



Thunnus Thynnus *The Atlantic Bluefin Tuna.*



Migration and Management, a short history.

Ancient history, and new discoveries.

Atlantic Bluefin Tuna (ABFT) fisheries have been recorded in the Mediterranean for over a thousand years. Images on friezes and pottery from across the ancient Mediterranean show fisherman and their quarry. Cave paintings in Sicily showing Tuna-shaped fish may confirm this relationship even goes back several thousand years further.



As recently as the last decades of the 20th century, little was really known about the lifestyle of Atlantic Bluefin Tuna. The last 20 years have seen a significant growth in our understanding of these amazing fish, but much remains to be learnt.

Assisted by extensive tagging campaigns, especially Pop Up Satellite Tags (PSATs), we now have a better if still incomplete picture.

'Foodie vacations'.

Bluefin from both the Gulf of Mexico and Mediterranean – the two major confirmed spawning sites - are known to undertake seasonal migrations from the warmer Southern waters, to food rich cooler climates further North.

Vast quantities of Atlantic Mackerel, Herring, Saury, Cod, Whiting and Squid are the target of these fish. Every year, from late Spring, masses of fish head North, and indeed many will crisscross the Atlantic, (West → East AND East ← West), in search of food.

Their near unique physiological characteristics - see my other article on this site - allow them to travel from waters of 30-33 degrees Celsius, to the chilly, bountiful waters of the North Atlantic, where water temperatures could be just 6-10 degrees.

The waters off of Donegal, NW Ireland have provided a great illustration of these 'foodie vacations'. The area has hosted large numbers of Atlantic Bluefin from late Summer, particularly since 2015 and has been flagged by scientists as a 'meet and eat' destination for fish from all over the Atlantic. Satellite tagging of these 'Irish' fish has confirmed this mixing, with some fish heading back to the Gulf of Mexico at the end of the year, and some to the Mediterranean.

In the following schematic you can see this perfectly illustrated by the tracks from two fish hooked and tagged just minutes apart by the same boat in 2003.

One popped its tag near the Bahamas, likely en route to the Gulf of Mexico spawning grounds, the other near Portugal, probably heading towards the Mediterranean.

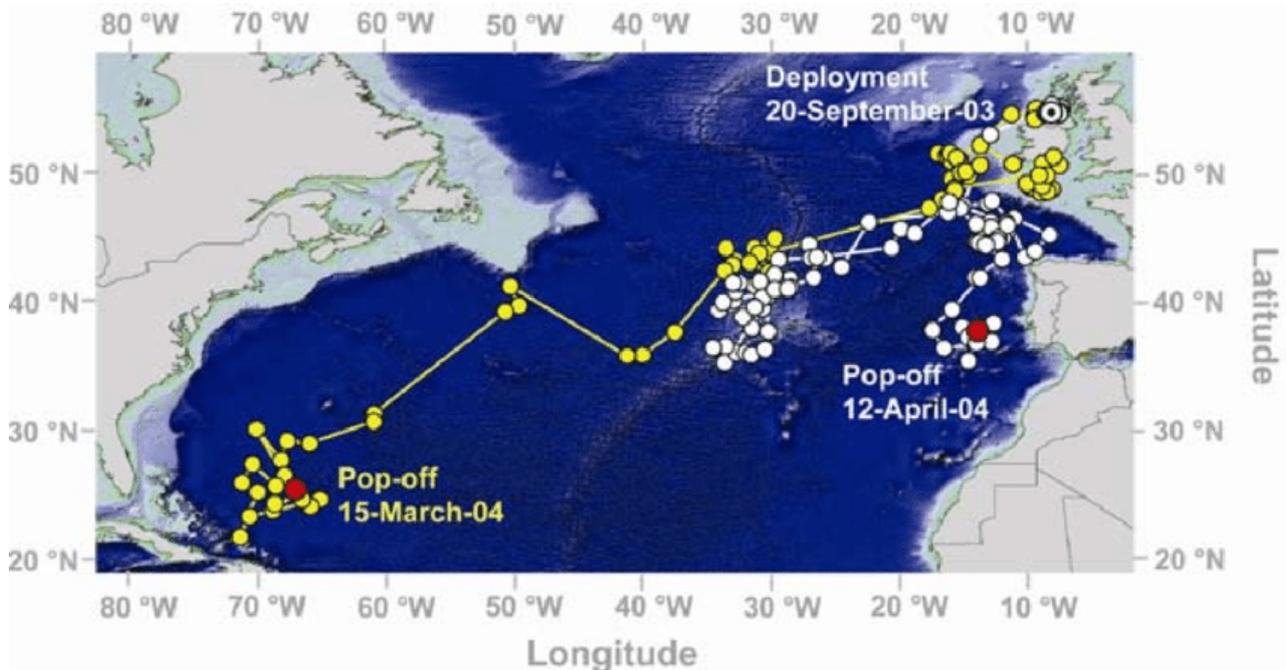


Illustration from the Irish Sea Fisheries Board

Sex tourism, Bluefin style.

Until very recently it was believed that Atlantic Bluefin had just two spawning areas, the Mediterranean and the Gulf of Mexico (GoM). Spawning occurs sometime around May-June, with its exact timing dependent upon temperature, salinity, and currents.

Scientists for decades talked of two distinct Western Atlantic and Eastern Atlantic/Med (EA/Med) stocks of fish, the latter significantly greater than the former. Some intermingling was suspected linked to their wide-ranging pursuit of food, but until the Tagging programs began to bear fruit that was about the extent of our knowledge.

In recent years scientist have discovered evidence of what may be a third spawning area in the Slope Sea off of the North Eastern US seaboard.

The discovery of this possible new spawning area is causing a re-think in our understanding of ABFT. One hypothesis is that some fish, in particular younger specimens, may spend some years away from their 'home' spawning areas.

Are they instead upon maturity reproducing in the Slope Sea? Or perhaps not spawning at all in some years? But then do they, mostly, return to their 'own' spawning grounds to reproduce in subsequent years? At this point, scientists just don't know for sure, and it is hoped that the most recent tagging programs being undertaken in 'new' fisheries, Scandinavian and UK waters, may help throw more light upon this.

Whether in search of food or sex, or both, some Atlantic Bluefin certainly undertake huge journeys over the course of a year.....

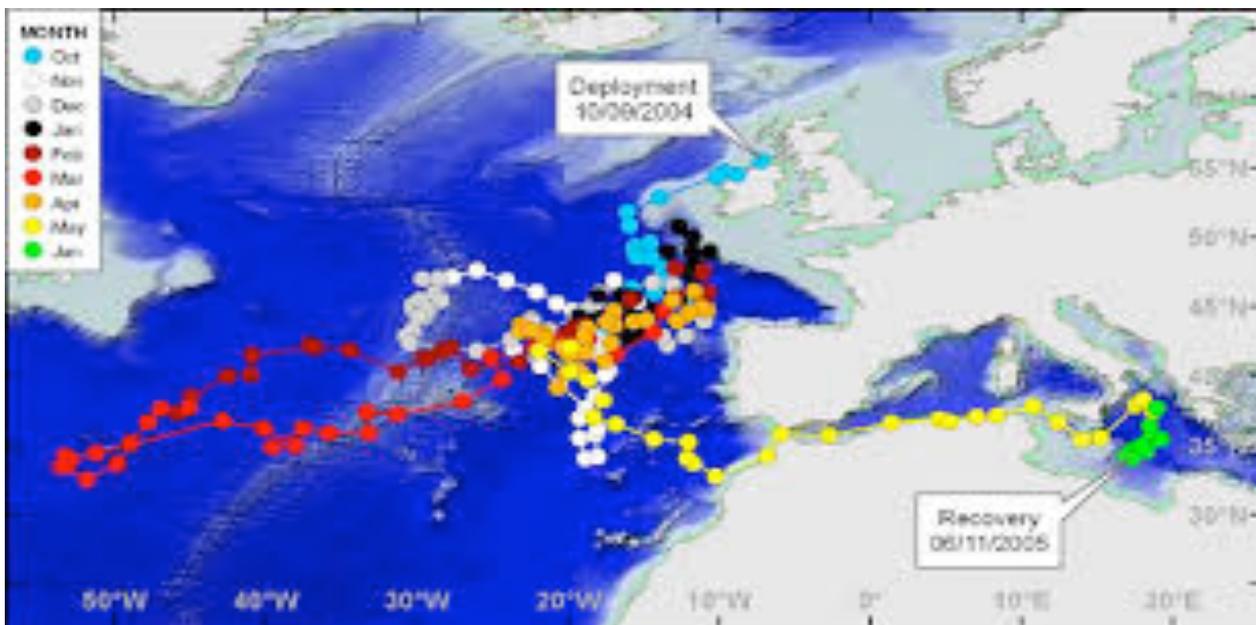
Bluefin Odyssey.

The near unique physiological features of Atlantic Bluefin allow them to tolerate a wide range of water temperatures. They can be found as far South as the GoM and Mediterranean, to the frigid waters of the North Atlantic. These seasonal migrations may take them just a few hundred miles, or in other cases on journeys of thousands of miles across the Atlantic and back.

There is now much evidence of the 'cross Atlantic' travels of Bluefin. 'Mediterranean' fish have been confirmed off the 'States and Canada, the North West coast of Ireland, Scandinavia, and in the mid-Atlantic near the Azores. Fish tagged in the eastern half of the Atlantic, as per the example above, are known in some cases to head back across the Atlantic at year's end

What is really amazing, are the huge distances some of these fish cover as they undertake these journeys.

Another fish tagged off Donegal in October 2004 undertook an amazing odyssey illustrated in the image below. It ended its days some seven months later, captured near Malta in June 2005. In all, a journey of over 17,000 kilometres (10,500 miles) in little over 8 months. These journeys are truly some of the most extreme in the animal world.



Historical stock management efforts have assumed these two stocks were distinct, and this misunderstanding may possibly have contributed to the more precipitous decline, and slower recovery in the Western stock. (Was the smaller, 'Western' stock being overfished in their journeys to the Eastern Atlantic?) A change is underway in this thinking, and we can only hope it will lead to better, more informed management in the future.

Management by ICCAT.

Recognising the importance of various Atlantic Tunas, in 1969 the International Commission for the Conservation of Atlantic Tunas (ICCAT) was established. Now consisting of 70 odd member countries ICCAT assists in the study of various species, and sets annual catch quotas in agreement with its members. It has frequently been criticised for bowing to Political and Commercial pressures from member states and some conservationists refer to it scathingly as the “International Conspiracy for the Capture of All Tunas.....”

The recent history of Atlantic Bluefin is a salutary, textbook example of the damage man can heap upon his environment, and possibly, how we can still repair things if we take note of the signs and act accordingly.....

To the edge and back?

Post WW2, population growth and great advances in fishing technology brought unprecedented pressure to bear on many marine species, including Bluefin. As demand for fashionable Bluefin flesh soared through the 1980s, overfishing saw stocks crash. By 2008 the Western Atlantic stock of Bluefin was estimated at just 17% of the 1950 level, and the Eastern stock at 33%.

Faced with the collapse of stocks to levels below sustainability, and the real risk of extinction, ICCAT members agreed a sharp reduction in quotas as part of a 15 year recovery plan starting in 2007. Already cut from 32,000 tonnes in 2006 to 22,000 in 2009, they were set at 13,500 tonnes for 2010 through to 2014. Enhanced enforcement measures were aimed at reducing the huge Illegal, under-reported or unreported (IUU) fishing that had pushed the real take maybe as high as 60,000 tonnes per year.

These measure fortunately do appear to have impacted the spawning stock biomass remarkably quickly, perhaps aided by a few good spawning years, leading to an apparent recovery in 2010-2015 and along with it, intense lobbying from some members for increased quotas.

The recent history has been a pattern of fishing nations pressing ICCAT for the maximum possible quota increase, whilst conservation bodies warn we could yet pressure the stock too hard and spark a precipitous collapse once again. Justified or not, from a low of around 13,500 tonnes in 2011, the global quota will have risen in increments to 36,000 by 2020.

The future of Atlantic Bluefin is still very uncertain, and recent success in avoiding its imminent near extinction could still yet be reversed.

In 2011 Atlantic Bluefin Tuna were classified on the IUCN Red List as “Endangered”, which made eminent sense given the parlous state of the stock after years of disastrous overfishing. The subsequent substantial increase in the stock does suggest that this status may now possibly be due a revision? Conservation bodies are understandably apprehensive about action which sends the wrong message to Commercial interests, but at the same time, failure to acknowledge real improvements may also damage their own credibility.

EU quotas, fishing rights, and Brexit.

The UK is a member of ICCAT under the umbrella of EU membership of the organisation. It is also a member in respect of certain overseas territories that have a Bluefin presence, such as Bermuda for example.

ICCAT in collaboration with its members sets and 'carves up' quota plans every 3-4 years, supposedly based upon their own scientists stock analysis, but often heavily influenced by pressure from the biggest quota-holding countries such as Japan and Spain.

The allocation of the EU's share of the ICCAT quota, like many species, was based upon many factors, including the historic presence of the quarry and a fishing history for that species. In the negotiations dividing up the EU quota France, Spain and Italy took the lion's share, with their history of fishing for Bluefin and existing fleets.

The UK therefore has had no share of the EU's Atlantic Bluefin Tuna quota.

Whilst Bluefin were not present in any numbers in UK waters in recent decades, this arrangement was not of great concern. However, with the appearance of substantial numbers of ABFT in UK waters since 2016, this presents a real constraint on our ability to access this resource, even in a sustainable, scientifically valuable way such as a Catch and Release Sports fishery.

An "untouchable" resource, on our doorstep.

Our lack of an Atlantic Bluefin quota within the EU prohibits UK commercial fishermen from harvesting these fish, anywhere.....

With regard to recreational angling it is ICCAT's rules that appear to prohibit anglers from targeting them.

ICCAT rules states that ONLY countries WITH a quota for ABFT can give permission for a recreational fishery, allocating all or part of their sovereign quota to a recreational fishery. Such a quota could be utilized either as a 'Retained' element for recreational vessels, or/and as a "mortality quota" allowance against a C+R sports fishery.

Such 'C+R' fisheries operate on the basis that there is an assumed mortality rate for Bluefin targeted by Recreational anglers. Inevitably, some fish will die in that process, through deep hooking, heart failure, or becoming wrapped in fishing line. Independent scientific studies have indicated that in well-regulated C+R fisheries, this can be as low as 3-6%. As such, a very small quota can translate into a lot of Recreational C+R fishing charters.

As it stands (September 2018) the UK's fisheries authorities – DEFRA and the MMO - have declared that UK anglers may not target Atlantic Bluefin in UK waters and those that do face possible prosecution*.

* See our website for more information on this

A Brexit bonus?

Whilst in the EU it would seem that any attempt to obtain a UK quota for Bluefin would likely entail taking some from Spain, France, Italy and the other EU states with an existing share. Negotiations around that would likely be very protracted and costly in terms of reciprocal Quota exchange.

Post-Brexit the landscape potentially changes significantly.

It is likely that post-Brexit, the UK will join ICCAT as a sovereign state in its own right. The British Government could then choose to join the majority of other ICCAT members and apply for a quota in their own name.

I have argued repeatedly that, initially at least, the UK should apply any such quota exclusively to recreational fishermen, as a mortality allowance for a Catch and Release sport fishery.

Numerous studies show that the economic value of such recreational fisheries is MULTIPLES per tonne of that of a Traditional Commercial fishery.

The quota for such a fishery could come from an existing reserve quota ICCAT holds for “artisanal” fisheries. I would argue that fits the bill for the fishery proposed.

The UK could be a world leader in establishing the best value, a sustainable, scientifically useful fishery of all existing ICCAT members.

Several years of operating such a fishery with embedded scientific tagging and DNA sampling could provide evidence that the UK could move to operate a small scale, well regulated “retained” fishery for recreational and possibly commercial fishermen. Such a fishery would optimise the economic and scientific benefits whilst operating in a sustainable fashion.

It would show the UK as a world leader in the management of this incredible icon of the seas.

A number of individuals and organisations have founded ‘Bluefin Tuna UK’, a group to campaign for such an outcome.

Follow our Campaign on Facebook - [Bluefin Tuna UK](#)

Or on our Website – www.bluefintuna.co.uk

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