been well monitored for the past five years, aided by this species readiness to take to nest boxes. A ringing programme is in being and it is estimated that due to the availability of artificial nest sites the population has increased threefold on Feldom. This migrant bird from Africa arrives here in early May, taking up residence in Waitgate Wood, Andrew Markham Wood and Clapgate Gill.

Whinchat (Saxicola rubetra) -

Another migrant from Africa arriving about the same time as the Redstart. However, this species prefers a more open habitat amongst the young mixed plantations. Males can be heard and seen singing in the tops of small trees in the young plantations close to Cordilleras Farm. The nest site is at ground level and most difficult to locate.

Wheatear (Oenanthe oenanthe) -

The first migrant from Africa to appear on Feldom in early spring. A white rump bounding along a drystone wall is probably the first glimpse you are likely to gain of this handsome bird. Perfectly at home on open moorland, the Wheatear builds its nests in drystone walls. By mid-August the Wheatear is on the move again, leaving the moors for lower ground and our coastline, before journeying south to warmer climes.

Ring Ouzel (Turdus torquatus) -

Similar in appearance to a Blackbird but with a white band across its breast, this bird is yet another migrant to the high moorland preferring areas sparsely covered by trees, particularly gills above 300 metres a.s.l leading up to rocky outcrops. A shy retiring bird which disappears in rapid flight usually with an accompanying alarm call of 'tchack-tchack'. One or two pairs regularly breed in Waitgate Gill.

Blackbird (Turdusmerula) -

An uncommon visitor to the moorland preferring the lower ground with more cover. During the breeding season at least one pair will venture up into both Clapgate and Waitgate Gill to breed, otherwise the Blackbird is an unlikely sighting on West Feldom.

The Ring Ouzel is a Spring migrant that can be found above 300 metres asl on our moorland, preferring rock strewn gills and cliffs in which to breed. Here a male brings food to nestlings in a disused stone barn in Throstle Gill near Dicky Edge, Feldom.

BIRDS OF FELDOM

Fieldfare (Turdus pilaris) -

A winter visitor arriving in large flocks from Scandinavia, occasionally numbering as many as a thousand individuals, attracted to the area by the rowan and hawthorn berry crop and undisturbed roosting sites. The Fieldfare, which is a scarce breeding bird in Britain, has been present on our ranges in late May. Breeding has not been proven here yet, but it is probably just a matter of time before a pair make it their home here.

Song Thrush (Turdus philomelos) -

Much like the Blackbird in habit, although more numerous in late summer and early autumn, attracted by elderberry, blackberry and rowan fruits.

Redwing (Turdus iliacus) -

A common winter visitor which may be seen feeding on the ground in the grassed areas near to Cordilleras Farm.

Mistle Thrush (Turdus viscivorus) -

Two to three pairs breed on West Feldom, their nesting sites being in Andrew Markham and Waitgate Woods. In autumn, small flocks of a dozen birds or more may be seen feeding on the ground in open areas often as winter approaches, in the company of Redwings.

Garden Warbler (Sylvia borin) -

Blackcap (Sylvia atricapilla) -

The habits of these two migrant warblers are similar, appearing in the scrubby areas of Clapgate and Waitgate Gills in early May, staying only long enough to breed before moving out of the area into lower ground and dense cover, before continuing their southward migration.

Willow Warbler (Phylloscopus trochilus) -

By far the commonest warbler to West Feldom and the first to arrive in spring. Favouring the habitat of our gills and occasionally venturing into the young mixed plantations on higher ground to breed. The distinctive musical descending cadence, ending in a flourish, of the Willow Warbler, heralds the arrival of spring to the ranges.

Goldcrest (Regulus regulus) -

This tiny attractive resident is commonest in the coniferous woodlands, particularly in Andrew Markham Wood where it breeds. Can more often be seen in the autumn in the company of tits, foraging through the woodlands in noisy bands. During severe weather, like most small birds, it forsakes the ranges for lower sheltered areas.

Spotted Flycatcher (Muscicapa striata) -

Widespread in our wooded areas, this late arriving migrant sits on a prominent perch and flies out hawking after insects, nearly always returning to the same perch. Two or three pairs breed around Cordilleras Farm nesting in three crevices or on building ledges. The Spotted Flycatcher also takes to open fronted nest boxes sited around the ranges.

Pied Flycatcher (Ficedula hypoleuca) -

This attractive migrant has been encouraged onto West Feldom by the provision of nest boxes which it takes to readily. Several pairs may be seen in spring in Waitgate Wood inspecting nest boxes for potential nest sites. By late May females are brooding full clutches and in mid June the young are fledged, disappearing into the tree canopies for two months before migrating southwards. As with the Redstart, a ringing programme of young birds from nest boxes is in being.

Marsh Tit (Parus palustris) -

Coal Tit (Parus ater) -

The habits of these two species are similar in that they venture onto Feldom, particularly into Andrew Markham Wood, in late autumn, often together and in the company of other tits, Goldcrests and Tree Creepers, all foraging for food.

Blue Tit (Parus coeruleus) -

Great Tit (Parus major) -

These two species breed in small numbers taking readily to nest boxes, Waitgate Wood being the favoured are on West Feldom.

Long-tailed Tit (Aegithalos caudatus) -

Not a resident, but may be seen in family groups travelling up into the range gills in late autumn, foraging for food amongst the hawthorns and dense bushes.

Treecreeper (Certhia familiaris) -

Nests behind splits in bark on tree trunks in Clapgate Gill, Andrew Markham and Waitgate Wood. Quite common, but more often seen in the company of tits in autumn, when its characteristic food searching technique of flying firstly to the base of a tree, climbing in spiral fashion well up the trunk, then dropping to the base of the next tree and repeating the pattern, can be observed.

Magpie (Pica Pica) -

Present throughout most of the year, this species could well earn the nickname of 'pirate of the moors', as along with the Carrion Crow, it predates heavily upon the eggs and young of ground nesting birds. Invariably seen in pairs except in autumn when parties of a dozen or more may roam the area.

Jackdaw (Corvus monedula) -

A common resident which may be seen throughout most of the year in the area of Cordilleras Farm. Nests in hollow trees, old buildings and on the cliff ledges of Kersey Green Scar. Often seen in late autumn and winter feeding on the ground in the company of Rooks.

Rook (Corvus frugilegus) -

There is one rookery on West Feldom, in Feldom Gill, where twenty to fifty pairs may breed. The Rook is a common sight in the late autumn and winter, feeding in large flocks on the grasslands around Cordilleras Farm.

Carrion Crow (Corvus corone) -

A common resident usually seen in pairs, although at the end of their breeding season they tend to form into groups of a dozen or more, scavenging the moorland in search of carrion. The Carrion Crow, if numbers are not controlled, can have a devastating effect upon ground nesting birds. It is not an uncommon sight in spring to find piles of eggshells of up to ten bird species where the Carrion Crow has left its trail. It also predates on young birds and plaintive calls of nesting Lapwings as they harrass the marauding Carrion Crows is a common sound on our moorland in spring.

Starling (Sturnus vulgaris) -

Breeds in small numbers in hollow trees in wooded areas. Large flocks numbering several hundreds feed on the range grasslands in late autumn moving back into urban areas to roost at night.

BIRDS OF FELDOM

Chaffinch (Fringilla coelebs) -

The commonest woodland species appearing in most wooded areas throughout the year. A familiar sighting among the beeches of Cordilleras Farm, though the breeding population on Feldom is quite small.

Brambling (Fringilla montifringilla) -

A winter visitor from Scandinavia which may be absent from our ranges for several years, then with a combination of severe weather in Europe and a good beech mast crop here, the Brambling may appear in large flocks of several hundred in the beech woods around Cordilleras Farm, staying for several weeks before moving on to other feeding areas.

Greenfinch (Chloris chloris) -

Breeds in small numbers in the lower sheltered areas of West Feldom. Never seen in more than one's or two's, except in autumn when large flocks of mixed finches passage through.

Goldfinch (Carduelis carduelis) -

Does not breed, but flocks or charms of Goldfinches may be seen on teasel and thistles in late autumn in open areas of the range.

Siskin (Carduelis spinus) -

This delightful brightly coloured small finch is a winter visitor to our area often seen in dancing flocks flying up into the gills, following the becks where alder trees grow and feeding on their seeds.

Redpoll (Carduelis flammea) -

A common resident preferring the habitat of the middle height mixed plantations where it breeds. Male birds can be seen and heard beating the bounds of their territories in song flight in spring. Outside the breeding season this species mixes with flocks of tits and other finches, feeding on birch and alder growing alongside our becks.

PLANTS OF WEST FELDOM

By Deborah Millward

Much of the area surveyed lies above 300m and consists of acid grassland with little to interest the botanist. It is only where this plateau is cut away by streams or possibly ice that a more diverse flora typical of the Pennine Dales occurs.

On entering the area from the south by Cordilleras Lane there is a small quarry where the underlying limestone is exposed. On the walls of the quarry, protected from grazing, a Hawkweed (Hieracium sp) has become established along with two lime-loving ferns, Maiden Hair Fern (Asplenium trichomanes) and Brittle Bladder Fern (Cystopteris fragilis).

To the east, where a small side-stream of the Clapgate Beck has cut a valley, the soil is acid and the vegetation is dominated by vigorous Bracken (Pteridium aqualine). Only tiny patches of Foxglove (Digitalis Purpurea), Primrose (Primula vulgaris) and Barren Strawberry (Potentilla sterilis) have survived. In a flushed area where the soil is too wet for bracken, a colony of Common Spike-rush (Eleocharis palustris) thrives with

PLANTS OF WEST FELDOM

Marsh Valerian (Valeriana dioica) growing amongst it. Beside the Clapgate Beck a comparatively rich area of moisture loving plants is established including the following:

Mentha aquatica	**Water Mint**
Veronica beccabunga	**Brooklime**
Lychnis flos-cuculi	**Ragged Robin**
Nasturtium officinale	**Watercress Marsh**
Caltha palustris	**Marsh Marigold**
Carex disticha	**Brown Sedge**
Carex hirta	**Hairy Sedge**
Dactylorchiza fushsii	**Spotted Orchid**
Cardamine amara	**Large Bittercress**
Chrysospleniun oppositifolium	**Golden Saxifrage**
Lysimachia nemorum	**Yellow Pimpernel**

Away from the stream side there are again large areas of bracken.

On the west bank this bracken is growing amongst profuse primroses which will be competed out if the bracken is not controlled.

Upstream on rocks below Low Feldom the rabbits have distrubed the ground to such an extent that arable weeds have established, these include:

Aphanes arvensis	**Parsley-piert**
Sherardia arvensis	**Field Madder**
Lamium purpureum	**Red Dead-nettle**
Geranium rotundifolium	**Roundleaved Cranesbill**

Myosotis ramosissima the Early Forget-me-not was also found here

Downstream the steep east bank has areas of calcareous soil and the following species were recorded:

Sanquisorba minor	**Salad Burnet**
Helianthemum numularia	**Rock Rose**
Linum catharticum	**Purging Flax**
Hieraceum pilosella	**Mouse-ear Hawkweed**
Briza media	**Quaking Grass**
Lotus corniculatus	**Birdsfoot Trefoil**
Thymus praecox	**Wild Thyme**
Carduus nutans	**Musk Thistle**
Carlina vulgaris	**Carline Thistle**
Carex flacca	**Carnation Sedge**
Carex caryophylea	**Spring Sedge**
Veronica officinalis	**Heath Speedwell**

Heath Speedwell (Veronica officinalis) was also found growing in very different company in the grassland above Dicky Edge where the principle plants were:

Nardus stricta	**Mat Grass**
Deschampsia flexuosa	**Wavy Hair Grass**
Gallium saxatile	**Heath Bedstraw**
Luzula campestris	**Field Woodrush**

Any plant growing on Dicky Edge scar must be able to survive the continuous and heavy grazing of rabbits which apparently were present in similar quantities as long ago as the 1930s. Presumably the vegetation made a brief recovery when myximatosis was at it's most virulent phase but the present vegetation is losing the

PLANTS OF WEST FELDOM

battle. In spite of the sparsity of ground cover a surprising number of species were recorded.

Urtica dioica	Stinging Nettle
Pteridium aqualine	Bracken
Teucrium scorodonia	Wood Sage
Thymus praecox	Wild Thyme
Myosotis arvensis	Field Forget-me-not
Galium cruciata	Crosswort
G sterneri	Limestone Bedstraw
G verum	Lady's Bedstraw
Asplenium ruta-muraria	Wall Rue
A trichomanes	Maiden Hair Fern
Sedum acre	Stonecrop
Oxalis acetosella	Wood Sorrel
Brachyopodium sylvaticum	Slender False-brome
Rumex acetosella	Sorrel
Aira praecox	Early Hair Grass
Carduus nutans	Musk Thistle
Veronica chamaedrys	Germander Speedwell

The latter species was heavily infested with the gall forming midge Jaapiella veronicae.

Below Dicky Edge, away from the cover of the rocks, the rabbits are marginally less active and a continuous ground cover has been maintained. Here, where the soil is calcareous, a very similar vegetation to that recorded in Clapgate Gill was found.

Carex flacca	Carnation Sedge
C panicea	Carnation Sedge
C caryophylea	Spring Sedge
Briza media	Quaking Grass
Lotus corniculatus	Birdsfoot Trefoil
Linum catharticum	Purging Flax
Carlina vulgaris	Carline Thistle
Viola riviniana	Dog Violet
Orchis mascula	Early Purple Orchid

Unfortunately no orchid flowers had survived to seed, all were eaten off at ground level.

Due north of Dicky Edge an area of scrub contains:

The latter species is mostly confined to the cliffs

Fraxinus excelsior	Ash
Sorbus aucuparia	Rowan
Sambucus nigra	Elderberry
Crataegus monogyna	Hawthorn
Taxus baccata	Yew

where it is less hazardous to grazing stock.

A spring in this same area was dominated by the Hard and Soft Rushes (Juncus inflexus and effusus) but not to the exclusion of other species and the following were recorded:

Cirsium palustre	Marsh Thistle
Cardamine pratensis	Lady's Smock
Holcus lanatus	Yorkshire Fog
Carex echinata	Star Sedge
C nigra	Common Sedge
Stellaria alsine	Bog Stitchwort
Lychnis flos-cuculi	Ragged Robin
Gallium palustre	Marsh Bedstraw
Epilobium hirsutum	Great Hairy Willowherb

Heading north again towards Waitgate Wood some of the grasses were infected with Epichloe typhina, a parasitic fungus related to the ergot and commonly known as 'Choke'.

A RELIC BROADLEAF WOODLAND
WAITGATE WOOD

By Ian Findlay

INTRODUCTION

Once part of the Marske Estate, Waitgate Wood was bought by the MOD in the 1940s and 1950s as part of the Feldom Ranges. As the woodland is situated on the western edge of the range very little in the way of MOD damage has occurred within the wood. The woodland has however been subjected to heavy grazing over many years by cattle, Sheep, Deer and Rabbits. This relic broadleaf woodland has survived the pressures of farming/grazing over the generations and is now restricted to its precarious position on the steep east bank of Waitgate Gill with its shallow acid soils and numerous rock outcrops.

SPECIES

The main woodland tree species are Birch - (Betula), Oak - (Quercus petraea), Rowan (Sorbus accuparia) and Hawthorn - (Crataegus monogyna). Some natural regeneration of the Birch does occur but is usually grazed out. The woodland supports a varied flora and fauna including: 46 species of flora/grass/fern, 7 tree species. Mammals include a resident badger, good small mammal population, passing roe deer which can and do hop over the fence line, and numerous rabbits. A nest box scheme set up in 1987 by the Army Bird Watching Society has encouraged the nesting of redstart, pied flycatcher, blue tit and tawny owl.

MANAGEMENT

The 2.8 hectares of woodland which run north to south on the steep east bank of Waitgate Gill was fenced in May 1987 to stop further grazing by cattle and sheep.

OBJECTIVES

To establish a self-regenerating woodland of oak, birch, rowan and other species.

PLAN

1. Fence woodland area to stop further grazing by cattle and sheep. Additional rabbit proof, wire netting may have to be used if the rabbit problem increases.

2. Set up quadrats to monitor the tree regneration.

3. Control the spread of bracken by spraying with Azuluox, with special care to be taken not to damage the extensive fern population.

4. Set up a long term monitoring scheme (NCC) 1990-1991.

A RELIC BROADLEAF WOODLAND
WAITGATE WOOD

PROGRESS

The results, after 2 years, are quite encouraging. The birch regeneration along the top ridge is very good despite a rogue sheep (Kangaroo blood) (1) which periodically gains access to the wood.

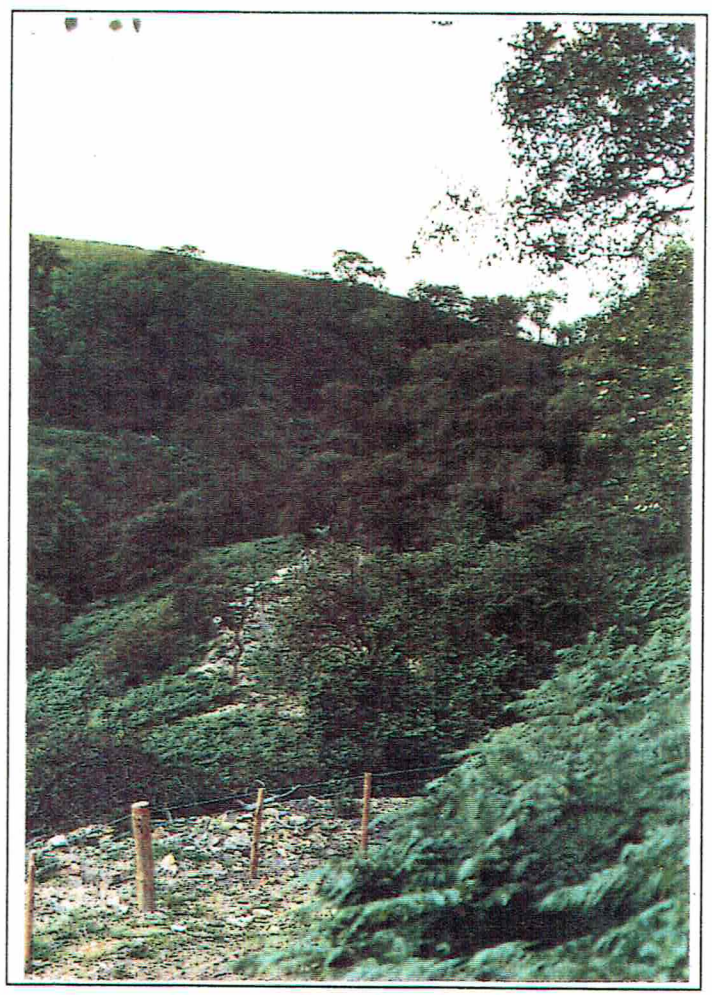
A small amount of both birch and oak seed have been collected within the wood by the Forestry department of the DLA and if the seed is viable and saplings are produced a limited number will be planted out. (2)

A programme of bracken spraying, started in 1989, will be continued over the next few years. The main bracken area is to be found at the northern end of the wood where, unfortunately, a deposit of bracken litter has become established over the years. To control any possible erosion that could occur after spraying several saplings of birch, rowan and oak have been planted in this area.

Editor's Note:

(1) The fence was raised to 5 feet to try to stop this 'lepper'.

(2) The oak was unsucessful in 1991



The wood has been fenced against sheep grazing

BUTTERFLIES AND MOTHS OF CLAPGATE GILL
1990

By Arnold Robson

The first visit to the site was made on the warm, sunny afternoon of 17 May. Although Orange-tips were plentiful that day along road-side verges between Richmond and Clapgate, together with a sighting of 2 Small Tortoiseshells, neither of these species was found within the study area. In fact the only species recorded in the Gill were Small and Green-veined Whites, and a Brown Silver Line Moth (Petrophora Chlorosata) was disturbed from the bracken.

A return visit to the site was made on another very warm, sunny afternoon, 24 June, and the sheer numbers and variety of Butterflies present was most encouraging. Small Heaths, Large Skippers and Green-veined Whites were abundant, 14 sightings of Common Blue were noted, a few Large Whites and single specimens of Meadow Brown, Small Copper and Small Tortoiseshell. There were also numerous Chimney Sweep Moths.

15 July was another very warm sunny day and the third visit to Clapgate Gill produced Meadow Browns in abundance, Small Tortoiseshells and Small Skippers were plentiful, 4 Common Blues were noted and there were still several Small Heaths to be found.

A fourth visit to the site was made on 21 August, a sunny but cooler day, although quite warm in the shelter of the Gill. Nineteen Small Coppers were counted, 6 Wall Browns, several Red Admirals, Peacocks and Meadow Browns and one Small Tortoiseshell. Large, Small and Green-veined Whites were also noted.

During the four visits, 13 species were recorded, viz.

Meadow Brown

Wall Brown

Small Heath

Small Tortoiseshell

Red Admiral

Peacock

Small Skipper

Common Blue

Small Copper

Large White

Small White

Green-veined White

Large Skipper

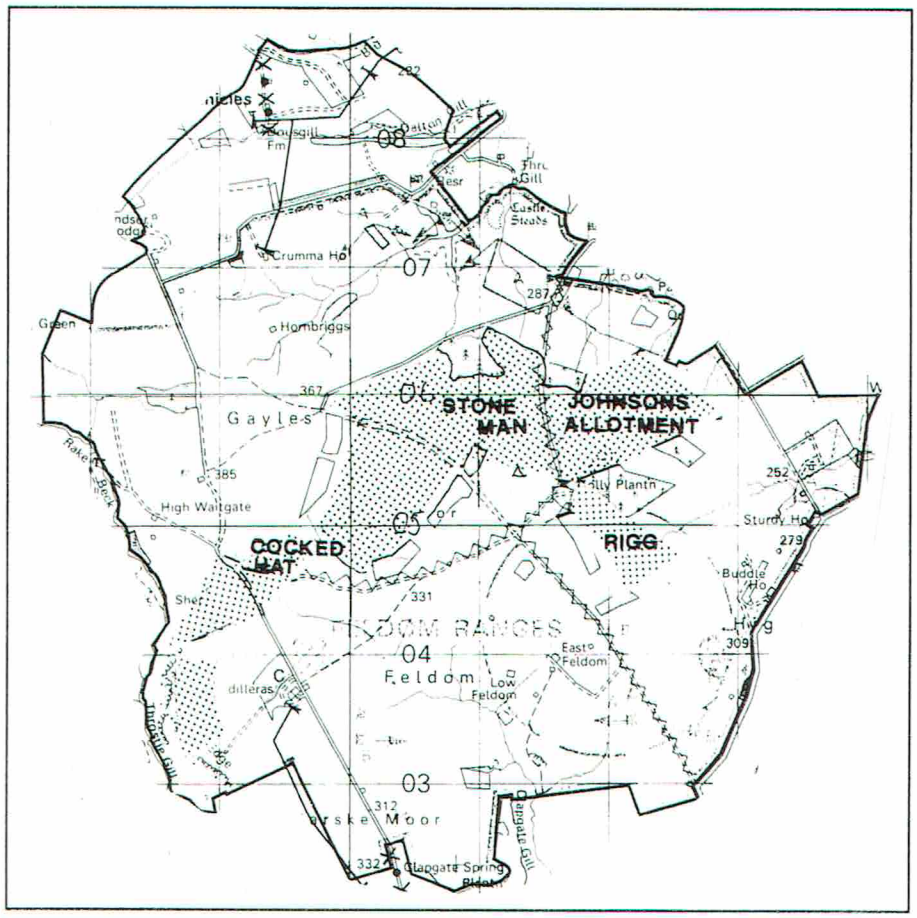
HEATHER MOORLAND MANAGEMENT FELDOM 1975-1990

By Major Bryan Wilson

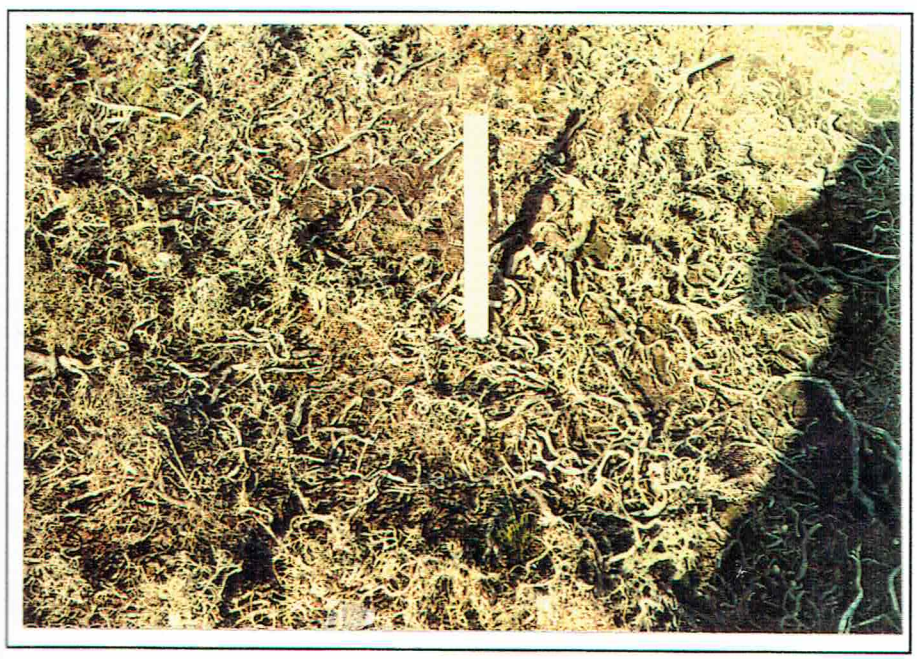
INTRODUCTION

This report describes the Heather Moorland Management plan carried out on the Feldom Training Area, from 1975 up to the present time.

The heather moorland areas - some 800 acres in extent - are shown pink on the illustration at Plate 3.



Heather Moorland Management (Plate 3)



Shepherds Hall 1976 - Mismanagement

BACKGROUND

"Sie mussen fur elen schaden mehr bezahlen" (1). Thus descreed the German Government in Bonn in 1967, a directive that very nearly destroyed forever the heather moors at Feldom. This ruling resulted in early 200 Armoured Personnel Carriers (APCs) being sent back from Germany to train at Catterick. The requirement for APC free running led to the breaking down of the walls and fences at Feldom and the adoption of a ranching style of farming. In the event, 'going' inhibited tracked vehicle training and later the APCs returned to Germany. The ranching policy continued. By 1974 - in a short 7 years - severe overgraze damage, from both cattle and sheep, had become a serious threat to the heather moorland habitat.

MANAGEMENT PLAN

In 1975 the Commandant Catterick Training Area stressed this overgraze problem to the Area Management Committee and a management plan was drawn up.

The aim of the management plan was the rehabilitation of the heather moorland; with a long term view to transforming the, by now, bare areas reverting to white grass and rush, back to well managed heather for military training, sheep grazing and wildlife.

The management plan was based on the following factors:

a. Minimum fencing - to divide farming interests and to control stock movement.

b. The total exclusion of cattle from the heather areas.

c. Insistence on a sheep stocking limitation based on a well tried ratio of one ewe and follower per hectare.

d. Grazing on the heather land limited to between about 1 June to 1 January only throughout the year; dates to be flexible dependent on early or late spring.

e. Drainage to encourage growth in wet areas.

f. Selective burning - when this became possible - to maintain stocks of young - 3 to 7 year old - nutritious ling.

(1) You must pay more for the damage".

HEATHER MOORLAND MANAGEMENT FELDOM 1975-1990

PILOT PLOT

A pilot project was launched in 1975 when the 35 acre Shepherds Hall plot was fenced and left ungrazed. This ground was a barren 'moonscape' with a few remaining mushroon shaped clumps of degnerate ling, patches of bare peat littered with dead heather stalks, and a steadily encroaching tide of whitegrass and rush.

Natural ling regeneration was, even as soon as July 1976, so vigorous and encouraging that a full conservation plan, covering all the moorland areas, was prepared. Sadly the pilot plot was severely damaged in 1978 when large numbers of sheep broke in via a snow drift.

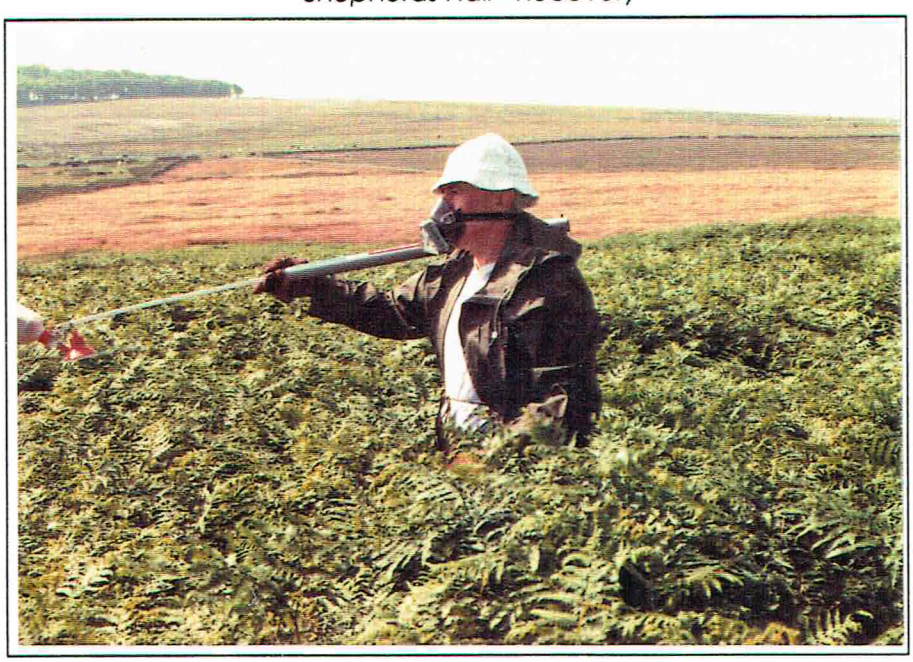
PROGRESS

By November 1978, 70% of the nominated conservation areas - Grassmoor, Stone Man, Johnson's Allotment and Feldom Rigg) were fenced. Fencing was finally completed in December 1979 and on 1 January 1980 the new, limited grazing policy was implemented thus restricting both sheep numbers and grazing time. The management plan was now in operation.

1980-1985

The critical 5 years. Progress varied from very good to fair. Shepherds Hall trial plot romped away patch burning in 1980 - strip burning in 1981. By 1982 - in 5 years, timed from the 1978 break in, the habitat had changed from 'moonscape' back to healthy heather moorland - just by giving nature a chance.

Shepherds Hall - Recovery



Cocked Hat 1981 - Bracken spraying

A very strong grass growth on the Cocked Hat enclosure was topped (2) in September 1981 and 1982. Doubts have been cast on the wisdom of grass topping to aid ling growth as an extra nitrogen release could result from the rotting debris encouraging even stronger grass growth. In the event the piercing winds of Feldom blew away the debris and gradually the ling became dominent. (2)

In 1981 conservation group members hand sprayed 2 acres of bracken on Cocked Hat with Asulox achieving a 70% 'kill'.

The regrowth was again sprayed in 1985 with complete success.

Limited grazing, subject to the one ewe and follower per hectare rule, was general over the whole area by 1985.

1985-1990

The second 5 years have been a period of consolidation. A particular success story has been achieved in the shallow valley of the Rigg. Here, 10 years ago, overgraze had reduced the ling to a few outcrops at the southern end. Today we have a superb heather carpet dominant almost throughout the valley.

Editor's Note:

Grass is 'topped' by mechanical cutting eg: with a hay mower.

Feldom Rigg - Improvement

Dicky Edge 1983 - A dying moor

Shepherds Hall and Cocked Hat 1989 - Regeneration

A final area of badly damaged ling at Dicky Edge was, after 3 years of false starts and frustrations, fenced off from all grazing in June 1986.

We have learned a lot from this 50 acre plot. Regrowth has been carefully monitored and proved perplexingly slow; perplexing that is until we acted on the adage that 'geology is the key to all flora', and asked our geologist for help. Richard Almond's survey showed that on Dicky Edge the underlying rock is Richmond Chert, leading to an impermeable, dry, poor, thin siliceous soil. Where regrowth is vigorous the underlying strata is of boulder clay which leads a permeable, water holding, fertile soil. The area was lightly grazed in the early summer of 1987. The vigorous growth throughout the area that had been achieved by the autumn of 1988 allowed a full burning programme to be prepared. Unfortunately this was not implemented: the autumn and spring 1988/1989 provided impossible burning conditions; only 3 half days were achieved.

SUMMARY

The Feldom Heather Moorland Management plan has now been in operation, on the ground, for just over 10 years. The plan is based on:

a. The maintenance of a finely balanced but flexible, stock to ground ratio.
b. Burning to maintain stocks of young ling.
c. Limited drainage to encourage growth in wet areas.
d. Control of stock movement.

Where this plan has been in operation the results have been spectacular in the, all but, complete recovery of a previous 'moonscape'. This recovery has brought back realistic training cover. It has earned the approbation of the farming tenants; one comment, "I have never had such good lambs from that ground" is particularly valued. The how healthy moorland provides a fruitful and varied habitat to the wildlife and birdlife in particular. The Feldom Moorland project is a long term triumph of practical conservation of which the Conserva-tion Group can be justifiably proud.

ENTOMOLOGICAL - WATER TRAPS

By D J de C Henshaw

The Feldom Area in general may not be expected to be entomologically exciting, for as with all British upland sites the exposed terrain will contain mainly coarse grasses and sedges, some wetland peat and on the better land, Heather. With the exception of the Heather which can have a diverse and interesting insect community, faunas for the other habitats are usually limited consisting mostly of high density emergences of a few species of Diptera, especially 'biting midges', and Coleoptera. Other Orders of insects are to be found but because of sudden changes in temperature, persistent drying winds these tend to be secretive and of short duration. They are not therefore often found except by long and dedicated collecting. Lastly, those insects associated with herbivores can form a significant part of the fauna depending upon land use. However, small valleys and other features breaking the monotony often provide exceptional variety, harbouring small but very diverse communities, largely reflecting the floral diversity also usually associated with such places.

During the period of this project few insects were collected, however, in an attempt to remedy this situation, four water traps were set out by the Hon Secretary at Clapgate Gill, (XX41135033) a south facing valley on the southern boundary of the Feldom Range, between 22 August and 25 August 1989. The contents of each trap were then collected on linen, stored in alcohol until identified.

Whilst the collection was not large it none the less showed the great variety of insects which can be seen during quite a modest period. In all 26 species in 8 Orders were obtained, including one fly considered rare.

Regular collecting would of course provide a wealth of information, both as a specific appraisal of the site, and above all as an important indicator of management policy success.

Of particular note the Tachinidae Ceramya monstrosicornis is to be checked by an authority as it is recorded as very rare - NO! the Gill is not likely to be made a special reserve for its protection. The May-fly also is unusual for the area. The presence of the fly Dixidae is an indicator of a wholesome site. It is to be hoped that further collecting can be undertaken from time to time.

WEST FELDOM - WATER TRAP RESULTS

The following is a resume of material identified:

	SITE 1	SITE 2	SITE 3	SITE 4
Collembola sp.	y	y	y	
Entomobryoidae		y		
Ephemeroptera 'May-Fly'				
Ecdyonuridae	y			
Hemiptera 'Bugs'				
Cicadellidae 'Leaf Hopper'	y		y	
Aphidae		y		
Lepidoptera				
Pyralidae moth	y	y		
Diptera				
Tipulidae				
Tipula paLUDOSA		y		
Dixidae		y		Y (larvae)
Sciaridae		y		
Ceratopogonidae sp. Culicoides				
'Biting Midges'	y	y	y	
Cecidomyiidae	y	y	y	
Psychodidae sp.		y	y	
Tricomyia urbica	y			
Chironomidae sp.		y		y
Phoridae		y		
Dolichopodidae				
Hypophallus obscurellus		y	y	
Dolichopus nubilus				
Agromyzidae				
Phytomyza ranunculi		y		
Chloropidae				
Oscinella frit	y			
Tachinidae				
Ceromya monstosicornis	y*			
Muscidae				
Polietes steini	y		y	
Hymenoptera sp.		y		
Ichneumonidae				
Thyraeella collaris-Moth parasite		y		
Mutillidae-Bee parasite	y			
Mymaridae sp.-Bug parasite		y	y	
Cynipidae sp.-Fly parasiote		y	y	
Braconidae sp.-Fly parasite			y	
Coleoptera				
Chrysomelidae 'Flea-beetle'				
Psylliodes chalcoma	y	y	y	
Psylliodes picina		y	y	
NON-INSECT				
Arachnida				
Linyphiidae				
Lepthyphantes sp.			y	

D.J. de C. Henshaw
4. April. 1990

CORDILLERAS FARM - A HISTORY

By Lt Col H S Le Messurier

INTRODUCTION

Anyone perusing Volume 797 of the Land Register in NORTHALLERTON might notice that on the twenty seventh day of September 1940 JOHN TIMOTHY D'ARCY HUTTON of the City of Liverpool conveyed to HIS MAJESTY'S PRINCIPAL SECRETARY OF STATE FOR THE WAR DEPARTMENT, for the sum of 3126,045, land forming a part of the MARSKE ESTATE totalling 2507.5 acres.

Knowing the propensity of the War Office to select remote high open land on which to train troops, he or she would not have been too surprised to find that that part of the Marske Estate, some 12kms WNW of RICHMOND and 4 kms NORTH of the village of MARSKE, was indeed some 350 metres above sea level.

The reader might wonder what sort of farming could be carried on under the weather conditions of that altitude and should the name Cordilleras Farm be noticed he or she would merely consider it strange for North Yorkshire.

This Conveyance is of great interest for two reasons, firstly that the land passed out of the hands of the HUTTON family for the first time in over 300 years and secondly that CORDILLERAS had been built as a technically advanced model farm back in the 19th Century.

PUTTING FELDOM ON THE MAP

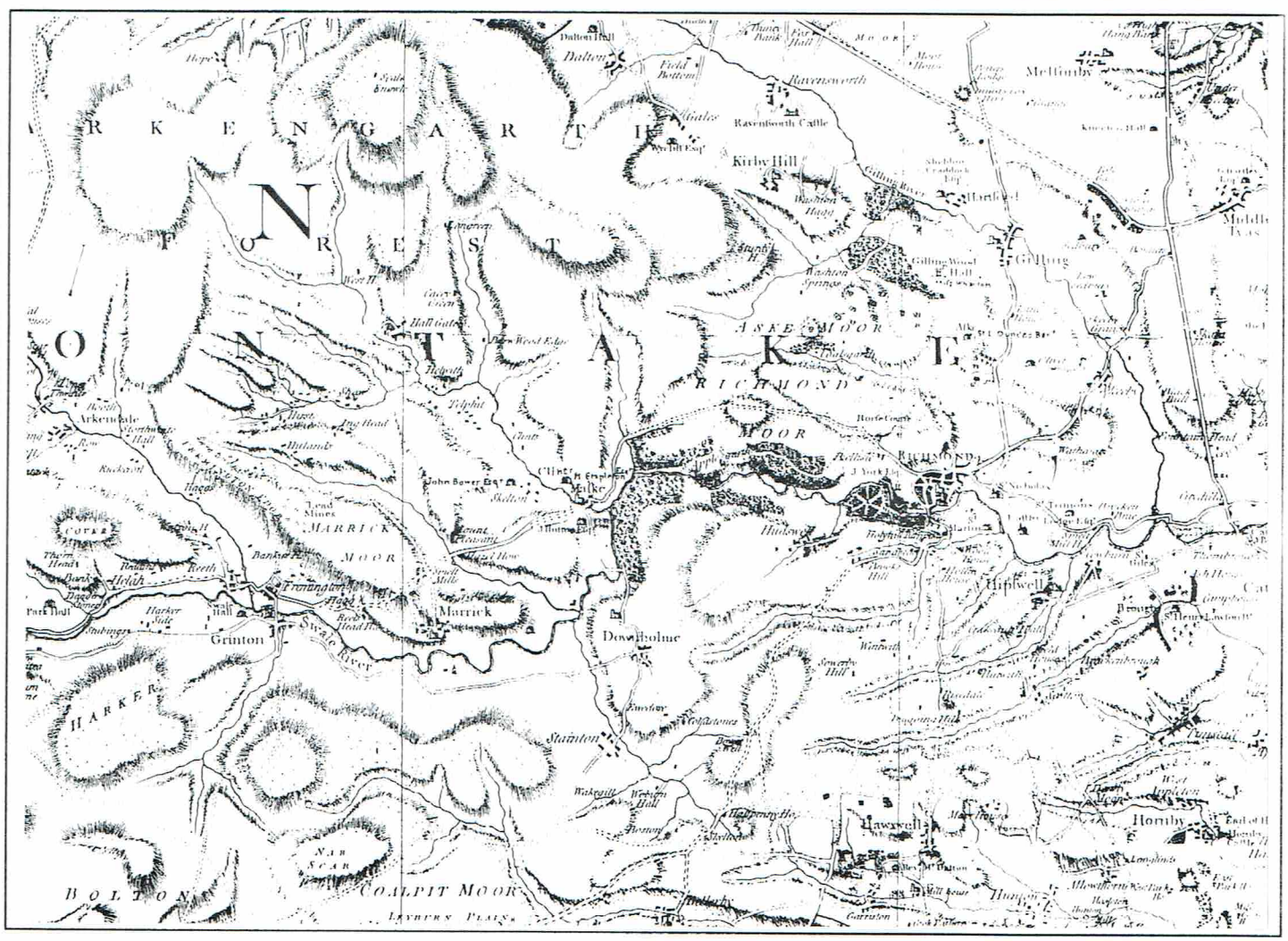
Although the HUTTONS were developing their Hall and parkland in the 18th Century it did not include the high moors. Arthur Young travelling the high ground between MARSKE and RICHMOND on his 'NORTHERN TOUR' of 1770, 'found the country all moors, and greatly improveable, but alas' none undertaken'. The 1771 map produced by THOMAS JEFFREY shows FELDOM area as just an empty plateau bounded by the familiar names of STURDY HOUSE, KIRBY HILL, the HORSE COURSE, APPLEGARTH, CLAPGATE BECK, MARSKE and CLINTS.

In 1809 Colonel Mudge, as part of his Ground Trigonometrical Survey of Great Britain, established the accurate position of two high points in the Pennines at the head of Swaledale:

GREAT SHUNNER FELL 2329 feet ASL (GR 848972) WATER CRAG 2186 feet ASL (GR 928046)

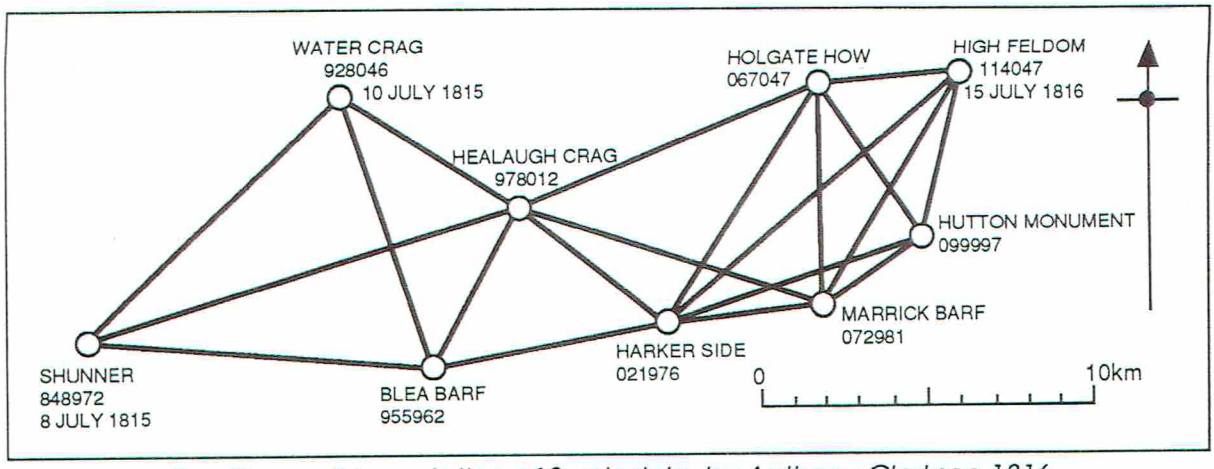
The distance between them being 538.83 chains (6.74 miles).

On Saturday 8 July 1815 a 28 years old local man, Anthony Clarkson, set up his theodolite on the summit of



CORDILLERAS 1771

CORDILLERAS FARM - A HISTORY



Cordilleras - Triangulation of Swaledale by Anthony Clarkson 1816

GREAT SHUNNER and began his triangulation of Swaledale. In a series of observations he progressed Eastwards. A year later on Monday 15 July 1816 he stood on the partially built HUTTON MONUMENT being erected above MARSKE and took a bearing towards HIGH FELDOM. That same day he moved his equipment to HOLGATE to take a final bearing on HIGH FELDOM and closed the triangle. FELDOM was at last on an accurate map.

Of course, this triangulation was only the skeleton of the future map which would show the hills, streams, fields, buildings etc in the area. This work took another 40 years and was completed by Captain Cooke, Royal Engineers, the result being published in 1857 as Sheet 38 of the 6 inch Ordnance Survey.

(Footnote: Sadly, in March 1847 and before the map was produced, Anthony Clarkson died while taking measurements on IVELET HILL side, just 4 miles from SMITHY HOLME where he lived. He had spent 30 years with chain and theodolite, up hill and down dale in the cause of the Swaledale survey).

DEVELOPMENT OF CORDILLERAS FARM

At the heights of both the Napoleonic Wars and the national wave of enclosures, John Hutton IV (1774-1841) enclosed Marske Moor by an Act of 1809 and began to establish his new farm there, 550 feet above the village. From the terse entries logged in the Day Books of his agent Thomas Carter one can, with patience, pick out and analyse from a mass of general data, the development and fortunes of this quite remarkable farm.

John Hutton was a bachelor, a man of business, an acknowledged authority on philosophy and scientific agriculture, and spread the gospel of new methods with enthusiasm throughout the district. He was a friend of the Colling brothers and other noted breeders in the Darlington area at the time when their crucial breakthrough by intensive in-breeding produced the improved Shorthorn and on his home farm in Marske John bred one of the early pedigree herds. Inspired by his admiration of mountains and roused by the Peninsular war, the furious revolts in the Spanish American colonies and the remarkable scientific publications and intrepid explorations of Alexander von Humboldt in Venezuela and the Andes, it was little wonder that John Hutton called his new farm Cordilleras, and the four South American volcanoes erupted on Marske Moor as names for his newfields. (Plate 5).

Even with a good atlas it is difficult to locate the origin of many of the field names, but at least four are from ECQUADOR.

The soil was poor and rock lay near the surface. Two patches of Main limestone were upfaulted on to the moor, giving useful quarries and a site for a lime kiln.

Most of the northern end was 'black moor', lingy, with peaty soils, but very variable, troubled by patches of bog and rushy swamp, swangs, hollows and 'shackholes' and, on the other hand, by 'chinilly hills', 'chirt hills' and rocky outcrops.

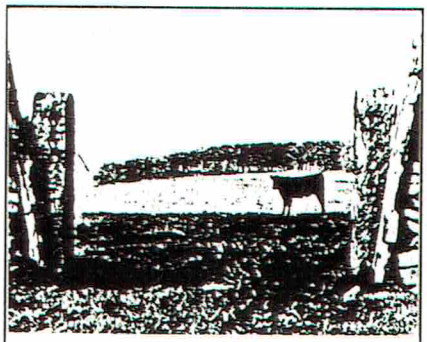
Of the 1,100 acres allotted to him on enclosures, it was 800 acres at this northern end that John Hutton made into Cordilleras Farm, incorporating 30 acres of old intakes down by Throstle Gill, working the whole in close association with his home farm down in Marske village and with his smaller Gilpool on the river silts of the Ure near Middleham.

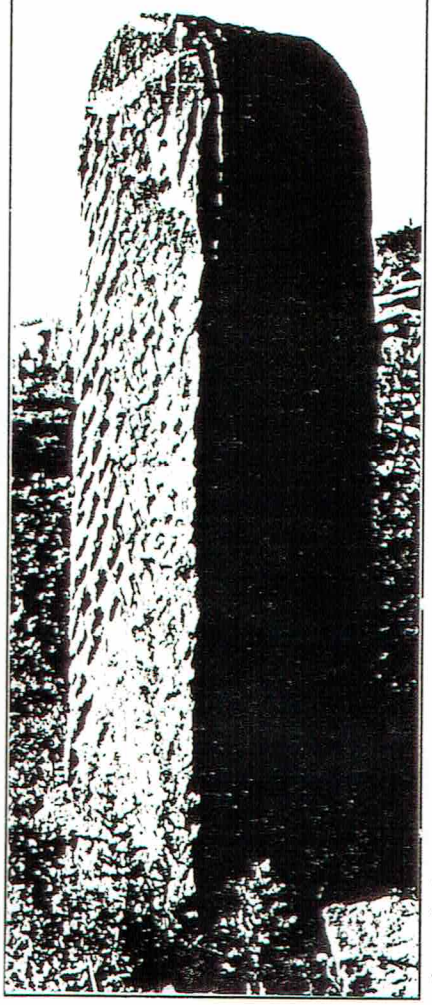
The years 1810 to 1812 were years of intense activity, the groundwork for marvellous progress in 1813 to 1815. Road-making, walling, reclaiming the land and building the farmstead went on side by side, with relative lulls in mid-winter and intensive summers with large gangs of men, women and children at work.

Early in 1810 a new road of a gentler gradient than the old was walled up the steep 250 feet front of Marske Edge, and a spine road realigned and constructed over the moor at a cost of £438. New field walls were begun, six or seven Quarters high, under cape, with edgewise cape and two rows of throughs. The walls were built by his own masons and day labourers and by bargain, the prices for getting and leading the stones varying according to the difficulties involved. Stone came from quarries newly cut in the fields, from land-cleaning and ploughing and from quarries on the Edges, resulting in a variety of materials and styles in sandstone, grit, limestone and boulders.

Most walling was tackled in 1810 and 1811, but it continued through 1812 and 1813 and even until 1817 as the later fields were brought into production. Both free-stone and masoned sandstone and grit gate stoups were used, set six to eight feet apart, sufficient for a dales cart. Drains were begun in 1810, but likewise continued to be made over several years. Main drains or cundiths were of flagstones. Trench drains 15 to 18 inches wide and as much as a yard

CORDILLERAS FARM - A HISTORY

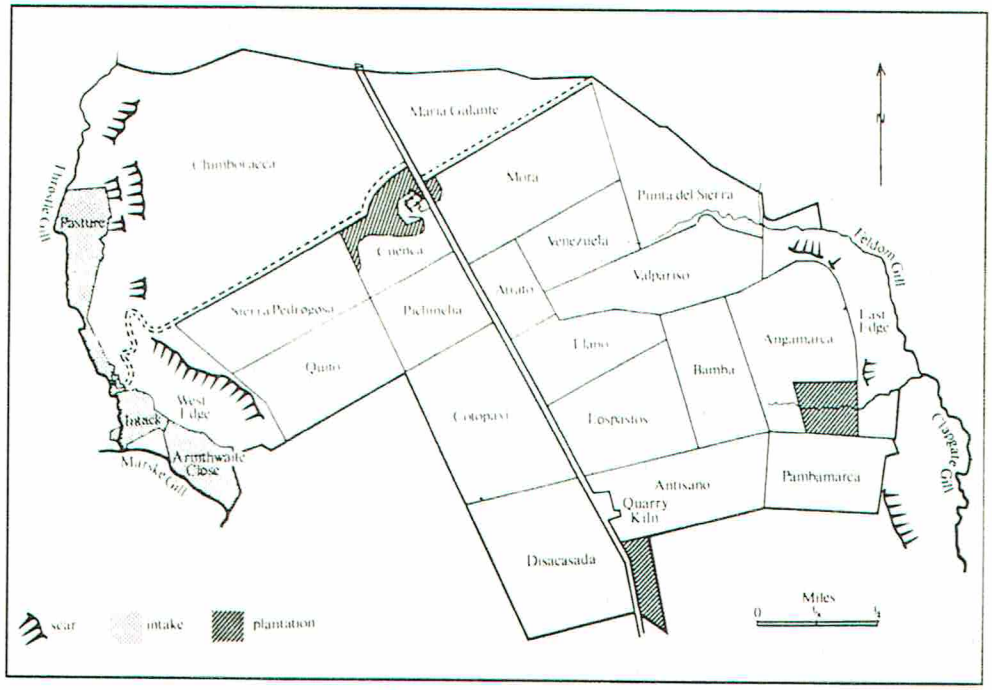




a. Gateway between Cotopaxi and Pichincha
b. Gate Stoop of Pichincha Field

deep were filled with stones and pebbles. Later on, as these works, using stone were nearing completion, access roads along field edges were constructed using chert stones laid over a bed of ling.

By September of 1810 paring and sod burning began at £1-2-6 an acre. In 1811 the first small patches of land, 21 acres in all, were ploughed and sown, and the first oat crop taken to the new granary at Cordilleras; in November, sixteen Irish heifers were folded in Quito on turnips temporarily hedged with fir-tops, and bedded in Cordilleras foldyard at night on bracken brought up by sledge from Feldom Gill. In June, 1812, a new lime kiln beside the spine road was fired, and liming began; 2,000 bushels of coals per season were brought for this kiln via



Cordilleras 1824

Winston and Gayles, a journey of nearly 20 miles from the 'fell pits' of south-west Durham at Old Etherley and South End Colliery. By the autumn of 1812 there were nine oat stacks in Angamarca and five in Quito.

Land reclamation was to be a gradual progress. In general land was pared, burned and drained for a year or two before being first sown, and frosted over a winter before liming. Estate made wooden ploughs gave way to iron ploughs first bought then copied by the estate blacksmith.

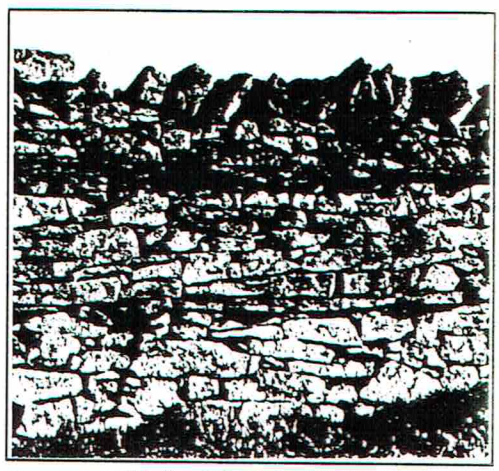
The amount of work involved was phenomenal: quarries made in the fields which provided the stone for foundations of farm buildings, roads and drainage had to be filled and levelled. The end result is depicted in the following account: "Shackholes and hollows were stuffed with quickens, sods, stones and soil and levelled. Chirt hills, chinilly hills and barren places were quarried down and covered with soil and manure, and 'earthfast stones' broken up. Springs were intercepted, using bore rods for five springs in Lospastos bogs and bores and drains to seven feet deep in Venezuela bogs. Swangs and wet hollows were filled with sods and cobbles, and for the horses rolling Llano, the carpenter made horse clogs".

Water had to be bored for too, for ponds and troughs and pipes were laid to bring water from Chimboracca to the farmstead.

By 1813, the year following Napoleon's retreat from Moscow, Cordilleras Farmhouse was inhabited throughout the winter though it lasted until April with Feldom lying under 5 foot of snow.

This year showed a tremendous advance. Eight further fields came into full production, 13 carthorses were working and a total of eleven productive fields were growing rape, turnips, clover and oats. By 1815 the whole acreage of most fields was fully cultivated.

With the end of the Napoleonic wars and in spite of the agricultural slump which followed there were several years of steady progress and by



Wall of Atrato Field

1817 cropping had increased to 500 acres. Two fields DISACASADA and CHIMBORACCA were only part ploughed and remained a heath'. Around the 1830s crop values fell and gradually only oats were grown annually in some fields with turnips and clover being grown in others. Cordilleras became pastoral. Although their characteristics were so different prior to reclamation, oats were grown on 4 particular fields. For more than 20 years QUITO produced oats one year in two, BAMBA & VENEZUALA each one year in three and ANGAMARCA nearly as often. The late Mr Meynell back in the 1960s said that he could recall corn growing on Cordilleras, presumably prior to 1914.

John Hutton was above all a stock man and on his combined farms at Cordilleras, Marske and Gilpool, wintered stock rising from 200 head before 1812 to 711 in 1816. The greatest expansion in tillage and stock was in 1815, the year of Waterloo.

The Marske Shorthorn herd remained around 50 with Scotch and 'mixed' herds wintering 100 by the 1830s. Sheep wintering increased from 100 in 1808-11, rising to 600 in 1816-19 before falling back to the 400 mark.

The enclosure of the moor and the development carried out by John Hutton had a great impact upon Marske in human terms. His labour force rose by 50% and the population of Marske increased from 247 to 290 in a decade.

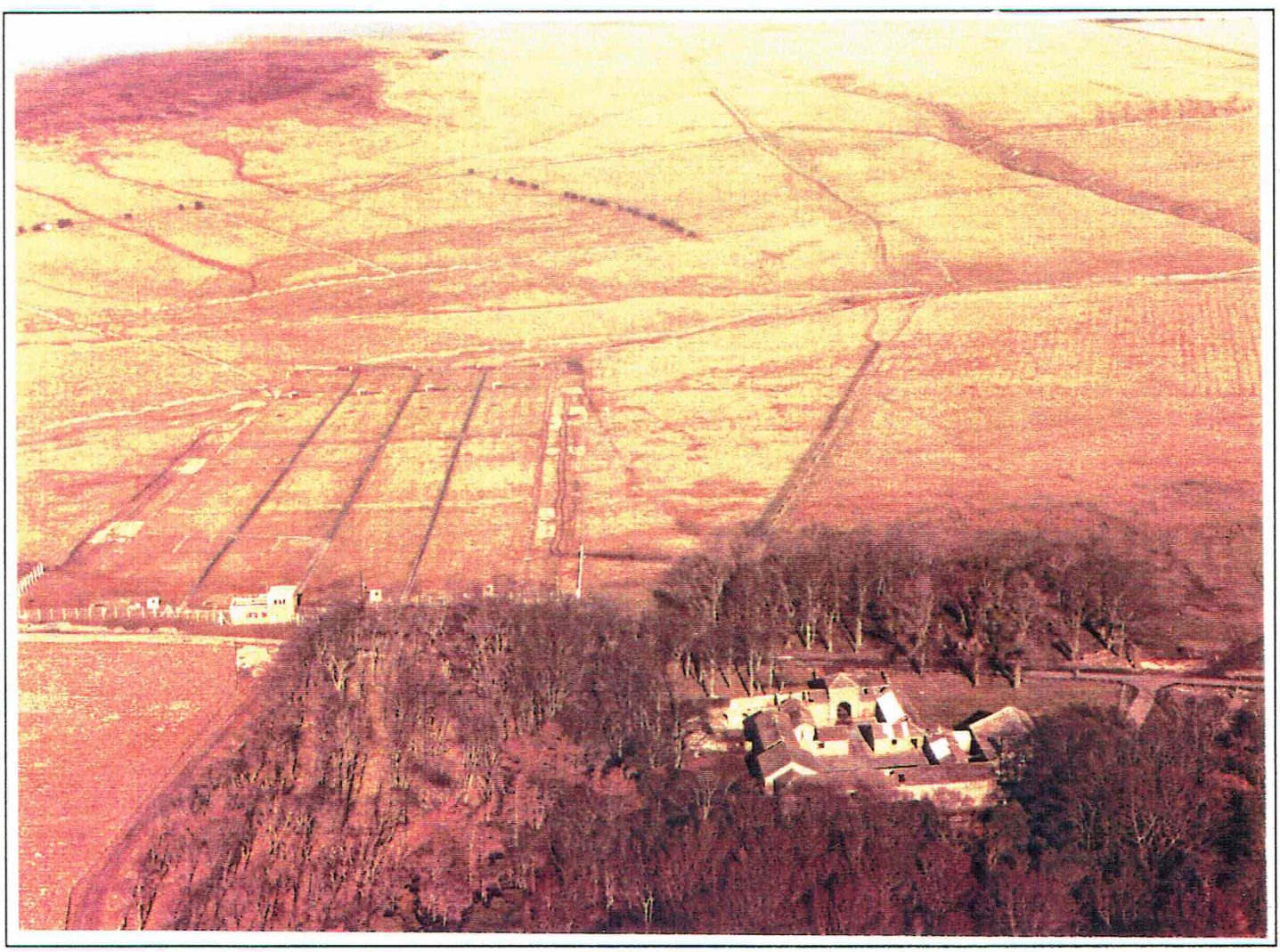
It should be remembered the host of trades needed to sustain farms in those days when there was no John Gill or Sam Turner to supply ploughs, barrows, sledges, carts and the like and stonemasons worked continuously on walls and buildings.

During the years of development of the farm John Hutton staged agricultural shows, and premiums day and dinners at Cordilleras attracting competitors from a 10 mile radius and further afield.

THE FARMHOUSE

Cordilleras farmstead itself came into being during 1810-13. Built by John's own masons, carpenters and labourers, and vernacular in construction, the buildings yet have a Spanish flavour in the main archway and tower.

The order of building reflected the progress and necessities of reclamation work and the increasing production from the fields. First came the house (Plate 8) and the west wing with its two three-stall stables and three-arched cart-shed and lofts over the barn with a threshing machine. Next came a 'horse-way' and a second barn with granaries over both, enclosing the west foldyard. Then followed the east foldyard, east and west cowhouses, foddering houses and calf



Farm and Wood - Aerial view from the West

CORDILLERAS FARM - A HISTORY

Farm and Wood - Aerial view from the South

house, the smith's shop (later dismantled), pigeon cote with cupola, two-stall stable and east stable granary and pighouses. The shelter belt of trees (1) and an apple orchard were planted and the garden of the house laid out.

It is not possible to identify with certainty all the original buildings. The third foldyard is obviously an addition to any original plan, and may have been added at either of two possible stages, some of the records being missing. The second and third foldyards are open yards flanked by arched cattle shelters. (Plate 9).

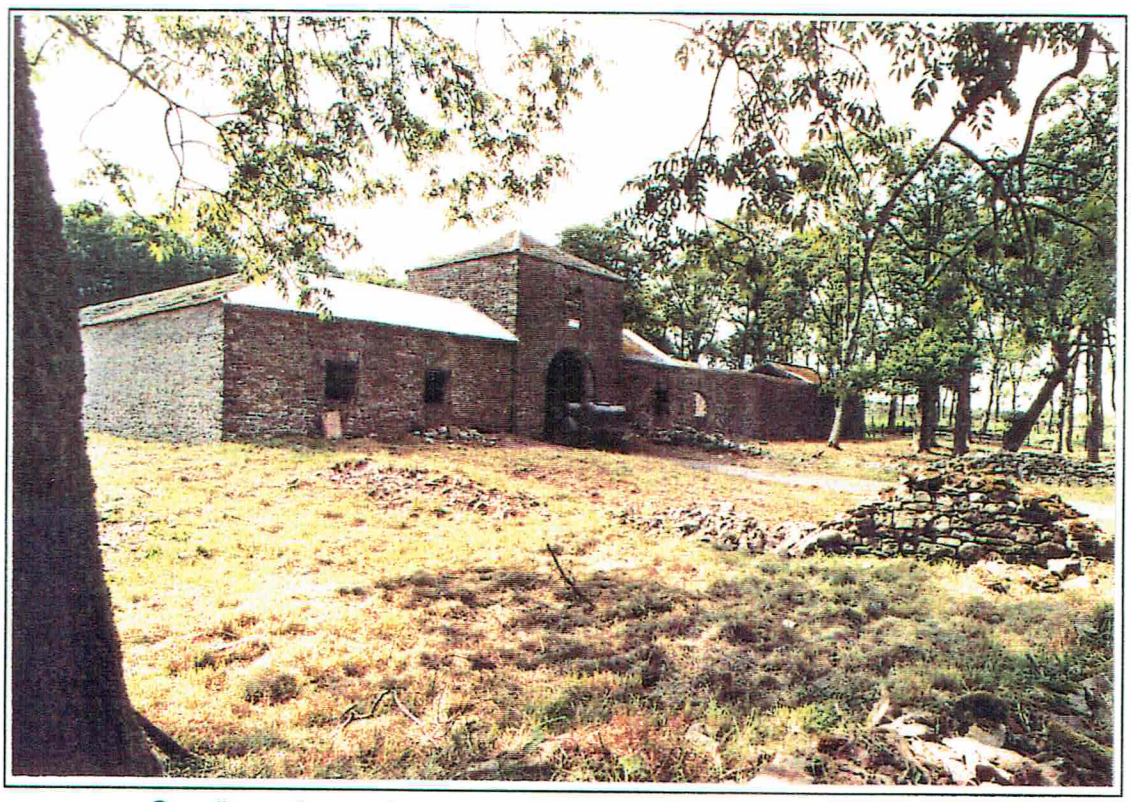
Interesting original facilities include a steaming house for potato feed preparation and a drying kiln. Before its completion, oats were dried in Cordilleras house and at Marske Mill.

The horseway is unusual in design. Most horsewheel sheds, from about 1790, were added to provide shade behind an existing barn. This was designed as an integral part of the complex.

Two opposite pairs of arches aired the plodding horses as they worked the thresher in the west barn but the back two arches are blocked up for later use as a cart shed. The massive beams which supported the horse-gear are still in position.

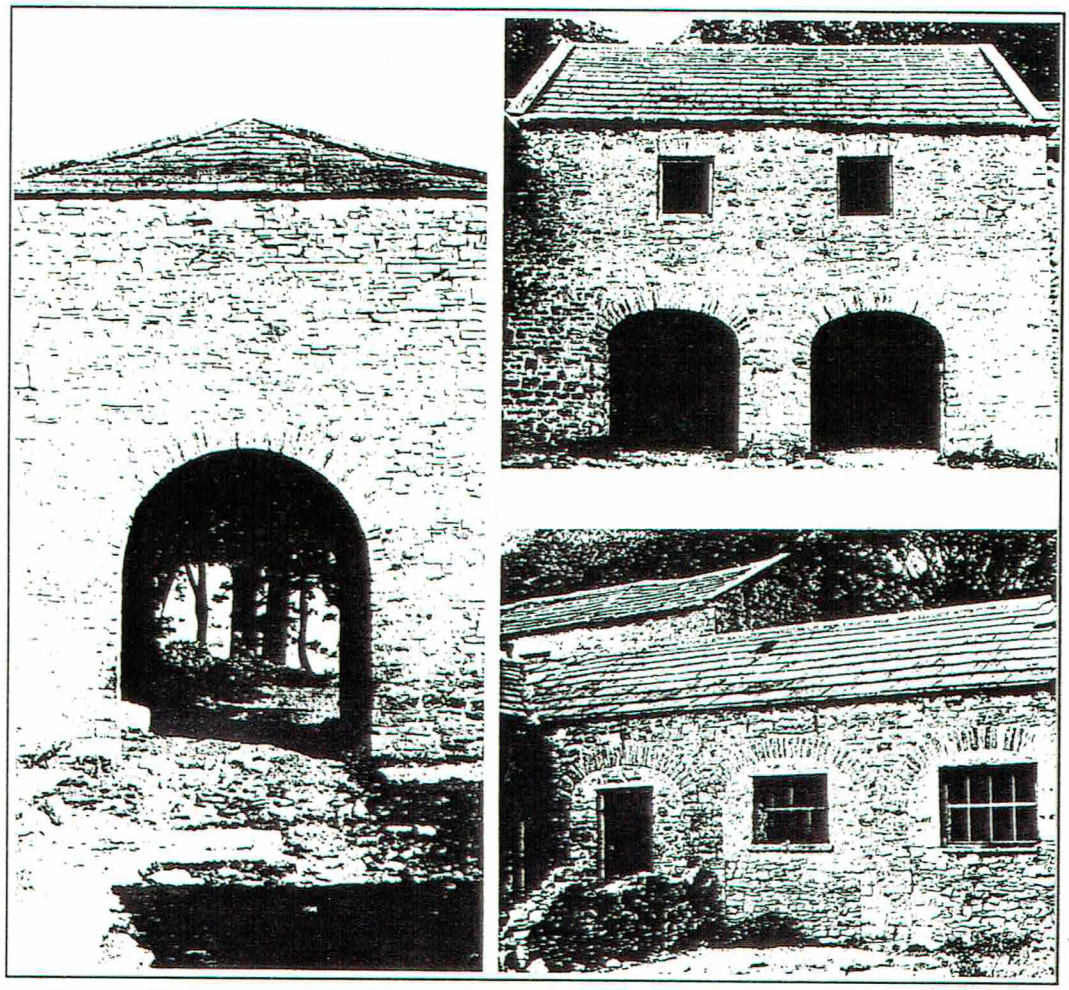
Cordilleras was an ambitious farm, even by lowland standards. Yet it was built in isolation at 1,100 feet just leeward of the gentle brow of Flock Hill, impressively reinforced and protected by a nine-acre shelter belt. (1) Only occasional small farms reach this height hereabouts, where the view is to seemingly limitless moortops rolling away westward in barren peneplained crests towards the Pennine summits.

This large and lonely landmark, visible for miles around, is perhaps one of the finest testimonials to



Corelleras Farm - SE aspect with pigeon cote cover East Gate

CORDILLERAS FARM - A HISTORY



a. Pigeon Cote over East Entrance built 1813
b. Horseway built in 1812
c. East Foldyard built 1812/1813East Gate

enclosing zeal which the North of England produced.

That it transformed the landscape and became a successful grazing farm is certain. Its three-yard layout, complete by 1824, remains to the present.

We are told that records closed in 1840 and following Johnn Hutton's death in 1841 considerable research would be needed to identify tenants of the Hutton family.

There were four families who lived and worked in Cordilleras within living memory.

Mr Henry Brown was a boy there in 1923 and in due course moved and farmed at Cordilleras in Aldborough St John where his widow still lives. Mr Brown's sister with whom I spoke, thinks that no corn would have been grown during and since their time.

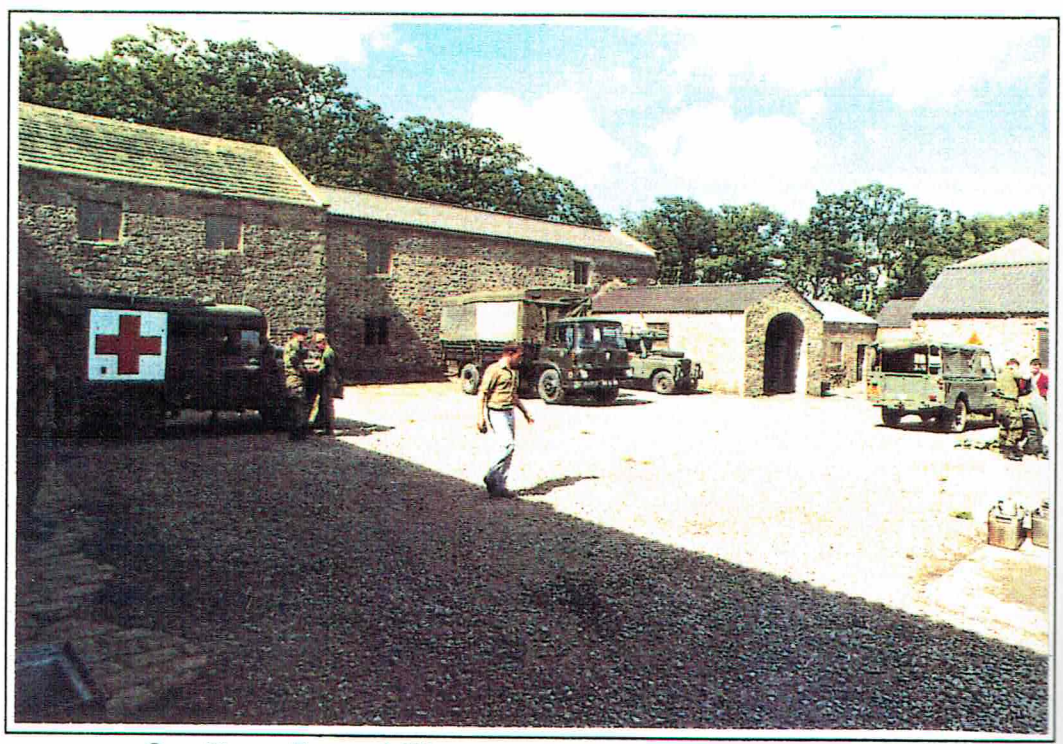
It was not easy making a living on these high moor farms and farmers tended to move on.

The next family were Mr and Mrs Richard Siddle. Their daughter Jennie married Mr Willie Fawcett who farmed Manor House, Marske.

After Mr Fawcett's death Mrs Fawcett carried on with her son Allan for a time before becoming the Post Mistress of Marske.

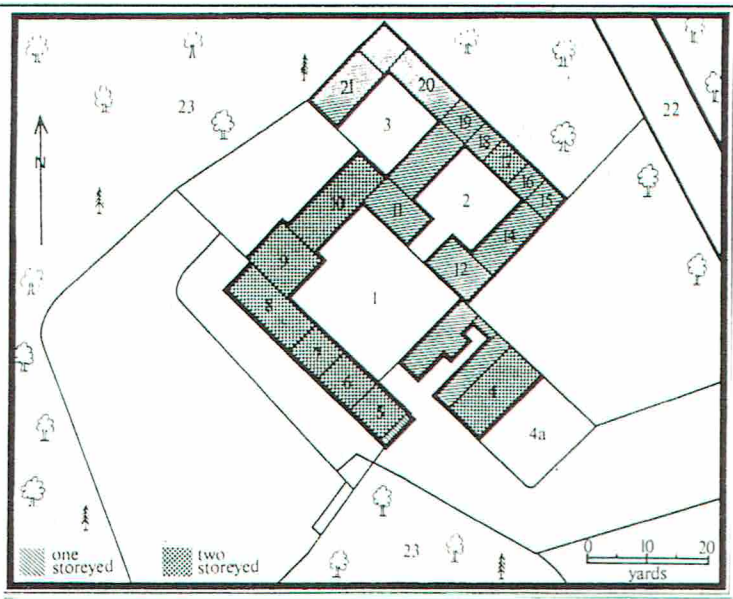
Following the Siddle's came the Tweddell family. The son Richard had two sisters Isabel and Ann. Isobel was the first wife of the late Ronald Calvert of Downholme Manor whose two sons Richard and David still farm in partnership at Downholme and Thorpe.

(1) Editor's Note: The beech trees in the shelter belt have been dated by the DLA Chief Forester, Mr D Brown's ring boring and are 170 years old and are therefore the original trees planted by John Hutton.



Cordilleras Farm - Military training in progress - East Aspect

CORDILLERAS FARM - A HISTORY



CORDILLERAS BUILDINGS

	IN JOHN HUTTON'S TIME, c. 1824 (Hutton MSS and buildings)	IN HENRY BROWN'S BOYHOOD, c. 1923 (recollections)
1, 2, 3	foldyard	foldyard, 2a midden steads
4, 4a	house and garden	house
5	3-horse stable and hay loft	calf house and hay loft
6	3-horse stable and hay loft	3-horse stable and hay loft
7	3-arched cart shed	back cart shed, wool store over
8	threshing barn	barn with wool store and granary over
9	4-arched horse-way, granary over	cart shed and loft
10	barn and granary over	calf house and hay barn
11	? byre	byre
12	—	calf house
13	feeding sheds, cattle sheds	heifer house
14	? byre	byre
15	—	hay
16	2-horse stable	loose box for dales' pony
17	entrance arch, pigeon cote with cupola	entrance arch
18	2-horse stable	ducks
19	—	foal box
20	cattle shed, 4-arched	—
21	cattle shed, 4-arched	hog house (sheep under one-year -old)
22	Barningham Road (the spine road)	Cordilleras Road
23	plantation	wood

Cordilleras Farm 1824 and 1923

The last tenant to live in the house was Mr and Mrs R J Lawson who moved in in 1940 and remained there until 1968 when they moved to Buddle House. They probably stayed the longest of any tenant and their daughter Margaret was the last baby to be born there in 1947.

MILITARY USE

For many years Feldom was used for live firing but not to the same extent as today. 3-inch and 81 mm mortar lines were established near the farmhouse, as were the Vickers gun lines necessitating the closure of the public road Marske-Raike Gate.

By 1968 it was decided by HQ Northumbrian District, located in Catterick, that the incumbent, Mr Dick Lawson, would have to leave, retaining sheep dipping facilities behind the buildings, which still exists.

The farmhouse was well appointed inside complete with the most beautiful and unusual steel staircase with a mahogany rail. Alas it was not long before the rail was used by troops for firewood, the building vandalised and lead removed by thieves, who failed to spirit away the loot before discovery of the cache by Mr Denis Jameson the Chief Range Warden.

Control of isolated buildings is difficult and damage begets damage. For some time, whilst military use was carefully controlled there was no money with which to restore the buildings for use in training.

With the advent of 6 Infantry Brigade in 1968 and their armoured personnel carriers (APCs) (FVs 432) the field systems of the day were changed to permit free running with the land run as an open ranch fields became choked with thistles and heather moorland torn up by cattle and overgrazed. Luckily the 'going' proved to be unsuitable for tracks and the APCs were withdrawn.

CONSERVATION

Since the 1970s the District Staff, the Defence Land Agency and the Department of Environment joined with the Catterick Training Centre to improve the area in numerous ways. The land no longer became an open ranch and limited fence lines separated tenants' interests.

Heather moorland was in part saved and plantations established. Conservation, now on a par with farming, has worked wonders but never more so that under the enthusiastic leadership of Major Bryan Wilson (Range Officer and Project Officer) who planned the restoration of the farmhouse and buildings in phases dictated by finance. Bit by bit, roof by roof from 1981 to 1986 he and the highly effective DOE clerk of works, Mr Lewis Peace, battled on until it was, to outward appearance, restored to almost its former glory.

Now available for a variety of units and headquarters engaged in training, but NOT of a destructive nature, it is again serving a useful purpose. After 175 years even The Duke of Wellington would have approved.

Cordilleras Wood - Military training in progress

A BRIEF LOOK AT THE LEAD INDUSTRY OF WEST FELDOM

By Lawrence Barker

The series of shallow shafts on Feldom ranges represent the most easterly efforts at lead mining in the Swaledale ore fields. The major west-east vein complexes start at the Swaledale watershed west of Keld and cross several rich mining areas including Beldi Hill, Gunnerside Gill, Old Gang and Surrender, Arkengarthdale, Hurst, finally terminating to the north-west of Richmond on the Feldom Plateau.

Although there may be other mineral deposits further to the east, the existence of the overlying magnesium limestone appears to have deterred any large scale exploration beyond Feldom Ranges. Some small scale copper mining did take place at Middleton Tyas and indeed a small amount of Chalcopyrite was mined from the lead shafts on Feldom. This ore, along with ore from the south of the Swale, was smelted near Copper Mill Bridge, GR NZ 143 055, where with careful searching, slag containing copper can still be found.

The shafts on Feldom are well grassed over indicating that they were sunk during an early phase of lead mining in Swaledale. There are references to 'more meres' (moor meres), being willed by Christopher Conyers Lord of Marske Manor, in the early 16th Century (1) and also to leases of moor meres in the 1590s (2). Further leases were granted by John Hutton to George Mylner and Timothy Corbut, both of Marske, in 1662 (3). The Huttons succeeded to the lordship of Marske Manor in the 17th Century and held it until the mid 20th Century.

The precise location of the area specified in the Hutton lease is not known but there are references to working at a depth of 12 fathoms, ie: 72'. This is fairly deep mining for the period and is a further indication of lead mining of an early phase of the industry.

The mines of Feldom are relatively small scale undertakings by comparison with operations further to the west, but nevertheless the ore deposits were considered to be sufficienty productive to warrant the driving of 2 levels from the side of Marske Beck, one at NZ 091 025 and a second one at NZ 093 018. These were presumably driven to explore the Oregate and other veins below the 12 fathom, or main limestone eastwards under Feldom, thus enabling excavation of the most productive rock strata of the Swaledale ore field.

In addition to the Feldom vein which was explored using shallow shafts from approximately NZ 017 042-126 646, there are numerous trial shafts sunk over a wide area on West Feldom and East Feldom

An interesting feature of the row of shafts on Feldom vein, is that they are spaced at intervals of approximately 30 yards or multiples thereof. This highlights the fact that in Swaledale the mere, a system of linear measurement, approximated 30 yards. This method of measurement was used in the 16th and early 17th Century but was replaced by the linear fathom by the second half of the 17th Century. The mere was still used on Grassington Moor as late as the mid 19th Century. Mere boundary stones, inscribed with lessee's initials, can be found in that area. To date only one mere stone has been found in the Swaledale field. This was discovered behind Old Moulds in Arkengarthdale.

The mines in the Marske area generally appear to have ceased functioning well before the middle of the 19th Century. The 1851 census does not record a single miner or retired miner in either Marske or Downholme. Elsewhere in Upper Swaledale and Arkengarthdale there were 1129 miners and numerous retired miners (5).

These facts, added to the general air of dereliction of the levels and smelt mill sites, all point to mine closure well in advance of the rest of the Swaledale and Arkengarthdale field.

The mines on Feldom, although representing a relatively small scale operation, are, nevertheless, indicative of an early phase in Swaledale mining history and are therefore of considerable significance, warranting further research and protection.

Shallow shafts for lead mining

References:
(1) Mines and Miners of Swaledale - Raistrick A 1955.
(2) Early Yorkshire Charters - YAS Extra Series.
(3) Ian Spensley MSS.
(4)The Lead Industry in Wensleydale and Swaledale Volume II - Raistrick A 1975.
(5) Barker MSS; analysis of 1851 Census, Reeth WEA.

YORKSHIRE NATURALISTS UNION (YNU) VISIT TO WEST FELDOM ON 18 AUGUST 1990

The YNU visited West Feldom under arrangements made by Mrs Deborah Millward (Botany) and the following reports have been submitted by their members at the request of the Catterick Conservation Group. We are most grateful to all the participants for their contribution.

BRYOLOGICAL REPORT - FELDOM RANGES

By Colin Wall

The steep confusion of limestone boulders and scree at Dicky Edge yielded good quantities of Orthotrichum cupulatum with some 0. diaphanum, Tortula intermedia and Tortella tortuosa. Two leafy liverworts recorded here, Porella platyphylla and Frullania tamarisci, were found to be well established on limestone outcrops, crags and dry stone walls throughout the Marske Beck valley. As the scree gave way to grassland Rhytidiadelphus triquetrus began to appear with other calcicoles such as Anomodon viticulosus and Ctenidium molluscum. A walk along the western bend of the beck towards Helwith soon revealed some north facing crags. Here Neckera crispa and N. complanata hung in festoons, with Metzgeria furcata and Apometzgeria pubescens in intermingled patches. There were tufts of Tortula subulata and Fissidens cristatus, also 2 leafy liverworts Scapania Aspera and Radula complanata, the latter unusual on rock and showing the diagnostic features of perianth with saccate male bracts demonstrating the paroecious nature of the plant. The dry stone walls, while supporting many of the species mentioned above provided in addition small amounts of the liverwort Barbilophozia atlantica, and the mosses Leucodon sciuroides, Zygodon viridissimus and Racomitrium languinosum.

Boulders and damp sandy soil by Marske Beck held Pellia endiviifolia, Plagiochila porelloides, Seligeria recurvata, Bryum pseudotriquetrum, Philonotis fontana, Mnium marginatum, Cratoneuron commutatum, C. filicinum and around the bases of trees Isothecium myurum and I myosuroides. Further upstream in Throstle Gill, Mr Grant found sterile Chiloscyphus polyanthos, Climacium dendroides, Fontinalis antipyretica and Racomitrium aciculare, with the acidophile Leucobryum glaucum on the adjacent hillside.

Other species favouring a soil reaction on the acid side of neutral included Barbilophozia Floerkei, Pleurozium schreberi and tantalizingly small patches of the elegant leafy liverwort Ptilidium ciliare, found occasionally in short turf throughout the valley.

FELDOM RANGES COLEOPTERA REPORT

By M L Denton

As VC65 had little recording activity in the past, meetings can generally be relied upon to produce a few interesting records, and this meeting was no exception. A find specimen of the bracket fungus, Polyporus squamosus, harboured a single example of Orchesia undulata. This beast, even when located, can be difficult to get to grips with as their strongly developed hind femora enable them to jump about in a manner reminiscent of fleas. A near relative of the aformentioned, Hallomenus binotatus, was lurking in the same fungus. Although widespread within the British Isles this species is still very local and therefore an important find. Other species encountered within this same fungus included Triplax aenea, Agathidium nigripenne, Anisotoma humeralis, Pseudotriphyllus suturalis, Gabrius splendidulus and Atheta repanda. This last mentioned species provided the vice-county with its first record.

Apart from Atheta atricolor, which proved to be new to the vice-county, the abundant sheep dung only held the usual common Atheta, Cercyon and Aphodius species. The numerous corpses or Rabbits, which had presumably died from myxomatosis, were also rather non-productive although a single male Aleochara albovillosa proved to be new to the vice-county. With one exception Yorkshire records of this species have all stemmed from the Huddersfield area and interestingly, all have been associated with Rabbits.

The Elmid, Elmis aenea, was found under stones in the stream, as was Limnebius truncatellus. The Elmid breathes by plastron respiration and a full account of this interesting adaptation can be found in the VC64 Coleoptera Report.

As a large proportion of beetle species are black or brown and therefore rather full to the uninitiated it was pleasing to be able to display 2 brightly coloured examples. The shiny red, yellow and black rove bee tle Lordithon lunulatus was found in the bracket fungus and another impressive rove, Platydracus stercorarius, which is red and black with patches of golden pubescens on the abdomen was found under a stone.

There was no sign of the Heather Beetle, Lochmaea suturalis, which the MOD felt was in plague proportions and therefore in need of control. A complete list of species encountered is attached.

COLEOPTERA FROM FELDOM RANGES NZ00 18/8/90

Carabiae

Carabus problematicus Hbst
Nebria brevicollis (F)
N gyllenhali (Sch)
Notiophilus biguttatus (F)
Patrobus atrorufus (Strom)

COLEOPTERA FROM FELDOM RANGES NZ00 18/8/90

Cychrus caraboides (L)
Trechus quadristriatus (Sch)
T secalis (Pk)
Pterostichus madidus (F)
P niger (Sch)
P melanarius (Ill)
Calathus melanocephalus (L)
C micropterus (Duft)
Olisthopus rotundatus (Pk)

Hydrophilidae

Cercyon melanocephalus (L) in sheep dung
Megasternum obscurum (Marsh)

Hydraenidae

Limnebius truncatellus (Thun) under stones in the stream

Leiodidae

Agathidium nigrepenne (F) in bracket fungi (Polyporus squamosus)
Anisotoma humeralis (F) in bracket fungi (P squamosus)
Catops tristis (Pz) from dead rabbits
Ptomaphagus subvillosus (Goez) from dead rabbits
Silphidae Thanatophilus rugosus (L) from dead rabbits

Staphylinidae

Xylodromus concinnus (Marsh)
Othius myrmecophilus Kies
Atrecus affinis (Pk)
Xantholinus linearis (01)
Philonthus laminatus (Cr)
P fimetarius (Gr)
Gabrius spendidulus (Gr) in bracket fungi (P squamosus)
Quedius curtippenis Bern
Sepedophilus marshami (Steph)
Platydracus stercorarius (01) under a stone
Lordithon lunulatus (L) in bracket fungi (P squamosus)
Tachinus marginellus (F)
Platystethus arenarius (Four)
Bolitochara obliqua Er
Atheta atramentaria (Gyll)
A crassicornis (F) in bracket fungi (P squamosus)
A repanda (Mul & Rey) in bracket fungi (P squamosus) The first vice-county record
A celata (Er)
A atricolor (Sharp) in sheep dung The first vice-county record
Aleochara lanuginosa Gr
A bipustulata (L) The second vice-county record
A albovillosa Bern from a dead rabbit The first vice-county record

Scarabaedidae

Aphodius ater (Dg) in sheep dung
A contaminatus (Hbst) in sheep dung
A lapponum Gyll in sheep dung
A prodromus (Bra) in sheep dung

Elmidae

Elmis aenea (Mull) under stones in the steam

Nitidulidae

Nitidula bipunctata (L) from dead rabbits
Rhizophagidae Rhizophagus dispar (Pk) under bark

Erotylidae

Triplax aenea (Sch) in bracket fungi (P squamosus)

Coccinellidae

Coccinella 7 - punctata L

Cisidae

Cis boleti (Scop)

Mycetophagidae

Pseudotriphyllus suturalis (F) in bracket fungi (P squamosus)

Salpingidae

Rhinosimus planirostris (F) under bark
R ruficollis (L) under bark

Melandryidae

Hallomenus binotatus (Quen) in bracket fungi (P squamosus)
Orchesia undulata Kra in bracket fungi (P squamosus)

FELDOM RANGES BUTTERFLIES AND MOTHS

By Mrs Payne

The sunny, still day was very favourable for butterflies and for a place of such altitude and isolation it proved a surprisingly rich habitat.

Nine species of butterflies were recorded. There was a scattering of Meadow Browns below Dicky Edge and in the pastures by Throstle Gill. They were displaying on the bare ground and ovipositing. Small Heath was common on the moorland edges. Small Tortoiseshell and Peacock were feeding on Field and Nodding Thistle as also was Small Copper. Red Admiral and Common Blue were reported as singles. Green-veined White was common otherwise the family was represented by 2 Large Whites only.

Antler moths were flying low over the grassland in several places but were not in large numbers. A Broom caterpillar was swept from a rushy area. The Brown-line Bright-eye moth, Fox and Northern Eggar caterpillars were all unrecorded from VC65 in Butterflies and Moths of Yorkshire 1989 (Sutton and Beaumont).

Fox, Northern Eggar, July Highflyer and Twin-spot Carpet were recorded on the moors. Fox and Northern Eggar caterpillars hibernate so can be badly affected by burning or spraying.

LEPIDOPTERA SEEN ON FELDOM RANGES 18 AUGUST 1990

By Gavin Boyd

Yporomentidae

Argyresthia goedartella	Numbers beaten out of Alders
Argyresthia bonnettella	One disloged from Hawthorn

Cochylidae

Eupoccilia angustana	Netted as it flew over heather

Tortricidae

Epinotio tenerana (Nut Bud Moth)	One beaten out of Alder

Pyralidae	
Agriphila straminella)	Hordes of grass moths everywhere
Agriphila tristella)	
Pieridae	
Pieris lorassicae (Large White)	One male seen by stream
Pieris nupi (Green-veined White)	Several netted to confirm identity
Pycaenidae	
Lycaena phlaes (Small Copper)	Several seen in various part of the site
Polyommotus icarus (Common Blue)	Single female netted, then released

ORNITHOLOGY - FELDOM RANGES 18 AUGUST 1990

By G E Alderson

Good weather helped to produce a fair variety of birds. Swallows were around the disused Cordilleras Farm. On the nearby moorland a Hen Harrier (described as large long winged Brown bird with White Rump) also Red Grouse over the moor and the usual meadow Pipits.

A wooded Gill to the west of Cordilleras gave the best variety of birds, a Buzzard flying from tree to dead tree gave excellent views, Green Woodpecker was seen and heard calling. A Sparrow Hawk was also reported. Lower down this Gill Goosander was seen. Over the steep grass hillside 3 Kestrels were in the air together which 'excited' some Rooks, Jackdaws and Crows. Other birds seen were a pair of Magpies, a pair of Kingfisher, Great Spotted Woodpecker, Grey and Yellow Wagtails, Redstart, Wheatear, Tree Pipit, Wren, Tree Creeper, Mistle Thrust, Blackbird, Curlew, Golder Plover, Chaffinch and Redstart, Spotted Flycatcher, Willow Warbler, Blue Tit and Wood Pigeon.

BOTANICIAL REPORT - FELDOM RANGES VC65

By D R Grant

The area visited is situated on the Yoredale Series of rocks which consist of sequences of limestones alternating with sandstones and shales. The main outcrop of limestone at Dicky Edge was examined first, the area being extremely barren due to the drought and the extensive grazing by many rabbits. On the outcrop were Geranium molle L and Carduus nutans L together with a few typical calcicolous plants. Underneath the trees were Brachypodium sylvaticum (Huds) Beauv and Mycelis muralis (L) Dumort. Members then descended the outcrop to Marske Beck and Thostle Gill. On sandy detritus near the beck there was evidence of lead mining spoil, several colonies of Minuartia verna (L) were seen here. Nearby was Viola lutea Huds.

A small pond was almost covered with Ranunculus hederaceus L and marshy ground nearby had much Juncus inflexus L. A shady rocky area near the junction of the 2 steams had Polpodium vulgare L, Arum maculatum L, Primula vulgaris Huds and Hieracium strumosum (W R Linton) A Ley.

Areas of gravel in the gill had Cardamine amara L and much Epilobium pedunculare auct.

Wych Elm trees had been attacked by Dutch Elm Disease and most were dead. Other trees of note were Sorbus aucuparia L and Prunus padus L.

Damp area had Chrysosplenium oppositifolium L and a little C alternifolium L together with Crepis paludosa (L) Moench. Higher up the Gill, sandstone rock appeared and species favouring acid soils were found. The shady areas had Luzula sylvatica (Huds) Gauden, Thelypteris oreopteris (Ehrh) Slosson and Dryopteris borreri Newm. One small log was colonized by Juncus acutiflorus Ehrh ex Hoffm and growing with it were several young clumps of Carex paniculata L.

Other logs had Mentha aquatica L, Triglochin palustris L, Carex panicea L, and C echinata Murr.

The Gill finally ends up in moorland supporting plants such as Calluna vulgaris (L) Hull, Vaccinium myrtillus L and Juncus squarrosus L.

Note: Nomenclature _ DADDY 1958

YORKSHIRE NATURALISTS' UNION 1990 VICE COUNTY FIELD MEETING VC 65 PLANT GALL REPORT

By J A Pearson

Most natural history field work done during 1990 has revealed the effects on flora and fauna of two mild winters followed by two extremely hot dry summers.

The search for plant galls has confirmed what workers in other fields have found, a reduction in the number of species recorded. There has been a marked reduction in the numbers of many plant galls, some of them being extremely scarce indeed. Dasineura urticae, a gall on the Common Nettle, Urtica dioica, is relatively common in most years. This year its numbers have been considerably reduced. Reports from many parts of the country confirm the experiences of Yorkshire cecidologists.

A total of only twenty four different galls is lower than would have been expected in climatically more normal years. However, two of them, both recorded on species of Prunus, were far from common, the mite gall, Eriophyes paderineus on Prunus padus, and the gall caused by the sawfly, Pristiphora monogyniae on Prunus spinosa.

Dr L Lloyd-Evans, while searching for microfungi recorded the fungal gall Puccinia galii-verni on Galium.

YORKSHIRE NATURALISTS' UNION 1990 - VC65 - FIELD MEETING LIST OF PLANT GALLS

Site - CORDILLERAS
One Km: Sq: NZ0903

PLANT GALL	HOST PLANT	CAUSER
Aceria macrorhyncha	Acer pseudoplatanus	Mite
Aceri pseudoplatani	Quercus spec	GW
Andricus fecundator	Urtica dioica	GM
Dasineura urticae	Crataegus monogyna	Mite
Eriophyes goniothorax	Quercus spec	GW
Neuroterus quercusbaccarum	Fraxinus excelsior	Psyllid
Psyllopsis fraxini		

A total of five different gall species was recorded in this area.

Site - FELDOM RANGES
One Km: Sq: NZ0804

PLANT GALL	HOST PLANT	CAUSER
Aceria axillare	Alnus glutinosa	Mite
Aceria brevitarsus	Alnus glutinosa	Mite
Andricus curvator	Quercus spec	GW
Andricus fecundator	Quercus spec	GW
Andricus kollari	Quercus spec	GW
Andricus lignicola	Quercus spec	GW
Cynips agama	Quercus spec	GW
Cynips divisa	Quercus spec	GW
Dasineura filicina	Pteridium aquilinum	GM
Dasineura fraxini	Fraxinus excelsior	GM
Dasineura urticae	Urtica dioica	GM
Dysaphis ranunculi	Crataegus monogyna	Aph
Eriophyes Laevis laevis	Alnus glutinosa	Mite
Eriophyes longisetosus	Betula spec	Mite
Eriophyes paderineus	Prunus padus	Mite
Neuroterus numismalis	Quercus spec	GW
Neuroterus quercusbaccarum	Quercus spec	GW
Phytoptus sorbi	Sorbus aucuparia	Mite
Pristiphora monogyniae	Prunus spinosa	Sf
Puccinia galii-verni	Galium spec	F

A total of twenty different gall species was recorded in this area.

KEY TO GALL CAUSERS

Aph	=	Aphid (Hemiptera)
F	=	Fungus
GM	=	Gall Midge (Cecidomyiidae - Diptera)
GW	=	Gall Wasp (Cynipidea - Hymenoptera)
Mite	=	Gall Mite (Eriophyidae)
Psyllid	=	Psyllid (Psyllidae)