

Curriculum Vitae

STUART J KININMONTH

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EMPLOYMENT HISTORY

July 2014 to Present:

Researcher

- Develop spatially explicit models of Baltic Sea trophic system.
- Supervisor: Dr Thorsten Blenckner, Stockholm Resilience Centre.

November 2012 to December 2014:

Research Fellow

- Investigate socio-ecological systems with respect to governance and resilience.
- Supervisor: A/Prof Örjan Bodin, Stockholm Resilience Centre, Stockholm University.

October 2011 to Present:

Spatial Ecology Consultant;

Great Barrier Reef Marine Park Authority

- Develop a spatial socio-ecological model of the vulnerability of the GBR to anchor damage
- Project Manager, Incident Response, Climate Change Group

University of Tasmania, Institute of Marine and Antarctic Futures

- Develop spatial and statistical models of the global fish and reef biodiversity

James Cook University

- Instruct on the use of network theory in ecology
- Design and construct marine sensor buoy

Coral Reef Research

- Manage the corals of the world spatial database

July 2001 to September 2011:

Spatial analyst, Australian Institute of Marine Science

Duties performed:

- Develop, manage and deliver geospatial program to AIMS
- Research the role of networks in marine ecology.
- Manage and develop sensor networks for the GBR.
- Manage the Corals of the World spatial database

2000 to 2001:

Spatial Analyst, CSIRO Sustainable Ecosystems

1998 to 2000:

GIS & IT Manager, Kakadu National Park, Parks Australia North.

1996 to 1998:

Gippsland GIS Manager, Natural Resource Systems, Victorian Department of Conservation, Forests and Lands

1994 to 1996:

Program Manager (Education & Vegetation) for Greening Australia ACT & SE NSW.

1992 to 1994

Farm manager in Gippsland, Victoria

1986 to 1992

Program manager for Outward Bound Australia

EDUCATION

2011

Doctor of Philosophy

Dissertation: Connectivity modelling of the coral reef ecosystem

Supervisor: Prof. Hugh Possingham

University of Queensland

Masters in Resource Science

Thesis: Isolate Connectivity Index; an advancement in modelling patch to patch influence across landscapes.

Supervisor: Dr. Nic Rollings

University of New England

Diploma of Education
Teaching methods: Biology and Science
University of Melbourne

Bachelor of Science
Double major in Zoology and Environmental Genetics
University of Melbourne

STUDENT SUPERVISION

Phd

Deborah De Freitas 2007-2010, JCU
Supriyo Chatterjea 2003-2007, University Twente, Netherlands.
Young Lin, 2011+ University of Queensland

Masters

Diana López Ferrando, 2014, Universitat de Barcelona
Stefan Zieger 2007, University of Dresden, Germany
Olga Bondarenko 2009 JCU
Delphine Mallet 2008 IFREMER, France
Claudia Mibredt 2010 University of Dresden, Germany
Romain Vidaud, 2006, France
Laure Barrall 2006, France
Tim Armstrong 2007 Melbourne University
Anneka Reuschel 2005 University of Dresden, Germany

Examinations

PhD

Stefan Ban James Cook University
Arvid Bergsten Stockholm University
Johanna Yletyinen, Stockholm University
Maike Hamann, Stockholm University

Masters

University of Wollongong (1)
Stockholm University (1)

AFFILIATIONS

Society for Conservation Biology
Australian and New Zealand Environment Institute, Certified Environmental
Practitioner (Ecology Specialist)
Far North Queensland GIS Association
CSIRO Scientists in Schools

GRANTS

1. Principal Investigator for Melbourne University ARC project examining the visualisation of complex large environmental datasets.
2. Principal Investigator for the Spanish project MARINERES : Understanding marine resilience: investigating critical environmental transitions to avoid social-ecological system collapse. Institution: INSTITUTO DE PRODUCTOS NATURALES Y AGROBIOLOGÍA CSIC

FIELD BASED QUALIFICATIONS

Coxswain

Commercial Diver ADAS1

Senior First Aid, CPR and O2

Dive Supervisor Status (AIMS & GBRMPA)

Heavy Truck License

PADI Dive Instructor

TEACHING CONDUCTED (past 3 years)

June to October 2006	James Cook University	Spatial Analysis in Resource Sci.
July 2010	Aust. Institute of Marine Sci.	Network analysis in R
October 2010	University of Wollongong	Networks Analysis in Ecology
June 2011	Murdoch University	Networks Analysis in Ecology
October 2011	University of Queensland	Networks Analysis in Ecology
November 2011	University of Auckland	Networks Analysis in Ecology
January 2012	GBRMPA	GIS in Marine Management
June 2012	James Cook University	Networks Analysis in Ecology
September 2013	Stockholm Resilience Centre	Bayesian Belief Networks
November 2013	University of La Laguna (Spain)	Network Analysis
March 2015	Stockholm University	Bayesian Networks in Ecology

PUBLICATIONS (downloadable from www.kininmonth.com.au/stuart_pub.cfm)

Scholarly Book Chapters

1. John (Charlie) E.N. Veron, Lyndon M. DeVantier, Emre Turak, Alison L. Green, Stuart **Kininmonth**, M. Stafford-Smith, and N. Peterson 2011. The Coral Triangle, In Z. Dubinsky and N. Stambler (eds.), Coral Reefs: An Ecosystem in Transition, Springer, DOI 10.1007/978-94-007-0114-4_5

2. **Kininmonth**, S. J. 2002. GIS: The key to research integration at the Australian Institute of Marine Science. Pages 67-72 in J.Breman, editor. Marine Geography; GIS for the oceans and seas. ESRI Press, Redlands

Refereed Journal Articles

3. Edgar G, Stuart-Smith R, Willis T, **Kininmonth** SJ, Baker SC, Banks S, Barrett NS, Becerro M a., Edgar SC, Forsterra G, Galvan DE, Irigoyen AJ, Kushner DJ, Moura R, Parnell PE, Shears NT, Soler G, Strain EM, Thomson RJ (2014) Global conservation outcomes depend on marine protected areas with five key features. *Nature* 506:216–220
4. **Kininmonth**, S, Bodin O, Bergsten, A. (2015) Closing the collaborative gap: aligning social and ecological connectivity for better management of interconnected wetlands, *AMBIO*, 44, S138-S148
5. **Kininmonth**, S. Beeden, R., and Dulman, S (in press) Snakes and Ladders: Resilience modelling of coral reefs for public dissemination, *Simulation and Gaming journal*
6. EA Treml, Ö Bodin, P Fidelman, S **Kininmonth**, J Ekstrom, (2015) Analysing the (Mis)Fit between Institutional and ecological networks of the Coral Triangle. *Global Environmental Change* 31, p. 265
7. Stuart-Smith, Rick, Jonathan Lefcheck, Amanda Bates, Sue Baker, Russell Thomson, Jemina Stuart-Smith, Nicole Hill, Emmett Duffy, Stuart **Kininmonth**, Laura Airoidi, Mikel Becerro, Stuart Campbell, Terrence Dawson, Sergio Navarrete, German Soler, Elisabeth Strain, Trevor Willis, Graham Edgar (2014). The potential of trait-based approaches to contribute to marine conservation. *Marine Policy*, 51, 148-150
8. M.G. Tulbure, S. **Kininmonth** and M. Broich, (2014) Spatiotemporal dynamics of surface water networks across a global biodiversity hotspot: implications for conservation. *Environmental Research Letters*. doi:10.1088/1748-9326/9/11/114012
9. Jeffrey Maynard, Johanna Johnson, Roger Beeden, Jen Dryden, Stuart **Kininmonth**, (2014). No anchoring areas reduce coral damage in effort to build resilience in Keppel Bay, southern Great Barrier Reef, *Australian Journal of Environmental Management*, Vol 21, Issue
10. **Kininmonth**, Stuart, Lemm, Stephenie, Cherie Malone, Hatley, Thomas (2014) Vulnerability assessment of anchor damage within the Great Barrier Reef World Heritage area. *Ocean and Coastal Management*, vol 100, pp20-31

11. Stuart-Smith, Rick, Jonathan Lefcheck, Amanda Bates, Sue Baker, Russell Thomson, Jemina Stuart-Smith, Nicole Hill, Emmett Duffy, Stuart **Kininmonth**, Laura Airoidi, Mikel Becerro, Stuart Campbell, Terrence Dawson, Sergio Navarrete, German Soler, Elisabeth Strain, Trevor Willis, Graham Edgar (2013). Integrating abundance and functional traits reveals new global hotspots of fish diversity. *Nature* doi:10.1038/nature12529
12. Elizabeth Evans-Illidge, David Abdo, Jason Doyle, Jane Fromont, Lyndon Llewellyn, Gavin Ericson, Christopher Battershill, and Stuart **Kininmonth** (2013) Phylogeny drives large scale patterns in Australian marine bioactivity and provides a new chemical ecology rationale for future biodiscovery. *Plos One* 8,9,e73800
13. **Kininmonth** S, van Oppen M, Castine, Sarah, Peplow, Lesa, Lutz, Adrian (2012) The small genetic world of *Seriatopora hystrix*, *Journal of Network Biology*, 2 (1)
14. van Oppen, Madeleine; Peplow, Lesa; **Kininmonth**, Stuart; Berkelmans, Ray (2011). Historical and contemporary factors shape the population genetic structure of the broadcast spawning coral, *Acropora millepora*, on the Great Barrier Reef, *Molecular Ecology*, doi:10.1111/j.1365-294X.2011.05328.x
15. **Kininmonth** S, Beger M, Bode M, Peterson E, Adams V, Dorfman D, Brumbaugh D, Possingham H (2011) Dispersal connectivity and reserve selection for marine conservation. *Ecological Modelling*, Volume 222, Issue 7, 10 April 2011, Pages 1272-1282
16. **Kininmonth** S, De'ath G, Possingham HP (2010) Graph theoretic topology of the Great but small Barrier Reef world. *Theoretical Ecology*, vol. 3, iss. 2, pp.75
17. **Kininmonth** S, Drechsler M, Johst K, Possingham H (2010) Metapopulation mean life time within complex networks. *Marine Ecology Progress Series*, vol. 417, pp.139-149
18. **Kininmonth** S, van Oppen M, Possingham H (2010) Determining the community structure of the coral *Seriatopora hystrix* from hydrodynamic and genetic networks. *Ecological Modelling*, vol. 221, pp. 2870–2880
19. Carissa J Klein, Natalie C Ban, Ben Halpern, Maria Beger, Edward T Game, Hedley Grantham, Alison Green, Travis Klein, Stuart **Kininmonth**, Eric Trembl, Kerrie Wilson, Hugh P Possingham 2010. Prioritizing land and sea conservation investments to protect coral reefs, *PloS One* 5,8 pp e12431

20. Bondarenko, O., Kingsford, M. **Kininmonth**, S. 2010 Deployment of Wireless Sensor Network to Study Oceanography of Coral Reefs, *International Journal on Advances in Networks and Services*, vol 3 no 1 & 2, year 2010
21. De Frietas , D.M., **Kininmonth**, S., Woodley, S. 2009. Linking Science and Management in the Adoption of Sensor Network Technology in the Great Barrier Reef Coast, Australia, *Computers, Environment and Urban Systems*, 33: 111-121
22. Veron JEN, DeVantier LM, Turak E, Green AL, **Kininmonth** S, Stafford-Smith MG, Peterson N (2009) Delineating the Coral Triangle. *Galaxea* 11:91-10
23. van Oppen M, Lutz A, De'ath G, Peplow L, **Kininmonth** S (2008) Genetic Traces of Recent Long-Distance Dispersal in a Predominantly Self-Recruiting Coral. *PloS One* 3:1-12
24. Zieger S, Stieglitz T, **Kininmonth** S, Buchroithner M (2008) Biotic Classification of a coral reef using spatial pattern recognition from multibeam bathymetry sonar data. *Remote Sensing and Environment* 264:209-217
25. Arias-Gonzalez J, Done T, Page C, Cheal A, **Kininmonth** S, Garza-Perez J (2006) Towards a reefscape ecology: Relating biomass and trophic structure of fish assemblages to habitat at Davies Reef, Australia. *Marine Ecology Progress Series* 320:29-41
26. Chatterjea, S., **Kininmonth** S. and Havinga P. 2006 Sensor Networks, *GEOconnexion International magazine*, October pp. 20-22
27. **Kininmonth**, S. Bainbridge S., Atkinson I. Gill E., Barral L. and Vidaud R. Sensor Networking the Great Barrier Reef, *Spatial Sciences Institute Journal (QLD)*, October 2004
28. Berkelmans R., De'ath G., **Kininmonth** S. and Skirving W. 2004. A comparison of the 1998 and 2002 coral bleaching events the Great Barrier Reef: Spatial correlation, patterns and predictions, *Coral Reefs* 23: 74-83

Conference submissions

29. **Kininmonth**, Stuart, Bodin, Örjan, Rick D. Stuart-Smith, Amanda Bates, Jonathan S. Lefcheck, J. Emmett Duffy, Susan C. Baker, Russell Thomson, Jemina F. Stuart-Smith, Nicole A. Hill, Laura Airoidi, Mikel A. Becerro, David E. Galván, Alejo Irigoyen, Stuart Campbell, Terence P. Dawson, Sergio A. Navarrete, German Soler, Elisabeth M. A. Strain, Trevor J. Willis, Antonia Cooper, Timothy Crawford, Graham J. Edgar (2013) Effective governance of

- reef fisheries requires inclusion of regional socio-ecological networks, IMPAC conference, October 21-25th Marseilles, France.
30. Stuart **Kininmonth**, Rebecca Weeks, Rene Abesamis, Maria Berger, Eric Trembl, David Williamson, Robert Pressey, Örjan Bodin (2013) Strategies in scheduling marine conservation plans in a networked system, IMPAC conference, October 21-25th Marseilles, France.
 31. M.G. Tulbure, S. **Kininmonth** and M. Broich, (2013) Spatiotemporal dynamics of surface water networks across a global biodiversity hotspot, MODSIM 2013, Adelaide.
 32. Jin, Young , Petra Lundgren, Bette Willis, Stuart **Kininmonth** , Madeleine van Oppen, Genetic adaptation along environmental gradients in the reef-building coral *Acropora millepora* from the Great Barrier Reef, AMSA conference, Gold Coast, July 7th -11th 2013
 33. Susanne Bleisch, Matt Duckham, Allison Kealy, Kai-Florian Richter, Stephan Winter, Stuart **Kininmonth**, Alex Klippel, Patrick Laube, Jaron Lyon, David Medyckyj-Scott, Tim Wark 2012. Supporting extraction of knowledge about environmental objects and events from geosensor data. AutoCarto conference, Columbus, Ohio, September 16-18
 34. de Freitas, Debora M.; **Kininmonth**, Stuart; Woodley, Simon 2007. Linking science and management in the adoption of sensor network technology in the Great Barrier Reef coast, Australia, 8th International Conference on Spatial Information Theory, Melbourne, September 2007
 35. Sutharshan Rajasegarar, Jayavardhana Gubbi, Olga Bondarenko, Stuart **Kininmonth**, Slaven Marusic, Scott Bainbridge, Ian Atkinson, Marimuthu Palaniswami 2008 Sensor Network Implementation Challenges in The Great Barrier Reef Marine Environment, ICT-MobileSummit 2008 Conference Proceedings, ISBN: 978-1-905824-08-3
 36. Marin-Perianu, M., Chatterjea, S., marin-Perianu, R., Bosh, S., **Kininmonth**, S., Havinga, P. (2008) Wave monitoring with wireless sensor networks, Proceedings from International conference on Intelligent sensors, sensor networks and information processing, Sydney, December 2009, pp. 611-616
 37. **Kininmonth**, Stuart 2007. Considerations in establishing environmental sensor networks, 1-4244-1502-0/07 2007 IEEE ISSNIP Melbourne
 38. Cameron Huddlestone-Holmes, Gilles Gigan, Graham Woods, Adam Ruxton, Ian Atkinson, Stuart **Kininmonth** 2007 Infrastructure for a Sensor Network on Davies Reef, Great Barrier Reef, IEEE ISSNIP Melbourne

39. Bondarenko, Olga; **Kininmonth**, Stuart; Kingsford, Michael 2007 Underwater Sensor Networks, Oceanography and Plankton Assemblages, IEEE ISSNIP Melbourne
40. Bondarenko, Olga; **Kininmonth**, Stuart; Kingsford, Michael 2007 Coral Reef Sensor Network Deployment for Collecting Real Time 3-D Temperature Data with Correlation to Plankton Assemblages, Sensor Technologies and Applications, 2007. SensorComm 2007. International Conference on 14-20 Oct. 2007 Page(s):204 - 209 Digital Object Identifier 10.1109/SENSORCOMM.2007.4394922
41. De Freitas, D.M., **Kininmonth**, & S., Woodley, S. (2007). Sensor Networks for GBRMP Management. 83rd Australian Coral Reef Society Conference. Fremantle/Australia, 9-11 October 2007
42. Stieglitz, T C, Kelley, R, Beaudoin, J, Hughes Clarke, J, **Kininmonth**, S 2006 Multibeam Bathymetry Mapping of the Great Barrier Reef Seascape: a Pilot Study, 2006 Ocean Sciences Meeting
43. Palazzi, C., Woods, G.S., Atkinson, I. and **Kininmonth**, S. "High Speed Over Ocean Radio Link to Great Barrier Reef" Session 1D-04, TENCON 2005 21-24 November 2005, IEEE Catalogue Number 05CH37710C, ISBN : 0-7803-9312-0
44. **Kininmonth**, Stuart, Atkinson, Ian , Bainbridge, Scott , Woods, Graham , Gigan, Gilles and Freitas, Debora 2005. The Great Barrier Reef Sensor Network, PACEM IN MARIBUS XXXI proceedings, Townsville, p.361-369
45. **Kininmonth** S., Edgar S. and Donovan T. 2003. Fusing Scientific Modelling with Knowledge Management Systems, Conference proceedings, MODSIM, Townsville, August 2003
46. **Kininmonth**, S. J. 1996 Client Focus: Landcare and GIS, AURISA'96, Conference Proceedings, Hobart, November 1996

Other Publications

47. EA Treml, Ö Bodin, P Fidelman, S **Kininmonth**, J Ekstrom, (2013) Analysing the (Mis)Fit between Institutional and ecological networks of the Coral Triangle. Report to the USAID Coral Triangle Support Partnership, WWF

48. Stuart-Smith, R., Crawford, T., Cooper, A., **Kininmonth**, S., Stuart-Smith, J., Berkhout, J., Edgar, G. 2013. Coral Sea Marine Biodiversity, Report for Institute for Marine and Antarctic Studies & Reef Life Survey, Hobart.
49. Veron, JEN; Turak, E; DeVantier, LM; Stafford-Smith, MG; **Kininmonth**, S (2011). Coral Geographic. www.coralgeographic.com, version 1.1. Aust. Inst. Mar. Sci.
50. Pitcher, C.R., Doherty, P., Arnold, P., Hooper, J., Gribble, N., Bartlett, C., Browne, M., Campbell, N., Cannard, T., Cappo, M., Carini, G., Chalmers, S., Cheers, S., Chetwynd, D., Colefax, A., Coles, R., Cook, S., Davie, P., De'ath, G., Devereux, D., Done, B., Donovan, T., Ehrke, B., Ellis, N., Ericson, G., Fellegara, I., Forcey, K., Furey, M., Gledhill, D., Good, N., Gordon, S., Haywood, M., Hendriks, P., Jacobsen, I., Johnson, J., Jones, M., **Kininmonth**, S., Kistle, S., Last, P., Leite, A., Marks, S., McLeod, I., Oczkiewicz, S., Robinson, M., Rose, C., Seabright, D., Sheils, J., Sherlock, M., Skelton, P., Smith, D., Smith, G., Speare, P., Stowar, M., Strickland, C., Van der Geest, C., Venables, W., Walsh, C., Wassenberg, T., Welna, A., Yearsley, G. (2007). Seabed Biodiversity on the Continental Shelf of the Great Barrier Reef World Heritage Area. AIMS/CSIRO/QM/QDPI CRC Reef Research Task Final Report. 320 pp
51. Terry Done, Emre Turak , Mary Wakeford, Glenn De'ath, Stuart **Kininmonth**, Scott Wooldridge , Ray Berkemans, Madeliene Van Oppen, Using the 2002 Great Barrier Reef bleaching event to test bleaching resistance hypothesis, Report to The Nature Conservancy, 2003
52. VJ Harriott, CL Goggin, B Barnett, S Edgar, S **Kininmonth**, T Harvey 2003. The Status of Monitoring in the Great Barrier Reef World Heritage Area, CRC Reef Research Centre Ltd, Townsville, 2003
53. Romy Greiner, Chris Stokes, Stuart Cowell, Stephen Tapsall, Janine Kinloch, Stuart **Kininmonth** and Angela Murray 2001. A socio-economic profile of the natural resource-based industries in the (East) Kimberley. Report for the Ord-Bonaparte Program, August 2001