

July 2008

Community Presentation a Success

SIMS held our first lecture evening for our supporters and friends in late May with presentations given by members of University of Sydney and Macquarie University.

The presentations were held on the evening of the 21st May and it was a resounding success with over sixty people coming along to listen to our speakers. Associate Professor Gavin Birch, of the University of Sydney, spoke on the environmental health of Sydney Harbour discussing his long term studies on the most toxic bays and areas within our harbour. It was good to hear that Chowder Bay is one of the cleanest areas of Port Jackson, but many were dismayed to hear of the toxic levels of chemicals in the sediments in areas around Homebush Bay and the upper areas of the main harbour and Middle Harbour. Not all of the toxicity is due to the industries that were once found in these areas. Those present were amazed to hear that one of the major contributors to zinc levels in the harbour is the wear from our car tyres. As new tyres gradually wear away they leave deposits on road ways which, through the stormwater drains, then end up in the waterways of Port Jackson. Some truck tyres contain as much as 4 kilograms of zinc in a single tyre!



Gavin Birch & Emma Thompson

Emma Thompson, a PhD Candidate of Macquarie University, working at SIMS then told us about her current research work to develop a bio-marker to assist in determining the levels of toxins in the Harbour and other waterways both nationally and worldwide. She is working on developing oysters, specifically the Sydney Rock Oyster, as an effective bio-marker to determine whether they can be an early warning system for diagnosing the health of our waterways. Emma's work is an example of the collaboration created through SIMS as her academic supervisors come from both Macquarie University and the University of Sydney.

At the end of the presentations the audience was shown new SIMS DVD which runs for around 10 minutes and outlines the history of both the Chowder Bay site and the institute, as well as giving an insight into the operations of the institute and some of the research taking place and the people responsible. If you haven't yet had the opportunity and would like to view our DVD just drop by our office and we would be more than happy to put it on for you, copies are also available from our reception.

Everybody that attended the evening was invited to stay around after the presentation to enjoy light refreshments and socialise with the presenters, SIMS staff and the other guests.

Our next lecture evening is scheduled for Wednesday 17th September starting at 6.30 and we look forward to welcoming you then. If the success of the May event is anything to go by we would recommend that you book early to secure a place as seating is limited. To book contact Tori Pollard on 02 9969 2664 or email tori.pollard@simms.org.au.



The Way of the Wobbegong

A new project aimed at understanding the impacts of releasing predators within Marine Parks recently started along the Sydney shore and is jointly supported by Sydney Institute of Marine Science, Sydney Aquarium Conservation Fund, Macquarie University, NSW Department of Environment and Climate Change, NSW Department of Primary Industries, Australian Acoustic Tagging and Monitoring System (part of the Integrated Marine Observing System), and Defence Maritime Services. This new study will investigate the movements and residence times of wobbegongs around Manly using passive acoustic telemetry. This relatively new technology uses acoustic receivers or 'listening stations' that can record unique identity codes sent by transmitters attached to animals such as sharks, rays or other fishes. Five of these listening stations were recently deployed within the Cabbage Tree Bay Aquatic Reserve and will enable wobbegongs to be tracked with an accuracy of 3–10 metres.

SIMS own Dr Charlie Huveneers will capture ten wobbegongs from the Aquatic Reserve and place internal tags within the body cavity through a small incision in the abdomen. Stitches will be applied before releasing the wobbegong with the whole surgery taking less than 5 minutes. The movements of these wobbegongs will then be monitored for a couple of months prior to releasing ten wobbegongs from Sydney Aquarium that will also be tagged prior to their release. These wobbegongs were born in captivity and part of a study looking at wobbegong growth to determine their resilience to fishing pressure.

The success of the release of captive-bred wobbegongs will be assessed through monitoring the movement of these sharks and comparing observed patterns to those of wild wobbegongs.



The listening stations will also tell us if the captive-bred wobbegongs leave the Aquatic Reserve. Furthermore, the impact of the captive-bred wobbegongs on the wild population will be assessed by comparing the area of movements of the wild wobbegong populations prior and after the release of the Sydney Aquarium wobbegongs.

This study will be later expanded through tagging of various other species such as the juvenile whaler sharks occurring within the Reserve, Australian Giant Cuttlefish, Blue Gropers, and possibly Weedy Seadragons. The inclusion of these other species will help us getting a better understanding of the ecosystem impacts of releasing predators within protected areas.

New Equipment to assist Scientists

Thanks to the generous contributions from our FutureMakers, Patrons and Members, SIMS has been able to further expand our laboratory and research aquarium facilities. Your generous support has enabled the installation of new aquarium tank stands and provided top up funds to enable the purchase of equipment required for our molecular biology laboratory. This equipment has assisted in the work to be conducted on genetic bio-markers for the monitoring of heavy metals as well as with numerous aquarium based studies such as seahorse habitat preferences and tropical fish migration to the Sydney region. On behalf of all those involved with SIMS, we wish to thank all of our supporters and look forward to keeping you informed on how your generous support is assisting with real research at the institute.

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SIMS

FutureMakers

The response in the last few months to our call for FutureMakers has exceeded our expectations and we are now very close to reaching our goal of 20. The opportunity to become one of the limited supporters of SIMS, responsible for jumpstarting our research will close later this year. If you would like further information on becoming a FutureMaker, or upgrading your current level of commitment, please contact Tori Pollard.

Upcoming Events @ SIMS

Christmas in July - 30th July

We are holding a Yuletide festival dinner function for our FutureMakers and Patrons on Wednesday 30th July. There is a charge of \$25 per person to cover costs of a Roast dinner, desert and drinks, we'll also throw in a few other surprises. If you would like further information or to make a booking please contact Tori Pollard.

Aquarium Open Day - 1st Aug

SIMS would like to invite our Friends and other members of the public to come along at the beginning of every month and find out what's happening behind the scenes at the institute.

Join Professor Iain Suthers and his colleagues to hear about the interesting projects that are currently being undertaken at SIMS.

The activity is free of charge but bookings are essential, please contact Tori Pollard to secure your place.

Don't worry if you miss the August tour as this activity takes place on the first Friday of every month.

Members Research Lecture

17th September

SIMS Supporters are invited to come along to hear from our scientists about their current projects, followed by light refreshments. Speakers for this event will be announced closer to the date. Bookings are essential, please contact Tori Pollard.