Livestock in Woods NEWSLETTER

SPRING 2008

WEST HIGHLAND WOODLAND GRAZING PROJECT

Why graze woodlands?

Ancient and semi-natural native woodlands provide a range of habitats supporting a rich diversity of flora and fauna, many of which depend on the continued existence of these habitats for their survival. The ecological and cultural character of these woodlands owes much to their historical management and this includes grazing by domestic livestock. Past woodland grazing regimes featured cattle and sheep in particular, but also pigs, goats and ponies.

Changes within forestry and agriculture since the latter half of the 19th century have led to the decline of 'managed' domestic stock grazing in woodlands. Much farm woodland is currently unfenced and therefore completely open to grazing by both domestic and wild herbivores. In general, high grazing pressures have led to over-browsing and limited natural regeneration causing a reduction in the structural diversity.

Whilst poor natural regeneration rates may be attributed to overgrazing by domestic livestock and wild herbivores, at sites where stock and wild herbivores have been excluded completely the more aggressive plant species can become dominant, shading out smaller and less competitive herbaceous species, as well as seedlings of some tree species. Where a 'mat' of ground vegetation develops, seeds may be prevented from reaching the ground, or from establishing once they have germinated.

To maintain the characteristics of ancient or semi-natural woodlands, their distinctive bird communities and the abundance of bryophytes and lichens, some grazing is often desirable. As stated by Rodwell & Patterson (1994) "Grazing and browsing by large herbivores are natural features of woodland ecosystems and grazing management should be considered from the outset, in management of semi-natural and native woods"

This approach to woodland management has been the driving force behind the West Highland Woodland Grazing Project (WHWGP). This newsletter has been produced by the WHWGP in order to highlight the many benefits of controlled livestock grazing, primarily in semi-natural woodlands. We report on the activities of the Project over the last few years, as well as highlighting the FCS S9 Pilot grant. Also in this issue we touch on the importance of historic management, both in relation to archaeology and biodiversity.

Much of the focus is on activity in Scotland, though, we do have one contribution from south of the border! We would, however, be very keen to hear about other projects, events etc, relating to woodland grazing, that are taking place across the UK. So if you have any news please let me know and we can include it in the next newsletter.

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IN THIS ISSUE:

The WHWGP would like to acknowledge grant support received from the Scottish Government Rural Directorate, Forestry Commission Scotland & Scottish Natural Heritage.

West Highland Woodland Grazing Project: Demonstrating how trees and livestock can grow together!

The West Highland Woodland Grazing Project (WHWGP) has now being running for just over 4 years. During this time we have held a number of very well attended workshops, undertaken a field-based review of some woodland grazing sites in Argyll & Lochaber and produced the Woodland Grazing Toolkit and Guidance Notes.

Our greatest achievement, however, has been our involvement with Forestry Commission Scotland in developing the SFGS pilot stewardship grant "S9" for controlled livestock grazing in woodland, which was launched in spring 2005.

James Colston, Farmer, helping with setting up a monitoring plot within the Brunery S9 Pilot site on Arisaig Estate (photo Mary Elliott, Oct 2006)

Over the last few years the WHWGP has highlighted the important role that domestic livestock have in woodlands – primarily through creating and maintaining mosaics of open and wooded ground. This diversity of habitats is essential for a number of species of conservation concern, such as black grouse, pearl-bordered fritillary, marsh fritillary and hazel gloves fungus. All these species are listed on the UKBAP and the SNH Species Action Framework.

The SFGS S9 Pilot Stewardship Grant

The focus of this grant is to enhance woodland biodiversity whilst also sustaining farming activity, particularly in areas that are extremely marginal and where there is a real risk of abandonment of farming. The S9 forms a benchmark in the integration of agricultural and forestry support. So finally, in 2007, the S9 Pilot came to fruition, with applicants signing contracts, fences going up and grazing getting underway.

There are 25 sites involved in the pilot, from Lochwinnoch and Dalkeith in the south, through Perthshire, Argyll and north into the Highlands. Woodland types vary with some fascinating juniper woods in Perthshire, the oak dominated woods of Argyll, birch woodlands in the Highlands and even a relatively young newly planted woodland. The majority of sites are using cattle as the main livestock choice, though there are a couple of sites using pigs. Some sites are being grazed all year round, others on a seasonal basis. The S9 funds operations relating to controlled livestock grazing (see Table 1 for payment details). One novel aspect of the pilot is that it encourages involvement of the farmer or grazier in objective setting, management planning, site monitoring, and short-term management decisions.

How are scheme applicants getting on, one season into the S9? In November 2007 we held a workshop for all those involved in the Pilot (farmers, site agents and FCS Woodland Officers). In the morning we visited Ardnaskie oak woods (courtesy of Lorne Nelson) just outside Taynuilt. Here we discussed how site agents, farmers and graziers had been getting on with monitoring. The farmers and graziers present had visited monitoring plots set up at their sites by the site agent, examined grazing indicator species, and recorded the

TABLE 1: Some of the payment rates available under the SFGS S9 Pilot Stewardship Grant
N.B. Other SFGS payments, such as those for building stock fences and repairing dykes, are also available for S9 sites

Activity	Operation	Op Ref number	Specification	Units	Standard Cost	Payment rate	
						60%	90%
Management Plans	S9 Woodlands: Management plan	900	To detail the controlled livestock grazing in woodland. Min payment of £300.	ha	3.50	2.10	3.15
	S9 Woodland Survey	901	To detail the woodland condition where controlled livestock grazing is taking place. Min payment of £300.	ha	7.00	4.20	6.30
	S9 Woodlands: Monitoring	902	Provide a monitoring plan at year 5 to show outcome of controlled livestock grazing. Min payment £300.	ha	4.00	2.40	3.60
Woodland grazing	S9 Woodlands: Supplementary Operations	940	Agreed operations eligible for supplementing controlled livestock grazing in woodland	ha	100.00	*	*

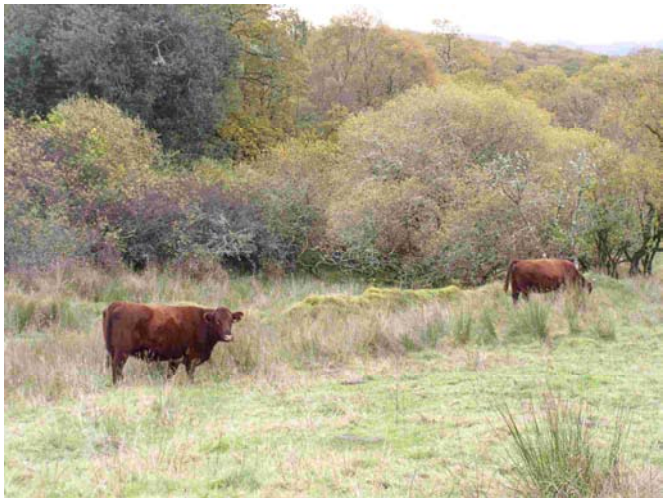
Woodland Grazing Workshop visiting the Ardnaskie S9 pilot site (photo Gordon Gray Stephens, Scottish Native Woods, Nov 2007)

grazing or browsing impact on these species. If they felt that the animals' impact had been too great or too small relative to the site objectives, it was in their power to vary the management to help achieve the objectives. Where there was a good working relationship between farmers, graziers, site agents and Woodland Officers, sites were progressing well. This highlighted the importance of communication between the parties involved in a site.

Some constraints

One of the constraints of the pilot was that no extra funding was available to support farmers while they learned about the monitoring process. A number of the farmers/graziers have become really involved in their sites, but have commented that they would have liked more training and support in undertaking the monitoring. We have noted several instances where site agents have kindly donated time to help farmers – an indication of their commitment to the sites and to woodland grazing in general. We believe that any future schemes should include a much greater emphasis on training for farmers and graziers to undertake monitoring and surveying.

The farmers are keeping management diaries, which detail the time they spend working on the scheme and any extra costs involved. This information will be vital when the Pilot is reviewed and when developing a management option, and setting funding levels, under the new SRDP Rural Development Contracts: Rural Priorities.



Luing cattle extensively grazing a 200 ha oak woodland in Argyll (Lucy Sumsion, Oct 2005)

Where next?

As the pilot continues, the monitoring information will be collated, and used to support the development of a technical toolbox by Forestry Commission Forest Research. This will aid the management planning process. We hope that this model, where site-specific management plans are drawn up and implemented by the farmer in collaboration with a site agent, can be used not just for future woodland grazing schemes, but also for other agri-environment options.

Over the next two years, in partnership with Forest Research, and in order to support all those involved in the S9 Pilot and others who are interested in woodland grazing, the WHWGP will continue to run further woodland grazing workshops and produce updates and newsletters.

The Woodland Grazing Toolkit, Guidance Notes and monitoring forms are all available from the Argyll & Bute Biodiversity Partnership website
www.argyll-bute.gov.uk/biodiversity

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A more detailed version of this article will appear in the Summer 2008 edition of Conservation Land Management.

Objective Setting

There are a wide variety of potential site-specific objectives relating to grazing in woodlands, ranging from reducing the density of birch regeneration to allowing previously over-grazed woodlands to regenerate, and from reducing the dominance of competitive sward species to increasing the population size of a rare butterfly species. Additional non-woodland objectives may equally be valid such as integrating farming and woodland management, maintaining and maximising agricultural activity on the holding, increasing opportunities for local employment and providing much needed shelter for livestock. Setting the objectives for woodland grazing at a site is critical to success.

Even when planned to fulfil similar objectives, grazing management regimes require to be site-specific in their detail as well as flexible and responsive in practice. The land manager, farmer, crofter should be involved in deciding the objectives, along with any specialists interested in the biodiversity of the site.

Glen Garry Visit 24th May 2007

In May 2007 the WHWGP organised a visit to the FCS grazing trials at Glen Garry. Over 50 keen folk gathered from across Scotland to brave the rain and midges (yes the little blighters were out even then!).

Indoor presentations were delivered in the new Community Hall at Invergarry, and participants heard about the background and results of the Glen Garry grazing trial from Adele Beck and Mike Smith of the Forestry Commission.

We then spent the afternoon visiting the woodland grazing plots in Glen Garry. This site is an extensive former native pinewood PAWS on the south side of Loch Garry, mostly planted between 1935 and 1970 with Norway spruce. However, 1,300 ha of PAWS have been clearfelled since 1996, with the overall objective being to restore the Caledonian Pinewoods in Glen Garry. The area was then enclosed by a deer ring fence, following which these early fellings regenerated densely with birch.

In response to this invasion of birch regeneration, Highland cattle have been used for the last four years to aid the restoration process with the objectives being to diversify tree species, encourage regeneration of Scots pine, and create open space for rare invertebrates. Significantly the cattle are helping to maintain patches of open ground, which are important for rare butterflies and dragon flies. However, Sandy Ferguson, who is responsible for looking after the cattle, was keen to point out that they also pay their way. The cattle keep in excellent health in the woodland, eventually providing quality beef, which is increasingly sought after and is available locally.

Forest Research has been involved in the setting up of trial and has been monitoring the results. Three enclosures were set up with three different treatments:

- C0: Control, no cattle
- C1: 0.108 cattle ha^{-1} (19 cattle in 175.7 ha)
- C2: 0.181 cattle ha-1 (40 cattle in 220.5 ha)

Early monitoring results indicate that the cattle are having a big impact on vegetation cover and species composition at both densities. However, the grazing regime in C2 has now been modified in response to the condition of the habitat and the welfare of the stock. This emphasises that setting prescriptive stocking rates can be too restrictive and may not deliver the biodiversity desired objectives. Grazing management regimes require to be site-specific in their detail as well as flexible and responsive to habitat condition.

Argyll WHWGP Workshop March 14th 2008

Our most recent workshop included visits to two very different and contrasting woods in Argyll. Again a big crowd of enthusiasts (just under 60) turned out.

Ballachuan SWT Reserve

Firstly we visited the SWT Ballachuan Nature Reserve on the Isle of Seil. Sven Rasmussen, from SWT, gave us a useful introduction to Ballachuan, informing us that it was bought by the Scottish Wildlife Trust in 1984. The most unusual feature of the Reserve is that the woodland is almost pure hazelwood, with a rich ground flora and outstanding lichen communities. There are also species-rich wetland areas on the low-lying level ground to the west of the woodland, with fragrant orchid, northern marsh orchid and wild thyme present. Principal species of interest on the reserve include the UKBAP species: otter, marsh fritillary butterfly and Hypocreopsis rhododendri ('hazel gloves fungus').

We were joined on the day by local Lichenologists Andy Acton and Anna Griffith who were able to emphasise to us the importance of grazing in relation to maintaining the lichen communities. When SWT first purchased the site the aspiration had been to allow the regeneration of a high forest type canopy. However, our understanding of how hazel woods regenerate and how conservation objectives have evolved has changed over the years. Hazel will regenerate from the base and the woodland will perpetuate indefinitely, as long as grazing pressure is light enough. The woodland structure we see toady is an unintentional result of the history of past land use and has resulted in a cultural and natural history that we value.

Seumas Anderson, a local farmer who seasonally grazes the site with his cattle, gave us an extremely useful insight into the practicalities of extensively grazing the wood and highlighted some of the challenges – such as trying to find them!

As well as looking at the woodland habitat we also discussed, with Tom Prescott from Butterfly Conservation Scotland, the habitat requirements for marsh fritillary butterfly. The marsh fritillary is only found in Scotland in south Lochaber and Argyll, and is present on the reserve in the species-rich wetland areas. Here abundant patches of devil's-bit scabious, the caterpillar's sole foodplant, are found, with extensive grazing being an important habitat requirement.

Currently the grazing regime for Ballachuan consists of grazing the woodland enclosure with approx 10 beasts in May-August and again in November-December. The wetland areas are then grazed from Sept-November. However, under this regime Bob Black felt that the ground flora within the woodland enclosure had lost some floristic diversity. Whilst Seumas Anderson felt that the cattle were not able to maintain the right habitat condition for the marsh fritillary in the wetland area, and that parts of it were becoming too rank. Delegates felt that this situation emphasised the importance of site managers working with graziers to adapt grazing regimes in response to habitat condition and not to stick to set grazing regimes.

Barndromin Farm

In the afternoon we visited Jamie Mellor's farm, Barndromin near Knipoch, a mixed livestock hill farm on the southern shores of Loch Feochan. The Allt Barrandromain Native Woodland is one of the sites in the Pilot SFGS S9 Stewardship Grant for Controlled Livestock Grazing (see page 6 for a case study on Barndromin). The woodland consists of mature native woodland on the slopes above the loch-side, containing a mix of native species; including oak, ash, hazel and birch, with localised oak-dominant stands. The woodlands, along with adjacent open ground, are representative of a number of UKBAP and LBAP priority habitats and associated species, such as red squirrel, black grouse and marsh fritillary butterfly.

Jamie is an enthusiastic supporter of the principles of woodland grazing for biodiversity benefit, but sees his farming enterprise being equally important. We were also joined by Bob Black of Argyll Woodlanders who is the woodland agent for the site. Bob is involved in a number of the S9 pilots and has gained a useful insight into how well the pilot is working. Jamie's overall aim is to have cattle grazing at the correct level for the marsh fritillary and allow the woodland to regenerate.

As when we visit many of these heavily oak dominated woodlands, we had an interesting discussion about achieving regeneration. The question being should small felling coups be cut to encourage regeneration within the woodland? Peter Quelch advised, however, that we should in fact wait for windblown areas to naturally open up the canopy. Though in the meantime, maintain the woodland condition so that seedlings can become established when the windblow occurs.

Richard Thompson from Forestry Commission Scotland said that he had seen oak regenerate in Wales. However, he pointed out that it is significantly warmer there and that oak does need warmth to successfully regenerate. Richard suggested that oak may be at the limit of its northern extent here in Scotland. It may well be that a number of these woodlands, that are oak dominated, may in fact regenerate as ash woodlands, and they should be allowed to do so. If all the regeneration was birch, a bit of 'gardening' might be required to maintain the oak and its associated biodiversity (though the number of oaks may be lower than as in the current woodland composition).

In summary an interesting and informative day was had by all. Feedback from delegates was very enthusiastic, many welcoming the opportunity to learn from the experiences of others. Workshops in 2008 are planned for the Highlands and Perthshire so keep an eye out for further details in due course.

S9 Pilot Site Case Study: Barndromin Farm

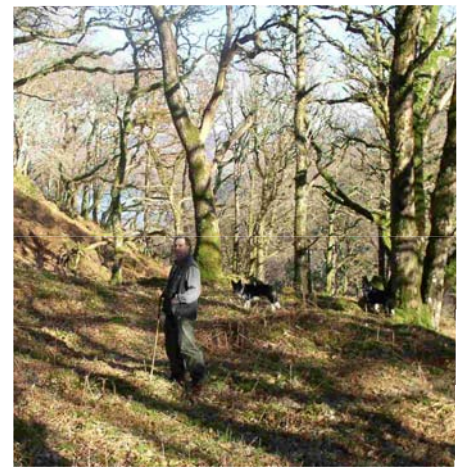
Mainland Argyll is blessed with a beautiful coastline of islands, sealochs and well-wooded hillsides. Barndromin is one of these woods, an ancient, moss and lichen-rich woodland of oak, hazel and birch overlooking Loch Feochan, just south of Oban. As woods go in Argyll, Barndromin is not large, about 20 hectares in all, though native woodland continues westwards long the loch-side and a conifer forest adjoins it on one side. Above the wood is a mosaic of semi-improved grassland, heath and young native woodland, mostly of birch.

The Barndromin S9 Pilot Site, showing the mosaic of woodland and open ground (Jan 2008)

Like all old woodlands in Argyll, Barndromin has a long history of management. Clues to some of this history can be found in the ruined enclosure dykes and circular charcoal hearths still visible within the wood. The charcoal hearths are typical of woods managed in the 18th and 19th century to supply charcoal to the iron furnace at Bonawe, near Taynuilt.

Barndromin Farm is owned by Jamie Mellor and has been in his family since 1928. Jamie's grandfather planted small groups of conifers through the wood in the 1930s. These trees have now grown up and have become a landscape feature, though the wood remains essentially a native woodland, primarily managed until recently for the shelter it gave to livestock. It was, and still is, managed as part of a 36 ha enclosure that includes the woodland and some of the open ground habitats above it. Inland of this is an ungrazed area that was included in a forestry scheme for the natural regeneration of native woodland, under which stock were excluded in 1997.

Up until 2007 Barndromin was grazed by both sheep and cattle. Numbers varied through the year with a winter average of around 40 ewes and five cows. There could be as many as 60 ewes or 20 cows with calves, depending on the amount of available grass. Stock were on the ground for most of year, though sheep were taken off during lambing from mid April to mid May. Stock were also rotated onto other parts of the farm for some of the time between July and December. This grazing pattern resulted in well-grazed grassland and wet heath, but also well-browsed and suppressed seedling trees.



Jamie felt that from a farming point of view the land was well grazed but not over-grazed. He was concerned, however, that the mature woodland lacked established tree regeneration and that sooner or later it would start to decline. Jamie was also very aware of the wildlife on his farm and had identified areas where scarce butterflies and moths breed. In particular, there are good populations of marsh fritillary butterflies and transparent burnet moths; the former a UK Biodiversity Action Plan species with a declining population, the latter a scarce species restricted in the UK mainly to the Hebridean islands and to a few localities on the mainland. Both species benefit from habitat that is grazed. The owner had observed that in the ungrazed, natural regeneration scheme the habitat had become rank despite low levels of deer browsing and the foodplants of the butterfly caterpillars were becoming scarcer.

The initial plan was to manage the ungrazed area and the 36 ha of the Barrandromain enclosure together as an integrated controlled-grazing pilot under the Forestry Commission Scotland SFGS S9 Pilot Stewardship Grant. However, there would have been administrative difficulties in including the existing ungrazed area in the pilot so, reluctantly, it was left

Angus X cows with calves at foot, grazing the woodland edge (Jan 2008)

out. Barndromin was entered into the pilot scheme in 2007. The aims were to reduce the overall grazing pressure within the woodland and in areas where regeneration could be expected (mainly heath and stands of open bracken close to existing woodland), whilst maintaining sufficient grazing to keep the heath and wetland habitats in a condition favourable to the breeding colonies of scarce butterflies and moths.

The sheep were taken off but grazing has continued with five cows with calves at foot, grazing throughout the year. Aberdeen Angus Cross cattle, the chosen breed, happily graze the whole range of habitat present at Barrandromain and in Argyll they are sufficiently hardy for year-round grazing. Invasion of the better grassland by rushes, thistles and bracken is an ongoing problem. Low intensity cattle grazing and trampling may slow the spread of these species, but will not stop it. So occasional cutting and weed-wiping to maintain the grassland area will be part of the project's management regime.

Jamie is monitoring the effect of the reduction in grazing on the habitat as an essential part of the pilot and the grazing regime will then be modified as necessary. When managing for conservation, this monitoring does involve an awareness of key species and habitats that are likely to occur on the site and a working knowledge of habitat requirements. Before starting the woodland grazing project, a different owner may well have needed the help of someone able to identify these species and their habitat requirements, though after the project is set up habitat monitoring should be fairly straightforward.

One of the monitoring plots, located in the species-rich grassland areas that are important marsh fritillary butterfly—see photo below (Bob Black, June 2007)

At the moment it is too early to say whether tree regeneration at Barndromin will become established successfully under the initial regime, but the signs are hopeful. The cattle are naturally concentrating their attention on the areas of better grassland and, in winter, around their feeding areas. But they move around the whole enclosure, maintaining clearly defined tracks through the woodland and lightly grazing the less palatable heath, wetland and woodland field layer species.

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This article was originally produced by Bob Black (Argyll Woodlanders) as a case study for the forthcoming revision of the Crofter Forestry Handbook which is being produced by a partnership led by Highland Birchwoods. Entitled "The Crofter Forestry Handbook: Small Scale Forestry for Individuals and Communities", the new publication will be relevant to all with an interest in the management of small woodlands. Contact info@highlandbirchwoods.co.uk to order a copy when it becomes available.

One of the monitoring plots, located in an area dominated by bracken. The photo above was taken in June 2007 (Bob Black), the photo below shows the same area in Jan 2008, where the cattle have been fed through the winter.

Guidance on Woodland Grazing Being Developed

Forest Research are currently working on the development of a Technical Toolbox that will give site managers further guidance on managing woodlands with livestock.

Background

Over the last 15 years we have seen a tremendous increase in the level of interest in the use of stock grazing as a tool to manage woodland habitats. Partly in response to this interest, Forestry Commission Scotland launched the pilot stewardship grant "S9" for controlled livestock grazing in woodland in spring 2005. The focus of this grant is to enhance woodland biodiversity whilst also sustaining farming activity, in what are often fairly marginal and fragile areas. The S9 forms a benchmark in the integration of agricultural and forestry support.

In 2005 a Woodland Grazing Toolkit (Sumsion and Pollock 2005) was produced in order to support the preparation of grazing management plans for the pilot sites under the S9. To build on the results of the S9 pilot and to aid the production of future plans, more detailed technical guidance is now required. In 2007 Forest Research initiated a new project, in partnership with FWAG and SAC, to provide this assistance in the form of the development of a Technical Toolbox. This Toolbox will contain guidance based on expert opinion, existing literature and initial experience from preparation of the management plans for the S9 pilot. Initial work on the toolbox will also inform the development of a new Rural Development Contract (RDC) measure for woodland grazing to feed in to the revision of the SRDP in 2009.

The other output from this project will be an evaluation of the S9 pilot scheme. Quantitative monitoring is being undertaken in each pilot site and management diaries are being kept by graziers. Both sources of information will be analysed in relation to the objectives identified in the grazing management plan to assess the success of the scheme.

How will the Toolbox be developed?

Since the focus of the S9 pilot grant scheme is on woodland management to achieve biodiversity objectives, applicants need first to identify the key conservation features for the site and then decide what their objectives are. These may range from management for particular species such as black grouse, pearl-bordered fritillary butterfly or a number of rare woodland insects and lower plants. Or the objectives may be at the habitat scale. A suitable grazing management regime then needs to be developed that will deliver these objectives. The woodlands, however, may be composed of one, or more, woodland types and sit within a mosaic of other open ground habitats.

Since most grazing units will consist of a number of different habitat types, to which the grazing animals have access, the Toolbox will provide information and guidance at both the woodland type and the site level. Information will be derived from published sources as well as from expert opinion and anecdote, including input from the pilot sites.

Biodiversity Objectives

There are a wide range of biodiversity objectives that woodland grazing can have a beneficial influence on, including a large number of species and vegetation types. Part of the work undertaken as part of this project will be to identify as many of these biodiversity objectives as possible, and which are likely to be mutually compatible.

Tree regeneration is at some point going to be a conservation objective in its own right within any woodland. However it may not necessarily be the primary objective. In relation to sustaining woodland habitats site managers need to consider how much woodland regeneration is needed and when?

Figure 1 illustrates where objectives need to be in relation to their position on a grazing/ structure line. For any particular site managers need to consider where they should be on this line to achieve biodiversity objectives?

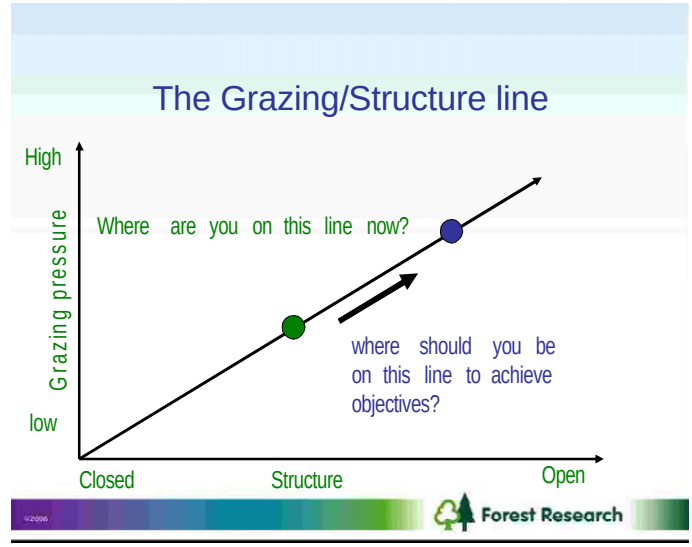

FIG 1: Graph indicating grazing structure relationship

Information feeding back from assessment of the S9 pilot sites will be incorporated into the toolbox, as it becomes available. Including the experience of graziers will be an essential part of the development of the Toolbox. It is envisaged that the Toolbox will help give site managers guidance on the following:

- Structure and species composition under different year round grazing pressures
- Effects of seasonal grazing
- Forage quality and quantity
- Grazing regimes
- Species and breeds
- Nature and timescale of habitat changes

In Summary

Forest Research envisages that the final output will be available on the internet and on CD as hyper-linked pages. The website and CD will include pages for information on future case studies to be added in a structured, and uniform, way. This will allow results from the S9 pilot project, amongst others, to be made widely available in future years.

For further information about the development of the Technical Toolbox please contact:

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Atlantic Woodlands—the importance of lichens

Atlantic woodlands are one of the most distinctive habitats in western Scotland and are an important European habitat. They support lower plant assemblages (mosses, liverworts and lichens) of European importance. The best woods for some of our rare lower plants are generally the least intensively managed woodlands in our landscape and these woods of very high biodiversity value.

The importance of hazel in Atlantic woods

Hazel is arguably the most important tree/shrub for lichens in Atlantic woodlands. It can support lichens of the Lobarion community (e.g. the large green, leafy tree lungwort Lobaria pulmonaria) that occur on other trees with basic bark, such as ash, elm, willow and old oaks. In addition, the smooth bark of hazel can support a specialised assemblage of lichens (the 'smoothies' of the Graphidion lichen community) that is generally only very poorly developed on other trees/shrubs. This latter community of thin crustose species is best developed on Atlantic woodlands with a large amount of hazel – especially coastal hazelwoods. One of the reasons that hazel is so important is that an individual stool can be very long lived. At any one time, a hazel is a dynamic ecological unit with young, mature, old, senescent, and dead stems on one individual.

Threats to Atlantic woodlands

Currently the major threats to lichen-rich woodland habitat in western Scotland are loss of habitat due to a long history of overgrazing (and consequent lack of tree regeneration) and paradoxically, shading due to excessive regeneration (of native trees such as birch, and non-native invasive species such as Rhododendron). Appropriate and controlled grazing regimes are probably the most important tool that can address these potential threats from native trees/scrub.

So how do we identify good stands of these overlooked woodland types? Sometimes size can help: large old collapsed willows, and hazels with a large basal girth, are often clearly very old and likely to be important. However, smaller trees/shrubs may be much older than their size would appear to indicate and so can be important too, and this is especially true in the case of hazel. Although identification of the lichens in these more 'marginal' habitats generally requires the services of a specialist, it may not always be necessary to call in a lower plant expert to identify a wood with potentially high lichen interest, and thus ones for which lichens should be a key management consideration.

Identifying the leafy Lobarion lichen community

A woodland that is potentially good for the Lobarion is not too difficult for landowners/managers to recognise on the basis of the presence of old/veteran trees (including birch and willow), large hazel stools, and lush growth of large leafy green, brown and blackish Lobarion lichens on trees and sometimes on rocks/outcrops within the woodland. A well-developed Lobarion community can be recognised with relatively simple training*. For example: the 'speckle-belly' lichens (see above) can help a non-specialist to identify a woodland of potentially high importance.

What about the specialist Graphidion community of smooth bark (the 'smoothies')?

The problem is that many Graphidion specialist species are only identifiable by a lichenologist. However, there are short-cuts that help. A well developed Graphidion usually occurs as a complex, map-like intricate mosaic on hazel stems consisting of a number of species that have fruiting bodies that can be described as scribbles, black spots/pimples, jam tarts, pinheads, warts and barnacles.

In addition, the presence of the striking Biodiversity Action Plan (BAP) fungus Hazel gloves (shown here) can help because it appears to be typically associated with ancient hazel stands.

Implications for woodland management - damaging operations

A wood with old trees, and/or frequent hazel stools, with a lush Lobarion and a well developed crustose mosaic of 'smoothies' (especially if hazel gloves is also present) is likely to be important for lichens. Ideally such a wood should be surveyed in more detail by a lichenologist, but this may not always be practical. In the absence of specialist survey, it would be prudent to manage such a wood sensitively to the lichen interest. In simple terms, this would **preclude**:

- long term exclusion of grazing from woodland pasture using large exclosures
- continued long term overgrazing of moribund woods.
- hazel coppicing (other than cutting for walking sticks).
- felling of mature native broadleaves

In these cases, specialist lichen survey of woodlands that are potentially important for lichens should be considered essential to identify areas where the above practices might be acceptable. For example sensitive thinning of even-aged stands of oakwood plantation may diversify the lichen habitat.

Controlled grazing for biodiversity

Management at sites of high lichen interest would involve appropriately controlled grazing levels to (i) permit some successful basal regeneration of hazel stools and (ii) control excessive natural tree regeneration (especially of birch) that might infill woodland glades. Often there is the problem of lack of regeneration of other woodland species by seed (e.g. oak, hazel, ash). In woods with widespread successful vegetative ('phoenix') regeneration of these species, this may not always be a problem, at least in the short term. However, if successful regeneration of these species by seed is required, intervention may be necessary. One option would be more labour-intensive stock/deer control, but this may have serious practical/financial implications and might only likely to be appropriate where a woodland of very high conservation value is managed solely for biodiversity. An alternative that would still allow continued sheltered grazing could include protection of existing regeneration (or very low density planted saplings) of native trees/shrubs in small exclosures. The crucial thing is that exclosures should be seen as a way to complement controlled grazing.

Conclusion

Trees are relatively easy to establish in the short term via fencing/ planting, but a woodland habitat with its associated structural diversity (especially old growth trees, deadwood habitat, glades), invertebrates, woodland ground flora and lower plant flora is very difficult to establish. Continued grazing and low intensity woodland management (including planting) have been crucial factors in the development of a rich and varied lichen flora in western Scotland. The importance of continued grazing in western woods cannot be under-estimated, but appropriate controls (which might include small scale, temporary fencing and probably low density planting) are needed to ensure continuity of woodland and, crucially, continuity of woodland structural diversity, and thereby biodiversity, in the future. In short - manage for biodiversity not trees.

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*The Native Woodland Discussion Group **www.nwdg.org.uk** runs basic lichen training courses and there are several lichenologists currently active in western Scotland.

Have you ever noticed the difference between the shape of trees which grow in open land and those which grow close together in woodlands? And I don't mean differences in the tree species composition between these two woody habitats. You might think an oak is an oak wherever it grows - but look more closely at the open-grown trees, especially in winter.

The most obvious difference is the shape and spread of the tree, an open-grown tree has a wider spread of branches, indeed more branches, starting from just above the ground. This gives a rounded profile to the tree compared to a woodland tree with competition from its neighbours, which is taller, straighter, has a cleaner stem and branches mainly in the upper crown. This is an ideal shape for trees grown mainly for timber, and of course that is the aim of traditional silviculture – to grow good timber trees within closely spaced stands. However the same tree species will grow into the rounded form when growing singly or in small groups in say rough or rocky grazings, or in fact anywhere outside of the dense woodlands, often giving shelter to livestock once the trees are mature.

Open-grown trees in grazings are what we now call 'wood pasture', really a shorthand term for widely spaced or partially wooded pasture with scattered trees. Ancient wood pasture is the same habitat but also graced by veteran trees of open-grown character, showing that the site has been open and grazed for centuries. Many people feel that wood pastures are aesthetically pleasing, as they allow us to observe well developed trees with full crowns. Wood pastures are also of course more useful as livestock shelter as they give grazing as well as shelter, and the trees are better adapted to surviving alongside the grazing animals.

Open grown trees in the humid clean air of Argyll often have a very rich lichen growth, not just the rare species on the trunks of veteran trees (for which wood pasture is the pre-eminent habitat for lichens), but sometimes the whole crown can be coloured with that vivid pale green of the common beard lichens especially Usnea species. The duller the day the more the luminous yellow-green of the lichens stand out in the oaks and birches.

Ash skirt or basal burr in Borrowdale

Open-grown trees in the sun are also good habitat for many insects, beetles, butterfly caterpillars and so on, together with the birds that feed on these. Once the old trees become rotten inside, then they are also host to dead-wood insects and fungi and then the hollows themselves are used by bats and birds for nesting. Burrs often develop more fully on wood pasture trees due to the open light conditions, and sometimes these can become massive and bizarre. If the burr develops around the base of the tree and livestock browsing continues to bite back back the burry shoots, the tree can over a long period of time develop a complete bulging 'skirt' of burr tissue. The skirted trees are only ever found in parkland or wood pasture situations, either grazed now or historically.

These bulging, basal swollen skirts are just one of a number of strange ways in which old open-grown trees develop in wood pastures. Open-grown trees have a lower centre of gravity compared to forest trees, and also often a better root system due to lack of competition with other trees. Because they have plenty of light compared to trees within woodland, when broadleaved trees are blown over they may continue to live, providing some roots are still linked to the soil. The stems and the branches may start to grow vertically again giving a renewed tree, rising up again like a phoenix. These phoenix trees may live a very long time themselves, and can give rise to mysterious lines of trees. This phenomenon is very common in wood pastures, and indeed in natural woodlands in general, which often tend to be fairly open with patches of trees and grassy glades between. You can see phoenix trees in birch, oak, goat willow, rowan, alder - in fact in most native trees.

A nice example of a birch phoenix in an open wood pasture in Borrowdale

A related phenomenon which also prolongs the life of the tree as an individual, despite changing stems mid-life as it were, is the way some species will layer when branches touch the ground and root up again, and it is surprising how many tree species will do this given plenty of room and light, and time. Certainly oak will layer, but many famous individual veteran trees including yews and beech have layered in this way. Other trees on steep slopes or in gullies will fall, layer down-slope, and grow up again, only to do the same thing perhaps a century later. Small-leaved limes growing naturally in the Lake District have survived for thousands of years in this way. Hazels, rowans, bird cherry and so on will do this in Scottish wood pastures and on crags.

Aspen, gean and some other species will send up masses of suckers from either the base of the stem or from the roots themselves on open well lit land around, and so survive vegetatively in that way. It is a feature of wood pastures that vegetative reproduction in many forms is a main mechanism for trees to persist on that land, compared to within woodlands.

The older trees do of course keep releasing seeds, and often prolifically considering the big healthy crowns they tend to have in wood pastures. But most of these abundant seeds, even if they germinate on the open pastures, will not of course be allowed to grow to saplings due to the browsing of the grazing animals. Unless there is a period of relaxed grazing pressure, or temporary exclosure, either deliberately or accidentally.

Some tree species are nearly always found in a wood pasture situation – they need the light conditions – for example crab apple, hawthorn and blackthorn. Indeed these thorny trees together with spiny shrubs like gorse, juniper, bramble and rose, have a special role in wood pastures as they often act as a protective mantle to individual tree saplings of ash and oak, holly or hazel, which can then indeed get away despite the pressure from grazing animals.

However if those seeds land in the peaty material found in the rotten hollows of open-grown veteran trees, then seedlings can germinate happily, and continue to grow on top of and within the veteran tree. These so called 'air trees' are typically of rowan, and are a real feature of ancient wood pastures, indeed are rarely seen elsewhere. Rowan seems to specialise in growing in this way, and may persist for decades as an air tree, occasionally outlasting the hollow host tree. Sometimes, being a victim of its own success the air tree grows too tall for its own precarious root system and then falls over, or causes the hollow host veteran to split apart violently in a gale.

A massive birch air tree in alder near Loch Katrine

Air trees are particularly common in veteran alders and ashes which have been pollarded, that is deliberately cut at about head height in times gone by, for fuelwood or animal browse. The pollarding cause the tree to develop a flat, hollow top to the pollarded head or bolling, well lit, and that is where the air trees grow.

A pollarded alder with a rowan

Rowan may also be seen growing within a multi-stemmed stool of another tree species, like oak, birch or alder, and this is quite common in old coppices rather than in wood pastures as such. Occasionally the thorny shrub which previously acted as a mantle is found entwined with the stems of the oak tree that it helped establish. A juniper growing intimately within a clump of self-sown oaks in a wood near Bonar Bridge in Sutherland is a good if unusual demonstration, but there are many other similar examples in wood pastures around the country.

A wood pasture surveyor and lichenologist Neil Sanderson has coined the term 'air tree' and it has stuck. Devising a wood pasture survey shorthand: of RAT for rowan air tree, BAT for birch, HAT for holly, YAT for yew etc, helps keep one amused during the long lonely days on the hill! Sitka spruce is also quite good at becoming an air tree (SSAT)!

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Do send in any photos you have of unusual trees on the farm!

Woodland Grazing & Archaeology

Woodland grazing both by wild and domesticated animals is intimately connected with past activities of people. This may have been for sport and food, as in the Glen Katrine Hunting Reserve, or as a system of grazing within a woodland context. In many cases the woodland may have spread from what was a woodland remnant or been planted over past habitations and fields.

Remains can be visible in many forms from ruined houses and walls, rigs and clearance cairns marking abandoned fields to more exotic ancient monuments marking Neolithic burial cairns or Iron Age Forts. As it is these areas with open woodland that often have the most diverse species and habitats it is important that the archaeology and history of an area is understood before any woodland grazing management is carried out.

Understanding the historical sites should be linked with an examination of the woodland structure to appreciate how the woodland has taken its present shape. This includes studying the individual features as well as the boundaries and species type within a woodland and must include a study of the trees themselves. Are they single aged block of maidens suggesting they have been planted as a timber crop? Do individual trees show signs of being coppiced or pollarded or have they grown to their full extent suggesting they have grown in open parkland? Mapping these trees in blocks will show how different compartments should be managed.

Ignoring this historical evidence both on the ground and within the trees will give a very partial picture of the woodland and its importance. It will also lead to inadvertent damage to the archaeology in woodlands because fences, tracks and areas of regeneration and planting will be placed on sites when such areas could easily be excluded. This was demonstrated recently by a archaeologist's report on 16 woodlands accepted into the SFGS S9 Pilot Stewardship Grant: Controlled Grazing in Woodlands. Seven of these sites are known, from desk-based assessments, to contain archaeology within existing woodlands and eitght contained significant archaeological sites in areas proposed for regeneration. This

Extract of map from John Home's Survey of Assynt 1774 held by the National Library of Scotland, reproduced with kind permission of Sutherland Estates.

Charcoal burning platform, Rahoy

was carried out without any additional field survey which would undoubtedly have increased the number of known sites.

Archaeologists welcome grazing over historic sites because it prevents scrub obscuring monuments, so long as the grazing animals do not cause erosion. This can be managed through a grazing plan. Archaeological sites often have a diverse and rich flora related to the past activities on the site and dating of a feature may show how long it was since the area was last disturbed.

There is desk-based information on archaeological sites publicly available in the form of old Ordnance Survey and Estate maps and some online archaeological data at www.pastmap.org.uk, but it needs careful interrogation. The data on the latter website, though suitable for identifying the extent of Scheduled Ancient Monuments, is not good enough for defining the extent and importance of the 95% of archaeological sites that do not have statutory protection. For these other sites a professional survey is required that includes both desk-based and on the ground survey. It is only with this assessment that an accurate picture of the archaeological history and importance of an individual woodland can be assessed.

It is not the case that all archaeological sites should be preserved. However, with accurate data an informed and balanced judgement can be made that assesses all the environmental and other information needed to produce a robust management plan. This is part of the EIA process that should be carried out for all woodlands and needs to be part of standard practice for Woodland Grazing Plans. Funding for archaeological surveys, previously available under the SFGS, may be available under the new Scottish Rural Development Plan, but details are not yet currently available.

For more information on woodland archaeology in Scotland www.scottisharchaeology.org.uk
For those interested in learning more about Woodland Archaeology, the Native Woodland Discussion Group are hosting a course from the 17th -19th April at Kinlochewe, Wester Ross. www.nwdg.org.uk

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Wood Pasture Update from the Borders

Borders Forest Trust planted over 2000 trees in individual exclosures between 2004 and 2006 to regenerate existing wood pasture without the loss of grazing and to create links on open ground between woodland sites. In the 2 years since the planting was finished we have seen the trees grow well with many reaching establishment.

The individual tree boxes which protect the trees from sheep, cattle and horses have so far withstood the rubbing and attention of stock. Most of the trees are now out of the 1.2m shelters and are growing well (see photo). In some areas however the cattle have managed to sneak tongues in to catch the tips of the emerging trees but this has only occurred in a couple of locations and can be remedied with netting.

Despite being fairly expensive, tree box planting does appear to be a very effective method of establishing trees quickly in a wood pasture habitat. Grant funded projects often have a limited life span of 3 years, getting the trees planted and established quickly is a top priority and protecting them in boxes proved to be well worth it.

Based on the success of the Borders Wood Pasture project, Borders Forest Trust were recently approached by Buccleuch Estates who are seeking to plant trees in boxes to regenerate an ancient SSSI oak woodland in Dalkeith. On securing grant funding from Scottish Natural Heritage 100 boxes will be built to protect newly planted young oak trees grown from nearby parent trees. They hope to continue to plant a hundred trees a year in this way for the ext 5 years to secure the future of the oak woodland for many years to come.

The Trust is also involved in a slower, more natural regeneration project using grazing on a SSSI and Ancient and Semi Natural Woodland in Berwickshire called the Cockburn Wildwood. This woodland is of mixed alder-ash and oak-birch composition with little in the way of natural regeneration and is therefore at risk from senescence. It has been included in the S9 Pilot Controlled Livestock Grazing in Woodland Project. It was fenced to enable controlled grazing during the winter months, we hope that this level of grazing will prevent the sward from becoming too dense to allow seed establishment. We are only 1 year into the project with no signs of regeneration yet but the 10 monitoring plots will be surveyed several times a year over the 10 years of the pilot to see what happens and will hopefully bear some good results.

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Solway Heritage Wood Pasture Project

The term 'wood pasture' is a relatively new and important concept in Scotland. Little is currently documented on 'wood pastures' and it's my job as the new Wood Pasture Project Officer for Sulwath Connections to make people aware of the cultural and ecological importance of conserving wood pastures.

As the new Wood Pasture Project officer my first assignment is to decide on a definition of what a wood pasture is. I've decided to keep it consistent with the revised Local Biodiversity Action Plan, to ensure a consistent approach across the Dumfries and Galloway Region. The definition is 'grazed grassland or heathland combined with trees or shrubs'. This definition seems simple when you first read it, however once you delve a little deeper you realise that it includes a variety of habitats, such as one or two trees in a grazed field, a small unfenced woodland in a grazed field, a grazed parkland, regenerating gorse in a grazed field, or even an old hedge at the edge of a grazed field. The only constant part to these examples is that the area is commercially grazed.

By now, most of you are probably thinking "Why on earth is it so important to protect wood pasture?" Well, there are cultural, historical and ecological answers to this question. The cultural and historical reasons for wood pasture include trees and shrubs being a source of food for humans and livestock, shelter for livestock, clothing, firewood and housing. Today, managed forests tend to provide all these needs for human consumption. Trees and shrubs were also historically planted for aesthetic reasons, the same as today. The ecological reasons of why wood pasture is important include providing a small number of sites for a range of rare species, such as invertebrates, fungi and lichens. These trees can also provide a food source, and shelter, for mammals and birds that travel long distances, such as some deer species and migrating birds. Also, ancient and veteran trees provide homes for hole-nesting birds and bats. By conserving new wood pastures, new sites will be created for these rare species in the near future. For more information read 'Trees in Fields and the Landscape of Dumfries and Galloway' which can be downloaded from the DGERC website, www.dgerc.org.uk

Currently the RSPB is enhancing a wood pasture on Barclye Farm, an extension to the RSPB Wood of Cree reserve near Newton Stewart. RSPB will be planting 130 hectares of new woodland doubling the size of the Wood of Cree and creating 72 hectares of wood pasture. There are presently a few trees and shrubs on the wood pasture at Barclye, but RSPB have planted more trees in this area so that when the veteran trees start dying, the new trees will carry on the wood pasture. To date they have planted 210 trees (see photo).

The next step of the project is to find landowners who have wood pasture on their land across Dumfries and Galloway. These landowners need to be keen to help keep wood pasture on their land for future generations. So if you are interested in helping to protect wood pastures in Dumfries and Galloway please contact me. The Wood Pasture project is part of the larger Sulwath Connections Landscape Project. The Wood Pasture project is managed by Solway Heritage and funded by Heritage Lottery Fund, the Tubney Charitable Trust, Landfill Communities Fund, Forestry Commission Scotland and Scottish Natural Heritage.

Eykolina de Zwart Tel: 01387 247543 Email: woodpasture@solwayheritage.co.uk

Jim O'Neill from the Forestry Commission based in Cockermouth has attended the last two WHWGP workshops and is keen to take back to Cumbria all that he has seen. Here he gives us his thoughts on how he is putting his experience into practice.

I am fairly new to grazed woodlands despite being the FC Woodland Officer in East Cumbria for 15 years now. Trouble is grants and grazing haven't mixed well in the past and either you got a grant from the FC and excluded stock or a grant from what is now DEFRA and kept the stock in - or even excluded them. However the older schemes didn't have much of an ability to regulate the grazing in terms of timing and to some degree numbers. Therefore the grazed woodlands we had were really pastures with some trees – not what we would coin wood pasture. Now that alone is likely to set off a debate with many experts waving arms and getting excitable!

Wood Pasture. What is it really? There are lots of answers to this from lots of people. I am not convinced of some and more convinced by others. Recently we had a presentation by Frans Vera that really struck a chord with me and perhaps the definition of woodland succession and wood pasture he outlined makes more sense than any explanation I have heard before.

Anyway, luckily for all of us and most importantly the woodlands, we are now trying to grasp the true meaning and value of these important remnants and this means they are at least being mapped and monitored and hopefully this will halt the slow decline or even "deforestation" that can happen imperceptibly on many sites.

Getting anyone to agree on what course of action is best to secure or even expand these remnants is at best difficult and generally impossible!

In my job the best thing I can advise a "customer" to do with his or her woodland is consider how it can assist with their holding or operation. Forget grants initially, what do they want the woodland for? Make a place for it in their everyday way of life. Try and help them look at the woodland within the context of their business or interest, however diverse it may be. Make them think about the woodlands again and how they may work for them. Once they have decided on a course of action, hopefully we can match a grant to aid them in their efforts. In delivering that grant, the Government will achieve one or more of its own targets too. Grazed woodlands should be no different, although they are obviously more specialist in their requirements and perhaps the dual functions of woodland and grazing will give more challenges in setting objectives for an enterprise than normal woodlands – whatever they may be!

Of course there will be, and indeed are, many woodlands out there that have a variety of important designations and sometimes the owners wishes can be at odds with these. The problem very often with these woods is that we wish the owners to do something they aren't really interested in. Yes, sure we will have some grant aid to help, but we must ensure the owner is on board with the objectives to really make things work in the longer term. We also need to be receptive to any ideas from the owners to make the woods work for them within the conservation objectives.

This is where I come in. I want to learn more about wood pasture, woodland grazing and ways of managing such woodlands that fit in with today's needs, both from a conservation perspective but also an economic perspective. Paying grants is useful at times to achieve a particular goal, but the best grant paid out is a "one off" or "kick start" grant that changes the course of a woodland and plots its way to becoming economic again. Is this even possible? I don't know, but we can try. That's why you will see me at various times sneaking on to your workshops, taking away your ideas and thoughts and trying to put them into practice in England.

Many of you will have heard of Geltsdale, which I'm lucky to have in my patch. Well there are discussions and proposals ongoing to significantly alter its management with a view to "re wilding" the whole valley and securing and expanding the existing wood pasture that is so important. How do we do this? Practically and financially. Who pays? What are the implications of taking one grant over another?

All these questions are yet to be answered - and anyway, is there a right answer?

I strongly believe the better option lies in ensuring the woodland management aligns with the owners objectives. This would seem to be the more sustainable option as grants have a habit of changing and ending and shouldn't be strongly relied upon for any long term management objectives. The problem is all aspects of the countryside are supported in some way or other and changes in one support system often alter another aspect, which makes following a course of action even more difficult.

Recolinasation of Geltsdale following destocking

Binney Banks, Geltsdale

Now if only we can come up with the answer to managed grazing in woodlands. But of course there is no "one size fits all" solution to this issue. Some flexibility needs to be incorporated in any general guidance we would all promote. This will ensure we direct a woodlands progress, but not dictate a course of action that is too prescriptive. This will help owners who seek advice, weave the management of these woodlands into their businesses as best they can to achieve a range of objectives that both they and we as the wider conservation community can support.

One thing is for certain though, we are all aware of these important woodlands again. They dropped off the radar for a long while, but their future is now of great concern to many. I don't think we will let them languish in obscurity again and the various Government and volunteer bodies are ever changing policies to try and support this work. Perhaps one of the most important aspects in the whole process is that we are all working together towards the best outcome for grazed woodlands. This work can be slow and inconclusive at times, but I think we are at least moving in the right direction. The debate is always lively on the way too!

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Managing Aspen Trees on our Farms

With its distinctive character in every season, aspen will be familiar to many Highland farmers. In a summer breeze, aspen trees draw attention to themselves with their noisily fluttering leaves. In spring, it is usually the last tree to come into leaf. In autumn, the leaves turn bright yellow, sometimes red.

The impact is often greater because aspen typically grows in discrete clumps. This results from its habit of growing from suckers. A 'parent' tree will often be surrounded by smaller stems which have developed from shoots thrown up from its root system. Aspen occurs throughout Scotland, but it is particularly widespread in the Highlands, and its UK stronghold is in Strathspey. It usually occurs with birch, less often with pine.

Although aspen is found throughout the Strath, aspen is usually only a minor component of our native woodlands and its stands are typically small and scattered. Because the suckers are very palatable to domestic stock, deer and rabbits, regeneration is generally rather scarce.

In fact, many species of flora and fauna rely exclusively on aspen to sustain them. These include fungi, mosses, lichens, moths and flies. Some of these are very rare, and considered a high priority for conservation action. Each species has different requirements – for instance, some require young leaves, while others depend on rotten sapwood.

Dark-bordered beauty moth, whose larvae feed on young aspen suckers. © Roy Leverton

Many of these species find it difficult to disperse from one aspen stand to the next, especially where the network of aspen habitat has been fragmented. In many cases, it may be possible to secure the future of aspen-dependent species by expanding existing aspen stands and establishing new stands where they are in short supply.

In order to plan conservation measures for these species, efforts are being made to find out more about the status of aspen in Strathspey. With funds from Cairngorms National Park, LEADER+ and Esmée Fairbairn Foundation, Scottish Native Woods has been leading a project to map aspen using aerial photography. A comprehensive map will allow us to identify gaps in the distribution of aspen and take steps to link stands and reconnect habitat networks.

Over 600 sq kms were flown in May 2007 and we are currently interpreting the photos and compiling a draft map of aspen. We then need to visit many of the mapped stands to ground-truth the survey and collect more information.
We anticipate that there will be targeted grants aimed at helping farmers, crofters and estates to manage their aspen woodland and plant new stands. We are also working with Highland Aspen Group to ensure an adequate supply of planting material. Because aspen rarely flowers and sets seed, it is normally necessary to propagate new trees from root cuttings. Two years ago, Highland Aspen Group set up a propagation unit in Kincraig and it is hoped to expand this facility in 2008.

FWAG and Scottish Native Woods are jointly planning a field event on **Managing Aspen on Farms** on Friday 6th June. If you would like to attend, or need advice on managing aspen on your land, or would simply like more information about the aspen project, please contact:

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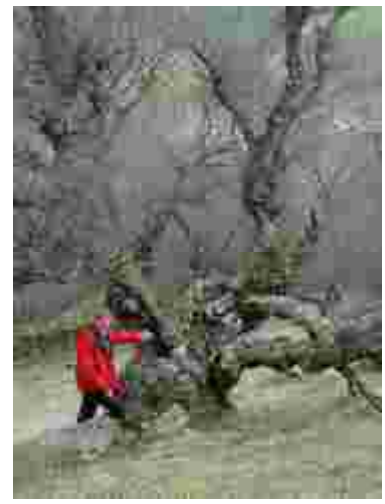
Farm Woodland Forum
Annual Conference June 24TH—26TH

For 2008, the annual Farm Woodland Forum conference will be held in Scotland from the June 24th to June 26th, based in Aberfeldy. The theme for this year will be '5000 years of integrated land use' - a big and challenging subject area! The conference will start at lunch time on the first day and will finish after lunch on the third day. Over the course of the three days there will be a number of presentations and site visits encompassing a wide range of topics. Presentations on the first day will cover underwater archaeology, Celtic place names and the history of the people of Loch Tay as well as farm woodland utilisation and the age of timbers used in old buildings. At night there will be the conference dinner and entertainment. This will take place at the Weem Hotel, Aberfeldy.



Day two starts with a talk about the Scottish Rural Development Programme (SRDP), and will look both forwards and backwards as to how we have got to where we currently are. Lucy Sumsion (FWAG) and Meg Pollock (SAC) will provide a double act on woodland grazing, and Peter Quelch will finish the morning discussing Ancient Woodland Pasture.

Site visits will include Bun Rannoch, where there are excellent examples of Ancient Woodland Pasture, and Craiganour, which is one of the Pilot SFGS S9 Stewardship sites for controlled livestock grazing in woodlands. If time permits the Forum will also visit the enclosures in the Black Wood of Rannoch that date back to the 1950's. No livestock or deer for nearly 60 years!

The final day will involve a morning of visits; travelling west to the Fortingall yew to face 5000 years of history on one site! Next stop the Crannog centre for a guided tour and the chance to try your hand at drilling holes in stone with a bit of wood, or making rope from nettles. Finally, back to Aberfeldy where we will visit a new silvo-pasture scheme, which will have been planted in March 2008.

The final costs have yet to be worked up, but if you would like to register an interest, please contact Mike Strachan on 01738 450790 or Email mike.strachan@forestry.gsi.gov.uk

WEST HIGHLAND WOODLAND GRAZING PROJECT

This newsletter has been produced by the West Highland Woodland Grazing Project (WHWGP). The Project was set up in January 2004 as a partnership under the umbrella of the Argyll & Bute Biodiversity Partnership. Funding Partners involved are Forestry Commission Scotland (FCS), Scottish Government Rural Directorate and Scottish Natural Heritage (SNH) along with project management support from the Farming & Wildlife Advisory Group (FWAG), Scottish Agricultural College (SAC) and Scottish Native Woods (SNW).

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