Dead marine megafauna strandings annual report 2013

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Introduction

From 2013 Manx Wildlife Trust has collated all dead marine megafauna strandings from around the Isle of Man on behalf of DEFA. Prior to 2013, data was collated on an ad-hoc basis by DEFA, often with little detail (see appendix). This report details the outcomes and results from the year 2013.

Training

7 volunteers (excluding MWT marine officer Eleanor Stone) were trained this year with only two people attending the strandings.

Methodology

Any dead strandings of marine megafauna around the Isle of Man, are reported to the current Marine officer at Manx Wildlife Trust, either via phone, email or social media. This information is then given to a trained volunteer. Each volunteer is assigned a 'strandings pack' which comprises of everything needed to effectively record the data required (see appendix). On arrival the attendee will record all the necessary details on a printed recording sheet. Firstly, the time, date, location and number of individuals stranded. Secondly, the details of the carcass found, including; dead/alive, species, degree of composition, trauma or identifiable markings, sex and maturity. Once complete, using the tape measure provided, the measurements are taken, depending on whether the specimen is a cetacean, pinniped or other, the dimensions are taken accordingly. Photographs are also taken, especially of areas of trauma or damage. The form is then submitted to the marine officer where it is added into the database, along with the photographs. Cetacean forms are also sent to CSIP (UK Cetacean Strandings Investigation Programme) for inclusion in their annual reporting.

Stranding results

9 Atlantic grey seals and 4 Harbour porpoises were reported for 2013 (Figure 1).

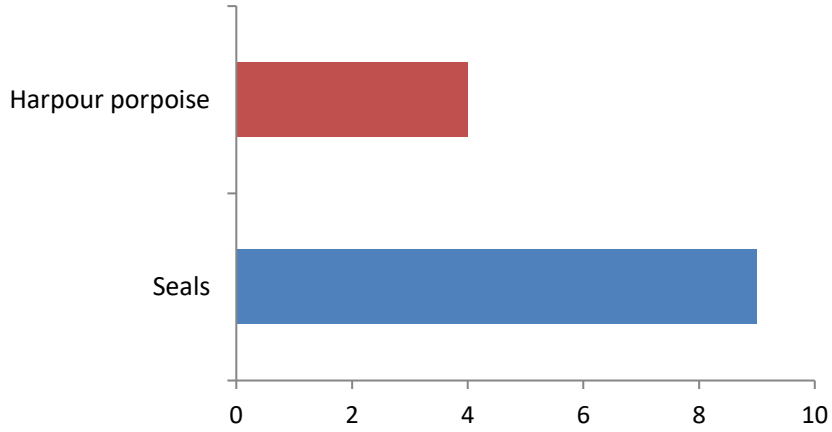


Figure 1. The species and numbers of marine megafauna reported for 2013.

Figure 2. The locations of each of the strandings reported throughout 2013.

From the map (Figure 2) it shows that majority of strandings were reported along the west coast.

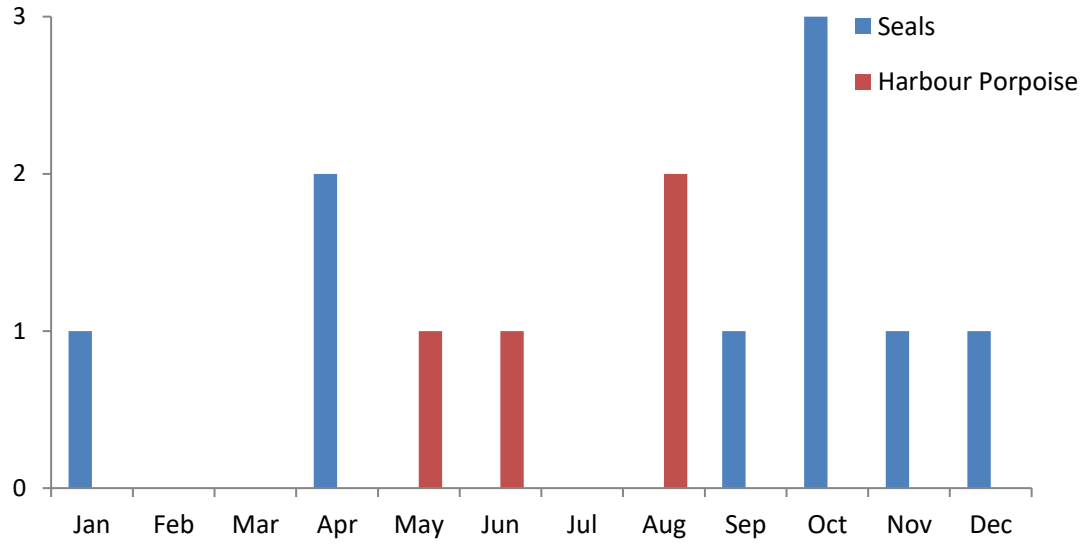


Figure 3. The month each stranding was reported.

Harbour porpoises

All Harbour porpoises were found between Peel and Glen Mooar on the west coast of the Island (Figure 4).

Figure 4. The distribution of Harbour porpoise strandings in 2013.

There was no clear pattern or bias in terms of the demographic data, as seen in Figures 5 and 6 below. All individuals were also reported as decomposed with no clear cause of death.

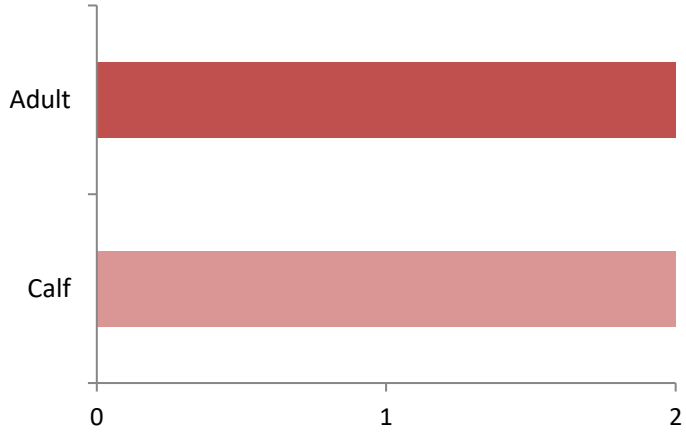


Figure 5. The age ratio of stranded individuals of Harbour porpoise.

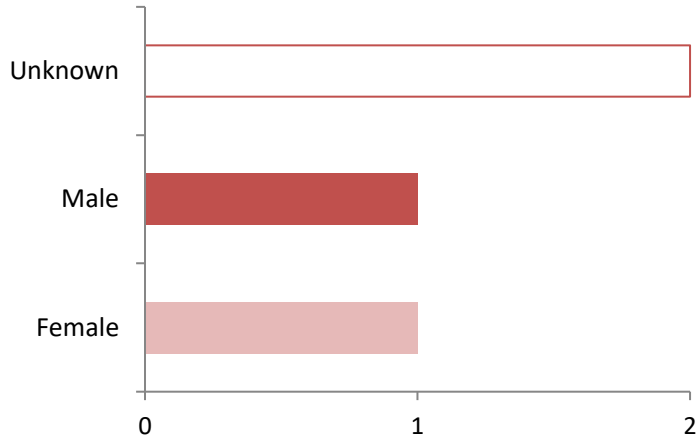


Figure 6. The sex ratio of stranded individuals of Harbour porpoise.

Atlantic grey seals

Grey seals were recorded all around the Island, as seen in Figure 6. Figure 7 shows a higher percentage of pups were found than adults but this is not surprising as they are not as good at swimming and are more vulnerable to adverse weather conditions. This ties in with when they were reported (October to December), when weather conditions can be more treacherous (Figure 2). Figure 8 shows the sex ratio of individuals. The large number of unknowns is a result of most seals being well decomposed when found, making it difficult to sex individuals. All strandings were also reported as decomposed with no clear cause of death.

Figure 7. The distribution of Grey seal strandings for 2013.

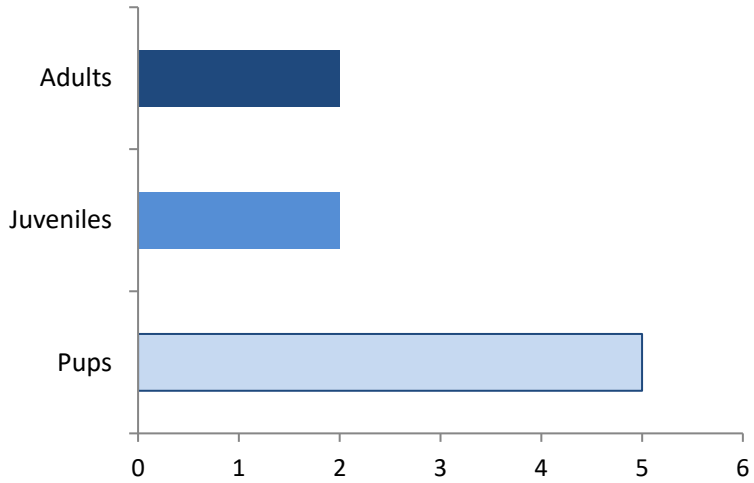


Figure 8. The age ratios of stranded individuals of Grey seals.

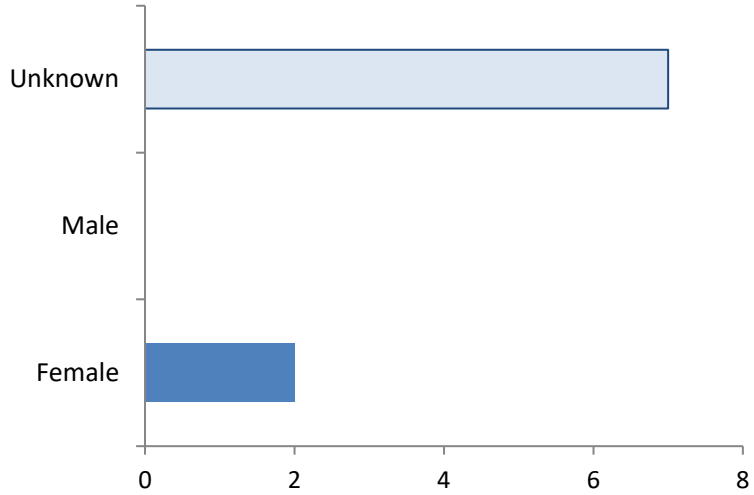


Figure 9. The sex ratio of stranded individuals of Grey seals.

CSIP reporting

The CSIP reported a total of 625 cetacean strandings, comprising of 17 different species, with Harbour porpoise and the Short beaked common dolphin being the most commonly reported strandings. Of this, 562 were reported stranded dead. The number of reported stranding is relatively comparable to the previous year's reports. Although not part of the CSIP remit, they reported 398 dead stranded seals, mostly from Scotland.

Conclusions

No real conclusions can be drawn at this time as the data set is too small. However, it is possible to comment that there are no clear signs of human impacts relating to these deaths, such as litter or shootings, and that cause of death in most cases is likely to be a result of natural causes, including storm conditions.

N.B. Please note that this data was collected before the current marine officer, Lara Howe, started working for MWT.

Data prior to 2013

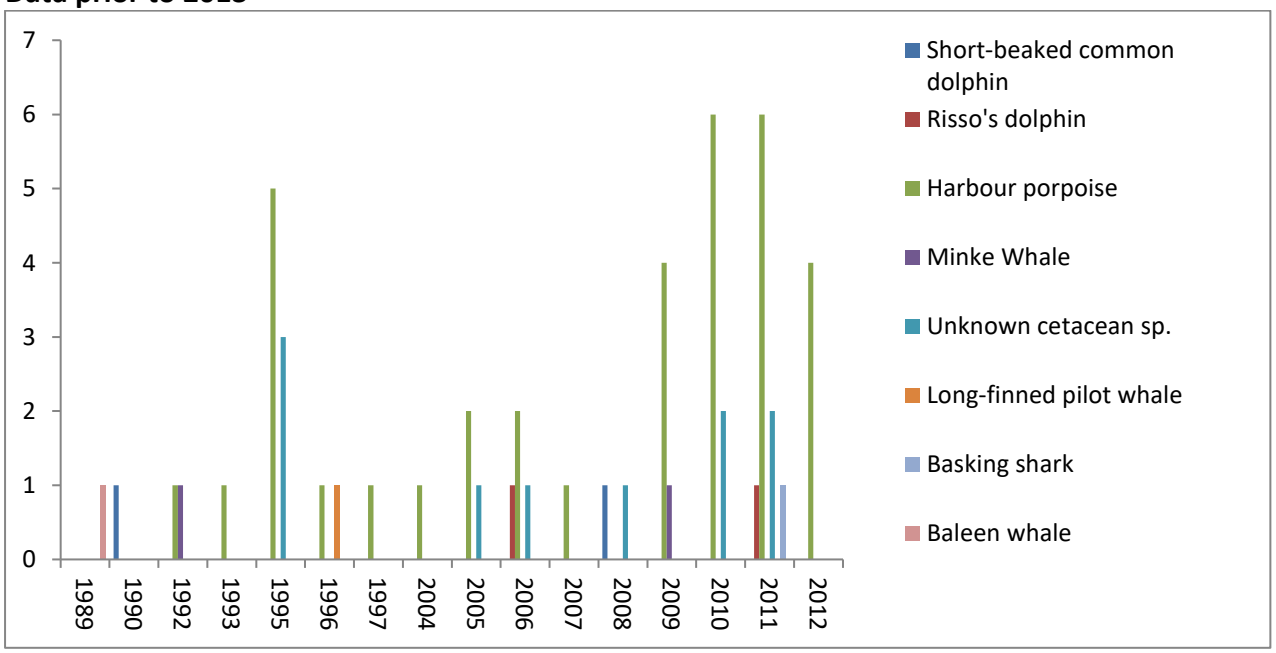


Figure 10. The number of cetacean strandings between 1989 and 2012.

Data of strandings from 1989 – 2012 as seen in Figure 10, shows that Harbour porpoise were the most common species found in every year's data set from 1992 onwards, with a total of 35, maximum of 6 found in 2010 and 2011. Basking shark, Baleen whale and Long-finned pilot whale were the least commonly found species, with only 1 stranding each.
As the data was collated on an ad-hoc basis some of the detail is missing such as, specific species ID, sex and accurate measurements. However, it does provide some historic context in terms of abundance and distribution (Figure 11).

Figure 11. The distribution of stranded cetaceans from 2008 – 2012. 1989-2007 data is limited and accurate positions of strandings are not available and therefore not recorded on the map.

Figure 11 shows that 28 cetaceans have stranded at a variety of locations around the Island, with no discernible pattern.

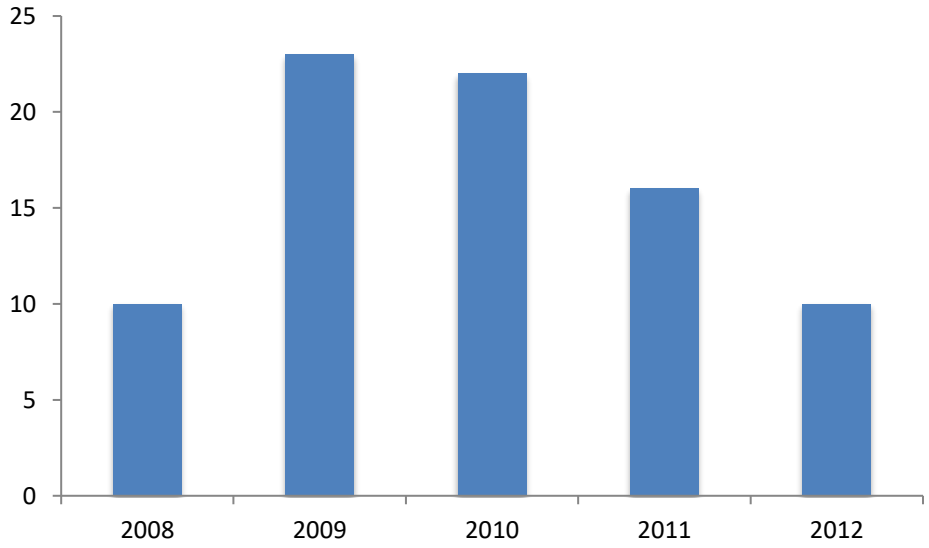


Figure 12. The number of seal strandings from 2008 – 2012.

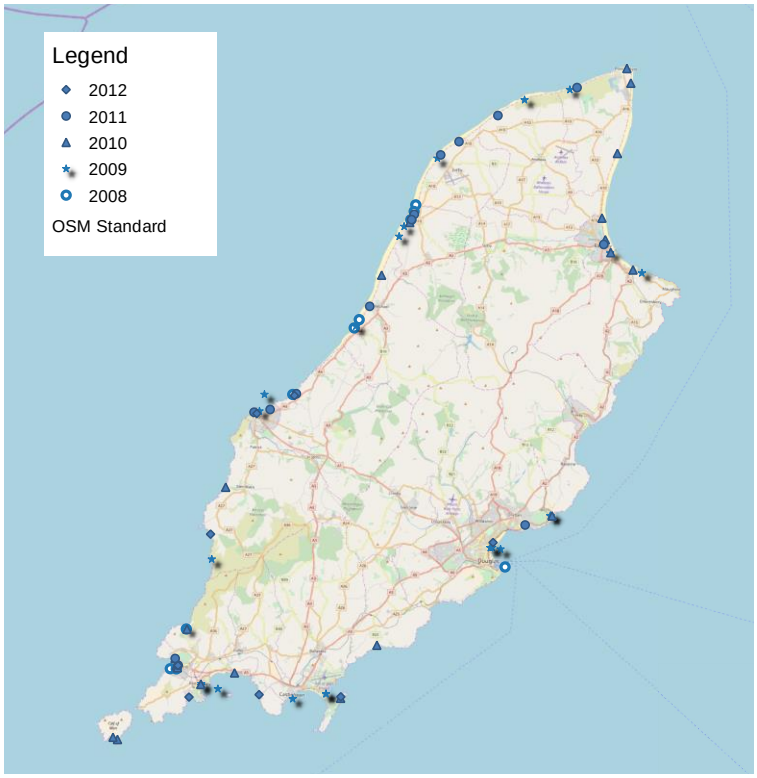


Figure 13. The distribution of stranded seals from 2008 – 2012.

Figure 12 shows seal strandings abundance since records began in 2008 and that there is variability between the years. Figure 13 highlights their distribution which is Island wide, with no discernible pattern.

7. Appendix

Form NHM136 w3/20010501

This form should be filled in and posted, immediately after telephoning or sending a fax, to:

Department of Zoology,
The Natural History Museum,
Cromwell Road, London SW7 5BD
Tel: 0207 942 5155 Fax: 020 7942 5054

THE NATURAL HISTORY MUSEUM

Stranded Whales, Dolphins and Porpoises

Note: Rubber gloves should be worn when handling cetaceans, alive or dead.

Place and date where carcase first seen
The position of a locality not likely to be given on an OS map should be indicated by its relation to some better known place, bay or headland.

Date

Place

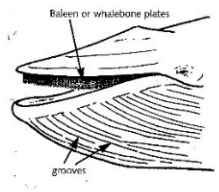
County | **Grid ref.**

Name of Finder

Is the tail horizontal? If the answer to this question is 'No', it is not necessary to fill up the rest of this form as the animal is therefore not a whale, dolphin or porpoise.	**Yes**		**No**								

Is there a hole ('blowhole') on the top of the head?	**Yes**		**No**	
Is it a single hole or a pair of holes?	**Single**		**Pair**	
Does the mouth contain teeth/tooth sockets or baleen/whalebone plates?	**Teeth**		**Baleen**	
If neither teeth nor baleen can be found, state whether the two halves of the lower jaw are:				
(a) Arched outwards and widely separated half way back (In which case the specimen is a Whalebone Whale, and the baleen has been washed out);	**(a)**			
(b) Close together in front, where the jaw is accordingly narrow (A Toothed Whale in which the teeth are concealed beneath the gum).	**(b)**			

Whalebone Whales if baleen present, state:



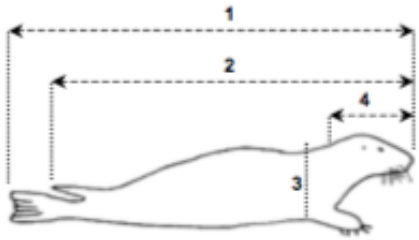
(a) The colour of the baleen plates. If not everywhere alike indicate the arrangement; e.g. 'white for ... cm at front end of right side, the rest as stated				
(b) The colour of the hairy fringes of the plates				
Grooves Is the throat marked by numerous deep grooves?	**Yes**		**No**	
Grooves Is the throat marked by a pair of grooves?	**Yes**		**No**	

Toothed Whales if teeth are present, state:

(a) Whether they occur in both jaws or in the lower jaw only.		**Both**		**Lower**	
(b) The number of teeth and empty sockets of one side of the upper jaw.		**Teeth**		**Empty sockets**	
(c) The number of teeth and empty sockets of one side of the lower jaw.		**Teeth**		**Empty sockets**	
(d) If only few teeth & sockets present, their position in the jaw.	**Front**	**Middle**		**Back**	
(e) The diameter of one of the largest teeth.		**Diameter**			
(f) Whether teeth spade-shaped or conical/needle-shaped.		**Spade-shaped**		**Needle-shaped**	

Appendix 1. The recording sheet used by volunteers when attending a stranded Whale, Dolphin or Porpoise.

Seal Stranding Recording Form

Please remember your own health and safety is paramount: watch for the tide, always wear gloves and do not lift heavy weights.				
Reported by: Telephone: Date/Time:		**Recorded by:** Telephone: Date recorded:		
Location:		**Grid ref:**		
Alive when stranded?		yes		no
Species (see id notes below):		grey	common / harp	hooded
Sex (male, female or unknown):		male	female	unknown
Age (adult, juvenile, pup or unknown):		adult	juvenile / pup	unknown
Is carcass complete (head, tail, all flippers present):		yes		no
Carcass condition (e.g. fresh, decomposed or advanced decomposition):		fresh	decomp	adv decomp
Obvious traumas other than scavenging (e.g. gunshot, net marks, etc.):				
Identifiable markings (scars, patterns on coat, missing claws, digits, etc.):				
Flipper tags, or hole between digits where tag may have been (if so please note which flipper, tag colour and any number or address):				
Hat tags (colour and number):				
Body Measurements: (cm)				
1. Head – hind flipper. Tip of the nose to the end of the hind flippers.				
2. Head – tail. Tip of the nose to the end of the tail.				
3. Girth. Taken beneath the flipper pits around the body.				
4. Head. Tip of the nose to the back of the head.				
5. Partial digit. Measured on the leading digit from the joint below the claw to the knuckle.				
Photos: If possible please take photos (digital are ideal) of the whole body and also close-ups of the left and right hand side of the head. If there are any unusual traumas such as gunshot, net marks, missing head, etc., please photograph those too.				
Seal Species Identification: There are two resident species of seal in the UK, the common seal and almost exclusively encountered around the Cornish coast, the grey seal. It is the head shape and its characteristics that offer most easily recognisable features: The common seal has a small head with rounded crown and a blunt nose which is sloping forming a concave bridge between the forehead and nose. The nostrils form a V shape, joining at the base. The grey seal has a large head with flattened crown and a straight long roman nose which offers a straight or convex profile. The nostrils are parallel and do not meet. Occasionally other species such as harp or hooded seals visit our waters. For identification of these and other species use a reliable reference book or id chart.				

Please return this form and your photos to:

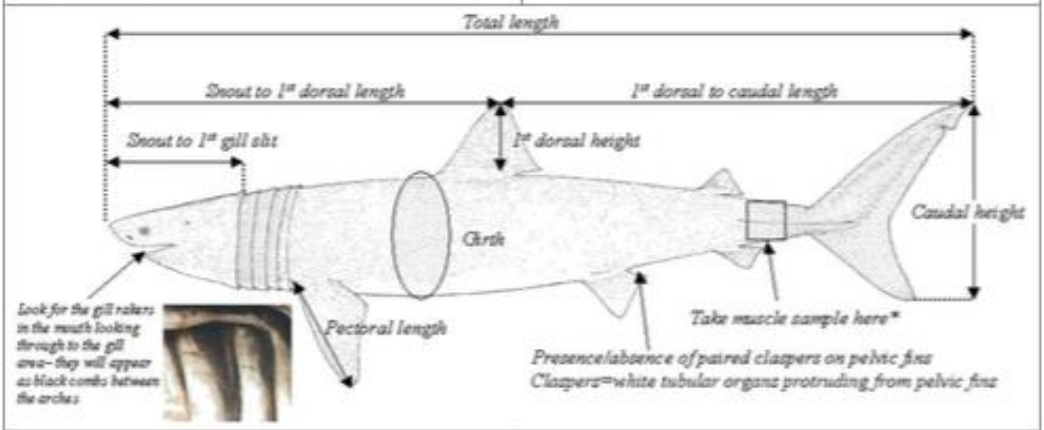
Strandings Records Coordinator, c/o Cornwall Wildlife Trust, Five Acres, Allet, Truro TR4 9DJ
Email: records@cwtstrandings.org **Website: www.cwtstrandings.org**

CORNWALL WILDLIFE TRUST WORKING IN ASSOCIATION WITH C-SMOG, THE NATIONAL SEAL SANCTUARY AND THE GODREVY SEAL GROUP

Appendix 2. The recording sheet used by volunteers when attending a seal stranding.

Basking Shark Stranding Recording Form

Reported by: Telephone: Address:	Recorded by: Telephone: Date recorded:
Date first seen: Time first seen: Alive when stranded? ☐ YES ☐ NO	Location: Grid ref:



Total length:	m	Claspers present?	☐ YES (male) ☐ NO (female)
Snout to 1st dorsal length:	cm	Gill rakers present?	☐ YES ☐ NO
1st dorsal to caudal:	cm	Food in back of throat (orange paste)?	☐ YES ☐ NO
Snout to 1st gill slit:	cm	Tissue samples taken (*where requested):	
1st dorsal height:	cm	Muscle for genetic analysis?	☐ YES ☐ NO
Pectoral length:	cm	Fin sample?	☐ YES ☐ NO
Girth (half way around x2):	cm	Skin sample?	☐YES ☐ NO
Caudal height:	cm	Photos taken?	☐ YES ☐ NO
Natural scars/markings (take photos if possible):		By-catch evidence (take photos if possible):	

Please return this form and your photos to:

Strandings Co-ordinator, Cornwall Wildlife Trust, Five Acres, Allet, Truro TR4 9DJ
Email: coordinator@cwtstrandings.org Website: www.cwtstrandings.org

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CORNWALL WILDLIFE TRUST IN ASSOCIATION WITH THE MARINE BIOLOGICAL ASSOCIATION

Appendix 3. Recording sheet template for a stranded Basking shark as provided by Cornwall Wildlife Trust.