

A partnership between
scientists and recreational
anglers to improve our
understanding of pollack
in south-west England



Non-Technical Report Summer 2024



Marine
Biological
Association



Department
for Environment
Food & Rural Affairs

ABOUT POLLACK FISP

The project is led by the University of Plymouth, in partnership with the Angling Trust, the Professional Boatmans Association, the Marine Biological Association and the University of York. The project team includes Dr Emma Sheehan, Dr Thomas Stamp and Dr Rebecca Nesbit from the University of Plymouth, Hannah Rudd from the Angling Trust, Dave Uren as Fisheries Liaison Officer, Dr Simon Thomas from the University of York, and Dr Bryce Stewart from the Marine Biological Association.

The project is funded by the Department for Environment Food and Rural Affairs (Defra) via the Fisheries Industry Science Partnership (FISP) scheme, part of the UK Seafood Fund. The FISP scheme is designed to be a true partnership between industry representatives and research institutions. FISP projects will improve and share knowledge of fisheries through data collection and research to support sustainable fisheries management. The final Pollack FISP results are due to be reported in 2025.

TRACKING POLLACK

We have fitted 92 pollack with internal tags to track their movements. Each tag continuously emits a unique 'ping' which can be detected by receivers on the seabed. The University of Plymouth team manages a network of receivers along the south coast - every time a tagged pollack swims within about 300m of a receiver, we will detect it. We also obtain data from receivers around Europe.

Our early results from 2023 have shown that many of our tagged pollack spent long periods in a small area. They stayed at the same reef or wreck, sometimes moving between different parts of the same reef for the day and night.

We are continuing to collect data from the tagged fish, and will share more insights soon.



Image A

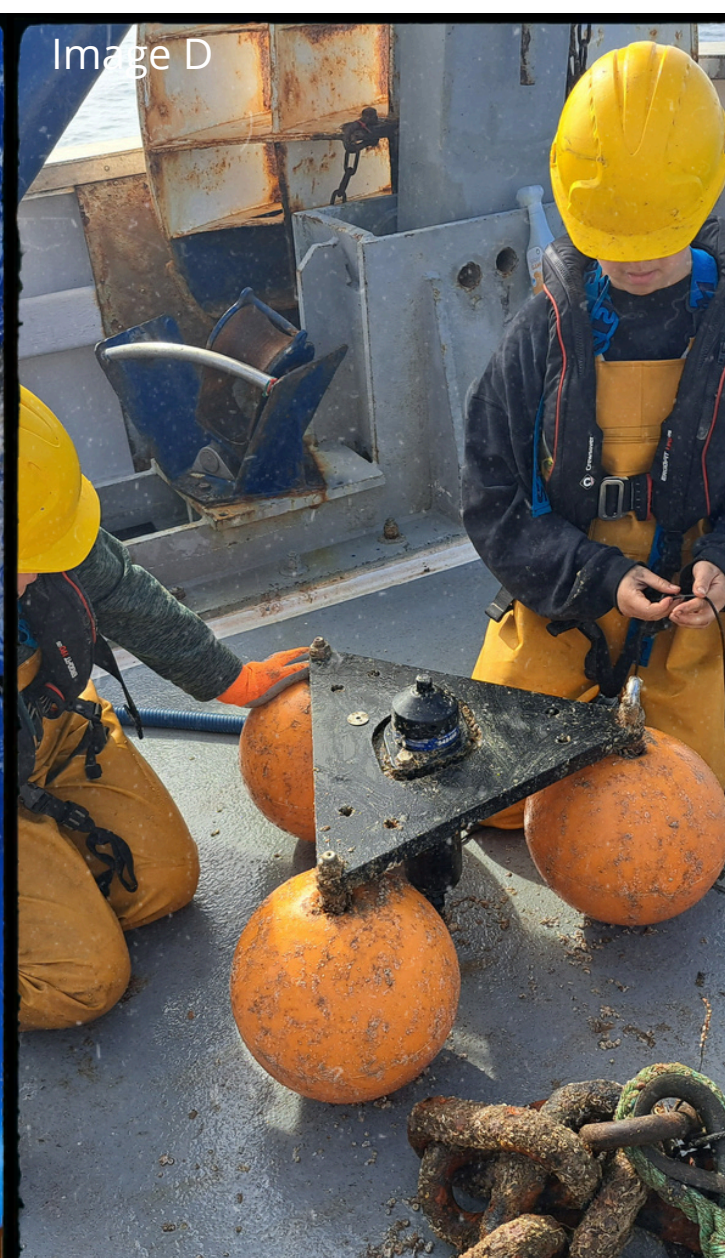


Image B

Image C

Image D

THE PROBLEM OF BAROTRAUMA

In our early days of tagging pollack, we found that many died from barotrauma - the gases in their bodies expanded as they were brought to the surface, so they didn't survive when they were released. This changed when we started to use a descending device to quickly return fish to depth, rather than release them on the surface. At least 3 out of every 4 fish survived if we quickly returned them to the depth they were caught at.

To learn more about barotrauma, we studied the survival of pollack caught at different depths around the Devon and Cornwall coast. Survival was related to the depth at which the fish was caught, with survival being very low for fish caught at deeper marks.

Many anglers we have spoken to are excited by the possibility of using descending devices such as the SeaQualizer. Our work suggests that these devices could be very powerful in increasing the survival of pollack in catch-and-release angling.



Image F



Image G



Image H



Image I

“Our work suggests that descending devices could be very powerful in increasing the survival of pollack in catch-and-release angling.”

Dr Thomas Stamp, University of Plymouth

MEASURING POLLACK

Over 15,000 pollack have already been measured as part of Pollack FISP, with the help of 14 charter skippers operating out of ports in the south west. The average length is 55cm, and the largest fish caught so far was 107cm. The highest catches came in the spring and early summer.

To work out how old the fish are, we have been collecting otoliths (ear bones). These can be used to calculate a fish's age in the same way that you would count rings on a tree. We have taken otoliths from fish of a range of different sizes, so will be able to calculate how old fish are at different lengths. We have collected otoliths from 185 fish, and will soon reach our target of 200 fish.

To complement the data we collect through the project, we've also been looking at historic records. So far, we have information from about 204 pollack from angling logbooks and catch records, dating back to 1960. This shows a decline in the size of pollack over the last 10 years, which fits with the experience of anglers we've spoken to. The decline was recorded slightly earlier on wreck marks, where anglers used to catch bigger fish.



15,089

fish measured by the
Pollack FISP charter consortium

761

recreational fishing trips

370

pollack otoliths collected



Image K



Image L



Image M

INSIGHTS FROM EXPERTS BY EXPERIENCE



On 14th February 2024, a group of recreational and commercial fishers came together to discuss pollack stocks and their management. There was unanimous agreement that pollack had declined in number and size along the south coast of England. A range of possible causes were suggested, including increased water temperature, an increase in netting, new advances in netting technology and lack of bait. There was debate about whether the reappearance of tuna has had an impact on pollack stocks.

The recent restriction on pollack catches was of great concern, particularly given the lack of alternative fisheries for many fishers. It was generally agreed that the management measures could have a positive impact on the pollack stock in a few years' time, but only if they are properly enforced. In particular, a need for better policing of large 'factory type' vessels was emphasised. Both recreational and commercial fishers agreed that the recreational fishery needs to be managed. Options for this include an increased minimum size, a closed spawning season, and a bag limit of 4-7 fish a day per angler. There was a great deal of interest in the use of descending devices such as SeaQualizers to return pollack safely.

Everyone agreed that there needs to be more research, more education, more consultation and more transparency. These outcomes of the workshop have already been presented to Defra by Dr Bryce Stewart, and Defra will also be sent a detailed report summarising the discussions in due course.

NEXT WORKSHOP WEDNESDAY 12TH FEBRUARY 2025

Pollack FISP will host a final workshop on Wednesday 12th February 2025 at the University of Plymouth to present on the findings of the project. If you would like to attend please email fishtracking@plymouth.ac.uk.

IF YOU SEE A TAGGED POLLACK...

Some of the fish we've tagged have been fitted with a yellow "floy" tag at the base of the dorsal fin. On this tag you will see an email address (fishtracking@plymouth.ac.uk) and a tag ID number. If you catch a tagged fish, please email us with as much information as possible about when and where the fish was caught. If you're fishing on secret marks, even just knowing this fish has been recaptured is extremely valuable.





IMAGE REFERENCE LIST

Title image) Pollack swimming on a reef off the Devon coast (Matt Doggett)

Image A) Pollack recovering post-tagging in the release cage at depth (Dr Thomas Stamp)

Image B) Researchers from the University of Plymouth deploy a hydrophone to communicate with receivers on the seabed near the Eddystone Lighthouse, Plymouth (Dr Rebecca Nesbit)

Image C) Pollack being anaesthetised ready for tagging (University of Plymouth)

Image D) Acoustic receiver download and maintenance (Dr Rebecca Nesbit)

Image E) Example of an external floy tag to identify tagged pollack (University of Plymouth)

Image F) Juvenile pollack (Dr Bryce Stewart)

Image G) Pollack exhibiting symptoms of barotrauma - engorged stomach (Dr Rebecca Nesbit)

Image H) Drone photo of Mirage, skippered by Dave Uren - one of the consortium skippers of Pollack FISP (Nick Kennedy, Verri Media)

Image I) Pollack exhibiting symptoms of barotrauma - engorged stomach (Dr Rebecca Nesbit)

Image J) Dr Simon Thomas dissecting pollack otoliths (Dr Bryce Stewart)

Image K) Working aboard a charter vessel (Dr Rebecca Nesbit)

Image L) Pollack otoliths (ear bones) collected to calculate a pollack's age in relation to its size (Hannah Rudd)

Image M) Pollack (Dr Bryce Stewart)

Image N) Pollack FISP workshop attendees (University of Plymouth)