

Environment & Heritage Service

Northern Ireland Species Action Plan

Yellow Bird's Nest

Monotropha hypopitys

March 2006

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1 Current Status

- 1.1** Yellow bird's nest *Monotropa hypopitys* is a short, perennial plant, growing to 30cm.. The whole plant is a waxy, pale brownish-yellow. Flowers are tubular with 4 to 5 sepals united at the base. The 4/5 petals are dull yellow, 8-12mm long on a drooping stem that becomes erect in fruit. Leaves are scale-like and close to the stems. In the UK there are two subspecies which are not easily separated morphologically. Most Irish plants appear to belong to the subspecies *hypophegea* which is characterised by hairless flowers.
- 1.2** This plant has popularly been described as a saprophyte, however it is more appropriate to classify yellow bird's nest as a myco-heterotroph meaning it gains energy from mycorrhizal fungi (Leake 2005). *M. hypopitys* roots are sheathed in ectomycorrhizal fungal mycelium, and nourished exclusively by carbon passing through a common mycorrhizal network linked to adjacent autotrophic trees, deciduous or coniferous.
- 1.3** It grows in leaf litter in shaded woodlands, most frequent under beech *Fagus sylvatica* and hazel *Corylus avellana* on calcareous substrates, and under *Pinus spp.* on more acidic soils. Outside Northern Ireland it also grows in damp dune-slacks, where it is usually associated with creeping willow *Salix repens*. Although many sites were lost before 1930, the species has suffered a further marked decline in southern England since 1962 (Preston *et al.*, 2002). The subspecies *hypopitys* occurs in England, Scotland, Wales and Ireland where it is assessed as endangered (Cheffings, 2004)
- 1.4** Though rare in Ireland, Curtis and McGough considered it to have been under-recorded in recent years. It has been reported in 13 Irish counties, but at only 3 sites since 1970. Yellow bird's nest has been recorded throughout Europe except in the extreme south (Curtis & McGough 1988).
- 1.5** The distribution information from the Centre for Environmental Data and Recording (CEDaR) records the Northern Ireland population in two areas. Apart from a recent discovery on the Antrim coast, all the occurrences are in County Fermanagh. Yellow bird's nest has been known in the Lough Erne basin since 1904 and has been recently identified at three sites at this location (Northridge & Northridge, 2002). However, the oldest reliable record for Northern Ireland refers to a hazel/oak wood in County Londonderry at Errigal Banks 1944 (Stewart *et al.*, 1992). In County Fermanagh, a population of plants consisting of over 100 spikes found beside Castlehume Lough in 1980 was later destroyed in the construction of a golf course. Yellow bird's nest was located at Castle Caldwell and Carrickreagh under beech and at Knockninny under hazel in 2002 (Northridge & Northridge, 2002) and it has been found at Correl Glen (Holy oaks, pers. comm., 2005). Plants do not appear in exactly the same spot each year, but new sites are usually within several metres of the old ones (Northridge & Northridge, 2002).

- 1.6** The species is protected in Northern Ireland under Schedule 8 of the *Wildlife (Northern Ireland) Order, 1985*, which makes it an offence to pick, uproot, or to destroy this plant.

2 Current Factors Causing Loss or Decline

- 2.1** Woodland management – the plant is dependant on leaf litter under a deciduous tree canopy. In its County Fermanagh stronghold, beech and hazel generally provide these conditions. Any change in these conditions may have an impact on the species.
- 2.2** Grazing - changes in agricultural practices such as overgrazing may result in the decline of populations.
- 2.3** Habitat fragmentation - leads to small isolated colonies vulnerable to extinction through chance events, natural population fluctuations and genetic decline.

3 Current Action

- 3.1** Under the *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985*, Areas of Special Scientific Interest (ASSIs) have been identified and declared by the Department of the Environment (DOE) through the Environment and Heritage Service (EHS). ASSIs are now designated under *The Environment (Northern Ireland) Order 2002*, which strengthened the protection of ASSIs, recognising the importance of working in partnership with owners and occupiers and facilitating the positive management of these sites. In 1995 Yellow bird's nest was found at the Knockninny Hill ASSI and more recently (2005) at Largalunny ASSI (also a NNR).
- 3.2** The Management of Sensitive Sites Scheme (MOSS), launched in 2002 by EHS, is a voluntary scheme designed to ensure the positive management of ASSI features to maintain their extent and favourable condition. Under the scheme, landowners can receive payment for carrying out conservation work within the framework of a written agreement. MOSS covers issues such as dumping, grazing and control of invasive species.
- 3.3** In 2000, the Northern Ireland Biodiversity Group (NIBG) produced its recommendations to Government (NIBG, 2000). These recommendations were largely accepted by the Northern Ireland Executive in 2002, with the publication of the *Northern Ireland Biodiversity Strategy* (DOE, 2002). As part of this process, a revised list of Northern Ireland priority species was published in March 2004. This list includes Yellow bird's nest.
- 3.4** Regional Planning and Transportation Division within DRD is responsible for coordinating the implementation of the *Regional Development Strategy (RDS) for Northern Ireland 2025* (DRD, 2001). The RDS contains a Spatial Development Strategy and related Strategic Planning Guidelines (SPGs). The emphasis in the SPGs is on competitiveness, sustainable development and tackling social exclusion and division.

Operational policies to give effect to the SPGs are contained in Planning Policy Statements (PPSs). Some of these policies have a direct or indirect bearing on the prevention of adverse impacts on priority habitats and species.

- 3.5** *PPS2 Planning and Nature Conservation* (DOE, 1997) (under review) contains planning policy for the hierarchy of sites of nature conservation importance. It also addresses trees and woodlands, and the protection of species.
- 3.6** *PPS14 Sustainable Development in the Countryside* is due to be published by Regional Planning and Transport Division (RPTD) of the Department of Regional Development (DRD) by the end of 2006.
- 3.7** Site protection policies are included in Development Plans. These include the identification of Sites of Local Nature Conservation Importance (SLNCIs). Planning Service is currently considering which SLNCIs will be formally identified in Development Plans. Where such sites are confirmed in adopted plans, specific planning policies will be applied to development proposals on those sites.
- 3.8** DARD, through its Countryside Management Branch (CMB), has developed a series of agri-environment schemes including the Environmentally Sensitive Areas (ESA) Scheme (revised in 2000) and the Countryside Management Scheme (CMS). A further revision to both the ESA and CMS has recently been approved under the current Northern Ireland Rural Development Programme (2000-2006). Their objective is to protect and enhance semi-natural habitats and species by encouraging more sensitive management practices. Both these schemes have similar management provisions, are voluntary and apply to the whole farm. These schemes provide a mechanism for delivering some of the targets listed in action plans for many species and habitats, targeting areas of as little as 0.1 ha of semi-natural habitat in order to maintain or improve their present conservation value. Around 230,000 ha of farmland are currently in agri-environment schemes in Northern Ireland, approaching a quarter of the total agricultural land in the Province. A sample of habitats is under long-term monitoring by QUB's Agri-environment Monitoring Unit (QUB, 2004b).
- 3.9** The designation of ESAs commenced in 1988 and today there are five ESAs in Northern Ireland. DARD has determined a number of priority habitats which, if they occur on the farm, must be brought under agreement and managed according to relevant prescriptions determined by DARD.
- 3.10** The Habitat Improvement Scheme (HIS) aims to help farmers protect, enhance and establish habitats which are considered to have major conservation value. This is achieved by taking land out of agricultural production or by entering into a 10 year agreement which involves extensive grazing based on non-application of fertilizers and pesticides to the land. No new applications for the HIS are being accepted as the scheme closed in mid-1999. The scheme has been replaced by the Countryside Management Scheme (CMS).
- 3.11** The CMS, launched in 1999, was developed with the primary aim to maintain and enhance biodiversity and is open to all farmers and landowners outside ESAs. Where

funding is limited, entry into the scheme is competitive, being based on who can offer the greatest environmental benefits.

- 3.12** Farmers in receipt of Single Farm Payment are required to observe certain conditions known as Cross Compliance, part of which states that they must keep their land in Good Agricultural and Environmental Condition. Claimants must ensure that all semi-natural habitats are maintained, not over grazed or undergrazed, not trampled or poached and they must not place supplementary feeders on habitats.
- 3.13** Within the Environmentally Sensitive Areas (ESA) and Countryside Management Schemes (CMS), grant aid is available to manage areas of broadleaf woodland greater than 0.1ha – oak, ash or wet woodland – and scrub. Management includes grazing/non-grazing, control of invasive species and clearing dumped material.
- 3.14** Through the ESA and CMS, grant aid is also available to plant small areas of woodland (0.01-0.2ha) on the farm.
- 3.15** Grants for woodland planting, regeneration and some other management practices are available from the Forest Service, DARD. Forest Service's main grant scheme is the Woodland Grant Scheme (WGS) which is part funded by the European Union (Council Regulation 1257/1999) and offers grants towards the costs of establishing new woodland and management of existing woodland. Establishment Grants are designed to assist new planting, restocking and natural regeneration. Woodland Improvement and Sustainable Forestry Operations Grants are available for existing woodlands to bring them back to sustainable management and secure environmental, social and economic benefits.
- 3.16** Roads Service has produced an Environmental booklet (DOE, 1998) (under review) as guidance to road contractors to minimise the impacts of roads from the design stage through to construction including the protection of species and habitats inside and outside designated areas.
- 3.17** Other relevant information is gathered through specialist biological recording groups, Non-Governmental Organisations (NGOs), universities and other government bodies. Biological records are currently stored in the Museum and Galleries of Northern Ireland (MAGNI) at the Centre for Environmental Data and Recording (CEDaR). CEDaR was established in 1995 in partnership with EHS, MAGNI and the biological recording community. There are currently over 1.4 million records held by CEDaR and there are plans underway to make these records more accessible through the Internet. This will be achieved through the National Biodiversity Network, a union of organisations throughout the UK working together to create an information network of accessible biological data for biodiversity information.

4 Action Plan Targets

- 4.1 Maintain the current populations at 4 sites.
- 4.2 Maintain the current range at 5 10x10km squares.
- 4.3 By 2015, increase the number of populations to 5 sites.
- 4.4 By 2015, increase the range to 6 10x10 km squares.

5 Proposed Actions with Lead Agencies

5.1 Policy and legislation

- 5.1.1 By 2008, ensure that important yellow bird's nest sites are recognised and, where appropriate, site protection policies are included in statutory and non-statutory plans e.g. Development Plans and other strategic plans, including Local Biodiversity Action Plans (LBAPs).
(ACTION: Planning Service, EHS, DARD, Forest Service, District Councils)
- 5.1.2 By 2007, ensure that agri-environment scheme prescriptions, MOSS and Forest Service Grants which are relevant/appropriate to yellow bird's nest are contributing to maintaining and enhancing the population across Northern Ireland.
(ACTION: DARD, Forest Service, EHS)
- 5.1.3 By 2008, target positive management through MOSS, agri-environment schemes, the LBAP process and grant aid for biodiversity to secure favourable management on yellow bird's nest sites.
(ACTION: EHS, DARD)

5.2 Site safeguard and management

- 5.2.1 By 2006, produce conservation objectives for all statutory sites containing Yellow bird's nest.
(ACTION: EHS)
- 5.2.2 By 2007, review the coverage of yellow bird's nest sites within the SAC, ASSI and NNR series and, if necessary, notify further sites to fill significant gaps.
(ACTION: EHS)
- 5.2.3 By 2009, secure favourable management of the historical site at Castle Hume Lake for Yellow bird's nest to encourage the recovery of this 'extinct' population.
(ACTION: EHS)

5.3 Species management and protection

- 5.3.1 By 2009, ensure that all known sites are managed in a manner that is beneficial to the conservation of yellow bird's nest.
(ACTION: EHS)

5.4 Advisory

- 5.4.1 By 2007, provide advice to land owners with yellow bird's nest on their land about suitable management requirements of the species.
(ACTION: EHS, DARD)
- 5.4.2 By 2007, ensure that information on yellow bird's nest in Northern Ireland is available to all those who could play a role in its conservation and recovery.
(ACTION: EHS, DARD, Forest Service)

5.5 International

- 5.5.1 Further develop links with the Republic of Ireland and other European and international organisations and programmes such as the European Environment Agency and the European Centre for Nature Conservation, to promote the exchange of information and experience in research, management techniques, education and conservation strategies.
(ACTION: EHS)

5.6 Future research and monitoring

- 5.6.1 By 2007, establish the distribution and abundance of yellow bird's nest populations.
(ACTION: EHS)
- 5.6.2 Periodically review monitoring protocols and condition assessment methodology for statutory sites with yellow bird's nest
(ACTION: EHS)
- 5.6.4 Monitor habitat condition and management to ensure that optimal site management is achieved.
(ACTION: EHS)
- 5.6.5 By 2006, set in place a reporting and monitoring structure to encourage progress towards the delivery of the targets and the completion of actions identified in this plan.
(ACTION: EHS)

5.7 Communications and publicity

- 5.7.1 Raise awareness of the species among the general public, volunteers, botanists and professional conservation workers and researchers e.g. by means of reports, publications, field meetings and presentation of research results at conferences.
(ACTION: EHS)

5.8 Links with other Action Plans

5.8.1 This plan should be considered in conjunction with the following UK and Northern Ireland Habitat Action Plan:

- Mixed ashwoods
- Upland Oakwoods

7 References

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List of Useful Acronyms

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CEDaR	Centre for Environmental Data and Recording
CMB	Countryside Management Branch
CMS	Countryside Management Scheme
DARD	Department of Agricultural and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Investment
DOE	Department of the Environment
DRD	Department for Rural Development
EHS	Environment and Heritage Service
ESA	Environmentally Sensitive Area
ESCRs	Earth Science Conservation Review Site
HAP	Habitat Action Plan
JNCC	Joint Nature Conservation Committee
MAGNI	The National Museums and Galleries of Northern Ireland
NESA	New Environmentally Sensitive Area
NIBG	Northern Ireland Biodiversity Action Group
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserves
PPS	Planning Policy Statement
RA	Rivers Agency
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SLNCI	Sites of Local Nature Conservation Importance
SoCC	Species of Conservation Concern
SPA	Special Protection Area
WFD	Water Framework Directive
WWT	Wildfowl and Wetlands Trust