

James R. White, PhD

California Department of Fish and Wildlife
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Education James Cook University, Townsville, QLD, Australia
2/2013 – 9/2015

- Doctor of Philosophy – Marine Biology

Thesis title: “The role of boldness and other personality traits in the ecology of juvenile marine fishes”

James Cook University, Townsville, QLD, Australia
3/2011 – 2/2013

- Masters by Research – Marine Biology

James Cook University, Townsville, QLD, Australia
2010

- Masters of Applied Science – Marine Biology; GPA 6.63 (7 pt. scale)

University of California - Santa Cruz, Santa Cruz, CA, USA 2006

- Bachelor of Science – Marine Biology

Professional skills and highlights

- Statistics:
 - Multivariate statistics:
 - Friedman’s test
 - Intra-class correlation coefficients (ICC)
 - Kaplan-Meier survival analysis w/ Cox’ F-Test
 - Phenotypic selection gradient analysis
 - Ordination techniques:
 - Multidimensional scaling (nMDS)
 - Principal components analysis (PCA)
 - Hierarchical agglomerative cluster analysis
 - Linear mixed effects modelling
 - Structural equation modelling (SEM)/confirmatory factor analysis
 - Factor analysis/Principle axis factoring
- Experimental design:
 - Designed and conducted 12 experiments over 6 field seasons at Lizard Island Research Station
- R programming, Shiny app development, lead for R instructional seminars
- 9 peer reviewed publications and 11 local and international conference presentations.
- Led long term surveys and managed staff for 7 field seasons at CA Fish and Wildlife.
- Led field operations unit which included planning, logistics, budget management, contracts, and multi-agency collaboration for all the environmental monitoring programs in the CDFW Stockton office.

Research Interests

- Exploring various aspects of the extent to which fish demonstrate personalities and the importance of these to their fitness.
- Investigating spatiotemporal variations in fish distribution throughout the San Francisco Bay and in the Sacramento-San Joaquin River Delta.

Research Experience

Senior Environmental Scientist Specialist

10/2024-Present; 40hrs/week; California Dept. of Fish and Wildlife, Stockton, CA

- Document environmental violations related to illegal cannabis cultivation including Lake/Streambed alterations, CESA/ESA, and CEQA.
- Develop R shiny apps to assist in site prioritization.
- Use ArcMap and Survey123 to map and document cannabis cultivation sites.

Senior Environmental Scientist Supervisor

2/2023-9/2024; 40hrs/week; California Dept. of Fish and Wildlife, Stockton, CA

- Manage field support staff conducting multiple long-term surveys in the estuary for CDFW/IEP.
- Provide contract deliverables to funding agencies.
- Manage budget for repairs/modifications/procurement for fleet of research vessels.
- Participate in IEP multi-agency survey redesign and pilot study efforts.

Environmental Scientist

8/2016-1/2023; 40hrs/week; California Dept. of Fish and Wildlife, Stockton, CA

- Lead scientist on Fall Midwater Trawl (FMWT) survey, examining the relative abundance and distribution of estuarine fishes in the Sacramento-San Joaquin River Delta.
- Collect environmental water quality data on turbidity, conductivity, relative clarity.
- Deploy, maintain, and safely operate trawling net and winches.
- Handle and ID caught fish and invertebrate species including ESA listed species: winter-run Chinook Salmon, spring-run Chinook Salmon, Delta Smelt, Longfin Smelt, etc.
- Produce department memos, peer-reviewed publications, deliver presentations on status and trends in FMWT data.
- **Manage and analyze 50+ year Access dataset.**

Masters/PhD Candidate

6/2009-8/2015; 40hrs/week; James Cook University, Townsville, QLD, Australia

- Obtain permitting and animal ethics approval for behavioral experiments.
- Organize, develop, and conduct multiple field and laboratory based experiments conducted on remote field stations.
- Manage and analyze data, publish finding in peer-reviewed journals and presenting at international conferences

Volunteer

8/2009-6/2015 James Cook University research groups, Townsville, QLD, Australia

- Assist in field collection, underwater photography, tagging, and processing of coral/seagrass/sediment/sponge samples.

Field Technician

1/2009-6/2009; 40hrs/week; PCSU/Research Corporation for the University of Hawai'i at Manoa, Honolulu, HI

- Organizing and conducting field work for coastal mapping and inventory project for the National Park Service.
- Working with a team to plan, organize, and conduct intertidal surveys to produce an inventory of biological, geographical, and anthropogenic resources within Park boundaries.
- Organize database to link with GIS map of coastal Park areas.

Marine Biologist

8/2007-6/2009; 40hrs/week; PCSU/Research Corporation for the University of Hawai'i at Manoa, Honolulu, HI

- Responsible for organizing and completing diving and other field/lab work for a coral reef recruitment and oceanography study.
- Field ID and preservation of local coral species.
- Construction/deployment/sampling of field devices.
- Manage and analyze data, complete reports and other documents.

Underwater Photographer

5/2007-8/2007; 40hrs/week; Capture Photo, Bonaire, Netherlands Antilles

- Daily maintenance of computers, computer network, and underwater cameras/housings.
- Train new employees and customers with usage of point and shoot underwater cameras. Give basic and advanced underwater photography courses.

Senior Building Maintenance Technician

2/2007-4/2007; 40hrs/week; Long Marine Lab, Santa Cruz, CA

- Mechanical and electrical maintenance and repair. Light carpentry.
- Small boat maintenance and repair- patching inflatable boats, repairing wooden floorboards, attaching and retrofitting new hardware, repairing lights, patching fiberglass, etc. LML seawater intake filter replacement, research vessel underwater inspection and repair, marine life collecting.
- Grounds maintenance and research vessel maintenance. Maintaining and filling of SCUBA cylinders.

Volunteer

4/2006-2/2007 PISCO Subtidal, Santa Cruz, CA

- Data entry and rechecking into Excel.
- General maintenance and repair of field equipment. Minor boat repair. Deployment and maintenance of moorings.
- Collection of SMURFS (artificial habitats for newly settled fish). Field ID and handling of pelagic marine fish, invertebrates, and algae using SCUBA. Data monitors abundance and distribution of marine species for state-wide marine protected area management.
- Deployment, programming, and data retrieval from temperature loggers and ADCPs (Acoustic Doppler Current Profilers).

Volunteer

10/2006-1/2007 Jan Freiwald, Santa Cruz, CA

- Collect, ID, and handle Kelp Greenlings (*Hexagrammos decagrammus*) for use in acoustic tracking project.
- Assist in taking fin clips, implanting acoustic tracking devices, and implanting fin tags.
- Replace and reposition hydrophones for project

Volunteer

4/2006-12/2006 PISCO Intertidal, Santa Cruz, CA

- Processing of “tuffys” (artificial habitat for mussel and barnacle recruits).
- Collection of data from intertidal field sites across N. California.
- General maintenance and repair of field equipment.

Volunteer

10/2006-11/2006 Jared Figurski, Santa Cruz, CA

- Assist in kelp forest detritus project by running *Macrocystis pyrifera* transects.

Teaching Experience

Tutor

2010; 4hrs/week; James Cook University, Townsville, QLD

- BT1001- Introduction to Plant Science
- Tutor students in observation and interpretation of plant materials, structure and function of plants, use of keys for identifying plants.
- Give PowerPoint presentations, guide during field trips, mark submitted assignments.

Tutor

2011-12, 2014; 4hrs/week; James Cook University, Townsville, QLD

- MB 3150 – Fisheries Science
- Tutor students in observation and interpretation of fish tissue/otolith samples, structure and function of fish physiology, use of keys for identifying coral reef fish.

Tutor

2011-2013; 4hrs/week; James Cook University, Townsville, QLD

- MB 2060- Marine Ecology and Environmental Assessment
- Tutor students in design and interpretation of ecological data, use of statistical software to analyze collected data.
- Guide during field trips

Substitute teacher

11/2015-6/2016; 40hrs/week; Lewisville, Grapevine, and Farmers Branch-Colleyville school districts, Dallas, TX

- Teach provided lesson plans to K-12 students.

Professional Affiliations

American Fisheries Society

Certifications AAUS Scientific Diver 100ft depth rating, Master Diver, Rescue Diver, Nitrox Diver, Oxygen/First Aid/CPR, Divemaster, Drysuit Diver, QLD Boating license

- Publications**
1. FLOAT-MAST (Flow Alteration - Management Analysis and Synthesis Team), 2022. White papers providing a synthesis of knowledge relating to Delta Smelt biology in the San Francisco Estuary, emphasizing effects of flow. Interagency Ecological Program, Sacramento, CA. IEP Technical Report #98. 191 pp.
 2. **White, J.R.**, and R.D. Baxter. 2022. Incorporating expanded sampling into an alternative abundance index for the Fall Midwater Trawl survey. California Fish and Wildlife Journal 108:e21.
 3. Beakes, M.P., Graham, C., Conrad, J.L., **White, J.R.**, Koohafkan, M., Durand, J.R., Sommer, T.R. (2020) Large-scale flow management action drives estuarine ecological response. North American Journal of Fisheries Management. doi:10.1002/nafm.10529
 4. Hammock, B.G., Ramírez-Duarte, W.F., Garcia, P.A.T., Schultz, A.A., Avendano, L.I., Hung, T., **White, J.R.**, Bong, Y., Teh, S.J. (2020) The health and condition responses of Delta Smelt to fasting: A time series experiment. PLoS ONE 15(9): e0239358. doi:10/ghc49t
 5. Brooker R.M., Feeney, W.E., **White, J.R.**, Manassa, R.P., Johanson, J.L., Dixson, D.L. (2016) Using insights from animal behaviour and behavioural ecology to inform marine conservation initiatives. Animal Behaviour. doi: 10.1016/j.anbehav.2016.03.012
 6. Palacios M.M., Killen S.S., Nadler L.E., **White, J.R.**, McCormick, M.I. (2016) Top predators negate the effect of mesopredators on prey physiology. Journal of Animal Ecology 1365–2656. doi: 10.1111/1365-2656.12523
 7. **White J.R.**, Meekan, M.G., McCormick, M.I. (2015) Individual consistency in boldness and activity in newly settled reef fish. PeerJ 3:e961. doi: 10.7717/peerj.961
 8. **White J.R.**, McCormick M.I., Meekan M.G. (2013) Syndromes or flexibility: Behavior during a Life History Transition of a Coral Reef Fish. PLoS ONE 8(12):e84262. doi: 10.1371/journal.pone.0084262
 9. Chivers, D.P., Dixson, D.L., **White, J.R.**, McCormick, M.I., Ferrari, M.C.O. (2013) Degradation of chemical alarm cues and assessment of risk throughout the day. Ecology and Evolution. doi: 10.1002/ece3.760
 10. **White J.R.**, Meekan M.G., McCormick M.I., Ferrari M.C.O. (2013) A Comparison of Measures of Boldness and Their Relationships to Survival in Young Fish. PLoS ONE 8(7): e68900. doi:10.1371/journal.pone.0068900

Conference Presentations

**Presenting Author*

1. **White, J.R.***, Using long term data to highlight suitable environmental conditions for Longfin Smelt. Oral presentation at the 2021 Bay-Delta Science Conference. (Virtual, April 6-9, 2021)
2. **White, J.R.***, Baxter, R.D. Incorporating expanded sampling into an alternative abundance index for the Fall Midwater Trawl Survey. Poster presentation at 14th Biennial State of the San Francisco Estuary Conference. (Oakland, CA, October 21-22, 2019)
3. **White, J.R.***, Baxter, R.D. Smelt abundances in Cache Slough and other non-index stations sampled in the Fall Midwater Trawl survey. Oral presentation at the 51st American Fisheries Society, Cal-Neva Chapter Meeting. (Eureka, CA April 5-7, 2017)
4. **White, J.R.***, Baxter, R.D. Smelt abundances in Cache Slough and other non-index stations sampled in the Fall Midwater Trawl survey. Oral presentation at the 2017 Interagency Ecological Program Workshop. (Folsom, CA March 1-3, 2017)
5. **White, J.R.***, Killen, S., Meekan, M.G., McCormick, M.I. Metabolic phenotype of the hunter affect the outcome of predator-prey encounters. Oral presentation at the International Society of Behavioural Ecology Conference. (New York City, USA, July 31 - August 5, 2014)
6. **White, J.R.***, McCormick, M.I., Meekan, M.G. The relationship between boldness and learning in a tropical reef fish. Oral presentation at the 9th Indo-Pacific Fish Conference. (Okinawa, Japan, June 24-28, 2013)
7. **White, J.R.***, McCormick, M.I., Meekan, M.G. The relationship between boldness and learning in a tropical reef fish. Oral presentation at the annual JCU Marine and Tropical Biology Student's Conference. (Townsville, Australia, June 3-4, 2013)
8. **White, J.R.***, Meekan, M.G., McCormick, M.I., Ferrari, M.C.O. A comparison of field methods for assessing boldness in fishes. Oral presentation at the 12th International Coral Reef Symposium. (Cairns, Australia, July 9-13, 2012)
8. **White, J.R.***, Meekan, M.G., McCormick, M.I., Ferrari, M.C.O. A comparison of field methods for assessing boldness in fishes. Oral presentation at the annual JCU Marine and Tropical Biology Student's Conference (Townsville, Australia, Sept. 29-30, 2011)
9. Basch, L.V., Leemhuis, A., **White, J.R.***, Walsh, W. Recruitment Dynamics of Scleractinian Corals in a network of National Parks and Marine Protected Areas: West Coast Hawai'i Island. Oral presentation at the 16th annual Hawai'i Conservation Conference (Honolulu, HI, July 29-31, 2008)
10. Basch, L.V., Leemhuis, A., **White, J.R.***, Walsh, W. Recruitment Dynamics of Scleractinian Corals in a network of National Parks and Marine Protected Areas: West Coast Hawai'i Island. Poster presentation at the 11th International Coral Reef Symposium (Ft. Lauderdale, FL, July 7-11, 2008)

James Ryan White, PhD

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Invited Talks 1. The role of boldness and other personality traits in the ecology of juvenile marine fishes. Oral presentation hosted by the Glasgow Fish Biology group at Glasgow University (Glasgow, Scotland, January 12, 2016).

Grants and Awards

2016

- International Society of Behavioural Ecology Travel Grant (US\$1600)

2014

- James Cook University Graduate Research Scheme Travel Grant (AU\$2000)
- AIMS@JCU Travel Grant (AU\$1500)
- AIMS@JCU Pilot Research Award (AU\$1000)
- International Society of Behavioural Ecology Travel Grant (US\$2000)

2013

- AIMS@JCU Travel Grant (AU\$2000)

2012

- James Cook University International Research Scholar (AU\$53,228 p.a. for 3 yrs)
- Best Oral Presentation, AIMS@JCU Seminar Day (AU\$2000)

2011

- Best Oral Presentation, JCU Marine and Tropical Biology Postgraduate Conference (AU\$250)
- Bronze Medal, Queensland Amateur Brewing Championship