



# TIFFANY NAY

## PhD Marine Biology



### SCIENTIFIC PUBLICATIONS

Abayakoon-Stanborough M, Oellerman M, **Nay TJ**, Pecl G. Flee the heat or stick with mates? Does sociality in spiny lobsters override individual temperature preference? (In prep)

**Nay TJ**, Longbottom RJ, Gervais CR, Johansen JL, Rummer JL, Steffensen JF, Hoey AS. Regulate or tolerate: Thermal strategy of a coral reef flat resident, the epaulette shark, *Hemiscyllium ocellatum* (Accepted to *Journal of Fish Biology*)

Gervais C, **Nay T**, Brown C. Friend or Foe? Odour detection, differentiation, and anti-predator response in an embryonic elasmobranch, *Heterodontus portusjacksoni* (Accepted in *Marine and Freshwater Research*)

**Nay TJ**, Johansen JL, Rummer JL, Steffensen JF, Hoey AS. Do fish prefer friends? The effect of conspecifics, heterospecifics, and predator presence on temperature preference in a coral reef fish. (In review in *Oecologia*)

**Nay TJ**, Hoey AS, Rummer JL, Steffensen JF, Johansen JL. (2020) The effect of habitat complexity on temperature preference in a coral reef fish. (In press in *Conservation Physiology*)

Spady BL, **Nay TJ**, Rummer JL, Munday PL, Watson SA. (2019) Aerobic scope of two tropical cephalopod species unaltered by projected near-future CO<sub>2</sub> levels. *Conservation Physiology* 7 IF: 3.460, Citations: 2

**Nay TJ**, Gervais CR, Hoey AS, Johansen JL, Steffensen JF, Rummer JL. (2018) The emergence emergency: a mudskipper's response to temperature. *Journal of Thermal Biology* 78: 65-72. IF: 2.093



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### EDUCATION



PhD Marine Biology, 2020  
MSc Marine Biology, 2015  
James Cook University  
Townsville, QLD



BSc Marine Biology, 2013  
University of West Florida  
Pensacola, FL, USA

### PROFESSIONAL SKILLS

- ✓ Scientific Writing
- ✓ Effective communicator
- ✓ Ecophysiology Background
- ✓ Project management
- ✓ Time management
- ✓ Independent
- ✓ Team management
- ✓ Collaborative
- ✓ Mentoring
- ✓ Troubleshooting ability

\* All project management experiences included team management, organization of schedules and tasks, volunteer training, budget management, report construction, scientific publication, and presentation of outcomes.

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### SCIENTIFIC PUBLICATIONS CONT'D

Gervais C, **Nay T**, Renshaw G, Johansen JL, Steffensen JF, Rummer JL. (2018) Too hot to handle? Using movement to alleviate effects of elevated temperatures in a benthic elasmobranch, *Hemiscyllium ocellatum*. *Marine Biology* 165(11): 162. IF: 2.215, Citations: 9

Habary A, Johansen JL, **Nay TJ**, Steffensen JF, Rummer JL. (2016) Adapt, move or die – how will tropical coral reef fishes cope with ocean warming? *Global Change Biology* 23(2): 566-577. Doi: 10.1111/gcb.13488. IF: 8.997, Citations: 40

**Nay TJ**, Johansen JL, Habary A, Steffensen JF, Rummer JL. (2015) Behavioural thermoregulation in a temperature-sensitive coral reef fish, the five-lined cardinalfish (*Cheilodipterus quinquelineatus*). *Coral Reefs* 34(4): 1261-1265. doi: 10.1007/s00338-015-1353-4. IF: 3.095, Citations: 17



### PROFESSIONAL EXPERIENCE

Volunteer 2017-2018	James Cook University, Townsville, Australia Coral collection and sample processing PhD candidate: Alejandra Hernandez
Laboratory Technician 2015	James Cook University, Townsville, Australia Responsibilities: training new students and volunteers, organizing volunteers, equipment care and maintenance, laboratory care and maintenance, animal husbandry Supervisor: Dr. Jodie Rummer
Student 2015	Fish Swimming Course, Friday Harbor Laboratories, Washington, USA Determined whether boldness or shyness determines position of fish in schools Supervisors: Dr. Paolo Domenici, Prof. John Steffensen, Dr. Jacob Johansen
Volunteer 2014	James Cook University, Townsville, Australia Animal husbandry, including feeding, cleaning, and maintaining water quality PhD candidates: Lauren Nadler, Geoffrey Collins
Internship 2013	South African Shark Conservancy, Hermanus, South Africa Participated in boat and shore based whale watching surveys, I3S software analysis from BRUV (Baited Remote Underwater Video), and assisting in creation of Kleinmond River Estuary clean-up project
Independent Researcher 2013	University of West Florida, Pensacola, Florida, USA Compared the effects of temperature on metabolic rates in sand and water environments on the coquina clam, <i>Donax variabilis</i> Supervisor: Dr. Jane Caffrey

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### PROFESSIONAL EXPERIENCE CONT'D

Volunteer 2010-2011	Operation Wallacea, Hoga Island, Indonesia Determined resistance to evaporative water loss in the crab-eating frog using gravimetric wind tunnel techniques, Examined tolerance of water loss and evaporative water loss on common and barred mudskipper fishes, Determined total oxygen uptake into pulmonary and cutaneous components using a bimodal respirometer of yellow-lipped sea kraits Supervisor: Dr. Wayne Bennett
Volunteer 2010	University of West Florida, Pensacola, Florida, USA Bioenergetics and thermal sensitivity of sergeant major and cocoa damselfishes living in hyperthermal beachrock pools, Used flow-through respirometry techniques to indirectly quantify caloric consumption and measure the costs of living in extreme tidepool habitats Supervisor: Dr. Wayne Bennett



### PRESENTATIONS

Conference 2019	Habitat complexity influences selection of thermal environment in a common coral reef fish, Species on the Move Conference, Kruger National Park, South Africa
Seminar 2018	Making moves: Thermoregulatory strategies used by fish to mitigate the effects of ocean warming, Invited presentation at University of Tasmania, Tasmania, Australia Hosted by: Professor Gretta Pecl and Dr. Michael Oellermann
Public Outreach 2017, 2018	These fins were made for walking. Using movement to mitigate exposure to elevated temperatures in a benthic elasmobranch, <i>Hemiscyllium ocellatum</i> , Heron Island Resort, Queensland, Australia
Conference 2018	Do fish prefer friends? The effect of conspecifics, heterospecifics, and predator presence on temperature preference in a coral reef fish, AMSA Conference, Adelaide, South Australia, Australia
Conference 2017	Too hot to handle? Using movement to mitigate exposure to elevated temperatures in a benthic elasmobranch, <i>Hemiscyllium ocellatum</i> , ACRS Conference, Townsville, Queensland, Australia
Conference 2016, 2015	The intersection between fish physiology and behaviour in regulating microhabitat use, ASFB/OCS Conference, Hobart, Tasmania, Australia MSc Presentation, James Cook University, Townsville, Queensland, Australia

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### PRESENTATIONS CONT'D

Symposium 2013	Comparing the effects of temperature on metabolic rates in water and sediment for the coquina clam, <i>Donax variabilis</i> , Students Scholar Symposium, University of West Florida, Pensacola, Florida, USA
Symposium 2013	The price of living in two worlds: Water economy adaptations of mudskipper fishes from Hoga Island, Indonesia, 2012 Student Scholar Symposium, University of West Florida, Pensacola, Florida, USA



### GRANTS AND AWARDS (~\$4050AUD travel, ~\$12500AUD research)

Travel 2018	The Fisheries Society of the British Isles, Travel Grant (\$1800 AUD) To attend Species on the Move Conference 2019
Travel 2018	Society for Experimental Biology, Company of Biologist Travel Fund (\$455 AUD) To attend Australian Marine Science Association Conference
Research 2017	ARC Centre of Excellence for Coral Reef Studies HDR Enhancement Scheme (\$2250 AUD) James Cook University, Townsville, Queensland, Australia
Travel 2016	Society for Experimental Biology, Company of Biologist Travel Fund (\$295 AUD) To attend Australian Society for Fish Biology/Oceania Chondrichthyan Society Conference
Travel 2016	ASFB John Glover Travel Fund (\$400 AUD) To attend Australian Society for Fish Biology/Oceania Chondrichthyan Society Conference
Research 2016	ARC Centre of Excellence for Coral Reef Studies HDR Enhancement Scheme (\$2500 AUD) James Cook University, Townsville, Queensland, Australia
Travel 2015	ARC Centre of Excellence for Coral Reef Studies Symposium and Student Retreat (\$1100 AUD) James Cook University, Townsville, Queensland, Australia
Research 2015	Friday Harbor Laboratories, University of Washington (\$3000 USD) Friday Harbor Laboratories, University of Washington, Washington, USA
Research 2013	Office of Undergraduate Research (\$340 USD) University of West Florida, Pensacola, Florida, USA
Award 2012	Distinguished Biology Department Presentation Award University of West Florida Student Scholar Symposium, Pensacola, Florida, USA
Research 2011	Office of Undergraduate Research (\$2400 USD) University of West Florida, Pensacola, Florida, USA

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### INSTRUCTOR/MENTOR EXPERIENCE

Co-supervisor 2019 - 2020	Masters student University of Tasmania, Hobart, Australia
Mentor 2014 - 2018	Laboratory undergraduate and graduate volunteers (~15 volunteers) James Cook University, Townsville, Australia
Mentor 2014, 2015	Visiting international undergraduate students (~10 students) James Cook University, Townsville, Australia
Instructor & Coordinator  2012, 2013	Schools Coral Reef Ecology, Hoga Island Marine Research Laboratory (~300 students) Tasks included: management of travel, coursework, field experiences, daily schedules, housing Operation Wallacea
Teaching Assistant 2009	UWF Summer Camps University of West Florida, Pensacola, FL



### CERTIFICATIONS

Emergency First Response CPR, First Aid, and O2 Administrator (2018)

PADI Dive master, Pensacola, Florida, USA (2013)

Visual Inspection Procedures Specialty, Scuba Diving International (2013)

Dive master at MBT Divers, Pensacola, FL (2010-2013)

NAUI Dive master, Pensacola, Florida, USA (2010)

Master Scuba Diver, Research Diver, and Underwater Photography (PADI, 2007)

Enriched Air Diver, Wreck Diver, Night Diver, Underwater Naturalist, Equipment Specialist, and Boat Diver (PADI, 2006)