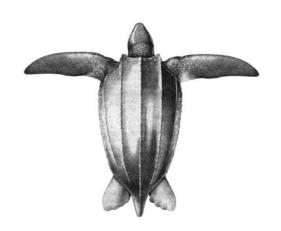


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UK & Republic of Ireland Marine Turtle Strandings & Sightings Annual Report 2007

R.S.Penrose & L.R.Gander. February 2008





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#### 1. SUMMARY

Information was gathered throughout 2007. Turtles were reported in all months of the year. A total of 35 turtles were reported either as sightings (23) or strandings (12) during the year comprising 22 leatherback turtles, 7 loggerhead turtles, 1 Kemp's ridley and 5 unidentified turtles. All were single animal reports.

#### **Live turtles**

17 leatherback turtles, 1 loggerhead turtle, 1 Kemp's ridley and 5 unidentified turtles were reported alive.

A live-stranded Kemp's ridley reported in January from Devon has been cared for at Weymouth Sea Life and is ready for release.

A live-stranded loggerhead reported in March from Wales was unfortunately returned to the sea and refound the next day stranded dead.

The geographical distribution of the 24 live animals is as follows - 5 Republic of Ireland, 5 Scotland, 6 England, 6 Wales, 1 Northern Ireland and 1 Isle of Man.

#### **Dead turtles**

5 leatherback turtles, and 6 loggerhead turtles, were reported as dead.

Of the 11 reports of dead animals 10 were strandings and 1 was a sighting.

Of the 5 dead leatherbacks just one was suitable for necropsy, this was found to have plastic in the gut. In total 7 loggerheads were found dead, 3 of which underwent a *post-mortem* examination

The geographical distribution of the 11 dead animals is as follows - 2 Republic of Ireland, 4 Scotland, 2 England, 3 Wales.

# **Updated turtles**

T2006/039 named 'Pembrey' had been located at Weymouth on the 4th December for rehabilitation. This animal unfortuately died on 21st February 2007.

T2006/043 Loggerhead named 'Holly' was rehabilitated at Weymouth Sea Life and released at Gran Canaria in 2007.

T2006/011 Loggerhead named 'Skye' was rehabilitated at Weymouth Sea Life and released at Gran Canaria in 2007.

# **TURTLE Record totals**

A large number of historical records gathered by Gabriel King predominently from Republic of Ireland have been entered into the database now showing a strong bias towards Irish waters.

**Current total of 2304** is broken down thus: Republic of Ireland 1203, England 508, Scotland 343, Wales 173, Northern Ireland 38, Isle of Man 20, Channel Isles 12 and Offshore 7.

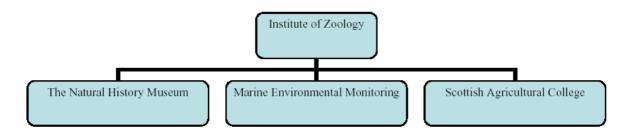
#### 2. INTRODUCTION

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 the programme in 2001.

#### 2.1 Changes to Project 2006.

Due to the end of the previous three year contract in 2005 coupled with departmental changes within Defra the 'Collaborative UK Marine Mammal Strandings Project' underwent a review by Watson & Crane Associates (full report can be viewed at <a href="http://www.defra.gov.uk/wildlife-countryside/resprog/findings/cetaceanstrand-review/cetaceanstrand-review.pdf">http://www.defra.gov.uk/wildlife-countryside/resprog/findings/cetaceanstrand-review/cetaceanstrand-review.pdf</a>).

During this review process in 2006 a short twelve month contract was let by Defra until a decision could be taken on the future arrangements and funding of the 'Collaborative UK Marine Mammal Strandings Project'. This short term contract was issued to the Zoological Society of London/Institute of Zoology (ZSL/IoZ) as the lead agency together with the Natural History Museum (NHM) the Scottish Agricultural College (SAC) in Scotland and Marine Environmental Monitoring (MEM) in Wales. The project is now named the 'Cetacean Strandings Investigation Programme' (CSIP) (see **Figure 1**.).



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

Records of sightings and strandings of live and dead marine turtles are continued to be kept by the Welsh Strandings Co-ordinator within the CSIP. However, funding cuts by Defra over this period have resulted in changes in procedures. Fresh carcasses may not now be delivered immediately for *post-mortem* examination, but held frozen and transported when links become available or transported with other carcasses to conserve funds.

#### 2.2 Further Changes to the Project 2007.

Numbers of cetaceans recovered for *post-mortem* examination for the whole of the UK have been limited to 100 carcasses. Further details of how these figures will break down around the UK will be produced as an annex to the 2007 CSIP report to Defra due in April 2008. The numbers of marine turtles delivered to the CSIP in a suitable condition for *post-mortem* examination are comparatively low and it is not felt these numbers will be restricted in the future.

Additionally, the CSIP has been requested to investigate UK strandings of basking sharks (*Cetorhinus maximus*).

# 2.3 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 Herpetological Conservation Trust (HCT). The contact agency is Scottish Natural Heritage (SNH). The Turtle Implementation Group (TIG) consists of the following organisations:-

- 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 385780
- Environment and Heritage Service 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
- Herpetological Conservation Trust is an authority on reptile and amphibian issues and are Lead Partners or joint Lead Partners for all five of the reptile and amphibian Action Plans within the UK BAP. Contact: Tony Gent 01202 391319
- Marine Conservation Society (MCS) is the UK charity dedicated to the protection of the marine environment and its wildlife.
   MCS is joint Lead Partner of the Marine Turtles Grouped Species Action Plan and coordinates the TIG. Contact: Sue Ranger or Peter Richardson 01989 566017 www.mcsuk.org
- Marine Environmental Monitoring (MEM) is a member of the Defra "UK Cetacean Strandings Investigation Programme", <u>www.strandings.com</u>. MEM also manages 'TURTLE' a UK & 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)
- MEDASSET, founded in 1988, is an international non-governmental organisation registered as a charity in the UK and as a non profit organisation in Greece, working for the conservation of sea turtles and their habitats throughout the Mediterranean. Its scientific and educational website <a href="https://www.euroturtle.org">www.euroturtle.org</a>, was developed by Roger Poland, of Kings College, Taunton. Contact: Lily Venizelos +30 210 3613572
- 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*
- Professor John Davenport is Head of Department of Zoology & Animal Ecology at University College Cork. He has worked on
  most species of sea turtles since the early 1980s, conducting fundamental studies on their physiology and biomechanics. He is
  currently linked to turtle conservation programmes in Bermuda and Cephalonia. Contact: +353 21 490 4051
- 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: Dr Martin Gaywood 01463 725230.
- Swansea University: Prof. Graeme Hays and Dr Jonathan Houghton are currently coordinating an INTERREG project with Prof. John Davenport and Tom Doyle from the University College Cork, to investigate the ecological relationship between leatherbacks and jellyfish in the Irish Sea. Contact: Dr John Houghton 01792 205678 ext 4614.
- 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. [Colin Speedie] The Wildlife Trusts Basking Shark Project contributes at sea survey data, from the west coast of Britain on an annual basis. Contact: Colin Speedie 07836 746197
- University of Exeter in Cornwall hosts the Marine Turtle Research Group that carried out fundamental and applied research on marine turtles in British waters, the Mediterranean, West Africa and throughout the UK Overseas Territories. Staff edit the international Marine Turtle Newsletter <a href="www.seaturtle.org/mtn">www.seaturtle.org/mtn</a> Contacts: Dr Brendan Godley & Dr Annette Broderick 01326 371 861

### 3. MATERIALS AND METHODS

Contact details vary for different parts of the UK & RoI 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. (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 725230** 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 **N.Ireland** all records should be reported to the Ulster Museum **02890 3831144** with 'live/dead' and entanglements to the Portrush Countryside Centre on **02870 823600**.

In the **Republic of Ireland** all records should be reported to Prof. John Davenport on **00353 (0)21 4904140** (work) and **00353 (0)21 4897392** (home).

Sightings & strandings can 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 <a href="https://www.euroturtle.org/turtlecode">www.euroturtle.org/turtlecode</a>

The following criteria are applied: -

#### 3.1 Live Animals

#### (Condition code 1) ¹

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 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) ¹

(Condition code 2b slight decomposition)¹

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. (see 2.1 Changes to Project 2006).

#### (Condition code 3 moderate decomposition)¹

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. (see 2.1 Changes to Project 2006).

¹ Body condition based on the Zoological Society of London condition code.

(Condition code 4 advanced decomposition)¹ (Condition code 5 mummified carcass)¹

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 UK & Republic of Ireland are kept by the Strandings Coordinator. Copies of *post-mortem* examination reports are sent from the Strandings Coordinator to the finder and others associated with the relevant stranding.

#### 4. RESULTS

The large dataset supplied by Gabriel King referred to in the 2006 Annual Report (5.1 Retrospective Reports. page 19). has now been incorporated into the TURTLE database. These new records were mostly from the Republic of Ireland with some from the UK and spanned many years. Funding provided by the National Parks and Wildlife Services (NPWS) of the Republic of Ireland enabled the inputting of this data and we are extremely grateful to NPWS for this support.

As a result all maps, graphs and tables produced in this report have been re-plotted, where necessary, to reflect the increase in historical records now held in TURTLE.

The following three tables include marine turtle 'sightings' and 'strandings' reported through 2007.

Table 1.

2007 Total number of reported marine turtles for UK & Eire (live & dead).													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (Chelonia mydas)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (Eretmochelys imbricata)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (Lepidochelys kempii)	1	0	0	0	0	0	0	0	0	0	0	0	1
Leatherback turtle (Dermochelys coriacea)	0	0	1	0	1	3	3	5	7	1	1	0	22
Loggerhead turtle (Caretta caretta)	2	2	1	1	0	0	0	0	0	0	0	1	7
Unidentified	0	1	0	0	0	1	0	2	0	1	0	0	5
Total animals	3	3	2	1	1	4	3	7	7	2	1	1	35

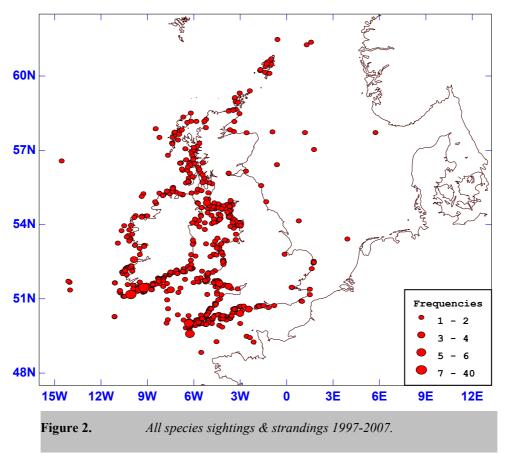
Table 2.

2007 Number of live marine turtles.													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (Chelonia mydas)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (Eretmochelys imbricata)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (Lepidochelys kempii)	1	0	0	0	0	0	0	0	0	0	0	0	1
Leatherback turtle (Dermochelys coriacea)	0	0	1	0	1	2	2	5	5	0	1	0	17
Loggerhead turtle (Caretta caretta)	0	0	1	0	0	0	0	0	0	0	0	0	1
Unidentified	0	1	0	0	0	1	0	2	0	1	0	0	5
Total animals	1	1	2	0	1	3	2	7	5	1	1	0	24

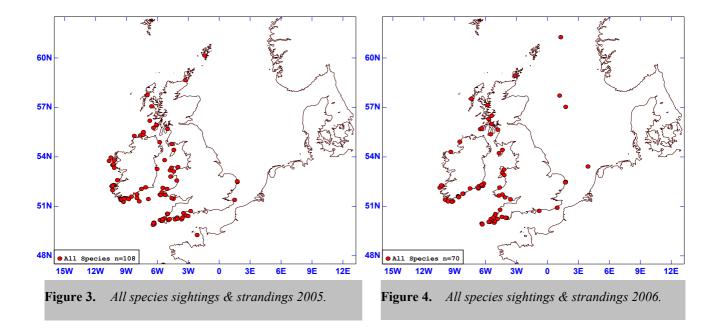
Table 3.

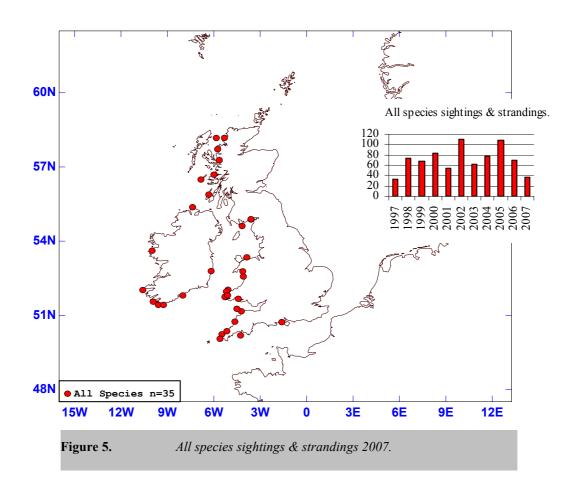
2007 Number of dead marine turtles.													
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Green turtle (Chelonia mydas)	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawksbill turtle (Eretmochelys imbricata)	0	0	0	0	0	0	0	0	0	0	0	0	0
Kemp's ridley turtle (Lepidochelys kempii)	0	0	0	0	0	0	0	0	0	0	0	0	0
Leatherback turtle (Dermochelys coriacea)	0	0	0	0	0	1	1	0	2	1	0	0	5
Loggerhead turtle (Caretta caretta)	2	2	0	1	0	0	0	0	0	0	0	1	6
Unidentified	0	0	0	0	0	0	0	0	0	0	0	0	0
Total animals	2	2	0	1	0	1	1	0	2	1	0	1	11

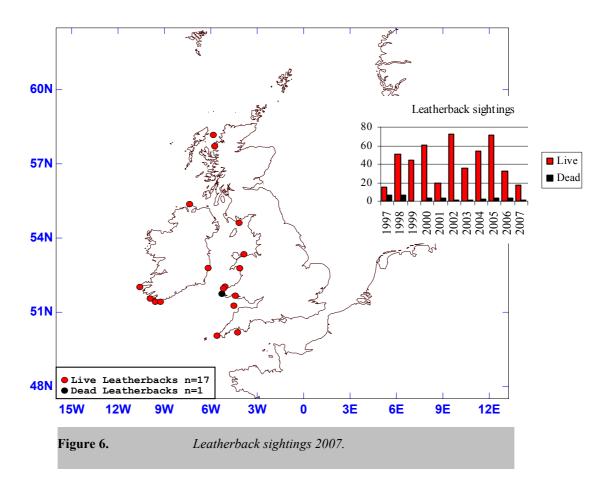
The general geographical distribution of each species, strandings and sightings, are plotted on the following maps. Although the maps are generated directly from the data stored, they should be regarded as showing distribution of animals rather than giving absolute counts. While the co-ordinate system 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.



Due to the large dataset inputted during 2006-07, all species, sightings & strandings over the eleven year period 1997-2007 have been plotted in **Figure 2.** Although many new records extend further back than 1997 only the 'more recent' records have been plotted for clarity.







No live or dead loggerhead turtle sightings were reported during 2007. However, 'sightings' of live loggerhead turtles have been recorded in recent years as shown in **Figure 7.** 

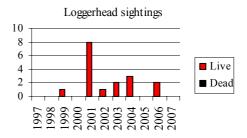
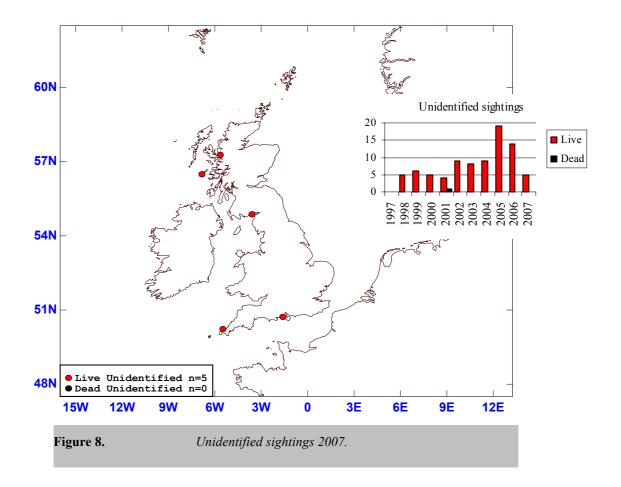
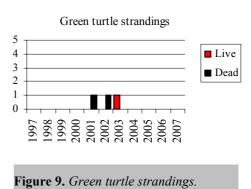


Figure 7. Loggerhead sightings 2007.



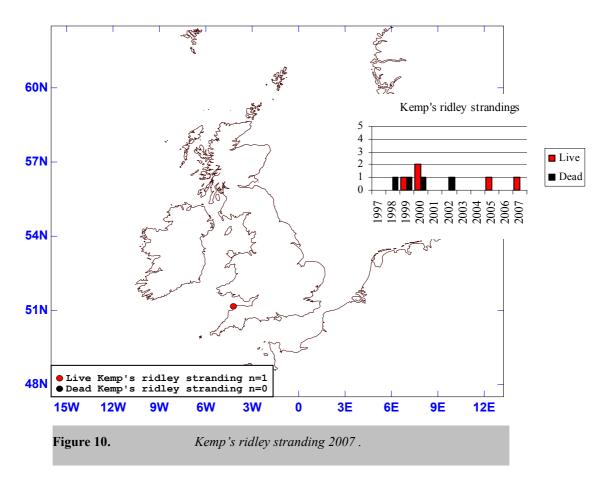
# 4.2 Strandings.

No live or dead green turtles were reported during 2007. However, 'strandings' of both live and dead green turtles have been recorded in recent years as shown in **Figure 9.** 



rigure 9. Green turtie strandings.

No live or dead Hawksbill turtle strandings were reported during 2007. There have been no records of Hawksbill turtle "strandings" in the database. One "sighting" record exists off Cork Harbour in 1983.



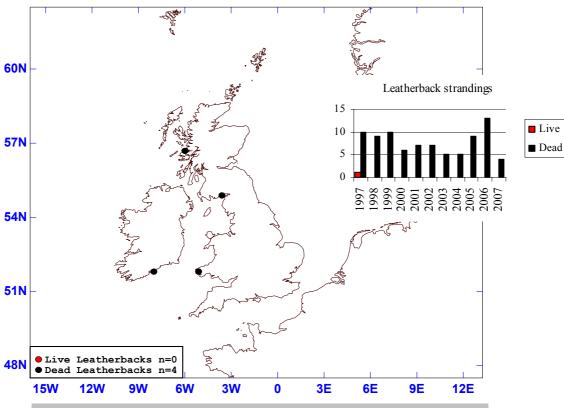
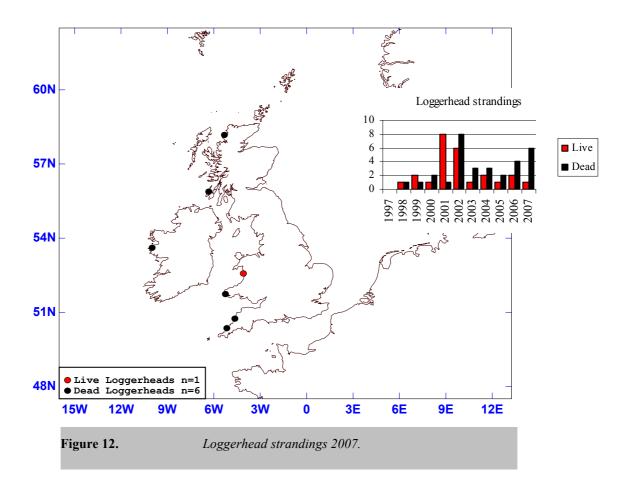


Figure 11. Leatherback strandings 2007.



No 'unidentified' strandings were reported during 2007. However, strandings of dead unidentified turtles have been recorded in recent years as shown in **Figure 13**.

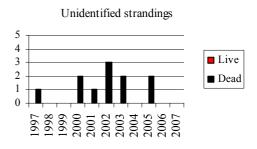


Figure 13. Unidentified strandings.

All leatherback strandings and sightings, both dead and alive have been plotted by month for the period 1997 to 2007 shown in **Figure 14.** The average figure was taken over 1997-2007 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 on the UK & Irish coast.

Numbers of leatherbacks recorded during 2007 were extremely low, the peak number recorded was in September (n=7) still within the expected temporal range as shown in **Figure 15.** 

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**. It is interesting to note the number of live-stranded loggerheads turtles, found in the UK & Ireland that are either compromised by having a flipper missing or juvenile loggerheads having little body strength due to their size. This would appear to add weight to the theory that these turtles are swept from their homerange by strong currents with these disadvantaged animals unable to maintain headway against this force.

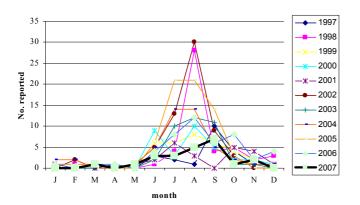


Figure 14. All leatherbacks by month.

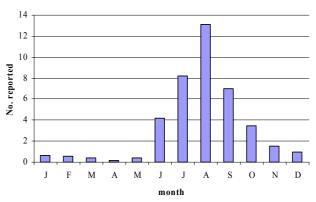


Figure 15. All leatherbacks average over 1997-2007

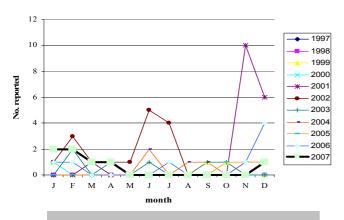


Figure 16. All loggerheads by month.

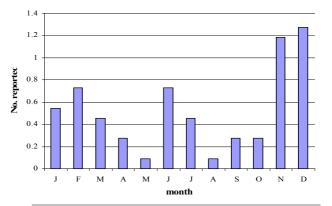


Figure 17. All loggerheads average over 1997-2007

Table 4.

Country	All	Species				
	2007	1748 - 2007				
Rep. of Ireland	7	1203				
England	8	508				
Scotland	9	343				
Wales	9	173				
N. Ireland	1	38				
Isle of Man	1	20				
Channel Islands	0	12				
Offshore	0	7				
Total	35	2304				

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** – **2007** column.

Table 5.

Species Comparison.													
		1987 - 1997											
Country	1997 - 2007												
	G	Т	Н	НВ		KR		T	L	LOG		UNI	
England	0	1	0	0	0	7	101	179	8	19	10	48	
Scotland	0	2	0	0	0	0	66	99	6	29	14	14	
Rep. of Ireland	0	0	0	0	2	0	427	220	21	19	36	16	
Wales	0	0	0	0	0	2	40	69	3	6	8	9	
Channel Islands	0	1	0	0	0	0	0	0	1	1	0	2	
N. Ireland	0	0	0	0	0	0	9	14	0	0	4	3	
Isle of Man	0	0	0	0	0	0	6	5	0	0	2	4	
Offshore	0	0	0	0	0	0	1	5	0	0	1	0	
Total	0	4	0	0	2	9	650	591	39	74	75	96	

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 - 2007).							
Species	TOTAL						
Green turtle (Chelonia mydas)	7						
Hawksbill turtle (Eretmochelys imbricata)	1						
Kemp's ridley turtle (Lepidochelys kempii)	33						
Leatherback turtle (Dermochelys coriacea)	1758						
Loggerhead turtle (Caretta caretta)	170						
Unidentified	335						
Total animals	2304						

The total records held in TURTLE are 2304 (end of 2007) and shows a significant bias towards Irish waters. A breakdown of records for each country is shown in **Table 4.** However, the eleven year comparison, 1987-1997 / 1997-2007 shown in **Table 5,** shows a marked decline in all species recorded for the Republic of Ireland compared with increases for nearly all other countries, the high numbers in 1987-1997 are a result of the concerted efforts of Gabriel King in investigating and collecting historical records on the Irish coast.

#### **5. MATTERS ARISING.**

#### 5.1 Retrospective Reports.

The National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Republic of Ireland, kindly supplied funds for the large number of records gathered by Gabriel King, to be entered into TURTLE. Additional records also gathered by G. L. King from Scotland, Isle of Man and Northern Ireland have also been entered.

As a result of this data input, all maps, graphs and tables produced in this report may differ from previous reports, as they have been re-plotted, where necessary, to reflect the increase in historical records now held in TURTLE.

It is understood that the Irish records will be published in a dedicated forthcoming issue of the Irish Naturalist Journal by King G.L. & Berrow S.D. and we are extremely grateful to Gabriel King for releasing these records to TURTLE.

#### 5.2 Repatriation.

**T2006/011** a loggerhead turtle *(Caretta caretta)* named '**Skye'** was seen close to the causeway connecting Oransay to the main Island of Skye on the 20th July 2006. It was thought the turtle was in distress and was retrieved to the Oban Sea Life Centre where it was found to be cold-stunned and undernourished. The animal had its front left flipper missing which was an old injury. Once stabilised the turtle was moved to the new Rehabilitation Centre at Weymouth Sea Life under the veterinarian supervision of Sue Thornton.

The turtle was successfully flown to Gran Canaria and released together with another loggerhead T2006/043 (below). PIT tag number 958000001056374 was inserted in the turtles left shoulder prior to being prepared for transportation. The flight took place on the 21st May 2007 with two staff from Sea Life in attendance. We are extremely grateful to Gran Canaria state veterinarian Pascual Calabuig for receiving this animal and to 'My Travel Airways' for flying these animals at no charge.



**Plate 1.** T2006/011 'Skye' being released in Gran Canaria by Sea Life's Sarah Leaney.

**T2006/043** a loggerhead turtle (*Caretta caretta*) named 'Holly' was found stranded on the 19th December 2006 at Ardmucknish Bay, north Argyll, Scotland. This was a small loggerhead turtle 25cm overall length, and weighing 1.09kg. The animal was taken to the Scottish Sea Life Sanctuary, Oban. Although this animal had a list to the left it responded to treatment and was moved to the Turtle Rehabilitation Centre at Weymouth Sea Life under the veterinarian supervision of Sue Thornton.

The turtle was successfully flown to Gran Canaria and released together with loggerhead T2006/011 (above). PIT tag number 958000001035103 was inserted in the turtles left shoulder prior to being prepared for transportation. The flight took place on the 21st May 2007 with two staff from Sea Life in attendance. Yet again we are extremely grateful to Gran Canaria state veterinarian Pascual Calabuig for receiving this animal and to 'My Travel Airways' for flying these animals at no charge.

**T2007/001** was a Kemp's ridley turtle (*Lepidochelys kempi*) found live-stranded at Woolacombe beach, Devon on the 6th of January 2007. Luckily the turtle was found by two members, Sarah Gardiner and Steve Hunt, of British Divers Marine Life Rescue (BDMLR) who managed to stop members of the public from returning the animal to the sea. The turtle was relayed to the RSPCA Centre at West Hatch by RSPCA Inspector



**Plate 2.** T2006/043 'Holly' in a holding tank before release at Gran Canaria.

Shaun Clements where the turtle was stabilised before being transported to Weymouth Sea Life Centre. The Kemp's ridley responded well to treatment and was soon fit for release. Current repatriation protocol for Kemp's ridleys is to return them to the US for release, this is unfortunately more involved than

returning loggerheads to Gran Canaria as CITES permits are required for movements of these species outside of Europe. The Topsail Turtle Project in North Carolina was selected as the recipient for the animal and a route was established involving British Airways for the transatlantic flight with the last leg from New York to North Carolina flown by a volunteer private aircraft, all free of charge. A PIT tag 958000001122311 was inserted in the left shoulder in readiness for the journey.

Unfortunately, due to a 60 day consultation period required in the US before a CITES permit can be issued, the sea temperatures at North Carolina started to drop below those recommended for a release. As a result the repatriation has been postponed and the animal held back at Weymouth.

It is hoped that links can be re-established and an attempt to repatriate this animal will be tried again in 2008.

# 6. LIVE STRANDING EVENTS 2007.

There were two live-strandings of marine turtles reported in 2007.

**T2007/001** was a Kemp's ridley turtle (*Lepidochelys kempi*) found live-stranded at Woolacombe beach, Devon on the 6th of January 2007. This event is covered in further detail in '5.2 Repatriation' above.

**T2007/006** was a loggerhead turtle *(Caretta caretta)*, found live-stranded at Tywyn, Gwynedd on the 17th March 2007. Unfortunately the animal was returned to the sea by a member of the public. Marine Environmental Monitoring volunteer Sal Shipley based at Tywyn was contacted who immediately conducted a search of the stranding area and maintained a watch for the next few days. On the 21st March 2007 a dead loggerhead turtle was found close to the original stranding location consistent with the size given for the live-stranded turtle and it has been assumed this to be the same animal. The animal was stored frozen and relayed to ZSL for *post-mortem* examination.

Cause of death was: Starvation/hypothermia.

#### 6.1 Rehabilitation

Only one live-stranding **T2007/001** listed above had survived to be taken into care, it is hoped this animal will be a candidate for release during 2008. This event is covered in further detail in '5.2 Repatriation' above.

## 7. BYCATCH.

Two animals, both leatherbacks, were reported as by-caught during 2007, these were as follows.

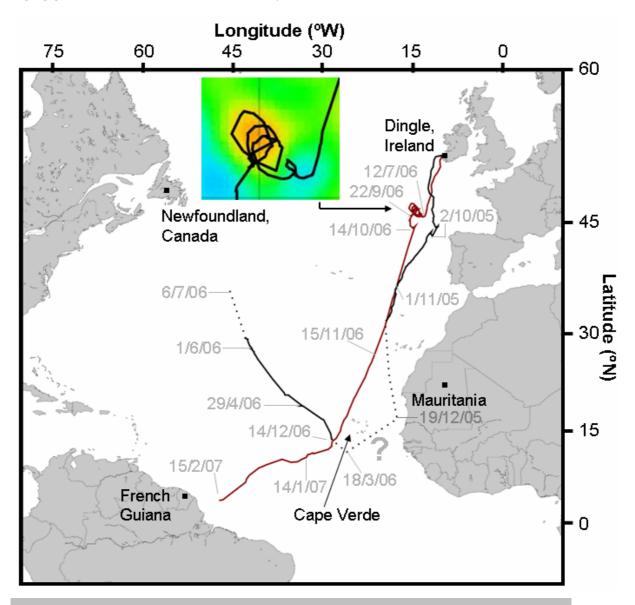
**T2007/017** Leatherback turtle found alive at sea entangled in fishing gear on the 12th September 2007 off Porth-gain, Pembrokeshire. Released alive by a local fisherman and swam off.

**T2007/034** Leatherback turtle found alive at sea entangled in buoy/pot rope in early November 2007 off the Blaskets, Co. Kerry, Ireland. Released alive and swam off.

# 8. TAGGING.

Doyle et al (2008) used satellite telemetry to record the movements and behaviour of 2 leatherbacks (named T1 (**T2005/090**) and T2 (**T2006/051**)) by-caught in fisheries off the southwest coast of Ireland. The turtle T1 (tagged 1 September 2005; female; tracked for 375 days) immediately travelled south via Madeira and the Canaries, before residing in West African waters for 3 months. In spring, T1 migrated north towards Newfoundland where transmissions ceased. T2 (29 June 2006; male; 233 days) travelled south for a short period before spending 66 days west of the Bay of Biscay, an area previously asserted as a high-use area for leatherbacks. This prolonged high latitude summer residence corresponded with a mesoscale feature evident from satellite imagery, with the implication that this turtle had found a rich feeding site. A marked change in dive behaviour was apparent as the turtle exited this feature and

provided useful insights on leatherback diving behaviour. T2 headed south in October 2006, and performed the deepest-ever dive recorded by a reptile (1280 m) southwest of Cape Verde. Unlike T1, T2 swam southwest towards Brazil before approaching the major nesting beaches of French Guiana and Surinam. Importantly, these tracks document the movement of leatherbacks from one of the remotest foraging grounds in the North Atlantic. See Doyle et al (2008) for more details².



**Figure 18.** Satellite tracks of the leatherback turtles T1 & T2.

**Figure 18.** shows the complete track of T1 (**T2005/090**) leatherback (female, SCCL = 153 cm, tagged 01/09/05) (black track with dotted sections) & T2 (**T2006/051**)(male, SCCL = 166 cm, tagged 29/06/06) (red track). Dotted section denotes section of female track where locations were intermittently received. T1 spent 3-month period between waters west of Mauritania and Cape Verde. T2 resided for 66 days in a cyclonic mesoscale feature (yellow area), with the turtle looping around in the same direction (clockwise)

² Thomas K. Doyle, Jonathan D. R. Houghton, Pádraig Frank O'Súilleabháin, Victoria J. Hobson, Ferdia Marnell, John Davenport, Graeme C. Hays (2008) Leatherback turtles satellite-tagged in European waters. Endangered Species Research Vol. 4: 23-31

three times (see inset). This male turtle preformed the deepest dive ever recorded by a reptile (1280 m) just south west of Cape Verde. Adapted from Doyle et al. (2008).

#### 9. 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.

**T2006/039** the loggerhead turtle (*Caretta caretta*) named '**Pembrey**' found live-stranded at Pembrey Country Park, west Wales on the 2nd December 2006 and transported to Weymouth Sea Life Centre unfortunately did not respond to treatment and died on the 21st February 2007. The turtle underwent a full *post-mortem* examination within the International Zoo Veterinary Group (IZVG). It was found that this male adult animal had lesions consistent with a severe chronic bacterial bronchopneumonia and tracheitis and it would seem likely this lesion had been developing for many weeks, the severity and extent would have made a response to treatment unlikely.

**T2007/002** was a loggerhead turtle *(Caretta caretta)* reported dead at Achmelvich beach, Sutherland, Highland on the 14th January 2007. The carcass was frozen and retrieved to the Scottish Agricultural College (SAC), Inverness for examination within the CSIP. The carcass was in good condition (code 2a) with a Straight Carapace Length (SCL) of 20.5cm and a Straight Overall Length (SOL) of 29cm. Cause of death given as: Cold-shocked.

**T2007/003** was a loggerhead turtle *(Caretta caretta)* reported dead at Crackington Haven, Cornwall on the 3rd January 2007. The carcass was taken to the Veterinary Laboratories Agency (VLA), Truro. Unfortunately, due to the condition of the carcass (code 3-4) very limited information could be gathered. Straight Carapace Length (SCL) was 13cm and the Straight Overall Length (SOL) was 20.5cm.

T2007/004 was a loggerhead turtle (Caretta caretta) reported at Marloes Sands, Pembrokeshire on the 14th of February 2007. The carcass was desiccated and starting to fall apart. No precise measurements were taken due to the fragile nature of the remains but the Straight Carapace Length (SCL) was approximately 10cm and the Straight Overall Length (SOL) was approximately 13 cm. This record represents the smallest loggerhead turtle recorded on the UK coast in the TURTLE database. Cause of death: could not be ascertained.



Plate 3. Remains of the tiny loggerhead turtle T2007/004.

**T2007/005** was a loggerhead turtle *(Caretta caretta)* reported dead at Perranporth beach, Cornwall on the 1st of February 2007. This animal was reported to be approximately 20cm wide and 25cm long and in good condition. The carcass was not immediately retrieved.

T2007/006 was a loggerhead turtle (Caretta caretta) reported as alive at Tywyn beach, Gwynedd on the 17th March 2007. Unfortunately, the turtle was returned to the sea by a member of the public. Subsequent monitoring of the beach by volunteer Sal Shipley eventually revealed a dead loggerhead on the 21st March 2007. It is assumed that this carcass is the same animal. The carcass was retrieved by Sal ready for collection and delivery to ZSL for post-mortem examination. Straight Carapace Length (SCL) was 19cm and the Straight Overall Length (SOL) was 27 cm. Cause of death was:- a:

**T2007/023** was a female leatherback turtle *(Dermochelys coriacea)* found stranded dead at Ballycotton, Co. Cork in the Republic of Ireland on the 24th July 2007. The carcass was investigated by Dr Tom Doyle. Unfortunately a cause of death could not be established for this animal but plastic debris was found in the gut.

Starvation/hypothermia (coldstunned) b: stranded on back

(hypostatic lungs).

# 10. PUBLICITY.

BBCTV Wales programme 'Saving Planet Earth' featured a section on marine turtles visiting Welsh waters including Dr Jon



Plate 4. Loggerhead turtle T2007/006 at ZSL.

Photo by: Matt Perkins ZSL



Plate 5. Plastic debris found in the gut of leatherback T2007/023.

Photo by: Ailish Murphy.

Houghton and the work he is doing on jellyfish together with a section on the 'TURTLE' database. The programme was screened several times in Wales and once networked nationally over the UK.

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 <a href="www.strandings.com/Turtlepage.html">www.strandings.com/Turtlepage.html</a>
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 <a href="http://www.searchnbn.net/">http://www.searchnbn.net/</a> 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.

#### 11. LEGISLATION.

In 2007 new legislation came in to force in Britain, the "Conservation (Natural Habitats, &c) (amendment) Regulations 2007". This makes changes to the Conservation (Natural Habitats, &c) Regulations 1994. Similar changes were also introduced to the equivalent legislation in Northern Ireland, the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995.

It is now prohibited by regulation 39(2)(a) and (b) (and equivalent provisions in Northern Ireland) to possess and transport dead specimens and/or derivatives of species listed on Annex IV to the EC Habitats Directive (92/43/EEC) without a licence, unless the specimen was acquired prior to 10th June 1994.

Sale, purchase and possession of Annex IV species in the Republic of Ireland is covered by regulation 22 of the European Communities (Natural Habitats) Regulations, 1997, as revised by the 2005 Habitats (Amendment) Regulations.

Annex IV includes all cetaceans and all marine turtles.

For research and educational purposes the current licensing authorities are the government statutory conservation bodies, Countryside Council for Wales, Natural England, Scottish Natural Heritage, the Environment and Heritage Service in Northern Ireland and the National Parks and Wildlife Service in the Republic of Ireland.

For possession of samples for research or educational purposes licence cover should be obtained via the use of existing general licences or a specific licence. Information and application forms are available from the relevant organisations listed above.

#### 12. PUBLICATIONS.

A report was commissioned by NPWS from Tom Doyle on Leatherback Turtles in Irish Waters. The report can be downloaded at: http://www.npws.ie/en/PublicationsLiterature/IrishWildlifeManuals/

#### 13. ACKNOWLEDGEMENTS.

Jemma and Ray Lerwill and Robin Pratt for providing support and base of operations at Fishguard. Dr Tom Doyle and Dr John Houghton, Doug Herdson, Plymouth National Marine Aquarium. Devon Biological Record Centre, Cornwall Wildlife Trust, Marine Conservation Society, Sea Trust, Ray Dennis, Seasearch, Sal Shipley and Gabriel King for supplying data to the database.

Marine Environmental Monitoring wishes to acknowledge 'My Travel Airways' for transporting turtles to Gran Canaria free of charge and Sea Life Centres in the UK for rehabilitation of cold-stunned turtles.

Marine Environmental Monitoring wishes to acknowledge the financial support of Scottish Natural Heritage, Natural England, and the Countryside Council for Wales.

Marine Environmental Monitoring would also like to acknowledge funding provided by the National Parks & Wildlife Service enabling the inputting of data from the Republic of Ireland.

#### 14. APPENDICES.

Appendix 1. 2007 Turtle data.

RecordKe\pecie	eghtStra	NiveDea	EndDate	Country	County	Location	Notes	ReportBy
T2007/001 KR	ST	ALIVE	05/01/2007	ENGLAND	DEVON	Woolacombe Beach	taken to Weymouth SL Centre. Initially thought to be a loggerhead. Arrangements being made by MEM for release in USA	Ken Atkins
T2007/002 LOG	ST	DEAD	14/01/2007	SCOTLAND	HIGHLAND	Achmelvich, Sutherland	30 cms long, completely intact. Frozen for Bob Reid to PM	
T2007/003 LOG	ST	DEAD	03/01/2007	ENGLAND	CORNWALL	Crackington Haven,	Taken for PME at Cornwall VLA	
T2007/004 LOG	ST	DEAD	14/02/2007	WALES	PEMBROKESHIRE	Marloes Beach	Very small - Approx 10 cms. Found on beach. Given to Pembrokeshire College.	
T2007/005 LOG	ST	DEAD	01/02/2007	ENGLAND	CORNWALL	Perranporth beach	Appox 20cm wide x 25cm long. Good condition, not retrieved, disappeared.	
T2007/006 LOG	ST	ALIVE	17/03/2007	WALES	GWYNEDD	Twywn beach	Small loggerhead 14 ins - put back into sea. Found dead 21st March - retrieved for MEM and frozen for PM.	John Brooks
T2007/007 LOG	ST	DEAD	11/04/2007	EIRE	GALWAY	White Strand, Renvyle	Carapace 52cms, total length approx 76cms -most of head missing	Ger O'Donnell
T2007/008 UNI	SEA	ALIVE	22/02/2007	SCOTLAND	DUMFRIES & GALLOWAY	Off Southerness Lighthouse	30 feet offfshore seen from rocks swimming north, high tide. Reported to 'recorder' by holidaymaker.	Linda Birdsall
T2007/009 LBT	SEA	ALIVE	24/05/2007	ENGLAND	DEVON	Off Ilfracombe near to Lundy Island	Approx 6 ft long - moving west surfaced to breathe - several seconds	Scott
T2007/010 LBT	ST	DEAD	23/06/2007	SCOTLAND	HIGHLAND	Beach west of Ardslignish, Ardnamurchan	Remains at high water mark. Only outer shell remaining approx 1.5m long.	Allan Munro
T2007/011 LBT	SEA	ALIVE	09/07/2007	ENGLAND	CORNWALL	Halfway between Penzance and Land's End	Seen briefly from dive boat near Lighthouse - huge, over 2 metres long, SWesterly direction.	Fred Buckingham
T2007/012 LBT	SEA	ALIVE	09/07/2007	SCOTLAND	HIGHLAND	Approaching Summer Isles, Invernesshire	Seen from top deck of Calmac Ferry. Floating head raised - nearly run down by ferry!	Tim Fison
T2007/013 LBT	SEA	ALIVE	14/08/2007	SCOTLAND	HIGHLAND	Gairloch	Laid at surface for approx 1 minute, dived and swam west for approx 20 m head surfaced for 30 secs then dived again	Ian French, Gairloch Marine Life Centre & Cruises
T2007/014 LBT	SEA	ALIVE	10/08/2007	NORTHERN IRELAND	DERRY	3 miles north of Downhill Beach	Classic upturned boat appearance with lifted head.	Gary Burrows
T2007/015 LBT	SEA	ALIVE	24/08/2007	WALES	PEMBROKESHIRE	Strumble Head	Seen through Leica bins at 500m. Whilst sea watching.	Graham Rees
T2007/016 LBT	SEA	ALIVE	05/09/2007	WALES	GWYNEDD	Off Llangwyrwe	Around for couple of days eating jellyfish	Gwyn Jones, Barmouth HM
T2007/017 LBT	SEA	ALIVE	12/09/2007	WALES	PEMBROKESHIRE	Off Porthgain	Released by local fisherman	Lee Miles
T2007/018 LBT	SEA	ALIVE	23/08/2007	ISLE OF MAN	ISLE OF MAN	Between IOM and Scotland	Large LBT seen	
T2007/019 LBT	SEA	DEAD	18/09/2007	WALES	PEMBROKESHIRE	Off Skomer Island	Towed to Skomer by Phil Newman CCW, Lower jaw removed by Juan Brown WT. Animal washed away after few days.	
T2007/020 LBT	ST	DEAD	26/09/2007	WALES	PEMBROKESHIRE	Newgale beach	Very decomposed, no head or limbs. 4-5 ft long Presumed to be T2007/19. Tagged for removal by Local Council.	
T2007/021 UNI	SEA	ALIVE	30/08/2007	SCOTLAND	ARGYLL & BUTE	Baugh, Isle of Tiree	Close inshore feeding on rising tide. Over 1 m long.	Dr John Bowler (RSPB)
T2007/022 LBT	SEA	ALIVE	27/09/2007	WALES	CARMARTHENSHIRE	East Carmarthen Bay	Aprox 2m in length. Seen from Vigilance (National Marine Monitoring Team)	Chris Bellas EA
T2007/023 LBT	ST	DEAD	24/07/2007	EIRE	CORK	Ballycotton	Necropsy carried out by T Doyle. Carcass sunk 2 miles out to sea. Plastic debris in gut.	Peter Manning (charter fisherman)
T2007/024 LBT	ST	DEAD	21/10/2007	SCOTLAND	DUMFRIES & GALLOWAY	Southerness, Dumfries	Lying on beach. Had started to decompose. Carapace approx 1.5m. 183cm nose to tail. Not collected for PM.	Rose Robertson
T2007/025 LBT	SEA	ALIVE	01/09/2007	ENGLAND	CORNWALL	5 miles towards the Eddystone Light	Appeared to be swimming on back and turned over before diving out of sight.	Mark Quail
	SEA	ALIVE	16/03/2007			Vicinity of Great Ormes Head	Sighted close to boat whilst fishing	Michael Hole, IOM
T2007/027 UNI	SEA	ALIVE	02/07/2007	SCOTLAND	HIGHLAND	Off Kyleakin, Loch Alsh, Isle of Skye	hardshell.	John Corry
T2007/028 LBT	SEA	ALIVE	08/08/2007	EIRE	CORK	1 mile west of Cape Clear		John Killeen
T2007/029 LOG		DEAD			ARGYLL & BUTE	Ardnave, north Islay		Dr Malcolm Ogilvie
		ALIVE	02/08/2007			Milford on Sea, Paddy's Gap	swimming vigourously off groyne 3-4 metres from shore, moving east to west. Approx 2 feet in length, dark brown.	Michael Batory
	SEA	ALIVE	04/06/2007			Dunmore Head	during IWDG whale watching	Jane Cotter
	SEA	ALIVE	05/06/2007			Near the Stags	swam past his boat	Nic Siocum
	SEA	ALIVE	07/09/2007			Arklow Head		Ken Doyle
	SEA	ALIVE	15/11/2007			Blaskets		Padraig O'Suilleabhain
T2007/035 UNI	SEA	ALIVE	13/10/2007	ENGLAND	CORNWALL	400 yds off St Ives NCI lookout	seen by NCI staff. Large turtle, probably but unconfirmed LBT.	Tim Bain & Dan Jarvis
•								