

# Media release

From the Office of the Environmental Monitor

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## **MISSING ANCHOVY MYSTERY SOLVED BY WORLD CLASS SCIENCE**

Ground breaking science has revealed Port Phillip Bay has healthy numbers of anchovies, including juveniles and older fish, putting to rest concerns that an entire year class of anchovy may have been missing from the Bay's fishery.

Releasing the 2009 Baywide Anchovy Study report today, Victoria's Environmental Monitor Mick Bourke said the results confirmed researchers' expectation that anchovies younger than one year were present in the Bay all along.

"While the 2008 trawl sampled healthy numbers of anchovy from the Bay, the scientific analysis didn't identify any fish aged in their first year of life," Mr Bourke said.

"Both Fisheries Victoria and the Office of the Environmental Monitor were confident the fish were there because a related Baywide Monitoring Program found there were plenty of anchovy larvae in the Bay in 2008 and 2009.

"The 2009 trawl sampled more than 360,000 anchovies, mainly from the centre and east of the Bay. The survey found a lot of small anchovy, which researchers believed represented an older year class of fish.

"Using technology not previously used on anchovy in Victoria, Fisheries Victoria researchers aged the 2009 fish and identified four separate year classes, from fish in their first year of life to three year old fish.

"This triggered further scientific analysis of the 2008 data, which showed anchovy in their first year of life were present in the Bay all along.

"2008 was the first time the Baywide Anchovy Study had been run. The 2009 work provided new information on the variability in size and age structure of the anchovy population in the Bay, which was the key to solving the missing anchovy year class mystery.

"The results mean that Port Phillip Bay continues to be home to strong numbers of anchovy, which is good for predatory fish species and Victoria's famous Little Penguins that feed on anchovy," Mr Bourke said.

Dr Peter Appleford Chair of the Channel Deepening Baywide Monitoring Programs Steering Committee said the Baywide Anchovy Study was the first time the ageing technology, which is based on internationally recognised expertise developed by Fisheries Victoria at the Queenscliff Centre of the Department of Primary Industries, was applied to anchovy in the Bay.

"The process involves dissecting, sectioning and examining the tiny ear bones of the anchovy," Dr Appleford said.

“Under a microscope the daily and annual growth rings of the anchovy, which are similar to tree growth rings, are analysed and counted to determine its age. This is a meticulous and time consuming task.

“Never before in Victoria have anchovies been reliably grouped into different age classes by studying the ear bones of the fish. Previous investigations of anchovy age in the Bay happened more than 50 years ago and involved analysis of their scales; a method which has proved to be less reliable in other species,” he said.

Dr Appleford said the research had also helped shed light on when anchovy left the Bay for open waters.

“Most anchovies found in the Bay during winter 2008 and 2009 were from the first and second year classes. While previous research suggested anchovies moved offshore during their third year, our work suggests that in the Bay the majority of anchovy may move offshore as much smaller fish during their second year.

“This is just one of the learnings to come from the program, and over the next two years the Baywide Anchovy Study will continue to collect important information on this species to fill existing knowledge gaps and help assess results from other Baywide Monitoring Programs.”

The Baywide Anchovy Study report can be found at: [www.oem.vic.gov.au](http://www.oem.vic.gov.au).

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