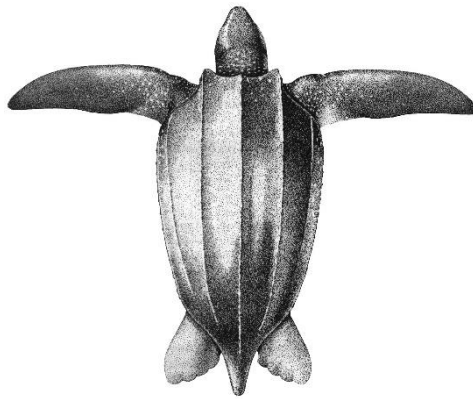


www.strandings.com

British & Irish Marine Turtle Strandings & Sightings Annual Report 2020

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1. SUMMARY

A total of 14 live and dead marine turtles were reported to TURTLE during 2020.

One Kemp's ridley turtle; 9 leatherback turtles; 1 loggerhead turtle; 1 green turtle and 2 unidentified hard-shell species.

Covid-19

Although there appears to be a declining trend in marine turtle sightings and strandings over the years, it is thought that a contributing factor to the low numbers of marine turtles reported throughout 2020 may be as a result of the restrictions imposed on the public with the vast majority adhering to UK and Irish government 'stay at home' advice during lockdowns.

Live stranded

There was 1 live stranded turtle reported in 2020. This was an unidentified hard-shell species in England.

Live sightings

Eight turtles were sighted alive at sea. One Kemp's ridley in England; 6 leatherbacks overall with, 1 in Scotland, 1 in England, 2 in Wales, 2 in the Republic of Ireland; 1 unidentified turtle in Wales.

Dead sightings

There were no dead sightings.

Dead strandings

A total of 5 dead turtles were reported stranded dead.

Three leatherback turtles stranded dead. One in England; 1 in Wales; and 1 in Republic of Ireland. One Green turtle stranded dead in Wales; and 1 loggerhead in Scotland.

Post mortem examination

One Kemp's ridley received a post-mortem examination within the CSIP.

One Green turtle is currently held frozen awaiting examination.

Data sharing

The TURTLE database has been adapted and uploaded to the NBN Atlas.

Repatriation

Loggerhead turtle T2019/01 will hopefully be released in the Canaries by June 2021.

TURTLE record totals

The current total of 2850 is broken down thus:

1351 Republic of Ireland; 692 England; 412 Scotland; 287 Wales; 42 Northern Ireland; 36 Isle of Man; 17 Channel Islands; 13 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**).

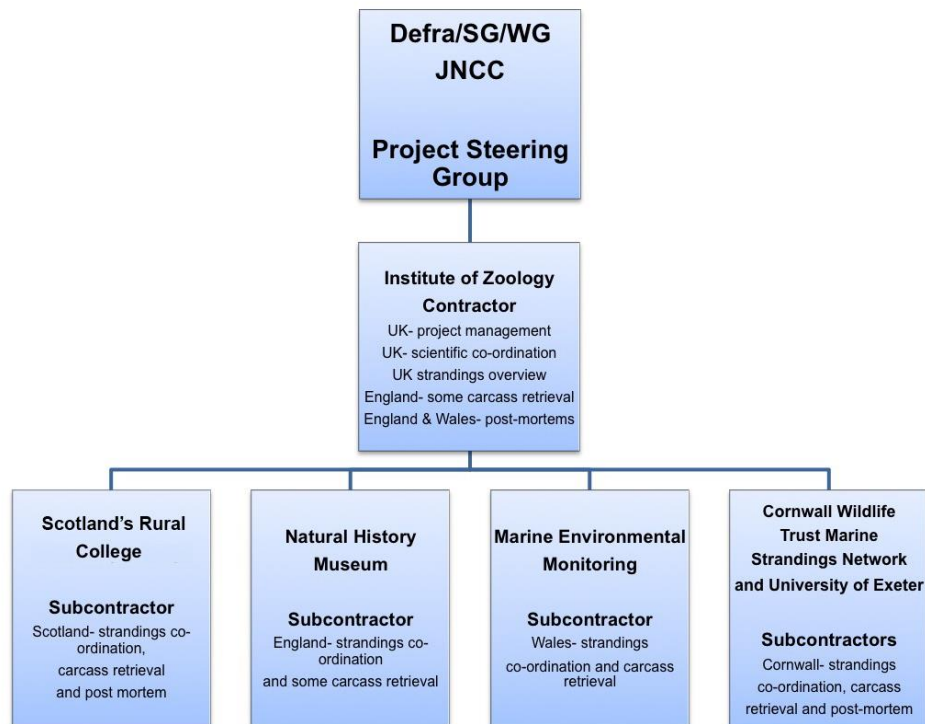


Figure 1. Current technical co-ordination of the Cetacean Strandings Investigation Programme (CSIP).

2.1 The UK Turtle Implementation Group.

Historically, 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 was part of the UK Biodiversity Action Plan and aimed 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 was 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 was Scottish Natural Heritage (SNH). The Turtle Implementation Group (TIG) now only communicate electronically and contribute to the project as a steering panel. TIG consists of the following organisations:-

¹ Formally Herpetological Conservation Trust (HCT).

- **Amphibian & Reptile Conservation Trust** is an authority on reptile and amphibian conservation issues and is an active participant in Governmental and third sector nature conservation programmes across the UK www.arc-trust.org
Contact: *Dr Karen Haysom, 01202 391319* karen.haysom@arc-trust.org
- 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: *Dr Peter Duncan, 01624 685884* peter.duncan@gov.im
The Manx Wildlife Trust also record strandings on behalf of DEFA.
Contact: *Dr Lara Howe on 01624 844432.* lara@manxwt.org.uk
- The **Department of Agriculture, Environment, and Rural Affairs (DAERA) Marine & Fisheries Division** is responsible for protecting the marine environment while maximising the sustainable use of its resources, now and for future generations.
Contact: *Dr Liz Pothanikat, 028 905 69421.* Liz.Pothanikat@daera-ni.gov.uk
- **Joint Nature Conservation Committee (JNCC)** is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation.
Contact: *Kelly Macleod, 01224 266584*
- **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: *Dr Peter Richardson, 01989 566017*
- **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 & Irish database holding both records of sightings and strandings of marine turtles dating back to 1748.
Contact: *Rod Penrose, (Reporting telephone No. 01239 683033)* rodpenrose@strandings.com or *Mat Westfield* mat.westfield@strandings.com
- **Marine Turtle Research Group** is based at the University of Exeter, Cornwall Campus and carries out fundamental and applied research on marine turtles in British waters, the Mediterranean, West Africa and throughout the UK Overseas Territories.
Contacts: *Prof Brendan Godley & Prof Annette Broderick 01326 371 861* B.J.Godley@exeter.ac.uk
- **MEDASSET**, founded in 1988, is an international environmental NGO registered as a Non Profit Organisation 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* medasset@medasset.org
- **National Parks and Wildlife Service (NPWS)**, part of the Department of Housing, Local Government and Heritage, 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* ferdia.marnell@chg.gov.ie
- **Natural England (NE)** is the Government agency that champions the conservation of wildlife and natural features throughout England.
Contact: *Tim Bernhard, 07775 026622* tim.bernhard@naturalengland.org.uk
- **Natural Resources Wales (NRW)** is the largest Welsh Government Sponsored Body. Formed in April 2013, it took over the functions of the Countryside Council for Wales, Forestry Commission Wales and the Environment Agency in Wales, as well as certain Welsh Government functions. Its purpose is to pursue sustainable management of natural resources. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.
Contact: *Dr Tom Stringell, 03000 653000* tom.stringell@cyfoethnaturiolcymru.gov.uk
- **NatureScot** is Scotland's nature agency providing advice to Scottish Government. NatureScot promotes the care, improvement, responsible enjoyment, understanding, appreciation and sustainable use of Scotland's natural heritage.
Contact: *Marine Monitoring Team, MPA@nature.scot 01463 725 018*
- **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
- **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** *Dr Tom Doyle*, School of Biological, Earth & Environmental Sciences. Sightings & strandings can also be reported online in the Republic of Ireland via the National Biodiversity Data Centre's turtle sightings page: <https://records.biodiversityireland.ie/record/sea-turtles>
Contact: *Dr Tom Doyle, 353-(0) 87 1354938 (mobile).*

3. MATERIALS AND METHODS

Contact details vary for different parts of the British Isles & Republic of Ireland and the Turtle Code (Appendix 2.) should be consulted for the relevant contacts.

In **England & Wales** a 24 hour answer phone **01239 683033**, 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.com Live strandings and entanglements should be reported to the RSPCA on **0300 1234 999** and/or British Divers Marine Life Rescue (BDMLR) **01825 765546**.

For **Scotland** all records should be reported to NatureScot on **01463 725018** with dead strandings being reported to the Scotland's Rural College (SRUC) **01463 243030**. Live strandings and entanglements should be reported to the SSPCA on **03000 999 999** and/or British Divers Marine Life Rescue (BDMLR) **01825 765546**.

For **Northern Ireland** all records of live or dead turtles should be reported to DAERA Marine and Fisheries Division on **028 905 69421** or <https://www.daera-ni.gov.uk/contacts/marine-wildlife-team>

UK turtle sightings and strandings can also be reported using the UK Turtle Code online at <http://www.euroturtle.org/turtlecode/default.htm>

In the **Republic of Ireland** all records should be reported to Dr Tom Doyle, School of Biological, Earth & Environmental Sciences, **353-(0) 87 1354938** (mobile). Sightings & strandings can also be reported online in the Republic of Ireland via the National Biodiversity Data Centre's turtle sightings page: <https://records.biodiversityireland.ie/record/sea-turtles>

On the **Isle of Man** all marine animal strandings should be reported to DEFA on **01624 685835/685884** or directly to Dr Peter Duncan **07624 300525**, or Dr Lara Howe **07624 450879**. Live animals can also be reported to British Divers Marine Life Rescue (BDMLR) **01825 765546**.

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 <http://www.strandings.com/Graphics%20active/turtlecode.pdf>

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 2020.

Table 1.

2020 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	1	1
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>)	1	0	0	0	0	0	0	0	0	0	0	0	1
Leatherback turtle (<i>Dermochelys coriacea</i>)	0	1	0	0	0	0	0	5	1	1	1	0	9
Loggerhead turtle (<i>Caretta caretta</i>)	0	1	0	0	0	0	0	0	0	0	0	0	1
Olive ridley turtle (<i>Lepidochelys olivacea</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Unidentified	0	0	0	2	0	0	0	0	0	0	0	0	2
Total animals	1	2	0	2	0	0	0	5	1	1	1	1	14

Table 2.

2020 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>)	1	0	0	0	0	0	0	0	0	0	0	0	1
Leatherback turtle (<i>Dermochelys coriacea</i>)	0	0	0	0	0	0	0	5	1	0	0	0	6
Loggerhead turtle (<i>Caretta caretta</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Olive ridley turtle (<i>Lepidochelys olivacea</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Unidentified	0	0	0	2	0	0	0	0	0	0	0	0	2
Total animals	1	0	0	2	0	0	0	5	1	0	0	0	9

Table 3.

2020 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	1	1
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	0	0	0	0	0	0	1	1	0	3
Loggerhead turtle (<i>Caretta caretta</i>)	0	1	0	0	0	0	0	0	0	0	0	0	1
Olive ridley turtle (<i>Lepidochelys olivacea</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
Unidentified	0	0	0	0	0	0	0	0	0	0	0	0	0
Total animals	0	2	0	0	0	0	0	0	0	1	1	1	5

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.

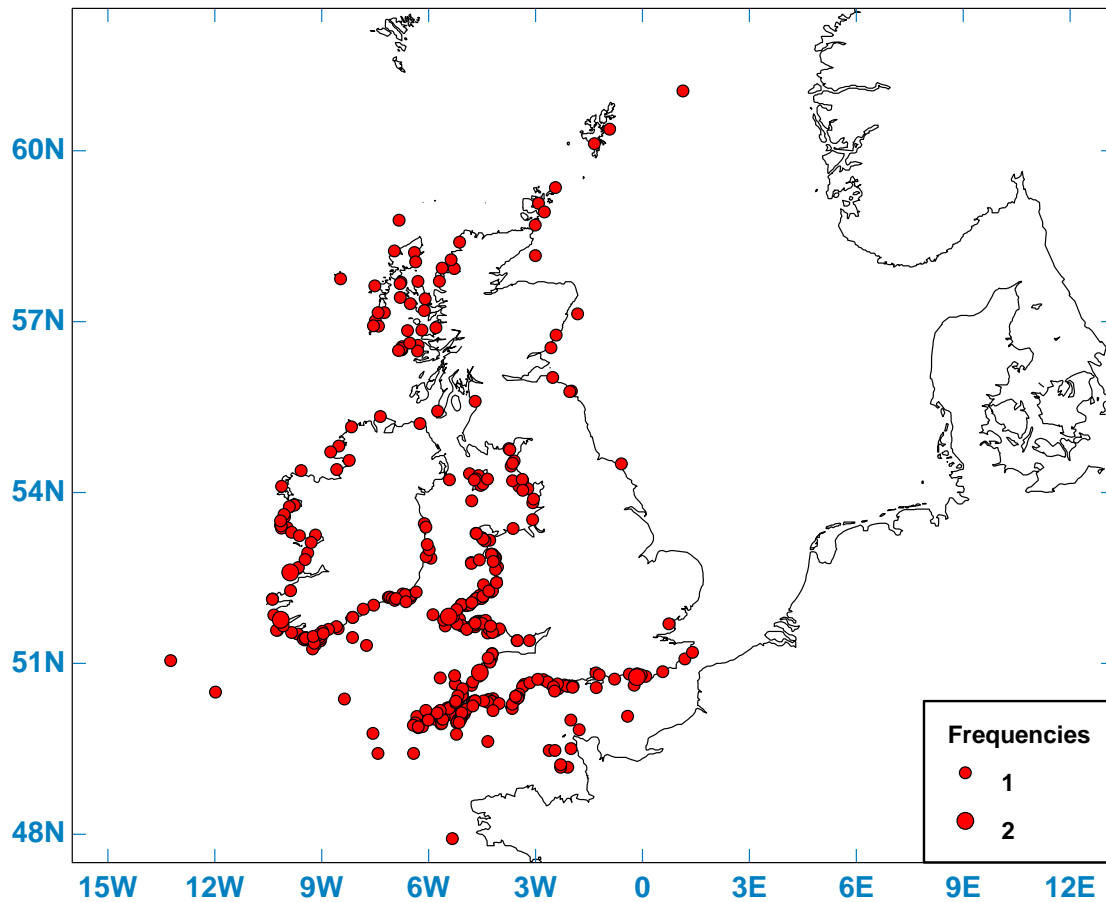


Figure 2. *All species sightings & strandings 2010-2020.*

All species, sightings & strandings over the eleven year period 2010-2020 have been plotted in **Figure 2.**

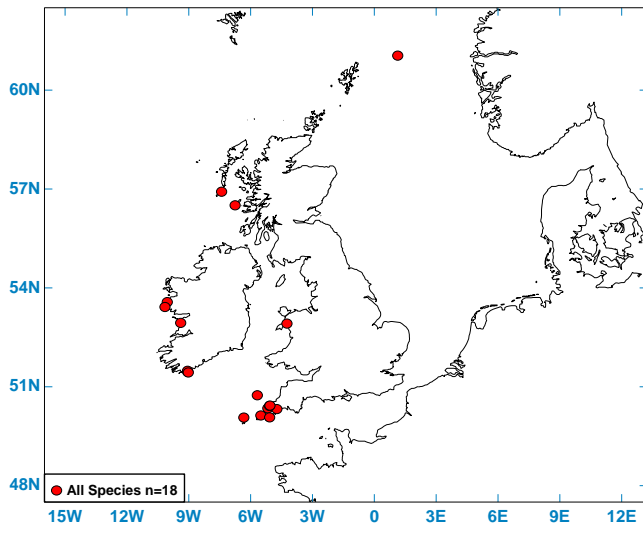


Figure 3. All species sightings & strandings 2018.

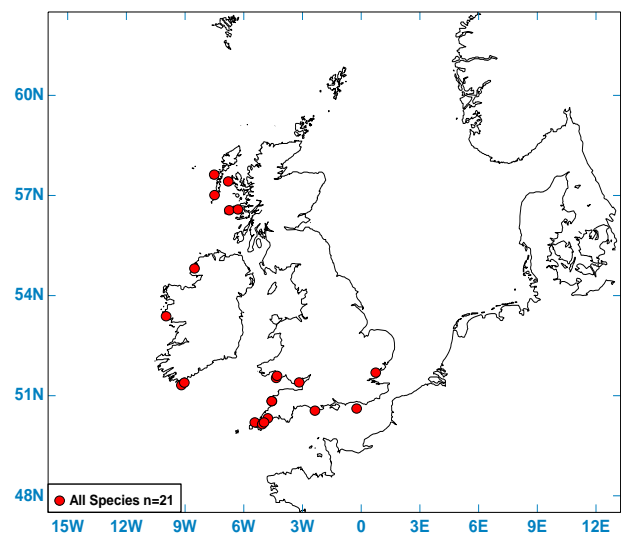


Figure 4. All species sightings & strandings 2019.

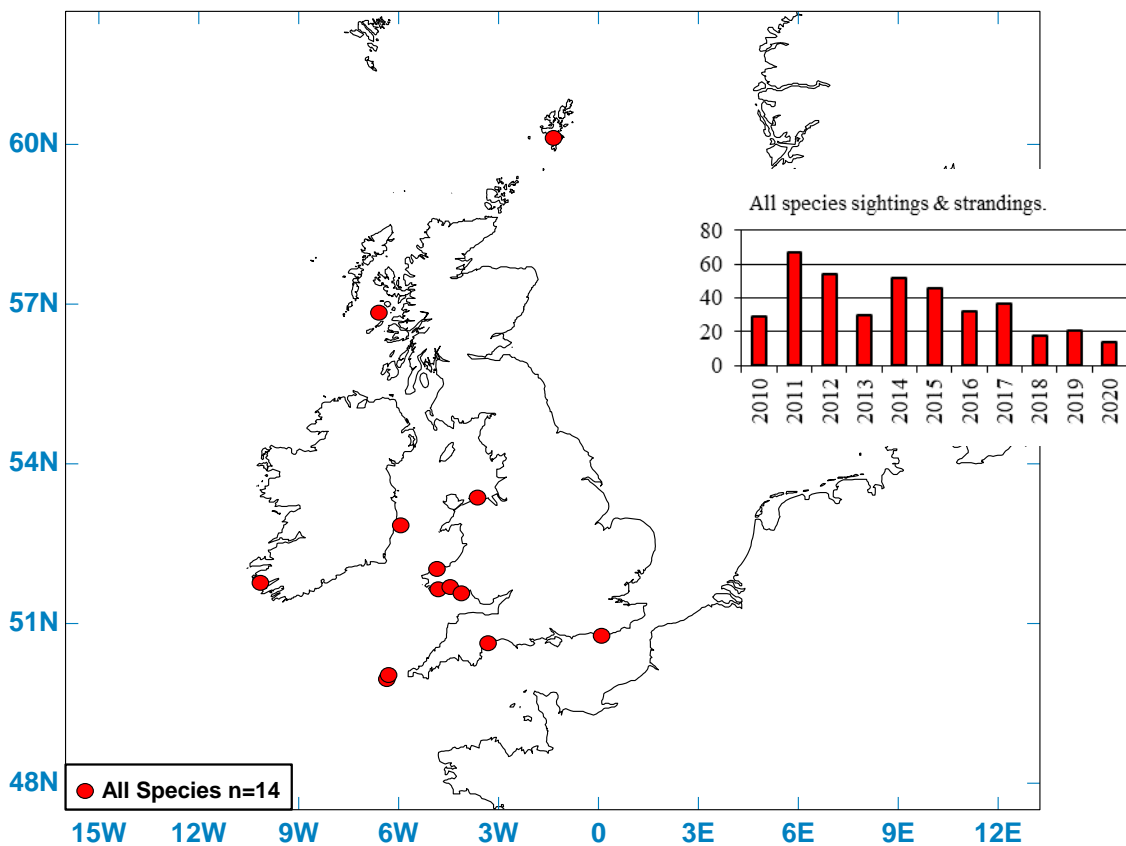


Figure 5. All species sightings & strandings 2020.

4.1 Sightings.

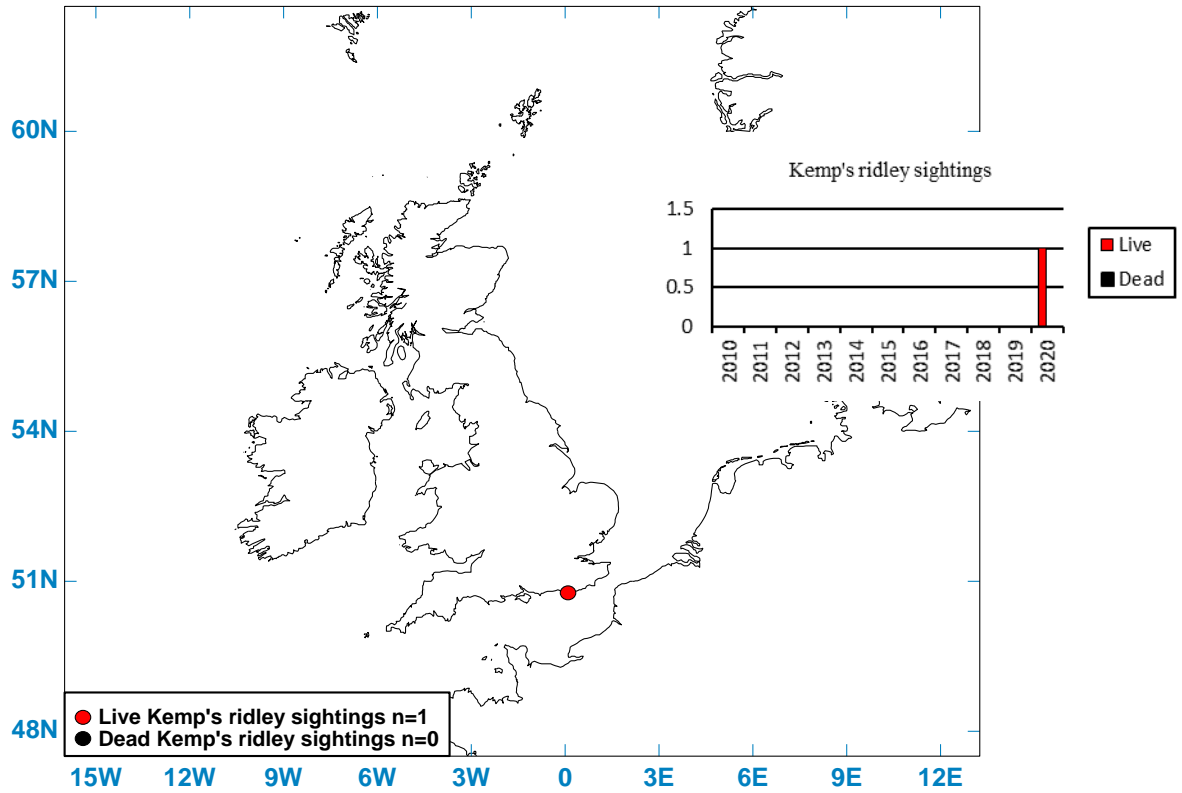


Figure 6. *Kemp's ridley sightings 2020.*

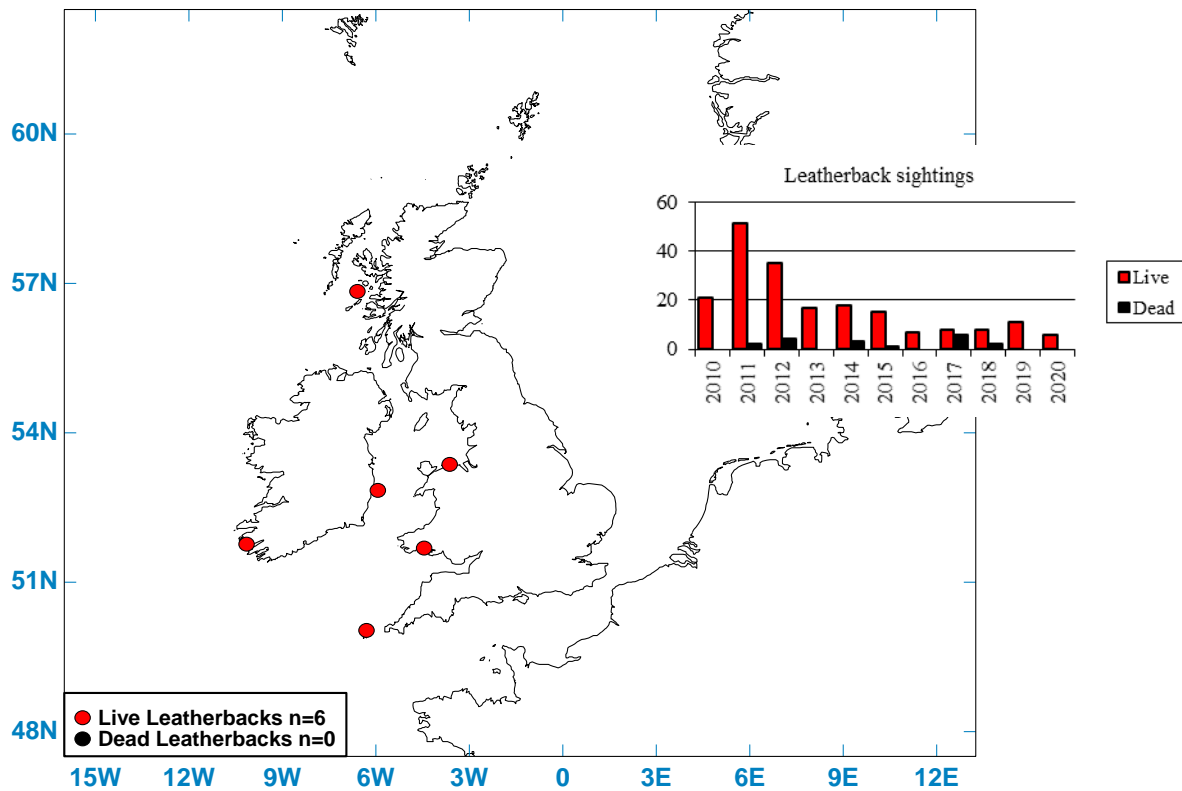


Figure 7. *Leatherback sightings 2020.*

No live or dead loggerhead sightings were reported during 2020. However, sightings of both live and dead loggerhead turtles have been recorded in recent years as shown in **Figure 8**.

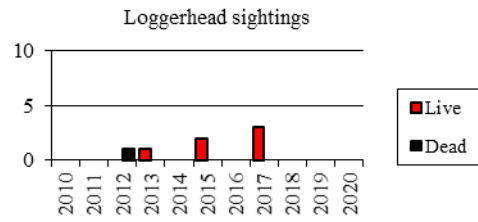


Figure 8. *Loggerhead sightings 2020.*

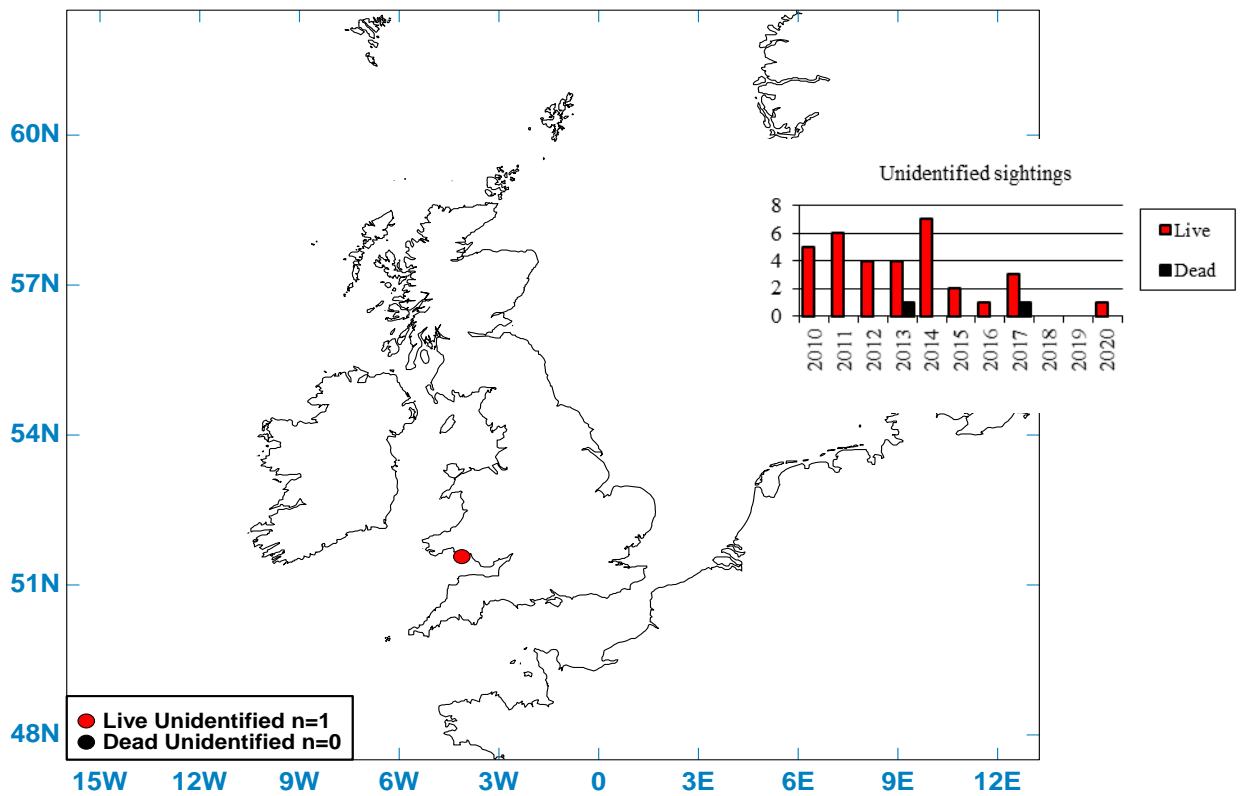


Figure 9. *Unidentified sightings 2020.*

The live Kemp's ridley sighting T2020/01 in **Figure 6**. was recovered from the sea by two swimmers off Seaford in Sussex in January. The turtle was taken to Brighton Sea Life Centre where a positive species identification was obtained, it died a few days later.

4.2 Strandings.

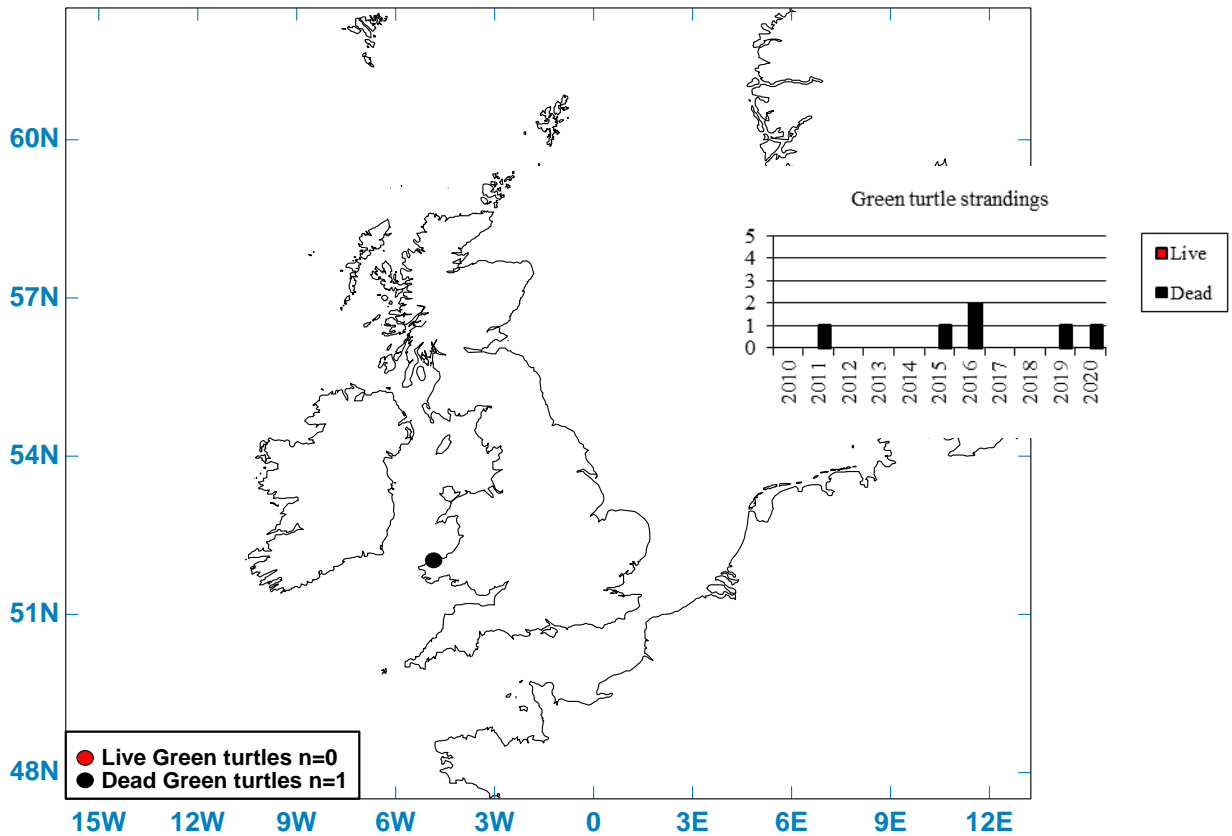


Figure 10. *Green turtle strandings 2020.*

No live or dead hawksbill turtle strandings were reported during 2020. 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 strandings were reported during 2020. However, strandings of both live and dead Kemp's ridley turtles have been recorded in recent years as shown in Figure 11.

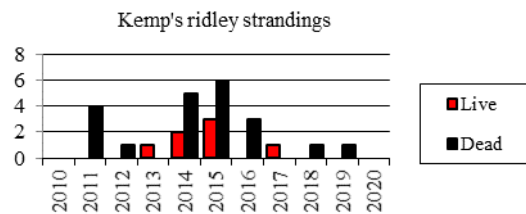


Figure 11. *Kemp's ridley strandings 2020.*

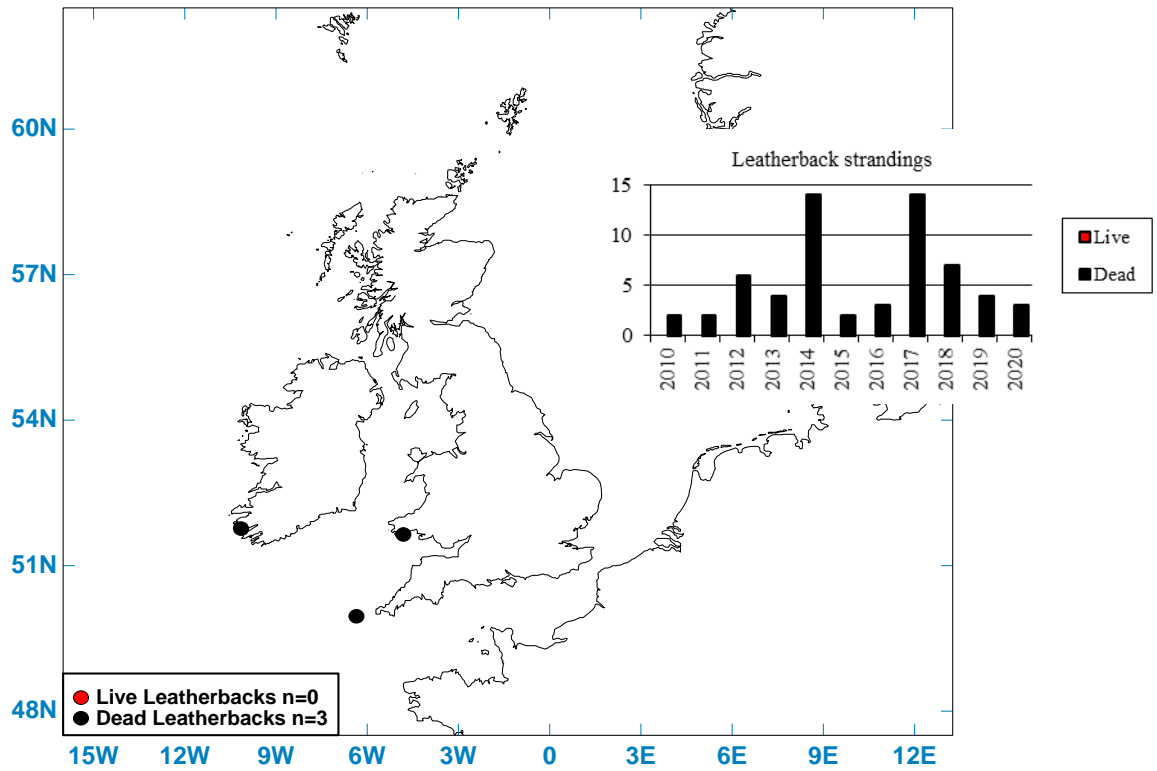


Figure 12. *Leatherback strandings 2020.*

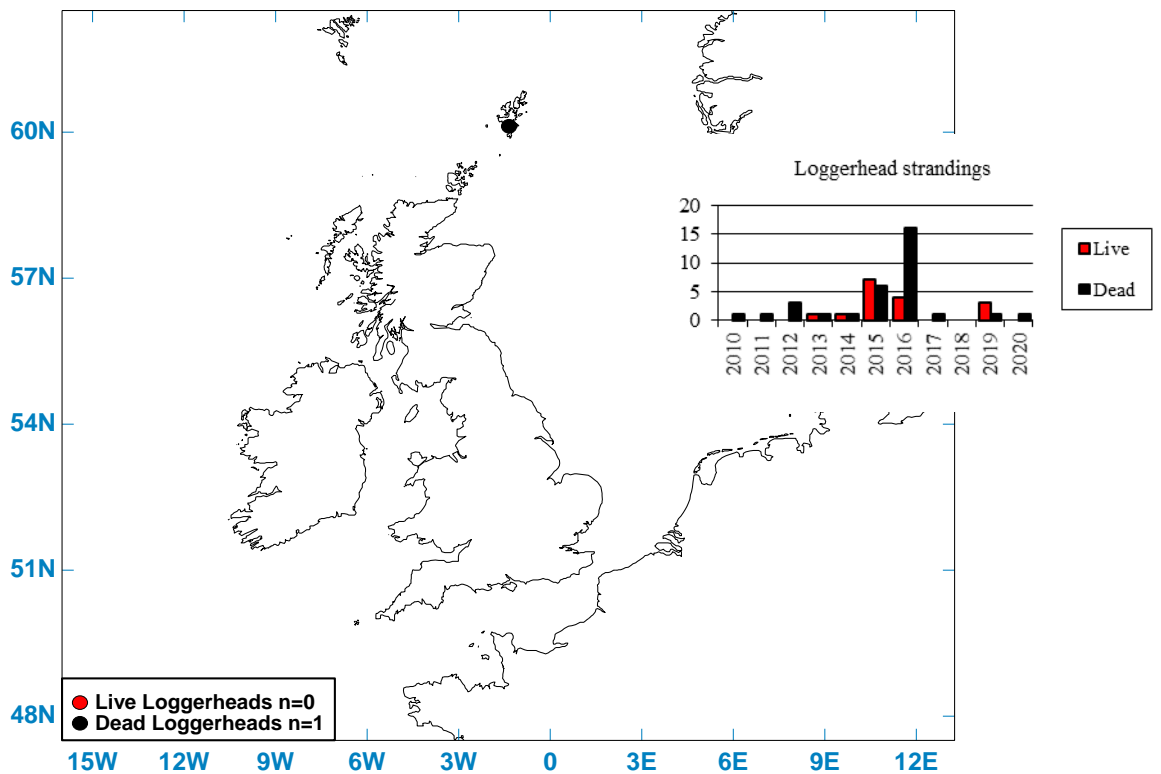


Figure 13. *Loggerhead strandings 2020.*

No live or dead olive ridley turtle strandings were reported during 2020. However, a live stranding of an olive ridley turtle was recorded in recent years as shown in **Figure 14**.

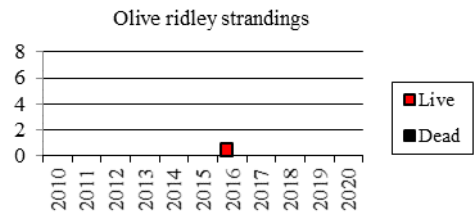


Figure 14. Olive ridley strandings 2020.

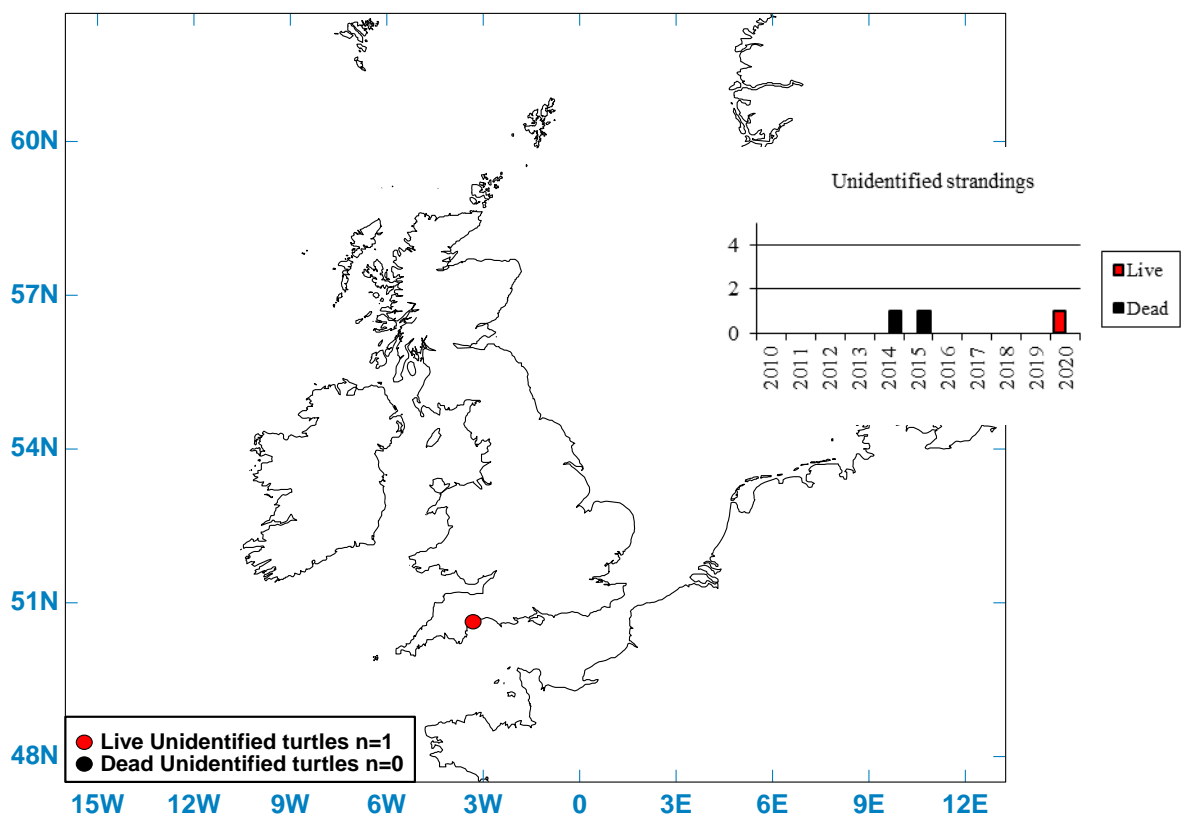


Figure 15. Unidentified strandings 2020.

The Unidentified turtle T2020/03 in **Figure 15**. was found alive entangled in fishing gear on the strandline, it was cut out and released by a member of the public, a photo was submitted but no ID could be confirmed other than it was a hard-shell species.

All leatherback strandings and sightings, both dead and alive have been plotted by month for the period 2010 - 2020 (n=283) shown in **Figure 16**. The average figure was taken over 2010-2020 and plotted in **Figure 17**. 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 & Irish coast. The records for the hard-shell species are more sporadic. Of the hard-shell species the most numerous recorded turtle over the 2010 - 2020 period is the loggerhead (n=52). The data for this species are plotted in **Figure 18** and **Figure 19**.

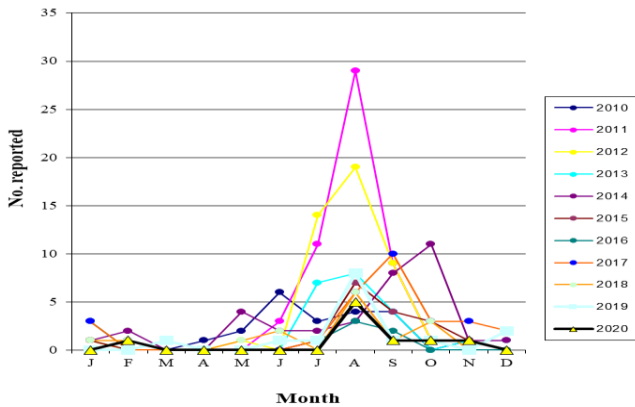


Figure 16. All leatherbacks by month.

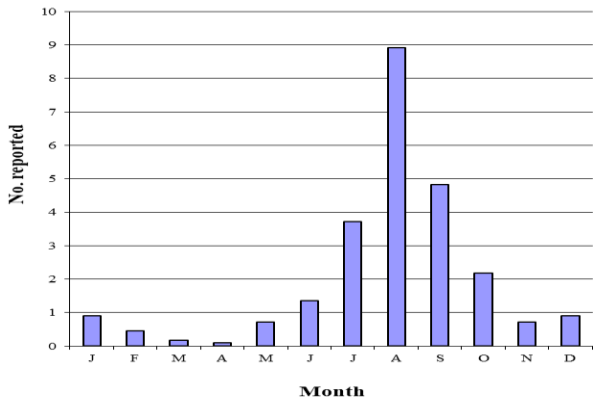


Figure 17. All leatherbacks average over 2010-2020

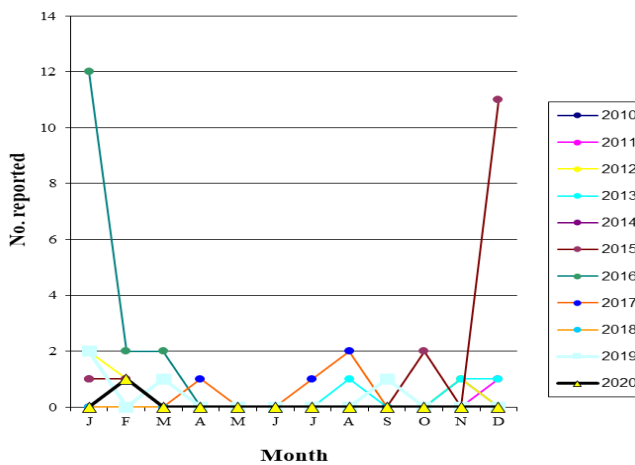


Figure 18. All loggerheads by month.

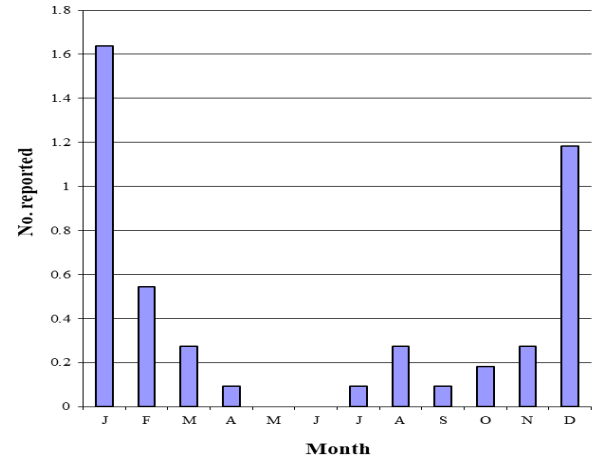


Figure 19. All loggerheads average over 2010-2020.

Table 4.

Cumulative number of records.		
Country	All Species	
	2020	1748 - 2020
Rep. of Ireland	3	1351
England	4	692
Scotland	2	412
Wales	5	287
N. Ireland	0	42
Isle of Man	0	36
Channel Islands	0	17
Offshore	0	13
Total	14	2850

The ‘Offshore’ row in **Table 4.** includes records of turtles where it is difficult to attribute a county ie, animal far from shore or nearer to Europe than UK.

Countries are listed in **Table 4.** by descending order of total number of records shown in the year **1748 – 2020** column.

Table 5.

Species Comparison.														
Country	2000 - 2010													
	2010 - 2020													
	GT	HB	KR	LBT	LOG	OR	UNI	GT	HB	KR	LBT	LOG	OR	UNI
England	1	0	0	0	5	12	160	103	31	19	0	0	55	26
Scotland	1	2	0	0	3	3	84	38	33	4	0	0	11	3
Rep. of Ireland	1	0	0	0	0	3	178	74	30	15	0	0	18	4
Wales	0	4	0	0	2	11	67	57	15	7	0	1	14	1
Channel Islands	1	0	0	0	0	1	0	2	1	2	0	0	2	0
N. Ireland	0	0	0	0	0	0	11	1	0	1	0	0	2	1
Isle of Man	0	0	0	0	0	0	15	4	0	3	0	0	4	1
Offshore	0	0	0	0	0	0	4	4	0	1	0	0	4	1
Total	4	6	0	0	10	30	519	283	110	52	0	1	110	37

GT = Green turtle, **HB** = Hawksbill turtle, **KR** = Kemp’s ridley turtle, **LBT** = Leatherback turtle, **LOG** = Loggerhead turtle, **OR** = Olive ridley turtle, **UNI** = Unidentified turtle.

Table 6.

TURTLE Database Species Totals (1748 - 2020).	
Species	TOTAL
Green turtle (<i>Chelonia mydas</i>)	15
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	1
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	69
Leatherback turtle (<i>Dermochelys coriacea</i>)	2108
Loggerhead turtle (<i>Caretta caretta</i>)	264
Olive ridley turtle (<i>Lepidochelys olivacea</i>)	1
Unidentified	392
Total animals	2850

The total records held in TURTLE are 2850 (end of 2020). However, some historical records with inadequate year data have been excluded in this report and from being uploaded to the NBN Atlas.

A breakdown of records for each country is shown in **Table 4**. However, the eleven-year comparison, 2000-2010 / 2010-2020 shown in **Table 5**, shows a marked decline in leatherback turtles recorded for most countries, this decline in sightings of LBTs is likely to be a reflection of reduced effort.

5. MATTERS ARISING.

5.1 Retrospective Reports.

No retrospective reports were received during 2020.

6. LIVE STRANDING EVENTS 2020.

Only one unidentified turtle was reported as live-stranding in 2020, this is listed below;

An unidentified hard-shelled turtle **T2020/03** in Figure 15. was found alive on the 10th April entangled in fishing gear on the strandline at Budleigh Salterton, Devon. It was cut out and released by a member of the public, a photo was submitted but no ID could be confirmed other than it was a hard-shell species.

6.1 Rehabilitation

A live Kemp's ridley **T2020/01** in Figure 6. was recovered from the sea by two swimmers on the 18th January off Seaford, Sussex. The turtle was taken to Brighton Sea Life Centre where a positive species identification was obtained, it died a few days later. The turtle was recovered by the CSIP for examination.

6.2 Repatriation.

Loggerhead turtle **T2019/01** held with Exploris Aquarium, Portaferry, Northern Ireland is currently now 16kg and Exploris are currently in the process of arranging repatriation in the Canary Islands. They are hoping to have this arranged before June 2021.

7. BYCATCH.

No turtles were reported to Marine Environmental Monitoring during 2020 as by-caught except possibly **T2020/03** which was found alive entangled in fishing gear on the shore. This could have possibly swum or drifted into discarded gear.

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.

Two turtles were recovered to the project in 2020 in a suitable condition to undergo a full post-mortem examination. These were a Kemp's ridley turtle **T2020/01** and a Green turtle **T2020/09**. These are covered in more detail below.

T2020/01 was a Kemp's ridley turtle recovered from the sea alive by swimmers on the 18th January off Seaford, Sussex and taken to Brighton Sea Life Centre where a positive species identification was obtained, it died a few days later. The turtle was recovered by the CSIP for examination where a post-mortem examination took place on the 27th January 2020. The small turtle, straight overall length 39cm, was judged to be in a negative nutritional plane and had no evidence of recent feeding. Fat deposits were poorer than those observed in other UK stranded Kemp's ridley turtles of a similar size. The cause of death was given as: Cold stunned, pending histology.



Plate 1. Kemp's ridley **T2020/01** under examination at ZSL.

Photo by: CSIP/ZSL.

T2020/09 was a Green turtle found stranded at Newport, Pembrokeshire on the 9th December. Although the carcass was headless the remains were in a very fresh condition so it was recovered by MEM for the CSIP for further investigation. Pending examination.

9. DATA SHARING.

The National Biodiversity Network (NBN) Gateway permanently closed on 31st March 2017 superseded by the NBN Atlas which went live on 1st April 2017. The TURTLE database has now been transferred to this platform having been updated to the new validation process required for the NBN Atlas.

A paper named “Long-term insights into marine turtle sightings, strandings and captures around the UK and Ireland (1910–2018)” Botterell et al. 2020 <https://www.cambridge.org/core/journals/journal-of-the-marine-biological-association-of-the-united-kingdom/article/longterm-insights-into-marine-turtle-sightings-strandings-and-captures-around-the-uk-and-ireland-19102018/6F91AE37C8EAE5C0CB143ABC18CAF03D> was produced using data from the TURTLE database. This article was published in the September issue of the Journal of the Marine Biological Association (JMBA) and also featured one of my (RSP) photographs of a green turtle on the front cover.

10. UNUSUAL OCCURRENCES.

In the early part of the year a severe acute respiratory syndrome Coronavirus (SARS Covid-19) entered the UK, the virus was thought to have originated from Wuhan in the People's Republic of China and soon became a global pandemic. Levels of infection became so high ‘lockdowns’ were implemented in countries to restrict the movement of people and thus hopefully to restrict the spread of the virus.

Although there appears to be a declining trend in marine turtle sightings and strandings over the years, it is thought that a contributing factor to the low numbers of marine turtles reported throughout 2020 may be as a result of the restrictions imposed on the public with the vast majority adhering to UK and Irish government ‘stay at home’ advice during lockdowns.

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/Wales.html
Posters and leaflets produced to increase awareness of the project have continued to be distributed.

The NBN Atlas is now be the preferred outlet for the TURTLE database.

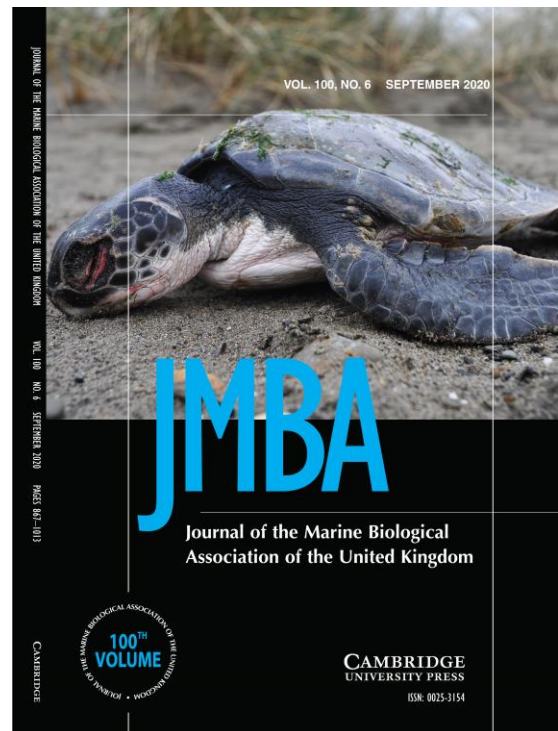


Plate 2. September issue of JMBA with article.

12. ACKNOWLEDGEMENTS.

Marine Environmental Monitoring wishes to acknowledge the following;

Cornwall Wildlife Trust, Marine Conservation Society, Dr Tom Doyle, Irish Whale and Dolphin Group (IWDG), University of Exeter's Cornwall campus, Gabriel King, Brighton Sea Life Centre, Doug Herdson and Exploris Aquarium.

Natural England, National Parks & Wildlife Service and the Welsh Government for financial support towards the British & Irish TURTLE database.

13. APPENDICES.

- Appendix 1. 2020 TURTLE data.
- Appendix 2. UK Turtle Code.
- Appendix 3. Morphometrics.

Appendix 1.

RecordKey	Species	Caught	Stranded	Live/Dead	EndDate	Country	County	Location	Notes
T2020/01	KR	SEA	ALIVE	18/01/2020	ENGLAND	SUSSEX	Off Seaford	Recovered by 2 swimmers and taken to Brighton SeaLife Centre, died 20/01/2020. To be recovered for examination by CSIP 21/01/2020. Originally reported and in press as an olive ridley.	
T2020/02	LBT	ST	DEAD	23/02/2020	WALES	PEMBROKESHIRE	Manorbier	Carapace only.	
T2020/03	UNI	ST	ALIVE	10/04/2020	ENGLAND	DEVON	Budleigh Salterton	Hardshell turtle found entangled in fishing gear on the strandline, cut out and released by a member of the public, photo submitted but no ID could be confirmed other than a hard-shell.	
T2020/04	LBT	SEA	ALIVE	06/08/2020	WALES	CONWY	off Rhos on Sea	Live leatherback observed swimming parallel to recreational angling boat.	
T2020/05	LBT	SEA	ALIVE	09/08/2020	WALES	CARMARTHEN	off three rivers Carmarthen Bay.	Video on facebook.	
T2020/06	LOG	ST	DEAD	29/02/2020	SCOTLAND	SHETLAND	Papa (uninhabited)	Shown in Shetnews on grass, not known if it hauled out or was dragged there. https://www.shetnews.co.uk/2020/08/10/turtle-remains-found-in-papa/	
T2020/07	LBT	SEA	ALIVE	06/09/2020	SCOTLAND	INNER HEBRIDES	Off the Isle of Muck	Sighted 15 miles off the isle of Muck while on an expedition on their HWDT research vessel Silurian.	
T2020/08	LBT	ST	DEAD	21/10/2020	ENGLAND	ISLES OF SCILLY	On Bryher Island by the bar	Advanced decomposition carcass found by the bar on Bryher, IoS.	
T2020/09	GT	ST	DEAD	09/12/2020	WALES	PEMBROKESHIRE	Newport beach	Headless but fresh carcass. Recovered by Mat Westfield for examination within the CSIP. Stored frozen at Llechryd.	
T2020/10	LBT	ST	DEAD	29/11/2020	EIRE	KERRY	Caherdaniel, Nr Darrynane Bay.	Advanced decomposition	
T2020/11	LBT	SEA	ALIVE	09/08/2020	EIRE	WICKLOW	at sea Arklow	Logging at surface 70m from moving vessel, then dove. ~2m in length. Dark grey carapace with 7 distinctive ridges. Absence of hard shell, scutes and scales.	
T2020/12	LBT	SEA	ALIVE	12/08/2020	EIRE	CORK	at sea Baltimore	100m away from boat. Thought it was a seal - but checked with binoculars and could see wide back (shell) with 3 distinct ridges on it. Colour: dark brown/black. Seen from whale watching boat "Liscannor Star".	
T2020/13	UNI	SEA	ALIVE	19/04/2020	WALES	SWANSEA	Off Pobbles Beach, Gower.	Viewed for 5 minutes through binoculars at a distance of 300metres from cliff top. Reported as a green turtle.	
T2020/14	LBT	SEA	ALIVE	11/08/2020	ENGLAND	ISLES OF SCILLY	3.5 miles N of St Martins	Retro report via Doug Herdson.	

The United Kingdom & RoI Turtle Code

Appendix 2.

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), in England and Wales.
- Conservation of Habitats and Species Regulations 2010, in England and Wales.
- Conservation (Natural Habitats, &c.) Regulations 1994 as amended, in Scotland.
- Conservation (Natural Habitats etc.) (Amendment) Regulations (Northern Ireland) 2007.
- Control of Trade in Endangered Species (Enforcement) Regulations (1997) as amended, in the UK.
- Customs and Excise Management Act 1979.
- Isle of Man Wildlife Act 1990.

PLEASE REPORT ALL TURTLE ENCOUNTERS

ENGLAND/WALES

ALL RECORDS
Rod Penrose, Marine Environmental Monitoring
01239 683033 (24hrs)
www.strandings.com

LIVE STRANDINGS/ ENTANGLEMENTS

RSPCA 0300 1234999
BDMLR 01825 765546

ISLE OF MAN

Dr Peter Duncan
DEFA - Isle of Man Government
01624 685835 (main)
Marine Operations Centre
01624 686628 (24hrs)

SCOTLAND

ALL RECORDS
Marine Monitoring Team,
Scottish Natural Heritage,
01463 725009

DEAD STRANDINGS

Nick Davison, Scottish Rural College (SRUC)
01463 243030
07979 245893
strandings@sruc.ac.uk

LIVE STRANDINGS/ ENTANGLEMENTS

SSPCA 03000 999999

NORTHERN IRELAND

ALL RECORDS
The Portrush Coastal Zone (DAERA)
028 7082 3600

REPUBLIC OF IRELAND

ALL RECORDS
Dr Tom Doyle
School of Biological, Earth & Environmental Sciences,
University College Cork.
00353 (0) 87 1354938 (24hrs)

Report online at: www.euroturtle.org/turtlecode & 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) and **take photographs** when possible.
- **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, but 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.

If 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.

If 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.

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 Strandings Investigation Project (CSIP).

Marine Turtles in the UK & RoI



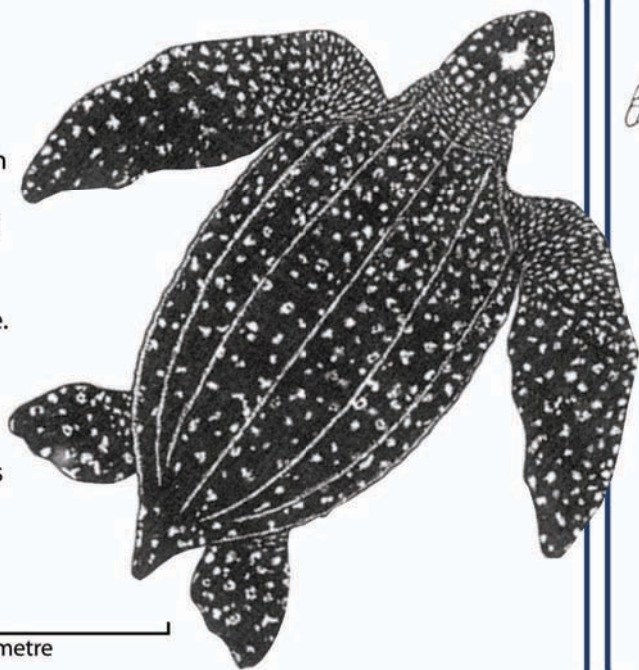
Endorsed by:



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 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

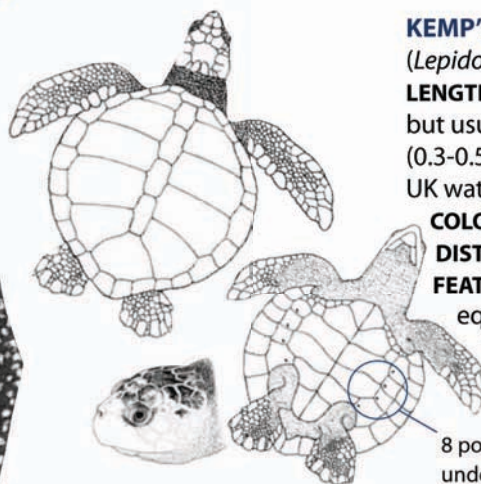
(Dermochelys coriacea)
Most frequently recorded species in UK waters.
LENGTH: up to 2.91 metres.
COLOUR: black, spotted with white.
DISTINCTIVE FEATURES: large, up to 916 kg, pronounced longitudinal ridges on shell, which tapers to a blunt spike.



SCALE 1 metre

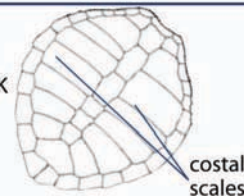
KEMP'S RIDLEY TURTLE

(Lepidochelys kempii)
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.



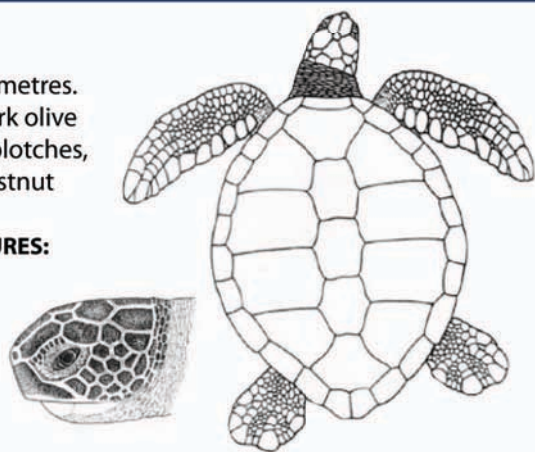
8 pores visible on underside (4 either side)

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.



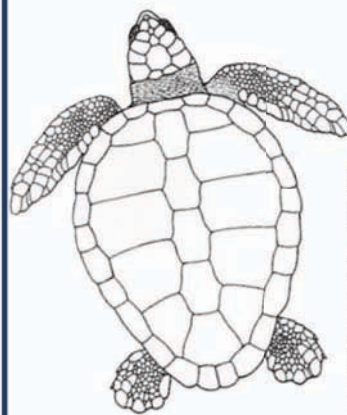
GREEN TURTLE

(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 facial profile (not angular).



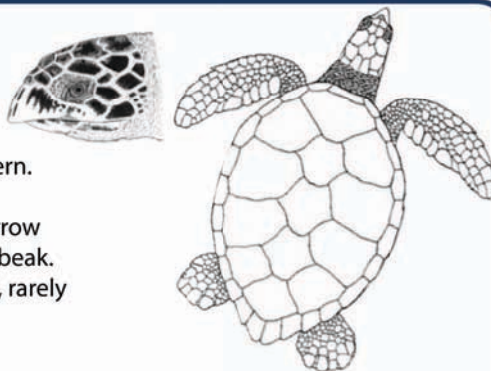
LOGGERHEAD TURTLE

(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.



HAWKBILL TURTLE

(Eretmochelys imbricata)
LENGTH: up to 1.2 metres.
COLOUR: brown, amber and black tortoiseshell pattern.
DISTINCTIVE FEATURES: shell scales overlapping, narrow tapered head with bird-like beak. Largely tropical distribution, rarely encountered in UK waters.



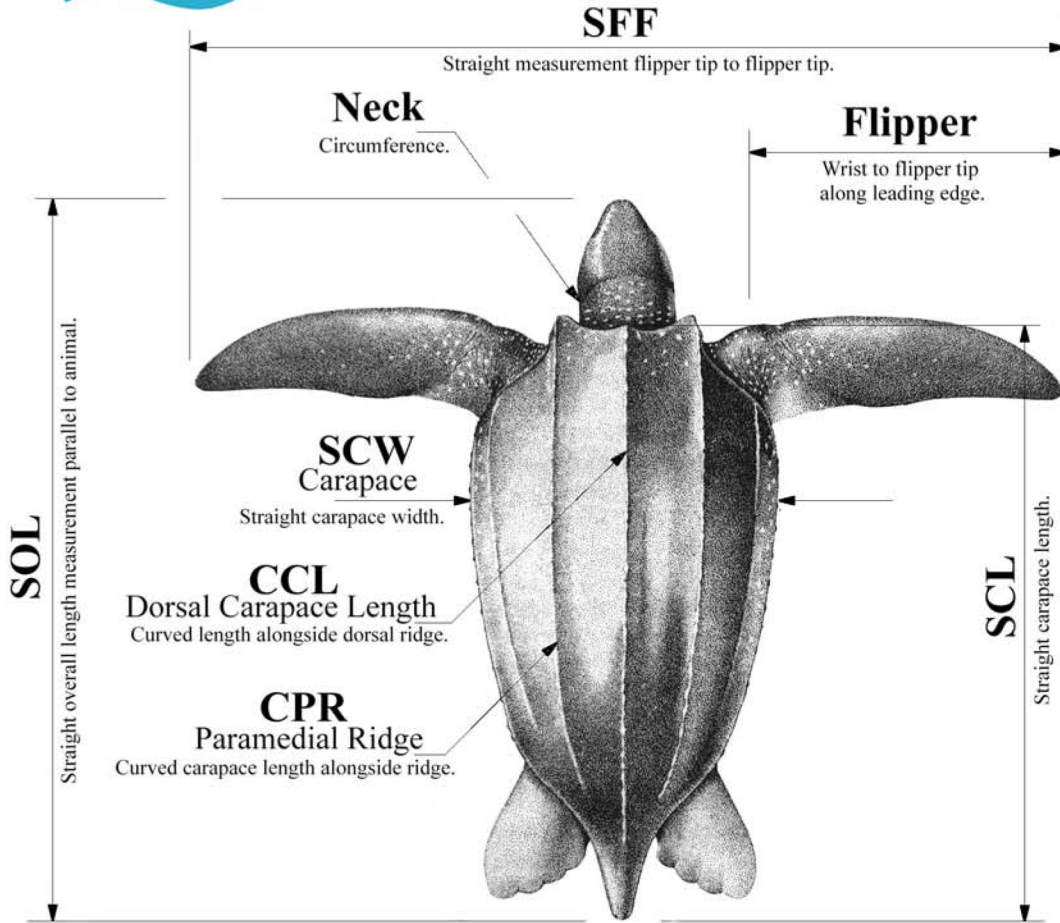
MARINE TURTLES ARE THREATENED

In UK waters threats include:

- **Accidental 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.
 - **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.
- PLEASE BE VIGILANT, AND DO NOT DISCARD FISHING GEAR OR LITTER AT SEA.**



Illustrations are taken, with permission, from: Eckert, KL, KA. Bjorndal, 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) IN 2011 WITH SUPPORT FROM NATURAL ENGLAND AND SCOTTISH NATURAL HERITAGE AND IN COLLABORATION WITH THE TURTLE IMPLEMENTATION GROUP OF THE UK MARINE TURTLES GROUPED SPECIES ACTION PLAN.



Other Measurements Required.

- COL** Curved Overall Length.
- CFF** Curved Flipper tip to Flipper tip over Animal.
- CCW** Curved Carapace Width.
- DMAX** Maximum Body Depth. (Straight).
- TTL** Total Tail Length from Plastron.
- PTL** From Centre of Cloacal Opening to end of Tail.
- WEIGHT** In Kilograms.
- SEX** If Known.

