

Calling all citizen scientists: hunt for shark egg cases launches in Australia

Sitecore summary: *The Great Eggcase Hunt has landed on Australian shores, calling on citizen scientists to help researchers learn more about sharks, skates and chimaeras by finding and recording egg cases washed up along our coasts.*

CSIRO, Australia's national science agency, is calling on citizen scientists to find and record egg cases washing up on Australian coasts, so researchers can better-understand oviparous chondrichthyans - egg-laying sharks, skates and chimaeras.

The Great Eggcase Hunt, an initiative of UK-based charity The Shark Trust, has launched in Australia in partnership with CSIRO to help provide new data for scientists studying the taxonomy and distribution of oviparous chondrichthyans.

Helen O'Neill, CSIRO Australian National Fish Collection biologist, said recording sightings of egg cases on beaches and coastlines would help scientists discover what the egg cases of different chondrichthyans look like, with some species still unknown.

"Egg cases are important for understanding the basic biology of oviparous chondrichthyans, as well as revealing valuable information such as where different species live and where their nurseries are located," Ms O'Neill said.

Cat Gordon, Senior Conservation Officer at The Shark Trust said the Great Eggcase Hunt began in the UK 20 years ago and has since recorded more than 380,000 individual egg cases from around the world.

"We're really excited to be partnering with CSIRO to officially launch this citizen science project in Australia and to be able to expand the Shark Trust's eggcase identification resources. There's such a diversity of species to be found around the Australian coastline, and with a tailored identification guide created for each state, they really showcase the different catsharks, skate, horn sharks, carpetsharks and chimaera eggcases that can be found washed ashore or seen while diving," Ms Gordon said.

Also known as mermaids' purses, egg cases come in many different shapes and colours, ranging from cream and butterscotch to deep amber and black. The range in size from approximately 4 to 25 centimetres.

Some egg cases have a smooth and simple appearance, while others have ridges, keels or curling tendrils that anchor them to kelp or coral. Port Jackson sharks have corkscrew-shaped egg cases that they wedge into rocks.

Each different species' egg case has a unique morphology that is helpful in taxonomy, the science of describing and naming species.

"At the Australian National Fish Collection, we are matching egg cases to the species that laid them," Ms O'Neill said.

"We borrow egg cases from other collections, museums and aquariums around the world and use our own specimens collected from fish markets, from surveys at sea or extracted from the ovaries of preserved specimens in our collection," she said.

Chondrichthyans have the most diverse reproduction strategies found among vertebrates, encompassing parthenogenesis (no father), multiple paternity (more than one father of the litter), adelphophagy (baby sharks predating each other in the womb) and various modes of egg laying.

Egg cases found on beaches rarely contain live embryos, whose incubation times range from a few months up to three years, depending on the species.

“Egg cases found washed up on beaches have likely already hatched, died prematurely due to being washed ashore or been predated on by creatures like sea snails, who bore a hole in the egg case and suck out the contents,” Ms O’Neill said.

The Shark Trust is a UK-based charity dedicated to safeguarding the future of sharks, skates, rays, and chimaera through positive change. The Trust achieves this through science, education, influence, and action.

To get involved in the Great Eggcase Hunt, you can record sightings via the Shark Trust citizen science mobile phone app or through the project website www.eggcase.org.

Images available at:

<https://www.dropbox.com/sh/2yznq541v4gxyqr/AADu1Ukw7Pqd3qTt1FmtQD1Ta?dl=0>