

ETNewsletter



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ETN IN NUMBERS



01

ETNews

New ETN release on the way!

Some changes and new features at the ETN database level are coming, including DST integration, and open detections aggregated into parquet files (this way people can access open data without an ETN account!). For the coming months, the ETN IT and Data Management Team will work on fixing bugs and integrating new features. If you notice any bugs, or have something else you want to mention that should be taken up, please email [us](#)!

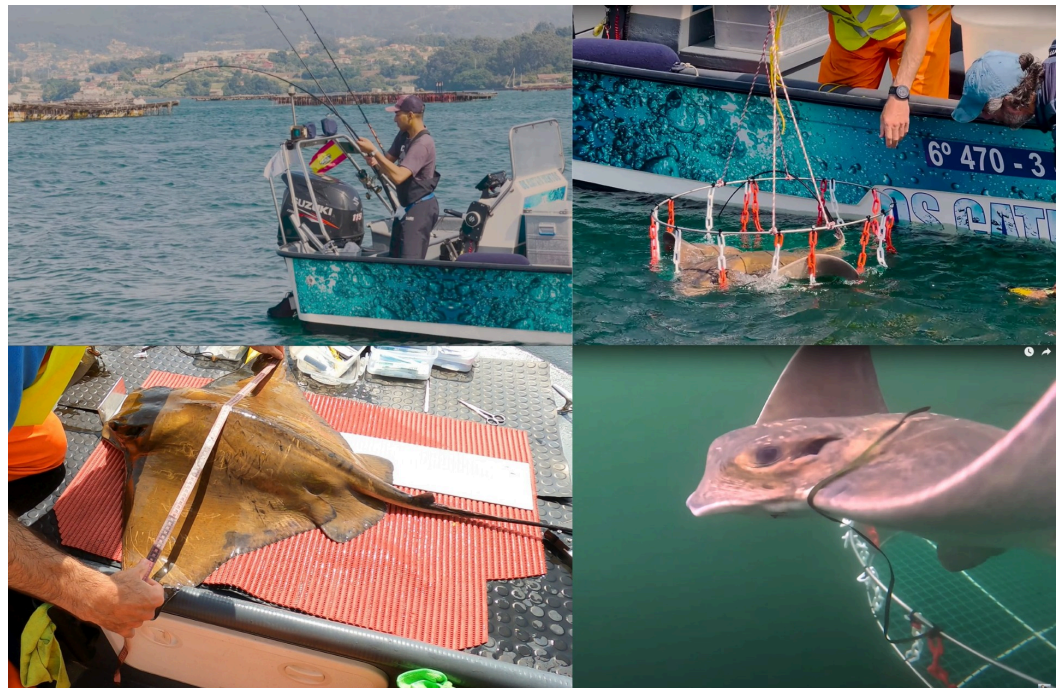
02

COOL RESEARCH

Telemetry to solve human-wildlife conflicts in the Galician Rias

The eagle ray *Myliobatis aquila* is a widely distributed member of the family Myliobatidae. In 2024, we started tagging this species in the framework of project **BELAS** (www.belasproject.com). Beyond our curiosity about how eagle rays move and behave within the Ría and further offshore, our research also addresses a pressing

human–wildlife conflict: the interactions between mollusc-pickers and this iconic ray. In simple terms, eagle rays love to feed on shallow clam beds, the same beds that support the livelihoods of many local families. We are in the early stages of understanding the conflict, but we are truly convinced that it will not be resolved without understanding the behavioral ecology of the eagle rays within Galician Rias. So far, most of the ~70 individuals we have tagged are quite large (up to 2 meters in total length) and female, leaving us wondering: where are the males? To catch the rays, we team up with a local recreational fishing company. Abi, the skipper and fisher, brings the rays by the side of the boat, and then it's our turn: we transfer them to an anaesthetic tank, tag and sample them. For the smaller rays, we go freediving and catch them by hand, carefully! These rays have a razor-sharp spine at the base of their tail, so precision is key. Once tagged, they recover quickly and return to the sea. Stay tuned to the project website and social media (@elasmopoulo.bsky.social) for updates and cool results!



Images: Jose Irisarri and Gonzalo Mucientes

03

TRACKING SEA ANGELS

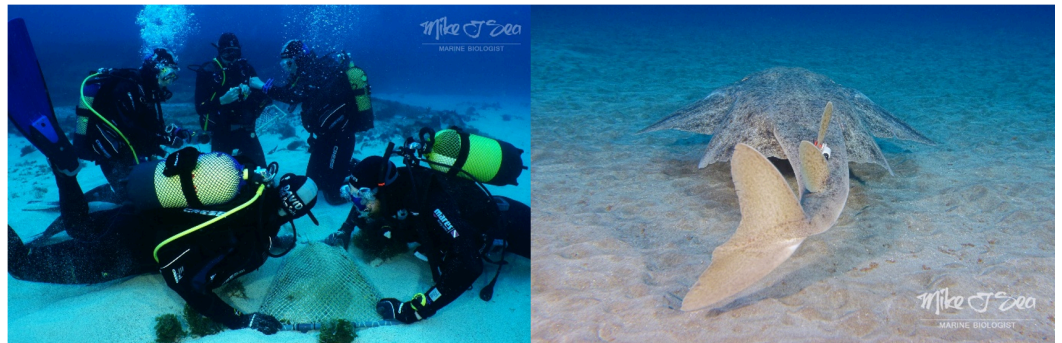
Long-term tracking for angelshark conservation

Studying the ecology of angelsharks (*Squatina squatina*) has proven particularly difficult, due to their rarity and cryptic behaviour. Once widespread across coastal areas of the Northeast Atlantic and Mediterranean Sea, this shark species is now Critically Endangered and limited to a few, isolated populations. The Canary Islands is a unique stronghold and the only place they are regularly sighted by divers, providing a rare opportunity to access the species in the wild. Since 2018, the Angel Shark Project: Canary Islands* has been using acoustic telemetry to track the species in La Graciosa Marine Reserve, Spain's largest marine reserve. This long-term study has provided novel data on movement, distribution and behaviour, and is already informing conservation in the region. Most recently, the researchers found that angelsharks may be far more vulnerable to climate change than previously thought, demonstrating the importance of long-term behavioural data for marine species as oceans continue to warm.

Check out these papers:

<https://www.int-res.com/abstracts/esr/v51/esr01255>

<https://onlinelibrary.wiley.com/doi/10.1111/gcb.70331>



Images by Michael J Sealey. Left: the research team preparing to tag an angelshark while diving, using a novel in-situ tagging method. Right: an angelshark with an acoustic tag externally attached to the dorsal fin.

*The Angel Shark Project is a collaboration between Leibniz Institute for the Analysis of Biodiversity Change, the University of Las Palmas de Gran Canaria and the Zoological Society of London.

04

ETN PROJECTS: SOME UPDATES

Major infrastructure milestones in STRAITS

The Horizon-funded **STRAITS** project achieved major infrastructure milestones as it enters its final year. The Gibraltar array was fully redeployed, while the Turkish array was expanded into the Black Sea in partnership with local institutions. Arrays in Ireland and Denmark/Sweden were successfully retrieved and serviced. A new RShiny application has been developed by VLIZ, now in testing, which will support all ETN users with enhanced data visualization and reporting.

Coordinated tagging campaigns for NorTrack

The Biodiversa+ **NorTrack** project coordinated acoustic tagging campaigns across eight North Sea countries with a wide range of species being tagged. A real-time fish detection pilot, designed to facilitate near-instantaneous data on species movement, is under development with procurement and planning on track for deployment in 2026.

Prototype phase for the North Sea Digital Twin of the Ocean

DTOTrack progressed toward its ambitious goal of developing Europe's first digital twin for marine animal movement. A prototype of a North Sea DTO has been created. The consortium has also registered a team in the upcoming Blue-Cloud Hackathon to further develop and test this innovation. This pioneering initiative bridges policy, conservation and technology by contributing to Europe's digital ocean strategy under the Sustainable Blue Economy Partnership.



05

A LITTLE ON COMPATIBILITY AND INTEROPERABILITY

In acoustic telemetry, we make use of acoustic signals to send over information from a tag to a receiver. These acoustic signals can be coded in different ways, but always make use of specific protocols. These protocols are a set of rules and standards used for transmitting and receiving sound signals.

Manufacturers of tags can decide to make use of interoperable or encrypted protocols. From a scientific perspective it makes most sense to opt for interoperable protocols. These allow for compatibility across brands and thus assure that your tagged animals are not only detected on receivers of the same brand, but also on others. However, the available interoperable protocols (like R64K) are somewhat outdated and are not very robust against false detections for instance. In addition, from 2010 onwards, an evolution was seen that manufacturers were evolving towards more encrypted protocols and thus steering away from the community needs.

As a result, in 2017, ETN requested the manufacturers to create new interoperable protocols that could serve the community in the short to medium term. About a year later, the 'Open Protocols' (OPi, for ID tags and OPs, for sensor tags) were born. OP represents a pivotal shift towards the scientific community needs, which aims to deliver state-of-the-art and relevant science utilizing a global network of interoperable equipment.

All Intellectual Property rights were handed over by the manufacturers that developed OP to ETN. The good thing about the OP is that it is not controlled by manufacturers but by ETN, which represents the community needs, and has different incentives than a company. In addition, ID allocation is done by a third-party to assure no duplicate ID codes can be used. By enabling tags and receivers from different manufacturers to work together seamlessly—and by managing ID allocation through an impartial third party—they drive collaboration, reduce costs, and stimulate technological innovation for future research.

OP is developed for global use, although it is currently mainly being used in Europe, and it is designed to encourage global interoperability across the different tracking networks. Claims have been made that OP doesn't meet the standards needed and that it will lead to ID duplication and higher rates of false positive IDs. However, these claims are not supported by evidence, and only merchandise doubt. Science on the other hand provides evidence for the hypotheses they make. This is a long process that includes a thorough review process by peers which decide whether the evidence is sufficient to accept the claim (Orekses and Conway 2010). Also, OP has gone through a long journey of data-analyses and peer-review to confirm applicability of OP as an interoperable solution. This has been done through assessing the compatibility between devices, characterizing the acoustic range of the transmitter-receiver combination, comparing detection efficiency and assessing the robustness against spurious detections. It is proven by scientific evidence that OP is robust against spurious detections, there is no ID duplication and that there is full interoperability between the tested devices. See [Aspillaga et al. 2024](#) for the full details.

However, ETN is aware that OP in its current form is only a mid-term solution, as technologies are fast-evolving and the number of users worldwide are rapidly increasing. Therefore, ETN continues to collaborate with industry and tracking networks across the globe to work on new interoperable protocols that meet the needs of the future.

We hope these novel insights will encourage international research groups to promote OP-based studies to ensure compatibility and maximise the benefits of acoustic telemetry networks.

06

KEEP AN EYE OUT - UPCOMING EVENTS

World Recreational Fisheries Conference 2026

- The 11th World Recreational Fisheries Conference is taking place in Eastern Cape, South Africa, 19-22 February 2026. Find out more [here](#).

Sharks International 2026

- Sharks International is the global conference for scientists working on sharks, rays and chimaera. In 2026, the conference is taking place in Colombo, Sri Lanka, 4-8 May 2026. Find out more [here](#).

2026 Pelagic Symposium

- The 2026 Pelagic Symposium is happening in Mexico City, Mexico, 4-8 May 2026, with the conference theme of "Navigating changes in small pelagic fish and forage communities: climate, ecosystems, and sustainable fisheries". Find out more [here](#).

07

KEEP IN TOUCH

Stay updated; follow us everywhere!

