

FRASER HARTLEY

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SUMMARY OF RESEARCH INTERESTS

My current research focuses on understanding the ecological dimensions of customarily managed coral reef fisheries in Melanesia, particularly how the interactions between gear use, fisheries closures and fish behaviour can inform coral reef conservation and management. I am interested in further expanding this work to include how fisher choice, motivation, markets and fish life-history characteristics interact in the context of traditional and modern reef management. I have worked closely with social scientists, local communities and other ecologists to identify important ecological and social factors that can aid, or hinder the adoption of management strategies. During my career, I have developed sustainable management plans for local communities in Papua New Guinea, conducting and integrating results from social and ecological surveys. I have worked on coral reef resource management in Kenya, Fiji, Papua New Guinea, and the Philippines.

EDUCATION

James Cook University, Townsville, Australia

PhD (Marine Biology)

predicted graduation 08/2013

Thesis: "*Fear of fishers: anti-predator behaviour of coral reef fish and its relevance to fisheries management and conservation.*"

University of Newcastle-Upon-Tyne

MSc in Tropical Coastal Management –Passed with Distinction (highest grade)

2004 – 2005

Thesis: "*Implications of a Kenyan marine protected area for biomass and community composition of the fish assemblage beyond its boundaries.*"

University of Newcastle-Upon-Tyne

BSc (Hons) in Marine Biology – First Class

2000 – 2003

Thesis: "*Changing patterns of fish and benthic community structure with fishing effort on traditional Fijian fishing grounds.*"

RESEARCH AND CONSERVATION EXPERIENCE

Dr Nick Graham, Great Barrier Reef

11/2010 – 02/2011

Research Assistant

Wildlife Conservation Society – Fiji Country Program

09/2009 – 12/2009

Marine Ecologist

During this post I provided additional scientific knowledge and skills to the Program. In particular I:

- Conducted coral reef ecological surveys
- Responsible for the compilation, and quality control of data
- Assisted with analysis of long-term monitoring data for the program

Wildlife Conservation Society – Papua New Guinea Marine Program

07/2008 – 08/2009

Marine Ecologist

My role was to provide scientific knowledge and survey experience to the coral reef conservation project based in New Ireland Province, Papua New Guinea. I took the lead role in our on-going ecological monitoring and conservation planning. During this period I:

- Collaborated with a research team from the ARC Centre for Excellence for Coral Reefs Studies at James Cook University investigating social drivers of MPA effectiveness in PNG and the wider region, including arranging all logistics and support in PNG
- Assisted with fundraising and donor reporting

- Trained seven young PNG marine scientists through one-to-one mentoring, building of scientific and survey skills
- Provided support to education and outreach activities conducted by local NGOs and community organisations
- Responsible for diving and operations safety, logistical support and equipment maintenance.

*Project Scientist, Andra Island Sustainable Coral Harvesting Project***09/2007 – 05/2008**

As the project scientist, I spent several months living with the Andra community in Manus province to help design a community-based management plan to conserve their coral reefs and promote sustainability of coral harvesting for lime production. This involved:

- Establishing a pilot coral farming project and identifying how to expand this to benefit the wider community
- Using both ecological and socio-economic research tools to identify current and future threats to the lagoon and reef health
- Leading community consultation and collaboration to find solutions both biologically and socially viable
- Integrating biological, social and economic management strategies into coherent sustainable coral harvesting management plan

*Ecological Field Team Leader – New Ireland Province***08/2006 – 02/2007**

This position involved running the field operations of the Program. My primary responsibilities were to:

- Design and conduct ecological baseline surveys of new/proposed marine protected areas in New Ireland Province
- Train local university graduates in fish, substrate and invertebrate underwater visual census methods whilst mentoring in field work and report writing
- Organize community-based monitoring and support.
- Supply and organize logistical and safety support for the Program

University of Newcastle-Upon-Tyne*Masters Project Fieldwork – Mombasa, Kenya***05/2005 – 06/2005**

During two months of fieldwork in Kenya I worked with Tim McClanahan of the Wildlife Conservation Society – Coral Reef Conservation Programme within the Mombasa Marine Park. I designed and implemented appropriate methodology involving both visual census surveys and, with the aid of a local fisherman, trapping studies.

Coral Cay Conservation*Science Officer – Southern Leye Reef Conservation Project***08/2003 – 12/2003**

My primary responsibilities were to train volunteers in survey techniques and identification skills, maintain survey standards and to plan and run the survey schedule. I was involved in the process to designate a new fish sanctuary within Sogod Bay involving consultation with local fishermen and liaison with both local mayors and the governor's office.

University of Newcastle-Upon-Tyne*Field Assistant – Western Australia***06/2002 – 08/2002**

Conducted surveys to assess human impacts on the biota of Cable Beach, Broome and assisted in estrildid finch surveys with the Australian Wildlife Conservancy.

PROFESSIONAL ASSOCIATIONS

Fishery Society of the British Isles

International Society for Reef Studies

GRANTS AND AWARDS

- Fisheries Society of the British Isles Travel Grant (2012) – **(GB £900)**

- ARC CoE Coral Reef Studies Graduate Research Scheme (2011) – (AUD \$2609)
- James Cook University International Postgraduate Research Scholarship (2010-2013)- tuition and stipend for PhD (AUD \$148,500)
- Natural Environment Research Council Masters Studentship (2004-2005) – tuition and stipend for MSc (GB £10,010)

PUBLICATIONS, POSTERS AND PRESENTATIONS

Peer-reviewed Publications

- **Januchowski-Hartley FA**, Graham NAJ, Cinner, JE, Russ GR (2013) Spillover of fish naïveté from marine reserves. *Ecology Letters*, 16, 191-197.
- highlighted in *Nature*
- **Januchowski-Hartley FA**, Nash KL, Lawton RE (2012) The influence of spear guns, dive gear and observers on estimating fish flight behaviour on coral reefs. *Marine Ecology Progress Series*, 469, 113-119.
- Nash KL, Graham NAH, **Januchowski-Hartley FA**, Bellwood DR (2012) Influence of habitat condition and competition on foraging behaviour of parrotfishes. *Marine Ecology Progress Series*, 457, 113-124.
- Cinner JE, McClanahan TR, MacNeil MA, Graham NAJ, Daw TM, Mukminin A, Feary DA, Rabearisoa AL, Wamukota A, Jiddawi N, Campbell SJ, Baird AH, **Januchowski-Hartley FA**, Hamed S, Lahari R, Morove T, Kuange J (2012) Comanagement of coral-reef social-ecological systems. *Proceedings of the National Academy of Sciences of the USA*, 109, 5219-5222.
- **Januchowski-Hartley FA**, Graham NAJ, Feary DA, Morove T, Cinner JE (2011) Fear of fishers: human predation explains behavioral changes in coral reef fishes. *PLoS One*, 6(8), e22761.
- Feary D, Cinner JE, Graham NAJ, **Januchowski-Hartley FA** (2011) Effects of customary marine closures on fish behavior, spear-fishing success and underwater visual surveys. *Conservation Biology*, 25, 341-349.

In review:

- **Januchowski-Hartley FA**, **Cinner JE**, **Graham NAJ** (in review) Fishery benefits from behavioural modification of fishes in periodically harvested fisheries closures. *Aquatic Conservation: Marine & Freshwater Ecosystems*

Book Chapters and Refereed Conference Proceedings

- Wia J, **Januchowski-Hartley FA**, Lahari RU, Morove T, Perks HM, Holmes KE (2012) Coral farming as means of sustaining livelihoods and promoting resource management. *Proceedings of the 12th International Coral Reef Symposium*, Cairns, Australia 9-13th July 2012.
- Chin A, Sweatman H, Forbes S, Perks H, Walker R, Jones G, Williamson D, Evans R, **Hartley F**, Armstrong S, Malcolm H, Edgar G, (2008) Status of coral reefs in Australia and Papua New Guinea. In: *Status of the coral reefs of the world: 2008* (ed Wilkinson C), Global Coral Reef Monitoring Network and Reef and Rainforest Research Centre, Townsville, 296pp.
- Walker R, **Hartley F**, Morove T, Karo M, Perks H & J Comley (2010) Short term response of coral reef fish communities under customary management in New Ireland, Papua New Guinea. *Proceedings of the 11th International Coral Reef Symposium*, Ft. Lauderdale, Florida 7-11th July 2008, Vol 2, 1065-1070.

Scientific Reports

- **Hartley F**, Lahari R, Morove T & H Perks (2008). *A Coral Reef and Socio-economic assessment of Andra Island, Manus Province, Papua New Guinea*. Wildlife Conservation Society Papua New Guinea Marine Program .
- **Hartley F**, Lahari R, Morove T & H Perks (2008) *Andra Island Marine Management Plan: Sustainable Coral Harvesting for Future Generations*. Wildlife Conservation Society Papua New Guinea Marine Program.

Conferences and Invited Seminars

- **Januchowski-Hartley F**, Graham N, Cinner J (2012) Traditional Management of Fish Behavior to Increase Yield in the South Pacific. *Oral Presentation, 142nd Meeting of the American Fisheries Society*
- **Januchowski-Hartley F**, Graham N, Cinner J, Russ G (2012) Spillover of naivety to fishing across marine reserve boundaries. *Oral Presentation, 12th International Coral Reef Symposium*
- **Januchowski-Hartley FA** (October 2011) Fear of fishers: anti-predator behavior of coral reef fishes and its implications for fisheries management. *Invited seminar at the Centre for Limnology, University of Wisconsin-Madison*
- **Hartley FA** (2008) Coral reef conservation in New Ireland and Manus, Papua New Guinea. *Invited seminar at the Australian Research Council Centre of Excellence Coral Reef Studies, James Cook University*

Media Outreach

- Interview on Radio Australia/In the Loop - broadcast in Australia and across the South Pacific (March 2011)
- ABC Radio Cairns (March 2011)
- Southern Cross Media (March 2011)

SKILLS AND EXPERIENCE

- Speak Tok Pisin to a conversational level
- Have experience in living and conducting research in remote areas with limited facilities
- PADI Divemaster (Mem No. 631403) with Nitrox and Emergency First Response Certification and have conducted approximately 500 scientific data collection dives plus over 500 hours conducting in-water snorkeling surveys
- Can operate and maintain a dive compressor
- Experience piloting both centre-console and tiller small craft
- Proficient in Minitab, R, Matlab and Microsoft Office Applications

REFERENCES

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