

# Future snapper snapshots study

GORDON PREECE

An abundance of three to four-month-old tāmāre (snapper) are swimming in tanks at a new habitat for a 14-month scientific study.

The common fish, which are considered a taonga, were welcomed to Cawthron Aquaculture Park at Glendhun for the first time on 10 February to be guinea pigs in a programme which delves into finfish adaptation to climate change.

The snapper results in the Fast-Tracking Finfish Climate Change Adaptation programme, could enable the aquaculture sector to be hooked with support to navigate the swelling environmental issue.

Cawthron aquaculture senior scientist and leader of the programme, Jane Symonds, says the snapper were reared from different parents in the broodstock at Nelson's Plant & Food Research Institute.

The institute's senior group leader in seafood production Dr Maren Wellenreuther will oversee the climate change adaptation programme, which Jane says will principally examine the snapper's tolerance to warmer and cooler temperatures.

"We can probably heat the water up to about 30 degrees and chill it to about eight or six. But for this trial, the most it's going up to is about 24 and a half degrees over what it might get in the ambient," she says.

"I think understanding how snapper interact with the temperature environment is also important for understanding fisheries management... if you're managing healthy stocks, you know what and when you can fish, and what temperatures are good or not.

"That's going to help create thriving populations." Jane says the juvenile fish's biology and physiology over the research period will also be choreographed.

"That will then be directly applied for Plant & Food within their breeding programme, which is potentially going to then help develop the aquaculture industry for that species," she says.

"It will give [the aquaculture industry] confidence in how the snapper is going to perform depending on their different farm sites and different temperature profiles.

"If you farm up North, you will have warmer sites, but in the Marlborough Sounds, it might be a bit cold, so that temperature

regime where we're testing the colder water might identify families that actually do better than the others over winter."

Dr Maren says the programme's results could also provide an insight into wild snapper's response to environmental change, particularly as the species expands to more southern regions as far as Ōtautahi Christchurch.

The programme is courtesy of the Ministry of Business, Innovation and Employment (MBIE) Endeavour Fund.



Plant & Food Research scientist Dr Maren Wellenreuther, left, and Cawthron Institute aquaculture senior scientist Jane Symonds. Photo: Gordon Preece.



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