



Thunnus UK: A baseline for Atlantic bluefin tuna off the United Kingdom

Tom Horton, Matthew Witt & David Righton



Outline

- Atlantic bluefin tuna
- The northeast Atlantic
- Thunnus UK
- Aim 1: Sightings
- Aim 2: Electronic tagging
- Aim 3: Advice



Atlantic bluefin tuna (*Thunnus Thynnus*)

- Important apex predators
- Endothermic = broad environmental niche
- Complex spatial dynamics
- Effective conservation = stock assessment & TACs
- Extensive knowledge of spatial ecology throughout range and life-cycle required
- NE Atl: recent changes...

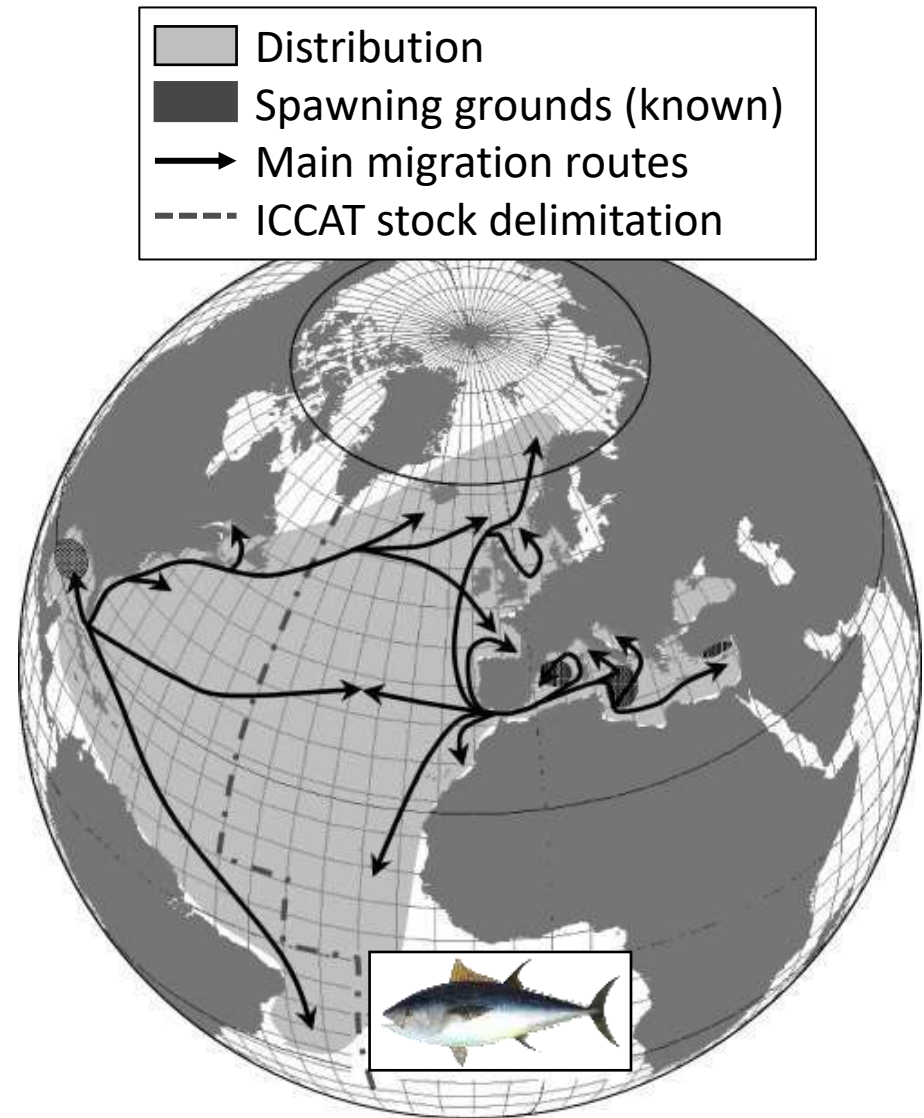


Figure 1. Spatial characteristics of Atlantic bluefin tuna ecology (Fromentin *et al.* 2005)

NE Atl: Recent changes...

In recent years bluefin tuna have returned to coastal waters of the NE Atlantic

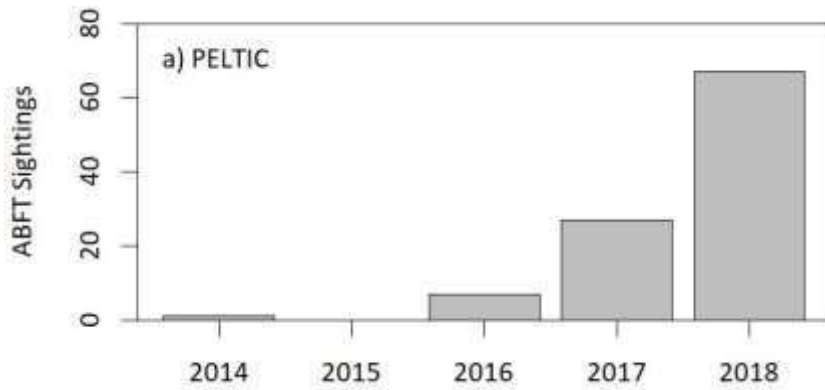


Figure 2. Bluefin tuna sightings during annual CEFAS PELTIC surveys (2 weeks annually)

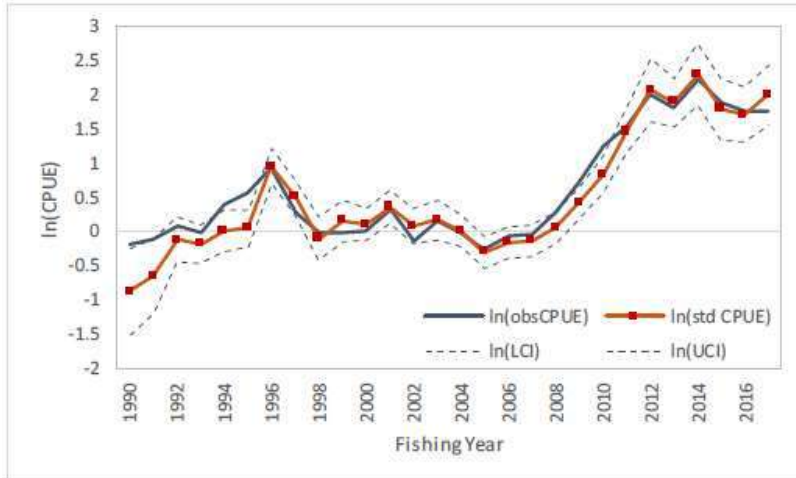


Figure 3. Standardized bluefin tuna CPUE for the Japanese longline fishery (Kimoto *et al.* 2017)



Characteristic feeding behaviour of bluefin tuna





Project Aims

- 1. Sightings:** To collate information on the presence and abundance of bluefin tuna in UK waters using scientific and citizen science methods
- 2. Tagging:** To undertake an electronic tagging programme to collect evidence on the seasonal migrations and behaviour of bluefin tuna caught in UK waters
- 3. Advice:** To provide information and advice to stakeholders

Atlantic bluefin tuna

1. Sightings



call: 07432 873490

email: bluefin@exeter.ac.uk

web: www.thunnusuk.org

twitter: @ThunnusUK



e.g. send a text
message/picture



**“20 Oct 2017 2pm,
54.5N, 8.9W, approx
20x 1.5m long fish
feeding, seen while
hauling”**

OR

**“14 Sep 2016 7pm,
3nm SSE Rame Head,
26-50 1m fish at
surface”**

1. Sightings

www.thunnusuk.org



Home

SUBMIT SIGHTING

About

Project

Events

News

bluefin hotline: 07432 873490



THUNNUS UK

THUNNUS UK is a collaborative research project between The University of Exeter, The Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the Tuna Research and Conservation Centre of Stanford University, USA and aims to provide a baseline understanding of the ecology of Atlantic bluefin tuna (*Thunnus thynnus*) in waters of the British Isles. The project is supported by the Department for Food, Environment and Rural Affairs (Defra) and the European Maritime and Fisheries Fund (EMFF)

1. Sightings

www.thunnusuk.org



Home [SUBMIT SIGHTING](#) [About](#) [Project](#) [Events](#) [News](#) [bluefin hotline: 07432 873490](#)

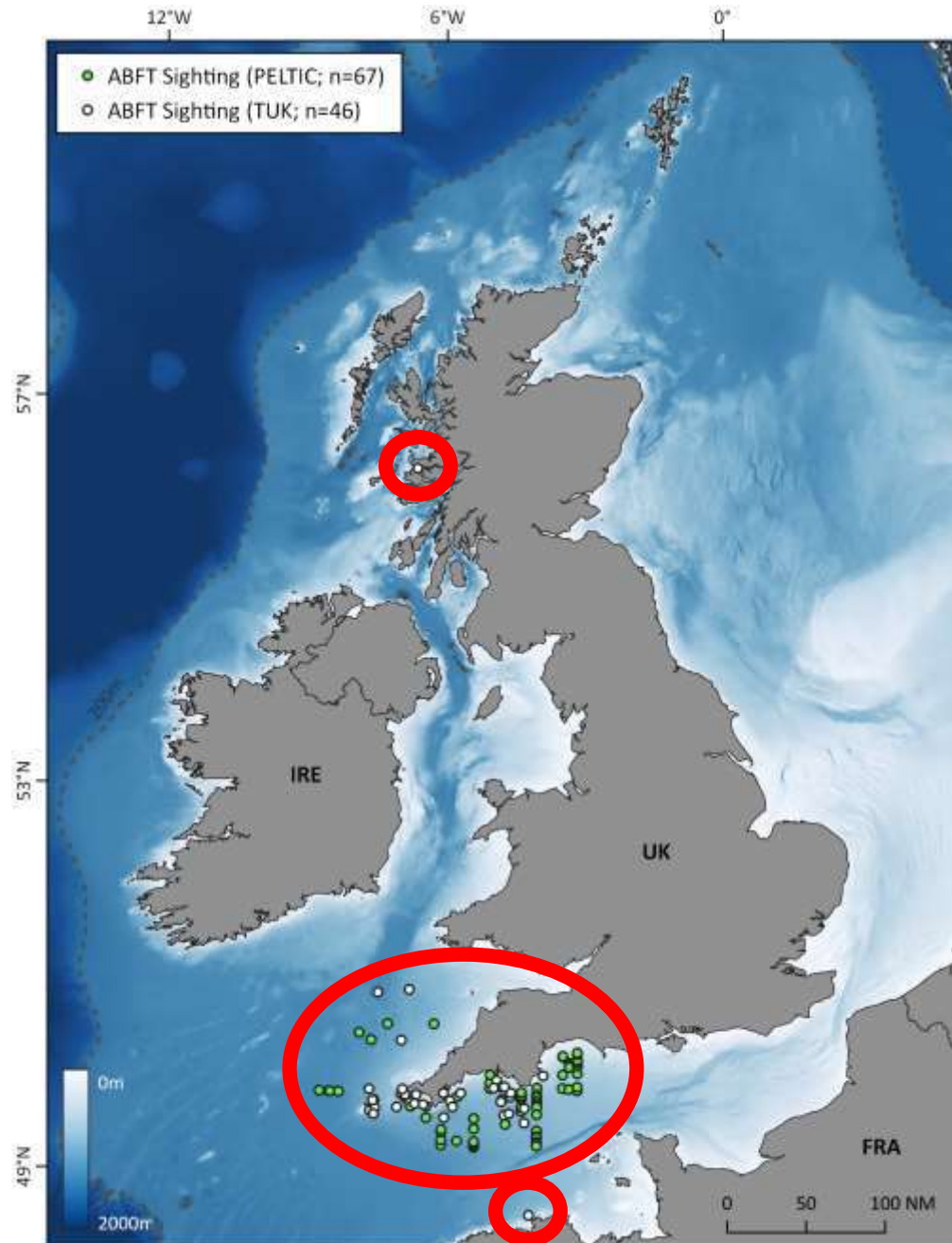
<input type="text" value="Name"/>	<input type="text" value="Email"/>
<input type="text" value="Select a Date"/>	<input type="text" value="Time (HH:MM:SS)"/>
<input type="text" value="Location (select)"/>	<input type="text" value="Longitude (Degrees & Decimal Minutes)"/>
<input type="text" value="Latitude (Degrees & Decimal Minutes)"/>	<input type="text" value="Size of fish (select)"/>
<input type="text" value="Number of fish (select)"/>	<input type="text" value="Anything else to add?"/>
<input type="button" value="Upload pictures +"/>	
<small>(Max File Size: 1MB)</small>	
<input type="button" value="SUBMIT"/>	

THUNNUS UK

THUNNUS UK is a collaborative research project between The University of Exeter, The Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the Tuna Research and Conservation Centre of Stanford University, USA and aims to provide a baseline understanding of the ecology of Atlantic bluefin tuna (*Thunnus thynnus*) in waters of the British Isles. The project is supported by the Department for Food, Environment and Rural Affairs (Defra) and the European Maritime and Fisheries Fund (EMFF).

1. Sightings

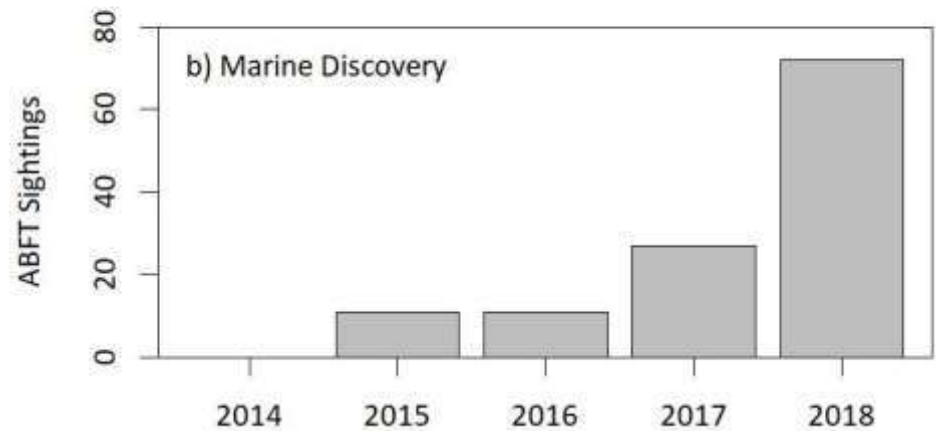
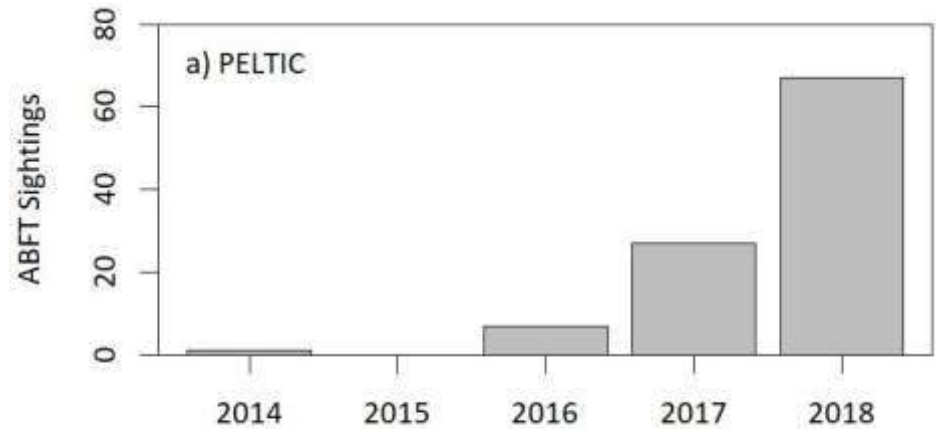
- 51 sightings from 25 recorders in 2018
- 6th May 2018 - 27th of Feb 2019
- Devon and Cornwall
- One from Oban, Scotland and one from Brittany, France
- During scientific tagging operations, staff recorded >400 sightings



1. Sightings

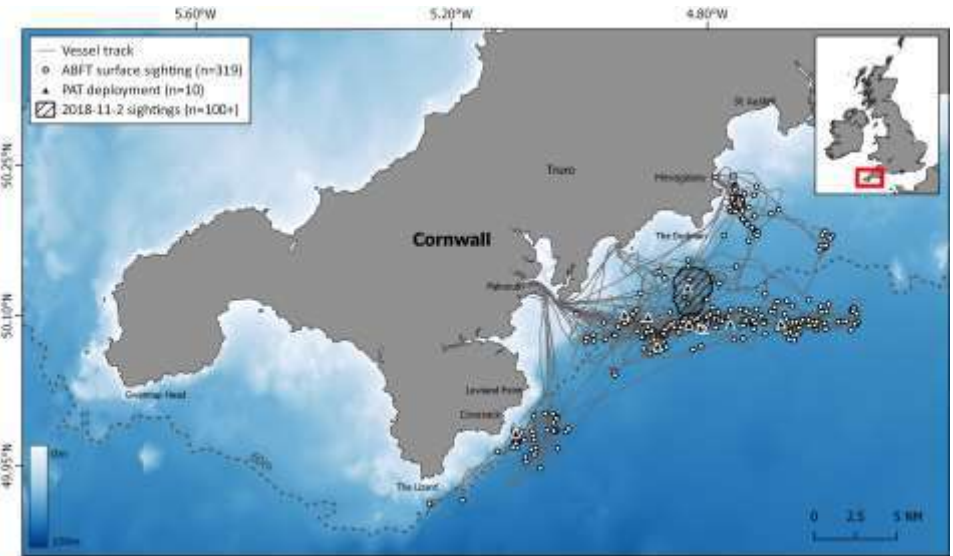
- **PELTIC:** 2014 onwards - 6th October – 9th November
- 68 sightings in 2018

- **Marine Discovery:** 200 trips annually April – November
- 67 sightings in 2018



2. Tagging

- Fishing conducted with contracted fishers
- MMO dispensation for fishing operations
- 25 days at sea: Sept 24th – Dec 12th
- Fishing = trolling:
 1. minimise capture times
 2. ensure high welfare standards
- Electronic tags = PSATs
- No news until the end of a deployment.



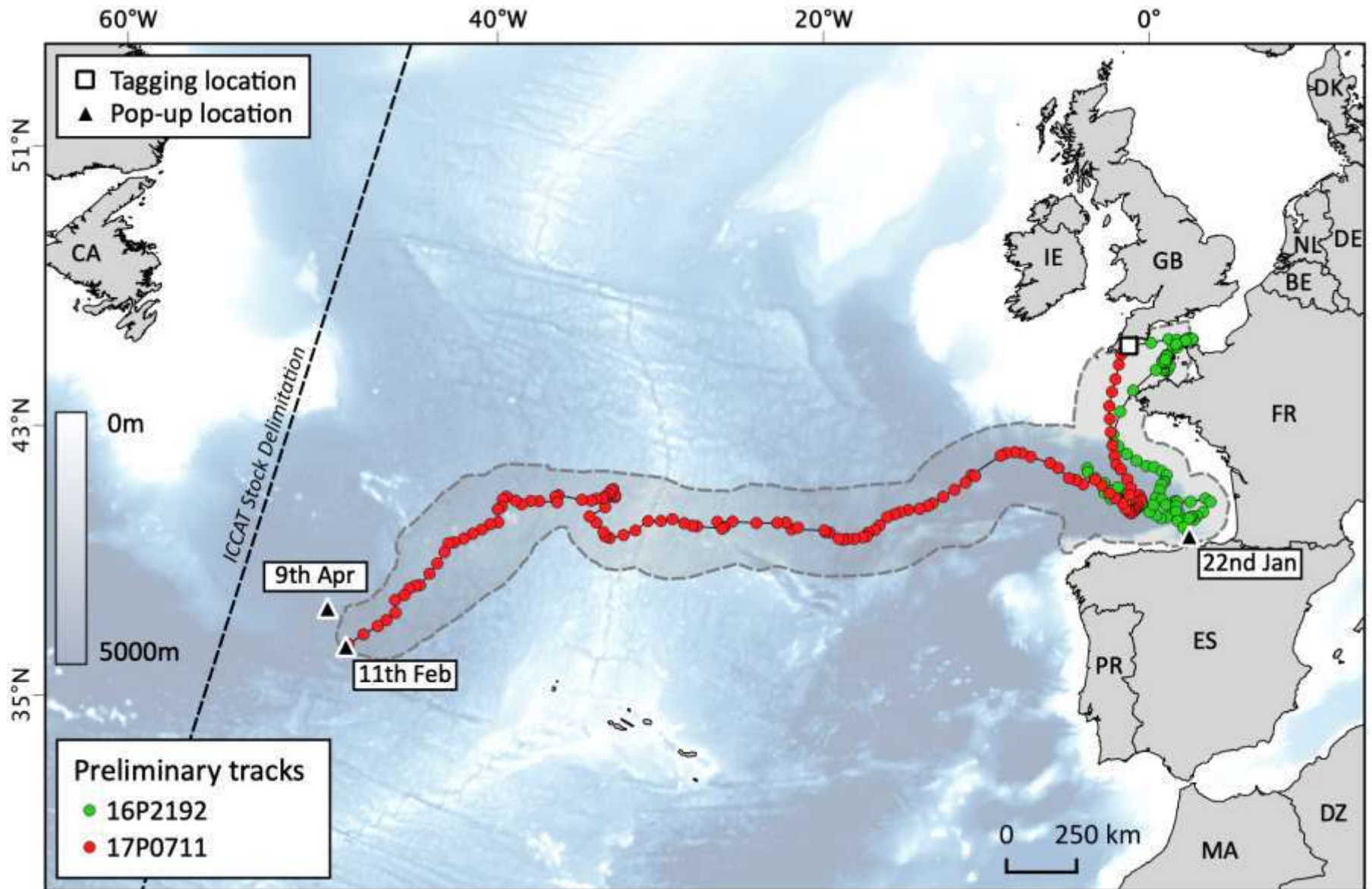


2. Tagging

- Ten bluefin tuna were electronically tagged
- Gills were irrigated & eyes were covered
- Capture time: 23:00 ± 12:47 min
- Handling time: 3:35 ± 0:44 min
- Size: 158-206 cm Curved Fork Length (5-8 yo)

2. Tagging

Three PSATs have popped-up after 106, 131 and 182 days at large



3. Advice

- Guidelines for the safe release of incidentally caught bluefin tuna
- Developed initial guidelines with Adrian Molloy
- Update in 2019
- Inclusion of information from tagged bluefin

Improving post-release survival in **Atlantic bluefin tuna**



Rod and line.

Atlantic bluefin tuna are a prohibited species in UK waters and must not be targeted by commercial or recreational fishers. Should they be accidentally caught, they must be returned to the sea alive by following the guidelines below and all incidents reported to the MMO.



Bring the fish to the boat as quickly as possible - if there are bluefin in the area consider moving on.



Free the hook and lip-hook the fish quickly - if you can't free the hook, cut the line as close to the hook as possible. Fish can survive with fishing hooks left in the jaw, so don't spend too much time trying.



Tow the fish gently with its head in the water - secure the lip-hook to the gunwale, put the boat in gear and tow the fish until it shows signs of revival.



RELEASE the fish by 'Popping' off the lip-hook - ensure the tuna's head faces down when released. NEVER remove the fish from the water.

To report a sighting please call the bluefin hotline on 07432 873490 or visit: www.thunnusuk.org/aim-1-a-baseline-understanding.

To report by-catch please contact the Hayle MMO office on 01736 787303

Summary

- ❑ Bluefin tuna were, once again, present in waters off the British Isles in 2018
- ❑ 500+ sightings collected in 2018
- ❑ Mainly off southwest England (also France, Scotland, Wales and the Channel Islands)
- ❑ 10 electronic tags deployed (7 currently at large)

2019

- The sighting scheme will run again in 2019
- Tagging will take place again in 2019
- Updated advice will be provided at the end of the project

Thanks

Tony Bicknell, Barbara Block, Nina Constable, Phil Doherty, Owen Exeter, Lucy Hawkes, Chris Kerry, Robbie Schallert, Sam Smith, Ramon, Jeroen van der Kooij and Ollie Yates



www.thunnusuk.org
[@thunnusuk](https://twitter.com/thunnusuk)
bluefin@exeter.ac.uk

Thank you for listening!