

The Cample Burn Juniper Scrub Project Demonstration Site

1. Executive summary

Juniper was once regarded locally as relatively common on the hills above Muirshiel, but appears to have been greatly reduced through the practice of muirburn and sheep grazing. The proposed juniper demonstration site (NS 308625) is close to Muirshiel Country Park (part of Clyde Muirshiel Regional Park). The aim for the site is to naturally regenerate the existing juniper by constructing a 19ha exclusion area using stock proof fencing. Ten hectares of the fenced site will be planted out with 1000 plants of locally propagated juniper stock and some introduced juniper plants from Central Scotland. A further 500 plants will be propagated to replace any losses and in case there is only a limited regeneration of juniper. It is expected that there will be some juniper, rowan, willow and birch regeneration over of the 19 ha site (Fig 1). The Lochwinnoch Community Garden Group will be propagating juniper from existing stock starting in March 2006 and Regional Park staff will organise volunteers to plant juniper at the project site, in 2008/09. Following the funding period the juniper will be maintained by the Regional Park as part of an area of scrub woodland through its duty to promote conservation (Fig 1).

Along with the Cample Burn Juniper Scrub Project it is intended that juniper should be more widely distributed in the Regional Park area as part of Clyde Muirshiel's commitment to the Local Biodiversity Action Plan and it is important that other juniper scrub sites are also established.

The overall objectives of the demonstration project are:

- 1.1 To naturally regenerate the existing juniper and other scrub species such as rowan, willow and birch
- 1.2 To demonstrate restoration of juniper woodland scrub
- 1.3 To encourage local involvement in the conservation and restoration of juniper woodland scrub
- 1.4 To emphasise and establish the value of juniper woodland scrub in the natural heritage
- 1.5 To encourage integrated land management outwith the project site including existing juniper sites and new sites for juniper woodland scrub.

2. The current status of juniper woodland scrub in the area

In the Clyde Muirshiel Regional Park (CMRP) area juniper is only known from four sites. At three of these sites juniper is represented by single specimens, two of which are low growing but cover a large area, with some apparent layering. At the fourth site there are three bushes. Of the six juniper plants only two are known to be female, and two other individuals have been identified as male. There is little specific data on former distribution although Henedy's *Clydesdale Flora* (1891) describes it as frequent, in woods and heaths, but only mentions Gourock as a locality; this statement is repeated by Lee in his *Flora of the Clyde Area* (1933).

It appears likely that Juniper has declined markedly since last century and is now very rare and on the verge of extinction in the Clyde Muirshiel area. It is only known from one locality in Lanarkshire and the nearest Greater Glasgow locality is to the north of Milngavie.

The decline is most likely due to excessive grazing and burning, and it is likely that this is preventing the establishment of young bushes. These ongoing management

factors, along with the apparent old age of the surviving individuals, geographical isolation and dioecious breeding system, decrease the likelihood of successful natural regeneration.

2.1 Management considerations

Hunterston Estate has agreed that the site on the Cample should be fenced to prevent grazing by sheep. The estate has agreed to formalise a written agreement with Clyde Muirshiel Regional Park to maintain the project site and to contribute 25 percent of the fencing costs.

Mountain Hares are occasionally noted but their numbers are low and are not expected to cause any significant loss of juniper.

Roe deer are shot locally by neighbouring forest managers for Ladymuir woodland (Fig 2) to prevent browsing and their numbers are noted to be low at Muirshiel woodland, therefore impacts from deer are likely to be negligible.

3. What are the main conservation priorities for existing juniper woodland scrub in the area?

3.1 The geographical isolation of the surviving individuals is of concern. Currently one male bush has been fenced at Craig of Todholes (Fig 2) to exclude grazing by livestock and some layering has been done at this site. Four hundred juniper cuttings (collected 2005) from the Muirshiel area are being propagated by the Forestry Commission and it is intended to plant these out at the Muirshiel woodland. The fencing of the three juniper on the Cample Burn is necessary to protect the male and female bushes at this site (Objective 1.1, 1.2, 1.3, 1.4 and 1.5).

3.2 There is a potential lack of genetic variety of the existing juniper stock as there are only 6 juniper plants recorded in Clyde Muirshiel Regional Park area. Due to the low number of juniper plants Alice Broome of the forestry Commission has recommended that 30 bushes are used to ensure genetic diversity. It is planned to improve the genetic variety by exchanging juniper propagated from Muirshiel stock with plants from similar sites (in terms of climate, soil and aspect) from Central Scotland. Transferred stock will be planted at the Cample site (Objective 1.4).

3.3 Land managers and Keepers have been informed of the location of the remaining bushes and the areas with juniper will be excluded from muirburn practice (Objective 1.5).

3.4 The Cample site is within the proposed pSPA (proposed Special Protection Area) for Renfrewshire Heights and is notified as a SSSI (Site of Special Scientific Interest, Fig 2). The main interest of the pSPA is for hen harriers. The planting of scrub should benefit hen harriers by providing habitat for prey species and nesting habitat for hen harriers. It is proposed that 40 percent of the project site area is retained initially as heather to benefit hen harriers over a ten year period. The management of any saplings in heather designated areas would be through their occasional removal to scrub woodland areas in the project area. It is intended that following this 10 year period, and as management of the wider heather moor improves to benefit hen harriers, scrub woodland will be allowed to dominate heather sites within the project area. (Objectives 1.1, 1.2, 1.4 and 1.5).

4. What are the main priorities for restoring or expanding juniper woodland scrub in the area?

4.1 The priority is to ensure that the only site known to contain male and female juniper is fenced to protect this existing stock and to encourage their natural regeneration. Secondly, it is planned to increase the number of sites that have native juniper. Juniper will be planted at Muirshiel in 2008, and at the Cample Burn site between 2008-10. There is potential to establish other juniper scrub woodland sites in the area at Cornalees and expand the existing Hardridge site beyond the current fencing limit. If the Renfrewshire Heights becomes an SPA the creation of further juniper sites on neighbouring farms should be encouraged through grant aid in the Natural Care Scheme. It is intended that the juniper scrub woodland restoration is part of an integrated land management that will benefit hen harriers (Objective 1.5).

5. The promotion of wider interest in juniper woodland scrub in the area

5.1 The Regional Park's involvement in promoting juniper is part of its charter aim 'to conserve and enhance the natural beauty, heritage and natural history of Clyde Muirshiel Regional Park'.

The planned mechanisms and products which could be used to promote juniper woodland scrub at this site can be summarised as:

- The involvement of local people from the Lochwinnoch Community Garden to grow on juniper cuttings and to provide a propagator and sprinkler system at their polytunnel in the village (Objective 1.3). The propagator and sprinkler system will be entirely funded by William Grant's (Hendrick's Gin). It is intended to collect around 1000 cuttings from the 6 known juniper sites within the Regional Park in March 2006. A further 2000 cuttings will be propagated and planted out between 2007-2012 to increase the amount of juniper scrub woodland in the Regional Park as part of CMRP's commitment to conservation. Some of these cuttings will also be used to replace any unsuccessful planted juniper or used in the regeneration area if there is limited growth from seed.
- A short information leaflet in conjunction with the Botanical Society for the British Isles (BSBI) describing the Cample Burn project and the restoration work in Central and South-West Scotland. This leaflet would be widely distributed in the local area and at the main Clyde Muirshiel Regional Park centres (Objective 1.3).
- An article in Plantlife (magazine on wild plant conservation) to promote collaboration in Central and South-West Scotland on the restoration project and the propagation work by the Forestry Commission. The environmental effect of planting juniper and encouraging scrub on the moorland, as well as the visual change in the landscape's appearance would be noted (Objective 1.3). The article would be part the Regional Park's conservation promotion programme.
- A quiz based on information on the 3 banners about juniper at the Muirshiel Centre, with a bottle of Hendrick's gin as the first prize (Objective 1.4). This planned event to highlight the importance of juniper in the environment has been sponsored by William Grant's and its promotion by Clyde Muirshiel Regional Park is part of its commitment to conservation.

- A cooking demonstration of game foods flavoured with juniper (Objective 1.4). This event is likely to be sponsored by Hendrick's Gin and is part of CMRP's commitment to juniper conservation.
- It is planned once the juniper scrub site is well established that a demonstration day will take place to inform interested parties such as ranger services, land managers and conservation workers of the project. It is likely that this event will take place in 2019.

During 2005 the juniper scrub woodland restoration project has been promoted by the following activities or methods:

- A guided walk to a juniper enclosure near Muirshiel which was followed by a BBQ of venison burgers and pork sausages cooked with juniper berries. This event was sponsored by William Grant's the makers of Hendrick's Gin.
- Three banners have been produced by the Regional Park to promote the conservation of juniper and have been displayed at outside events such as green woodworking demonstrations by the Ranger Service, the juniper BBQ and also at the local council offices to help highlight work in the Local Biodiversity Action Plan. The banners were sponsored by William Grant's the makers of Hendrick's Gin.

Summary

Juniper scrub has been recognised as a nationally scarce woodland type. The Cample Burn Juniper Project aims to naturally regenerate juniper and plant out locally propagated stock at an existing site by constructing a 19ha exclusion area. Juniper will be planted at 100 per hectare at the 10 ha site while a reserve stock of 500 cuttings will be available to replace any losses and also if necessary to support the 9ha regeneration site. In addition it is planned to increase the amount of juniper scrub woodland at several sites in the Regional Park with the planting of 1500 propagated juniper. It is hoped that the local genetic stock will be improved through the collaboration of other sites in Central and South-West Scotland. Along with this it is intended that juniper conservation will be promoted in and around the Regional Park through the production of 20000 leaflets to highlight the Cample Burn Project and the wider conservation of this species. Local volunteers from the Lochwinnoch Community Garden will be involved in the propagation of juniper and volunteers organised through Clyde Muirshiel Regional Park's Ranger Service will plant them at the Cample site in 2009. The site will be maintained by Clyde Muirshiel Regional Park staff as part of their stated environmental charter aim that includes a commitment to conservation and education.



