

Somerset Sea Watching 5 Year Report 2014 – 2018



The 53 miles of Somerset coastline has an amazing diversity of habitats and wildlife. The surrounding waters are defined by where the muddy freshwater of the Severn estuary meets the open sea of the Bristol Channel. The Severn estuary has the highest tidal range in the UK and the second highest in the world, with a 15-metre vertical height difference in sea level between the highest and lowest tides. Along with the mixing of sea water and freshwater, the huge tidal movements of the estuary churn the sand and mud flats, mixing plant and animal life to create a protein rich environment. This plays a vital role in feeding resident and migrating animals above and below the water. Huge numbers of wildfowl and waders drop in to feed and rest here on their spring and autumn migrations and over 100 species of fish have been recorded. However, it is not a well-known place for sighting marine mammals and previous to 2014 there had been very few sightings recorded, in fact prior to 2011 most of the records are for stranded animals. Marine megafauna have been identified as an area of Somerset wildlife that needs considerably more investigation.

This led to the formation of a volunteer Regional Coordinator role for Somerset as part of a national marine environmental charity; the Sea Watch Foundation. Sea Watch work to improve the conservation of whales, dolphins and porpoises collectively called cetaceans, in the seas around Britain and Ireland. This is supported by a network of volunteer regional coordinators who provide data through recording and reporting all sightings of cetaceans.

The role of Somerset Regional Coordinator started in 2014 and along with support from the Somerset Wildlife Trust and Exmoor National Park, public land watches have been carried out along Somerset's coastline throughout the year to record the distribution and abundance of marine wildlife; including dolphins, harbour porpoise, seals, sunfish and jellyfish. In addition marine mammal identification training days were run each year from 2014-2018 to equip other volunteers to complete structured effort surveys throughout the year. Along with these surveys and casual sightings sent in by the public, the data is used to better understand and monitor marine species around the Somerset coast. Besides increasing our general knowledge of marine fauna that inhabits the Severn Estuary, it can inform us of important areas and times of year for particular species, enabling better decision making on the risk of harm to local populations from certain human activities.

A small number of volunteers have completed effort surveys since 2014 from various headlands along the Somerset coast, not only recording sightings but also the number of hours spent watching. Even when no species are seen, it is important to have a measure of effort in order to interpret sightings more effectively. Only with evidence-based records of occurrence, behaviour and ecology can we act to better protect and conserve these amazing marine animals.

Overview 2014-2018

270

Sightings reported

3

Cetacean species reported

5

Marine mega-fauna species reported

84

Effort surveys completed

178.83

Hours of dedicated survey effort

5

Training days

20

People submitted sightings and/or survey data

4

Sites surveyed for effort data

13

Surveys conducted as part of NWDW



Thank you to the dedicated volunteers who have completed effort surveys along the Somerset coast; Peter Burns, Lucy Wood, Lorne Thomson, Jillie Leonard, Susan Boutle, and Kat Smith. Also thank you for the numerous sightings and photographs made available from both Brian Gibbs and Dave Dawe.

Somerset Sea Watch Effort Surveys

A better understanding of marine wildlife is achieved by collecting robust data through effort based surveys. These surveys are carried out by trained volunteers following Sea Watch Foundation survey protocol. They are timed surveys; for a minimum of two hours, where environmental data as well as sightings data is recorded every survey interval of 15 minutes.

The information collected not only gives us a snap shot of what is out there in the Severn estuary but can inform us of any areas of the coast which are important for their survival such as feeding or calving grounds. It can also provide an insight into their seasonal and annual changes in abundance and distribution, which can all contribute towards effective protection and conservation for these species.

Within the years 2014-2018 a total of 84 effort surveys have been completed by trained volunteers, consisting of 178.83 hours of effort at four different locations along the Somerset coast. These locations are Hurlstone Point, Watchet Harbour, Brean Down and Blue Anchor Bay. There were 5 different species sighted during the effort surveys: harbour porpoise, bottlenose dolphin, short-beaked common dolphin, grey seal and barrel jellyfish.

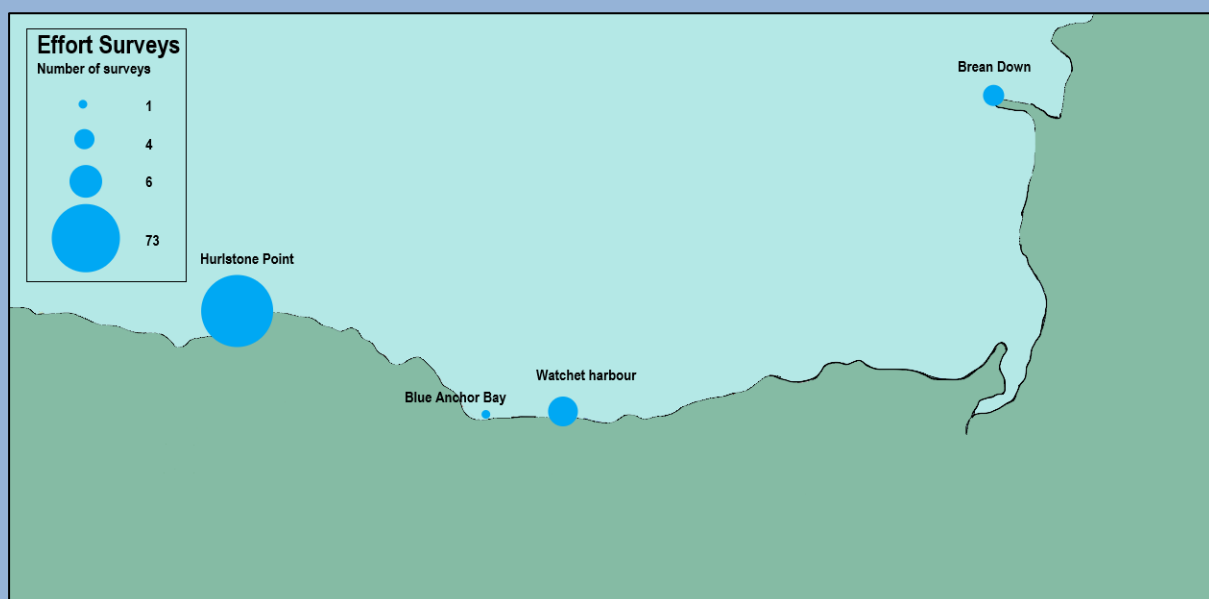


Figure 1. Map of Effort Survey Locations

The majority of effort surveys took place at Hurlstone Point and all the sightings except one were recorded here. Harbour porpoise were the most commonly sighted species, seen throughout the year. Short-beaked common dolphins were occasionally seen in the summer months travelling further offshore, and grey seals were seen popping up below the watch point. The second most surveyed site was at Watchet harbour; however no sightings were recorded here. There was a sighting of two harbour porpoise at Brean Down in January 2017.

Year	No. of surveys	Sightings rate per hour %	No. of species seen	Species
2014	21	31	4	Harbour porpoise, bottlenose dolphin, barrel jellyfish, grey seal
2015	17	21	2	Harbour porpoise, grey seal
2016	21	31	2	Harbour porpoise, short-beaked common dolphin
2017	14	54	2	Harbour porpoise, grey seal
2018	11	54	2	Harbour porpoise, grey seal

Table 1. Quantitative description of effort surveys per year at Hurlstone Point

Table 1 shows the number of surveys completed at Hurlstone Point within 2014-2018 and the percentage sightings rate per hour. Unfortunately the number of surveys completed decreased considerably in 2018 compared to the start of Somerset Sea Watch in 2014.

Harbour porpoise was the most frequently sighted species at Hurlstone Point. As can be seen in figure 2, they were sighted all year except in February and March, with peaks in sightings during July and October 2014-2018. The most

effort surveys were completed in July which correlates with National Whale and Dolphin Watch taking place at the end of this month.

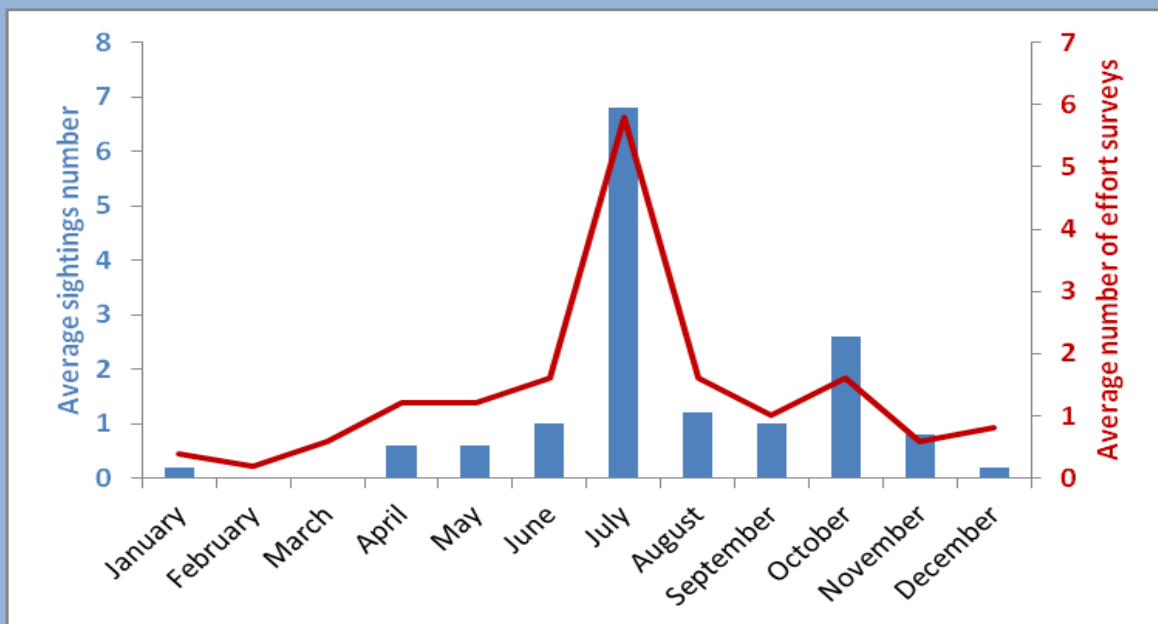


Figure 2. Seasonality of harbour porpoise average sightings numbers and average number of effort surveys 2014-2018

A notable sighting at Hurlstone Point in July 2018 was of a mother harbour porpoise and calf with the mother presenting distinctive markings on its dorsal fin, which is unusual for this species. In other species, particularly bottlenose dolphins, individuals can be identified from their markings on their dorsal fin and along with photo ID can determine whether the same individuals are returning to the same areas. We encourage photographs to be taken of any sightings if possible to help with accurate species identification but also to help with individual animal photo ID.



Somerset Sea Watch Casual Sightings

Casual sightings are those as-and-when sightings of animals when volunteers and members of the public are out and about and not actively searching for marine wildlife within a set timeframe.

Through 2014-2018, 210 sightings of marine mega-fauna have been reported to Sea Watch, consisting of 5 different species. There was a decrease in harbour porpoise sightings in 2017, but the number of sightings increased again in 2018 (table 2). As shown in figure 4, harbour porpoise were sighted all year round with average sightings numbers highest throughout the summer, with a peak in July. The sightings numbers sharply declined from August to September but increased again during November and December.

Number of casual sightings reported between 2014 and 2018

Species	2014	2015	2016	2017	2018
Harbour porpoise	35	27	26	22	34
Grey Seal	12	5	8	4	7
Bottlenose dolphin	1	1	2	0	2
Common dolphin	0	0	2	2	2
Barrel Jellyfish	0	0	0	1	0

Table 2. Number of casual sightings 2014-2018

Occasional sightings of bottlenose and short-beaked common dolphins have been sighted. A notable sighting was of a large pod of short-beaked common dolphins, estimated numbers of 70-100, recorded from a fishing boat 4 miles off from Hurlstone Point in June 2018.



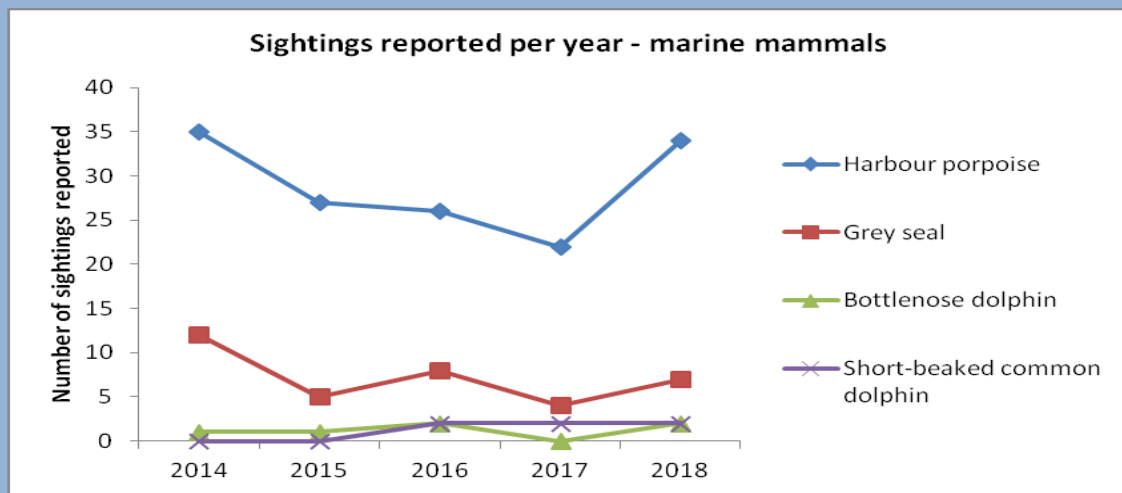


Figure 3. Sightings reported per year of marine mammals

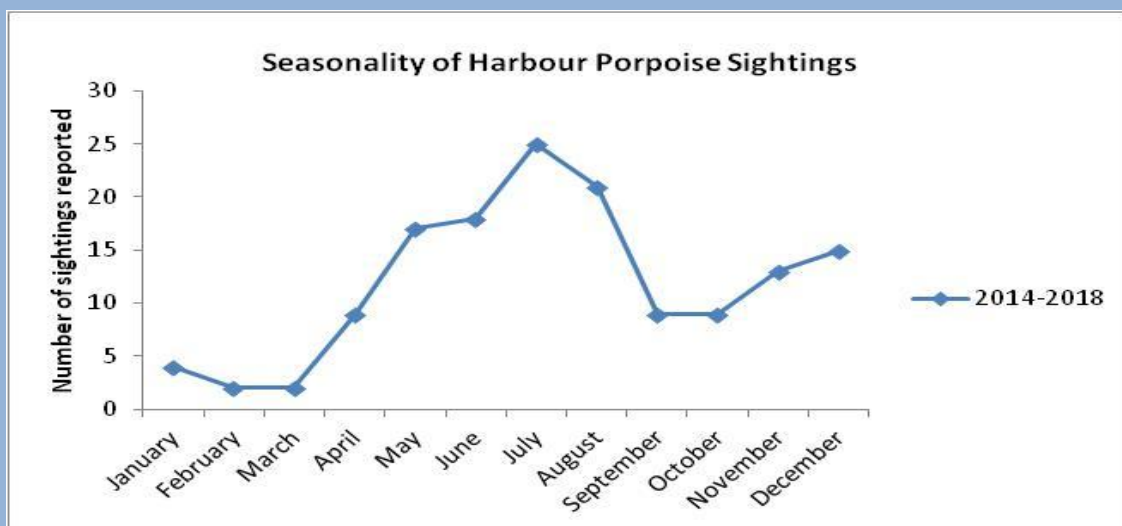


Figure 4. Seasonality of harbour porpoise sightings

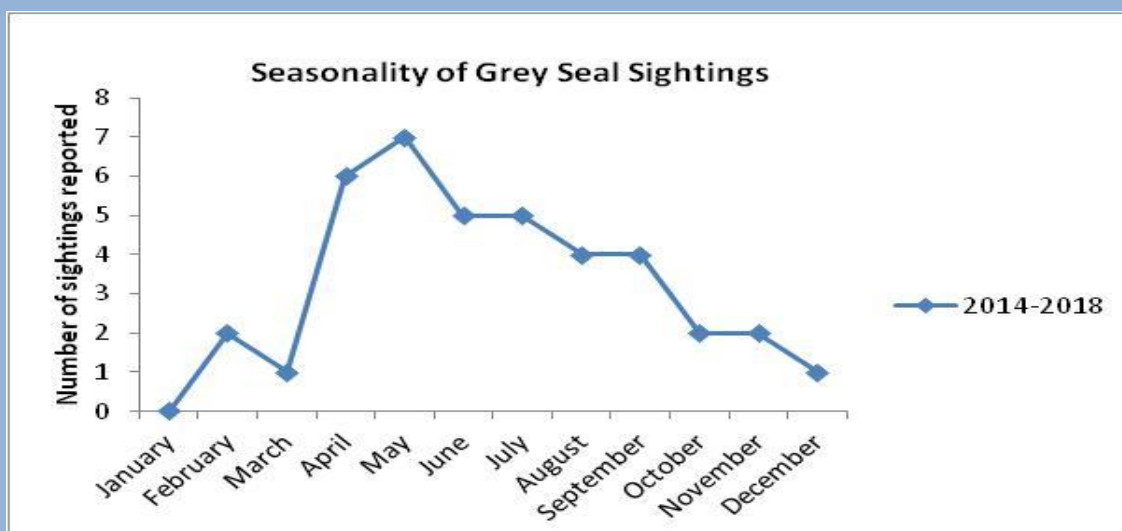


Figure 5. Seasonality of grey seal sightings

As can be seen in figures 6 and 7, sightings of a variety of species have been seen all along the Somerset coast. Harbour porpoise are known to travel up rivers and several sightings have been recorded within the River Parrett, one individual was recorded travelling as far as Bridgwater in May 2015.

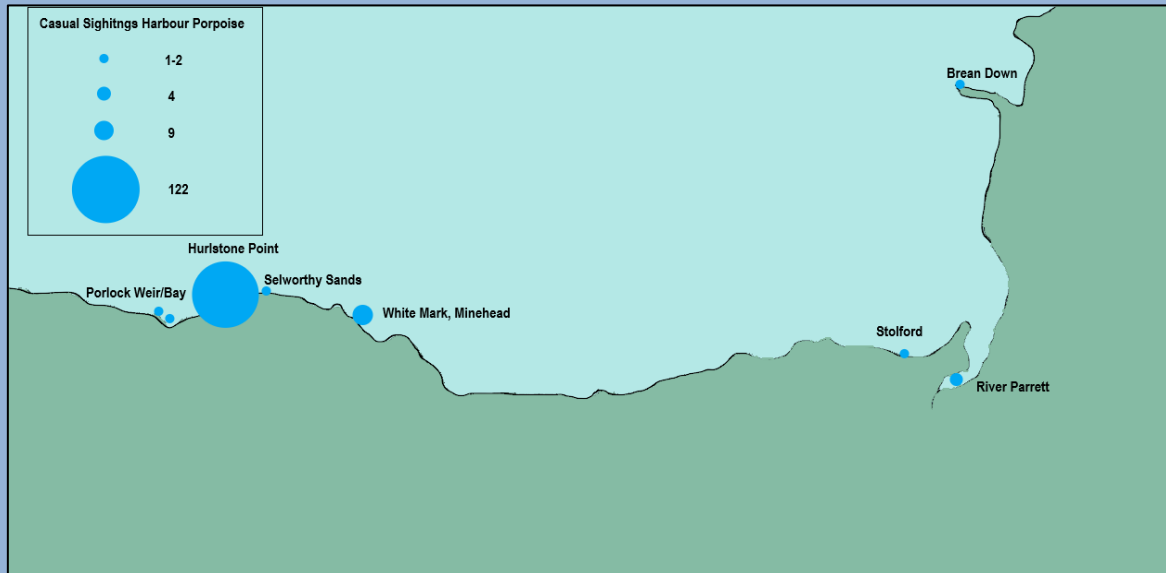


Figure 6. Map of casual sightings of harbour porpoise from land

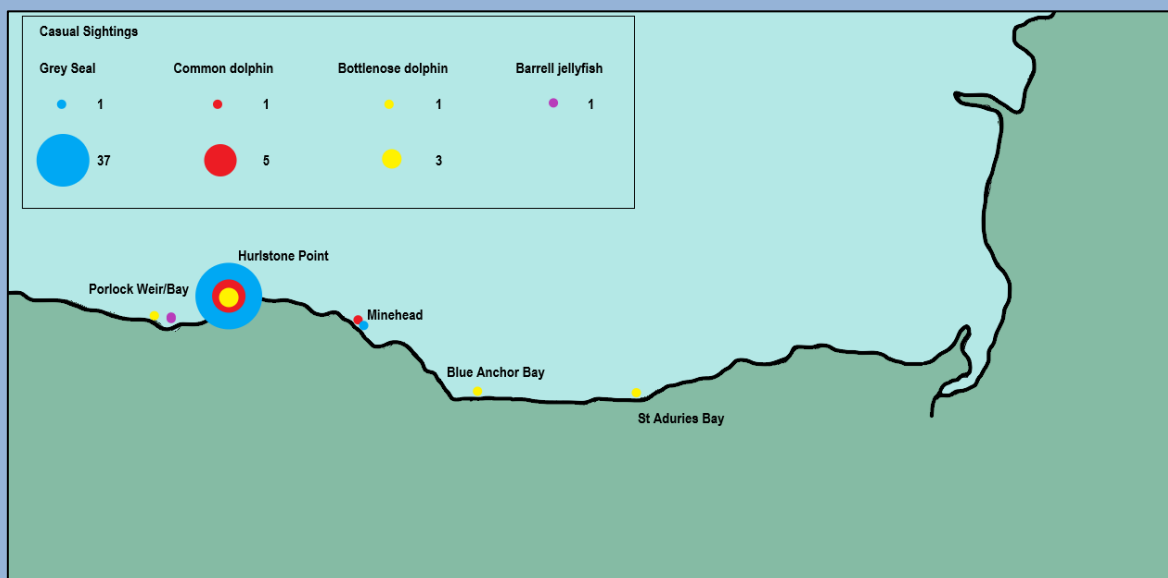


Figure 7. Map of casual sightings of other marine mega-fauna from land



Figure 8 shows both casual and effort sightings have predominately been recorded from Hurlstone Point and it is here where the most species have been sighted. Hurlstone Point appears to be an important area for harbour porpoise and with continued effort surveys both here and at other locations along the Somerset coast more can be learnt about their behaviour and distribution.

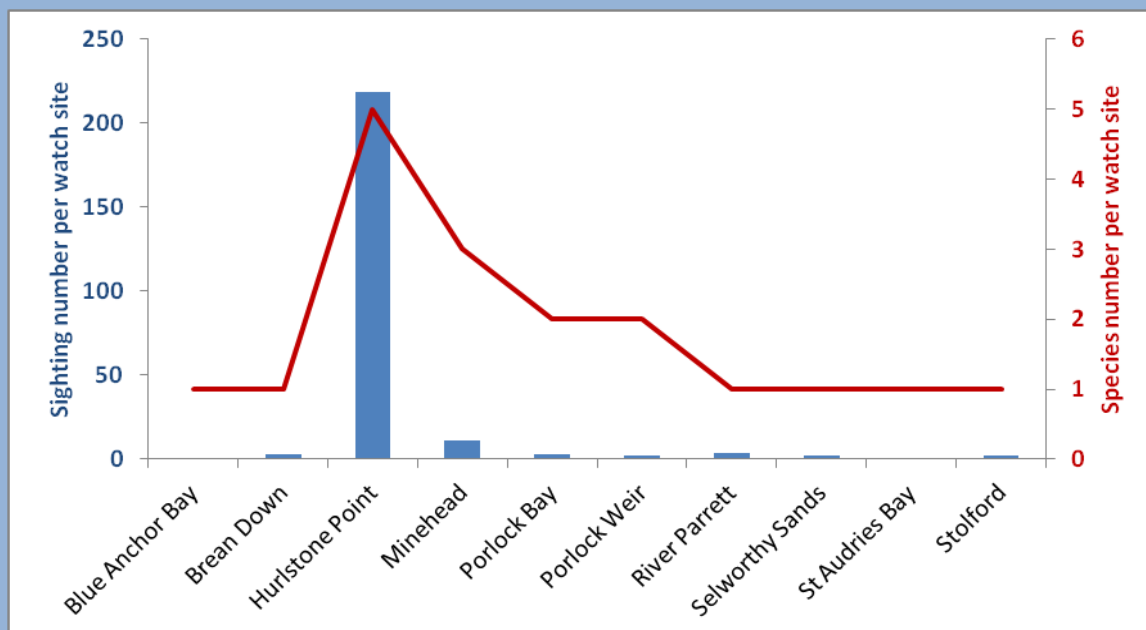


Figure 8. Number of sightings (casual and effort related) and species per watch site location

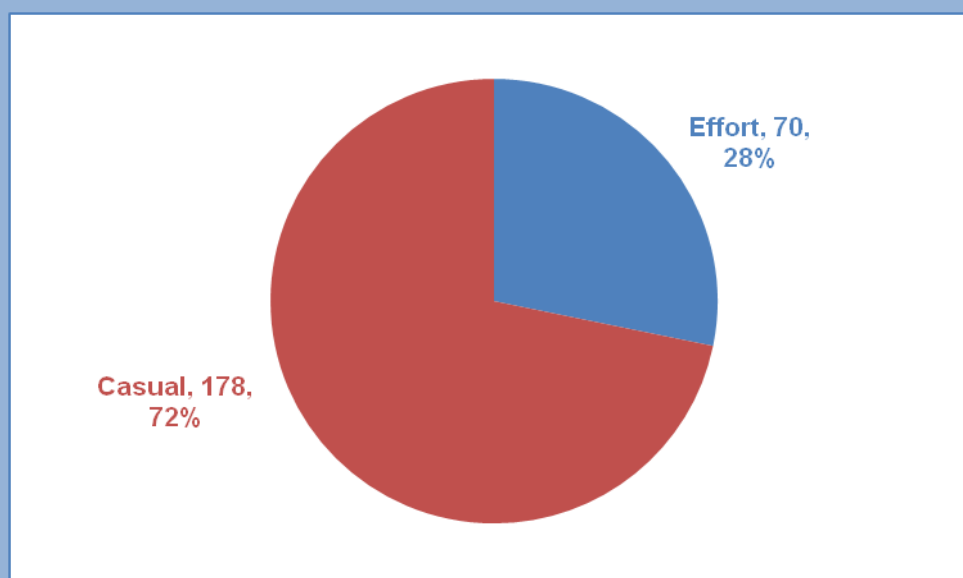


Figure 9. Proportion of effort related sightings (n=70, 28%) and casual sightings (n=178, 72%) recorded during 2014-2018

National Whale and Dolphin Watch

National whale and dolphin watch (NWDW) is an annual event run by the Sea Watch Foundation, inviting members of the public to take part in dolphin, whale and porpoise surveys around the UK. The data collected during the event will help in developing a snapshot of the distribution of dolphins, whales and porpoises around the UK.

13 surveys have been completed along Somerset's coast for NWDW. The only sightings for this event were in 2017 with 4 sightings of harbour porpoise.

Aims for Future Somerset Sea Watching

To start in 2020 we are hoping to complete effort surveys at several more locations along the coast, as well as popular locations. This will be achieved by holding more public watches on a set day each month. This would include increasing the number of surveys completed for NWDW. In addition we would like to encourage all trained volunteers to complete surveys at their chosen location on another set day each month. Increasing the number of effort surveys will enable us to gain a more accurate representation of the abundance and distribution of marine mega-fauna, particularly harbour porpoise, within the Severn estuary.

Developing a more robust citizen science project will hopefully help achieve three key aims:

- Engage people with the marine environment
- Collect data on marine mega-fauna
- Better understand and conserve marine wildlife

Find out more!

Sea Watch Foundation www.seawatchfoundation.org.uk

Somerset's Brilliant Coast www.somersetwildlife.org/what-we-do