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Irish Humpback Whale Expedition ... in search of *Port na bPucaí*

The humpback whale is one of the most popular and enigmatic of all creatures. It is famous for breaching spectacularly from the water, and the recordings of their complex and ever-changing songs made in the 1970s became well known throughout the world.

Historically humpbacks along with many other species of whale were hunted almost to extinction, and many populations are still greatly reduced despite nearly 50 years of protection. In the North Atlantic there are thought to be 5 or 6 feeding areas with whales faithful to their feeding grounds each year and two breeding areas. The West Indies is one well known breeding site but the location of the other site is still uncertain. The best guess is around Cape Verde Islands, off the coast of West Africa, but despite three attempts to record whales, no humpback whale observed off Cape Verde has been allocated to a feeding ground. At the recent International Whaling Commission meeting the Committee on North Atlantic Humpback Whales agreed that the highest priority for future work was obtaining additional photographic and genetic samples from Cape Verde to find out which animals breed there.

Objective:

To locate, photograph, video, record and sample humpback whales in the eastern North Atlantic, beginning on the south coast of Ireland this year (2002), and then proceeding along their supposed migration route to breeding grounds in the Cape Verde Islands off West Africa (2003).

Humpback whales off Ireland and Cape Verdes

There have been few contemporary sightings of humpback whales in Irish waters although they would have been much more abundant in the past. The suggestion that humpback whales may have been more abundant in Irish waters is captured by the beautiful slow air, *Port na bPucaí* (translated as "Music of the Fairies"), from Inishvickillane Island in the Blaskets, Co Kerry. Legend tells that three islanders were rowing back to Inishvickillane when they heard these strange sounds emanating from the hull of their currach. One islander, a fiddler, picked up his bow and played along to this eerie sound, thought to have been made by fairies. Many years later the connection was made between *Port na bPucaí* and the song of the humpback whale. Maybe it was indeed *Port na bPucaí* -the sound of the fairies -or perhaps the islanders heard a singing whale heading south to breeding grounds around the Cape Verdes.

The fact is that Irish waters represent part of a migratory pathway for humpback whales, at least some of which originate in Norwegian, and possibly Icelandic, waters. Recent monitoring of underwater hydrophones located off the western seaboard has shown there is a passage of singing humpbacks between mid-October and late March, all heading south. The migratory destination remains uncertain; they may well be bound for the Cape Verde Islands, but there is no scientific, contemporary data to confirm this hypothesis. In September 2001 and July 2002 we successfully obtained humpback whale

fluke shots from the south coast of Ireland. This is the first time images for photo-identification have been obtained and this is a significant step in our attempt to find out where Irish humpback whales breed.

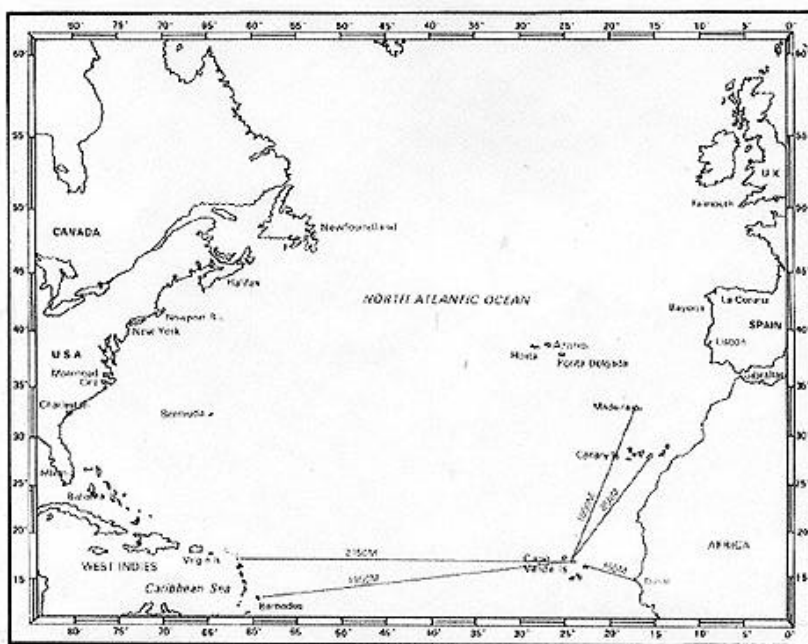


Humpback whale off Mine Head, Co. Waterford

Previous expeditions to Cape Verde have demonstrated the feasibility of studying humpback whales and the collection of photographic and genetic samples, but some have been restricted by inclement weather. A recent visit in December 2000 suggested that although whales were first sighted in December, prevailing conditions would be most favourable in March and April. Recent evidence suggests humpback whales calve in Mordiera Bay on the southwest of Sal, and in Bahia Sal Rei by the Baixo Ingles in the west of Boavista.

Cruise plan

The first leg of the expedition will commence from Baltimore, Co. Cork, this autumn (2002) and take the *Anna Mto* the Algarve, southern Portugal. Leaving in February 2003, she will head for the Canary Islands and then the Cape Verdes. It is around 700 nmls (1250km) from Portugal to the Canary Islands and Cape Verdes are about 850 nmls (1,500km) from the Canary Islands, which if the northeast trade wind prevails, should enable passage time of 5-6 days to the Canary Islands and 6- 7 days to Cape Verdes. Returning to Ireland from the Cape Verdes is more problematic as the direct route being contrary to the prevailing wind. The route taken will be decided at the time, but will almost certainly take in the Azores and may also involve crossing the Atlantic to America and Bermuda.



Routes to and from the Cape Verde Islands

Figure I. Cape Verde Islands in the North Atlantic.

Objectives

The objectives of this expedition are to:

1. Photograph tail flukes of humpback whales off the Irish coast.
2. To survey the potential migratory path of humpbacks from Portugal south to the Canary Islands and again to the Cape Verdes.
3. Collect genetic samples of humpback whales around Cape Verde and during passage from the Azores.
4. Record humpback whales singing on their breeding grounds.
5. Raise awareness and interest in Ireland of the rich diversity of whale species in Irish waters and our conservation responsibility, through regular uplinks with Irish media and the making of a film.
6. Contribute to the knowledge of cetaceans around the Cape Verde Islands.

Personnel

The core expedition team will be Dr Simon Berrow, for scientific leadership, skipper Joe Aston, who will be responsible for running the research boat and logistics, and film-maker Tony Whelan of Ergo Films. The expedition will be carried out under the auspices of the Irish Whale and Dolphin Group (IWDG), a charity and limited company dedicated to the conservation and better understanding of cetaceans (whales, dolphins and porpoises) in Irish waters, through study, education and interpretation.

Dr Simon Berrow

Dr Simon Berrow has been working on cetaceans in Ireland since 1987 and has recently spent 2 years working in the Antarctic. He has led three sailing expeditions in search of whales and dolphins in Irish waters (1993, 1998,2001) and has been a member of two dedicated whale sighting surveys, one in the Celtic Sea (1994) and one in the Southern Ocean around the Antarctic peninsula (2000). He has over 60 scientific papers to his name and is founder member and Chairperson of the IWDG.

Joe Aston

Skipper Joe Aston, born in 1946, has been a professional fishing skipper and boat-owner since 1972, having been also a keen yachtsman since child-hood. He took a degree in French, Spanish and English at Cambridge and worked for a while as a journalist before going to live in Co Donegal in 1973, and starting his career in commercial fishing. He moved to Co Clare in 1987, where he lives on the shore of the Shannon estuary at Carrigaholt, Co Clare. Joe has sailed to the Azores twice, as well as France, Scotland, Spain and Portugal; so he has learnt some Portuguese to add to French and Spanish.

The Anna M is an ocean-going schooner, designed by John Illingworth, 13.6 meters long and now worked up into excellent condition. She has a new main-sail, GPS navigator, radar, wind-vane steering gear, and safety gear, and the engine has been completely over-hauled. The Anna M has a passenger license and has spent 3 summers taking sailing trips with the Shannon dolphins, and with occasional more extensive trips, including a pelagic study of common dolphins in August 2001 and whale-watching cruises on the south coast in 2002. For more information see www.gannetswav.com

Tony Whelan

Tony Whelan is a documentary film-maker. Having trained at the BBC, Tony has worked in broadcast television for over a decade and is currently working on a number of documentaries including this one and the Search for the Irish Blue whales.

Irish Whale and Dolphin Group

The Irish Whale and Dolphin Group (IWDG) is Ireland's premier group dedicated to the study and conservation of cetaceans in Irish waters and have been recording cetacean stranding and sightings since 1991. In December 1999 the IWDG was granted charitable status (CHY1163) by the Revenue Commission and became a Limited Company in October 2000. For more information see www.iwdg.ie

Estimated Budget

The yacht *Anna M* will be chartered for the duration of this expedition.

Yacht charter	15 weeks @ €1000 per week	€15,000
Consultancy and expenses	12 weeks @ €600 per week	€7,200
Crew expenses	15 weeks @ €500 per week	€7,500
Communication via iridium satellite		€3,300
<i>Sub-total</i>		€38,000
Equipment		
Inflatable boat and engine		#4,700
Water-maker		€1,300
Solar-panels		€1,000
Satellite phone		€2,500
Laptop		€3,000
Hydrophone		€2,500
Digital Canon D30 camera		€3,000
<i>Sub-total</i>		€18,000
TOTAL COST		€56,000

Contributions, large or small, from sponsors will be most gratefully received. All sponsors will be acknowledged on the video and web-site. Contributions may be lodged with the IWDG at:

Bank Ac No. 68767478
Bank: Bank of Ireland
Malahide
Co. Dublin

Sort code: 90-06-07

The IWDG is registered as charity No. CHY11163

Contributions are tax deductible.

APPENDIX 1: Detailed methodology and References

i) Humpback whales have distinctive markings on the underside of their tail flukes which can be used to identify individual animals. Photographs will be deposited at the North Atlantic Humpback Whale Catalogue in Bar Harbor, Maine. There they will be digitized and matched with existing images taken on the feeding grounds. To date there has been no matches of whales recorded in Cape Verde Islands. Genetic samples will be obtained from sloughed skin and stored for analyses at the University of California at Berkeley, USA by Per Palsbell.

ii) Humpback whale vocalisations will be recorded on a DA T recorder via a hydrophone either towed behind the *Anna M* or deployed while stationary.

iii) The Irish Humpback Whale Expedition will be widely publicised in Ireland and the results disseminated to the scientific community. A website will be established for people to follow the expedition and seek regular updates. Weekly broadcasts will be made on RTE Radio. An internet link will be established for schools etc to ask questions to the researchers in the field and learn more about humpback and other whales. We are in discussions about making a film documentary of the trip with independent film company Ergo Films (Director: Tony Whelan) on the expedition and the cultural significance of humpback whales in Ireland.

iv) There is very little information on the relative abundance and diversity of cetaceans around the Cape Verde Islands. Members of the Centro de Mamíferos Marinos de Canarias in Santa Cruz de Tenerife will be invited out to contribute to the survey effort in Cape Verde. This organisation has been collecting data on cetaceans around Cape Verde since 1997 and all sighting records will be copied to them. A towed hydrophone will be used to enhance survey effort.

References

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