



NATIONAL  
**BIODIVERSITY**  
DATA CENTRE



**Annual Report 2007**

Report to the Heritage Council  
December 2007

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Comhshaol, Oidhreachta agus Rialtas Áitiúil  
**Environment, Heritage and Local Government**

An Chomhairle Oidhreachta  
The Heritage Council



The National Biodiversity Data Centre is an initiative of the Heritage Council and is operated under a service level agreement by Compass Informatics. The Centre is funded by the Department of the Environment, Heritage and Local Government'.

Photographs: Dylan Vaughan, Liam Lysaght, David Manser, Ellen O'Sullivan.  
Design: David Manser. [www.mansergraphics.com](http://www.mansergraphics.com)

## Chairman's statement

With the establishment of the National Biodiversity Data Centre in January 2007, the government has put in place a key component of the infrastructure needed to support the implementation of public policy on biodiversity, environment and development. There is a pressing need for good quality information on Ireland's environment to be made available in the appropriate format required to inform public policy and to contribute to the knowledge economy.

A significant amount of data already exists on Ireland's biological diversity detailing the status and distribution of many organisms in Ireland and its offshore waters. The first challenge facing the Centre is to bring these data together and to assess the state of knowledge on Ireland's biodiversity and identify information gaps.

Through the projects commenced by the Centre in the last year this process has been embarked upon. There is, however, a substantial information deficit on many aspects of Ireland's biological diversity. The Centre aims to address this information deficit by initiating, with its partners, a comprehensive programme of systematic surveys, designed to provide baselines on the status of Ireland's biological diversity.

The need for these baselines has never been greater with the quite dramatic changes already underway, including landuse changes resulting from a radical spatial differential in agriculture, allied to the impacts of climate change on our terrestrial and marine environments.

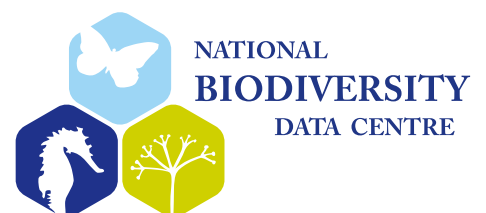
Once the systems are in place to collect and collate these data, the important and demanding task of interrogating the data and documenting what it is telling us needs to be undertaken. Through the development of its web-based mapping system the Centre will be in a position to track changes in Ireland's biodiversity and to identify the drivers of these changes. More detailed investigation of how the changes impact on ecological systems, and the development of models to predict future changes are important research questions which will be undertaken by scientists, working in partnership with the Centre.

The establishment of a dedicated national centre for biological data will provide the necessary coordination and added value that needs to be brought to existing and future biological data initiatives. The Centre recognises that this can only be achieved by working in collaboration with its partners, and delivering a service of value to a wide range of stakeholders. I hope that the vision and programme of work set out in this first annual report of the Centre can deliver this service.

**Liam Downey, Chairman, National Biodiversity Data Centre.**

Below: Prof. Jeremy Greenwood and Dr Liam Lysaght at the official opening of the Centre on 18 January 2007

Bottom: Prof. Kieran Byrne, Director, W.I.T., Martin Cullen T.D., Minister for Transport and Dr Liam Downey, Chair, The National Biodiversity Data Centre.





# 01 SECTION

## Background information

The National Biodiversity Data Centre was established in January 2007, and is based at Waterford Institute of Technology, Waterford. It is an initiative of the Heritage Council and is funded by the Department of the Environment, Heritage & Local Government.

A Management Board was established by the Heritage Council with responsibility for setting the strategic direction of the National Biodiversity Data Centre and for ensuring proper management and accounting systems and practices are operated by the Centre. The composition of the Management Board is:

<b>Prof. Liam Downey</b>	Chairman
<b>Mr Michael Starrett</b>	Chief Executive – The Heritage Council
<b>Dr Ciaran O’Keeffe</b>	Director – National Parks and Wildlife Service
<b>Dr Venie Martin</b>	Head of Development – Waterford Institute of Technology
<b>Mr Nigel Monaghan</b>	Keeper – National Museum of Ireland – Natural History Division
<b>Dr Peter Wyse Jackson</b>	Director – National Botanic Gardens
<b>Mr Larry Stapleton</b>	Director – Environmental Protection Agency
<b>Dr Simon Berrow</b>	Co-ordinator - Irish Whale and Dolphin Group
<b>Prof. Howard Platt</b>	Assistant Director of Conservation Science, Environment & Heritage Services, N. Ireland

## National policy context

In 2002, the government published its national strategy for the conservation of biological diversity, fulfilling one of its key obligations under the Convention.

The National Biodiversity Plan (2002) makes a commitment to ‘put in place a national biological data management system to be co-ordinated by a National Biological Recording Centre’ (Action 42).

The establishment of the National Biodiversity Data Centre is implementation of this action. The policy context for the Centre was further strengthened by the commitment in the programme for government to ‘resource the...[Centre]... as a central database to record the richness of Ireland’s flora and fauna and as a centre of research excellence’ (Programme for government, June 2007).



## Need for data on Ireland's biological diversity

Ireland, along with its other EU partners, agreed in 2001 'to halt the decline in biodiversity by 2010' and to 'restore habitats and natural systems'. If the decline in Ireland's biological diversity is to be halted, then the resource needs to be described and quantified, and systems put in place to monitor changes to that resource. The National Biodiversity Data Centre's role will be crucial in achieving this objective.

The Data Centre will work to make data on Ireland's biological diversity available for the following specific uses:

- **The implementation of international conventions and European directives**
- **Monitoring programmes**
- **Distribution mapping & modelling**
- **Publications**
- **Future scientific programmes**
- **Documentation of ecological and bio-geographical information.**

The availability of good quality biological data can also make a significant contribution to informing and evaluating the success of other policy areas. This is particularly relevant for cross-cutting strategies such as the National Sustainable Development Strategy and the Climate Change Strategy, and for sectoral policies in agriculture, forestry, marine, planning, transport and tourism.







## Strategic objectives

The Centre has identified six strategic objectives to frame its work programme over the coming five years.

- **To serve as a national repository for biological data, and make good quality and reliable data on Ireland's biological diversity freely and universally available via the internet.**
- **To implement a programme of biological recording initiatives and biodiversity research, supported by a network of recorders and researchers, to improve our knowledge of Ireland's biological diversity.**
- **To assist the establishment of a series of biological baselines and monitoring programmes to measure change to Ireland's biological diversity.**
- **To facilitate and promote the use of biodiversity data to inform policy and decision-making in Ireland and the European Union.**
- **To promote training and Professional development of the biological recording community in Ireland, and raise standards of data collection, management and presentation.**
- **To highlight the importance of conservation of Ireland's biological diversity for the benefit of society.**

An additional long-term objective of the National Biodiversity Data Centre is to establish itself as a Centre of Excellence on Ireland's flora and fauna, in line with government policy.

### Strategic objective 1:

*To serve as a national repository for biological data, and make good quality and reliable data on Ireland's biological diversity freely and universally available via the Internet.*

The availability of data and information is a prerequisite for the effective conservation of Ireland's biological diversity. A great deal of data on Ireland's biological diversity already exists, but these data are held in a multitude of formats and in varying degrees of accessibility. The establishment of a national data management system by the Centre will provide a structure to enable data from disparate sources to be brought together and made available on-line through the development of a range of web-based services.

These services will allow people to browse the national database, view data on a comprehensive mapping system, and to produce reports on the distribution of species on a national, regional and local scale. The intention is that this system will become a valuable tool for nature conservationists, researchers, planners and policy makers in years to come. Underpinning this data management and presentation system are strong data validation and quality control systems and protocols.

## **Strategic objective 2:**

*To implement a programme of biological recording initiatives and biodiversity research, supported by a network of recorders and researchers, to improve our knowledge of Ireland's biological diversity.*

Improving our knowledge on Ireland's biological diversity is a multi-faceted task, and cannot be done by the Centre in isolation. The Centre sees itself as instrumental in coordinating a national programme of biological recording projects and promoting biodiversity research to improve our knowledge of Ireland's biological diversity. The delivery of this programme can only be achieved through the establishment of an extensive network of voluntary and Professional biological recorders, state bodies, researchers and NGOs, and is very much dependent upon the availability of adequate resources.

## **Strategic objective 3:**

*To assist the establishment of a series of biological baselines and monitoring programmes to measure change to Ireland's biological diversity.*

The collection of data on biological diversity has intrinsic merit in its own right. But in order to maximise the value of data collection, a series of well planned biological baselines and structured monitoring programmes needs to be established to enable changes to the Irish countryside to be identified and quantified. There is a serious information deficit in Ireland in this regard, and the Centre will work with its partners to address this deficiency. A starting point in this process is the compiling of existing datasets and data, and reviewing their appropriateness as baselines.



## Strategic objective 4:

*To facilitate and promote the use of biodiversity data to inform policy and decision-making in Ireland and the European Union.*

One of the challenges facing the National Biodiversity Data Centre is to translate the large amount of biological data and information on Ireland's flora and fauna into a greater understanding of Ireland's biological diversity, thereby assisting in its conservation. At a time of rapid environmental change, the Centre is particularly aware of the important role it can play in interpreting the data available to it, and presenting it in a format that assists implementation of policy, within, but not restricted to, the conventional nature conservation policy areas. This will primarily be done through the provision of objective, scientifically-based information on the status of species and habitats that occur in Ireland, and in the identification of appropriate group of organisms that could be used as biodiversity indicators.

## Strategic objective 5:

*To promote training and Professional development of the biological recording community in Ireland, and raise standards of data collection, management and presentation.*

A fundamental requirement of any discipline is the promotion of training and provision of opportunities for Professional development. A great amount of expertise already exists within Ireland in areas such as taxonomy, field identification skills, recording and data management, but regular training is needed to maintain, and enhance this expertise. The provision of training programmes is necessary to increase the pool of both voluntary and Professional recorders available to generate biological records, to improve general standards of data collection and to assist capacity building within the state and non-governmental sectors. The Centre will deliver a programme of training workshops with the relevant experts, Professional organisations and academic sector as a service to the biological recording community.

## Strategic objective 6:

*To highlight the importance of conservation of Ireland's biological diversity for the benefit of society.*

The ultimate justification for the establishment of the National Biodiversity Data Centre is to assist with the conservation of Ireland's biological diversity. The Centre recognises that effective conservation requires a greater appreciation of the value of biological diversity outside the relatively small group of conservationists and scientists to affect real change. The Centre will develop an outreach programme of events to promote its work amongst a wide audience.



## Staff

The Centre's staff are responsible for the development and delivery of a work programme to meet the strategic objectives identified by the Management Board. Staff are also responsible for the day to day running of the Centre at Beechfield House. The staff is supported by a team of developers, employed by Compass Informatics, who are responsible for development of the Centre's data management and web mapping system.

### Full-time staff

<b>Dr Liam Lysaght</b>	Centre Director
<b>Dr Úna Fitzpatrick</b>	Ecologist
<b>Dr Eugenie Regan</b>	Ecologist
<b>Maria Walsh</b>	Office Manager
<b>Ellen O'Sullivan</b>	Research Officer

### Part-time staff

<b>Stefanie Fleischer</b>	Research Officer
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### IT & Systems team

<b>Ken Dowling</b>	ICT infrastructure developer
<b>Pavel Janda</b>	Informatics developer
<b>Edwin Wymer</b>	Biodiversity informatics & database expert
<b>Maurizio Taddei</b>	Informatics developer
<b>Vasilis Vlastaras</b>	Informatics developer
<b>Aodán de Paor</b>	Data developer

Supported by wider Compass Informatics team.

### Contract management

<b>Gearóid Ó Riain</b>	Director, Compass Informatics Limited
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The contract for running of the Centre for a 5 year period has been awarded to Compass Informatics. Mr Gearóid Ó Riain, Company Director has responsibility for the overall service-level agreement between Compass Informatics and the Heritage Council.



## 2007 key events

<b>18 January</b>	Official opening of the Centre performed by Martin Cullen, T.D. Minister for Transport. Open lecture – <i>Biological Recording, Information into Policy</i> . Prof. Jeremy Greenwood, Director British Trust for Ornithology.
<b>30 January</b>	Hosted Turboveg training workshop. Leader: Stephan Hennekens, Wageningen University, The Netherlands.
<b>5 March</b>	Meeting of the Management Board.
<b>6 &amp; 7 March</b>	Hosted Recorder 6 training workshop. Leader: John van Breda, Dorset Software, UK.
<b>14 March</b>	Joint meeting with the Centre for Environmental Data and Recording (CEDaR), N. Ireland.
<b>8 May</b>	Meeting of the Management Board.
<b>9 &amp; 10 May</b>	Hosted educational programme for school children as part of the Bealtaine Festival.
<b>10 - 13 May</b>	Hosted water beetles identification workshop. Leaders: Prof. Garth Foster, Balfour Brown Club, Dr Brian Nelson, Ulster Museum & Stephen McCormack, UCD.
<b>15 - 17 June</b>	Hosted pine marten workshop.
<b>22 &amp; 23 August</b>	First Annual Recorder's Event: <i>Butterflies &amp; Moths – tracking changes in the Irish countryside in the 21st Century</i> .
<b>30 August</b>	Completed phase 1 of vegetation data entry contract. Client: National Parks and Wildlife Service.
<b>6 September</b>	Hosted meeting of the Heritage Officer's Heritage Training and Development Programme.
<b>17 September</b>	Meeting of the Management Board.
<b>25-27 September</b>	Stand promoting the Centre at the National Ploughing Championship.
<b>26 September</b>	Joint meeting with the Centre for Environmental Data and Recording (CEDaR), N. Ireland.
<b>16 November</b>	Presented paper on the Centre at the UK's National Biodiversity Network's Annual Meeting, London.
<b>19 November</b>	Meeting of the Management Board.

## National Vegetation Data project

Partners - National Parks and Wildlife Service, National Botanic Gardens, Botanical Society of the British Isles

A National Vegetation Database has been established and hosted by the National Biodiversity Data Centre. The aim is to collate all of the relevés (the vegetation sampling units) data that has been collected over years onto a single database, which ultimately could lead to the development of a national vegetation classification for Ireland. A national vegetation classification would be an invaluable tool in accurately describing the vegetation resource of the country and providing a baseline against which large-scale changes due to, for example, climate change could be detected.

The National Biodiversity Data Centre has established a National Vegetation Database Working Group, comprised of the leading vegetation scientists in the country, to assist in the development of the database. The format of this database, in special vegetation software called Turboveg, has been agreed and data is being collated for entry onto the database. The Data Centre is currently inputting vegetation data onto the database, and five validated additional datasets have been contributed to the Data Centre for integration into the National Vegetation Database, totalling about 5000 relevés.

A standardised field recording card has been developed and is currently being assessed by the Botanic Gardens and NPWS. When finalised it will be distributed to all those organisations or individuals known to collect vegetation data in Ireland. This card is fully compatible with Turboveg and has been created in an attempt to ensure that vegetation data collected in the future is both standardised, and collects a level of detail that is of maximal value. A data sharing agreement has been drawn up for contributors to the National Database.

Extensive discussion is underway with NPWS and the Botanic Gardens to work out the best solution to ongoing taxonomic checklist problems. The use of a standardised checklist within Turboveg in Ireland is hampered by the lack of available Irish checklists that can be loaded into the version of the software distributed here. Discussions are currently underway to obtain an official Irish checklist from the Botanic Gardens and to have this accepted and added to the version of Turboveg distributed to Ireland. Formatting of the Botanic Gardens list for use within Turboveg has been identified as a substantial body of work that will be done in the Centre (will require 6-8 weeks work). Ultimately, this checklist can also be added to Recorder, thus avoiding similar problems with plant species data stored on other databases in the Centre.

The Botanical Society of the British Isles (BSBI) has been approached and has expressed an interest in encouraging members to begin collecting vegetation data during future fieldwork. As an organisation they have not traditionally done so, but if they could be encouraged are likely to be an invaluable contributor to the National Vegetation Database. A small, discreet BSBI-National Biodiversity Data Centre joint project to introduce members to the concept is being developed.

Year highlights

Left (top to bottom) 1. Martin Cullen T.D., Minister for Transport officially opens the Centre. 2. School child taking part in a nature trail as part of the Bealtaine Festival. 3. Prof. Garth Foster, one of Europe's leading experts on water beetles, leads the water beetle identification workshop. 4. Ken Bond leads the moth and butterfly workshop at the First Annual Recorder's Event.





## National Invasive Species Database

**Partners: EnviroCentre/Quercus, N. Ireland, Central Fisheries Board, Marine Institute, Botanical Society of the British Isles**

Invasive species have been identified, worldwide, as one of the most significant threats to biodiversity, with the potential to cause severe economic problems. Ireland is no different as invasive species have already altered significantly Ireland's natural ecosystems, and species like the grey squirrel, rhododendron and zebra mussel are causing negative economic impacts. As a policy response to this issue, National Parks and Wildlife Service and Environment & Heritage Services of Northern Ireland are funding an All-Ireland Invasive Species Initiative. The National Biodiversity Data Centre has been working closely with this initiative to support and to bring an additional dimension to their work.

The National Biodiversity Data Centre has established a small, but significant, database of all the published records of 24 alien plant species, work undertaken on the Centre's behalf by Sylvia Reynolds. These data will be uploaded and displayed on the Centre's web-based mapping system. Building on this work, the Data Centre has agreed with the All-Ireland Invasive Species Initiative requirements for a National Invasive Species Database, and has recommended that that database be hosted by the Data Centre.

The All-Ireland Invasive Species Initiative has identified 24 target species which it considers the 'most unwanted', and is currently developing a website to provide fact sheets on each of these species. These include terrestrial, freshwater and marine species. The National Biodiversity Data Centre will collaborate with this project and will provide distribution maps for these species where possible. This will involve a link between the respective websites, and will greatly complement the work of both initiatives.

The National Biodiversity Data Centre will be working with key data providers over the next 14 months to obtain data to populate the National Invasive Species Database in the Centre, with emphasis placed on obtaining data for the 24 target species by the end of 2008 (a small number of these overlap with the work carried out by Sylvia Reynolds). It is hoped this will involve collaborations with, at a minimum, the Central Fisheries Board, The Marine Institute, Botanical Society of the British Isles, AlgalBase, COFORD and BirdWatch Ireland.

The Centre will link with the All-Ireland Invasive Species Initiative to ensure that any educational material prepared on the target species includes information on how to properly collect a record and information on how to submit it to the database in the Centre. The database is intended as a monitoring tool. Once the system is ready and the National Invasive Species Database goes live it is important that data can be submitted online so that invasive species movements can be tracked as they occur.

## Water Beetles of Ireland Initiative

Partners – National Parks and Wildlife Service & Balfour Browne Club

Water beetles possess a range of attributes that make this group suitable for evaluation and monitoring of freshwater habitat quality. The aims of the initiative are to increase the understanding of water beetles in Ireland and increase Irish expertise in this field. The overall objective being to provide a framework to aid in the development of freshwater habitat quality monitoring tools. In 2006, The National Parks and Wildlife Service commissioned Prof. Garth Foster to produce a Red Data List of Water Beetles in Ireland. The Red Data List is a process that produces an objective assessment on the conservation status of different species. The National Biodiversity Data Centre is working with The National Parks and Wildlife Service and Prof. Garth Foster to build on the Red Data List process, to fill in some of our gaps in knowledge, and to develop a website to present these data with background contextual information.

To fill in some of our gaps in knowledge of the distribution of species, the Data Centre organised a training workshop to improve taxonomic and field collection skills of potential recorders, in what is a specialised area of recording. Following from that a programme of fieldwork was organised to survey parts of the country previously unsurveyed. A monthly newsletter was produced to support recorders efforts in the field. The Water Beetles of Ireland Database now holds over 32,000 records, with 13,000 records added since the beginning of the initiative. Interestingly, a new species to Ireland was found which has only ever been recorded previously from a lake in Sweden.

Fulfilling one of the major objectives of the Data Centre, this information will be brought into the public domain through the internet and will be a readily accessible resource for local authorities, conservation managers, and interested public alike. The website will display these data, with accompanying text, to help interpret the data and provide additional relevant information.

Mullaghmore in the Burren where the new species was found (Andrew Byrne)







## Web-based Flora of County Waterford

Partners – Botanical Society of the British Isles & National Botanic Gardens

About 180,000 records of approximately 1500 species of vascular plants in County Waterford have been amassed, since 1997, by Paul Green a member of the Botanical Society of the British Isles (BSBI) and County Recorder for Waterford. These data form the basis of the Flora of County Waterford, due for publication by the National Botanic Gardens. The publication presents the flora of the county on a species by species basis, with tetrad distribution maps accompanying many of the species accounts. The National Biodiversity Data Centre is working with Paul Green and the National Botanic Gardens to develop a web-based flora in conjunction with the publication of the hard copy. This will bring considerable added value to the work, will make the data more accessible and will enable the database to be continuously updated. The final web site will have the following functions:

- A species list (scientific, vernacular and Irish names) leading to the species Prof.ile
- A list of extinct species – with an indication of whether a specimen exists in the National Herbarium and a photograph of the living species where possible.
- Species Prof.ile to include text on the status and distribution of the species, maps showing distribution, and a photograph. Information will also be provided on the date of the first and most recent record within the county.
- Provision of an online bibliography with references for the historic and published records. At a later stage the possibility of including a reference link within the text to the bibliography will be explored.
- Presenting species distribution data as a GIS layer, allowing the turning on/off of the five information layers of most relevance e.g., contours, soils, aerial photographs etc.
- Presentation of distributional data on 10km, tetrad and 1km scales
- Presentation of distributional data for rare species on a townland basis
- Colour coding of dots to allow temporal sorting
- Ability to generate a species list for each 10km, tetrad and 1km square.
- Ability to generate a list of rare species present in each townland.
- Graphical representation of species richness within the county (number of species per tetrad).
- Provision of a facility for Paul to update the database supporting the web flora
- Provision of a facility for online submission of records, with these passing through Paul Green for verification, before being uploaded into the database.
- List of key sites of botanical interest in County Waterford including photographs and text on each. These will be in the form of 15-20 recommended walks within the county.



## Freshwater Fish Database

Partner – Central Fisheries Board

The National Biodiversity Data Centre is working with the Central Fisheries Board to establish a national database of freshwater fish in Irish lakes. The Central Fisheries Board has a considerable amount of fish data, much of which is important historic data. The National Biodiversity Data Centre is working with the Central Fisheries Board to assist the digitisation of these data, leading to the establishment of a national freshwater fish database. It is estimated that the digitisation of the data will take approximately 8 weeks, and the Data Centre has provided a Research Officer to work with the Central Fisheries Board to undertake this work. Once this work is completed an important database will have been established. This project is an example of the kind of collaborative work the Data Centre will engage in with state agencies, providing a valuable service to the agency while also making important data more widely available.

The long-term objective of establishment of the national freshwater fish database is to develop an online and hard copy atlas of freshwater fish in Ireland, as a joint initiative with the Central Fisheries Board. Work on this project will continue in 2008 and will involve expanding the database to include species records held by, at a minimum, National Parks and Wildlife Service and the Irish Char Conservation Group.



Year Highlights

# 02

## SECTION

## Progress to date

**Strategic objective 1:** *to serve as a national repository for biological data, and make good quality and reliable data on Ireland's biological diversity freely and universally available via the internet.*

Achieved in 2007

- Established server and connectivity infrastructure to support the Data Centre data management and presentation systems.
- Established internal hardware, connectivity infrastructure and software systems to support the Data Centre staff.
- Developed a data model for storing data that is compatible with the UK National Biodiversity Network (NBN).
- Integration and support for the taxonomic database of the Natural History Museum, London.
- Substantial progress in development of a data management system with support for data receipt from commonly used data systems including Recorder and MapMate, with development of a data exchange template.
- Substantial progress in development of the web-based interfaces to the Data Centre's data, with powerful mapping, querying and reporting functionality. A preliminary system has been established with further upgrades to mid 2008, and on an on-going basis thereafter.
- Substantial progress in design and development of websites for the Data Centre and its associated projects, using a content management system for efficient maintenance of sites.
- Liaison with data providers in relation to technical aspects of data provision to the Data Centre.
- Liaison with relevant organisations in Ireland and Europe on development of compatible systems.

Below: First Annual Recorder's Event, 22 & 23 August 2007



**Strategic objective 2:** *to implement a programme of biological recording initiatives and biodiversity research, supported by a network of recorders and researchers, to improve our knowledge of Ireland's biological diversity.*

Achieved in 2007

**Project:** Develop a National Freshwater Fish Database for Irish lakes, based on Central Fisheries Board data.

**Partners:** Central Fisheries Board, National Parks and Wildlife Service & Irish Char Conservation Group

**Benefits:** Establish a digital database of historic survey data on fish distribution in Irish lakes; Make data available for display on the Centre's web mapping system; Provide the nucleus of a national freshwater fish database and freshwater fish atlas; Establish an important working relationship between the Central Fisheries Board and the National Biodiversity Data Centre.

**Project:** Develop an annotated checklist of Irish Microlepidoptera.

**Partners:** Ken Bond & MothsIreland.

**Benefits:** Produce a checklist of Irish Microlepidoptera; Compile available data in a single database.

**Project:** Develop a web-based flora of County Waterford

**Partners:** Paul Green & Botanical Society of the British Isles

**Benefits:** Create first local web-flora of its type in Britain or Ireland; Make flora data available at a scale and format to assist flora conservation; Serve as a prototype of the service the National Biodiversity Data Centre can provide to data providers.

**Project:** Establish a National Vegetation Database Working Group

**Partners:** National Parks and Wildlife, Botanical Society of the British Isles

**Benefits:** Have key vegetation scientists provide advice on the appropriate standard for the development of the National Vegetation Database.

**Project:** Audit of sources of vegetation data

**Partners:** National Parks and Wildlife Service

**Benefits:** Provide an inventory of the key sources of Irish vegetation data; Facilitate the long term aim of developing a national vegetation classification for Ireland.

**Project:** Validate and digitise Gibson spider collection housed in the National Museum of Ireland – Natural History Division

**Partners:** National Museum of Ireland- Natural History Division

**Benefits:** Establish an important working relationship between the National Museum of Ireland - Natural History Division and the National Biodiversity Data Centre; Assist development of agreements covering issues of data use and data sharing between the National Museum of Ireland and the National Biodiversity Data Centre.

Progress to date





**Strategic objective 3:** *to assist the establishment of a series of biological baselines and monitoring programmes to measure change to Ireland's biological diversity.*

Achieved in 2007

**Project:** Establish a National Vegetation Database

**Partners:** National Parks and Wildlife Service

**Benefits:** Have an agreed structure for the National Vegetation Database as the first stage in the future development of a national vegetation classification.

**Project:** Initiate progress towards a National Countryside Survey

**Benefits:** Gain support for establishing a scientifically structured baseline and monitoring programme as the basis for tracking changes to the Irish countryside.

**Project:** Initiate a pilot butterfly monitoring programme

**Benefits:** Test the feasibility of establishing a national butterfly monitoring programme to provide data to track changes due to factors such as climate change and changing landuse.

**Project:** Establish a National Invasive Species Database

**Partners:** Environment & Heritage Services, N. Ireland, National Parks and Wildlife Service, Central Fisheries Board, EnviroCentre, Quercus

**Benefits:** Have an agreed structure for the National Invasive Species database hosted by the Centre, holding data on the 'most unwanted' invasive species.

**Strategic objective 4:** *to facilitate and promote the use of biodiversity data to inform policy and decision-making in Ireland and the European Union.*

Achieved in 2007

**Project:** Completed first phase of the Water Beetles of Ireland initiative

**Partners:** Balfour-Browne Club, Professor Garth Foster, National Parks and Wildlife Service, Dublin Naturalists' Field Club

**Benefits:** Have all of the data on water beetles in a national database and displayed on the Centre's web-based mapping system; Have accompanying text to interpret what the 32,000 records tell us about water beetles and the environment.

**Strategic objective 5:** to promote training and Professional development of the biological recording community in Ireland, and raise standards of data collection, management and presentation.

Achieved in 2007

## Training

**Event:** Hosted species identification workshops on:

- Spiders. Leader - Myles Nolan
- Bumblebees. Leader – Dr Una Fitzpatrick
- Daytime moths and butterflies. Leader – Ken Bond

**Objectives:** Improve taxonomic and field survey skills; Provide a service to the surveyors and researchers.

**Event:** Establishing a Butterfly Transect.

Leader: Dr Tom Brereton, Butterfly Conservation, U.K.

**Objectives:** Provide training in butterfly monitoring methodology; Gain feedback from potential surveyors on the appropriateness of the methodology.

**Event:** Introduction to Turboveg.

Leader: Stephan Hennekens, University of Wageningen

**Objectives:** Provide basic training in the use of Turboveg, the software package for holding vegetation data.

**Event:** Introduction to Recorder 6.

Leader – John van Breda, Dorset Software, UK.

**Objectives:** Provide basic training in the use of Recorder 6, the primary software adopted by the National Biodiversity Data Centre for holding species data.

## Networking

**Event:** Hosted First Annual Recorder's Event, *Butterflies and moths – tracking changes to the Irish countryside in the 21st Century*

**Objectives:** Provide a forum to hear of survey work currently underway in Ireland and abroad; Identify and agree national priorities for survey work on butterflies and moths over the coming 5 or so years; Provide an opportunity for networking.

**Event:** Made the Data Centre facilities available, free of charge, for organisations and events organised by the biological recording community.

**Objectives:** Provide a service for the biological recording community.

Progress to date



Above: Julian Reynolds, Prof. Garth Foster and Simon Harrison at the Water Beetles identification workshop 10 – 13 May 2007.

Left: Seen at the Water Beetles identification workshop 10 – 13 May 2007.



## Raising Standards

**Event:** Produced National Vegetation Database – guidelines for development

**Objectives:** Have an agreed standard in place to facilitate future development of the national database,

**Event:** Produced standard field recording sheet for vegetation data

**Objectives:** Ensure that the future collection of vegetation data is standardised and collected to a level of detail to ensure its maximal value.

**Event:** Produced a Guidance note for data providers

**Objectives:** Define a minimal standard for biological records; Propose minimal metadata attributes; Define the appropriate format for submission of biological data to the Centre.

*Strategic objective 6: to highlight the importance of conservation Ireland's biological diversity for the benefit of society*

Achieved in 2007

**Event:** Participation at national events

**Action:** Stand at the National Ploughing Championships

**Event:** Participation at local events

**Action:** Hosted school visits as part of CALMAST's Bealtaine Science Festival

## Plans for 2008

The following are some of the key elements of the work programme planned for 2008. The majority of these initiatives will be developed, jointly, with project partners.

- Roll-out of the full version of the website systems
- Establish Global Biodiversity Information Facility (GBIF) services to serve selected Data Centre data to GBIF compatible systems
- Commence an active programme of data acquisition from data providers
- Consider how best to contribute to the Biodiversity Knowledge Programme for Ireland produced by the National Platform for Biodiversity Research
- Establish a National Microlepidoptera Database
- Establish a National Non-marine Molluscan Database
- Undertake scoping study for a joint Irish Cetacean Database
- Continue to develop the National Vegetation Database
- Continue to develop the National Invasive Species Database
- Continue digitisation of Macrolepidoptera data
- Continue development of a Freshwater Fish Database
- Complete Phase 2 of the Water Beetles of Ireland initiative
- Roll-out a programme of species identification and recording workshops.



# List of collaborators for 2007

## Organisations

National Parks and Wildlife Service  
The Heritage Council  
Central Fisheries Board  
National Botanic Gardens  
National Museum of Ireland – Natural History Division  
Centre for Environmental Data and Recording, N. Ireland  
Teagasc  
Botanical Society of the British Isles  
Dublin Naturalists' Field Club  
Bat Conservation Ireland  
MothsIreland  
Institute for Ecology and Environmental Management  
CALMAST, Waterford Institute of Technology  
Dun Laoghaire Rathdown County Council  
Butterfly Conservation, UK  
Balfour Browne Club  
Clare Biological Records Centre

## Individuals

Ken Bond	Evelyn Moorken
David Bourke	Brian Nelson
Tom Brereton	Myles Nolan
Andrew Byrne	Cliona O'Brien
Peter Carey	Áine O'Connor
Declan Doogue	Eimear O'Connor
Marie Dromey	Colman O'Criodain
Rosaleen Dwyer	Gordon Purvis
Paul Green	Sylvia Reynolds
Jesmond Harding	Julian Reynolds
Eddie Fitzgerald	Siobhan Ryan
Garth Foster	Gerry Sharkey
Matthew Jebb	Peter Turner
Naomi Kingston	Angus Tyner
Nick McCarthy	Paul Walsh
Stephen McCormack	Christopher Wilson
Damian McFerran	Shane Wolsey
Caroline Mhic Dhaeid	Mark Wright



Top: Participants in the Annual Recorder's Event 2007 enjoying the Barbecue.  
Above: School children taking part in a nature trail as part of the Bealtaine Festival.



## Financial statement

**Costs incurred 01/11/06 - 31/10/07**

### **Total costs (€)**

Staff (Research)	123,300
Staff (Administration)	53,729
Subcontractors	19,479
I.T. development & contract support	189,862
Office/consumables	5,427
Software	1,612
Hardware	1,107
Office running costs	8,153
Data projects	8,815
Additional contracts	77,023
Sub-total	488,507
Vat @ 21%	102,586
Travel & subsistence	34,314
<b>Total</b>	<b>625,407</b>

### **Additional contracts**

The Data Centre received additional specific project funding in 2007. The following is the financial detail as at 31 October 2007. The completion date for most of these projects is the end of the calendar year.

#### **Water Beetles of Ireland Initiative**

Source of funding: National Parks and Wildlife Service

Grant: €53,732.47 (V.A.T. inclusive) Completion: 31/12/07

Staff	9,895
Subcontractors	13,684
Office/consumables	1,282
Sub-total	24,861
Vat @ 21%	5,221
Travel & subsistence	6,179
<b>Total</b>	<b>36,261</b>

### Digitisation of the Gibson spider collection

Source of funding: The Heritage Council

Grant: €10,500 (V.A.T. inclusive) Completion: 02/11/07

Subcontractors	8,678
Sub-total	8,678
Vat @ 21%	1,822
<b>Total</b>	<b>10,500</b>

### National Vegetation Database

Source of funding: National Parks and Wildlife Service

Grant: €68,100 (V.A.T. inclusive) Completed: 31/08/07

Subcontractors	31,008
Sub-total	31,008
Vat @ 21%	6,512
<b>Total</b>	<b>37,520</b>

### National Vegetation Audit

Source of funding: National Parks and Wildlife Service

Grant: €67,098 (V.A.T. inclusive) Completion: 30/11/07

Subcontractors	10,823
Sub-total	10,823
Vat @ 21%	2,273
Travel & Subsistence	3,975
<b>Total</b>	<b>17,071</b>

### Annual Recorder's Event

Source of funding: The Heritage Council

Grant: €5,000 (V.A.T. inclusive) Completion: 23/08/07

Travel & Subsistence	5,000
Sub-total	5,000
<b>Total</b>	<b>5,000</b>

### Microlepidoptera Database

Source of funding: The Heritage Council

Grant: €10,000 (V.A.T. inclusive) Completion: 31/12/07

Subcontractors	1,653
Sub-total	1,653
Vat @ 21%	347
<b>Total</b>	<b>2,000</b>

Financial statement



