

SANCOR NEWSLETTER

South African Network for Coastal and Oceanic Research

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Acknowledging achievers in marine science

The South African Network for Coastal and Oceanic Research (SANCOR) proudly announces the winners of the triennial prestigious awards which were presented to the top achievers in marine science. The awards were presented at Stellenbosch University on the 18th of July 2014 at the gala dinner of the 15th South African Marine Science Symposium (SAMSS) which was held in conjunction with the African Marine Mammal Colloquium.

The following medals and awards were presented:

The **Gilchrist Medal** is awarded to distinguished marine scientists. The Medal serves as recognition of the recipients' contributions to marine science, to further stimulate excellence in South African marine science, and to focus attention on South Africa's marine and coastal environments. Winners of the 2014 medal were Associate Prof Coleen Moloney and Prof Mark Gibbons.

Prof Moloney has been Director of the Marine Research Institute at the University

of Cape Town since 2012. Her research covers the broad areas of the variability and dynamics of marine foodwebs and ecosystems under global change. Coleen has published some 89 peer-reviewed papers including two in *Science* and one in *Nature*, with various chapters in books, and has edited three books. A notable feature of Coleen is that many of her activities are in the service of others, rather than promoting her own self-good. Large proportions of her research grants are devoted to bursaries and funding needed to support



SANCOR triennial award winners for 2014 pictured above:

Top L-R:	Assoc Prof Coleen Moloney	Prof Mark Gibbons	Dr Deena Pillay
Middle L-R:	Dr Eleanor Yeld Hutchings	Mrs Penny Haworth	Dr Andrew Green
Bottom L-R:	Mr Rob Cooper	Miss Sharon du Plessis	Dr Lorien Pichegru



students, particularly those with a PDI background. She is much in demand because of her efficiency and wise counsel. She truly is a team player, dedicated to the promotion of marine science and the transformation of its national composition.

Prof Mark Gibbons, Head of the Department of Biodiversity and Conservation Biology at the University of the Western Cape, has published 94 peer review scientific journals the greater majority of which have been published in prestigious top international peer review high impact journals. Additionally, he has authored/co-authored 6 book chapters, 14 technical reports and 23 popular science articles. Mark has successfully supervised 25 BSc Honours, 14 MSc and 4 PhD students, the bulk of whom are from previously disadvantaged backgrounds. He has played a vital role in transformation South African marine science and many of his past students are playing key roles in the Department of Environmental Affairs and other governmental agencies tasked with directing the marine conservation agenda for our country. He serves on a number of advisory boards concerned with the conservation of South Africa's marine biodiversity and fisheries.

The **Derek Krige Medal** is awarded in recognition of outstanding achievements in the field of technical support to marine science in South Africa. The award of this medal serves to emphasize the valuable contribution to marine science made by those who provide the technical and logistical support services that make research possible. The medals were awarded to Mr Rob Cooper and Miss Sharon Du Plessis.

Mr Cooper has made exceptional and

innovative contributions to formal and informal training and/or capacity building of those involved in marine science and technology by training DAFF scientific support staff as well as external scientific and technical students, both in the office (data collection, collation and validation protocols) and at sea (species identification, sampling protocols). Through Rob's extensive knowledge and technical skills he has been able to advance significantly excellence in the field of marine science in South Africa. Mr. Cooper displays the highest levels of professional integrity and dedication to ensuring highest levels of data quality possible.

As the technician responsible for the design of scientific facilities on research vessels, the *Ellen Khuzwayo* and the *SA Agulhas II*, Sharon is certainly a deserving recipient. Due to the excellent design, practical layouts and all the small technical features, designed and ordered by Sharon, based on her vast experience of many separate facets of both oceanographic and fisheries research protocols, these vessels are such a pleasure to use. Given the typical life span of research ships, these dedicated research platforms will serve the South African marine science community well for at least the next three decades, as a lasting legacy of her abilities as research ship liaison officer.

The **Marine and Coastal Communicator Awards** are made to individuals or groups of individuals in recognition of their outstanding contributions towards communication of information about the marine and coastal environment to the public via various media at various levels. Winners of the 2014 Awards are Dr Eleanor Yeld Hutchings and Mrs Penny Haworth.

Eleanor has done a huge amount to communicate marine science and

management to the public. She was the main driver behind the marine biology component in the popular TV series 'Shoreline', but has also been an invited guest speaker, covering South African marine ecology, science and conservation, and the importance of awareness and education, at a number of high-profile public events. She is able to translate complex scientific information into exciting and stimulating information that is easily understood, but is also up-to-date and accurate.

Mrs Penny Haworth, manager of Communications & Governance at the South African Institute for Aquatic and Biodiversity (SAIAB), plays a major role in communicating marine science at a local and national level. She has conceptualised, developed and implemented a range of unique communication tools and systems and is well deserving of recognition in this regard.

A new award has been added - the **SANCOR Emerging Scientist Award**. This award has been established to acknowledge a new generation of scientists and to encourage research excellence in science in the marine and coastal environment (SMCE). Three winners received this award: Drs Andrew Green, Deena Pillay and Lorien Pichegru. All three candidates have made a positive impact on science in the marine and coastal environment in South Africa in terms of the number of publications produced, students supervised, reviewing papers and establishing an international profile.

Dr Andrew Green has published 28 peer-reviewed journal articles of which 5 are in South African journals and 23 in top international journals. Andrew is a senior lecturer in the Department of Geology. His PhD investigated the evolution of submarine



canyons on the northeastern South African continental shelf, the aim of which was to understand the formative evolution of the habitat of the South African coelacanth. That PhD resulted in 9 peer-reviewed journal publications and significantly advanced global understanding of canyon-forming processes. He has also built an enthusiastic and highly skilled research group in a short period of time.

Dr Deena Pillay has published 23 peer-reviewed chapters or journal articles, equating to 3.8 for each year of his academic career, well above the national average for marine scientists. Deena is a deeply conceptual thinker, who has stamped his mark on ecological theory by re-shaping the way that we think about biological interactions. His most ground-breaking influence has been in the sphere of bioturbation. Deena has many awards and has rapidly built up a school of postgraduate students, and in his short academic career. He is an excellent lecturer and is involved in outreach activities. All these are indications of his strong commitment to promoting Marine Science at grass-roots level among young people.

Despite only completing her PhD on the foraging ecology of Cape Gannets at the University of Strasbourg in 2008, Dr Lorien Pichegru, as conducted outstanding research on South Africa's seabirds, publishing 24 peer-reviewed papers in prominent scientific journals. In 2008 she was appointed as a post-doctoral fellow at the University of Cape Town, whereupon she set up a research project in Algoa Bay to assess the impacts of the small pelagic fishery on African Penguins. This project has been extremely successful, assessing the penguin's foraging effort in relation to environmental parameters, in particular the

abundance of pelagic fish and fishery catches. Her findings have recently resulted in SANParks expanding the Marine Protected Area associated with the Greater Addo Elephant Park to include a large portion of the African Penguin's foraging range. Lorien contributes extensively to the training of the next generation of South African marine scientists.

Acknowledgements

- The citations were produced by the proposers of the nominations. Prof John G Field & George M Branch and co-nominators, Drs Lynne Shannon, Carl van der Lingen and Ursula Scharler wrote Prof Moloney's citation. Profs William Froneman and Chris McQuaid produced Prof Gibbons' citation. Dr Deon Durholtz nominated Mr Cooper and Mr Alan Robertson proposed Ms Du Plessis' award. Prof Andrew Cooper proposed Dr Green's award. Prof Peter Ryan submitted Dr Pichegru's nomination and Prof George Branch proposed Dr Pillay's award. Dr Eleanor Yeld Hutchings' award was proposed by Prof George Branch and Ms Judy Mann. Mrs Penny Haworth's citation was produced by Dr Angus Paterson. The full citations for each candidate are available [here](#).
- Stellenbosch University and the Western Cape Representatives of SANCOR, under the chairmanship of Dr Sophie von der Heyden, are thanked for successfully hosting the 15th Southern African Marine Science Symposium.
- The South African Environmental Observation Network (SAEON) sponsored the trophies of the SANCOR Emerging Scientist Awards.
- Photo credits: Eleanor's photo by Claudio Velasquez Rojas / Homebrew Films . Sharon's photo by Rob Leslie. ☞

Prize-winning presentations at SAMSS 2014

The Southern African Marine Science Symposium (SAMSS), held during, 15-18 July 2014 at Stellenbosch University, attracted 484 participants, including 181 students. Prizes were given to the best student oral and poster presenters at the end of the symposium. Click [here](#) for the abstract book.

The following students are congratulated on their prize-winning presentations:

Best Poster Presentations

- Winner: Phumlile Cotiyane (RU) - The physical and biological effects of a tidal creek on a mangrove forest at Nahoon Estuary.
- First Runner-up: Noelle Tubbs (UCT) - Heat Tolerance in African Penguins in the face of climate change.
- Second Runner-up: Robyn Payne (UCT) - Taxonomy and systematics of the sponge fauna from Walter's Shoal, a shallow seamount in the Western Indian Ocean region,

Best Oral Presentations

- Winner: Denham Parker (RU) - Spatial variability associated with long-term monitoring of subtidal reef fish in Tsitsikamma National Park Marine Protected Area.
- First Runner-up: Davide Gaglio (UCT) - Linking the foraging ecology and population dynamics of swift terns to the availability of forage fish.
- Second Runner-up: Schalk du Plooy (NMMU) - Role of nutrient assimilation in facilitating prolonged bloom persistence of Cyanobacteria sp. in Lake St Lucia, iSimangaliso Wetland Park (South Africa). ☞



Meteor research and training cruise - From the Atlantic to the Indian Ocean

By Nina Lester

Biological Sciences Department,
University of Cape Town



Eight young scientists from South Africa, Namibia, and Madagascar were chosen to partake in an international training and capacity building cruise on board the German RV *Meteor* on the cruise leg M100/2, The *Meteor* III's 100th cruise. The voyage commenced in Walvis Bay, Namibia, and continued around South Africa, hugging the South-East Coast, near Port Elizabeth, passing the Eastern shores of Madagascar and arriving in Port Louis, Mauritius. The cruise passed through the Benguela Current coastal upwelling system and the Agulhas Current, providing a remarkable diversity of oceanic conditions and biological specimens to sample.

The primary objective of the training and research cruise was to train young scientists in state-of-the-art methods in marine research, physical and biological oceanography and marine biogeochemistry. Students learnt how to collect data and samples at sea, and how to process, analyse and interpret the results. In addition, students were required to design a short

research project which would provide data/results for analysis and discussion by the students onboard. The cruise was a unique opportunity for hands-on training in an interdisciplinary and truly international setting. It also offered opportunities for scientific networking among candidates from different German and African partner institutions. Co-ordinators of the cruise were from a range of institutes including GEOMAR, the universities of Bremen and Hamburg, and the Leibniz Centre for tropical marine ecology.

Students collected and had access to physical oceanography data (CTD, L-ADCP, S-ADCP, uCTD, TSG), biogeochemical data (Underway measurements of trace gases, CO₂, O₂, CH₄ and pH), biological data (Hand nets, bongo nets, multi-nets), and numerical ocean model data (INALT01). Practical teachings were supplemented with daily lectures from a range of specialists to create a well-rounded educational cruise.



CTD sampling by South African students (Photo: Laura Braby)

Student output projects looked at: Copepod respiration rates, copepod egg production, faecal pellet sinking speeds, pteropod diversity and abundance, foraminifera diversity in relation to geochemical parameters, T-S profiles of the water



Inspection of zooplankton samples by students.



masses, and model simulation of larval transport by ocean currents. Regular presentations on project progress kept listeners informed on various topics, provided input for the reporter and improved presentation skills.

As a marine biologist in the Biological Sciences department of the University of Cape Town, my research is primarily zoologically based with background courses in oceanography. My passion is to investigate the impacts of climate change on calcifying animals, which has led me to my current dissertation on the impacts of global change on South African abalone, supervised by my A/Prof Mike Lucas (University of Cape Town). Thus, I was very excited to be chosen as a participant in this oceanographic research training cruise so that I could enhance my oceanographic capacities. My personal objectives for the cruise were to introduce myself to the practicalities involved in biological oceanography and to provide some insight into the phytoplankton communities around southern Africa and Madagascar. During the cruise I collected chlorophyll and nutrient samples, and biological samples of phytoplankton inhabiting the waters along the cruise track. These samples will be analysed to produce a general article on phytoplankton diversity in

the area.

Unfortunately, none of the samples for phytoplankton research were able to be analysed on board, so samples were shipped to Bremen University for nutrient, chlorophyll and HPLC analyses. Preserved biological samples were able to be sent to the University of Cape Town for species identification and calculation of biodiversity. Apart from scientific knowledge, the cruise provided an ideal chance for African students to connect with German students from various universities.

Students and co-ordinators stayed in Swakopmund, Namibia for two nights in preparation for the voyage during which time they participated in ice-breaker events, enjoyed tours of the local aquarium, explored the town and shared many meals together. At the end of the voyage, tired staff and students were able to relax during a one-night stay in Mauritius, after which many heartfelt goodbyes were said. An experience of a life time and not soon to be forgot - the *Meteor* training program once again managed to change the lives of many young scientists.

Acknowledgements

I would like to thank the cruise leader, Martin Visbeck, for making this cruise

possible, and the collaborative work of the captain, Michael Schneider, the boson, Peter Hadamek, and the entire crew of *METEOR*, which was commendable and very much appreciated. ☞



Bongo nets used to collect biological samples in the Agulhas Current.



Multinets used to collect biological samples in the Benguela Current.



Students and lecturers on board the *M100/2* cruise (Photo by Martin Visbeck).



Collecting samples down to 500m under the sea

By Nicky Willemse

South African Institute for
Aquatic Biodiversity



SAIAB
South African Institute
for Aquatic Biodiversity

THE west coast of South Africa is a key area for mining, trawling and the oil and gas industry – yet very little is known about the thousands of animals living in the sand at the bottom of the ocean, which could potentially be affected by these activities.

Over the past five years, Cape Town's Natasha Karenyi, 35, has been exploring these sandy ecosystems in selected areas stretching from the Namibian border all the way to Cape Point – and in parts of the ocean as far out to sea as 160km and as deep as 500m.

This ambitious large-scale project – the first of its kind along the west coast – formed the basis of her doctoral research at Nelson Mandela Metropolitan University in Port Elizabeth.

She also drafted the country's first conservation plan for the submerged sea floor sediment ecosystems in this area – taking into account selected priority areas and the industries that operate in these areas. Her work will feed into the South African National Biodiversity Institute's (SANBI's) next national biodiversity assessment.

“One of the major issues with studying these ecosystems is that we are limited in terms of our understanding by the accessibility of the

ecosystems – the deeper we go, the less we know. You need to go out on ships to get the deepest samples.”

Karenyi embarked on nine trips out to sea ranging from three days to two weeks, where she could gather samples from the far-off continental shelf. It was an impressive feat for the PhD student – one of a handful of benthic (bottom of the ocean)

ecologists in South Africa – who has “no sea legs” and was plagued by continual bouts of sea sickness.

With a limited budget, she mainly hitched rides on research vessels belonging to the Department of Environmental Affairs (DEA) and the Department of Agriculture, Forestry and Fisheries (DAFF).

“Collaborations with colleagues and institutions are imperative for attaining research goals ... I had to build working relationships with colleagues from different disciplines to get the study done.”

On board the research ships, she deployed an instrument called a grab. “It's like a jaw you can send down and when it hits the bottom, it takes a bite out of the sea floor.”

She also collected samples from the beach, and utilised divers to collect samples from shallow areas. In all, she collected more than 44 000 sand-dwelling animals representing



DIGGING IN THE DEEP ... Natasha Karenyi, who recently completed her PhD studies on west coast sea-floor ecosystems through Nelson Mandela Metropolitan University in Port Elizabeth, had to board research vessels to collect the samples she needed from the continental shelf.

Doctoral student's pioneering research of sea-floor ecosystems along SA's industry-rich west coast will help inform conservation decision-makers.

over 450 species from 200 samples collected at 48 different sites during the course of her research. Her collection will be sent to a museum to identify any new species.

“I looked at animals bigger than 1mm that live in the sediment. These were mostly polychaetes (marine worms) and crustaceans (e.g. prawns and crabs). There were also some anemones and a few other organisms, like starfish and sea urchins.”

Karenyi is hoping that similar large-scale



research studies currently underway or in the pipeline will produce comparable information for South Africa's other coastlines. This will provide national scale data essential for the conservation and management of these ecosystems.

"Marine unconsolidated sediments [the sandy sea floor] constitutes the largest sea floor ecosystem on earth. Because it's such a large ecosystem, you can't sample the whole thing. Most people focus on a particular area – a bay or a harbour – and work on that. A large-scale study requires lots of resources and is very difficult to do."

Karenyi's study was funded by the National Research Foundation (NRF) and the Andrew Mellon Foundation in the United States.

Although she completed her BSc, honours and masters degrees at the University of Cape Town, she opted to complete her PhD through NMMU so that she could be supervised by Dr Ronel Nel, a leading expert in marine sandy ecosystems. Her co-supervisor was SANBI's Dr Kerry Sink, who led the development of the South African national marine and coastal habitat classification.

"I enjoyed learning about a system that very few people actually know about ... I know my research will be used in future which gives me a sense of accomplishment – it's a great feeling." ✂

Recipient of the 2014 SANCOR Travel Award

SANCOR is pleased to congratulate the recipient of the 2014 SANCOR International Travel Student Award, Ms Mia Wege.

Mia is a PhD student at the Mammal Research Institute in the Department of Zoology and Entomology at the University of Pretoria. Her supervisors are Prof Marthan Bester and Dr Nico de Bruyn (a previous travel award winner). Her PhD study focuses on the maternal foraging ecology of sympatric Antarctic and Subantarctic fur seals from Marion Island. Her study highlights individual and colony-preferred foraging locations of a top predator. This is crucial for identification of highly productive marine areas and the development of marine protected areas.

Mia is an outstanding student, with an exceptional academic record; she has already published her work in the international peer-reviewed scientific literature and has a very promising career as scientist ahead of her. Mia will be presenting a paper at the [5th Biologging Conference](#) in Strasbourg, France, entitled: "Foraging site fidelity of a temperate central-place forager - the Subantarctic fur seal." The conference brings together a wide range of researchers who use animal-attached electronic devices to study aquatic, terrestrial and aerial species, and their habitats.



The SANCOR International Travel Student Award is presented annually to a PhD student in recognition of their work accomplished thus far. It has been instituted to promote and develop capacity building in science in the marine and coastal environment. The grant offers up and coming young marine scientists the opportunity to attend an international conference and to showcase their research as well as gain experience in presenting a paper to an international audience. Furthermore, it provides the ideal platform for the student to interact and network with national and international experts in the same research field. ✂

2015 Applications for the Applied Marine Science Masters Degree now open

The [Applied Marine Science Masters degree](#) is by coursework and dissertation and is a 13 month degree offered through the Marine Research Institute at the University of Cape Town. The programme provides students with a broad, multidisciplinary and integrated overview of marine science. It is intended for an array of people, ranging from students who would like good scientific knowledge of various disciplines related to applied marine science, to professional researchers who aim to reskill themselves. It is designed to equip students with a set of practical skills on how to assimilate scientific knowledge and apply it to marine and coastal analysis within both a natural and social context and often with a management orientation.

Closing date for applications:

South African Students: 30 September 2014

Students outside South Africa: 31 August 2014



Marine and coastal fieldwork for inland students

By Gavin Snow¹ and
Deanne Drake²

¹Botany Department, Nelson
Mandela Metropolitan
University; ²School of Animal,
Plant and Environmental
Sciences, University of
Witwatersrand

The School of Animal, Plant and Environmental Sciences, University of Witwatersrand, held their annual Marine and Coastal Systems Fieldwork course at Rocky Bay on the KwaZulu-Natal south coast from 26 January to 2 February 2014. The course introduced twenty 2nd year students to the marine and coastal habitats of southern Africa, with the greatest emphasis being placed on the rocky shores of KwaZulu-Natal. The students gained experience in identifying organisms and putting into context the behaviour, distribution and ecology of the organisms found in these diverse habitats.

The course included lectures on the classification of biological organisms, photography techniques, freshwater biology, identifying rocky shore animals and algae,



A colourful contoured dorid nudibranch photographed in a rock pool at Rocky Bay.

mangroves and sandy beach ecology, urchin development and reproductive strategies, quantitative transect techniques, and plankton and symbiotic relationships. The lectures were presented by Assoc. Prof Deanne Drake, Dr Gavin Snow, and teaching assistants Mr Graham Stansell, Mr Shivan Parusnath and Mr Ryan Thomas.

The students had the opportunity to identify organisms in a number of coastal habitats; a pristine stream in the Vernon Crookes Nature Reserve, an impacted stream in a

sugarcane plantation, mangroves in the Bayhead Natural Heritage Site, plough snails (*Bullia* sp.) at Isipingo Beach, and frogs in a wetland near Park Rynie. Three rocky shores were visited; Rocky Bay, Clansthal Conservancy Area and Reunion Rocks, which are dominated by granite, Dwyka tillite and sedimentary rock types respectively. The students conducted transects at Rocky Bay to determine if the rocky shore organisms were present in distinct zonation patterns.

The course participants also had the



Students identifying mudflat organisms in the Bayhead Natural Heritage Site, Durban Harbour.



Students conducting a *Bullia* sp. experiment along the Isipingo sandy beach.



opportunity to have a behind the scenes tour of uShaka Marine World. The enthusiastic staff conducted a tour of the enormous rooms that house the water filters, pipes and sumps, and showed how the water quality is maintained using protein skimmers, sand filters and temperature control units. Just feeding the marine life at the park exceeds R50 000 a month!

The fieldwork was concluded by examining the students on the information that they had learned in the field and during presentations. Based on feedback from evaluation forms the excursion was well received by the students, providing them with a rare glimpse into the ecology of rocky shores. ☞



Students identifying organisms at the Clansthal Rocky shore.

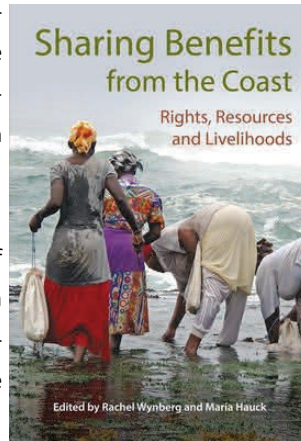
Book releases from the UCT Environmental Evaluation Unit

Sharing Benefits from the Coast

Rights, Resources and Livelihoods

Edited by Rachel Wynberg and Maria Hauck

Coastal resources are vital for communities in developing countries, many of whom live in abject poverty. These resources also hold



significant value for a number of different sectors such as mining, fisheries and tourism, many of which supply expanding global consumer markets. Although these activities provide opportunities for economic and income growth, global patterns indicate growing levels of economic inequality between custodians of these resources and those exploiting them, as well as an increasing incidence in poverty.

This book provides novel analyses of these issues, drawing from empirical research in South African and Mozambican coastal communities. It aims to deepen our knowledge about coastal resource use, who benefits and who loses and in what circumstances, why benefits and losses are distributed in the way that they are, the main blockages that prevent greater equity, and strategies to enhance more equitable benefit sharing. These findings have relevance and application for coastal livelihoods, rural governance and resource sustainability— not only in the research sites, but across a world in which community rights are increasingly undermined through land grabbing, unequal power relations and externally driven development interventions. ☞

Governance for Justice and Environmental Sustainability

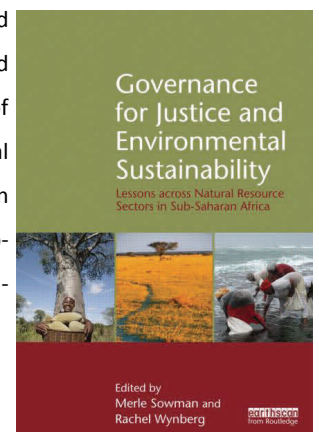
Lessons across Natural Resource Sectors in Sub-Saharan Africa

Edited by Merle Sowman and

Rachel Wynberg

Understanding the governance of complex social-ecological systems is vital in a world faced with rapid environmental change, conflicts over dwindling natural resources, stark disparities between rich and poor and the crises of sustainability. Improved understanding is also essential to promote governance approaches that are underpinned by justice and equity principles and that aim to reduce inequality and benefit the most marginalised sectors of society.

This book is concerned with enhancing the understanding of governance in relation to social justice and environmental sustainability across a range of natural resource sectors in Sub-Saharan Africa. By examining governance across various sectors, it reveals the main drivers that influence the nature of governance, the principles and norms that shape it, as well as the factors that constrain or enable achievement of justice and sustainability outcomes. The book also illuminates the complex relationships that exist between various governance actors at different scales, and the reality and challenge of plural legal systems in much of Sub-Saharan Africa. ☞





Estuary management learning programme

*By Gavin Snow, Janine Adams and Daniel Lemley
Botany Department, Nelson Mandela Metropolitan University*

The National Biodiversity Assessment (2011) estimated that there are nearly 300 functional estuaries along the South African coast. Many have become focal points for development in the coastal zone as the country's economy grows. Issues such as the increased abstraction and pollution of fresh water in river catchments, an increase in the number of holiday and residential homes and growing industrial zones all contribute to the pressure being placed on estuaries. As the intensity of resource utilisation increases the need to promote the equitable, efficient and sustainable use of estuary-associated goods and services increases.

The Short Learning Programme run by the Nelson Mandela Metropolitan University, *Managing Estuaries in South Africa*, was held at the Arena Riverside Resort near East London. This was the eighth presentation of this course and was attended by 27 participants from diverse backgrounds. Funding from the FETWater Programme ended in 2010 and the C.A.P.E. Estuaries Programme funded workshops in George (2011) and Velddrif (2012). The East London 2013 workshop was funded by the Department of Environmental Affairs: Oceans and Coasts.

The Department of Environmental Affairs aims to improve the management of estuaries by developing Estuary

Management Plans (EMP's) and the capacity to implement them. The National Environmental Management: Integrated Coastal Management Act (No. 24 of 2008) requires estuaries to be managed in a coordinated and efficient manner, in accordance with the recently introduced National Estuarine Management Protocol. The Protocol requires the management of estuaries through the development and implementation of individual Estuarine Management Plans.

The course was three days long with presentations and breakaway groups on days one and three, and a field excursion to the Kwelera Estuary on day two. The content of the estuary management course was presented by Gavin Snow, Janine Adams and Daniel



Participants using a Secchi disc to estimate the penetration of light into the Kwelera Estuary (Photo: G Snow).



Participants aboard the Arena Riverside Resort boat for a trip along the Kwelera Estuary (Photo: G Snow).



East London course participants with the Kwelera Estuary in the background (Photo: G Snow)



Lemley (NMMU), Ntombovuyo Madlokazi (DEA), and Lara van Niekerk (CSIR Natural Resources and the Environment). Topics covered included resource economics, the value and function of estuaries, activities that threaten estuaries, legal mandate (including the National Estuarine Monitoring Protocol) and Estuary Management Plans. Each participant received a course assessment guide & workbook, and CDs with copies of many publications relating to estuaries. Participants were required to complete an assignment based on four tasks as well as questions linked to the field excursion for evaluation. The assignments were based on knowledge gained from the presentations, tasks that were completed throughout the course and field excursion.

The course has been registered as a short-learning programme at NMMU a NQF level of 8 and based on the positive feedback from the participants should be considered as a long-term method used to train people in estuarine management issues.

If you are interested in attending future courses or just need additional information then please contact Gavin Snow (Gavin.Snow@nmmu.ac.za). ☞

First Meeting of the Panel of Experts on Ocean Governance for Africa

On January 22-24 2014 the United Nations Environment Programme (UNEP) convened the first meeting of the Panel of Experts on Ocean Governance for Africa, arranged by the Secretariat of the Abidjan Convention and hosted in Cape Town, South Africa by the International Ocean Institute - Southern Africa (IOI-SA). The meeting aimed to address some of the most pressing challenges to the African continent such as poverty alleviation, security issues (including food), and the impacts of climate change by tackling existing obstacles related to use of ocean goods and services and putting in place a Roadmap to an African Summit on the Governance of the Oceans. The Expert Panel is to develop a Policy Blueprint for adoption and implementation to outline steps towards the realization of a Blue Economy for Africa, with direct implications for management and policy frameworks in the marine, coastal and maritime sectors,

and ultimately helping ensure a sustainable and productive relationship between the oceans and the African people.

The meeting also agreed on a Draft Decision to be adopted at the upcoming Conference of the Parties for the Abidjan Convention (22 Countries) to facilitate engagement with the Roadmap and Policy Blueprint on Ocean Governance. The UNEP Regional Seas programme covers the entire African coastline with the Abidjan, Nairobi, Jeddah and Barcelona Conventions in place. The African Union will also play a significant role in backstopping the process ahead, as well as ensuring alignment between the Policy Blueprint on Ocean Governance and the recently adopted (31 January 2014) AU 2050 African Maritime Strategy. ☞



International Ocean Institute
Southern Africa



**Nelson Mandela
Metropolitan
University**

for tomorrow





MCEN Annual National Conference 2014

The Marine and Coastal Educators Network, a coordinating group of SANCOR, held its 14th national conference in the Eastern Cape 5-10 January 2014. The conference was themed: "East Coast biodiversity – Port Elizabeth- City of five biomes". The conference was successfully organized by the South African Marine Rehabilitation and Education Centre (SAMREC).

The conference featured information on marine research, classroom and field teaching activities and techniques while offering interesting and informative field experiences. Selected speaker highlights included presentations and activity demonstrations from:

- Mrs Debbie Hargreaves (KwaZulu-Natal Sharks Board) gave an overview of activities at the Sharks Board to prevent shark attacks as well as interesting collaborative ventures that the Sharks Board has been involved in.
- Mr Marcus Osshrey presented on the heroic work done by the National Sea Rescue Institute (NSRI). He also presented on the NSRI's waterwise education programme to educate children on rip currents.
- Dr Angus Paterson of SAIAB presented on Modern Technology in Marine Research.
- A young scientist from Bayworld, Ms Michelle Bradshaw, presented on acoustic telemetry methods used on penguins.
- Mr Russell Stevens and Mr Khonzani Lembeni of the Two Oceans Aquarium presented an experiment to demonstrate the movement of warm and cold currents as well as the salinity of the ocean. They also discussed the impacts of sudden influxes of freshwater in estuaries on marine organisms.
- Mr Arno Munro (DAFF) presented a classroom activity on the classification and identification of marine animals, using replicas of the organisms.
- Dr Paul Martin and Mrs Jenny Rump, scientists from the Zwartkops Conservancy, took participants on a guided tour of the Zwartkops estuary, pointing out examples of the various biomes and highlighting the activities in the estuary. The Conservancy is in the process of preparing to register the estuary on the Ramsar List of Wetlands of International Importance.

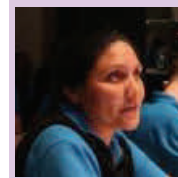
On the final day of the conference, participants visited SAMREC, where they experienced the day to day tasks involved in the rehabilitation of African penguins and other seabirds. SAMREC staff also presented

their outreach and education activities for learners and the public.

MCEN aims to assist marine educators in their activities, facilitate collaboration between educators, help co-ordinate national marine education initiatives and to identify future opportunities for marine education.

The next annual conference (11-16 January 2015) will be MCEN's first inland conference in its newly established chapter in Pretoria, Gauteng. If you would like to contribute in the form of a presentation, lesson, classroom activity or field excursion, please contact [Carmen Visser](#) or [Armstrong Mashakeni](#) to participate in this exciting science communication opportunity.

Photos by Arno Munro ✍



Bianca Engel has been the MCEN chairperson for the past four years and has handed the reigns over to Arno Munro. We thank Bianca for her consistently buoyant leadership of the committee. We welcome Arno as MCEN's new chairperson. He has enthusiastically served as regional and institutional representative on the committee.



Classroom activity on the classification of marine organisms





Initially we wanted to answer two questions. Firstly, is there a pattern in the number of egg cases found at different times of the year which could indicate a definite breeding season? Secondly, can we conclude which oviparous sharks occur at specific locations along our shores by monitoring what shark egg cases are found at all the beaches in the Overstrand?

The pilot phase of the project has shown some surprising results. In the first seven months of collecting egg cases, the answer to the first question, is yes and no. The number of egg cases washing out on the beach remains constant throughout the year, with one exception. For the St Joseph shark the number of egg cases collected were very high during May and June, tapering off to a few only in the months September to December. To establish whether this pattern is 'real', we will have to continue the collections for at least another two, preferably three, years to make sure that the same pattern occurs every year.

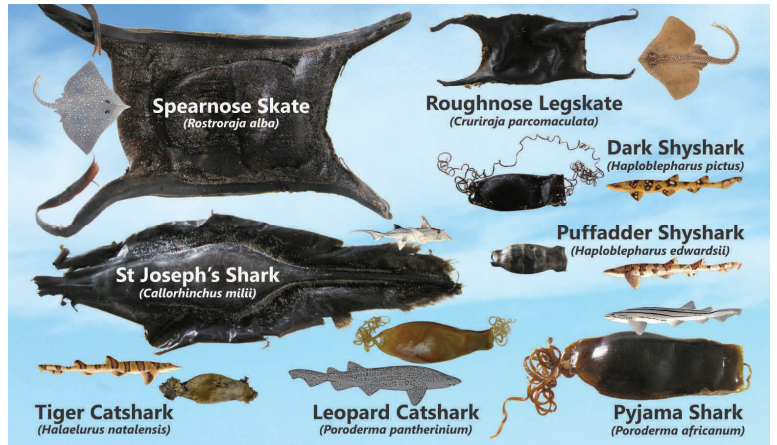
The collection teams have been visiting different beaches and community members have also provided information on the egg cases that they found at different beaches along the Whale Coast. The Working for the Coast staff also participate in the project. It is one of these groups that found an interesting egg case at Pearly Beach. Xavier Zylstra, shark nurseryman at the Two Oceans Aquarium, identified it as the egg case of the leopard catshark. He also alerted us to the fact that they had a new hatching in the aquarium which turned out to be a tiger catshark. The tiger catshark egg case is about the same size as a puffadder shyshark case but is covered in a golden, cloudy fluff. We have not yet spotted this in our collections or surveys and are on the lookout

for it. Information about the project is shown on the information boards that have been erected at the three Blue Flag beaches. The orange dots show which of the egg cases are found at beaches along the Whale Coast shoreline.

We still need information about the following beaches: Rooiels, Pringle Bay, Hangklip and Silver Sands Bay in Betty's Bay. Palmiet River, Bot River Estuary mouth area and Brekvis Bay in Vermont, Onrus Main Beach, Sandbaai and Skulphoek Beach, Hermanus New Harbour area and the Hermanus Old Harbour and Mussel River Beach, Die Plaat, Stanford's Cove and Gansbaai Beach, Romansbay, Danger Point and Uilkraalsmond.

If you are visiting these places any time soon, please be on the lookout for the shark egg cases that can be seen in the picture above. Please send the information to [Sheraine](#).

During 2013 we established seven collection sites. Initial findings in Walker Bay are intriguing. The Bay shoreline is approximately 18km long, yet



egg cases are deposited in a very small area of 500m to 1000m long. It would seem that in-shore currents pick up the empty egg cases and carry them in specific current patterns to be deposited at a particular site. We are currently attempting to link this phenomenon with local oceanographic dynamics. We are enlisting the help of divers to marking egg cases underwater so that these ocean pathways can be determined and so that we can also calculate what proportion of egg cases are actually deposited on beaches. We are also looking at the effect of weather conditions, especially wind direction and speed.

Through this citizen-science project Whale Coast Conservation will add to the knowledge about some of the sharks along the Cape Whale Coast and contribute to their protection. ☞





Local marine specialist company a player in the global marketplace

By Sidney Bilski

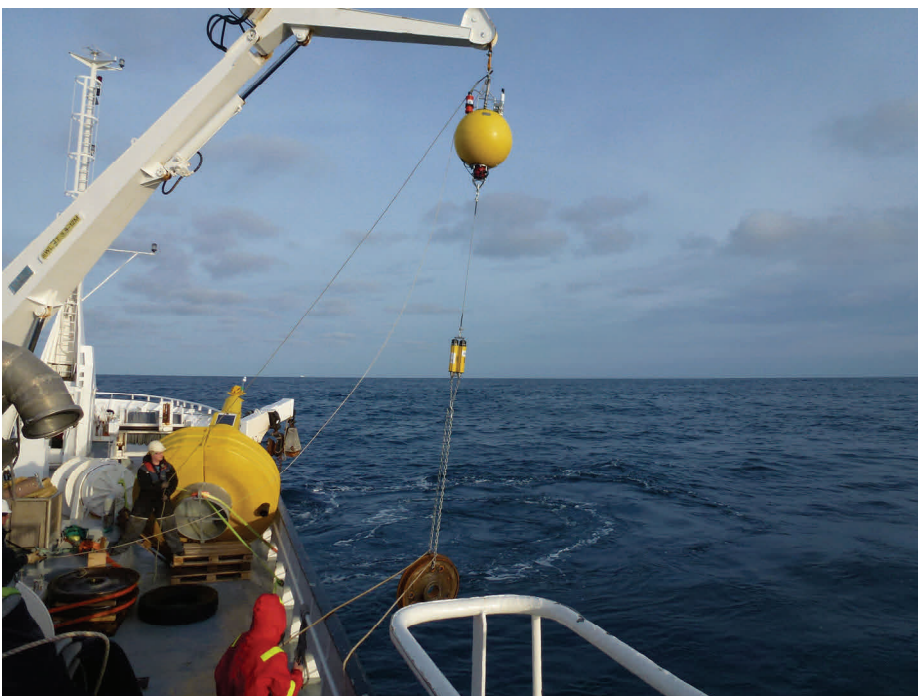
Metocean Services International

Metocean Services International (MSI) provides oceanographic and meteorological (metocean) measurement services on a worldwide basis. Since inception in 2003, the company has conducted measurement projects in over 40 countries from its offices in Cape Town and Hobart. MSI owns and operates a large range of oceanographic equipment and all services are performed according to our ISO-certified quality management system. The majority of our clients are large international oil companies, who require long term data sets for engineering design. A team of qualified and dedicated oceanographic engineers ensures that all offshore work is conducted to the highest safety standards, and all data is processed inhouse using a suite of Matlab-routines.

In 2014 MSI will be mentoring two N.Dip. (Oceanography) students from the Cape Peninsula University of Technology, and they

will get the opportunity to conduct some original research for themselves, as well as get a flavour for how we go about performing operational oceanography. We will also, once again, lecture the Project Management module of the Masters in Applied Marine Science course at the University of Cape Town.

If you would like to learn more about the work we do and receive updates, please visit our website www.metoceanservices.com or visit our Facebook page <https://www.facebook.com/Metocean>. We regularly publish articles on some of our more interesting projects, and you have the opportunity to subscribe to our newsletter Undercurrents via our website, or by sending an e-mail to info@metoceanservices.com ✉



The Robin Rigby Trust

invites proposals to undertake
Collaborative Coastal Research

Proposals are invited from qualified individuals to undertake collaborative research projects that focus on understanding and implementing aspects of conservation and sustainable development in coastal areas. Specifically, the Robin Rigby Trust supports individuals who (1) are undertaking community-centred coastal research in collaboration with appropriate coastal communities, coastal research organizations, and/or coastal-focused non-governmental organizations (NGOs), and (2) are either based in Canada and carrying out their project overseas, or based outside Canada and travelling to Atlantic Canada for their project. The Trust supports suitable partnerships, by funding small-scale "do-able" projects developed in response to local needs, and aiming to:

- (a) better understand coastal ecosystems and the value of their biodiversity and conservation,
- (b) effectively address coastal environmental and resource management problems,
- (c) assist in developing coastal areas responsibly, and/or (d) improve the livelihoods of those living along the coast.

[Further details are available here.](#)

Closing date: 31 October 2014



SANCCOB and CapeNature rescue orphaned Cape Gannet chicks

In a rescue effort to save 36 Cape gannet chicks, SANCCOB (the Southern African Foundation for the Conservation of Coastal Birds) and CapeNature teamed up to admit the orphaned chicks from Bird Island (Lambert's Bay) to SANCCOB's seabird rehabilitation centre in Table View. Every year around May, adult Cape gannets vacate the island for their annual post-breeding immigration and can often be found as far as Angola or Mozambique. The group of gannet chicks hatched late in the breeding season and are not yet of a fledging age. As a result, they were abandoned by their migrating parents and would have faced starvation on the island if SANCCOB and CapeNature had not intervened.

Admitted on 22 May 2014, the Cape gannet chicks will be reared at SANCCOB for the next 3-4 weeks. During this time the chicks will undergo water therapy to strengthen their wings, will be fed whole fish and fish formula to boost their immune systems and will receive regular doses of water and electrolytes to keep them hydrated. Once their feathers are waterproof, their health status and blood results are cleared by the veterinary team, and they have reached a normal fledging weight, they will be released back into the wild.

The Cape gannet is currently listed as vulnerable and is only found on three colonies in South Africa and three colonies in Namibia. Currently, 8 000 pairs breed on Bird Island in Lambert's Bay. Maintaining the colony at Lambert's Bay is critical to the conservation of the species. According to Dr Richard Sherley, at the University of Cape Town "Environmental conditions for seabirds



Photo by Francois Louw

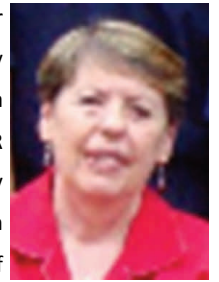
have deteriorated severely on South Africa's West Coast over the last decade and gannets have relied heavily on energy-poor fishery discards to feed their chicks. Recent research has shown that adults have been able to maintain relatively good survival, but the poor feeding conditions have resulted in slow chick growth, low survival of chicks in the nest and high mortality of these young birds in their first year at sea as well. Since adults move very little between colonies, efforts to increase the number of young birds making it to breeding age are important to ensure the survival of the colony at Bird Island".

In 2013, SANCCOB rescued 172 oiled Cape Gannets from Bird Island in the Eastern Cape, the largest gannet colony in the world, after the *Kiani Satu* bulk carrier ran aground in the Goukamma Marine Protected Area on 8 August. ⚔



A life well lived

Annette Schnetler passed away in January 2014. She was a longstanding SANCOR secretariat in its early days. Annette was such a fine example of dedication and professionalism. She was widely admired and respected by the marine science community of South Africa for her wisdom, integrity, kindness and steadfast commitment.



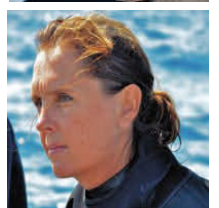
[Khonzani Lembeni](#), vibrant award-winning marine educator at the Two Oceans



Photo by Arno Munro

Aquarium (and former magician), passed away suddenly in May 2014. He was a passionate educator who was actively involved in community outreach. He was always an informative and entertaining presenter at MCEN national and regional conferences.

[Peter Timm](#) and [Adele Stegen](#)—top SA divers—passed away in a tragic diving accident in June this year. Peter was a world-renowned diver and discovered the presence of coelacanths at Sodwana Bay. Adele was the first South African woman to see a



coelacanth in its natural habitat. ⚔



SANCOR Steering Committee Membership Update

The South African Network for Coastal and Oceanic Research (SANCOR) is a non-statutory body that generates and communicates knowledge and advice in order to promote the wise and informed use and management of marine and coastal resources and environments. It's purpose is to co-ordinate, facilitate, stimulate and review marine and coastal environment research in South Africa. The SANCOR Steering Committee is the leadership team that directs SANCOR's activities.



A student representative is elected every three years at the Southern African Marine Science Symposium (SAMSS) to serve on the committee. SAMSS was held during 15-18 July 2014 and was hosted by the University of Stellenbosch on behalf of SANCOR. Miss Rita Steyn was elected as the new SANCOR Student Steering Committee Representative at the symposium. Rita is a first year PhD student on the PDP programme at SAEON and the Department of Zoology and Entomology at Rhodes University. She specializes in benthic invertebrate

communities in rocky reef habitats.

SANCOR warmly welcomes Rita onto the committee and wishes her a rewarding experience on the committee.

We also bid farewell to outgoing Steering Committee members:



Dr Paula Patrick is acknowledged for her dedication and enthusiasm on the committee in the past three years as the student representative.

Associate Professor Moenieba Isaacs served as the National Forum Social Scientist Representative on the committee in the past two years. Moenieba is thanked for her valuable contribution and time on the committee.



For the past two years, Dr Achuo Enow has represented the National Research Foundation on the SANCOR Steering Committee. Dr Achuo Enow has now

resigned from the NRF and will no longer serve on the steering committee. Achuo is thanked for the significant role he has played in SANCOR's activities, especially in securing support for marine science within the NRF and DST. We thank him for his commitment to the programme and wish him well in his future endeavours.

Nominate a candidate to serve on the committee

Nominations are now invited for two positions on the SANCOR Steering Committee:

- National Forum Representative - this post is currently held by Dr Louis Celliers. He is willing and eligible for re-election.
- National Forum Representative Social Scientist

Please contact [Carmen Visser](#) to nominate a candidate for these positions. ✉



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