



Irish Cetacean Research Seminar

Towards a Joint Cetacean Sightings database for Ireland

Friday 16 June, 2006

Marine Institute, Rinville, Oranmore, Co Galway



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*Summary prepared by Simon Berrow
Irish Whale and Dolphin Group, Merchants Quay, Kilrush, Co Clare*

Objectives

The objectives of the first Irish Cetacean Research seminar were to:

1. Present data and results from research initiatives on the distribution of whales and dolphins in Irish waters. These include the IWDG ISCOPE project (2003-2005), Petroleum Infra-structure Programme surveys carried out by CMRC at University College, Cork, data from Irish waters held by SeaWatch UK and the SCANS I and II international surveys in Irish waters
2. Obtain feedback on recording schemes from partners in Ireland
3. Pull together cetacean research community in Ireland to discuss future survey requirements and the creation of Joint Irish Cetacean Sightings database

Over 80 people attended the seminar from a range of government departments and agencies including Bord Iascaigh Mhara, Environment and Heritage Service, Joint Nature Conservancy Council, Marine Institute, National Parks and Wildlife Service, third level institutes (University College, Cork, Galway-Mayo Institute of Technology, Sligo Institute of Technology and the University of Central Lancashire) and NGOs (Coastwatch, ISPCA, Irish Seal Sanctuary) as well as many Irish Whale and Dolphin Group members and recorders.

Summary of presentations

Arliss Winship of the Sea Mammal Research Unit (invited speaker) described the background and objectives of the Joint Cetacean Atlas which was a combination of three major datasets: JNCC Seabird at sea data, SCANS data and Seawatch Foundation data. He described the different methodologies and timescales these data were collected and some of the difficulties encountered: compatibility of data, how to standardize units and how to present the data. Relative abundance can be easily shown via scale dots proportional to sighting rate but effort also needs to be presented to show where effort was put in but no sightings were made. The UK approach was to present observation duration and distance covered in each ¼ ICES rectangles (15°latitude by 30°longitude). Sightings and effort associated with each grid cell can be presented by month and year. Only one co-variate (sea-state) was used to compute sightings rate for each species. Other co-variables included in the merged dataset included observer ID, vessel ID, number of observers.

Arliss described some of the variables, which strongly impact on sightings rate. Sea-state does have a big impact and observations were standardized to a notional 'zero sea state observation'. The influence of observer and observer experience on sighting rate was also presented. Ship speed was also has a strong influence of sighting rate. Large differences in sighting rate by observer for harbour porpoise in the Moray Firth were presented but these differences are confounded by area/season/year and platform. Even with highly trained observers and structured survey methodology two-fold differences in sighting rates can be recorded. In order to address these issues, co-variables need to be calibrated. What can an Atlas be used for? Broad scale distribution, exploring seasonal differences or large scale time trends, small scale spatial structure to identify critical habitats? Caution was expressed as the data are very heterogeneous and can be over-interpreted. However using sub-sets of data Arliss did show how to look at long-term trends in sighting rates.

Peter Evans from SeaWatch Foundation in the UK (invited speaker) asked what use can monitoring data based on sighting surveys: NO SUMMARY AVAILABLE.

Pádraig Whooley, Sightings Co-ordinator with the IWDG reviewed the IWDG Sighting schemes. The audience was introduced to the historical backdrop against which today's sighting scheme is set. The development of both whale watching and cetacean recording in Ireland was traced from the early days of the IWDG to the present day, where whale watching is now acknowledged as a strong niche tourism product. To date 8,320 records of 17 species have been reported and validated by IWDG, and these are growing by c1, 400 records per annum, at a rate of 20%. Illustrations were used from www.iwdg.ie mapping facility to indicate the impact of ISCOPE on sightings in those areas, which have historically suffered from low levels of cetacean coverage. For instance in the counties of the NW region (Mayo, Sligo and Donegal) there were 55 reported sightings reported in 2002 (pre ISCOPE) but this had increased to 125 by 2005, an increase of 127%.

Results of four years of effort watches by the author at the Old Head of Kinsale Co. Cork 1999-2003 were used to show the value of regular effort watches from a single location. Similar watch effort is now being replicated at several other sites such as Sleah Head, Co. Kerry, Ardmore Head, Co. Waterford and White Head, Co. Antrim, which are three of the 12 sites identified for monitoring in ISCOPE II. Both the casual and constant effort sighting schemes were introduced, how it is run and how individual records are validated, and just how easy it is now to contribute to it and how it can be used to make a real contribution to cetacean conservation in Ireland.

Dave Wall is the Ship Surveys (including ferry surveys) Co-ordinator with the IWDG. The audience was familiarised with the methods used during surveys on Ships of opportunity and the type of data collected. The Ferry Surveys programme was introduced and placed in context of its role in a wider EU network of ferry surveys conducted by the Atlantic Research Coalition. ARC now offers the most widespread systematic monitoring program for cetaceans in Northwest Europe. To date in excess of 447hrs of survey effort has been conducted with over 488 sightings recorded. Maps were presented of seasonal distribution and relative abundance of harbour porpoise and common dolphin in the Irish Sea. Common dolphin showed a strongly seasonal distribution with highest relative abundance recorded during the summer months and activity moving south in the winter. Harbour porpoise were present throughout the year.

Ship survey results were also presented with over 850hrs of survey time conducted and over 417 sightings of over 5,600 individual cetaceans recorded. Eight cetacean species have been identified during the surveys, with additional sightings of cetaceans not identified to species level. A summary of the results of a recent paper 'Summer Distribution and Relative Abundance of Cetaceans off the West Coast of Ireland' published in *Biology & Environment* was also presented.

Emer Rogan from UCC presented data on surveys carried out under the Petroleum Infrastructure Programme and SCANS II. NO SUMMARY AVAILABLE

IWDG Stranding Co-ordinator, **Mick O'Connell** gave a presentation which aimed to explain why the IWDG Cetacean Stranding Scheme was set up, how it works and what happens to the records when they have been received. In order to do this we looked at the history of cetacean stranding records in Ireland which tended to be ad-hoc and restricted to cases of large or unusual animals. This led us on to look at the objectives of the scheme, which is 'to record stranded cetaceans on the Irish coast in order to monitor species occurrence, distribution, relative abundance, status, epizootics or other high mortalities' with a subsidiary objective being to provide biological samples for research purposes. We explained that our aim is to record species, gender and length, and also to remove a skin sample for storage in the Irish Cetacean Genetic Tissue Bank where possible.

We then looked at how the stranding scheme is organised and explained that critical to it, is a network of trained observers around the coast who are in a position to visit and identify animals which have been reported to us. As many who were in attendance had previously submitted records, we felt it was important to show them what happened to the records when we received them and explained how the records are uploaded onto the website and validated by publication in the *Irish Naturalist's Journal* with a view towards

publishing a five-yearly review. We also looked at some examples of annual stranding records since 2000 to see how the numbers of strandings reported to IWDG have increased with public awareness, particularly since the inception of ISCOPE and briefly compared some annual records to see what patterns or unusual events were apparent concerning the strandings of different species. To finish with we saw a list of published or ongoing studies to which the IWDG had contributed followed by a thank you to everyone who has contributed records to the scheme.

Padraic Moran of the IWDG presented the Cetacean sightings and strandings database and website. Padraic reviewed the origins of the project in 2001, when the IWDG saw the potential of making its sightings and strandings database publicly accessible and searchable on the web. A new website was launched in July 2002, its most innovative feature being a new interactive map, plotting the results of searches, with links to more details. The website component of the ISCOPE project grew out of feedback gathered on relaunched website combined with new ideas to exploit its potential. Desiderata were organised into a phased project plan, focusing on two broad areas: 1) improving the database structure, incorporating new data, allowing information to be related and compared in new ways, and reducing the potential for data-entry errors; and 2) providing new ways of searching, analysing and displaying data through the website interface. Phase 1 was completed in March 2004, and primarily focused on consolidating the existing system, identifying and correcting data errors, and providing a more robust platform for further development. Phase 2 was delivered in early 2005, the most significant addition being the incorporation of a large amount data on dedicated effort watches, with new tools to analyze this information. The presentation concluded with a demonstration of the website, showing how data in relation to sightings, strandings and dedicated effort watches is stored, updated, searched and analyzed.

Open Forum and Discussion

Database and website upgrade

Suggested upgrade of the website and database included an electronic copy of the constant effort form for on-line submission (**Emer Magee**) and access to raw data (**Elizabeth Sides**). A discussion on what data should be available through the website was had. **Simon Berrow** stated that the website as well as being a resource in its own right was an efficient method by which the IWDG could administer enquiries and disseminate information to members and users. If the IWDG had many similar requests and it would be more efficient to develop an on-line facility to help respond to these requests then this would be explored. Specific requests of a unique nature are better made direct to the IWDG, which will be responded to on an individual basis. An example of this was a recent request from BIM for common dolphin stranding data in an Access spreadsheet. This was dealt with in under a week. **Jim and Faith Wilson** (no relation) raised the issue of data ownership and value. Should the IWDG provide all data to all users or provide it on request. Data has a value and for more detailed requests or analysis the IWDG should charge a handling fee in order to fund the schemes. Can and should the website cater for requests from the public and agencies etc or is it primarily for public access to data. **Padraic Moran** suggested a restricted access could be established where by specific users (NPWS, EHS etc) could have access to all data but this would not be available to the public.

Research priorities

Joanne O'Brien presented a very brief description of her PhD project, which includes a published review of cetacean research in Irish waters. This review will include the identification of research priorities and the seminar was invited to suggest topics they felt were important for future research. She presented some examples of questions that might be important and considered priorities. **Emmet Johnson** thought the list of research questions was far too ambitious but **Simon Berrow** re-iterated that these were just some suggestions to stimulate debate. In response to a series of potential research priorities, **Oliver O'Cadhla** suggested aircraft were subjected to the same constraints as ships and did not provide a better or more efficient platform, just different. **Jim Wilson** suggested one of the great advantages of ships such as ferries was that they were using the same routes and this provided very good data on seasonal variation and for

monitoring long term trends. **Faith Wilson** thought that research vessels such as the Celtic Explorer enhanced cetacean sighting surveys by collecting simultaneous data on physical and biological parameters, which could be used to try and understand the driving forces behind cetacean distribution and relative abundance.

Dennis Strong asked whether data from post-mortem examination of stranded cetaceans was to be published. This question was deferred to **Emer Rogan** as the IWDG do not carry out post-mortems examination. The IWDG Stranding scheme records species, length and gender and if the animal is in good condition information is passed on to UCC and it is up to them to recover the carcass. **Emer Rogan** responded by stating that it is their hope to publish post-mortem data soon and certainly causes of death would be the first to be made available. She also pointed out that there was no funding at present for recovery of carcasses. **Michael Ó Cinnéide** reminded the seminar that considerable funding had been put into cetacean research in Ireland in recent years through the Marine Institute, NPWS and the Petroleum Infrastructure Programme. Jim Wilson said that the state should be funding cetacean post mortems on an ongoing basis as a means of detecting problems with our marine environment. Simon Berrow suggested it should be better targeted at species and areas with fewer samples. It would help the IWDG if they were informed of the priority species and areas.

Gary Burrows raised the issue concerning the effectiveness of marine protected areas (SACs) for protecting mobile species such as cetaceans. His concerns were echoed by other people but **Ciaran O’Keeffe** pointed out that the NPWS (and EHS) were required to designate SACs under EU directives so the debate about its effectiveness is not useful at this moment in time as they must be designated. **Peter Evans** suggested that wide geographical areas should be incorporated into marine spatial planning to protect cetaceans and monitoring should consider the possibility of cetaceans undertaking shifts in their range. Data on distribution and abundance is required to try and select the best sites for designation. **Emer Magee** said that designation alone is not enough, enforcement is the key to protection. **Simon Berrow** emphasized the importance of cSAC designation in the Shannon estuary in the conservation of the resident bottlenose dolphins. Designation has modified activities such as Disposal at Sea, dolphin-watching and thus it has contributed to increased protection. **Oliver O’Cadhla** also suggested that designation of Broadhaven Bay, Co Mayo as a cSAC had modified work practices in the site.

Pauline ni Flaherta suggested an important area for research would be determining the effects of acoustic survey techniques including multi-beam on cetaceans. **Tim O’Leary** asked whether information on what constitutes “normal” levels with respect to the physiology and histology of cetaceans. This information is required to recognize abnormal lesions and conditions. **Emer Rogan** replied that some “normal/baseline” physiology had been determined that assisted the identification of some diseases and lesions associated with fisheries bycatch.

A question on the role of the Irish whale and dolphin sanctuary and how EU policies conflict with pro-whaling counties intentions to expand commercial whaling was raised by **Geoff Oliver**. At this point the Chair (**Michael ÓCinnéide**) requested the discussion return to one of the objectives of the seminar, namely the creation of a joint sightings database.

Joint Cetacean Sightings database

Michael ÓCinnéide asked the seminar whether the creation of a joint sightings database was considered a good idea. The majority supported this initiative, however some reservations were raised as to why a new database was to be created when there were ones already available. **Emer Rogan** and **Oliver O’Cadhla** suggested all data could be submitted to the European Seabirds at Sea database (ESAS), which included cetacean records. **Emer Rogan** also suggested that the OBIS database which looks at distribution on an ocean wide scale could also be used. **Michael ÓCinnéide** felt that although it would be important to contribute to international databases, it was also imperative to create a national database for national interests. **Gary Burrows** asked whether this would be a national or All-Ireland database. It was agreed that an All-Ireland approach is the best geographical unit to consider but that there additional issues associated with cross-border initiatives. **Tim Dunne** advised the seminar that JNCC were discussing the creation of a updated Cetacean Atlas and would welcome co-operation from data-holders in Ireland.

Marine Megafauna Working Group

Simon Berrow presented on behalf of himself and **Dave McGrath** of GMIT the proposal to form an informal group of people working on marine megafauna (cetaceans, seals, basking sharks, turtles etc) to aid information exchange, and compliment each others studies. It could provide an opportunity to discuss the commonality of methods and associated problems. Such a group might also enable a more effective response to calls for proposals. The group would be open to everybody with an interest in marine megafauna (government agencies, third level institutes, NGOs). At each meeting a good speaker could be invited to explore a new area of interest as well as providing an opportunity to present posters/research findings/problems encountered. It was proposed to meet annually in the winter and maybe the host could be encouraged to fund a visiting speaker. If there is an interest then Galway-Mayo Institute of Technology in Galway are happy to host the first meeting. There was a consensus that this was a useful proposal and **Simon Berrow** said on the basis of that they would organise a meeting in the winter to explore the possibilities in detail and see who attends.

Seminar closed at 5:30pm

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Date: Friday 16 June, 2006
Time: From 09.30 to 17.00
Venue: Marine Institute auditorium, Rinville, Oranmore, Co Galway
Number of Delegates: 80 - 100 approx
Organisers and hosts: Irish Whale and Dolphin Group, Marine Institute and the National Parks and Wildlife Service

Aims and Objectives:

The aims of this seminar are to:

4. To present data and results from research initiatives on the distribution of whales and dolphins in Irish waters. These include the IWDG ISCOPE project (2003-2005), Petroleum Infra-structure Programme surveys carried out by CMRC at University College, Cork, data from Irish waters held by SeaWatch UK and the SCANS I and II international surveys.
5. To obtain feedback on recording schemes from partners in Ireland
6. To bring together the cetacean research community in Ireland to discuss future survey requirements and the creation of a Joint Irish Cetacean Sightings database

Target audience

The invited audience will include staff from the National Parks and Wildlife Service; DCMNR, including the Petroleum Affairs Division who have funded studies under PIP; Geological Survey of Ireland; Irish Naval Service; scientists from Marine Institute and Irish universities; Heritage Officers; Environment and Heritage Service (Northern Ireland); staff and volunteers from the Irish Whale and Dolphin Group; environmental consultants; NGOs; industry and media and interested members of the wider public.

Invited Speakers:

Dr Simon Northridge: SMRU, St Andrews, Scotland. Joint author of "Atlas of Cetacean Distribution in Northwest European waters"

Dr Peter Evans: Seawatch Foundation, Oxford, England. Cetacean sightings data from Ireland

Dr Emer Rogan: University College, Cork. National organiser of SCANS II in Irish waters

Further information/programme will be available on the IWDG (www.iwdg.ie), MI (www.marine.ie), NPWS (www.npws.ie) websites.

Contacts

Seminar Organiser: **Janelle Atkinson**, Contact 00353 87 0532757 or Janelle.Atkinson@iwdg.ie or

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Programme

Friday 16 June

9:30: Introduction to seminar: Simon Berrow, Irish Whale and Dolphin Group

9:40 Arliss Winship, SMRU: Atlas of Cetacean Distribution in Northwest European waters

10:10 Pádraig Whooley, IWDG: IWDG Cetacean Sighting Schemes

10:30 Peter Evans, SeaWatch Foundation: Cetacean data from Ireland

11:00-11:30

COFFEE

11:30 Dave Wall, IWDG: Ships of Opportunity Surveys

11:50 Emer Rogan, UCC: PIP offshore surveys and SCANS II in Irish waters

Launch of IWDG Guide to Whales and Dolphins of Ireland

12:30 – 13:30

LUNCH

13:30 Mick O’Connell, IWDG: IWDG Cetacean Stranding Scheme

13:50 Padraic Moran, IWDG: Cetacean Sighting and Stranding database and website

14:30 – 15:00

COFFEE

15:00 Ciaran O’Keeffe, NPWS: Towards a Joint Cetacean Sightings database for Ireland

15:30 Open Forum: Chair: Michael Ó Cinneide, Marine Institute

1. Opportunity for feedback from partners on IWDG recording schemes, resources, feedback
2. Invitation to contribute to the cetacean literature review
3. Proposal from Dave McGrath (GMIT) for establishment of a Marine Mammal Working Group.

17:00 Thank you and close of seminar