

NATALIE ROSSER CURRICULUM VITAE

EDUCATION AND ACADEMIC QUALIFICATIONS:

Doctor of Philosophy, University of Western Australia, Perth (2016)

Thesis passed with no corrections and awarded Honourable mention on the Dean's list. Thesis title: "Alternative breeding times and evolutionary pathways in corals in north Western Australia". Supervisor: Winthrop Professor Michael Johnson.

Bachelor of Science with Honours (1st Class), Murdoch University, Perth (2005)

Thesis title: "*Reproductive seasonality and biannual spawning of Acropora on two north west Australian reefs*". Supervisors: Dr M van Keulen, Murdoch University, Dr J Gilmour and Dr L Smith, Australian Institute of Marine Science WA.

Bachelor of Science (Conservation Biology Major)

Murdoch University, Perth (2004)

EMPLOYMENT HISTORY:

Associate lecturer, University of Wollongong, Wollongong (2016 – current)

Lecturing 3rd year and Masters units in Conservation Genetics; role includes writing and preparing lectures, preparing and running pracs and tutorials, marking assignments and exams. Other aspects of my role as a fellow include supervising PhD students and giving seminars.

Casual demonstrator, University of Western Australia, Perth (2011 - 2015)

Teaching and demonstrating in biology, population genetics and marine genetics. Major focus of work was preparing and running laboratory demonstrations, running discussion meetings, advising on experimental design, data analysis and report writing, and marking assessments.

Independent expert on coral spawning, for Chevron Australia, Perth (contract) (2014)

Providing expert advice on coral spawning matters in Western Australia, such as spawning patterns, monitoring, definitions and interpretation of ministerial conditions.

Coral Advisor, SKM/RPS Alliance for Gorgon Monitoring, Perth (part time) (2010 - 2011)

Major focus of work was providing advice on coral reproduction monitoring, and designing and implementing QA/QC for coral monitoring programs. Other tasks included writing and conducting in-house training programs, writing methods statements, conducting data checks and conducting literature reviews.

Coral Biologist, Cardno Ecology Lab, Perth (contract) (2010)

Major focus of work was providing specialist advice on coral monitoring methods and data analysis, conducting quality control checks on CPCe analysis, assisting with coral identification, writing a coral identification guide, and report writing.

Supervising Marine Scientist, RPS Environment, Perth (2005 - 2010)

Major focus of work was project management, designing and implementing marine monitoring programs and conducting specialised coral identification and coral reproduction studies. Responsible for:

- Project management and coordination of multi-million dollar work programs for oil and gas projects on the Northwest Shelf, including team coordination, subcontractor management, budgeting and financial reporting, planning, safety, reporting, quality assurance and quality control, and client liaison.
- Environmental Impact Assessment and applied ecological research for marine developments.
- Design and implementation of marine monitoring and management programs with regulatory compliance in WA.
- Analysis and interpretation of data and integration of research findings into technical reports and refereed scientific literature.
- Coral taxonomy and identification of scleractinian corals to species level.

- Specialised coral reproduction studies including coral spawning assessments, coral dissection, fecundity analysis, and reproductive state analysis.
- Preparation of project specific HSE plans, Job Hazard Analyses and risk identification.

Field experience: coral reef surveys (including coral identification, coral cover assessment, coral reproduction surveys and coral health monitoring), benthic habitat surveys, water quality and sediment surveys, infauna surveys, seagrass monitoring, benthic habitat mapping. Expertise in the use of various instruments including: underwater digital still photography and video systems, backscatter water quality instrumentation, PAR light loggers, compound CTD probes, pH, conductivity and dissolved oxygen meters, GPS navigation with GIS interface.

Coral Biologist, Murdoch University

(2005 - 2006)

Major focus of work was coral research and field surveys. Major projects included:

- Research into coral physiology including growth, metabolism and photosynthesis.
- Design and implementation of marine surveys and marine monitoring programs.
- Conducting surveys of genetic similarity among populations of two coral species at Ningaloo Reef.
- Coral identification and the establishment of a coral reference collection for the North West Research Station.

ACHIEVEMENTS AND ACTIVITIES:

Awards received:

- PhD thesis awarded honourable mention on Dean's List, 2016
- Australian Coral Reef Society Research Award 2015 (\$2,500)
- Best student speaker at Society of Aust. Systematic Biologists conference, 2015
- Holsworth Wildlife Research Endowment 2010, 2011, 2012 (\$18,000)
- Geoffrey Kennedy Postgraduate Research Award, 2011 (\$2,500)
- UWA Graduate Research Travel Award, 2011 (\$1,500)
- Australian National Network in Marine Science PhD Mobility Award, 2010 (\$3,060)
- Australian Post Graduate Award, 2010-2015 (\$23,000 p.a.)
- UWA Post Graduate top up Scholarship, 2010-2015 (\$5,000 p.a)

Conference presentations:

- *Acropora* evolution revisited: a genome-wide perspective, *Society of Australian Systematic Biologists Invertebrate Biodiversity and Conservation Conference*, Perth, December 2015
- Do Western Australian corals provide insight into the evolutionary history of corals in Indonesia? *Wallace Darwin Science Symposium*, Makassar, Indonesia, September 2012.
- Phylogeography of *Acropora tenuis* in north Western Australia, *12th International Coral Reef Symposium*, Cairns, July 2012
- Connectivity of Coral Populations between Indonesia and Western Australia, *The 2nd Coral Reef Management Symposium on Coral Triangle Areas*, Kendari, Indonesia, October 2011
- Intra-specific Phylogeography in the Coral *Acropora tenuis* in North Western Australia, *Genetics Society of Australasia Conference*, Melbourne, July 2011
- Biannual Multi-Specific Coral Spawning on North-West Australian Reefs. *11th International Coral Reef Symposium*, Florida, July 2008
- Patterns of Reproduction and Spawning on Two North West Australian Reefs, *Australian Coral Reef Society Conference*, Heron Island, September 2005

Other qualifications:

- ADAS 2815 Part I Diver
- PADI Divemaster
- PADI Rescue Diver
- PADI Advanced Open Water Diver
- PADI Open Water Diver
- St Johns Senior First Aid Certificate
- Oxygen Administration Certificate
- Recreational Skippers Ticket (WA)
- Helicopter Underwater Escape Training (HUET)
- Aviation and Sea Survival Certificate
- 'C' Class Drivers License

Scientific Publications:

Rosser, N.L., Thomas, L., Stankowski, S., Richards, Z.T., W.J.P. Kennington, Johnson, M.S. (2016) Phylogenomics provides new insight into evolutionary relationships, reproductive barriers and genealogical discordance in the reef-building coral genus *Acropora*. *Proceedings of the Royal Society B, Biological Sciences* 284: 20162182.

Rosser, N.L. (2016) Demographic history and asynchronous spawning shape genetic differentiation among populations of the hard coral *Acropora tenuis* in Western Australia. *Molecular Phylogenetics and Evolution* 98: 89-96

Johnson, M.S.J., Prince, J., Brearley, A., **Rosser, N.L.**, Black, R. (2016) Is *Tridacna maxima* (Bivalvia: Tridacnidae) at Ningaloo Reef, Western Australia? *Molluscan Research* DOI 10.1080/13235818.2016.118114.

Rosser, N.L. (2015) Asynchronous spawning in a sympatric population of a hard coral reveals reproductive isolation and ancient genetic lineages. *Molecular Ecology* 24:5006-5019

Richards, Z.T., Garcia, R.A., Wallace, C.C., **Rosser, N.L.** and Muir, P.R. (2015) A diverse assemblage of reef corals thriving in a dynamic intertidal reef setting (Bonaparte Archipelago, Kimberley, Australia). *PLoS ONE* 10(2): e0117791.

Rosser, N.L., Wilson, B.R., Forde, M., Fitzpatrick, J.J., Scoones, R.J.S and Huisman, J.M. (2014) Marine Ecology. In: Comrie-Greig, J. & Abdo, L. (eds.) *Ecological studies of the Bonaparte Archipelago*. Perth: Inpex Operations Australia Pty Ltd.

Rosser, N.L. (2013) Biannual coral spawning decreases at higher latitudes on Western Australian reefs. *Coral Reefs* 32:455-460.

Styan, C.A. and **Rosser N.L.** (2012) Is monitoring for mass spawning events in coral assemblages in north Western Australia likely to detect spawning? *Marine Pollution Bulletin* 64:2523-2527.

Richards, Z. and **Rosser, N.L.** (2012) Abundance, distribution and new records of scleractinian corals at Barrow Island and Southern Montebello Islands, Pilbara (offshore) Bioregion. *Journal of the Royal Society of Western Australia* 95:155-165.

Rosser N.L. and Veron J.E.N. (2011) Australian corals thriving out of water in an extreme environment. *Coral Reefs* 30:21.

Rosser N.L. and Baird A. H. (2010) Multi-specific coral spawning in spring and autumn in far north-western Australia. pp366-370. *Proceedings of the 11th International Coral Reef Symposium* 1:366-370.

Rosser N. L. and Gilmour J.P. (2008) New insights into patterns of coral spawning on Western Australian Reefs. *Coral Reefs* 27:345-349.

Other Activities:

- Keen interest in coral taxonomy and studied *Acropora* taxonomy under Carden Wallace at Museum of Tropical Queensland in 2008
- Peer reviewer for international scientific journals including *Ecology & Evolution*, *Invertebrate Biology* and *Coral Reefs*
- Studying and learning Indonesian language since 2011
- Keen photographer

Memberships:

- International Society for Reef Studies
 - Australian Coral Reef Society
 - Australian Marine Science Association
 - Royal Society of Western Australia
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