

Research and Development Series

Review of marine turtle records in Northern Ireland

This report was presented to EHS in May 2007



Environment &
Heritage Service

www.ehsni.gov.uk

RESEARCH AND DEVELOPMENT SERIES

A report written for
Environment and Heritage Service

(No. 07/02)
Review of marine turtle records in Northern Ireland

Author: Gabriel King

EHS contract number CON2/4(54)

This report should be cited as follows:
Gabriel L.King 2006. Review of marine turtle records in Northern Ireland. Environment and Heritage Service, Research and Development Series. No 07/02.

For further information on this report please contact:

Gary Burrows
Environment and Heritage Service
Klondyke Building
Gasworks Business Park
Lower Ormeau Road
Belfast
BT7 2JA

The opinions expressed in this report do not necessarily reflect the current opinion or policy of Environment and Heritage Service.

Contents

1	Summary	4
2	Introduction	4
3	Data Collection	6
4	Results	7
5	Discussion	11
6	Recommendations	13
7	Acknowledgements	13
8	References	14
9	Appendix I	15
	Appendix II	16
	Appendix III	18

1. Summary

A survey of marine turtles in Northern Irish waters was carried out between April and August 2006. Over this five-month period every port, harbour, jetty and marina on the Northern Irish coast from Carlingford Lough, Co. Down to Lough Foyle, Co Derry was visited. During this study 65 new turtle records (including 2 dead strandings) of at least two species (one stranded turtle was reported as almost certainly a loggerhead) were recorded of which 24 (37%) were from Northern Ireland, 19 (29%) from the Republic of Ireland and 22 (34%) from Scotland, Wales and England (including the Isle of Man and the Scilly Isles). Most records were obtained from fishers, both retired and active.

Prior to this survey there were only twelve records from Northern Ireland thus the total number of records in the Northern Ireland Marine Turtle database is now 36, including two records of dead strandings and three either observed or recovered dead at sea. Most records are of definite Leathery turtles (73%) with a further two most probably Leathery turtles making nearly 80% of all records of this species. The only other definite species recorded in Northern Ireland is the Loggerhead turtle. Records are well distributed throughout the coastal waters of Northern Ireland with clusters off Portrush, Co Antrim and Strangford Lough, Co Down. All but two records are within NI territorial waters. Most records are from August with 78% of records between July and September. Little is known about migration routes (if any) of Leathery turtles around the UK and Ireland. Leathery turtles appear to converge off Malin Head and Inishtrahull, Co Donegal and one might expect that higher numbers would continue in an easterly direction following the Antrim coastline. The scarcity of records for Antrim waters could suggest that the majority of Leathery turtles turn westwards at North Co Donegal or swim north on the strong flood tide easterly to pass closer to the Scottish islands.

It is recommended that the UK Turtle Code, together with the shortened laminated version be disseminated to the marine community in Northern Ireland. Records of marine turtles, both alive and dead, should be collected and added to this Northern Ireland Marine Turtle database. When possible post-mortem examination of dead turtles should be carried out to determine the cause of death and other lesions, including genetic samples which could be used to identify breeding sites.

2. Introduction

Of the seven species of marine turtle in the world, five have been recorded in European Atlantic waters (Brongersma 1972; Langton *et al.* 1996). Historically, their occurrence would have been considered as rare or unusual which indicated that they had strayed out of their "normal" home range, as most people still associate marine turtles with tropical and sub-tropical environments. However, in recent years a number of reviews have shown that marine turtles, especially the Leathery turtle or Luth (*Dermochelys coriacea*), regularly occur during the summer months in British and Irish coastal waters (Langton *et al.* 1996, Penrose 2002, 2003, 2004, 2005, Penrose and Gander 2006, King 2005).

Despite these recent reviews, there were still few records of marine turtles in Northern Irish waters. The first published record was from Stendall (1945) who described a loggerhead turtle (*Caretta caretta*) that was observed

swimming in the River Bann in Co Derry by Captain B.F. McCorkell. This was the only record for Northern Ireland listed in the extensive turtle reviews by O’Riordan (1972) and Brongersma (1972). No additional records from Northern Ireland were reported by King (1984), however, King (2005) listed seven records from Northern Ireland (five live and two dead sightings at sea).

Although there were eight records of marine turtles in Northern Irish waters prior to the present study, the Centre of Environmental Data and Recording (CEDaR) at the Ulster Museum listed only one leathery turtle record on their database. Thus there was a huge gap in the knowledge of marine turtles in waters around Northern Ireland and dissemination of the existing information was also poor.

Legislation

All marine turtles recorded in the UK and Ireland are entitled to a range of legal protection. They are listed on Appendix I of the Convention on the International Trade in Endangered Species of Flora and Fauna (CITES), Appendices I and II of the Bonn Convention and Appendix II of the Bern Convention. All species are listed on Annex IV of the EU Habitats Directive with the loggerhead turtle also listed as a priority species on Annex II. Marine turtles are listed as both Species of Conservation Concern (SoCC) and Priority Species in the Northern Ireland Biodiversity Strategy and are collectively listed in a Grouped Species Action Plan within the UK Biodiversity Action Plan.

Present study

This present study was undertaken as part of a wider project on the occurrence of marine turtles in UK and Irish waters that began in 1983 (King 1984, 2005). In August 2005 over 800 previously unrecorded turtle records for Ireland (Northern Ireland and the Republic of Ireland) that had been collected mostly between 1984 and 1995 were privately published (King 2005) but only seven of these records were from Northern Ireland. It has always been assumed that the limited number of records was due to under recording rather than reflecting their true distribution. Additional survey work was required in Northern Ireland in an attempt to collect additional turtle records.

This survey is consistent with requirements laid out in the UK Biodiversity Action Plan for turtles namely:

“Encourage and support projects which add to knowledge and understanding of the biology of turtles and the threats they face, when in UK waters”

(ACTION: CCW, EHS, EN, JNCC, NERC, SNH), and;

“Encourage the submission of old and new records of living, entangled or dead stranded turtles through appropriate publications and the media.”

(ACTION: CCW, EHS, EN, JNCC, NHM, SNH)

The results of the survey presented here are part of an All-Ireland review of marine turtle records and those from Northern Ireland cannot be fully analysed in isolation from the vast body of data for the south of Ireland. Here we present a summary analysis of the records from Northern Ireland. A full analysis will be carried out as part of an All-Ireland review to be published in the Irish Naturalists’ Journal.

3. Data collection

This present study began in April 2006 and was completed by the end of August 2006. Actual fieldwork amounted to 50 days, which always included weekends to ensure maximum exposure to the recreational seafaring community.

Over this five-month period every port, harbour, jetty and marina on the Northern Irish coast from Carlingford Lough, Co Down to Lough Foyle, Co Derry were visited. The principal fishing ports of Ardglass, Kilkeel and Portavogie were visited on five or six different days over the course of the study thus ensuring wide exposure to as many people as possible.

The method of investigation applied was random questioning of groups and individuals who were perceived to be potential sources of information. These included fishermen, those employed in fishing-related industries, yachtsmen and women, MCA Coastguards and RNLi personnel, boatmen, sea-anglers, divers, birdwatchers, ex lighthouse keepers, serving lighthouse staff and Police Service Northern Ireland Marine Corps personnel. Dozens of referrals were acquired which were followed up either in person or by telephone. Past experience showed the value of talking with retired fishermen and other older members of seafaring communities and such people were always sought out and visited over the course of this study.

Validation of records

Whereas in the past many seafarers were unfamiliar with the common names of turtles, the present study showed that most informants, and indeed most other people who were solicited for information, had some knowledge of the Leathery turtle, Luth or Leatherback turtle (*Dermochelys coriacea*). This no doubt reflects the increased interest in marine turtles in the media over the last few years.

In all cases a description and size of the turtle was requested. In cases that involved Leathery turtles, most informants on seeing the turtle for the first time thought that it was an upturned boat, dinghy, punt etc, and when possible most altered the course of their boat to investigate. The colour of Leathery turtles varies from black to green depending on the light and sea conditions. The informant was then shown an illustration and/or photograph (Appendix I), which usually confirmed its identity. When the distinction between Leathery turtles and the hard-shelled turtles (*Cheloniidae*) could not be established with any certainty the record shows species indeterminate. With regards to the records in this category, although it can be difficult to make an accurate identification of a turtle from a distance at sea (even between Leathery turtles and the Cheloniids), there is seldom any doubt that the creature was indeed a turtle. The following codes were used in the database (from King 2005):

- De - Leathery turtle (*Dermochelys coriacea*)
- Ca - Loggerhead (*Caretta caretta*)
- Le - Kemp's Ridley (*Lepidochelys kempii*)
- Ude - Unidentified but most probably Leathery turtle
- Uch - Unidentified Cheloniid
- Uni - Unidentified turtle

Additional turtle records

In order to populate the Northern Ireland Marine Turtle database a search for records from Northern Ireland from a number of sources was carried out. These included published records from the Irish Naturalists' Journal, Marine Environmental Monitoring database and from the Irish Whale and Dolphin Group.

4. Results

Number of records

During this study 65 new turtle records (including 2 dead strandings) of at least two species (one stranded turtle was reported as almost certainly a loggerhead) were recorded (Table 1).

Many of the pelagic fishermen from Co. Down had traditionally fished between the Isle of Man and the Cumbrian Coast, hence the high incidence of records given for the Whitehaven area. Other records were acquired from the professional Northern Ireland fishermen working elsewhere in Great Britain and Ireland. In the ports, harbours and marinas of Northern Ireland as at other maritime facilities elsewhere in the UK and Ireland, one meets informants from different home-ports and sailing clubs.

All turtle records solicited during this study are presented in Table 1 and include 24 (37%) from Northern Ireland, 19 (29%) from the Republic of Ireland and 22 (34%) from Scotland, Wales and England (including the Isle of Man and the Scilly Isles).

Table 1. Number of turtle records obtained from Northern Ireland between April and August 2006. Figures in () refer to dead stranded animals.

Species	Northern Ireland	Republic of Ireland	Scotland	Wales	England	Total
Leathery Turtle	19	13 (1)	3	4	8	47(1)
Loggerhead turtle	(1)	0	0	0	0	(1)
Unidentified but most probably Leathery turtle	1	0	0	0	0	1
Unidentified Cheloniid	0	1	0	0	0	1
Unidentified turtle	3	4	1	3	3	14
Total	23 (1)	18 (1)	4	7	11	63(2)

Most records were obtained from fishers, both retired and active (Table 2). Yachts people were also a good source of records. Lighthouse keepers were the best landbased source of records.

The records for locations outside of Northern Ireland waters will be passed on to the statutory agencies in England (Department for Environment, Food and Rural Affairs), Scotland (Scottish Natural Heritage), Wales (Countryside Council for Wales) and Ireland (National Parks and Wildlife Service) as well as the Marine Environmental Monitoring Database.

Table 2. Sources of turtle records from the marine community in Northern Ireland

Species	Fishers	Yachts	Boatmen	Lighthouse keepers	Seamen	Anglers	RNLI	Divers	Others
King (2005)	4	0	1	0	0	0	0	0	2
This study	29	13	4	4	3	3	2	1	4
Total	33	13	5	4	3	3	2	1	6

Total number of turtle records for Northern Ireland

Prior to this study there were only twelve records from Northern Ireland, one published in the Irish Naturalists' Journal, seven from King (2005) and four from Marine Environmental Monitoring in Wales. With the additional records obtained during the present study, this brings the total number of records in the Northern Ireland Marine Turtle database to 36 (Table 3), including two dead stranding records and three either observed or recovered dead at sea. All records are shown in Appendix II.

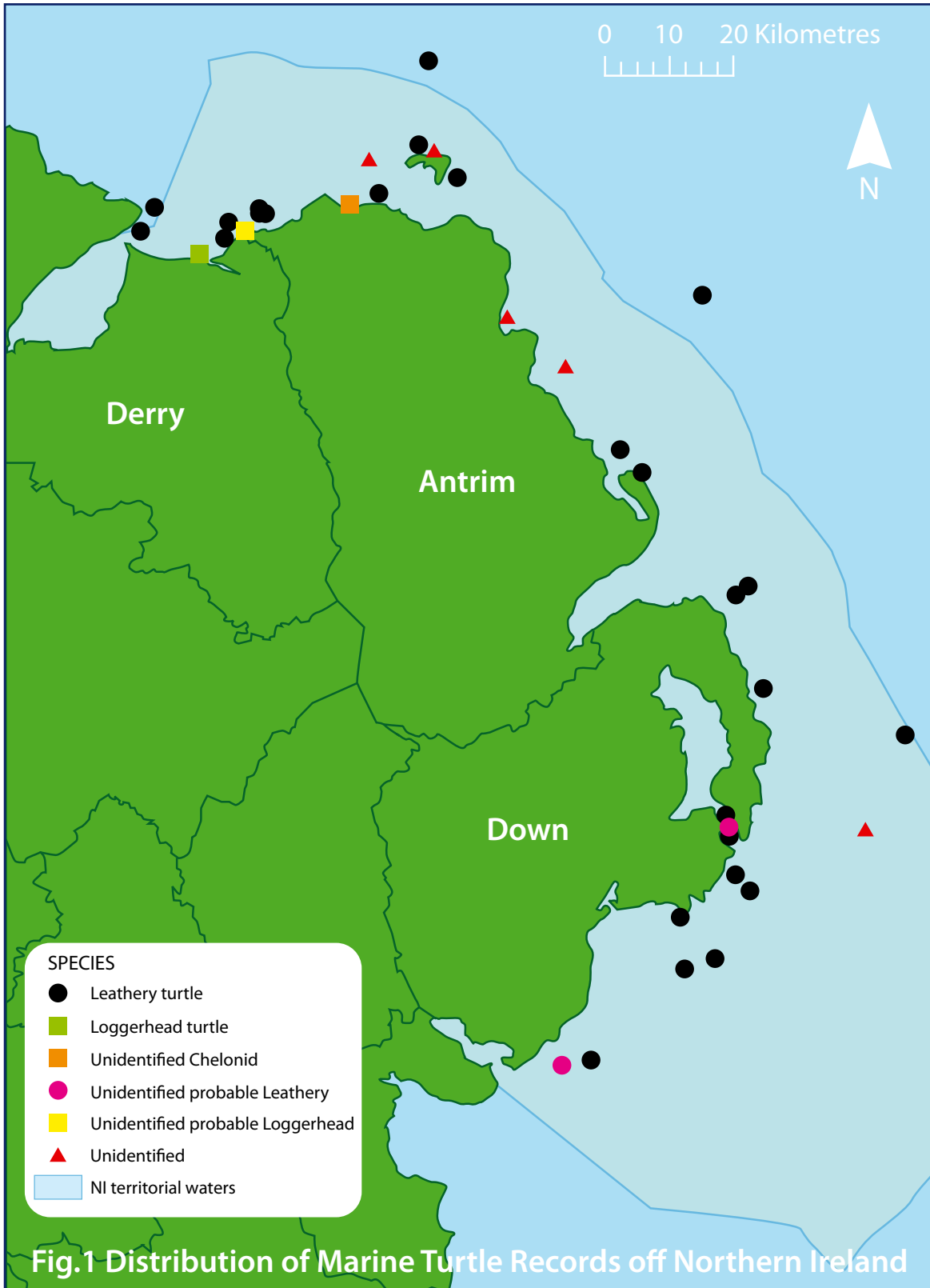
Table 3. Cumulative total number of marine turtle records from Northern Ireland

Source	Leathery Turtle	Loggerhead turtle	Others	Cumulative Total
Brongersma (1972)	0	1*	0	1
O'Riordan (1972)	0	1*	0	1
King (1984)	0	0	0	1
King (2005)	4	0	3	8
MEM (2001-2005)	3	0	1	12
This study	19	1?	4	36
Total	26	2	8	36

* same record, ? indicates it was most probably a Loggerhead turtle but coded as Uch in the database

Most records are of definite Leathery turtles (72%) with a further two most probably Leathery making nearly 78% of records of this species. The only other definite species is of Loggerhead turtle. One was stranded at Castlerock, Co Derry on 7 August 1945 but during this study a record of a second turtle, which was almost certainly the same species stranded dead on the West Strand, Portrush, Co Antrim was reported. The turtle had a hard-shelled carapace and was described as being 1.5m long x 1.4m wide.

A map showing the distribution of records is shown in Fig. 1. Records are well distributed throughout the coastal waters of Northern Ireland with clusters off Portrush, Co Antrim and Strangford Lough, Co Down. Most records are within the NI territorial waters, with two records off Co Antrim marginally outside this limit.



Geographical distribution of records

The distribution by County is shown in Table 4, with a similar number of records in Counties Antrim and Down and only five records from Co Derry.

Table 4. Distribution by county of all turtle records from Northern Ireland, including prior records. Figures in () refer to dead animals.

Species	Derry	Antrim	Down	Total
Leathery turtle	4	9 (1)	10 (2)	23 (3)
Loggerhead turtle	1	0	0	1
Unidentified but most probably Leathery turtle	0	0	2	2
Unidentified Cheloniid	0	(1)	0	(1)
Unidentified turtle	0	4	1	5
Unidentified but most probably Loggerhead turtle	0	(1)	0	(1)
Total	5	13 (3)	13 (2)	31 (5)

Seasonal distribution of records

Most records did not have an accurate date associated with it. 12 records had a range for date e.g. July/August or was descriptive e.g. "summer" and five records did not attempt to record the month or season in which the record was made. Those records with dates to within a month are shown in Table 5. Most records are from August with 78% of records between July and September.

Table 5. Monthly distribution of turtle records, where the date was reported.

Species	Feb	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Leathery turtle	0	0	0	4	4	3	2	0	13
Loggerhead turtle	0	0	0	0	1	0	0	0	1
Unidentified but most probably Leathery turtle	0	0	0	1	0	0	0	0	1
Unidentified Cheloniid	0	0	0	0	0	0	0	1	1
Unidentified turtle	1	0	0	0	1	0	0	0	2
Unidentified but most probably Loggerhead turtle	0	0	0	0	0	0	0	0	0
Total	1	0	0	5	6	3	2	1	18

If these records are presented by season in order to use the available data, then one third of records were outside of the summer period with six of these in the autumn (Table 6). There is a strong seasonal component to the distribution of marine turtles off Northern Ireland with most records in the summer and autumn.

Table 6. Seasonal distribution of turtle records, where the date to within a month was reported.

Species	Spring	Summer	Autumn	Winter	Total
Leathery turtle	2	17	3 (2)	0	22 (2)
Loggerhead turtle	0	1	0	0	1
Unidentified but most probably Leathery turtle	0	1	0	0	1
Unidentified Cheloniid	0	2	(1)	0	2 (1)
Unidentified turtle	0	0	0	1	1
Unidentified but most probably Loggerhead turtle	0	0	0	0	0
Total	2	21	3 (3)	1	27 (3)

5. Discussion

This is the most comprehensive survey of marine turtles in Northern Ireland, which has resulted in 24 new records. After a trawl of the main datasets, which might include marine turtle records from Northern Ireland, the Northern Ireland Marine Turtle database now has 36 records. Clearly marine turtles occur more regularly in Northern Irish waters than had been previously reported.

Although a significant increase, it is still not possible to carry out an extensive analysis in isolation from the large body of data for the south of Ireland. However, these data do allow some preliminary interpretation of the distribution and seasonal occurrence of turtles in Northern Ireland.

Marine turtles in Northern Irish waters

Two of the five species of marine turtle recorded in European waters have been recorded in Northern Ireland, however, the vast majority of turtle records are of Leathery turtles. Leathery turtles occur mainly in the summer months especially in July and August. They are distributed throughout inshore waters with equal number of records in Counties Antrim and Down. On nine occasions (24%), the informants noted the presence of abundant jellyfish when they observed the turtle. This is to be expected as recent studies have shown that jellyfish "hotspots" strongly influence the broad-based distribution of Leathery turtles (Houghton *et al.* 2006).

Possible migration routes for turtles in Northern Irish waters

Leathery turtles appear to converge off Malin Head and Inishtrahull, Co Donegal (King 2005) and one might expect that higher numbers than has been recorded would continue in an easterly direction following the Antrim coastline before reappearing off the Western Scottish seaboard and in the Solway Firth. The scarcity of records for Antrim waters could suggest that the majority of Leathery turtles turn westwards at Malin Head/Inishtrahull or swim north on the strong flood tide easterly to pass closer to the Isle of Islay and the Mull of Kintyre before reappearing in the Firth of Clyde and the Solway Firth. The available Scottish data (Langton *et al.* 1996, Penrose 2002, 2003, 2004, 2005, Penrose and Gander 2006) lends support to the latter hypothesis, but equally turtles may diverge at Malin Head and begin the migration south in both directions, west along the Donegal coast and east passing down the North Channel into the North Atlantic, hugging the shallow Rhinns of Galloway coastline into Luce Bay and the Solway Firth and along the Cumbrian coastline.

That said, very little is known about migration routes (if any) of Leathery turtles around the British and Irish islands apart from King (2005) who showed a westerly movement of turtles off the coast of Counties Waterford and Cork. This culminating in the well-reported westerly passage of Leathery turtles off Cape Clear Island, Co Cork between July and September.

In an effort to explain the low numbers of Leathery turtle numbers off Co Derry and Antrim compared with Co Donegal and Scottish inshore waters from the Firth of Clyde down to the Solway Firth, a survey was carried out during September and October 2006. During this survey the islands of Islay, Gigha, Arran and the Kintyre peninsula were visited. This survey brought to light about 25 previously unrecorded occurrences of turtles, most of which were Leathery turtles. Of these records, six were from Islay and the remainder are from the Firth of Clyde and the inner Scottish Hebrides, north of Islay. All these records will be passed on to Scottish Natural Heritage and the Marine Environment Monitoring database in due course.

The confluence of extremely strong tides and currents that extend up to 10 miles off the Rhinns of Islay might perhaps inhibit the inshore movement of Leathery turtles at certain times during the day. In the authors' view the low number of Leathery turtles recorded for Counties Derry and Antrim, the inshore waters of Islay, the Sound of Jura and the Kintyre peninsula, would suggest that the movement of this species in the Northwestern approaches is more likely to be mid-way between Malin Head, County Donegal and the Oa of Islay and on through the narrow entrance to the North Channel between Rathlin Island and the Mull of Kintyre into the Clyde and further afield.

Threats to turtles in Northern Irish waters

It is difficult to identify threats and suggest possible mitigation measures for marine turtles in Northern Irish waters as little is known about their ecology. Clearly fishing is potentially a significant threat to individuals. At least three types of fishing gear were implicated in catching turtles in Northern Irish waters during this study. Lobster pots, drift nets and mid-water trawls have all incidentally captured turtles. However there are many reports elsewhere of turtles being released alive from fishing gear (Langton *et al.* 1986, Penhallurick 1990, Penrose 2002, 2003, 2004, 2005, Penrose and Gander 2006, King 2005) so the actual level of mortality is less than the numbers captured.

Having spoken to many fishermen in Ireland, north and south, over the years it is the authors' experience that fishermen continue to go to great lengths, often at great personal risk, to release without harm turtles incidentally caught in nets and ropes. This often requires cutting and/or damaging gear in the process.

6. Recommendations

1. Information about marine turtles should be disseminated to a general audience in Northern Ireland. To that end it is recommended that the UK Turtle Code, together with the shortened laminated version be used (Appendix III). These documents were published by the Marine Turtle Species Action Plan Implementation Group (TIG).
2. Records of marine turtles, both alive and dead, should be collected and added to the Northern Ireland Marine Turtle database.
3. When possible post-mortem examination of dead turtles should be carried out to determine the cause of death and other lesions, and incidence of plastic debris in the stomachs of marine turtles.
4. Identifying the breeding sites of turtles that occur in Northern Irish waters is essential to ensure the population can be monitored and maintained.

7. Acknowledgements

I would like to thank Simon Berrow for his assistance with the data analysis and presentation, Janelle Atkinson for typing in the Northern Ireland records and preparing reports of the data and Sheila Downes for producing the map. The present study was made possible with funding from the Environment and Heritage Service, Department of the Environment (Northern Ireland) (EHS Reference CON 2/4 (54)).

8. References

- Brongersma, L.D. (1972) *European Atlantic Turtles*. Zoologische Verhandelingen, No. 121, Leiden, Netherlands.
- Houghton, J.D.R., Doyle, T.K., Wilson, M.W., Davenport, J. & Hays, G.C. (2006) Jellyfish aggregations and leatherback turtle foraging patterns in a temperate coastal environment. *Ecology* 87(8); 1967-1972.
- King, G.L. (1984) *Provisional list of the occurrence of the Leathery turtle, Dermochelys coriacea (L.) for the British Isles since 1971. (Occurrences after those listed by L.D. Brongersma. European Atlantic Turtles, Leiden, 1972)*. Unpublished manuscript.
- King, G.L. (2005) *Records of Marine Turtles in Irish Waters, personally communicated in the course of a study carried out between 1985 and 1994*. Unpublished report.
- Langton, T.E.S., Beckett, C.L. King, G.L. & Gaywood, M.J. (1996) *Distribution and status of marine turtles in Scottish waters. Scottish Natural Heritage Research, Survey and Monitoring Report, No. 8*.
- O’Riordan, C.E. (1972) Provisional list of cetacea and turtles stranded or captured on the Irish coast. *Proceedings of the Royal Irish Academy* 72(15): 253-274.
- Penhallurick, R.D. (1990) *Turtles off Cornwall, the Isles of Scilly and Devonshire*. Pengwella, Truro.
- Penrose, R.S. (2002) UK & Eire Marine Turtle Strandings and Sightings Annual Report 2001. Marine Environmental Monitoring, Cardigan, Wales.
- Penrose, R.S. (2003) UK & Eire Marine Turtle Strandings and Sightings Annual Report 2002. Marine Environmental Monitoring, Cardigan, Wales.
- Penrose, R.S. (2004) UK & Eire Marine Turtle Strandings and Sightings Annual Report 2003. Marine Environmental Monitoring, Cardigan, Wales.
- Penrose, R.S. (2005) UK & Eire Marine Turtle Strandings and Sightings Annual Report 2004. Marine Environmental Monitoring, Cardigan, Wales.
- Penrose, R.S. & Gander, L.R. (2006) UK & Eire Marine Turtle Strandings and Sightings Annual Report 2005. Marine Environmental Monitoring, Cardigan, Wales.
- Stendall, J.A.S. (1945) Loggerhead turtle in the Bann. *Ir. Nat. J.* 8: 307-308.

Appendix I: Images used to validate records

Leathery turtles at sea.

Note bottom image resembles an 'upturned boat or currach'.



Photos courtesy of Dick Brennan



Photo courtesy of John Coveney

Appendix II: Edited version of the Northern Ireland Marine Turtle Database

Record ID	Species	King 2005	MEM	Month	Year	Dead /Alive	County	Grid Reference
NIRL001	Ude	Ude 6			unknown	Alive	Down	IJ 33910 10736
NIRL002	Uch					Dead	Antrim	IC 84553 40686
NIRL003	Uni	Uni 18	T1926/01		1926 c.	Alive	Antrim	ID 13992 53390
NIRL004	LOG		T1945/04	August	1945	Alive	Derry	IC 77504 37034
NIRL005	Uni				c. 1954	Alive	Antrim	ID 34518 19576
NIRL006	LBT				mid 1950's	Alive	Derry	IC 68331 40631
NIRL007	LBT	De274	T1967/03	Summer	1967	Alive	Down	IJ 61024 40448
NIRL008	LBT			September	c. 1970	Alive	Down	IJ 52505 33772
NIRL009	LBT			August	1976	Alive	Down	IJ 63245 37878
NIRL010	LBT			June/July	1984/1986	Alive	Antrim	ID 05432 46503
NIRL011	LBT			Summer	1988	Alive	Down	IJ 57940 27361
NIRL012	LBT	De 325			1989 (pre)	Dead	Antrim	ID 13169 67127
NIRL013	Uni			Summer	1989	Alive	Down	IJ 81155 47578
NIRL014	LBT	De 379	T1990/69	July	1990	Alive	Antrim	IC 86892 44010
NIRL015	LBT		T1991/07	July-August	1991	Alive	Antrim	ID 11733 54013
NIRL016	Uch	Uch 34		November	1991	Dead ?	Antrim	ID 01015 44753
NIRL017	UNI		T1992/01	February	1992	Alive	Antrim	ID 03960 51741
NIRL018	LBT			Summer	1992	Alive	Antrim	IC 87770 43360
NIRL019	Uni			August	1994/1995	Alive	Antrim	ID 25533 27382
NIRL020	LBT			September	1994	Alive	Antrim	ID 55926 30598
NIRL021	LBT			July	1995	Alive	Antrim	IC 87003 43429
NIRL022	LBT			August	1995	Alive	Down	IJ 65346 69362
NIRL023	LBT			July	1997/1998	Alive	Derry	IC 82061 41979
NIRL024	LBT		T1997/24	September	1997	Alive	Antrim	ID 46423 03030
NIRL025	LBT			July/August	1997/1998	Alive	Down	IJ 60062 46395
NIRL026	LBT			Summer	c. 1999	Alive	Down	IJ 61101 83946
NIRL027	LBT	De 7*		late June – beg. Aug.	1999	Alive	Derry/ Donegal	IC 70567 44246
NIRL028	LBT			August	2000	Alive	Antrim	ID 17597 48981
NIRL029	LBT			August	2000	Alive	Down	IJ 53167 25699
NIRL030	LBT			October	2000	Dead	Down	IJ 63110 85336
NIRL031	LBT		T2001/25	October	2001	Dead	Down	IJ 38484 11543

Record ID	Species	King 2005	MEM	Month	Year	Dead /Alive	County	Grid Reference
NIRL032	LBT			c. May	2001	Alive	Down	IJ 59632 49679
NIRL033	LBT			May/June	2002	Alive	Down	IJ 87439 62253
NIRL034	LBT			July/August	2001	Alive	Derry	IC 81522 39507
NIRL035	Ude			July	2004	Alive	Down	IJ 60427 47995
NIRL036	LBT		T2005/87	July	2005	Alive	Antrim	ID 43125 06541

Notes:


King 2005: refers to record-id in King (2005) reference

MEM: refers to Marine Environmental Monitoring reference

* De7 from King (2005) from survey conducted at Wicklow Harbour from June

– August 2004, not main record

Appendix III: Marine Turtle Code and associated information



The United Kingdom Turtle Code

Advice for sea users on how to deal with marine turtle encounters

As a sea user, you can help in the effort to protect endangered marine turtles by providing information about your encounters with these spectacular creatures in UK waters.

MARINE TURTLES ARE LEGALLY PROTECTED
 There is no offence if turtles are caught accidentally in fishing gear. Nor is it an offence to help turtles if entangled or stranded, or temporarily to hold dead turtles for later examination by experts.

However, marine turtles are protected in Britain. This means that:

- turtles may not be deliberately killed or caught
- live turtles may not be landed unless for the purpose of tending them or enabling their subsequent release
- dead turtles or shells obtained from turtles in UK waters may not be possessed unless the animal was lawfully acquired
- turtles and their derivatives may not be sold or offered for sale without UK government permission unless they are antiques acquired before 1st June 1947 (with documented proof)
- turtles and their derivatives may not be imported or exported without UK government permission

The following legislation pertains to marine turtles:

- Wildlife and Countryside Act (1981, as amended)
- Conservation (Natural Habitats, &c.) Regulations (1994)*
- Control of Trade in Endangered Species (Enforcement) Regulations (1997)
- Council Regulation (EC) No. 338/97

* transposes EC Habitats Directive 1992 to domestic legislation

PLEASE REPORT ALL ENCOUNTERS

ENGLAND/WALES ALL RECORDS Rod Penrose, Marine Environmental Monitoring 01348 875000 (24 hrs) www.strandings.com LIVE STRANDINGS/ ENTANGLEMENTS RSPCA 08705 555999	SCOTLAND ALL RECORDS Dr Martin Gaywood, Scottish Natural Heritage 0131 4474784 DEAD STRANDINGS Bob Reid, Scottish Agricultural College 01463 243030/ 07979245 893 LIVE STRANDINGS/ ENTANGLEMENTS SSPCA 0131 3390111	N. IRELAND ALL RECORDS Lynne Rendle, Ulster Museum & Botanical Gardens 02890 383144 LIVE/DEAD STRANDINGS / ENTANGLEMENTS Ian Irvine, Portrush Countryside Centre 02870 823600 07770 570350 (24 hrs)
--	--	--

This code is available online at www.mcsuk.org

RECORD THE FOLLOWING DETAILS

All information is valuable, but the following details are particularly useful:

- **A description** of the turtle (alive or dead), identification of species (at least to leatherback/hard-shelled level) and overall straight length. Note any damage e.g. cuts, scars
- **Location** (longitude & latitude/ OS grid reference), date and time of sighting
- **Other observations**, such as turtle's behaviour, whether caught in fishing gear (including exact nature of entanglement, gear involved) etc
- **Presence of tags**. Many conservation projects place plastic or metal tags on turtles' flippers, which display identification numbers and a return address. Record any tag details if this can be done without causing disturbance to the turtle

Please report all dead turtles, even if they have to be discarded at sea. Records from diaries or logbooks, however old, are also of interest.

WHAT TO DO IF YOU FIND A SICK OR ENTANGLED TURTLE

Immediately report the turtle to the relevant contact. Marine turtles will drown if trapped underwater. However, prompt action can save them. A turtle that is entangled or trapped is likely to be stressed. Large turtles deliver a serious bite and a blow from a flipper can be painful, so be careful. Due to possible health risks involved in handling turtles, always wear rubber gloves.

TURTLES ENTANGLED AT SEA

Approach calmly and cautiously and ensure first of all that the turtle's head is above water so that it can breathe if it is alive.

ALIVE

AVOID TOWING TURTLES TO SHORE. THEY SHOULD BE DISENTANGLED AND RELEASED AT SEA WHENEVER POSSIBLE

Alert & active

- Do not use a gaff to pull the turtle alongside and do not haul leatherbacks aboard
- Avoid pulling hard on the turtle's flippers as they may dislocate or break
- Carefully disentangle the turtle, making sure that as much net and line as possible has been removed before the animal is released
- Make sure that the vessel is stopped and out of gear before carefully sliding the turtle back into the water
- Ensure that the turtle is clear of the vessel before moving away

ONLY if disentanglement at sea is impossible should the turtle be brought ashore
 Tow leatherbacks very slowly and make sure the animal's head is above water so that it can breathe. Release leatherbacks in shallow water, not on land. Other species should be retained and reported.

TURTLES STRANDED ON LAND

Leatherback turtles
 Leatherbacks found stranded on beaches are usually very weak, dead or dying, but might still be saved.

If apparently uninjured:

- Carefully drag the turtle back to the sea and release it (enlist the help of several people and pull the shell rather than the flippers).
- Do not drag the animal over rocks, as this will cause severe damage.
- If stranded on rocks, it may be better to wait for the incoming tide to provide some buoyancy before dragging the turtle back to sea.

Other species (hard-shelled)
 Loggerhead, Kemp's ridley, green and hawksbill turtles encountered on UK shores are usually cold stunned juveniles and should not be placed back in the sea.

- Wrap the turtle in a towel soaked in seawater, do not cover the nostrils
- Place the animal in a sheltered and secure place on its belly. If inactive, raise the back end of the shell so the turtle is resting at approximately 30° to drain the lungs. Report the turtle as soon as possible.

Dead turtles of all species are valuable for research and should be reported as soon as possible. Fresh specimens should be preserved in a cold store where possible. These animals will undergo a full post-mortem examination within the DEFRA-funded UK Cetacean and Turtle Strandings Project.

Traumatised/inactive

(no or slight movement, limbs flexible and limp, no decomposition)

Severely traumatised hard-shelled turtles can be saved if they are small enough to fit on your boat

- Wrap the turtle in a towel soaked in seawater. Do not cover the nostrils
- Place the animal in a sheltered and secure place on its belly. To drain the lungs, raise the back end of the shell so the turtle is resting at approximately 30°. Keep it in this position until you return to shore
- Leatherbacks should **not** be hauled aboard. If inactive, they can be towed to shore very slowly, ensuring they are able to breathe at all times

DEAD

There may be serious health risks involved in handling dead turtles. Inexperienced individuals are advised not to touch them. Where possible, record the details listed above and, only if the specimen is fresh, bring it back to shore and place in cold storage. Always wear rubber gloves when handling turtles.



Marine turtles in the UK

Endorsed by

DEFRA

Department for
**Environment,
Food & Rural Affairs**

SEAFISH

Of the world's seven marine turtle species, five have been recorded in UK waters. They are the leatherback, loggerhead, Kemp's ridley, green and hawksbill turtles. The leatherback, the largest marine turtle, is the species most frequently recorded in UK waters. Leatherbacks have a flexible, leathery shell and are unique among reptiles in that they are able to metabolically raise their body temperature above that of their immediate environment, allowing them to survive in colder waters. Each summer leatherbacks migrate from tropical nesting beaches to UK waters where they feed on jellyfish. The other four species have hard shells and are less frequently encountered in UK waters, where they usually occur as stray juveniles carried by currents from warmer seas.

LEATHERBACK TURTLE

(*Dermochelys coriacea*)

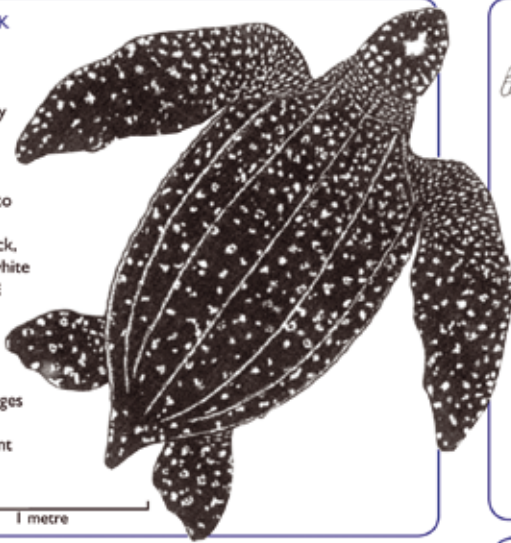
Most frequently recorded species in UK waters

LENGTH: up to 2.91 metres

COLOUR: black, spotted with white

DISTINCTIVE FEATURES: large, up to 916 kg, pronounced longitudinal ridges on shell, which tapers to a blunt spike

SCALE 1 metre



KEMP'S RIDLEY TURTLE

(*Lepidochelys kempi*)

LENGTH: up to 1 metre, but usually juveniles (0.3-0.5 metres) occur in UK waters

COLOUR: grey/olive

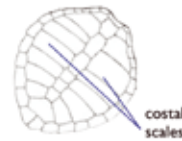
DISTINCTIVE

FEATURES: shell width equal to or greater than shell length.

8 pores visible on underside (4 either side)



NB: The olive ridley turtle (*Lepidochelys olivacea*) occurs in the Atlantic, but has not been recorded in UK waters to date. Similar to Kemp's ridley with 8 pores on underside, but has 5-9 pairs of costal scales on shell.



GREEN TURTLE

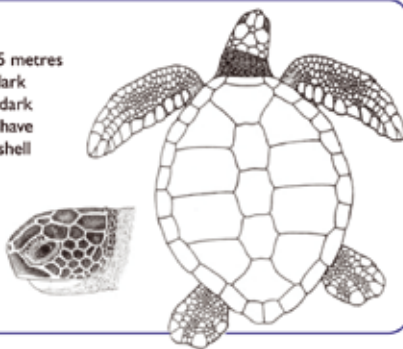
(*Chelonia mydas*)

LENGTH: up to 1.5 metres

COLOUR: adults dark olive or grey with dark blotches, juveniles have chestnut coloured shell

DISTINCTIVE

FEATURES: smooth shell, rounded (not angular) facial profile



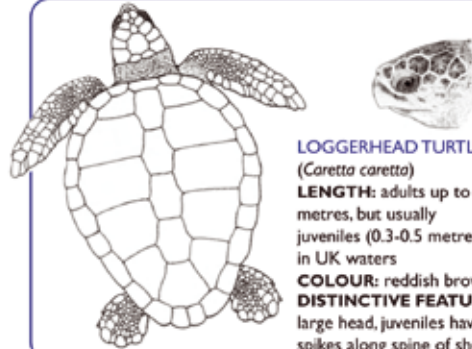
LOGGERHEAD TURTLE

(*Caretta caretta*)

LENGTH: adults up to 1.5 metres, but usually juveniles (0.3-0.5 metres) occur in UK waters

COLOUR: reddish brown

DISTINCTIVE FEATURES: large head, juveniles have small spikes along spine of shell



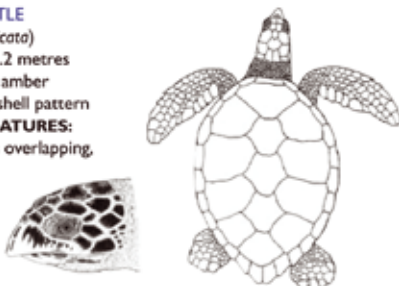
HAWKSBILL TURTLE

(*Eretmochelys imbricata*)

LENGTH: up to 1.2 metres

COLOUR: brown, amber and black tortoiseshell pattern

DISTINCTIVE FEATURES: central shell scales overlapping, narrow tapered head with bird-like beak



MARINE TURTLES ARE ENDANGERED

In UK waters threats include:

- **Marine litter**, especially plastic, which turtles mistake for jellyfish. Once ingested, plastic can block a turtle's gut leading to starvation
- **Boat collisions**. Turtles often bask and must surface regularly to breathe, leaving them vulnerable to boat strike
- **Entanglement in fishing gear**. Although turtles can dive to great depths, they become stressed and drown when trapped underwater by fishing gear. Fishing gear discarded at sea may also entangle and kill turtles

PLEASE DO NOT DISCARD FISHING GEAR AT SEA

Illustrations are taken, with permission, from: Eckert, K.L., K.A. Bjornisd, FA.Abreu-Grobois, and M. Donnelly (Editors), 1999. Research and Management Techniques for the Conservation of Sea Turtles. IUCN/SSC Marine Turtle Specialist Group Publication No. 4.

THIS DOCUMENT WAS PRODUCED BY THE MARINE CONSERVATION SOCIETY (MCS), WITH SUPPORT FROM ENGLISH NATURE, THE ENVIRONMENT AND HERITAGE SERVICE AND C&G Cheltenham & Gloucester





Our aim is to protect, conserve and promote the natural and built environment for the benefit of present and future generations.

Environment & Heritage Service
Klondyke Building
Gasworks Business Park
Lower Ormeau Road
Belfast

www.ehsni.gov.uk

ISSN No. 1367-1979 (Print)
ISSN No. 1751-7796 (Online)

printed on 100% post-consumer waste



An Agency within the Department of the
Environment
www.doeni.gov.uk



INVESTOR IN PEOPLE