Newsletter 2014
Published November 2014

HIRS Station Manager
Dr Elizabeth Perkins
Heron Island Research Station
Heron Island
via Gladstone QLD 4680
Ph: +61 7 4978 1399
Email: hirs@uq.edu.au

MBRS Station Manager
Mr Kevin Townsend
Moreton Bay Research Station
PO Box 138,
Dunwich QLD, 4183
Ph: +61 7 3409 9058
Email: mbrs@uq.edu.au

Research Facilities Manager
Dr Clint Chapman
Email: c.chapman1@uq.edu.au

Research Facilities Project Officer
Ms Lucy Hurrey
Email: l.hurrey@uq.edu.au

Cover images: A pelican takes flight in Moreton Bay - E. Perkins; driftwood on Heron Island - G. Bessone; a Silvereye perched in the Pisonia forest at Heron Island - E. Perkins; sooty terns on the Protector wreck under a super moon - E. Perkins; a recent turtle hatchling makes the race to the sea on Heron Island - G. Bessone.
ISLAND RESEARCH STATIONS

Heron Island Research Station

Situated on the southern Great Barrier Reef, 80 km offshore from the city of Gladstone, Heron Island Research Station (HIRS) is the oldest and largest marine research station on the Reef. With crystal clear water and near pristine conditions, the Station provides easy and direct access to the marine environment.

 Owned and operated by The University of Queensland, HIRS is internationally renowned for coral reef research and student training in marine sciences. Facilities and equipment rarely found in an offshore facility combined with its enviable position on the world’s largest reef make HIRS the ideal location for climate change research.

The Station caters to Australian and international researchers and educational groups, offering modern wet and dry laboratories, indoor and outdoor aquaria, a large animal holding tank, separate research and teaching laboratories, seminar facilities, a library, computer room and extensive boating and diving facilities. A permanent staff of ten are available to provide scientific services, boating, diving and technical support.

Moreton Bay Research Station

Moreton Bay Research Station (MBRS) is located 40 kilometres east of Brisbane on the Moreton Bay side of North Stradbroke Island, providing direct access to the waters of Moreton Bay and the Pacific Ocean as well as the unique terrestrial environments of the 27,700 hectare sand island.

Lying on the convergence of the eastern Australian subtropical and temperate zones, North Stradbroke Island and the surrounding waters support an incredibly diverse range of terrestrial, coastal and marine ecosystems on which to base research and education activities.

Also owned and operated by the University of Queensland, the research station offers accommodation for up to 96 guests in a range of accommodation styles. Modern research laboratories, teaching space and lecture theatres, boating facilities and a fabulous location attract visiting scientists and academics from around the world each year. The permanent staff of five are available to assist with planning your visit and provide scientific and boating support as required.
The weather is always a central topic here on Heron. Everyone wants to know what it’s going to do and naturally wants it to be perfect for their stay. This year the weather didn’t really cooperate early in the year with windy weather prevailing. But as the year draws to a close and we take this opportunity to touch base with our users, finally it’s calm and sunny, showcasing the best Heron has to offer.

This year was as busy, vibrant and challenging as ever. It was a shaky start with a fire at the Resort on Christmas Day disrupting utilities across the Island. Heron Island Research Station and Faculty of Science staff were quick to respond and the Station re-opened as planned in January with just some minor technical difficulties. Thanks must be given to our January clients who endured the complications with grace.

While it wasn’t without its challenges, for the most part, 2014 was a year of positive change around the Station in terms of culture, customer service and Station developments.

Equipment improvements have been steadily occurring with new king single beds and mattresses rolled out across the guest accommodation. We have also had upgrades and additions in the scientific section including a new centrifuge and spectrophotometer as well as equipment to improve safety and communications on the Station such as new waterproof radios.

We welcomed a new member to the team this year with Ben Potts joining the Boating and Diving section. Ben is an experienced skipper and scientific diver and an enthusiastic addition to the team. We also welcomed new caterers with John Guy and his team from Good Food Solutions seamlessly fitting in to the joys of catering on Heron with a fresh new menu and quality food.

We’ve been keeping in better contact with our guests past and present this year with regular website updates and through the Island Research Stations mailing list. Be sure to look out for our latest news and we look forward to seeing you on Heron in 2015.

ELIZABETH PERKINS
Station Manager,
Heron Island Research Station
The start to 2014 was a whirlwind due to the North Stradbroke Island fires (see News & Events) seeing the Station become a temporary base and respite for the fire brigade. No one was seriously hurt and thankfully the Station was safe.

Our library was recently remodelled with new computers, an interactive data projector and dividing doors. This has provided us with a great new flexible teaching space and a perfect space for workshops and conferences.

The year has been busy with university field courses, science camps and high schools. A collaboration with Education Queensland’s Moreton Bay Environmental Centre (MBEC) has provided an opportunity to access the Centre’s large teaching vessel, Inspiration. MBEC will be bringing the boat to Dunwich to conduct free educational tours during the 2014 MBRS Open Day (see News & Events).

With upgraded engines on Glaucus and a new vessel from St Lucia (Xiphias), we are now even better positioned to support water-based research. Xiphias, an aluminium boat with a bowsprit, provides researchers with a platform to research whales and work with nets and other equipment that wouldn’t be possible on the inflatable vessels.

In addition to our boating upgrades, we have added a new spectrophotometer as well as a reverse osmosis water purification system to continue our support of visiting researchers. We’ve also completed renovations to the dining rooms, making them more comfortable for our Station guests.

This year the Mad Science program with local Dunwich State School was a great success. Over half of the student body attends and the program is enthusiastically embraced by the School. In 2014, the program has attracted funding from mining company Sibelco and local publisher Suburban Living Redlands.

We hope you’ve had a productive year and that we see you at the Station very soon!
HIRS RESEARCH HIGHLIGHTS IN 2014

Once again, HIRS saw a varied group of researchers pass through the Station in 2014 showcasing the breadth of research that can be carried out from the facility.

History Lesson
The Station hosted University of Sydney Research Fellow Iain McCalman. Prof McCalman is a specialist in eighteenth and early-nineteenth century European history. His project on the Station involved researching and writing about the impact of the underwater world on art, science and culture. His most recent publication is titled: ‘The Reef - A Passionate History, from Captain Cook to Climate Change’.

Whales on the Reef
Dr Alastair Birtles, Senior Lecturer at JCU has been on Station recently cataloguing the GBR dwarf minke whale population and investigating its migratory pathways, ecology and areas of critical habitat.

The Algae Budget
Carolina Castro Sanguino, a PhD candidate from UQ, and HIRS Research Scholarship winner has spent much of the year on the Station investigating Halimeda, a green alga with a key ecological role as one of the most important contributors to carbonate budgets in the Indo-Pacific.

Shark Success
A/Prof Gillian Renshaw, Griffith University, visits the Station to study the epaulette sharks which can be found in abundance on the reef. Gillian is focussed on the effect of climate change on their stages of development.

Algae and Climate Change
As part of her research, Dr Emma Kennedy from Griffith University is assessing the responses of coralline algae to ocean acidification and warming and aims to determine whether it can be used to track the impacts of climate change in the GBR.

Birds with Malaria!
Dr Sonya Clegg, Griffith University, studies natural selection in silvereyes to understand the nature of phenotypic evolution. Her group recently discovered the first evidence of avian malaria in Capricorn silvereyes on the Island.

Finding Fish
Research Scientist at Australian Institute of Marine Science and James Cook University, Dr Michelle Heupel examined the long-term movement patterns of predators including sharks, rays and fishes.

For more information, check out the 2014 Publications!

Climate change researcher conducting coral research on the Station’s purpose built aquaria deck - D. Lancaster
Tagged turtle release; helping monitor turtle movements around the GBR - B. Latimer
Carolina Castro-Sanguino hunting for Halimeda - C. Castro-Sanguino
A visiting leopard shark and remora; researcher Dr Christine Dudgeon uses their unique spotting patterns, like fingerprints, to identify individuals - E. Perkins
MBRS RESEARCH HIGHLIGHTS IN 2014

MBRS is a hub of long-term research projects, such as Janet Lanyon’s dugong research, Matt Hayes’ mangrove carbon cycling and Stuart Phinn and Chris Rolfsema’s satellite mapping of Moreton Bay. This year, the Station continued to host researchers from a broad range of disciplines.

Mangroves to the Reef
Jean Davis, a PhD candidate at Griffith University, is studying trophic connectivity among tropical coastal habitats and implications for MPA design. Her study aims to characterize the trophic consequences of habitat connectivity between mangroves and fringing reefs within Moreton Bay in an effort to improve the effectiveness of marine reserve design and function.

Fire and Rehabilitation
Recent MBRS Research Scholarship recipient, Jessica Cooke, is studying the influence of fire on floristic community composition of North Stradbroke Island and the implications for rehabilitation.

Islands and Aquifers
A limnologist and biogeochemist with The University of Queensland, Dr Nina Welti studies the interactions between surface and groundwater on biogeochemical processes. Nina’s research is focussed on estimating groundwater recharge and residence time in a large sand-island aquifer system, North Stradbroke Island.

Sands of Time
A Postdoctoral Research Fellow from the University of Exeter, Dr Michael Salter’s primary research interest is the production and fate of carbonate sediments in shallow marine environments.

Dr Salter is currently exploring these issues at various tropical, sub-tropical, and temperate sites along the east coast of Australia, including North Stradbroke Island.

Connections to Country
Rachael Cole-Hawthorne, a PhD candidate at Griffith University is researching Aboriginal connections to Country to better understand how Aboriginal connections to Country are expressed in land-use planning processes.

Find more research highlights in the 2014 Publications!
Since joining the Station in March 2012, Geraldine Bessone (better known as ‘G’) has been responsible for housekeeping and guest services while assisting other staff members whenever necessary. G has also had numerous opportunities to help out and volunteer with researchers during their stay which made her decide to reorient her professional career. She has a European Diploma in Human Resources and is now undertaking a Certificate in Natural Resources Management. In her spare time, G enjoys wildlife photography and paddle-boarding.

06:15 Beach walk.
08:00 Morning meeting with all staff.
08:30 Complete daily morning cleaning routine.
10:00 Morning tea break.
10:15 Prepare guest rooms, laboratories and communal areas for the new clients arriving. Pick up luggage.
12:00 Lunch.
13:00 Meet catamaran to welcome and farewell guests.
13:30 Daily afternoon routine, help other departments with boats, mail, labs.
15:40 Check in with guests needs.
16:00 Finish work, study or paddle-board.
17:30 Beach sunset watching with friends.
STATION SCHOLARSHIPS IN 2014

HIRS

The Heron Island Research Scholarship is a merit-based scheme that promotes the early career research programs at Heron Island Research Station by helping researchers from The University of Queensland either develop new research projects at the Station or expand existing ones.

The Semester I Research Scholarship was awarded to Carolina Castro-Sanguino, a PhD candidate in the Marine Spatial Ecology Lab. Carolina’s work is focussed on the ecological drivers of Halimeda (a calcareous green algae) abundance.

The Semester II Research Scholarship was awarded to Daniel Stoupin, a PhD student from the School of Biological Sciences for his project investigating the role of nitric oxide in the holobiont of the coral reef demosponge Amphimedon queenslandica. A second Research Scholarship was awarded to Pablo Diaz Morales, a PhD student from the School of Biological Sciences for his project on the parasites of coral gobies.

MBRS

MBRS strongly supports research programs that promote research relevant to Moreton Bay, its terrestrial habitats, surrounding waters, social and cultural environments, MBRS offers four scholarships per year to UQ PhD and Honours students: two scholarships focused on Community Research and two pure Research Scholarships.

The Semester I Research Scholarship was awarded to Russell Yong, a PhD student from the School of Biological Sciences. Russell is studying blood flukes of Australian coastal fish. The second Research Scholarship was awarded to Jessica Cooke, an Honours student from the Sustainable Minerals Institute who is studying the influence of fire on rehabilitation communities of North Stradbroke Island.

These scholarships are available every semester and further details can be found on the Station websites: www.uq.edu.au/hirs/scholarships and www.uq.edu.au/mbrs/scholarships
2014 was an exciting year for HIRS with a strong focus on community engagement and education.

**Camp Earth Hour**, an initiative from EarthWatch, was held from on Heron Island this year. The Camp is a three-day training retreat where Earth Hour supporters could explore the Island, meet with experts and be trained by in community organising.

Dr Kathy LaFauce, Scientific Officer from HIRS represented both Stations at the **Australian Coral Reef Society Conference** in Brisbane. This provided an opportunity to showcase the Station facilities to new researchers and answer questions about what can be studied at each Island.

As part of **National Science Week**, the Station ran a range of exciting events over the week of 18 August. Alongside a number of entertaining and educational presentations, guests on Station and at the Resort enjoyed the displays from Reef Check Australia, Coral Watch, GBRMPA’s Eye on the Reef program and the South Australian Maritime Museum.

A team from the **BBC Natural History Unit** visited the Station multiple times this year to film footage of the Island’s population of Epaulette sharks for an upcoming shark documentary. Epaulette sharks are unique in their ability to survive long periods out of water and “walk” on land between pools.
For MBRS, 2014 was a year of community support, outreach and education.

The Station provided sanctuary for 100 Queensland Fire & Emergency Service staff during North Stradbroke Island bushfires in January. This included providing accommodation for emergency crews and temporary parking for fire trucks in a two-week long firefighting effort. The January fires burnt through two thirds of the Island’s natural environment and threatened homes in the Dunwich area but the facility was not damaged in the blaze.

The Australian Course in Advanced Neuroscience (ACAN), a highly prestigious training course for PhD students runs for three weeks each April/May at the Station. High-profile neuroscientists fly in from around the world to teach. Students work in a variety of areas of neuroscience, ranging from fly behaviour to addiction in humans. This visit represented the tenth anniversary for the course and the organisers invited a special guest speaker, Nobel Prize winner Prof Bert Sakmann, to attend and present.

The Station recently hosted the award ceremony for The University of Queensland’s Science Faculty Indigenous Science Scholarship. Longterm resident MBRS researcher and Director of Independent Marine Biochemical Research, Dr Geoff Nette, provided the generous donation to give Indigenous students the opportunity to enhance their science studies with financial support of up to $20,000 a year. Ms Taylah Gerloff, the latest recipient, said she was thrilled to receive the scholarship to help her complete her degree.

Ms Lucy Hurray, Project Officer from the Faculty of Science Research Facilities team represented both Stations at the Marine Teachers Association of Queensland Conference in Mooloolaba. This provided an opportunity to showcase the Station facilities to marine educators and answer any questions about what can be studied at each Island.

As this goes to press, the Station is preparing for their annual MBRS Open Day. This event is always well attended by the North Stradbroke Island and Redland City community with a welcome to Country, hands-on educational displays, showbags, presentations, and a sausage sizzle drawing big crowds to the Station.
Senior high school, undergraduate and postgraduate groups use HIRS facilities as an integral part of their degree programs. World class facilities and immediate access to the reef provide exceptional opportunities for hands-on learning.

“HIRS is as well presented as ever. It's nice to see some improvements and that the station is being well maintained. All staff were very efficient and friendly, nothing was a trouble. A big thank you to all staff. I will continue to use HIRS for educational purposes.” - Jamison High School

“Very happy with the facilities and the support from the staff. The Scientific staff was exceptionally helpful.” - Macquarie University Marine Masters

“We appreciate the wonderful experiential opportunities that this world class facility offers our students. The resident scientific staff and visiting researchers are always accommodating. Thank you and see you next year”. - Coombabah State High School
The location and facilities of MBRS make the Station popular with secondary and tertiary groups alike.

“Really appreciated the friendliness and helpfulness of the staff. We blew in and blew out again quickly to catch low tides on the first day and found the staff to be very helpful in providing us with equipment for our fieldwork. Thanks!” - Noosa Christian College

“The trip to MBRS was a really fantastic educational experience for my students. Many told me that prior to the visit, they had not thought that the environment was important, but that their trip to Straddie changed their mine. It was a very valuable experience, and the MBRS provided an excellent venue which was an important factor.” - UQ Environmental Systems Engineering

“Wonderful experience - the tutors that we had were great - lots of experience and knowledge as well as being able to pass this excitement onto the students. They were fantastic! We would love to have these tutors again.” - Christian Outreach College Toowoomba

Whale-spotting in the Bay, a favourite resting spot for Humpbacks - OMC

International students identifying invertebrates in one of the station labs - A. Flower

Lessons in the mangroves, just one of the habitats on the doorstep of the Station - OMC

Yabbie collecting from the easily accessed mudflat in front of the Station - M. Heselwood

Students can access a wide range of scientific equipment at the Station - D. Alexander

Sandy intertidal exploring in Moreton Bay - A. Flower

Hands-on learning opportunities create fun educational experiences - D. Alexander
SUPPORTERS IN 2014

ISLAND RESEARCH

Situated on a coral cay in the Great Barrier Reef and on one of Australia’s largest sand islands are the Heron Island Research Station and the Moreton Bay Research Station. Both facilities are situated in the heart of Australia’s most biodiverse environments and are completely dedicated to research and education of Australia’s coastal and marine environments. These facilities attract national and international visitation from high schools to Universities alike and play a crucial role in advancing cutting edge research and promoting the importance of Australia’s wonderful coastal and marine habitats. By supporting the Research Stations with cash or in-kind donations, your gift will contribute to ground-breaking research, advancing global education and creating a sustainable future.

Find out more!
Find out how you can get involved in supporting our Island Research Stations by visiting www.uq.edu.au/hrs/get-involved or www.uq.edu.au/mbrs/get-involved

FRIENDS OF THE STATION

Supporters who give $500 or more (tax-deductible) can become a Friend of the Station.

As a Friend of the Station, some of the benefits you will receive include a supporter t-shirt, a personalised tour of the Station of your choice, your name on a plaque on the Station as well as your name printed in the newsletter which you will receive a copy of each year.

CURRENT SUPPORTERS

Mark Magnussen, a Dunwich resident, generously donated significant tank and aquarium equipment to MBRS. The tank and equipment will be a valuable asset to researchers in the Station wet lab. Mark also made a large cash donation to contribute to Station research.

Sibelco Australia Ltd, a mineral and metal extraction company on North Stradbroke Island, provides financial support for MBRS Open Days and multiple Early Career Research Scholarships per year.
The St Lucia Boating and Diving Facility was commissioned in 2005 as a central service for marine fieldwork. Providing access to 13 sea-going vessels, specialised scuba equipment and highly qualified personnel; boating and diving facilities at the Faculty of Science provide unmatched support of research and education.

One unique opportunity provided by the facility is the ADAS Part 1 Restricted (Scientific) Dive Course.

For the past eight years the Boating & Diving Facility has offered this internationally recognised Scientific Dive Course. The course is accredited by ADAS (Australian Divers Accreditations Scheme), who have qualified The University of Queensland as an Accredited Training Establishment.

UQ is the only Group of Eight University to offer this course and the first university in Australia to do so.

The intense 3 week dive course is run 3-4 times per year. During the course, students will study theory topics such as: diving physiology; hyperbaric chambers; enriched air (Nitrox); safe tool use and dangerous marine animals. The varied curriculum will cover the majority of topics students need to stay safe and accomplish a variety of underwater scientific tasks.

The decommissioned rock quarry offers an ideal location to safely undertake a variety of tasks up to 24 meters depth. It is here that the students learn to use pneumatic tools, lift bags and practice deep recovery of an injured diver.

Near the end of the course, the students visit Flat Rock, just outside of Moreton Bay. It’s at this reef where the deep diving (up to 30 meters) occurs. Here students learn video transects, underwater photography, navigation and drift diving.

After a few days in the classroom, the students are then quickly acquainted with the traditional SCUBA gear and then full face masks and in-water communications in the University pool. Shortly after, it’s off to the rock quarry at Karawatha to undergo the bulk of the in-water training.

Feel free to enquire at boating.diving.stlucia@uq.edu.au; staff are happy to answer your questions regarding the ADAS Part 1 restricted or any other boating and diving query.

Get an early start on your Scientific Diving career!

The freshwater Karawatha Quarry, the primary training site for students completing the ADAS course - C. Heatherington

PhD student, Anne Winters training in Chandler pool - C. Heatherington

Recent cohort of ADAS students diving at Flat Rock - C. Heatherington
Plagiorchiida) belongs in the superfamily
the genus
Littlewood, DTJ (2014) Molecular evidence that
Bray, RA; Cribb, TH; Waeschenbach, A;
Parasitology, 1-9.

a problem for parasitological biological tagging

in situ
underwater
platform by combining
of microphytobenthos abundance on a reef
SR; Grinham, AR (2014) Predicting distribution
Borrego-Acevedo, R; Roelfsema, CM; Phinn,
University of Queensland.

Thesis, School of Biological Sciences, The
University of Queensland.

Bender, D (2014) The future of coral reef algae:
how ocean acidification, elevated temperatures
and nutrient enrichment affect algae. PhD
Thesis, School of Biological Sciences, The
University of Queensland.

Bender, D; Diaz-Pulido, G; Dove, S (2014) The
impact of CO2 emission scenarios and nutrient
enrichment on a common coral reef macroalga
is modified by temporal effects. Journal of
Phycology, 50: 32-54.

Booth, DT (2014) Kinematics of swimming and
thrust production during powerstroking bouts
of the swim frenzy in green turtle hatchlings.
Biological Open, 3: 887-894.

Borrego-Acevedo, R; Roelfsema, CM; Phinn,
SR; Grinham, AR (2014) Predicting distribution
of microphytobenthos abundance on a reef
platform by combining in situ underwater
spectrometry and pigment analysis. Remote

Bray, RA; Cribb, TH (2014) Are cryptic species
a problem for parasitological biological tagging
for stock identification of aquatic organisms?
Parasitology, 1-9.

Bray, RA; Cribb, TH; Waeschenbach, A;
Littlewood, DTJ (2014) Molecular evidence that
the genus Cadenatella Dollfus, 1946 (Digenaea:
Plagiorchiida) belongs in the superfamily
Haploroidea Nicoll, 1914. Systematic
Parasitology, 89: 15-21.

Brodersen, KE; Lichtenberg, M; Ralph, PJ;
Kühl, M; Wangpraseurt, D (2014) Radiative
energy budget reveals high photosynthetic
efficiency in symbiont-bearing corals. Journal of
the Royal Society Interface, 11: 20130997.

Bruce, AJ (2014) Periclimenaeus
denticulodigitus sp nov (Crustacea: Decapoda:
Palamemonidae: Pontoniinae), from Heron
Island, Queensland, Australia. Zootaxa, 3753:
71-78.

Budd, A; McDougall, C; Green, K; Degnan,
BM (2014) Control of shell pigmentation by
secretory tubules in the abalone mantle.

Ceccarelli, DM; Frisch, AJ; Graham, NA; Ayling,
AM; Beger, M (2014) Habitat partitioning and
vulnerability of sharks in the Great Barrier Reef
Marine Park. Reviews in Fish Biology and
Fisheries, 24: 169-197.

Chenery, KL; Cortesi, F; How, MJ; Wilson, N;
Blomberg, SP; Winters, AE; Umanzor, S;
Marshall, NJ (2014) Conspicuous visual signals
do not coevolve with increased body size in
marine sea slugs. Journal of Evolutionary
Biological, 27: 676-687.

Clark, NJ; Adlard, RD; Clegg, SM (2014)
First evidence of avian malaria in Capricorn
Silveryeyes (Zosterops lateralis chlorocephalus) on Heron Island. The Sunbird: Journal of the
Queensland Ornithological Society, 44: 1-11.

Couturier, LIE; Dudgeon, CL; Pollock, KH;
Jaine, FRA; Bennett, MB; Townsend, KA;
Weeks, SJ; Richardson, AJ (2014) Population
dynamics of the reef manta ray Manta alfredi

Crandall, ED; Treml, EA; Liggins, L; Gleeson, L;
Yasuda, N; Barber, PH; Wörheide, G; Rigino,
C (2014) Return of the ghosts of dispersal past:
historical spread and contemporary gene flow
in the blue sea star Linckia laevigata. Bulletin
of Marine Science, 90: 399-425.

Cribb, TH; Adlard, RD; Bray, RA; Sasal, P;
Cutmore, SC (2014) Biogeography of tropical
Indo-West Pacific parasites: A cryptic species of
Transversotrema and evidence for rarity of
Transversotrema tetrataenia (Trematoda) in French
Polynesia. Parasitology International, 63: 285-
294.

Cribb, TH; Bott, NJ; Bray, RA; McNamara,
MK; Miller, TL; Nolan, MJ; Cutmore, SC
(2014) Trematodes of the Great Barrier Reef, Australia: emerging patterns of diversity and
richness in coral reef fishes. International
Journal for Parasitology, 44: 929.

Currey, LM; Heupel, MR; Simpfendorfer, CA;
Williams, AJ (2014) Sedentary or mobile?
Variability in space and depth use of an
exploited coral reef fish. Marine Biology, 161:
2155-2166.

Cyronak, T; Santos, IR; Erler, DV; Maher, DT;
Eyre, BD (2014) Drivers of pCO2 variability in
two contrasting coral reef lagoons: The
influence of submarine groundwater discharge.

Deschaseaux, ES; Jones, GB; Deseo, MA;
Shepherd, KM; Kiene, RP; Swan, HB; Harrison,
PL; Eyre, BD (2014) Environmental factors on
dimethylated sulfur compounds and their
potential role in the antioxidant system of the
coral holobiont. Limnology and Oceanography,
59: 758-768.

Deschaseaux, ESM; Kiene, RP; Jones, GB;
Deseo, MA; Swan, HB; Oswald, L; Eyre,
BD (2014) Dimethylsulphoxide (DMSO) in
biological samples: A comparison of the
TiCl3 and NaBH4 reduction methods using
headspace analysis. Marine Chemistry, 164:
9–15.

Erler, DV; Santos, IR; Eyre, BD (2014)
Inorganic nitrogen transformations within
permeable carbonate sands. Continental Shelf
Research, 77: 69-80.

Erler, DV; Wang, XT; Sigman, DM; Scheffers,
SR; Shepherd, BO (2014) Controls on the
nitrogen isotopic composition of shallow water
corals across a tropical reef flat transect. Coral
Reefs, doi: 10.1007/s00338-014-1215-5.

Eslick, EM; Beilby, MJ; Moon, AR (2014) A study
of the native cell wall structures of the marine
alga Ventricaria ventricosa (Siphonocladoidea,
Chlorophyceae) using atomic force microscopy.
Microscopy, dft083.

Fang, JKH; Schönberg, CHL; Mello-Atayde,
MA; Hoegh-Guldberg, O; Dove, S (2014)
Effects of ocean warming and acidification on
the energy budget of an excavating sponge.

Garen, M; Son, K; Raina, JB; Rusconi, R;
Menolascina, F; Shapiro, OH; Tout, J; Bourne,
DG; Seymour, JR; Stocker, R (2014) Abacterial
pathogen uses dimethylsulfinopropionate as a
cue to target heat-stressed corals. ISME, 8:
999-1007.


Heupel, MR; Simpfendorfer, CA (2014) Importance of environmental and biological drivers in the presence and space use of a reef-associated shark. Marine Ecology Progress Series, 496: 47-57.

Hibino, Y; Tod, PA; Yang, S-y; Benayahu, Y; Reimer, JD (2014) Molecular and morphological evidence for conspecificity of two common Indo-Pacific species of Palythoa (Cnidaria: Anthoza). Hydrobiologia, 733: 31-43.


Jeans, J; Szabó, M; Campbell, DA; Larkum, AWD; Ralph, PJ; Hill, R (2014) Thermal bleeding induced changes in Photosystem II function not reflected by changes in Photosystem II protein content of the gillbladders of marine fishes (Teleostei) from Australian waters. Systematic Parasitology, 87: 47-72.


Kraft, GT; Saunders, GW (2014) Crebradomus and Dissimularia, new genera in the family Chondrymeniaceae (Gigartiniales, Rhodophyta) from the central, southern and western Pacific Ocean. Phycologia, 53: 146-166.


Leveelahti, LT; Rytkönen, KT; Renshaw, GM; Nikinmaa, M (2014) Visiting redox-active antioxidant defenses in response to hypoxic challenge in both hypoxia-tolerant and hypoxia-sensitive fish species. Fish Physiology and Biochemistry, 40: 183-191.

McNamara, MKA; Miller, TL; Cribb, TH (2014) Evidence for extensive cryptic speciation in trematodes of butterflyfishes (Chaetodontidae) of the tropical Indo-West Pacific. International Journal for Parasitology, 44: 37-48.


Phillott, AD; Parmenter, CJ (2014) Fungal colonization of green sea turtle (Chelonia mydas) nests is unlikely to affect hatching condition. Herpetological Conservation and Biology, 9: 297-301.


Read, TC; Wantiez, L; Werry, JM; Farman, R; Petro, G; Limpus, CJ (2014) Migrations of green turtles (Chelonia mydas) between nesting and foraging grounds across the Coral Sea. PloS One, 9: e100083.


Rummer, JL; Couturier, CS; Stecky, JAW; Gardiner, NM; Kinch, JP; Nilsson, GE; Munday, PL (2014) Life on the edge: thermal optima for aerobic scope of equatorial reef fishes are close to current day temperatures. Global Change Biology, 20: 1055–1066.


Searle, EL; Cutmore, SC; Cribb, TH (2014) Monorchid trematodes of the painted sweetlips, Diagramma labiosum (Percomorpha: Haemulidae), from the southern Great Barrier Reef, including a new genus and three new species. Systematic Parasitology, 88: 195-211.

Simms, CA; Riginos, C; Blomberg, SP; Huelksken, T; Drew, J; Grutter, AS (2014) Cleaning up the biogeography of Labroides dimidiatus using phylogenetics and morphometrics. Coral Reefs, 33: 223-233.


Sun, ZM; Hanyuda, T; Kurihara, A; Miller, AJ; Gurgel, CFD; Kawai, H (2014) Four newly recorded species of the calcified marine brown macroalgal genus Padina (Dictyotales, Phaeophyceae) for Australia. Australian Systematic Botany, 26: 448-465.

Szabó, M; Wangraseurt, D; Tamburic, B; Larkum, AWD; Schreiber, U; Suggett, DJ; Küh, M; Ralph, PJ (2014) Effective light absorption and absolute electron transport rates in the coral Pocillopora damicornis. Plant Physiology and Biochemistry, 83: 159-167.

Tout, J; Jeffries, TC; Webster, NS; Stocker, R; Ralph, PJ; Seymour, JR (2014) Variability in microbial community composition and function between different niches within a coral reef. Microbial Ecology, 67: 540-552.


Wangraseurt, D; Küh, M (2014) Direct and diffuse light propagation through coral tissue. In SPIE BIOS (pp. 894117-894117). International Society for Optics and Photonics.

Watson, JR; Brennan, TCR; Degnan, SM; Kromer, JO (2014) Analysis of the biomass composition of the demosponge Amphipholis queenslandica on Heron Island Reef, Australia. Marine Drugs, 12: 3733-3753.


MBRS


Baumann, K; Casewell, NR; Ali, SA; Jackson, TN; Vetter, I; Dobson, JS; Cutmore, SC; Nouwens, A; Lavergne, V; Fry, BG (2014) A ray of venom: Combined proteomic and transcriptomic investigation of fish venom composition using barb tissue from the blue-spotted stingray (Neotrygon kuhlii). Journal of Proteomics, 109: 188-198.


Couturier, LIE; Dudgeon, CL; Pollock, KH; Jaine, FRA; Bennett, MB; Townsend, KA; Weeeks, SJ; Richardson, AJ (2014) Population dynamics of the reef manta ray Manta alfredi in eastern Australia. Coral Reefs, 33: 329-342.

Cribb, TH; Miller, TL; Bray, RA; Cutmore, SC (2014) The sexual adult of Cercaria praecox (Digenea: Fellodistomidae), with the description of n. g. Systematic Parastitology, 88: 1-10.
Phylogeography of the Australian freshwater
mammals: A dugong example. Marine

Hagihara, R; Jones, RE; Grech, A; Lanyon,
JM; Sheppard, JK; Marsh, H (2014) Improving
population estimates by quantifying diving and
surfacing patterns: A dugong example. Marine

Hodges, K; Donnellan, S; Georges, A (2014)
Phylogeography of the Australian freshwater
turtle Chelodina expansa reveals complex
relationships among inland and coastal
bioregions. Biological Journal of the Linnean
Society, 111: 789-805.

Horgan, P; Booth, D; Nichols, C; Lanyon, JM
(2014) Insulative capacity of the integument of the
dugong (Dugong dugon): thermal
conductivity, conductance and resistance measured by in vitro heat flux. Marine Biology:
161: 1395-1407.

Ifikar, FI (2014) Testing the role of heart
mitochondrial stability and function in heart
failure of ectotherms exposed to heat stress.

Ifikar, FI; MacDonald, JR; Baker, DW;
sensitivity of mitochondria determine species
distribution in a changing climate? The Journal
of Experimental Biology, 217: 2348-2357.

Jaine, FRA; Rohner, CA; Weeks, SJ; Couturier,
LIE; Bennett, MB; Townsend, KA; Richardson,
AJ (2014) Movements and habitat use of reef
manta rays off eastern Australia: offshore
excursions, deep diving and eddy affinity revealed by satellite telemetry. Marine Ecology
Progress Series, 510: 73-86.

Lovelock, CE; Adame, MF; Bennion, V; Hayes,
M; O’Mara, J; Reef, R; Santini, NS (2014)
Contemporary rates of carbon sequestration
through vertical accretion of sediments in
mangrove forests and saltmarshes of South
East Queensland, Australia. Estuaries and
Coasts, 37: 763-771.

Maxwell, PS; Pitt, K A; Burfeind, DD; Olds,
A. D; Babcock, R. C; Connolly, RM (2014)
Phenotypic plasticity promotes persistence
following severe events: physiological and
morphological responses of seagrass to

Moss, P (2014) A peaty archive: The patterned
tails of the Great Sandy region. Wildlife
Australia, 51: 20-23.

Nash, SB; Dawson, A; Burkhard, M; Waugh,
C; Huston, W (2014) Detoxification enzyme
activities (CYP1A1 and GST) in the skin of
humpback whales as a function of organochlorine burdens and migration status.
Aquatic Toxicology, 155: 207-212.

Orelis-Ribeiro, R; Arias, CR; Halanych, KM;
Cribb, TH; Bullard, SA (2014) Diversity and
ancestry of flatworms infecting blood of
nontetrapod Craniates "fishes" Edited by:
Rollinon, D; Stothard, JR in: Advances in
Parasitology, 85: 1-64.

Richmond, S; Stevens, T (2014) Classifying
benthic biotopes on sub-tropical continental
shelf reefs: How useful are abiotic surrogates?
Estuarine, Coastal and Shelf Science, 138: 79-
89.

Rossi, RA; Rueda, JL; Tibbetts, IR (2014)
Feeding ecology of the seagrass-grazing nereid
Smaragdia souverbiana (Montagu, 1863) in
subtropical seagrass beds of eastern Australia.
Journal of Molluscan Studies, 80: 139-147.

Schuyler, Q; Harbore, AR; Brown, CJ; Bozec,
Y-M; Castro, C; Chollett, I; Hock, K; Knowland,
CA; Marshall, A; Ortiz, JC; Razak, T; Roff, G;
Samper-Villarreal, J; Phinn, SR (2014)

Vandegheuvel, MW; Gautoy, A; Hubau, M;
Groote, SRE; Baerdemaeker, NJF; Hayes, M;
Welti, N; Lovelock, CE; Lockington, DA; Steppe,
K (2014) Long-term versus daily stem diameter variation in co-occurring mangrove species: Environmental versus ecophysiological drivers. Agricultural and Forest Meteorology, 192: 51-
58.

Watson, JR; Brennan, TCR; Degnan, BM;
Degnan, SM; Kromer, JO (2014) Analysis of
the biomass composition of the demersal
Amphimedon queenslandica on Heron Island
Reef, Australia. Marine Drugs, 12: 3733-3753.
Pineapple sea cucumber (Thelenota ananas) on Heron Reef - E. Perkins