

Woodsia ilvensis (L.) R. Br.

Oblong Woodsia

Key:

Dots refer to the native sites of the species

Numbers refer to the nearby Botanical Collections



Starting references

Family

Woodsiaceae

IUCN category (2001)

Endangered

Habit

Evergreen fern.

Habitat

Open rock.

Reasons for decline

Over-collecting in the 19th century.

Distribution in wild

Country	Locality & Vice County	Sites (10km ² occurrences)	Population (plants)
Wales	Caernarvonshire	2	12
England	Borrowdale, Cumberland	1	
Scotland	Moffat Hills, Dumfriesshire Clova, Angus	1	4 clumps

Ex situ Collections

Gardens close to the region of distribution of the species

- 1 University of Dundee Botanic Garden
- 2 St Andrews Botanic Garden
- 3 Branklyn Garden
- 4 RBG Edinburgh
- 5 Dawyck Botanic Garden
- 6 Holehird Gardens
- 7 Sizergh Castle
- 8 Treborth Botanic Garden
- 9 Bodnant
- 10 Portmeirion Gardens

Gardens with specialisation on species *Woodsia ilvensis*

RBG, Edinburgh

Potential to grow the species in ex situ Collections

From Royal Botanic Garden Edinburgh, Indoor Department (Andrew Ensoll and Clare Morter, pers. comm.)

- Propagation from spores.

In spring or summer the spores are sown in plastic pots containing 1:1 peat/bark sieved, added with N-Mag fertiliser (~ 5ml for 10 L of compost) and sterilised with boiling water (to kill the spores of algae, mosses, fungi and alien ferns as they germinate and develop faster than the sown fern spores).

The pots are sealed with cling film to create a closed environment and stored in a growing room under artificial light 12H/day at 18°C.

Germination occurs about 4 weeks later. The fresher the spores are, the quicker they germinate. After germination the prothalli are left untouched for an extra 2 months until they become sporelings big enough to be held with tweezers.

The young sporelings are pricked out in 2^{3/4} square plastic pots containing 1:1 sieved peat/sieved bark. The pots are wrapped with cling film and stored in a growing room under artificial light 12H/day at 18°C.

Later on, the pots are left uncovered in the growing room as the sporophytes need a lower humidity environment for hardening-off.

Once they have hardened-off and thicker fronds appeared, the young ferns are pricked out in a tray for further development, in a free draining compost containing 75%:15%:10% propagation bark/John Innes No. 1/fine grit, fine charcoal, N-Mag. The tray is placed in the growing room with a propagation top to keep a closed atmosphere. The top is uplifted later, once the plants are well established.

Mature sporophytes are transplanted in individual pots (3-4 sporophytes/pot) containing the same compost as previously and placed in the glasshouse at 10-13°C. In late spring-early summer, the pots may be transferred outdoor, in a shaded tunnel.

Plants are susceptible to aphids and vine weevil infestations.

They get the usual feeding for indoor plants: a liquid fertiliser every 2 weeks and osmocote.

The difficulty in propagating *Woodsia ilvensis* from spores, is to keep the humidity factor right all the way through.

- Vegetative propagation by division in March-April.
- Outdoor conditions

Woodsia ilvensis should be planted in a free-draining soil (crucial), in a light (avoid sites with prolonged exposure to sun), open site.

Conservation information

Woodsia ilvensis is listed on Schedule 8 of the Wildlife and Countryside Act, 1981

Linkages to BAPs

In 1995, *W. ilvensis* was listed as a priority species in the UK Government's Biodiversity Action Plan (UKBAP) and in 1998 the national Species Action Plan (SAP) for *W. ilvensis* is agreed and published.

Lead partner is Dr Heather McHaffie, Royal Botanic Garden, Edinburgh, Tel: 0131 248 2876

The following LBAPs are working on the species:

Bioamrywiaeth yn Eryri

Dumfries and Galloway

Habitat Management

Most colonies are within NNRs or SSSIs.

The English re-introduction site is within the Teesdale National Nature Reserve and the Scottish site is in the Southern Uplands within a SSSI.

Re-introduction localities are kept secret and are monitored regularly.

Known conservation programmes

The conservation collection of *Woodsia ilvensis* is held at the RBGE and represents most of the genetic variation in the British populations.

Re-introductions were made by the RBGE into several secret sites near Moffat in 1999 and in Teesdale in 1999 and 2000.

A new re-introduction was started in autumn 2003 at another site north of Moffat.

References

- Mc Haffie, H. 2004. *Woodsia ilvensis* re-introduction programme. *Pteridologist* **4**, 3, p. 67.
- Lusby, P., Lindsay, S. & Dyer, A.F. 2002. Principles, practice and problems of conserving the rare British fern *Woodsia ilvensis* (L.) R.Br. *Fern Gazette*. **16** (6, 7 & 8), pp. 350-355.

Web References

- UK Species Action Plan: <http://www.ukbap.org.uk/UKPlans.aspx?ID=634>
- NBN Gateway database: <http://www.searchnbn.net>