

Introduction

The Great Eggcase Hunt is a citizen science initiative that has been running since 2003. Between 01-01-2003 and 27-09-2022 the project has received 22,978 submissions from ~7,000 people, totalling 355,324 eggcases from oviparous chondrichthyan species around the world. Of these eggcases 88.31% have been verified by either a photo, specimen or expert ID, resulting in confirmed records of 313,773 eggcases from 42 species, with seven other species yet to be confirmed. Although most of the data is from the British Isles, where the project was established (97.79% verified eggcases, 76.90% submissions), the Great Eggcase Hunt receives submissions from around the world. As well as this organic growth in both the number of people participating and project reach, regional identification resources have been created in collaboration with regional organisations and the project continues to expand.

The Great Eggcase Hunt - A UK Focussed Summary

Project Growth and Reach

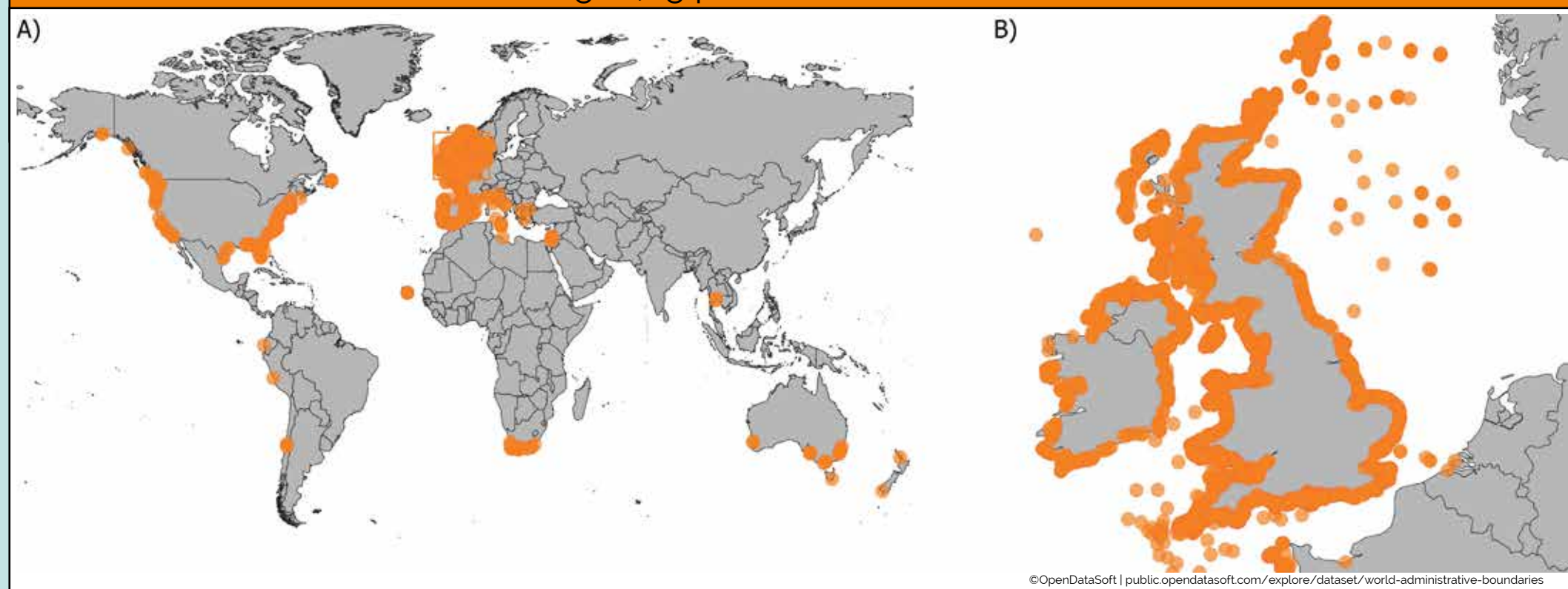
Since the project launch in 2003, the Great Eggcase Hunt has grown at an incredible rate. In 2003, the Great Eggcase Hunt received 27 submissions from 13 locations (mostly in the Southwest of England) totalling 128 eggcases (68.8% of which have been verified), whereas in the first six months of 2022 alone the database received 1,232 submissions from 241 locations from 13 countries, totalling 31,375 eggcases (91.3% verified). 98.7% of the verified eggcases from the first half of 2022 were reported from around the British Isles, with the most eggcases being reported from Orkney, Cumbria, Cardigan Bay (Wales), the East Irish coast and the South of England. Though records from other countries are becoming more regular, most of the data submitted (~97%) comes from the UK (Fig.1). The high volumes of data received from around the British Isles provides a rich dataset which can be used to understand species diversity, distribution and seasonality.

Species Specific Data and Trends

The Great Eggcase Hunt is nearly 20 years old, and as such this dataset provides a great resource to look into annual and seasonal trends of eggcase records (Fig.3). The main consideration with this data is unpicking the relationship between search effort (number of submissions) and the number of eggcases recorded, particularly as the number of submissions generally increases over time. Other factors such as seasonal based search effort, breeding seasons, weather and the growth of the project itself will affect how and when eggcases are recorded, and understanding these variables is key to interpreting this data.

The species with the most data available for these analyses are those most commonly found around the British Isles, particularly: *Raja clavata* (28.7% of UK eggcases), *Scyliorhinus canicula* (28.0%), *Raja montagui* (12.2%), *Raja undulata* (11.6%), *Scyliorhinus stellaris* (8.1%) and *Dipturus intermedius* (7.5%).

Figure 1: distribution of verified eggcases from the Great Eggcase Hunt A) globally (n=313,773) and B) around the British Isles (n=306,834)



Eggcase Hotspots

The Great Eggcase Hunt has received eggcases from all over the British Isles (Fig.2a), with some areas yielding more eggcases than others. These hotspots need exploring in more depth, but the high numbers of eggcases recorded could be due to: sediment type, topology, proximity of egg-laying grounds, beach accessibility and search effort. As well as ad-hoc beach finds, the Great Eggcase Hunt has some dedicated regular reporters, providing valuable subsets of the data which can be interrogated to explore seasonal and yearly trends. Without knowing how many people are behind each submission it is impossible to weight fully, but to partially account for search effort the data was weighted by the number of submissions (Fig.2b). Using this as a rough gauge, eggcases hotspots are highlighted in North Wales, the Cumbrian coast, the Solent, the North Kent coast and the Channel Islands.

Figure 2: 'Hotspots' for all eggcase records around the British Isles, data is grouped to 0.25 decimal degrees. A) the total number of eggcases recorded between 2003-2022 and B) the number of eggcases weighted by the number of submissions to partially account for effort

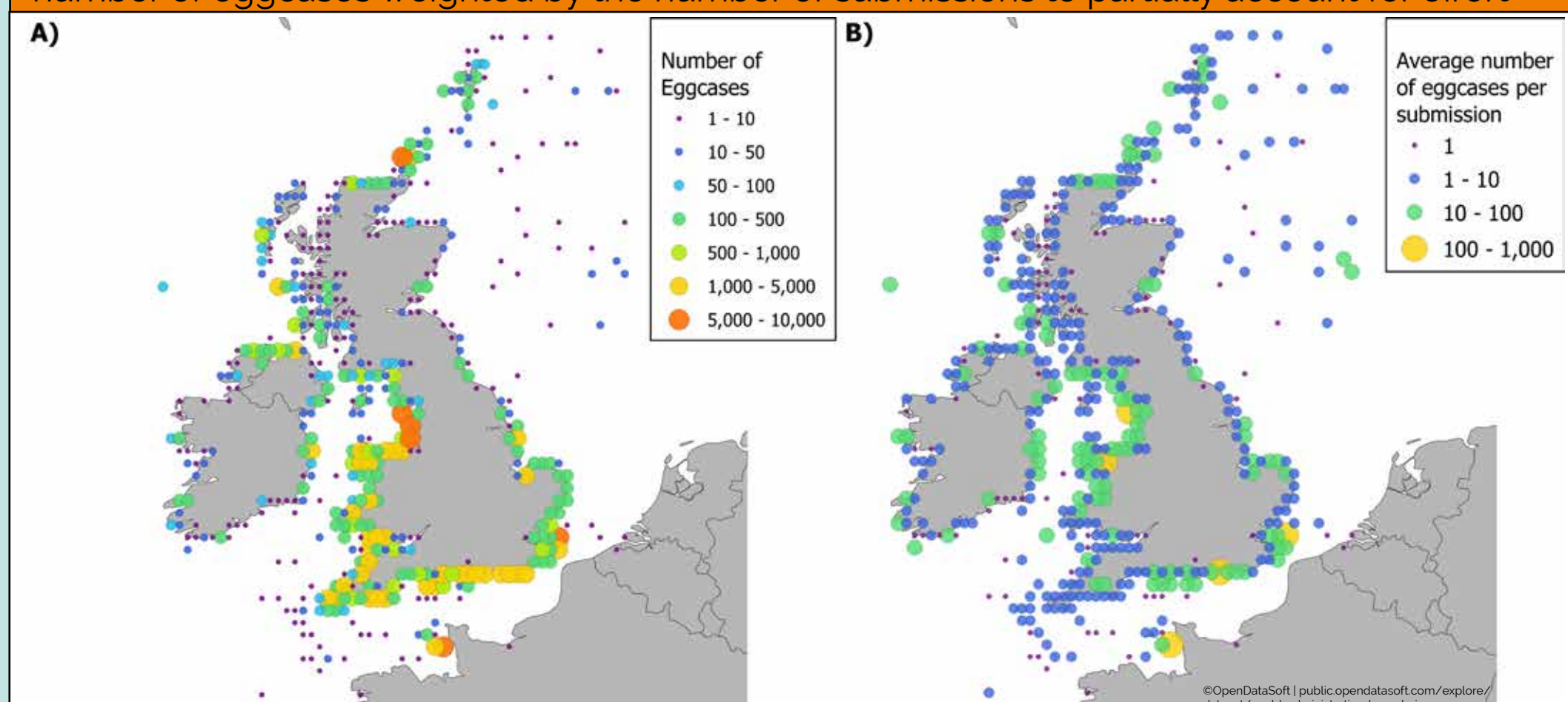
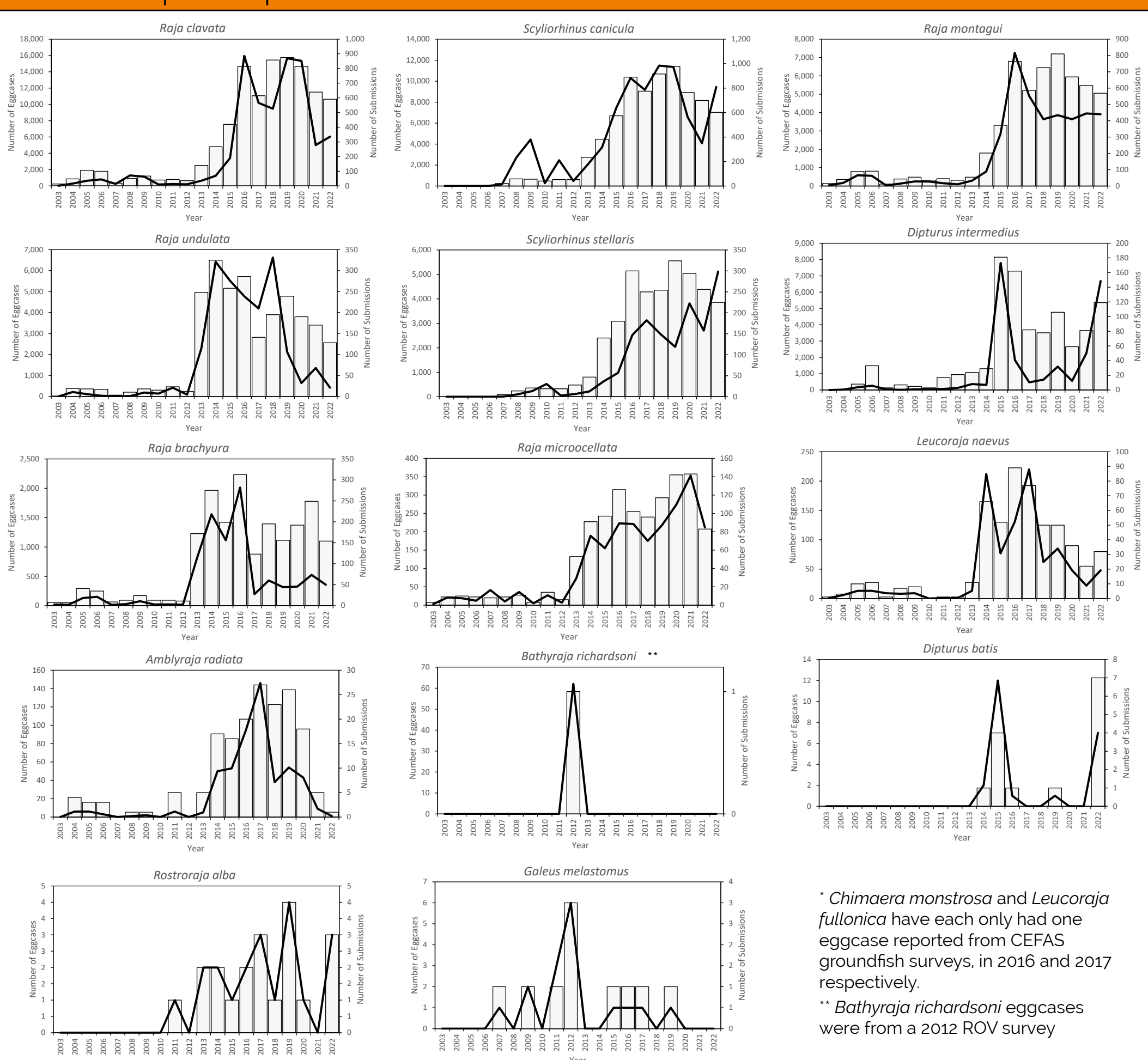
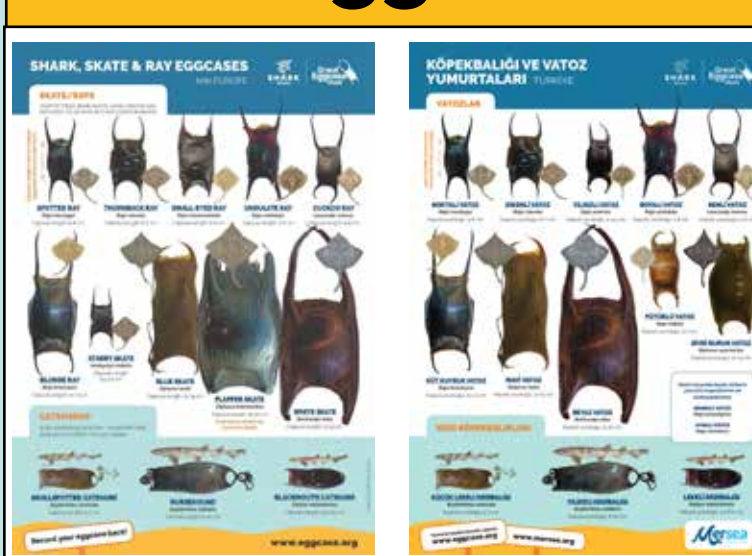


Figure 3: Total number of eggcases (line) and number of submissions (bar) each year for each of the 16* oviparous species found around the British Isles



* *Chimaera monstrosa* and *Leucoraja fullonica* have each only had one eggcase reported from CEFAS groundfish surveys, in 2016 and 2017 respectively.
** *Bathyrhynchus richardsoni* eggcases were from a 2012 ROV survey

Great Eggcase Hunt Resources



We have regional and translated ID materials available for Northwest Europe, the Netherlands, Portugal, Spain, Türkiye, Wales, and East-coast USA, with more regional resources in development, including Australia. Scan the QR code for our resources.



Get involved

Find out more at eggcase.org, record your eggcase sightings at recording.sharktrust.org/sightings/record or contact us at eggcase@sharktrust.org. Photos and new specimens are very welcomed!

