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September 22, 2009

World first octopus research project

A true lady never reveals her age, and neither, it seems, does the *Octopus australis*.

In a world first research project, state government scientists at the Cronulla Fisheries Research Centre of Excellence are uncovering the secret life of *Octopus australis*, Primary Industries Minister Ian Macdonald said today.

Minister Macdonald said a key aspect of the study will be determining the age of members of this little understood species.

“Little is known about the biology of cuttlefish and octopus species found off the coast of NSW, particularly the sand octopus, *Octopus australis*,” Minister Macdonald said.

“In order to effectively manage the resource we need to know how this species lives and how long for.”

Mr Macdonald said a fall in the quantities of octopus, squid and cuttlefish caught over recent years prompted scientists to recommend a stock assessment on local cephalopods and an key part of that is determining the age structure of the population.

The Cronulla Fisheries Research Centre of Excellence housed 60 *Octopus australis* this year as part of the program to develop a technique for aging the species.

Octopus, squid and cuttlefish are part of the cephalopod group which form a valuable part of the state’s commercial fisheries catch.

“There are a number of methods scientists currently employ to age cephalopods including testing the hypothesis that they lay down regular rings on the hard parts in their bodies, similar to growth rings produced by trees, that correlate to the number of years they have been alive,” Mr Macdonald said.

“We need to know how often a ring is deposited before we can age *Octopus australis*,” he said.

Mr Macdonald said the rings are translucent in colour and are deposited on a hard part known as the stylet at the base of the brain of some octopus species.

“To find this out scientists stained the stylet and determined that a daily ring is deposited, meaning we will now be able to work out how many days old individuals in the population are.”

“As far as we can ascertain this is the first time any where in the world that this technique has been used successfully on an octopus species,” Mr Macdonald said

“Once we know the age we can conduct studies on growth and mortality and then fisheries managers and industry can use this information to develop strategies to sustainably fish the resource,” he said.