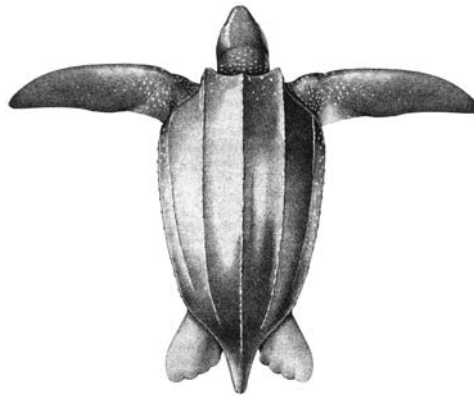


www.strandings.com

British Isles & Republic of Ireland Marine Turtle Strandings &
Sightings
Annual Report 2010

R.S.Penrose & L.R.Gander. February 2011



Marine Environmental Monitoring
Penwalk
Llechryd
Cardigan
Ceredigion
West Wales
SA43 2PS
e-mail: rodpenrose@strandings.demon.co.uk

REPORT DISTRIBUTION.

Amphibian & Reptile Conservation.	T. Gent
Blue Reef Aquarium.	J. Wilkinson
British Chelonia Group.	D. Wains
British Divers Marine Life Rescue (BDMLR).	A. Rowberry
Brixham Seawatch.	J. Barnett
Centre for Environment, Fisheries & Aquaculture Science (CEFAS).	L. Hingley
Ceredigion CC.	R. J. Law
Cornish Fish Producers Organisation.	B. Samson
Cornwall Wildlife Trust.	P. Trebilcock
Countryside Council for Wales (CCW).	J. Loveridge
	Dr A. McMath
	T. Stringell
	R. Pratt
Defra.	Dr J. Myers
	A. Hynes
Dept. of Environment, Food and Agriculture I.o.M.	L. J. Hanley
Dingle Aquarium.	M. Laguna
Environment Agency.	N. Price
	K. Cameron
Hebridean Whale & Dolphin Trust.	C. Fleming
HM Coastguard.	J. McWilliams
Irish Whale & Dolphin Group (IWDG).	Dr S. Berrow
Joint Nature Conservancy Council (JNCC).	Dr M. Tasker
	Dr F. Marubini
Marine Conservation Society (MCS).	P. Richardson
	S. Ranger
Marine Fish Information Services.	D. Herdson
Marine Turtle Research Group Exeter Uni. (Cornwall).	Dr B. Godley
MEDASSET.	L. Venizelos
National Museums of Scotland.	Dr G. Swinney
National Museums of Wales.	P. Howlett
National Parks & Wildlife Service R.o.I.	Dr F. Marnell
	Dr E. Kelly
Natural England.	J. Foster
Natural History Museum.	Dr C. McCarthy
	R. Sabin
Northern Ireland Environment Agency.	G. Burrows
Organisation Cetacea (ORCA).	D. Walker
Pembrokeshire Coast National Park.	J. Hodges
Portrush Coastal Zone.	J. Cowan
Royal Society for the Protection of Cruelty to Animals.	R. de Kerckhove
Queen's University Belfast.	Dr J. Houghton
SEPA.	Dr J Curra

Scottish Agricultural College (SAC).

Scottish Executive Rural Affairs.

Scottish Natural Heritage (SNH).

Sea Fish Industry Authority.

Sea Watch Foundation.

Shetland Fisherman's Association.

Sea Mammal Research Unit (SMRU).

Snowdonia National Park Authority.

The Wildlife Trusts.

Ulster Museum.

University College Cork.

University of Liverpool.

Welsh Assembly Government.

Weymouth Sea Life Centre.

Whale & Dolphin Conservation Society (WDCS).

Zoological Society of London (ZSL).

R. Reid

Dr A. Brownlow

I. Walker

L. Clark

B. Lart

Dr P. Evans

J. Simpson

S. Northridge

K. Williamson

S. Kessell

Dr N. Tregenza

F. Catternach

L. Rendle

Prof. J. Davenport

Dr E. Rogan

Dr T. Doyle

Dr J.R. Baker

Dr H. Prosser

Dr K. Raymond

J. Thomas

P. Bullimore

M. Simmonds

Dr P. Jepson

R. Deaville

Others :

Countryside Council for Wales Library.

Natural England Library.

Scottish Natural Heritage Library.

G. L. King.

Lauren Davis DBRC.

Alison Palmer Hargrave SAC Officer.

Arwyn Mason Dyfed Powys Police.

I. Rees.

CONTENTS.

	Page	
1	SUMMARY	6
2	INTRODUCTION	7
	2.1 The UK Turtle Implementation Group.	7
3	MATERIALS AND METHODS	8
	3.1 Live Animals.	9
	3.2 Dead Animals.	9
4	RESULTS	10
	4.1 Sightings.	13
	4.2 Strandings.	14
5	MATTERS ARISING	18
	5.1 Retrospective Reports.	18
	5.2 Repatriation.	19
6	LIVE STRANDING EVENTS 2010	19
	6.1 Rehabilitation.	20
7	BYCATCH	20
8	SAMPLES & POST-MORTEM EXAMINATIONS	20
9	DATA SHARING	20
10	UNUSUAL OCCURENCES	20
11	PUBLICITY	20
12	TAGGING	21
13	ACKNOWLEDGEMENTS	21
14	APPENDICES	21

List of Figures.		page
Figure 1.	Current Technical Co-ordination of the Cetacean Strandings Investigation Programme (CSIP).	7
Figure 2.	All species sightings & strandings 2000-2010.	11
Figure 3.	All species sightings & strandings 2008.	12
Figure 4.	All species sightings & strandings 2009.	12
Figure 5.	All species sightings & strandings 2010.	12
Figure 6.	Leatherback sightings 2010.	13
Figure 7.	Loggerhead sightings 2010.	13
Figure 8.	Unidentified sightings 2010.	14
Figure 9.	Green turtle strandings 2000-2010.	14
Figure 10.	Kemp's ridley strandings 2000-2010.	15
Figure 11.	Leatherback strandings 2010.	15
Figure 12.	Loggerhead strandings 2010.	15
Figure 13.	Unidentified strandings 2010.	16
Figure 14.	All leatherbacks by month.	16
Figure 15.	All leatherbacks average over 2000-2010.	16
Figure 16.	All loggerheads by month.	16
Figure 17.	All loggerheads average over 2000-2010.	16

List of Plates.

Plate 1.	'Squirt' being released at Gran Canaria.	19
Plate 2.	'Steve' being released at Gran Canaria.	19

List of Tables.

Table 1.	2010 Total number of reported marine turtles for British Isles & RoI (live & dead).	10
Table 2.	2010 Number of live marine turtles.	10
Table 3.	2010 Number of dead marine turtles.	10
Table 4.	Cumulative number of records.	17
Table 5.	Species Comparison.	17
Table 6.	'TURTLE' Database Species Totals (1748 - 2010).	18

1. SUMMARY

A total of 29 turtles were reported during the year. One loggerhead and two leatherback turtles were found stranded dead. Twenty six sightings of live leatherback turtles were received. Several were seen close to shore and feeding on jellyfish.

Live turtles (26)

Twenty six reports received were of live leatherback turtles seen either from boats or from shore. No live turtles were found stranded.

The geographical distribution of the 26 live sightings is as follows:-

4 Republic of Ireland, 3 Scotland, 9 England, 7 Wales, 0 Northern Ireland and 3 Isle of Man

Dead turtles (3)

Two leatherbacks and one loggerhead turtle were found stranded dead.

The geographical distribution of the 3 dead strandings is as follows:-

3 Republic of Ireland.

Updated turtles

Loggerhead turtles T2009/09 and T2009/016, rehabilitated at Blue Reef Aquarium in Newquay, Cornwall were successfully released in Grand Canaria.

Data sharing

2009 TURTLE data has been uploaded to the NBN Gateway <http://www.nbn.org.uk/>

TURTLE record totals

The current total of 2460 is broken down thus:

1255 Republic of Ireland, 364 Scotland, 542 England, 210 Wales, 39 Northern Ireland, 31 Isle of Man, 12 Channel Isles and 7 Offshore.

2. INTRODUCTION

In 1990, the ‘Collaborative UK Marine Mammal Strandings Project’ was initiated and part-funded by the UK Department of the Environment (now Defra). The project involves detailed pathological and other investigations of stranded marine mammal carcasses (mostly cetacean) from UK waters. It forms part of the Department's international obligations towards conservation agreements, including the ‘Agreement on the conservation of Small Cetaceans of the Baltic and North Seas’ (ASCOBANS).

Detailed pathological investigations of stranded marine turtles were included in 2001 and the systematic recording and occasional examination of stranded basking sharks began in 2007. The project is now named the ‘Cetacean Strandings Investigation Programme’ (CSIP, www.ukstrandings.org) (see **Figure 1.**).

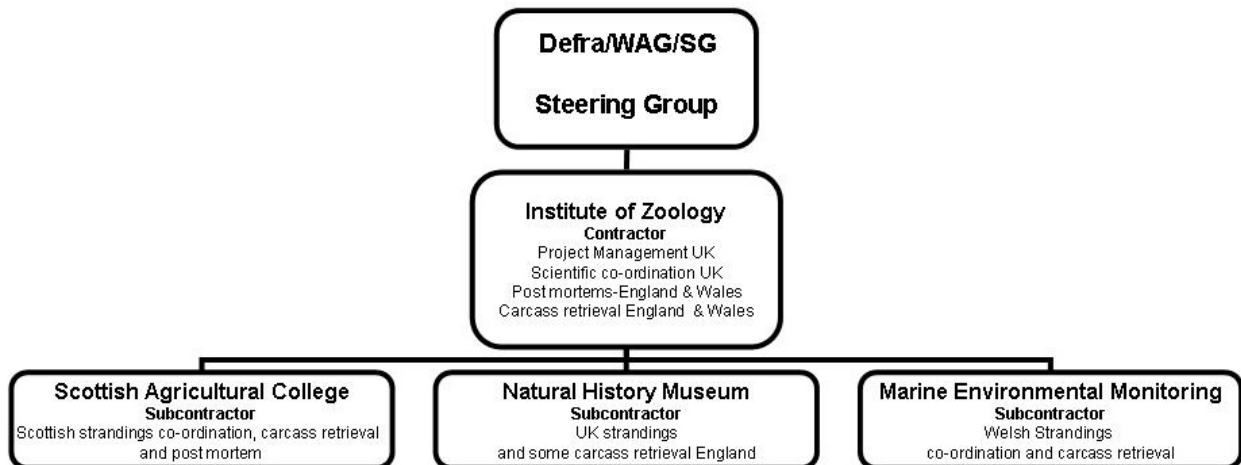


Figure 1. Current Technical Co-ordination of the Cetacean Strandings Investigation Programme (CSIP).

2.1 The UK Turtle Implementation Group.

In 1999, English Nature, now Natural England, published the UK Marine Turtles Grouped Species Action Plan (SAP) on behalf of the UK Biodiversity Group. The SAP is part of the UK Biodiversity Action Plan and aims to enhance marine turtle conservation in UK waters and in the UK Overseas Territories as well as raise awareness and knowledge of their occurrence, legal protection and measures to enhance conservation amongst marine users and the general public. The SAP is being implemented by a group of organisations led by joint lead partners the Marine Conservation Society (MCS) and the Amphibian & Reptile Conservation Trust¹ (ARC). The contact agency is Scottish Natural Heritage (SNH). The Turtle Implementation Group (TIG) consists of the following organisations:-

- **Amphibian & Reptile Conservation Trust¹** is an authority on reptile and amphibian issues and was the Lead Partners or joint Lead Partners for all five of the reptile and amphibian Action Plans within the UK BAP www.arc-trust.org
Contact: *Tony Gent 01202 391319*
- **Countryside Council for Wales (CCW)** The Countryside Council for Wales is the Government's statutory advisor on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment in Wales and its inshore waters.
Contact: *Tom Stringell 01248 385500*
- The **Department of Environment, Food and Agriculture (DEFA)** is the Isle of Man Government's department responsible for species protection and site designation under the Manx Wildlife Act 1990. The Department is also the key Isle of Man contact for strandings and sightings of sea turtles.
Contact: *Laura Hanley 01624 685835 www.gov.im/defa*
- **Marine Conservation Society (MCS)** is the UK charity dedicated to the protection of the marine environment and its wildlife. MCS was the joint Lead Partner of the Marine Turtles Grouped Species Action Plan and coordinates the TIG. www.mcsuk.org
Contact: *Sue Ranger or Peter Richardson 01989 566017*

¹ Formally Herpetological Conservation Trust (HCT).

- **Marine Environmental Monitoring (MEM)** is a member of the Defra “UK Cetacean Strandings Investigation Programme”, www.strandings.com www.ukstrandings.org MEM also manages ‘TURTLE’ the British Isles & Republic of Ireland database holding both records of sightings and strandings of marine turtles dating back to 1748.
Contact: *Rod Penrose (Reporting telephone No. 01348 875000) rodpenrose@strandings.demon.co.uk*
- **MEDASSET**, founded in 1988, is an international environmental NGO registered as a charity and private company in the UK and as a Non Profit Organisation in Greece, working for the conservation of sea turtles and their habitats throughout the Mediterranean, through scientific research, environmental education, political lobbying and awareness-raising.
Contact: *Lily Venizelos + 30 210 3613572 E-mail: medasset@medasset.org*
- **National Parks and Wildlife Service (NPWS)**, part of the Department of the Environment, Heritage and Local Government, provides the legislative and policy framework for the conservation of nature and biodiversity in the Republic of Ireland. It also oversees its implementation, based on good science, with particular emphasis on the protection of habitats and species, through the designation and conservation of sites under EU Directives and national legislation.
Contact: *Dr Ferdia Marnell +3531 8883290.*
- **Natural England (NE)** is the Government agency that champions the conservation of wildlife and natural features throughout England.
Contact: *Jim Foster 01733 455251.*
- **Northern Ireland Environment Agency (NIEA)**, is the agency responsible for the implementation of government environmental policy in Northern Ireland. Its aim is “to protect and conserve the natural and man-made environment and to promote its appreciation for the benefit of present and future generations”.
Contact: *Gary Burrows, 028 9056 9571 or 028 7082 3600.*
- **Queen’s University Belfast:** Dr Jonathan Houghton works on the foraging ecology and migratory behaviour of marine turtles with a particular focus on the predator prey interactions of leatherback turtles and gelatinous zooplankton (jellyfish).
Contact: *Dr Jonathan Houghton 028 90972297 j.houghton@qub.ac.uk*
- **Scottish Natural Heritage (SNH)** is a government body responsible to the Scottish Government and Scottish Parliament. SNH promotes the care, improvement, responsible enjoyment, understanding, appreciation and sustainable use of Scotland’s natural heritage. SNH is the contact government point for the Marine Turtles Grouped Species Action Plan.
Contact: *Laura Clark 01463 725237.*
- **The Wildlife Trusts** is a partnership of 47 Wildlife Trusts, across the UK, caring for more than 2,400 nature reserves. It campaigns for the protection of wildlife and invests in the future by helping people of all ages to gain a greater appreciation and understanding of nature. The Wildlife Trusts Basking Shark Project contributes at sea survey data, from the west coast of Britain on an annual basis.
Contact: *Dr Nick Tregenza 01736 711783.*
- **University College Cork** *Professor John Davenport* is Emeritus Professor of Zoology. He has worked on most species of sea turtles, but especially leatherbacks, since the early 1980s, conducting fundamental studies on their physiology and biomechanics. He is currently linked to turtle conservation in Bermuda, and conducts turtle research with colleagues in Nova Scotia, France and Hawaii.
Contact: *Professor John Davenport +353 21 490 4051 or Dr Tom Doyle +353 (0) 21 4703119.*
- **University of Exeter, Cornwall Campus** hosts the Marine Turtle Research Group that carries out fundamental and applied research on marine turtles in British waters, the Mediterranean, West Africa and throughout the UK Overseas Territories.
Contacts: *Dr Brendan Godley & Dr Annette Broderick 01326 371 861.*

3. MATERIALS AND METHODS

Contact details vary for different parts of the British Isles & Republic of Ireland and the Turtle Code should be consulted for the relevant contacts.

In **England & Wales** a 24 hour answer phone **01348 875000**, is interrogated at regular intervals. A message requests callers to leave details of the stranding or sighting and location, along with their name and contact phone number, so they may be reached if confirmation of details are required. A dedicated email address to receive digital photographs has been created info@strandings.demon.co.uk and a mobile phone has been activated to receive ‘phone images’ only Tel. No. **07773 592227**. (If the stranding is a live-stranding a message on the answer-phone informs the caller to contact the RSPCA immediately. see 3.1).

For **Scotland** all records should be reported to Scottish Natural Heritage on **01463 725237** with dead strandings being reported to the Scottish Agricultural College **01463 243030**. Live strandings and entanglements should be reported to the SSPCA on **0131 3390111**.

For **Northern Ireland** all records of live or dead turtles should be reported to both the Ulster Museum **028 9038 31144** and the Portrush Coastal Zone on **028 7082 3600**.

In the **Republic of Ireland** all records should be reported to Prof. John Davenport on **353-(0)21-4904651** (work) and **353-(0)87 289 5641** (mobile) or Dr Tom Doyle on **+353 (0)21 4703119**. Sightings & strandings can also be reported online in the Republic of Ireland at www.turtle.ie

UK turtle sightings and strandings can also be reported using the UK Turtle Code online at www.euroturtle.org/turtlecode

On the **Isle of Man** all marine animal strandings should be reported to **DEFA** on **01624 685835** or directly to either **Dr Fiona Gell 07624 473753** or **Laura Hanley 07624 483942**. If a live seal becomes stranded call the **MSPCA** on **01624 851672**.

The following criteria are applied: -

3.1 Live Animals

(Condition code 1)²

In 1994 the Marine Animal Rescue Coalition (MARC) was formed. This consists of all the major animal welfare and conservation bodies involved with marine mammals/turtles in the UK. It has been agreed that in the case of a live-stranding the first point of call would be the RSPCA (England & Wales), SSPCA (Scotland) as they support a manned 24-hour emergency phone. The RSPCA/SSPCA would then contact the relevant organisations, Marine Environmental Monitoring etc.

Contacts and advice can be found in the UK Turtle Code at www.strandings.com/Turtlepage.html

3.2 Dead Animals

(Condition code 2a extremely fresh as if just died)²

(Condition code 2b slight decomposition)²

(Condition code 3 moderate decomposition)²

Health and safety precautions are followed with the animal being handled only with gloved hands. Preferably it is then taken immediately for *post-mortem* examination, but due to funding cuts in 2006 freezing is now an option until transport becomes available.

(Condition code 4 advanced decomposition)²

(Condition code 5 mummified carcass)²

Species identified, basic measurements taken together with skin for DNA. Health and safety precautions being observed. Local Authorities then contacted for safe disposal of remains.

All live and dead marine turtles are allocated a “T0000/001” number. “T” designates the animal as a marine turtle, 0000 is the year and /001 is an individual number for each record of the same year. Records of all strandings & sightings in the British Isles & Republic of Ireland are kept by the Strandings Co-ordinator. Copies of *post-mortem* examination reports are sent from the Strandings Co-ordinator to the finder and others associated with the relevant stranding.

² Body conditions based on Kuiken, T. and Garcia Hartmann, M (1991) Proceedings of the European Cetacean Society workshop on cetacean pathology: dissection techniques and tissue sampling. ECS newsletter 17, Special issue: 39pp

4. RESULTS

The following three tables include marine turtle 'sightings' and 'strandings' reported through 2010.

Table 1.

2010 Total number of reported marine turtles for the British Isles & RoI. (live & dead).													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (<i>Chelonia mydas</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Leatherback turtle (<i>Dermochelys coriacea</i>)	0	1	0	1	2	7	3	4	4	0	1	0	23
Loggerhead turtle (<i>Caretta caretta</i>)	0	0	0	0	0	0	0	0	0	0	1	0	1
Unidentified	0	0	0	0	0	2	0	1	1	0	1	0	5
Total animals	0	1	0	1	2	9	3	5	5	0	3	0	29

Table 2.

2010 Number of live marine turtles.													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (<i>Chelonia mydas</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Leatherback turtle (<i>Dermochelys coriacea</i>)	0	1	0	1	2	7	3	4	3	0	0	0	21
Loggerhead turtle (<i>Caretta caretta</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Unidentified	0	0	0	0	0	2	0	1	1	0	1	0	5
Total animals	0	1	0	1	2	9	3	5	4	0	1	0	26

Table 3.

2010 Number of dead marine turtles.													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (<i>Chelonia mydas</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Leatherback turtle (<i>Dermochelys coriacea</i>)	0	0	0	0	0	0	0	0	1	0	1	0	2
Loggerhead turtle (<i>Caretta caretta</i>)	0	0	0	0	0	0	0	0	0	0	1	0	1
Unidentified	0	0	0	0	0	0	0	0	0	0	0	0	0
Total animals	0	0	0	0	0	0	0	0	1	0	2	0	3

The general geographical distribution of each species, strandings and sightings, are plotted on the following maps. Although the maps are generated directly from the data stored, they should be regarded as showing distribution of animals rather than giving absolute counts. While the co-ordinate system and the mapping software can theoretically differentiate between points as close as 1 metre apart, even with separations of 100 metres at the scale at which these maps are presented, some symbols may appear to overlap completely.

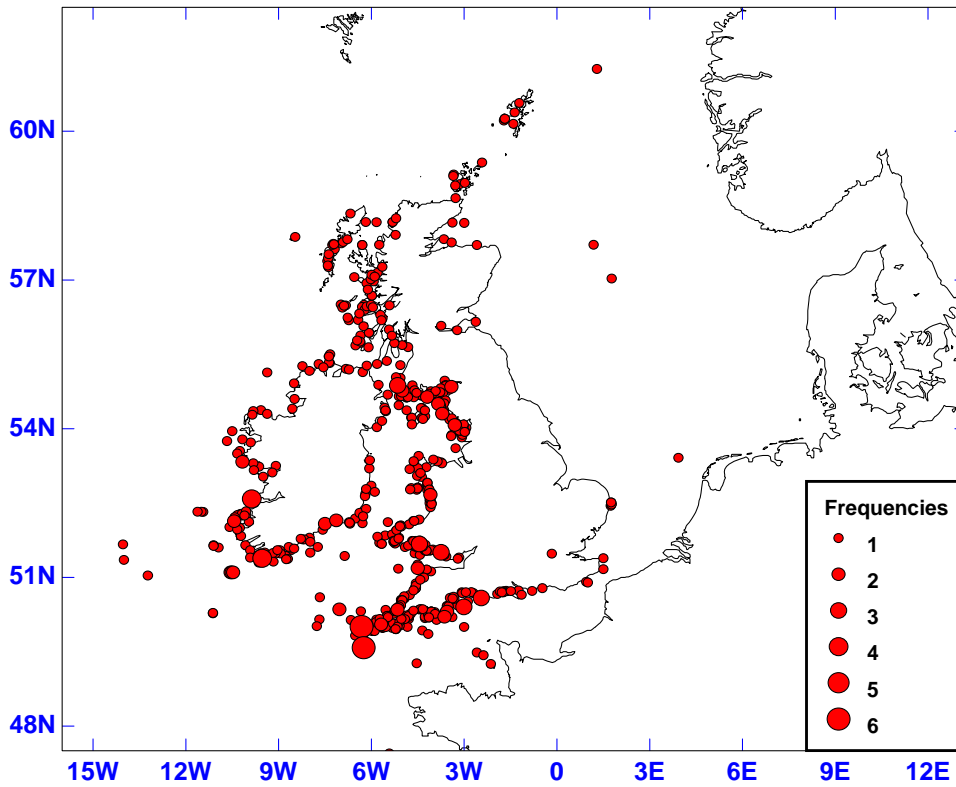


Figure 2. *All species sightings & strandings 2000-2010.*

All species, sightings & strandings over the eleven year period 2000-2010 have been plotted in **Figure 2.**

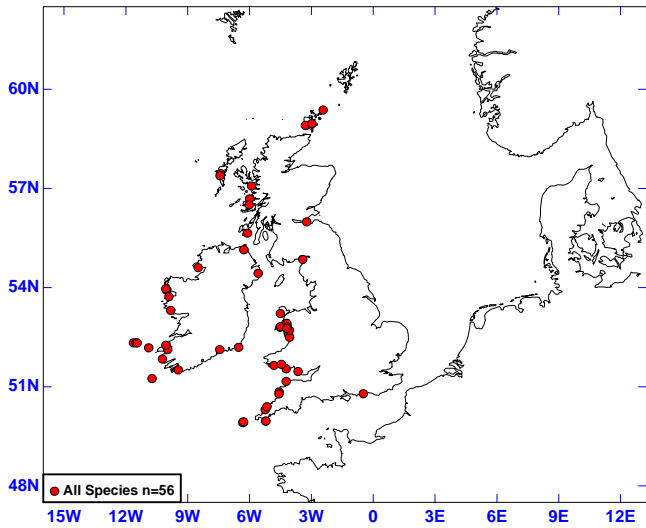


Figure 3. All species sightings & strandings 2008.

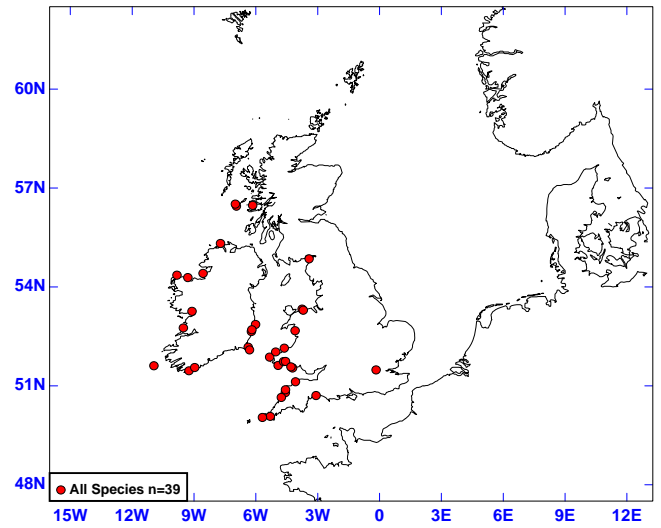


Figure 4. All species sightings & strandings 2009.

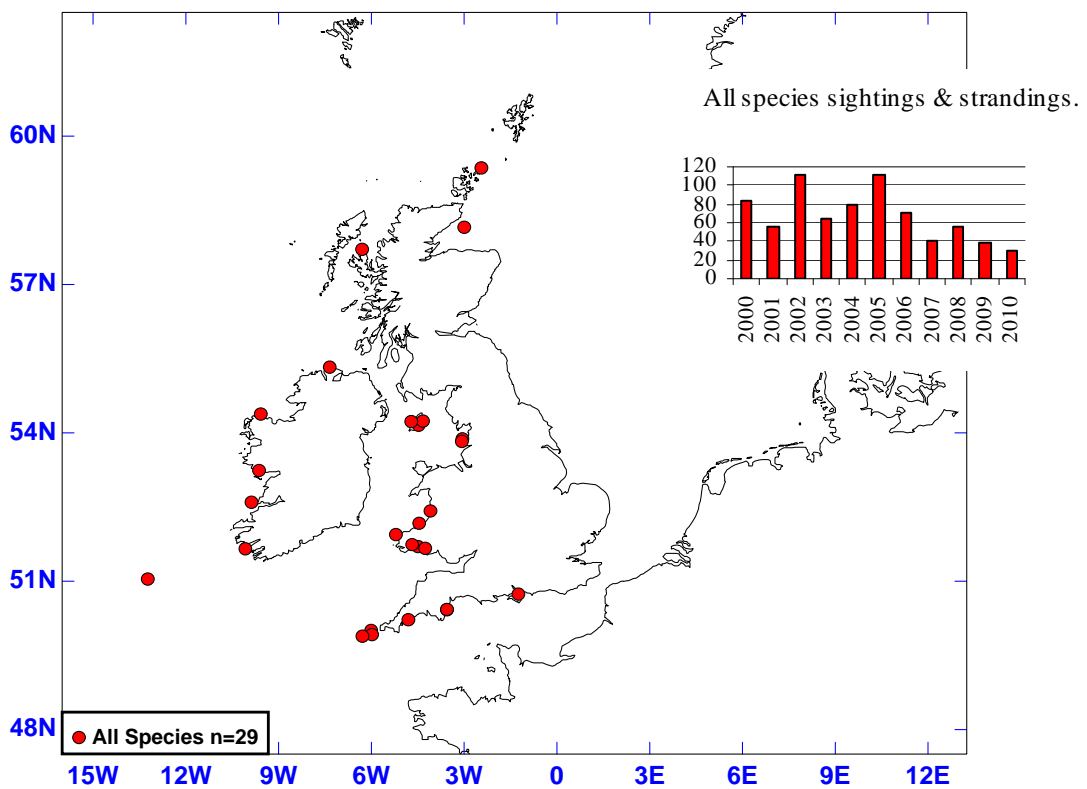


Figure 5. All species sightings & strandings 2010.

4.1 Sightings.

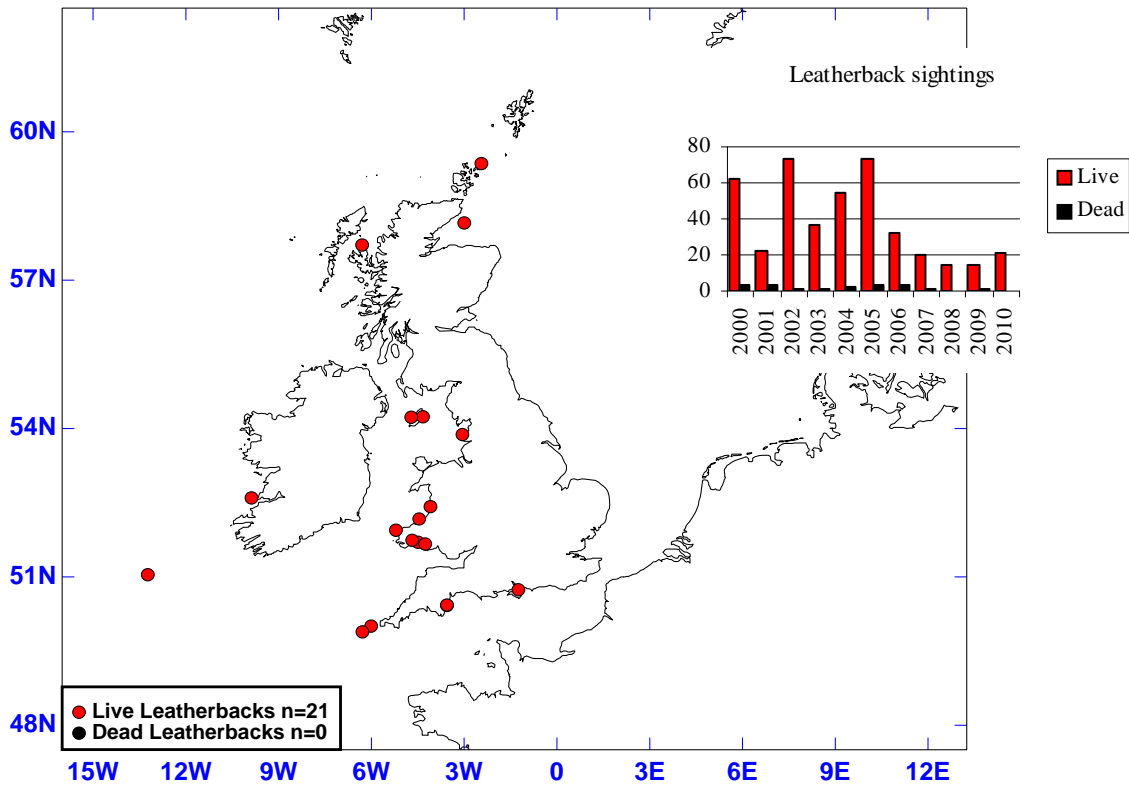


Figure 6. *Leatherback sightings 2010.*

No live or dead **loggerhead turtle** sightings were reported during 2010. However, ‘sightings’ of live loggerhead turtles have been recorded in recent years as shown in **Figure 7**.

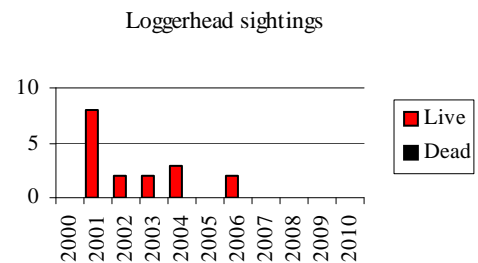


Figure 7. *Loggerhead sightings 2010.*

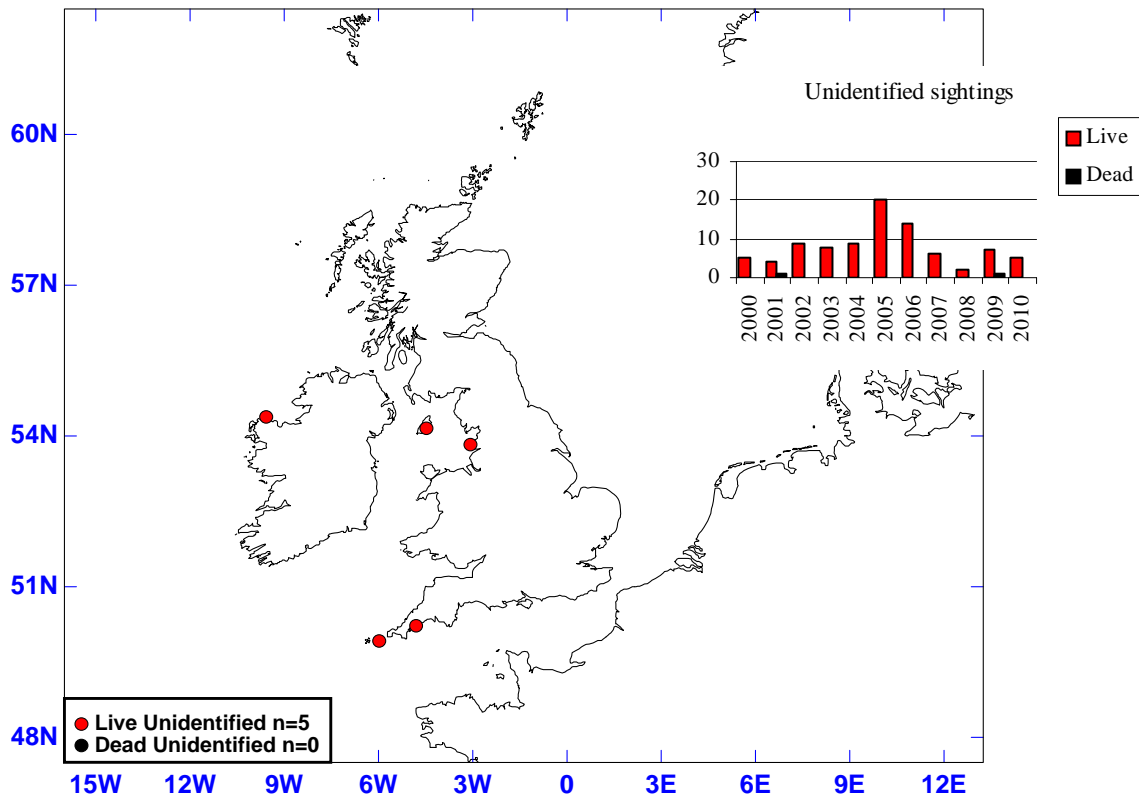


Figure 8. *Unidentified sightings 2010.*

4.2 Strandings.

No live or dead **green turtles** were reported during 2010. However, ‘strandings’ of both live and dead green turtles have been recorded in recent years as shown in **Figure 9**.

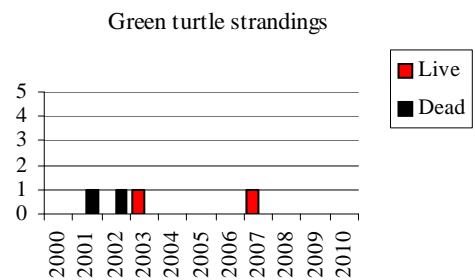


Figure 9. *Green turtle strandings. 2000-2010.*

No live or dead **hawksbill turtle** strandings were reported during 2010. There have been no records of Hawksbill turtle “strandings” in the database. One “sighting” record exists off Cork Harbour in February 1983 when one was caught in a herring net and brought ashore alive.

No live or dead **Kemp's Ridley turtles** were reported during 2010. However, 'strandings' of both live and dead Kemp's Ridley turtles have been recorded in recent years as shown in **Figure 10**.

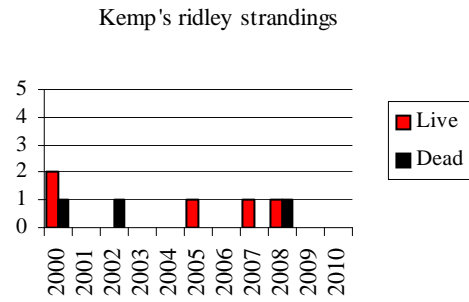


Figure 10. *Kemp's ridley strandings. 2000-2010.*

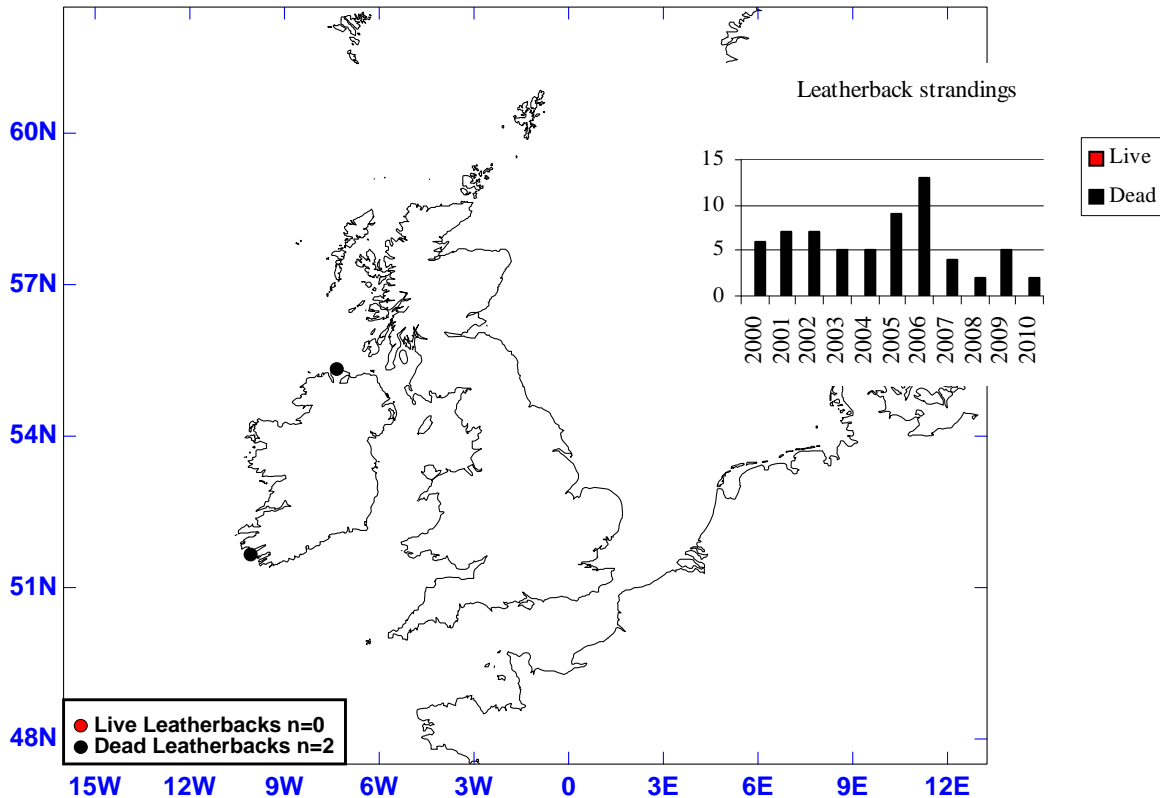


Figure 11. *Leatherback strandings 2010.*

Only one **loggerhead turtle** was reported during 2010. This animal stranded dead at Carraroe, Connemara, Galway in the Republic of Ireland on the 28th November.

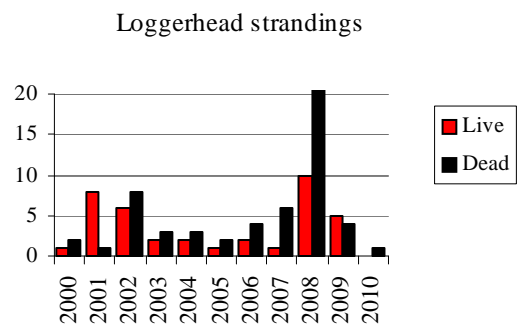


Figure 12. *Loggerhead strandings 2010.*

No live or dead **unidentified turtles** were reported stranded during 2010. However, ‘strandings’ of both live and dead unidentified turtles have been recorded in recent years as shown in **Figure 13**.

All leatherback strandings and sightings, both dead and alive have been plotted by month for the period 2001 to 2010 shown in **Figure 14**. The average figure was taken over 2001-2010 and plotted in **Figure 15**. The graph clearly shows the increase in numbers through the summer months and gives a good indication on when to expect leatherbacks around the British Isles & Republic of Ireland coast.

The records for the hard-shell species are more sporadic. Of the hard-shell species the most numerous recorded turtle is the loggerhead. The data for this species are plotted in **Figure 16** and **Figure 17**

Unidentified strandings

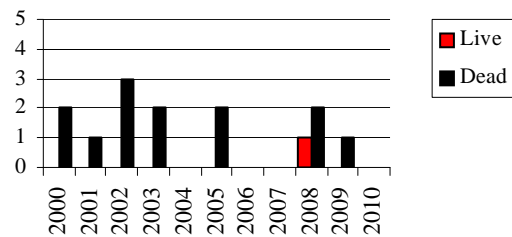


Figure 13. Unidentified strandings 2010.

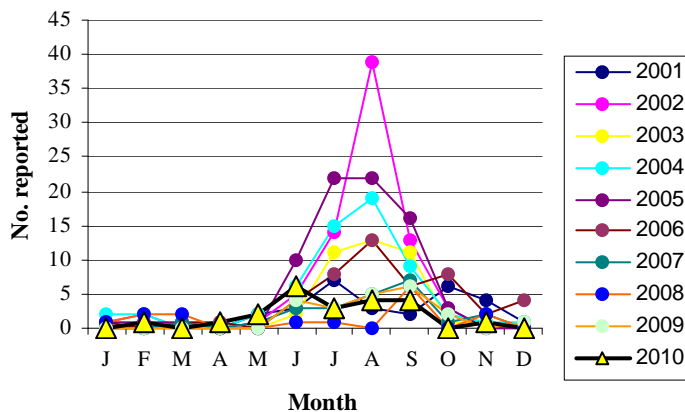


Figure 14. All leatherbacks by month.

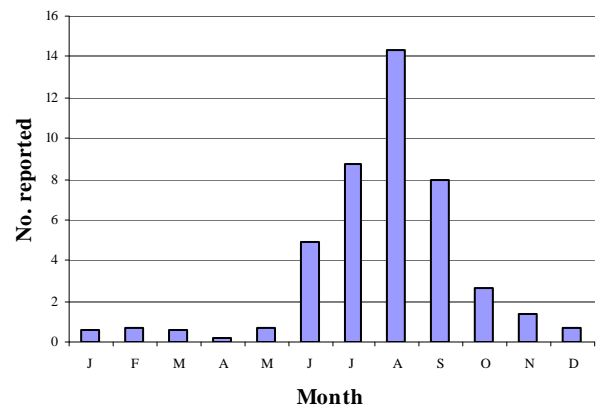


Figure 15. All leatherbacks average over 2000-2010

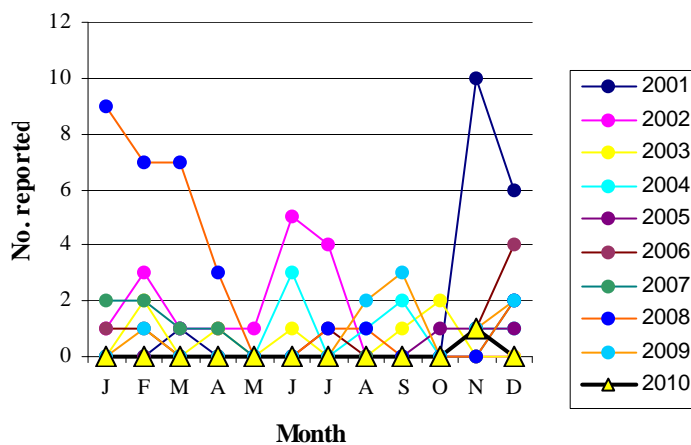


Figure 16. All loggerheads by month.

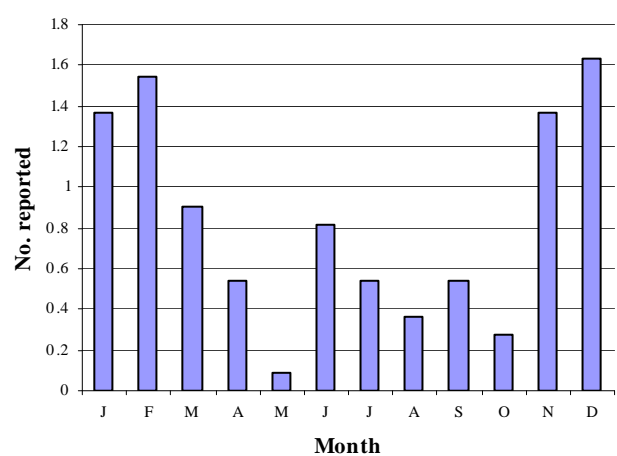


Figure 17. All loggerheads average over 2000-2010.

Table 4.

Cumulative number of records.		
Country	All Species	
	2010	1748 - 2010
Rep. of Ireland	7	1255
England	9	542
Scotland	3	364
Wales	7	210
N. Ireland	0	39
Isle of Man	3	31
Channel Islands	0	12
Offshore	0	7
Total	29	2460

An additional row has been added to **Table 4.** (Offshore), this includes records from the Bay of Biscay and another sighted whilst on passage to Iceland.

Countries are listed in **Table 4.** by descending order of total number of records shown in the year **1748 – 2010** column.

Table 5.

Species Comparison.												
Country	<i>1990 - 2000</i>											
	2000 - 2010											
	GT		HB		KR		LBT		LOG		UNI	
England	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>5</i>	<i>121</i>	158	<i>9</i>	31	<i>14</i>	55
Scotland	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>85</i>	83	<i>6</i>	35	<i>16</i>	11
Rep. of Ireland	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>459</i>	177	<i>21</i>	30	<i>34</i>	17
Wales	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>2</i>	<i>59</i>	66	<i>4</i>	15	<i>11</i>	14
Channel Islands	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	0	<i>1</i>	1	<i>0</i>	2
N. Ireland	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>14</i>	11	<i>0</i>	0	<i>3</i>	2
Isle of Man	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	15	<i>0</i>	0	<i>2</i>	4
Offshore	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	4	<i>0</i>	0	<i>1</i>	0
Total	2	4	0	0	8	8	744	514	41	112	81	105

GT = Green turtle, HB = Hawksbill turtle, KR = Kemp's ridley turtle, LBT = Leatherback turtle, LOG = Loggerhead turtle, UNI = Unidentified turtle.

Table 6.

'TURTLE' Database Species Totals (1748 - 2010).	
Species	TOTAL
Green turtle (<i>Chelonia mydas</i>)	9
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	1
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	35
Leatherback turtle (<i>Dermochelys coriacea</i>)	1843
Loggerhead turtle (<i>Caretta caretta</i>)	214
Unidentified	358
Total animals	2460

The total records held in TURTLE are 2473 (end of 2010). However, some records with inadequate year data have been excluded in this report and show as a discrepancy compared to previous years in some totals presented in Table 6.

A breakdown of records for each country is shown in **Table 4**. However, the eleven year comparison, 1990-2000 / 2000-2010 shown in **Table 5**, shows a marked decline in leatherback turtles recorded for the Republic of Ireland compared with increases for nearly all other countries, the high numbers in 1990-2000 are a result of the concerted efforts of Gabriel King in investigating and collecting historical records around the Irish coast.

5. MATTERS ARISING.

5.1 Retrospective Reports.

The following retrospective records were added to the TURTLE database during 2010.

T1980/25	Leatherback turtle, dead at sea in fishing gear, August 1980, off Lenadoon Point, Sligo, Eire.
T1988/51	Leatherback turtle, stranded dead, 19th November 1988, at Pollan Bay, Ballyliffen, Donegal, Eire.
T1994/70	Leatherback turtle, at sea alive entangled in fishing gear, released alive, 20th July 1994, Coanmore Bay, Sligo, Eire.
T1995/76	Leatherback turtle, stranded dead entangled in pot rope, 5th Sept 1995, Lenadoon Point, Sligo, Eire.
T1995/77	Leatherback turtle, stranded dead, 7th October 1995, at Inishcrone strand, Sligo, Eire.
T1998/57	Leatherback turtle, stranded dead, 20th September 1998, at Ballycastle beach, Mayo, Eire.
T2009/40	Leatherback turtle, sea alive, 1st July 2009, Cogden beach, Dorset, England.

5.2 Repatriation.

T2009/009 a loggerhead turtle named ‘**Squirt**’ was found alive at Loe Bar, Porthleven in Cornwall on the 10th August 2009. The turtle was taken to Blue Reef Aquarium, Newquay, Cornwall. The animal was successfully flown together with loggerhead turtle T2009/016 (below) to Gran Canaria for release. The turtle was released on the 22nd March 2010 at Melenara beach on the east coast of Gran Canaria. We are extremely grateful to Gran Canaria State Veterinarian Pascual Calabuig for receiving this animal and to Thomas Cook and PBS International for flying these animals and producing the Airway Bill free of charge.



Plate 1. ‘*Squirt*’ being released at Gran Canaria.

Photo by: Matt Slater.

T2009/016 a loggerhead turtle named ‘**Steve**’ was found alive at Trebarwith Strand, Tintagel, Cornwall on the 4th September 2009. The turtle was taken to Blue Reef Aquarium, Newquay, Cornwall. The animal was successfully flown together with loggerhead turtle T2009/009 (above) to Gran Canaria for release. The turtle was released on the 22nd March 2010 at Melenara beach on the east coast of Gran Canaria. We are extremely grateful to Gran Canaria State Veterinarian Pascual Calabuig for receiving this animal and to Thomas Cook and PBS International for flying these animals and producing the Airway Bill free of charge.



Plate 2. ‘*Steve*’ being released at Gran Canaria.

Photo by: Matt Slater.

The two loggerhead turtles released in 2010, T2009/009 and T2009/016, were both below the size recommended for either PIT tags or flipper tags and so were flown and released without being tagged.

The journey and release was documented by True North productions for a BBC 1 programme called Animal 24-7.

6. LIVE STRANDING EVENTS 2010.

There were no live-strandings of marine turtles reported in 2010.

6.1 Rehabilitation

There were no marine turtles reported undergoing rehabilitation in 2010 other than T2009/009 and T2009/016 who remained in rehabilitation for the first few months of 2010 until their release in March.

7. BYCATCH.

No marine turtles were reported as by-caught during 2010.

8. SAMPLES & POST-MORTEM EXAMINATIONS.

The normal procedure for the taking of samples is from fresh animals that have been taken for *post-mortem* examination within the CSIP or the Irish Strandings project.

No turtles were examined in Ireland or within the CSIP during 2010.

The unidentified turtle T2009/037, thought to be a loggerhead, stored frozen at a Sea Life Centre in Scotland was unfortunately accidentally disposed of at the Sea Life centre.

9. DATA SHARING.

The TURTLE database was uploaded to the National Biodiversity Network (NBN) <http://www.nbn.org.uk/> to include the 2009 British Isles & Republic of Ireland data.

10. UNUSUAL OCCURENCES.

In early May 2010 a report came in of an unidentified turtle basking on a rock in Addington Loch, Aylesford. Basking behaviour sounded unusual and indeed suspicion that it was a terrapin was later confirmed by photographic evidence.

11. PUBLICITY.

The Strandings Web-site has been maintained to provide details of the CSIP. Although this is intended primarily for Wales, key contact details are given for England, Scotland and Ireland. The pages can be viewed at www.strandings.com/

Annual reports and other turtle related publications are available at www.strandings.com/Turtlepage.html
Posters and leaflets produced to increase awareness of the project have continued to be distributed.

Records are posted on the National Biodiversity Network (NBN) Gateway and these can be accessed at <http://www.searchnbn.net/> The NBN is now the preferred outlet for the database and the database on the strandings.com web-site will no longer be maintained but will be linked to the NBN in future.

A poster was presented at the CSIP conference at the Zoological Society of London on 'UK marine turtle strandings and post-mortem examinations (2000-2009)'. A copy has been included as Appendix 2.

Following the leatherback sighting report near Blackpool on the 7th June, MCS issued a press release raising awareness and encouraging the public to report their turtle sightings. This was broadcast on BBC1 six o'clock news and featured in local press in England and Wales and national press in Scotland.

12. TAGGING.

The two loggerhead turtles released in 2010, T2009/009 and T2009/016, were both below the size recommended for either PIT tags or flipper tags and so were flown and released without being tagged.

13. ACKNOWLEDGEMENTS.

Marine Environmental Monitoring wishes to acknowledge the following:

Jemma and Ray Lerwill and Robin Pratt for providing support and base of operations at Fishguard.
Cornwall Wildlife Trust, Marine Conservation Society, Medasset and Tom Doyle for supplying data to the database.

Blue Reef Aquarium and Sea Life Centres in the UK for rehabilitation of cold-stunned turtles.

Gary Costello of PBS International for producing Airway Bills and Customs Declarations free of charge.

Thomas Cook Airways for transporting turtles to Gran Canaria free of charge.

Ray Dennis, Chris Booth, IWDG, and Pascual Calabuig in Gran Canaria.

Scottish Natural Heritage, Natural England, National Parks & Wildlife Service and the Countryside Council for Wales for financial support towards the British Isles & Republic of Ireland TURTLE database.

14. APPENDICES.

Appendix 1. 2010 Turtle data.

Appendix 2. UK marine turtle strandings and post-mortem examinations (2000-2009).

Appendix 1.

RecordKey	Species	Count	SightStran	AliveDead	EndDate	Country	County	Location	Notes
T2010/001	LBT	SEA	ALIVE	27/02/2010	WALES	CEREDIGION	Aberystwyth North	Turtle seen from shore for 45 minutes and with telescope. Large head.	
T2010/002	LBT	SEA	ALIVE	12/04/2010	ISLE OF MAN	ISLE OF MAN	Langness/Douglas	Seen by fisherman swimming heading east into tide. Manx vessel 'Coral Strand'.	
T2010/003	LBT	SEA	ALIVE	21/05/2010	WALES	CEREDIGION	Off of Aberarth	Large (approx. 7ft) Turtle seen and heard from boat for two minutes. Approx half mile offshore. Flat calm, abundant large jellyfish.	
T2010/004	LBT	SEA	ALIVE	27/05/2010	SCOTLAND	HIGHLAND	Isle of Skye, Staffin	Seen by shore fisherman 25 feet parallel to coast. Moon jellies around	
T2010/005	LBT	SEA	ALIVE	07/06/2010	ENGLAND	LANCASHIRE	Cleveleys, nth of	Seen from beach, nearly two hours, feeding and raising head to breathe	
T2010/006	LBT	SEA	ALIVE	13/06/2010	ISLE OF MAN	ISLE OF MAN	Peel	Seen from land for 20 mins. White patches noted.	
T2010/007	LBT	SEA	ALIVE	05/06/2010	WALES	PEMBROKESHIR	near Traeth Llyfn,	Turtle seen from cliff top swimming parallel with shore approx 80 metres out	
T2010/008	LBT	SEA	ALIVE	23/06/2010	ENGLAND	CORNWALL	Between Scillies	Seen by 3 kayakers rowing from Scillies to Sennen Cove. 6 - 7 feet long huge oval carapace. Article in Western Morning News 25/06/10	
T2010/009	LBT	SEA	ALIVE	27/06/2010	ENGLAND	LANCASHIRE	nr Blackpool north	Approx 300m from observer. 600m from bay. Off coast near north pier. Swimming north to south.	
T2010/010	LBT	SEA	ALIVE	30/06/2010	WALES	CARMARTHENSH	Burry inlet	seen feeding on jellyfish	
T2010/011	UNI	SEA	ALIVE	27/06/2010	ENGLAND	ISLES OF SCILLY	off Scillies	approx. 4 ft - seen from sailing boat. Thought not to be a LBT.	
T2010/012	LBT	SEA	ALIVE	19/07/2010	SCOTLAND	ABERDEENSHIRE	off Moray Firth	seen from survey boat (poss two others in distance but could not change boat direction)	
T2010/013	LBT	SEA	ALIVE	26/07/2010	ENGLAND	HAMPSHIRE	off Solent, Lee on	Seen from land (by several folk too) moving up and down along shore 10-20 m out. High sea temp 20.1C. Approx 1.5-2 m length	
T2010/014	LBT	SEA	ALIVE	27/07/2010	ENGLAND	DEVON	near Saltern Cove,	Seen from land moving up and down along shore 20- 30 m from observer. Seemed to be following fish shoal. Pics taken..	
T2010/015	UNI	SEA	ALIVE	02/08/2010	ENGLAND	CORNWALL	off Dodman Point	Seen from boat from 10 metres. - a large turtle	
T2010/016	LBT	SEA	ALIVE	02/08/2010	ENGLAND	DEVON	3 coves west	Seen from land 50 m from observer. Large turtle - poss same as 014 (MCS press article prompted).	
T2010/017	LBT	SEA	ALIVE	30/08/2010	WALES	CEREDIGION	Off Ynys Lochtyn	Seen from land off headland, heading south. 6' x 4'.	
T2010/018	LBT	SEA	ALIVE	01/09/2010	WALES	PEMBROKESHIR	Saundersfoot	Seen from boat, dived and came up again before swimming off. Between harbour wall and Monkstone	
T2010/019	LBT	SEA	ALIVE	02/09/2010	WALES	CARMARTHENSH	off Pendine,	Seen from EA survey boat eating barrel jellyfish, large healthy specimen. 2-3 metres.	
T2010/020	UNI	SEA	ALIVE	17/11/2010	ISLE OF MAN	ISLE OF MAN	near Douglas	Seen for 25 mins swimming against tide. Rugged back. Twice the length of an eider duck.	
T2010/021	LBT	SEA	ALIVE	21/06/2010	ENGLAND	ISLES OF SCILLY	Sth of St Marys	Seen by shark tagging team. MV Sapphire	
T2010/022	LBT	SEA	ALIVE	21/09/2010	EIRE	offshore	near Porcupine	Seen approx 20 m from boat	
T2010/023	LBT	ST	DEAD	25/09/2010	EIRE	DONEGAL	near Marlin,		
T2010/024	LBT	SEA	ALIVE	23/08/2010	EIRE	CLARE	Bridges of Ross	Seen loafing at surface by birders. Approx 1.5 - 2 m long.	
T2010/025	LBT	SEA	ALIVE	19/08/2010	EIRE	CLARE	Bridges of Ross	Seen after humpback whale by reliable observer	
T2010/026	UNI	SEA	ALIVE	28/09/2010	EIRE	DONEGAL	Downpatrick Head	Described as approx 1 metre with one flipper breaking surface - Sun fish ??	
T2010/027	LBT	ST	DEAD	01/11/2010	EIRE	CORK	Small beach near	Said to be 1-2 m long. Disappeared before confirmation by Tom Doyle. May have restranded....Tom checking	
T2010/028	LOG	ST	DEAD	28/11/2010	EIRE	GALWAY	Carraroe,	photos taken - 22-20 ins	
T2010/029	LBT	SEA	ALIVE	02/06/2010	SCOTLAND	ORKNEY	Nth Ronaldsay, by	Seen near the pier	



UK marine turtle strandings and post-mortem examinations (2000-2009)



Robert Deaville¹, James Barnett², Andrew Brownlow³, Nick Davison², Lin Gander⁴, Paul D. Jepson¹, Jan Loveridge⁵, Tony Patterson⁶, Matthew Perkins¹, Robert Reid³, Vic Simpson⁷, and Rod Penrose⁴

(1) Institute of Zoology, Zoological Society of London, Regent's Park, London NW1 4RY, UK. (2) Veterinary Laboratories Agency Truro, Polwhele, Truro, Cornwall, TR4 9AD, UK. (3) Scottish Agricultural College, Veterinary Services Division, Inverness, IV2 4JZ, UK. (4) Marine Environmental Monitoring, Penwalk, Llechryd, Cardigan, Ceredigion, SA43 2PS, UK. (5) Cornwall Wildlife Trust Marine Strandings Network, Five Acres, Allet, Truro, TR4 9DJ, UK. (6) DSIB (Pathology), Veterinary Sciences Division, Stoney Road, Stormont, Northern Ireland (7) Wildlife Veterinary Investigation Centre, Jollys Bottom Farm, Station Road, Chacewater, Truro, Cornwall, TR4 8PB, UK.

Abstract

Reporting on UK stranded marine turtles and conducting post-mortem examinations on appropriate individuals became a formal part of the UK Cetacean Strandings Investigation Programme (CSIP) in 2001. In the ten year period between 2000 and 2009, 475 marine turtle strandings and sightings were reported within UK waters to the British Isles & Republic of Ireland 'TURTLE' Database Manager. Of the 475 reports, 142 were found stranded on the UK coast or floating dead at sea and came under the reporting remit of the CSIP. The most commonly reported species found stranded or floating dead at sea were the loggerhead turtle (*Caretta caretta*, n=65) and the leatherback turtle (*Dermochelys coriacea*, n=53), with smaller numbers of Kemp's Ridley turtles (*Lepidochelys kempii*, n=8), green turtles (*Chelonia mydas*, n=3) and unknown marine turtle species (n=13). Of the 142 reports, 92 were found stranded dead, 35 were found stranded alive and 15 were reports of dead marine turtles found at sea. Of the 35 live strandings, 13 subsequently died, 9 were returned to the sea and 13 were successfully rehabilitated and subsequently released. All loggerhead turtles were flown to Gran Canaria for release with the one Kemp's Ridley flown to North Carolina in the US for release. Since routine post-mortem examinations by the CSIP began in 2001, 32 have been conducted, comprising 22 loggerhead turtles, four leatherback turtles, five Kemp's Ridley turtles and a single green turtle. The most common cause of death in this period, was starvation/hypothermia, consequential to cold stunning (n=22). Evidence of ingestion of marine litter was found in five marine turtles and was thought to be directly implicated in the cause of death of the single green turtle examined at post-mortem

Methods

Marine turtle sightings in UK waters and strandings on the UK coastline are routinely reported to Marine Environmental Monitoring, the British Isles and Republic of Ireland 'TURTLE' database manager. As part of research funded by UK government and conducted by the UK Cetacean Strandings Investigation Programme, a total of 32 marine turtles found stranded around the coastline of the UK between 2000 and 2009 were examined at post mortem using detailed standardised protocols. A range of tissue samples were taken for microbiology, parasitology, histology and other studies in order to help ascertain the cause of death.

Results

Species	Reports	PME's
Loggerhead turtle	64	22
Leatherback turtle	55	4
Kemp's Ridley turtle	8	5
Green turtle	2	1
Unidentified turtle	13	0
Total	142	32

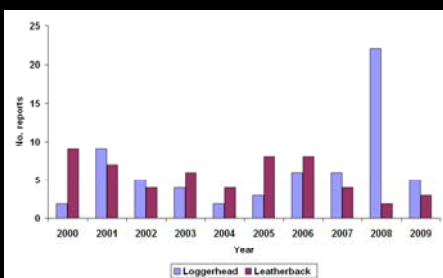


Figure 1 Inter-annual variation in number of reports of loggerhead and leatherback turtles (2000-2009)

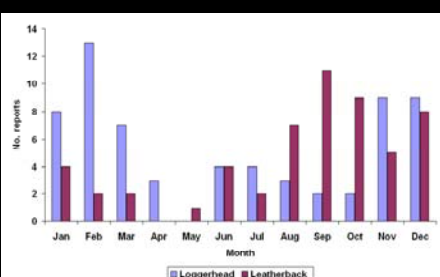


Figure 2 Monthly variation in loggerhead and leatherback turtle reports (2000-2009)

Plate 1 Leatherback turtle found entangled off St Agnes, Cornwall



Plate 2 Close-up of leatherback turtle head and spines in buccal cavity



Plate 3 Loggerhead turtle found stranded in Cornwall, 2002



Plate 4 Loggerhead turtle with missing flipper and goose barnacles



Plate 5 Kemp's Ridley turtle found stranded in Gwynedd, 2008



Plate 6 Green turtle found stranded in Lancashire, 2001



Plate 7 Marine litter found in stomach of green turtle



Plate 8 Marine litter found in green turtle stomach

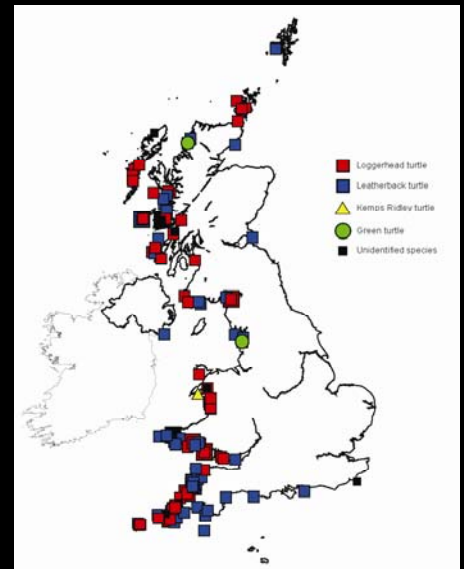


Figure 3 Spatial distribution of marine turtles found stranded on the UK coastline or floating dead at sea in UK territorial waters (2000-2009)

Summary

- Between 2000 and 2009, 142 marine turtles found stranded on the UK coast or floating dead at sea in UK territorial waters were reported to the British Isles and Republic of Ireland 'TURTLE' database manager
- Majority stranded on west coast
- Similar numbers each year apart from peak in strandings of loggerhead turtles in 2008
- Majority of loggerhead strandings occurred in colder winter months; majority of leatherback turtle strandings occurred in latter half of year
- The CSIP examined 32 at post mortem, of which the most common cause of death was starvation/hypothermia consequential to 'cold stunning' (n=22, hardshell species only)
- Evidence of ingestion of marine litter was noted in three leatherback turtles, one green turtle and one loggerhead turtle



Acknowledgements

The collaborative Cetacean Strandings Investigation Programme (www.ukstrandings.org) is jointly funded by the UK Department for Environment, Food and Rural Affairs (Defra), Welsh Assembly Government and Scottish Government. Joint Nature Conservation Committee manage the contract on behalf of funders.