

Reviewing the recreational catch for bluefin tuna – Part 2

In the September/October issue of Professional Skipper we sought help for gathering information on a newly developing recreational fishery for bluefin tuna off the west coast of the South Island.

The Marine Transport Association and the Ministry of Fisheries outlined a proposal for a web-based system for monitoring gamefish catches from charter vessels. In this issue we will cover the differences between the bluefin species, how they breed and live and early results from the west coast monitoring programme for 2007.

How to tell a Pacific from a southern bluefin – it's not easy!

Pacific bluefin tuna (*Thunnus orientalis*) was previously thought to be a sub species of Atlantic bluefin tuna. Since about 2001 it has been recognised as a distinct species which in turn is a separate species to the more common southern bluefin tuna (*Thunnus maccoyii*). But they look very similar and it's difficult to tell them apart. **Pacific bluefin** often have a distinctive dark colouration and patterns of mottling. They have a smaller head and eye size in relation to its body than a southern bluefin. Caudal keel colour may differ (dark in Pacific bluefin, yellow in southern bluefin). A fish greater than 190 cm fork length or weighing over 150 kilograms greenweight is much more likely to be a Pacific than a southern bluefin tuna. Large **southern bluefin** (larger than about 130 cm) have a prominent creamy white muscular bulge (like a poached chicken breast) in the gut cavity. Pacific bluefin do not. The purpose of the bulge is unknown.

Despite these differences it is still hard to tell bluefins apart and sometimes DNA analysis is the only way.

One known breeding site for Pacific bluefin

Pacific bluefin roam widely, but are found mainly in the north Pacific Ocean. The only known spawning ground for Pacific bluefin is between Japan and the Philippines in April, May, and June, spreading to the waters off southern Honshu in Japan in July and to the Sea of Japan in August. It is believed there is a single stock for Pacific bluefin tuna based on tagging, distribution by size and other research, and because eggs and larvae have not been found anywhere else. Pacific bluefin caught in the southern hemisphere, including those caught in New Zealand, are mainly adults, indicating they have moved from elsewhere.

Pacific roamers

The life history of these fish is quite impressive. From being spawned in the Sea of Japan, many young fish swim across the Pacific and spend their early years off Baja, California. Some of the adults move down to the South Pacific. It is this behaviour which has sparked considerable interest in what 'our' fish do and where they come from.

This interest has led to satellite tagging. Following last year's successful tagging, another eight fish were tagged from *Cerveza II* during the 2007 west coast bluefin tuna season, including a fish estimated in excess of 400 kilograms. It is early days in this work (many of the fish are still swimming around with the satellite tags in them), but results from 2006 show that the large adult fish seen off the west coast of the South Island between August and September, remain in New Zealand waters until at least February.

Monitoring New Zealand bluefin

The following results are those reported on the web-based system to 27 September 2007 for the West Coast bluefin tuna season. MFish is also displaying these summary results on its website (<http://www.fish.govt.nz/en-nz/Recreational/Gamefish+Catches>).

Pacific bluefin tuna			Southern bluefin tuna	
	Landed	Released	Landed	Released
Number	42	79	34	20
Weight (kg)	10,775	20,457	3,691	2,171

Playing an international role

International obligations may require New Zealand and other countries to review their management of Pacific bluefin. Overall landings throughout the Pacific range from 10,000 tonnes to 14,000 tonnes in recent years. The majority of this catch is of pre-adult fish and includes troll fisheries for 1 year old bluefin off Japan and an increasing purse seine fishery off Mexico that takes 2-4 years olds for fattening in 'ranching' operations. Recent landings within New Zealand are probably not that important in determining the overall status of the stock - 20 to 50 tonnes per year reported by commercial fishers over the past five years and 11 tonnes for the gamefish and spear fisheries reported by charter boats for 2007 to date.

Thanks skippers

Many thanks to those charter boat operators who are voluntarily reporting their catches as requested. Game fish catch records are important for documenting New Zealand's ability to monitor its entire fishery of this highly migratory stock. These data assist in achieving a viable and sustainable world class game fishery for bluefin tuna in New Zealand waters.