



We welcome Orion Expedition Cruises

SIMS is delighted to welcome Orion Expedition Cruises as its latest Founding Partner. The Orion story is one developed from the experience, vision and energy of its founder, Sarina Bratton. The result is an Australian company that has made big strides in demonstrating world's best practice in environmentally sound operating procedures, while at the same time providing a high quality and unique cruising experience for its guests.

A former Vice President, Asia Pacific for Cunard, Bratton later founded the Norwegian Capricorn cruise line, whose itineraries included exploration of the coast to the north of Australia. She came to the realisation that operating cruises in such pristine areas beyond major settlements required a different approach – one that combined respect for the environment and the local inhabitants with a strong focus on both comfort and self sufficiency.

Her vision was shared by the Paspaley family, who saw the opportunity to build on their deep knowledge of WA's Kimberley region, and Orion Expeditions was born. The first task was to find a suitable ship. On this Bratton was not prepared to compromise – the ship needed to be suitable for cruising in a range of environments, accommodating up to 100 guests to a high standard of comfort, and a generous complement of expert crew. The ability to be self sufficient for up to 22 days was vital. This meant carrying sufficient food, fuel and supplies without relying on restocking, with capacity for power generation, fresh water generation and recycling and storage of wastes.

Orion in the Antarctic. The ship was purpose built with an ice-strengthened hull to enable expeditions to the Antarctic.. Photo courtesy of Ken Duncan.



Eventually such a ship was found under construction in a shipyard in Germany and in 2005 this was launched as Orion I.

Today Orion Expeditions has expanded to two ships, with an impressive schedule of cruises to areas as diverse as the Antarctic, New Zealand, the Sea of Japan, Papua New Guinea, Borneo, Tasmania and the Kimberley coast. For each itinerary, Bratton and her team undertake exhaustive research to identify the best routes for scenery, for activities such as snorkeling and for unique ways to experience local sites and cultures. The last is managed through exclusive and close relationships with small communities; Bratton's approach is to minimize impact on the local communities through restricting visits to only one or two a year, while at the same time providing them with practical support that helps them to achieve their own goals in areas such as education and health. (Continued p3)

News in brief

Fund raising dinner

SIMS' inaugural annual fund raising dinner was held at Sergeants Mess on 8th November, 2010.

The evening was an outstanding success with a great talk by Dr. Mark Norman, Jane Rutter and her son Bertie playing a number of pieces and finally both live and silent auctions and a raffle. Dr. Robyn Williams did a great job as our MC.

We are most grateful to all of people who donated prizes for the auctions and raffle and in particular we thank Sergeants Mess, our major sponsor, Delatite Wines for providing the wines and Glen Wirth, our auctioneer.

The event raised just on \$60,000 for SIMS - this was a fabulous result .

Infrastructure progress

The good news is that we are making progress. Indeed SIMS has received praise from the Federal Government for its excellent management of this whole development.

The new facilities will be coming on-line in stages over the next several months. The lecture theatre is almost finished and the two laboratory buildings are in the final stages of fit-out. The aquarium should be completed by the end of May and the new administrative and conference centre will be finished by the end of June.

We look forward to welcoming all of our supporters to these wonderful new facilities.

Save this date

Fathers' Day 4th September

SIMS' Harbour Hike will make its debut on this day.

Up to 1,200 teams of two people will take this walk along the beautiful foreshores of Sydney Harbour from Kirribilli to SIMS.

There will be a festival atmosphere at the event finish at Clifton Gardens and Chowder Bay.

Meet Paul Hallam

Visitors to SIMS will have seen Paul Hallam – he might have been the figure behind the bar at a function, down by the dock checking the boat before a field trip, or standing by to meet visiting dignitaries. Paul, the Chief Operating Officer at SIMS, has been with the institute since its very early days and has been a major factor in its successful growth. Marilyn Sleigh met Paul recently to find out more about his background and current activities.

MS: Paul, how did you get started at SIMS?

PH: I was working at the Marine Research Station on Heron Island in Queensland. I first went there in 1996 as an electrician. I thought it was going to be a 6 month break from city life, but I ended up staying for 10 years, the last 2 years as Head of the Station. By the end of 2005 I was keen to move to Sydney and saw the position at SIMS advertised. With my background, I seemed to have the right experience for the job, particularly since there had been a major program of rebuilding and upgrading at Heron Island while I was in charge, and there were clearly lots of challenges ahead for SIMS in that area.

MS: What was your role in the early days of SIMS?

PH: Initially I was SIMS' only employee, funded by contributions from the partner universities. The first round of building was getting under way and I was the link between the scientists and the external project manager appointed to oversee the job. Keeping everyone happy was a challenge. I was also responsible for the finances, safety, laboratory facilities, equipment and keeping everything running as smoothly as possible. Frank Talbot (former SIMS chairman) was working very hard on fund raising for the Institute and I worked with him on that as well.

MS: SIMS has made a major step forward with the recent receipt of infrastructure funding through the Federal Government's Education Investment Fund. How has that affected your activities?

PH: The building program is certainly a major focus for me. Remaking old buildings never goes smoothly and we have had some unexpected problems as the rebuilding of what will be the SIMS' administrative centre has progressed. The aquarium, lecture theatre and laboratories should be open for business by the middle of the year, but other aspects of the building program will continue through into 2013. What is really exciting is that the grand plan we envisaged achieving for SIMS over 10-15 years (at least in terms of infrastructure) will be substantially realized by the time SIMS turns 6.

Apart from the building works, I am still responsible for much the same range of activities at SIMS, but I now have a number of people to help, in managing the finances, purchasing, maintenance of our facilities and equipment and of course the Foundation, which is leading the fund raising efforts.

MS: Apart from the infrastructure program, what do you see as the most positive developments for SIMS' future.

PH: The new growth of collaboration around the place is an obvious change - among the scientists, and also at the Board level. I feel that people are working together in a way that will ensure the future of SIMS. The continuing support from the Harbour Trust is also a key factor. We can see a time when even our new facilities will not meet the demand of people wanting to work at SIMS and we are already planning with the Trust for an expansion of our laboratories. Involvement with the local community is another major feature of SIMS. The completion of a public display area as part of our current building program we think will help our interactions with the community grow in a way that should be a real strength for building interest in marine science generally, and in SIMS in particular.



Paul Hallam - smiling as usual.



Expanded lecture theatre - almost finished. This updated facility now accommodates more than 70 people. All of the seating has been replaced and air conditioning has been installed.



Work-in progress in the aquarium. This room will become the new protected (PC2) laboratory within the SIMS aquarium - one of only two such aquarium facilities in Australia.

Did you miss it? Orion Expedition Cruises (cont.)

On Wednesday 9th March over 50 SIMS supporters enjoyed a special “Spotlight on Marine Science” lecture hosted by the Sydney Institute of Marine Science in celebration of National Seaweek.

Associate Professor Ross Coleman described the “Flower Pot Project” which is attempting to recreate rock pool habitats lost with the construction of artificial seawalls around Sydney harbour. Ross is Director of the Centre for Research on Ecological Impacts of Coastal Cities, at the University of Sydney.



Ross Coleman with some of his flower pots.

Our next speaker, Professor Bill Gladstone, captured the immediate attention of the audience with his title slide - “Sex and the Sea”. Bill’s presentation included some amazing video footage of a male “yellowmargin triggerfish” furtively preparing the seabed nursery while his potential female partner drifted about inspecting the proceedings. Bill is Head of the School of Environmental Sciences at the University of Technology Sydney.

The final talk was by Dr. Moninya Roughan who described what SIMS does in being responsible for the operations of the NSW node of the national Integrated Marine Observing System (IMOS). The IMOS program deploys a range of sophisticated equipment in our oceans, producing data that has never before been available. Most importantly, all of data are available free of charge from the IMOS web site which is based at the University of Tasmania. Moninya is co-leader of the NSW IMOS program.

SO...don't miss our next science talk - we shall let you know by email when it is scheduled.

Bratton sees a natural fit between Orion and SIMS – a “win-win” relationship. A strong focus of Orion Expeditions is providing expert guidance to its guests on the marine environment, and many continue a strong interest beyond the cruise experience. She is looking forward to building interactions between SIMS’ expert and enthusiastic scientists and Orion’s current and former guests, and to introducing Orion alumni to SIMS’ beautiful location at Chowder Bay. As well, she shares SIMS’ deep commitment to preserving our spectacular marine environments, from Sydney Harbour to Antarctica and the Kimberley, a commitment that is amply demonstrated by Orion’s award- winning achievements in environmentally-sensitive cruising.

For more about Orion, see www.orionexpeditions.com.

Our thanks to Merilyn Sleight for meeting with Sarina Bratton and contributing this article.



Sarina Bratton, Founder and Managing Director of Orion Expedition Cruises, at Wattam Village in Papua New Guinea.



Orion at Hunter River in the Kimberley.

Dr. Mark Norman - guest speaker at our annual dinner

We were privileged to have Dr. Mark Norman, Head of Sciences at Museum Victoria and a world authority on octopuses, deliver an amazing talk on these wonderful creatures at our inaugural annual dinner, last November. Here are some of the things that he shared with us on the evening.

What creature has a beak like a parrot, swallows its food through a hole in the centre of its doughnut shaped brain, three hearts, eight arms, blue blood, skin that can change colours and moves by jet propulsion? The answer is an octopus!

Mark Norman has spent his life studying cephalopods (octopus, squid and cuttlefish) and has discovered more than 150 species of octopus. But life was not always easy. When he commenced his PhD, he spent the first three months on the Great Barrier Reef and did not find one octopus, in fact he finished up buying one at a fish co-op. The light dawned when he was told not to look for the shape of the octopus as it usually looks like a rock or some coral. Rather, it is a smooth slight movement or a change of colour, that reveals its presence. The two-part beak of an octopus and toothed radula are its only hard parts. They don't have bones or spines or poisons. They are able to change the shape of the rest of their body to squeeze through any space that is big enough to accommodate the beak. It is like us being able to squeeze through the mail slot.

Mark entertained the guests at the dinner with a collection of amazing photos of octopuses. One of the most remarkable is the Mimic Octopus, discovered by Mark and colleagues in the tropical seas of South East Asia.

All octopuses can change colour and texture to blend in with the sea floor, however the Mimic Octopus is the first octopus known to impersonate other animals. This octopus lives in bare sand flats and mud flats in the shallow waters of Indonesia and New Guinea. Octopuses, with their limited defenses, are pure meat - a popular meal, so they need appropriate protection mechanisms to avoid or discourage their predators.

The Mimic Octopus transforms itself to take on the physical appearance and movements of a number of other species including poisonous sea snakes, lionfish and flat fish. A Mimic Octopus, if being harassed by a damselfish, will change its shape to resemble the banded sea snake, a damselfish predator. The octopus impersonates the snake by changing its colours to bands that resemble those of the snake and burying six of its arms whilst waving the remaining two in opposite directions.

Another amazing octopus that Mark and his colleagues have discovered is the Coconut Octopus.

It lives in Indonesia in soft sand and mud – a pretty scary place for an octopus. For protection, these octopuses collect the halves of a coconut shell that have been discarded by the local inhabitants. They move along carrying the two halves of the coconut shell stacked under their arms and when danger threatens, they pull them over their body and close them up to make the perfect ball of armour.

Mark's other research interests include argonauts, cuttlefishes and bobtail squids, as well as behaviour, evolution and toxicity. Australia has the highest diversity of cephalopods reported for any country in the world and is an ideal place to study these fascinating creatures.



Mark Norman (above) and one of his excellent slides as shown on the night (to the right)



Mimic octopus disguised as a sea snake
Photo Roger Steene



Coconut octopus complete with its body armour
Photo Roger Steene

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An image from Bill Gladstone's recent talk on "Sex and the Sea":. The annual fish reproduction cycle in the Farason Islands in the Red Sea, is key to an age old cultural ritual where each year the local people await the arrival of the fish, and the subsequent harvest. Only the locals are permitted to take part in the harvest.

