

DAVID JAMES McELROY

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EDUCATION

2014 · **University of Sydney** · *Ph.D.* · Marine Biology, Human-Impact Ecology

2009 · **University of Sydney** · *B. Science (Hons 1st)* · Coastal Management, Environmental Law

2004 · **University of New England** · *B. Arts (Hons 2nd)* · Theatre, Geography & Humanities

PROFESSIONAL EXPERIENCE

2014 · **RESEARCH AND EVALUATION MANAGER** · **Global Action Plan UK** · Expert advisor on the evaluation of behaviour change programmes. Project sales and development.

2009— 2013 · **DEMONSTRATOR/LECTURER** · **University of Sydney** · *Zoology, Marine Biology and Biosciences Outreach Programs* · Supervision and assistance in practical classes. Grading of papers/exams. Also ran and designed practical sessions for school children years K—12.

2008—2009 · **RESEARCH ASSISTANT** · **University of Sydney** · *Environmental Geology Lab* · Marine sediment data collection.

2006 – 2007 · **RESEARCH ASSISTANT** · **University of Sydney** · *Behavior and Physiology Research Lab*, Maintain locust and ant cultures.

PROJECT MANAGEMENT

2014 · **Marine Biological Association of the United Kingdom** · *Will multiple stressors alter the effect of a globally invasive predator on economically important mussels?* · Coordinating a team of two academics, two technical staff and one student in a project funded by the British Ecological Society.

2013 · **University of Sydney & Queen's University Belfast** · *Examining food web stability under various environmental contexts* · Led an international team made of researchers from the UK, Australia, The Netherlands and France in a project funded by the University of Sydney and King's College London.

2012-2013 · **University of Sydney and University of Technology Sydney** · *Determining the direct and indirect effects of a contaminant-based disturbance on succession ecology using marine biofilms and invertebrates as a model system* · Principle investigator in a cross-disciplinary study done by researchers with backgrounds in plant biology, arthropod ecology and field robotics and funded by the Linnean Society of NSW and the Paris Goodsell Trust.

VOLUNTEER EXPERIENCE

2010 · **SCIENCE COMMUNICATOR** · **University of Sydney** · Visit primary schools to teach climate science and marine zoology.

2008 · **INTERN** · **NSW Nature Conservation Council** · Legal and scientific research for submission to parliament and as comment on planning proposals.

1998 - 2004 · **RURAL FIRE FIGHTER** · **NSW Rural Fire Service** · Containing bush fires.

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PUBLICATIONS

- McElroy DJ, O’Gorman EJ, Schneider F, Hetjens H, Le Merrer P, Coleman RA, Emmerson M (in review) *Community reorganization in response to human-induced changed effects of size restructuring and ocean warming, but not nutrient enrichment.*
- McElroy DJ, Le Merrer P, Hetjens H, O’Neill D, Emmerson M (in prep) *Characterising trophic interactions between the Shore Crab *Carcinus maenas* and Gammarid amphipods in the context of changing body size and habitat simplification*
- McElroy DJ, Doblin M, Murphy R, Hochuli, DF, Coleman, RA (in prep) *Indirect role of sequestration of copper by biofilms on the development of a fouling assemblage*
- McElroy DJ, Nguyen HD, Byrne M (2012) *Respiratory response of the intertidal seastar *Parvulastra exigua* to contemporary and near-future pulses of warming and hypercapnia* Journal of Experimental Marine Biology and Ecology
- Byrne M, Soars N, Ho M, Wong E, McElroy DJ, Selvakumaraswamy P, Dworjanyn S, Davis A (2010) *Fertilization in a suite of coastal marine invertebrates from SE Australia is robust to near-future ocean warming and acidification.* Marine Biology 157(9): 2061-2069.

GRANTS, AWARDS, AND SCHOLARSHIPS

- 2013 · **British Ecological Society** · Research Grants · **£4817**
- 2013 · **University of Sydney** · WC McIlrath Scholarship · **\$AU2400**
- 2013 · **Linnean Society of NSW** · Joyce Vickery Science Research Grant · **\$AU1500**
- 2013 · **King’s College, England** · Australian Bicentennial Scholarship · **£1000**
- 2013 · **Marine Institute, Ireland** · Sea Change Networking Initiative · **€1077**
- 2013 · **Ecological Society of Australia** · Student Research Grant · **\$AU1000**
- 2012 · *Ruhm Travelling Fellowship* · **\$AU4000**
- 2012-13 · **University of Sydney** · Postgraduate Support Scheme · **\$AU1,632**
- 2011 · *Paris Goodsell Memorial Grant-in-Aid* · **\$AU1500**
- 2010 — 2013 · **University of Sydney** · Australian Postgraduate Award · **\$AU67,500**
- 2009 · **Sydney Marine Aquarium Society** University Marine Research Prize · **\$AU1000**
- 2009 · **Aust. Mar. Sci. Assoc. Conference** · CSIRO Editor’s Choice Student Poster Prize
- 2008 · **University of Sydney** · Medical Sciences Honours Scholarship · **\$AU2500**

CONFERENCE EXPERIENCE

- “Driving pro-environmental behaviour change in organisations” ESMA 2014
Secured funding and coordinated logistics for the mini workshop/conference: *Predictive Ecology for a Changing Ocean*. Queen’s Marine Laboratory, Northern Ireland, 2013
- “Direct and indirect effects of warming, eutrophication and overexploitation in a semi-natural food web” AMSA 2013
- “Temporal contingencies in marine disturbance ecology” BES 2012
- “The effect of copper and contamination history on micro-algal type and abundance using field spectrometry” AMSA 2012, ES of America 2012
- “Use of artificial units of habitat to eliminate some historical contingencies in subtidal biodiversity quantification” ES of Australia 2011.
- “The effect of temperature and pH/pCO₂ on *Parvulastra exigua* oxygen uptake” – AMSA 2010 & ES of Australia 2011
- “Exploring the synergistic effect of two climate change stressors (ocean warming and acidification) on life stages of the seastar *Patiriella regularis*” – AMSA, 2009

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COMPUTER AND TECHNICAL SKILLS

PRIMER-E, PERMANOVA +, SPSS & GMAV - *various statistical analysis software*

MATLAB - *data handling and mathematical computation programming language*

ArcGIS - *ESRI's geographic information system*

Aquarium maintenance - *extensive experience in large-scale marine aquaria facilities*

PAM Fluorometry - *analysis of photosynthetic health*

High Performance Liquid Chromatography - *used to determine pigment composition*

Sediment Analysis including ICP, digestion and separation - *general analysis*

ACCREDITATION

2012 · **Massey University, New Zealand** · *PERMANOVA + Workshop*

2010 · **PADI Taganga, Colombia** · *Open Water Diver*

2007 · **NSW, Australia** · *Unrestricted Driver's License*

1998 · **NSW, Australia** · *Basic Firefighting I*

REFERENCES

Prof. Mark Emmerson · *Biological Sciences, Queens Uni. Belfast* · m.emmerson@qub.ac.uk

Assoc. Prof Ross Coleman · *Biological Sciences, USYD* · ross.coleman@sydney.edu.au

Prof. Maria Byrne · *Biological and Medical Sciences, USYD* · mbyrne@anatomy.usyd.edu.au

Assoc. Prof. Dieter Hochuli · *Biological Sciences, USYD* · dieter.hochuli@sydney.edu.au

Dr. Elizabeth May · *Biological Sciences, USYD* · elizabeth.may@sydney.edu.au