

Press release: Ancient migration mystery could be solved after eels fitted with satellite tags

The life-cycle of the eel has been a mystery since at least the 4th century BC when even Aristotle pondered the question of where they came from.

Prehistoric and snakelike in appearance, the European Eel (*Anguilla anguilla*) is listed as Critically Endangered on the IUCN Red List of threatened species. Where eels spawn is still unknown, unravelling this mystery will be crucial to further understanding of the biology of the species and to protect spawning areas.

Now researchers – led by the Environment Agency together with the University of the Azores, ZSL (Zoological Society of London), Defra, Cefas, the University of Hull and DTU-Aqua – took a big step towards solving the mystery when they located European eel populations on the Azores Islands, close to the last known point on the eel migration route tracked by previous projects.

Three eels large enough to carry satellite tags were captured in a small river on the island of San Miguel following an intensive netting program conducted from October to December 2018.

In December 2018 the eels were fitted with satellite tags and released from a sandy beach into the Atlantic Ocean to begin their epic migration.

The tags are programmed to detach after 8 months so the eels have until around July 2019 to get to the Sargasso Sea before the tags detach, float to the surface and send their data to the researchers via satellite.

Environment Agency project lead and researcher Ros Wright said:

The European Eel is critically endangered so it is important that we solve the mystery surrounding their complete life-cycle to support efforts to protect the spawning area of this mysterious species.

Migrating eels are driven to travel vast distances by an innate desire to spawn. We hope that at least one of these three satellite tagged eels will become a superhero to the species by completing the migration lifecycle giving agencies and conservationists around the world the clues needed to protect this iconic species.

This is the first time we've been able to capture eels in the Azores and also ones that are large enough to carry satellite tracking tags so everything recorded since the eels started their journey will reveal information about eel migration that has never been known before.

There is evidence that the eels migrate around 6000 kilometres from Europe and Mediterranean countries across the Atlantic Ocean to spawn and die somewhere in the Sargasso Sea, a vast area of the Atlantic off the east coast of the United States and north of the Caribbean. The actual location of the breeding area has never been identified and spawning eels have never been seen.

At a local level the Environment Agency has installed eel and fish passes at man-made structures that can impede the movement of eels along our waterways as well as requiring screens to be added to abstraction intakes to protect eels and other species.