

Curriculum vitae

Ronald Baker

Assistant Professor, Department of Marine Sciences, University of South Alabama
Dauphin Island Sea Lab, 101 Bienville Blvd., Dauphin Island, AL 36528
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[Google Scholar Profile](#)

Education

PhD (2006) James Cook University, Australia (Supervised by Dr. Marcus Sheaves).

Honours (Marine Biology)(1997) James Cook University, Australia (Supervised by Dr. Brett Molony & Dr. Marcus Sheaves).

BSc. (1996) James Cook University, Australia.

Career

Aug 2018- Assistant Professor in Marine Sciences, University of South Alabama

2016-2018 Senior Research Scientist, TropWATER (Centre for Tropical Water & Aquatic Ecosystem Research), James Cook University. Completing all aspects of existing REMP projects for mining companies, including planning and completing field trips to remote locations, data collation and analysis, interpretation of data in relation to State and National guidelines (e.g. ANZECC/ARMCANZ 2000, QWQG 2009), preparation and delivery of reports to clients.

2014-2018 Senior Research Scientist, Project Manager for *Sustainable management of sport fisheries for communities in Papua New Guinea*, a \$4.2M multidisciplinary project between JCU, the Australian Centre for International Research, the Papua New Guinea National Fisheries Authority, and the PNG Tourism Promotion Authority.

2011-2015 Post-Doctoral Fellow, Tropical Landscapes Joint Venture, CSIRO/JCU, Townsville

2010-2011 Post-Doctoral Fellow, Smithsonian Marine Station at Fort Pierce, Florida, USA

2009-2010 Research Fellow, Coastal and Estuary Ecosystems Group, JCU, Townsville Australia

2007-2009 NRC Post-Doctoral Associate with NOAA Fisheries Galveston Lab

2004 – 2007 Fisheries Resource Officer, Queensland Department of Primary Industries and Fisheries, Townsville Australia

2003 Aquatic ecology consultant, Milne Bay Estates, Milne Bay, PNG.

2000-2001 Research Assistant, Introduced Marine Pests Port Monitoring Project, CRC Reef & Biological Sciences, JCU, Townsville Australia

1998 Laboratory Technician, Australian Museum Business Services, Australian Museum, Sydney, Australia

1997 – 2007 Practical Class Demonstrator for BSc. undergraduate courses, Biological Sciences, James Cook University, Townsville Australia

Publications

See [Google Scholar Profile](#) for up-to-date publication listing.

Refereed journal articles – published

Student co-authors denoted with *

Baker R, Barnett A, *Bradley M, Abrantes K, Sheaves M (in press) Contrasting seascape use by a coastal fish assemblage: a multi-methods approach. *Estuaries and Coasts*

Baker R, *Bradley M, *Freddi S, Abrantes K, Barnett A, Sheaves M (2018) Non-lethal aging of tropical catch-and-release sport fishery species. *Fisheries Research* 207: 110-117.

*Buelow CA, **Baker R**, Reside AE, Sheaves M (2018) Nutrient subsidy indicators predict the presence of an avian mobile-link species. *Ecological Indicators*, 89:507-515.

*Buckland A, **Baker R**, Loneragan N, Sheaves M (2017) Standardising fish stomach content analysis: The importance of prey condition. *Fisheries Research*, 196: 126-140.

*Dunbar K, **Baker R**, Sheaves M (2017) Effects of forest width on fish use of fringing mangroves in a highly urbanized tropical estuary. *Marine and Freshwater Research*, 68: 1764-1770.

*Buelow CA, **Baker R**, Reside AE, Sheaves M (2017) Spatial dynamics of coastal forest bird assemblages: the influence of landscape context, forest type, and structural connectivity. *Landscape Ecology*, 32: 547-561.

*Bradley M, **Baker R**, Sheaves M (2017) Hidden components in tropical seascapes: Deep-estuary habitats support unique fish assemblages. *Estuaries and Coasts*, 40: 1195-1206.

Sheaves M, **Baker R**, Abrantes K, Connolly RM (2017) Fish biomass in tropical estuaries: substantial variation in food web structure, sources of nutrition, and ecosystem-supporting processes. *Estuaries and Coasts*, 40: 580-593.

Barnett A, Abrantes KG, **Baker R**, Diedrich A, Kuilboer A, Mahony T, McLeod I, Moscardo G, Prideaux M, van Luyn A, Sheaves M (2016) Sport fisheries, conservation, and sustainable livelihoods: A multidisciplinary assessment of best practice. *Fish and Fisheries* 17: 696-713.

Sheaves M, **Baker R**, McLeod I, Abrantes K, Wani J, Barnett A (2016) The conservation status of Niugini Black Bass: a world-renowned sport fish with an uncertain future. *Fisheries Management and Ecology* 23: 243-252.

Sheaves M, Johnston R, **Baker R** (2016) Use of mangrove by fish: new insights from in-forest videos. *Marine Ecology Progress Series* 549: 167-182.

Baker R, Sheaves M, Johnston R (2015) Geographic variation in functional access to tidal wetlands. *Hydrobiologia* 762: 1-14.

Abrantes KG, Barnett, A, **Baker R**, Sheaves M (2015) Habitat-specific food webs and trophic interactions supporting coastal-dependent fishery species: An Australian case study. *Reviews in Fish Biology and Fisheries* 25: 337-363.

- Sheaves M, **Baker R**, Nagelkerken I, Connolly RM (2015) True value of estuarine and coastal nurseries for fish: incorporating complexity and dynamics. *Estuaries and Coasts* 38:401-414.
- Nagelkerken I, Sheaves M, **Baker R**, Connolly R (2015) The seascape nursery: a novel spatial approach to identify and manage nurseries for coastal marine fauna. *Fish and Fisheries* 16:362-371.
- Baker R**, *Buckland A, Sheaves M (2014) Fish gut content analysis: robust measures of diet composition. *Fish and Fisheries* 15:170-177.
- Baker R**, Fujiwara M, Minello T (2014) Juvenile growth and mortality effects on white shrimp *Litopenaeus setiferus* population dynamics in the northern Gulf of Mexico. *Fisheries Research* 155:74-82.
- *Davis B, **Baker R**, Sheaves M (2014) Seascape and metacommunity processes regulate fish assemblage structure in coastal wetlands. *Marine Ecology Progress Series* 500:187-202.
- Frisch AJ, *Ireland M, **Baker R** (2014) Trophic ecology of large predatory reef fishes: energy pathways, trophic level, and implications for fisheries in a changing climate. *Marine Biology* 161:61-73.
- Baker R**, Fry B, Rozas L, Minello T (2013) Hydrodynamic regulation of salt marsh contributions to aquatic food webs. *Marine Ecology Progress Series* 490:37-52.
- Sheaves M, Johnston R, Johnson A, Connolly R, **Baker R** (2013) Nursery function drives temporal patterns in fish assemblage structure in four tropical estuaries. *Estuaries and Coasts* 36:893-905.
- *Davis B, Johnston R, **Baker R**, Sheaves M (2012) Fish utilization of wetland nurseries with complex hydrological connectivity. *PLoS One* 7(11): e49107.
- Minello T, Rozas L, **Baker R** (2012) Geographic variability in salt marsh flooding patterns may affect nursery value for fishery species. *Estuaries and Coasts* 35:501-514.
- Sheaves M, Johnston R, Connolly R, **Baker R** (2012) Importance of estuarine mangroves to juvenile banana prawns. *Estuarine Coastal and Shelf Science* 114: 208-219.
- Baker R**, Minello T (2011) Trade-offs between logistics and gear selectivity when sampling nekton from shallow open-water habitats: a gear comparison study. *Gulf and Caribbean Research* 23:37-48.
- Baker R**, Minello T (2010) Growth and mortality of juvenile white shrimp, *Litopenaeus setiferus* in a marsh pond. *Marine Ecology Progress Series* 413:95-104.
- Baker R**, Sheaves M (2009a) Refugees or ravenous predators: detecting predation on new recruits to tropical estuarine nurseries. *Wetlands Ecology and Management* 17:317-330.
- Baker R**, Sheaves M (2009b) Overlooked small and juvenile piscivores dominate shallow-water estuarine "refuges" in tropical Australia. *Estuarine Coastal and Shelf Science* 85:618-626.
- Frisch A, **Baker R**, Hobbs J-P, Nankervis L (2008) A quantitative comparison of recreational spearfishing and linefishing on the Great Barrier Reef: implications for management of multi-sector coral reef fisheries. *Coral Reefs* 27:85-95.

Baker R, Sheaves M (2007) Shallow water refuge paradigm: conflicting evidence from tethering experiments in a tropical estuary. *Marine Ecology Progress Series* 349:13-22.

Baker R, Sheaves M (2006) Visual surveys reveal high densities of large piscivores in shallow estuarine nurseries. *Marine Ecology Progress Series* 323:75-82.

Sheaves M, **Baker R**, Johnston R (2006) Marine nurseries and effective juvenile habitats: an alternative view. *Marine Ecology Progress Series* 318:303-306.

Baker R, Sheaves M (2005) Redefining the piscivore assemblage of shallow estuarine nursery habitats. *Marine Ecology Progress Series* 291:197-213.

Book chapters:

Sheaves M, Brodie J, Brooke B, Dale P, Lovelock C, Waycott M, Gehrke P, Johnston R, **Baker R** (2007) Vulnerability of coastal and estuarine habitats in the Great Barrier Reef to climate change. In: *Climate change and the Great Barrier Reef*, eds. Johnson J, Marshall P. Great Barrier Reef Marine Park Authority and Australian Greenhouse Office, Australia.

Reports:

Baker R (2017) FIS-2013-015 Sustainable management of sport fisheries for communities in Papua New Guinea. Annual Report to the Australian Centre for International Agricultural Research, Australian Government, Canberra. 102pp.

Baker R, Templeman S (2017) Carpentaria Gold Receiving Environment Monitoring Program, 1 Nov 2016 to 31 Oct 2017. Centre for Tropical Water & Aquatic Ecosystem Research, Report No. 17/64, Nov 2017. 79pp.

Templeman S, **Baker R**, James C (2017) Carpentaria Gold Receiving Environment Monitoring Program Design Report, Version 2. Centre for Tropical Water & Aquatic Ecosystem Research, Report No. 17/33, June 2017. 57pp.

Templeman S, Williams C, Gainsford A, **Baker R** (2017) Woodcutters Mine Receiving Environment Monitoring Program 1 Nov 2015 to 31 Oct 2016. Centre for Tropical Water & Aquatic Ecosystem Research, Report No. 17/31, June 2017. 50pp.

Baker R, Templeman S (2017) Review of Environmental Authority EPML00979013 for Carpentaria Gold, July 2017, 7pp.

Templeman S, **Baker R**, Williams C (2016) Carpentaria Gold Receiving Environment Monitoring Program, 1 Nov 2015 to 31 Oct 2016. Centre for Tropical Water & Aquatic Ecosystem Research, Report No. 16/57, Nov 2016. 352pp.

Baker R (2016) Annual Report: FIS-2013-015 Sustainable management of sport fisheries for communities in Papua New Guinea. Report to the Australian Centre for International Agricultural Research, Australian Government, Canberra. 281pp.

Baker R (2016) Niugini Black Bass Research: Project Progress Report to NFA, Jan 2016. 14pp.

Baker R (2015) Ecosystem Repair Prioritization. Prepared for the Fitzroy Basin Association, Rockhampton, Qld, Australia. 41pp.

Baker R (2015) Annual Report: FIS-2013-015 Sustainable management of sport fisheries for communities in Papua New Guinea. Report to the Australian Centre for International Agricultural Research, Australian Government, Canberra. 27pp.

Sheaves M, Johnston R, McLean N, Mattone C, **Baker R**, Abrantes K (2012) The life-cycle habitat requirements of coastal fisheries species: identifying key knowledge gaps and research needs. Report to the Fisheries Research and Development Corporation, December 2012, 59pp.

Frisch A, **Baker R**, Hobbs J-P, Nankervis L (2007) A quantitative comparison of spearfishing and linefishing on the Great Barrier Reef: A step toward resolving conflict between recreational fishing sectors. Report to Queensland Department of Primary Industries and Fisheries, Recreational Fisheries Program. 30pp.

Baker R, Sheppard R (2006) Fisheries resources of Albatross Bay, Gulf of Carpentaria. Queensland Department of Primary Industries and Fisheries, Information Series QI06062. 90pp.

Baker R, Sheppard R (2005) Fisheries resources of Cleveland Bay (Townsville). Queensland Department of Primary Industries and Fisheries, Information Series QI05021. 86pp.

Theses:

Baker R (2006) Piscivory and the functioning of shallow tropical estuarine nursery grounds. PhD Dissertation, James Cook University. 226pp.

Baker R (1997) Temporal changes in the zooplankton assemblage in a supralittoral pool of a tropical estuary. Honours Thesis, James Cook University. 81pp.

Other:

Baker R (2006) Otolith catalogue of common coastal and estuarine fishes of north-eastern Queensland, Australia. James Cook University. 36pp.
Available at: <http://www.jcu.edu.au/caeel/publicationsdata/index.htm>

Selected recent Conference presentations:

Baker R (2016) What do we really know about the functional values of tidal wetlands for fishery species. Mangrove & Macrobenthos Meeting 4, St. Augustine, Florida, July 18-22, 2016.

Baker R, Wani J, Abrantes K, Barnett A, Sheaves M (2014) Insights into the life-history of the New Guinea Black Bass *Lutjanus goldiei*. Society for Conservation Biology Oceania. 9-11 July 2014, Suva, Fiji.

Baker R, Feller IC (2013a) Untangling the web: the importance of wetland production to aquatic food webs across a salt marsh-mangrove ecotone. Coastal and Estuarine Research Federation Conference, San Diego, November 2013.

Baker R, Minello T, Levin P (2010) The value of habitat information at different life stages in refining white shrimp stock assessments in the Gulf of Mexico. NOAA National Marine Fisheries Service, National Stock and Habitat Assessments Workshop, New Orleans Louisiana, May 2010

Students Supervised

Current

Alexia Dubuc, **PhD**, *Dissolved oxygen as a constraint for fish use of mangroves*.

Cesar Herrera, **PhD**, *Ecosystem functioning of tidal wetland pools*.

Michael Bradley, **PhD**, *Role of context in habitat and seascape relationships of coastal fishes*.

Jakob Fries, **MSc**, *Detecting agricultural effects on estuarine ecosystems*.

Completed

Christina Buelow, **PhD**, *Role of birds in coastal ecosystem connectivity*. 2018

Vincent Smythe - **Masters Minor Project**, *Ecotoxicology of herbicides*. 2017

Bornwell Seemani – **Masters Special Topic**, *Lake Bangweulu Fisheries*. 2015

Stefano Freddi – **Masters Minor Project**, *Non-lethal aging of *Lutjanus**. 2015

Ben Davis – **PhD**, *Processes structuring fish assemblages in tropical estuaries*. 2014

Krista Stegemann –**MSc**, *Fish use of edge habitats*. 2014

Michael Bradley – **BSc. Honours**, *Deepwater fish-habitat associations*. 2013 (Class I)

Kimberley Dunbar – **BSc. Honours**, *Value of remnant mangroves for fish*. 2013 (Class IIA)

Jacob Tapp – **BSc. Honours**, *Mangrove crab distributions*. 2012 (Class IIA)

Teaching experience

Casual Lecturer and course development, *Coastal, Estuarine and Mangrove Ecosystems* (3rd yr and Masters-Level course at JCU), 2000-2015.

Computer Tutorial Leader, *Biometrics* (2nd yr Biological Statistics course at JCU), 2002-04.

Practical Class Demonstrator, *various undergraduate/graduate courses in Biological Sciences at JCU, including 1st yr Botany and Zoology, 2nd yr Marine Invertebrate Biodiversity, 3rd yr Fisheries Science, Estuarine Ecology, Advanced Multivariate Statistics*, 1997-2007.

Grants, Awards and Fellowships

- **Holsworth Wildlife Research Endowment** - Response of benthic ecosystem functioning to biodiversity and environment in a tropical coastal wetland \$7000, 2017 (Herrera, Baker, Sheaves, Sheaves).
- **BirdLife Australia Research Award** – The role of Australian mangrove avifauna in coastal ecosystem connectivity \$4875, 2015 (Buelow, Reside, Baker, Sheaves).
- **ACIAR Research Grant** – *FIS-2013-015: Sustainable management of sport fisheries for communities in Papua New Guinea* **\$688,000**, 2014-2018 (Sheaves, Baker).
- **Wet Tropics Management Authority** – *Dissolved oxygen as a constraint for fish utilizing mangrove forests*. **\$3750**, 2016 (Dubuc, Sheaves, Waltham, Baker).
- **JCU Faculty Grant** *Fish connectivity in coastal seascapes*. **\$11,000**, 2014 (Baker).
- **Tropical Landscapes Joint Venture JCU/CSIRO Post-Doctoral Fellowship and research funding** **\$250,000**, 2011-14 (Baker).
- **Smithsonian Institution Post-Doctoral Fellowship** **\$44,000**, 2010/11 (Baker).
- **NOAA NMFS SE Regional Office** – *Food web support of fishery species in salt marshes across SE USA* **\$60,000**, 2008/09 (Baker, Minello, Rozas, Fry).
- **ICES Conference Travel Award** **\$500**, 2008 (Baker).
- **National Research Council Post-Doctoral Associateship NOAA Fisheries, Galveston Texas** **\$94,000**, 2007-09 (Baker).
- **Coastal CRC Annual conference** – *Best student presentation*, 2005 (Baker).

- **Australian Society for Fish Biology Annual Conference** – John Lake Poster Award, 2004 (Baker, Wilson).
- **Coastal CRC PhD Scholarship Award and research funding \$87,000**, 2002-04 (Baker).

Professional affiliations

Coastal and Estuarine Research Federation 2009-
American Fisheries Society 2007-
Australian Marine Sciences Association 2005-
Australian Society of Fish Biologists 2004-

Peer reviewer for Journals

Aquatic Biology
Asian Fisheries Science
Caribbean Journal of Science
Coral Reefs
Diversity and Distributions
Ecosystems
Estuaries and Coasts
Estuarine Coastal and Shelf Science
Functional Ecology
Hydrobiologia
Journal of Crustacean Biology
Journal of Experimental Marine Biology and Ecology
Journal of Fish Biology

Journal of Sea Research
Journal of the Marine Biological Association of the UK
Marine and Freshwater Research
Marine Biology Research
Marine Ecology Progress Series
Marine Ecology
Marine Fisheries Review
PLOS ONE
Revista de Biologia Tropical
Scientific Reports
Wetlands
Wetlands Ecology and Management
Zoological Studies

Other reviewing/examining duties

Reviewer for NOAA Saltonstall Kennedy Grants
Honours thesis reviewer for Griffith University
Honours thesis reviewer for James Cook University