

Northern Ireland Species Action Plan
Blue-eyed grass
Sisyrinchium bermudiana
March 2005

1. Current Status

- 1.1** Blue-eyed grass *Sisyrinchium bermudiana* L. is a rhizomatous perennial herb of the Iris family. Its name arises from the long, narrow, sword-shaped leaves up to 5mm wide arranged in fans giving it a grass-like appearance. The stems grow to approximately 50cm, the flowers are bright blue, but its daytime flowering period is short-lived, only occurring in sunshine. It flowers in summer from July to August.
- 1.2** *S. bermudiana* occurs in a variety of habitats such as open, usually moist, acid soils including damp meadows and pastures, lakeshores and stony places where it can be locally abundant (Heukels, 2000). It has been found more recently along grassy road margins.
- 1.3** *S. bermudiana* is a member of the American element of Irish flora. It is widespread in North America, but in Europe the main distribution of the species is confined to Ireland where it is restricted to the west of the country occurring from County Cork to County Donegal apart from in County Mayo, its distribution elsewhere is rare and very local. Stace (1995) argues as to whether the plant is native or an American introduction. Naturalised plants have been reported in Britain, but the species may have been misreported, as *S. bermudiana* is often confused with *S. montanum* (Stace, 1995). There are records of locally naturalised plants in France (Heukels, 2000).
- 1.4** *S. bermudiana* was first recorded in Northern Ireland at Derryvore, near Crom, Co. Fermanagh, in 1889. The Centre for Environmental Data and Recording (CEDaR) holds seventy seven records for *S. bermudiana* in Northern Ireland, 55 of which are recent (1987-2000). However, many of these records are from the same sites and show that the species is present as a presumed native species in five 10x10 km squares (Preston *et. al.*, 2002) with sites concentrated around Lough Erne and Lough Melvin in Co. Fermanagh.
- 1.5** There has been an apparent loss of *S. bermudiana* from two sites around Lough Erne, Co. Fermanagh since the 1970s. However, apparent changes in status may be affected by confusion with *S. montanum* and *S. angustifolium*. *S. bermudiana* may also have been missed in previous surveys as the flower only appears in full sunshine and when not in flower can be confused with some grass species.
- 1.6** *S. bermudiana* is protected in Northern Ireland under Schedule 8 of the *Wildlife (Northern Ireland) Order 1985*, which makes it an offence to pick, uproot, or destroy this plant. It is also listed in the Irish Red Data Book for vascular plants (Curtis & McGough, 1998).

2. Current Factors Causing Loss or Decline

- 2.1 Agricultural improvement – the habitat of *S. bermudiana* is moist, acid soils typical of that found around Lough Melvin in Co. Fermanagh. Changes in agricultural practices, fertiliser and herbicide use in the vicinity of sites pose the largest threats to established populations in this area.
- 2.2 Habitat fragmentation – leads to small isolated colonies vulnerable to extinction through chance events, natural population fluctuations and genetic decline.
- 2.3 Grazing – changes in agricultural practices such as overgrazing or cessation of grazing can affect population dynamics. Under grazing of these pastures allows these sites to be colonized by scrub species. However no dedicated survey has been carried out in Northern Ireland to investigate to what extent this is affecting population dynamics.
- 2.4 Drainage – successive drainage programmes in the Lough Melvin basin have resulted in a decline in populations around the Lough margins.

3. Current action

- 3.1 In 1992, the EC adopted the *Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna*, known as the ‘Habitats Directive’. The Habitats Directive, which was transposed into Northern Ireland law through the *Conservation (Natural habitats etc) Regulations (Northern Ireland) 1995*, requires member states to designate and manage Special Areas of Conservation (SACs) for habitats (listed in Annex I of the Directive) and species (listed in Annex II). A small proportion of these habitats and species, which are considered to be most in need of conservation at a European level, are given priority status. Three sites have been nominated as candidate Special Areas of Conservation (cSACs) for their Annex I habitat *Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)*, of which *S. bermudiana* is a part.
- 3.2 The *Conservation (Nature Habitats, etc.) Regulations (Northern Ireland) 1995* and *The Conservation (Natural Habitats, etc.) (Amendment) Regulations (Northern Ireland) 2004* (The Habitat Regulations) require competent authorities, when considering a plan or project not directly connected with the management of a European site e.g. an SAC or SPA, to undertake an Article 6 assessment. This assessment will determine if the plan or project, either alone or in combination with other plans or projects, is likely to have a significant impact on the site. In the case of a negative or undetermined assessment, a competent authority may only agree to the plan or project where it is satisfied that there are no alternative solutions and that the plan or project must be carried out for imperative reasons of overriding public interest, which may be of a social or economic nature. However, if the site hosts a priority habitat or species then the plan or project may only be approved for: a) reasons of human health, public safety, beneficial consequences of primary importance to the environment, or b) other reasons which the Department (DOE), having considered the opinion of the European Commission (EC), determines are imperative reasons of overriding public interest.

- 3.3** Under the terms of the Habitat Regulations, the above Article 6 assessment by the competent authority is required for plans or projects e.g. land reclamation, which are outside European sites but may still have an impact on the site.
- 3.4** Guidance to help competent authorities and others to interpret the Habitat Regulations has been published (EHS, 2002).
- 3.5** Guidance on the completion of an Article 6 assessment has also been published (European Commission, 2000)
- 3.6** Under the *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985*, Areas of Special Scientific Interest (ASSIs) are identified and declared by the Department of the Environment (DOE) through the Environment and Heritage Service (EHS). *The Environment (Northern Ireland) Order 2002*, strengthened the protection of ASSIs, recognising the importance of working in partnership with owners and occupiers and facilitating the positive management of these sites. Three ASSIs include *S. bermudiana* as an interest feature and these same three sites have also been nominated as candidate Special Areas of Conservation (cSACs) (see above).
- 3.7** Survey and monitoring work is carried out by EHS at Lough Melvin ASSI, Garvros ASSI and Upper Lough Erne ASSI.
- 3.8** In 2000, the Northern Ireland Biodiversity Group (NIBG) produced its recommendations to Government (NIBG, 2000). These 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 *S. bermudiana*.
- 3.9** Regional Planning and Transportation Division within DRD is responsible for co-ordinating 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.
- 3.10** *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, protection of species and peatlands.
- 3.11** *PPS14 Sustainable Development in the Countryside* is due to be published by the end of 2005.
- 3.12** 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.

- 3.13** 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 is currently in agri-environment schemes in Northern Ireland, approaching a quarter of the total agricultural land in the Province.
- 3.14** 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.
- 3.15** 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).
- 3.16** 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.
- 3.17** The Management of Sensitive Sites scheme (MOSS) was launched in 2002 by EHS. It is a voluntary scheme designed to ensure the positive management of ASSI features, for example lowland semi-natural grassland. Under the scheme, landowners can receive payment for carrying out conservation work within the framework of a written agreement. MOSS covers issues such as agricultural improvement, grazing and control of invasive scrub species. One-off payments for works such as fencing and scrub clearance to assist grazing can be made.
- 3.18** Roads Service has produced an Environmental booklet (DOE, 1998) (under review) as a 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.
- 3.19** 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 range of *S. bermudiana* at 5 10x10 km squares.
- 4.2 By 2015, increase the range of *S. bermudiana* to 6 10x10 km squares

5. Proposed Actions with Lead Agencies

5.1 Policy and legislation

- 5.1.1 By 2007, review the coverage *S. bermudiana* sites within the cSAC, ASSI and NNR series and, if necessary, notify further sites to fill significant gaps.
(ACTION: EHS).
- 5.1.2 By 2008, ensure that important *S. bermudiana* 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, District Councils)
- 5.1.3 By 2007, ensure that agri-environment scheme prescriptions relevant/appropriate to *S. bermudiana* are contributing to maintaining and enhancing the population across Northern Ireland.
(ACTION: DARD, EHS)
- 5.1.4 By 2008, target positive management through MOSS, agri-environment schemes, the LBAP process and grant aid for biodiversity to secure favourable management on *S. bermudiana* sites.
(ACTION: EHS, DARD)

5.2 Site safeguard and management

- 5.2.1 By 2006, produce conservation objectives for all statutory sites containing *S. bermudiana*.
(ACTION: EHS)
- 5.2.2 By 2009, secure favourable management of selected historical sites for *S. bermudiana* to encourage the recovery of these 'extinct' populations.
(ACTION: EHS)

5.3 Species management and protection

- 5.3.1 By 2009, ensure that an appropriate selection of sites are managed in a manner that is beneficial to the conservation of *S. bermudiana*.
(ACTION: EHS)

5.4 Advisory

- 5.4.1 By 2006, provide advice to land owners with *S. bermudiana* on their land about suitable management requirements of the species.
(ACTION: EHS, DARD)
- 5.4.2 By 2006, ensure that information on *S. bermudiana* in Northern Ireland is available to all those who could play a role in its conservation and recovery including competent authorities and environmental consultants involved in the preparation of Environmental Impact Assessments.
(ACTION: EHS, DARD)

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)
- 5.5.2 Coordinate actions with Republic of Ireland bodies on cross-border sites.
(ACTION: EHS)

5.6 Future research and monitoring

- 5.6.1 By 2005, establish the distribution, abundance and viability of *S. bermudiana*.
(ACTION: EHS)
- 5.6.2 Periodically review monitoring protocols and condition assessment methodology for statutory sites with *S. bermudiana*.
(ACTION: EHS)
- 5.6.3 By 2008, research the ecology and genetics of *S. bermudiana* to determine the origin of the species and to further understand its presence and ecological requirements in Northern Ireland.
(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 *S. bermudiana* 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)

6 Links with other Action Plans

- 6.1 This plan should be considered in conjunction with the following UK and Northern Ireland Habitat Action Plans:
- Purple moor-grass and rush pasture
 - Fens

7 Costings

- 7.1 A table showing the global costs for this and other SAPs is available on the EHS/Biodiversity web page.

8 References

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Stace, C.A. (1995) *New Flora of the British Isles* Cambridge University Press, Cambridge.

List of Useful Acronyms

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CEDaR	Centre for Environmental Data and Recording
CMD	Countryside Management Division
CMS	Countryside Management Scheme
DARD	Department of Agricultural and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Industry
DOE	Department of the Environment
DRD	Department for Regional 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 Group
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserve
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
UWT	Ulster Wildlife Trust