

JESSICA MELBOURNE-THOMAS (NÉE TREBILCO)
PHD, B.SC. HONS.

Antarctic Climate & Ecosystems Cooperative Research Centre • University of Tasmania
Private Bag 80 • Hobart, Tasmania 7001, Australia
Tel. +613 6226 6658 • Mob. +614 0580 3868
Email. Jessica.MelbourneThomas@utas.edu.au

EDUCATION

- PhD, Institute for Marine and Antarctic Studies, University of Tasmania, December 2010
Thesis title: Decision support tools for visualising coral reef futures at regional scales
- Graduate Diploma in Quantitative Marine Science, University of Tasmania, December 2010
- Postgraduate student, Department of Zoology, University of Oxford, 2003-2005
- Bachelor of Science (Zoology and Plant Science Majors) with First Class Honours in Zoology, University of Tasmania, 1999-2002
Thesis title: Estimating characteristic length scales of dynamic biological systems: removing the need for long time series

ACADEMIC AWARDS, SCHOLARSHIPS & FELLOWSHIPS

- DISCCRS VI Symposium Scholar (sole Australian representative), Dissertation Initiative for the Advancement of Climate Change Research, 2011
- Theo Murphy High Flyers Think Tank delegate, Australian Academy of Science, 2011
- CSIRO Fellowship in Marine Ecosystem Modelling, 2009
- Wentworth Group Science Program Scholarship, 2009
- Vice-Chancellor's Postgraduate Fellowship, University of Tasmania, 2007-2010
- Honorary Research Fellowship, Centre for Mathematics and Physics in the Life Sciences and Experimental Biology, University College London, 2007
- University of Tasmania/CSIRO Quantitative Marine Science (QMS) Graduate Research Scholarship, 2006-2010
- Rhodes Scholarship, University of Oxford, 2003-2005
- University Medal and Dean's Citation Award, University of Tasmania, 2002
- University of Tasmania Prize for the best Zoology Honours thesis (joint), 2002

PUBLICATIONS

- **Melbourne-Thomas, J.**, C. R. Johnson, T. Fung, R. M. Seymour, L. M. Chérubin, J. E. Arias-González, and E. A. Fulton. 2011. Regional-scale scenario modeling for coral reefs: a decision support tool to inform management of a complex system. *Ecological Applications* 21:1380-1398.
- **Melbourne-Thomas, J.**, C. R. Johnson, P. M. Aliño, R. C. Geronimo, C. L. Villanoy, and G. G. Gurney. 2011. A multi-scale biophysical model to inform regional management of coral reefs in the western Philippines and South China Sea. *Environmental Modelling & Software* 26:66-82.
- **Melbourne-Thomas, J.**, C. R. Johnson, P. Perez, J. Eustache, E. Fulton, and D. Cleland. 2011. Coupling biophysical and socioeconomic models for coral reef systems in Quintana Roo, Mexican Caribbean. *Ecology & Society* 16(3):23.
- **Melbourne-Thomas, J.**, C. R. Johnson, and E. Fulton. 2011. Regional-scale scenario analysis for the Meso-American Reef system: modelling coral reef futures under multiple stressors. *Ecological Modelling* 222:1756-1770.
- **Melbourne-Thomas, J.**, C. R. Johnson, and E. Fulton. 2011. Characterizing sensitivity and uncertainty in a model of a complex coral reef system. *Ecological Modelling* 222:3320-3334.
- Johnson, C. R., S. C. Banks, N. S. Barrett, F. Cazassus, P. K. Dunstan, G. J. Edgar, S. D. Frusher, C. Gardner, M. Haddon, F. Helidoniotis, K. L. Hill, N. J. Holbrook, G. W. Hosie, P. R. Last, S. D. Ling, **J. Melbourne-Thomas**, K. Miller, G. T. Pecl, A. J. Richardson, K. R. Ridgway, S. R. Rintoul, D. A. Ritz, J. Ross, J. C. Sanderson, S. A. Shepherd, A. Slotwinski, K. M. Swadling, and N. Taw. 2011.

Climate change cascades: shifts in oceanography, species' ranges and marine community dynamics in eastern Tasmania. *Journal of Experimental Marine Biology and Ecology* 400:17-32.

- **Melbourne-Thomas, J.** 2010. A decision support tool for managing coral reefs at regional scales. Pages 77-81 in D. Cleland, **J. Melbourne-Thomas**, M. King, and G. Sheehan, editors. Building capacity in coral reef science: an anthology of CRTR scholars' research 2010. The Coral Reef Targeted Research & Capacity Building for Management (CRTR) Program, The University of Queensland, St. Lucia.
- Haapkylä, J., **J. Melbourne-Thomas**, M. Flavell, and B. L. Willis. 2010. Season and coral community structure drive coral disease prevalence on Heron Island, Great Barrier Reef, Australia. *Coral Reefs* 29:1035-1045.
- Haapkylä, J., R. K. F. Unsworth, A. S. Seymour, **J. Melbourne-Thomas**, M. Flavell, B. L. Willis, and D. J. Smith. 2009. Spatio-temporal coral disease dynamics in the Wakatobi Marine National Park, South-East Sulawesi, Indonesia. *Diseases of Aquatic Organisms* 87:105-115.
- Haapkylä, J., A. S. Seymour, **J. Trebilco**, and D. Smith. 2007. Coral disease prevalence and coral health in the Wakatobi Marine Park, south-east Sulawesi, Indonesia. *Journal of the Marine Biological Association of the UK* 87:403-414.
- Habeeb, R. L., **J. Trebilco**, S. Wotherspoon, and C. R. Johnson. 2005. Determining natural scales of ecological systems. *Ecological Monographs* 75:467-487.

CONFERENCE PUBLICATIONS

- **Melbourne-Thomas, J.**, A. Constable, S. Wotherspoon, and B. Raymond. 2011. Predicting change in complex marine ecological networks: a review of tools and approaches. Proc. Australian National Network in Marine Science Inaugural Conference: Marine Science in Tropical, Temperate and Southern Oceans, University of Western Australia, Perth. Presentation abstract.
- **Melbourne-Thomas, J.**, C. R. Johnson, P. Mak, and B. Joseph. 2011. Reef Scenarios: an online decision support tool for coral reef management and conservation. Proc. 2nd International Marine Conservation Congress, Victoria, Canada. Presentation abstract.
- **Melbourne-Thomas, J.**, G. G. Gurney, C. R. Johnson, P. M. Aliño, R. C. Geronimo, and C. L. Villanoy. 2010. Multi-scale simulation models to inform coral reef management in the Philippines. Proc. 2nd Asia Pacific Coral Reef Symposium, Phuket, Thailand. Presentation abstract.
- **Melbourne-Thomas, J.** and C. R. Johnson. 2009. A decision support tool for visualising coral reef futures at regional scales. Proc. Australian National Network in Marine Science Inaugural Conference: Marine Science in Tropical, Temperate and Southern Oceans, University of Tasmania, Hobart. Presentation abstract.
- **Melbourne-Thomas, J.**, C. R. Johnson, T. Fung, and R. M. Seymour. 2008. Predicting reef futures using a multi-scale coral reef ecosystem model. Proc. 11th International Coral Reef Symposium, Fort Lauderdale, Florida. Presentation abstract.
- **Melbourne-Thomas, J.**, C. R. Johnson, T. Fung, and R. M. Seymour. 2007. Decision support tools for managing coral reef systems at local to regional scales. Pages 169-177 in Proc. Environmental Research Event 2007: Global Problems - Local Solutions, James Cook University, Cairns.

EMPLOYMENT HISTORY

- **Ecological Statistician**, Antarctic Climate & Ecosystems Cooperative Research Centre, University of Tasmania, 2011-present
- **Research Associate**, Institute for Marine and Antarctic Science, University of Tasmania, 2010
- **Marine Science Coordinator (joint) and Coral Biology Project Leader**, Operation Wallacea Marine Science and Conservation, Sulawesi, Indonesia, 2006
- **Dissertation Supervisor (Coral Biology Field Projects) and Coral Reef Ecology Lecturer**, Operation Wallacea Marine Science and Conservation, Sulawesi, Indonesia, 2004-2005

TEACHING EXPERIENCE

- Undergraduate supervision and teaching in Quantitative Methods (KZA357), Marine Ecology (KZA356) and Behavioural Ecology (KZA301), School of Zoology, University of Tasmania, 2007-2011
- Dissertation Supervisor, Operation Wallacea Marine Science and Conservation, Sulawesi, Indonesia, 2004-2006
- Academic tutor in Zoology, University of Oxford, 2004

LEADERSHIP

- Coordinator, Modelling and Marine Ecosystem Change Discussion Group, Antarctic Climate & Ecosystems CRC and Institute for Marine and Antarctic Studies, University of Tasmania, 2011
- Communications Committee joint Chair, GEF Coral Reef Targeted Research Program Scholar Network, 2008-2010
- Postgraduate Representative, School of Zoology, University of Tasmania, 2007-2009
- SSI Dive Instructor, 2010-present
- PADI Dive Master and SSI Dive Control Specialist (650 logged dives), 2004-2010