



Fantasea Harbour Hike - what a great day!!

Almost two thousand hikers enjoyed themselves participating in Fantasea Harbour Hike on Father's Day. Many more joined them at Clifton Gardens Reserve for the SIMS Marine Festival. All hikers have the opportunity to win great prizes. The team that raises most funds will win four adult passes on the Fantasea New Year's Eve cruise on Sydney Harbour. On-line fund raising will continue until the end of September at www.harbourhike.com

We have received wonderful accolades from the hikers:

"Can I just say congratulations on such a good event. My husband and girls had had such a fantastic time together on Father's Day" wrote Janette.

"We had a great day walking along the Harbour foreshore and enjoyed the whole experience" email from Pam.

We are most grateful to our Presenting Sponsor, Fantasea Adventure Cruising and to the Sydney Morning Herald for the wonderful publicity they gave to the event. We also pay tribute to all of the other supporters including NSW National Parks & Wildlife Service, Mosman Council, Taronga Zoo, Lands Edge, Dr. Belinda Curley who gathered the live creatures that were in the SIMS display tanks at the Marine Festival, the SIMS scientists who gave their time and expertise to educate and enthuse the public and to the volunteers who helped make the day a great success.



The foreshore path along the Harbour not only gives great views of the Harbour itself but meanders through beautiful bushland that forms part of Sydney Harbour National Park.

Photo: Mara Page

Thiess remediation team visits SIMS

The Thiess remediation team is working on the former HMAS Platypus site on the shore of Neutral Bay. This land is now under the control of the Sydney Harbour Federation Trust (SIMS' landlord) and is being remediated with funding from the Department of Defence. When finished, it will be another iconic harbour-front site that can be developed by the Sydney Harbour Federation Trust for enjoyment by the community.

The site is contaminated largely because of its use as a gasworks from the 1870s to the 1930s. It then became a defence site and remained so until the late 1990s. In 2005 it was transferred to the Harbour Trust. The Thiess team is making use of the harbour to transport some treated material from the site so it was natural for them to want to visit SIMS and swap notes on contaminants in and around the harbour. Prior to the visit, the team identified SIMS as a cause worthy of support and made a very welcome donation to SIMS' research. Following the presentation (pictured below) the team enjoyed a tour of SIMS' facilities.



Members of the Thiess Remediation team presented a framed certificate to go with their donation towards SIMS' research. Photo: Daryl Charles

Don't miss these events!!

Emerald Dinner:
23rd October 2013
Guest speaker Tim Jarvis AM
talking about his *Shackleton Epic*.

Marine science in the school holidays - see page 2 for details.
Phone 9435-4600 for bookings.

Visit us at **SIMS** in your school holidays and discover what marine science is all about!

To Settle or not to Settle?

Wednesday 25th September 1-4pm

Wharves, pier pilings, shark nets, or any structure we place into the harbour is very quickly colonised by living creatures. Have you ever wondered what these creatures are? And are they the same as the plants and animals we find on natural rocky reefs along the shore? In this workshop you will get a close look at the fascinating diversity of marine invertebrates growing on artificial structures and natural reefs in Sydney Harbour and discover how these animals have adapted to a life without moving from place to place.

for teenagers aged 10-13, cost \$20

Plastic Seafood

Wednesday 2nd October 1-3pm

Bottle caps or food for baby birds? Plastic bags or dinner for turtles? A lot of the plastic that we throw away ends up in our waterways and eventually gets washed into the ocean. It gathers there in giant 'rubbish soups' or pollutes our beaches and coastlines. But more importantly marine plastics are often accidentally eaten by wildlife. Plastic bag or jelly fish? Does it look so different when you are a hungry turtle swimming by? We will use plastic litter to craft our own marine creatures to show how this waste can easily be confused for food.

for children aged 6-9, cost \$20

The Weakest Link

Friday 27th September 1-4pm

Sydney Harbour is at the heart of the city of Sydney with more than 4 million residents. What are the sources of contamination in such a highly urbanised estuary? And how do these contaminants affect the local wildlife? Slipping into the role of an ecotoxicologist you will first examine different sediments as a vehicle for contamination spread. Then you will learn to conduct a fertilisation inhibition assay, which is a standard tool in practical environmental impact assessments, to observe how pollutants can disrupt the critical early development stages of an organism.

for teenagers aged 14-16, cost \$20



SIMS
SPRING
VACATION
PROGRAM

Major grant for Sydney Harbour Research

To ensure that people can swim, catch fish and enjoy the beauty of the urban waterways, we need to be able to predict the effects of more than one stressor at a time. SIMS, in partnership with the NSW Office of Environment & Heritage, the Hawkesbury-Nepean Catchment Management Authority, CSIRO and the Singapore Centre on Environmental Life Sciences Engineering applied to the Australian Research Council for a major grant to pursue this research. Everyone was delighted to learn recently that this grant application was successful. Overall funding for the research will approximate \$1 million, with substantial additional resources being contributed by all of the partners.

This research project, entitled “Testing the waters: Impacts of contaminants on ecosystem structure and function of urban waterways” will determine how nutrients and contaminants interact to affect our waterways. Findings will help prioritise management actions that protect biodiversity and human uses of these systems.



This stunning image of the NSW coastline shows just how fortunate we are to live in this beautiful place. The photo shows North Head from Freshwater Reserve.

Photo by Mike Barnert <http://ozczecho.redbubble.com>

Detailed below is a new initiative from the NSW Office of Environment and Heritage to conduct research relating to the consequences of environmental change in NSW. SIMS is delighted to be involved in this initiative that will help provide the science to look after our beautiful NSW coast and estuaries for the longer term.

NSW Adaptation Hub - Coastal Processes and Responses node

The NSW Office Of Environment and Heritage has recently established the NSW Adaptation Hub to generate the key information necessary to manage the consequences of environmental change in NSW. There are three research Nodes within the Hub and SIMS was successful with their tender to establish the Coastal Processes and Responses Node. The initial program is for 3 years, with funding of approximately \$1 million over that time.

The focus of the program is on the interaction between climate driven changes in sea level, storms, waves and flooding, and the coastal and estuarine environment. Thus for example, we will develop a NSW-wide coastal hazard assessment methodology to identify and assess the impacts of sea level rise, storm surges and coastal erosion. The research will increase our understanding of the influence of current climate variability on coastal processes and how this will change with projected climate change scenarios. We will identify the extent of threats posed by coastal erosion events, shoreline recession and coastal flooding, especially under climate change and sea level rise scenarios. This will be done for both natural and artificial shorelines. Within estuaries, we will

develop an increased understanding of the potential impacts of extreme events (e.g. floods, droughts, heat waves, storms) on estuarine habitats and develop climate change ecological risk profiles for a range of estuary types along the NSW coast.

As well as providing key information and predictions on the fate of our coasts under climate change, the Node also strongly integrates our science into coastal planning and development policy within the NSW State Government and brings into the SIMS scientific group coastal engineers and geomorphologists, disciplines that were previously not strongly represented at SIMS.

The other two research hubs established by the Office of Environment and Heritage are:

Biodiversity, exploring ways to make integrated decisions for local land use plans that optimise biodiversity outcomes.

Adaptive communities, exploring ways in which government can support communities in building their resilience and adaptive capacity.

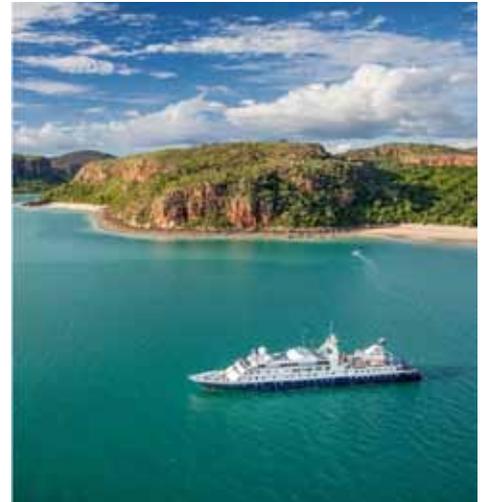
Emerald Dinner live auctions - all for research

MV Orion - 10 night Kimberley Cruise

Join Australia's only luxury expedition vessel and embark on an adventure to the stunning Kimberley coastline. Orion's Expedition Team will lead your exploration of secluded beaches and river inlets. From spectacular waterfalls and awe inspiring gorges, to ancient cultural history, the only way you can access the best of the Kimberley is from the sea onboard Orion. This itinerary has been enhanced to include complimentary flight seeing over the famous Bungle Bungle ranges.

Although custom designed for expedition cruising, National Geographic Orion is the epitome of elegance. Her five star appointments mean she is more megayacht than cruise ship and her guests are few; just 102 guests cared for by an experienced crew of 75.

This prize is for a Junior Suite and may be taken on any sailing departing Darwin or Broome between May and August 2014, subject to availability. The photo shows MV Orion at Naturaliste Island in the Kimberley.



3 nights at beautiful Lizard Island Resort

Lizard Island is truly secluded from the rest of the world. Located right on the Great Barrier Reef, there are 24 powdery-white beaches and 40 villas and suites. Sensational diving opportunities abound, including the famous Cod Hole and the legendary outer Great Barrier Reef. The Ribbon Reefs near Lizard Island are also renowned for some of the best big game fishing in the world.

Snorkellers are rewarded for little effort with coral gardens, brightly coloured tropical fish and giant clams just moments from the island's beaches. Discover secluded, pristine beaches by foot or by motorised dinghy with a gourmet picnic just for two.

Dining is one of Lizard Island's many pleasures. Osprey's Restaurant embodies the resort's understated elegance. The Executive Chef changes the menu daily and showcases the finest local produce and freshest seafood.

This prize is for two people in a Garden Room and is valid until 31st March 2014.

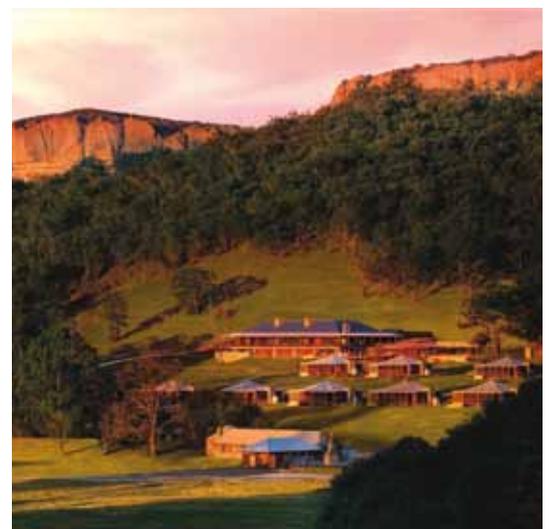
Emirates Wolgan Valley - a hidden gem

Emirates Wolgan Valley Resort & Spa is an environmentally responsible tourist destination set amidst the stunning scenery of the rugged Greater Blue Mountains World Heritage Area. The unique spa resort is built around a fully restored homestead and nestles within its own private conservation and nature reserve.

Experience the huge array of native wildlife and learn about Aboriginal history in a variety of traditional outdoor activities led by highly knowledgeable field guides. Each suite has its own private pool and terrace. World-class dining emphasises local and organic produce along with exemplary service.

Just a 3 hour drive from Sydney, Emirates Wolgan Valley Resort & Spa is remarkably accessible yet feels a world away. Tall, almost vertical cliffs contrast with the gentle curve of the valley floor.

This prize is for two people to spend two nights at the Resort, mid-week bookings only (Sunday night to Thursday night). Valid to 23rd April 2014.



More auction items for the Emerald Dinner

Here are some of the other great items for auction at the Emerald Dinner:

Chase Gallery

A wonderful lithograph from Chase Gallery that specialises in works on paper by 20th Century Masters:

Marc Chagall limited edition colour lithograph *The Blue Fish* 1957.

Taronga Conservation Society

Behind the Scenes Big Cats Tour for six people. A rare opportunity to get up close and personal with the lions, tigers and snow leopards!

John Dahlsen

Original work of art by award winning environmental artist, John Dahlsen. The photo shows John working at SIMS where he produced this piece.



Major award for Andrew Boomer



Andrew Boomer, looking relaxed and happy despite the enormous challenges of his job.



AATAMS team preparing to deploy one of the tracking devices in Western Australia.

Andrew Boomer has been Operations Manager of the Australian Animal Tracking and Monitoring System (AATAMS) Facility since the very early stages of the Integrated Marine Observing System (IMOS). SIMS has Australia-wide responsibility for the AATAMS System. In July, 2013, the Australian Marine Sciences Association presented the Technical Award for Outstanding Achievements in support of marine science in Australia to Andrew. The citation said:

“He has made an outstanding technical contribution to marine science in Australia, in the field, at the desktop, and around the meeting room. It is Andrew’s unique ability to innovate and deliver ‘in-water’ solutions, and to engage a large community of science collaborators, and to see the data collection through to availability/uptake/use that makes his achievements truly outstanding.”

AATAMS is a national network of 1275+ acoustic receiver stations, from the tropics to the cool temperate coasts of Tasmania and large centralized database. As at to-day, there are 35 organisations registered in the AATAMS database, with 120 users of the system

and 60 individual research projects. More than 40 Postgraduate theses have arisen or been assisted by this resource and the number of papers published is increasing exponentially.

As operations manager, Andrew is responsible for deployment, servicing, retrieval and maintenance of the acoustic network at 14 different locations around the country, many in extremely remote locations e.g. Rowley Shoals and Scott Reef in NW WA, Flinders Island and Bass Strait in Tasmania. The position involves an extremely high level of technical competence, the ability to work under hostile conditions and the need to maintain very high levels of safety. From diving in shark infested murky tropical waters, through grappling for moorings at 3 am in 55 knot winds, to punishing 14 hour days in frigid Tasmanian waters, Andrew has led his team for the last five years without incident.

AATAMS is set up to collect data over a long period of time. This sustained approach will enable researchers to assess the effects of climate change, ocean acidification and other physical changes that affect animals within the marine environment.

Photos of Fantasea Harbour Hike



SIMS Marine Festival at the finishing line, Clifton Gardens Reserve. Everyone loved the food, entertainment and displays .
Photo: Charlie Shuetrim



Ten checkpoints along the way kept the hikers thinking. There were prizes for the teams with the most correct answers.
Photo: Maya Page



SIMS' scientists were out in force. Each of these tents has a display of marine animals with scientists on hand to provide explanations.
Photo: Charlie Shuetrim



Land's Edge, outdoor education provider at Chowder Bay, took lots of children around Chowder Bay in these kayaks.
Photo: Maya Page



Valerie Taylor AM did her best to convince the audience that sharks are not dangerous. Just hit them in the gills she said.
Photo: Charlie Shuetrim



The Taronga Zoomobile was a great hit with a variety of animals on display. This is an ornate box tortoise.
Photo: Charlie Shuetrim

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TO MAKE A DONATION:

Go to www.sims.org.au
and follow the prompts.

SCHOOL HOLIDAYS:

Call SIMS at 9435-4600
to make your booking for
one of the school holiday
programs.



This is the new boat that Fantasea Adventure Cruising has just introduced to Sydney Harbour. Everyone loved the ride back to Kirribilli after their hike and festivities at the SIMS Marine Festival.
Photo: Charlie Shuetrim