

Steven J. Lindfield, Ph.D.

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D.O.B.: 16/12/1984

EDUCATION

- 2010-2015 University of Western Australia, Crawley, WA, Australia
- Doctor of Philosophy (PhD)
 - *Depth refuge and the impacts of fishing on coral reef fish communities*
- 2003-2007 University of Newcastle, Ourimbah, NSW, Australia
- Bachelor of Science (Honours) - Class 1 Honours (>85%) Marine Science

PROFESSIONAL EXPERIENCE

Positions

- 2016-2019 Coral Reef Research Foundation, Koror, Palau
- Research Scientist
 - Scientific diving, fishery-independent and-dependent surveys, oceanographic fieldwork, stereo-video, fish life history, reef fish spawning aggregations, mesophotic surveys and specimen collections
 - Contracts from AIMS to complete baited remote underwater video surveys in Palau, Chuuk and Pohnpei for the Global FinPrint project
 - Contract from Rare Micronesia for supporting Fisheries Sustainability Science and Policy in Micronesia
 - Contract from Biospherics for life history analysis of 7 reef fish species
 - Contracts from TNC Indonesia for assessing shark and ray bycatch in Indonesian snapper and grouper fisheries
 - Grouper spawning aggregation monitoring with Yvonne Sadovy
- 2015-2016 Palau International Coral Reef Center, Koror, Palau
- Fisheries researcher
 - Science and monitoring of Palau's Northern Reef Fisheries Management Project
- 2007-2008 NSW Department of Primary Industries, Cronulla NSW Australia
- Fisheries Technician (Casual)
- 2006-2009 University of Newcastle, NSW, Australia
- Research Assistant for Associate Professor William Gladstone

Consulting

- 2014 Biospherics Pty Ltd.
- Consultant to Jeremy Prince to work on fisheries and stereo-video projects. Palau fieldwork, image analysis for fish catches in Solomon Islands and Fiji
- 2014 Conservation International

- BRUVs shark monitoring project (Jan/Feb 2014)
- 2013 Catlin Seaview Survey
- Raja Ampat survey (Feb 2013)
- 2009-10 Cardno Ecology Lab
- Casual scientific diver and fisheries observer for Sydney based work
- 2009 NSW Marine Park Authority
- Baited remote underwater video surveys at NSW Marine Parks

SCIENTIFIC PUBLICATIONS

Google Scholar profile: <https://scholar.google.com.au/citations?user=m9LgZ3AAAAAJ&hl=e>

- H-index = 10

Research Gate profile: https://www.researchgate.net/profile/Steve_Lindfield

- RG score = 23.44

Published articles

- Sadovy De Mitcheson, Y.J., Colin, P.L., **Lindfield, S.J.**, Bukurrou, A. (2020). A decade of monitoring an Indo-Pacific grouper spawning aggregation: Benefits of protection and importance of survey design. *Frontiers in Marine Science*. 7. doi: 10.3389/fmars.2020.571878
- Andradi-Brown, D.A., Beer, A.J., Colin, L., Head, C.E., Hidayat, N.I., **Lindfield, S.J.**, Mitchell, C.R., Pada, D.N., Piesinger, N.M., Ahmadia, G.N., 2020. Highly diverse mesophotic reef fish communities in Raja Ampat, West Papua. *Coral Reefs*. doi: 10.1007/s00338-020-02020-7
- MacNeil, M.A., Chapman, D.D., Heupel, M., Simpfendorfer, C.A., Heithaus, M., et al. (2020). Global status and conservation potential of reef sharks. *Nature* 583, 801–806. <https://doi.org/10.1038/s41586-020-2519-y>
- Langlois, T., Goetze, J., Bond, T., Monk, J., Abesamis, R.A., et al. (2020). A field and video annotation guide for baited remote underwater stereo-video surveys of demersal fish assemblages. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.13470>
- Colin, P.L., **Lindfield, S.J.** (2019). Palau, in: *Mesophotic Coral Ecosystems*. Springer, pp. 285–299.
- Colin, P.L., Johnston, T.S., MacKinnon, J.A., Ou, C.Y., Rudnick, D.L., Terrill, E.J., **Lindfield, S.J.**, Batchelor, H. (2019). Ngaraard pinnacle, Palau: an undersea “island” in the flow. *Oceanography* 32, 164–173.
- Goetze, J.S., Bond, T., McLean, D.L., Saunders, B.J., Langlois, T.J., **Lindfield, S.**, Fullwood, L.A., Driessen, D., Shedrawi, G., Harvey, E.S. (2019). A field and video analysis guide for diver operated stereo-video. *Methods in Ecology and Evolution* 10, 1083–1090.
- Harasti, D., Williams, J., Mitchell, E., **Lindfield, S.**, Jordan, A. (2018). Increase in relative abundance and size of snapper *Chrysophrys auratus* within partially-protected and no-take areas in a temperate marine protected area. *Frontiers in Marine Science* 5.
- Harasti, D., Davis, T.R., Mitchell, E., **Lindfield, S.**, Smith, S.D.A. (2018). A tale of two islands: Decadal changes in rocky reef fish assemblages following implementation of no-take marine protected areas in NSW, Australia. *Regional Studies in Marine Science* 18, 229–236.
- Cimino, M., Colin, P., Schramek, T., **Lindfield, S.**, Domeier, M., Terrill, E. (2018.) Oceanographic, acoustic, and remote approaches reveal the spatio-temporal dynamics of blackfin snapper at an aggregation site in Palau. *Marine Ecology Progress Series* 601, 185–201.

- Jaiteh, V.F., **Lindfield, S.J.**, Mangubhai, S., Warren, C., Fitzpatrick, B., Loneragan, N.R., (2016). Higher abundance of marine predators and changes in fishers' behavior following spatial protection within the world's biggest shark fishery. *Frontiers in Marine Science* 3.
- Lindfield, S.J.**, Harvey, E.S., Halford, A.R., Mcllwain, J.L., (2015). Mesophotic depths as refuge areas for fishery-targeted species on coral reefs. *Coral Reefs* 35, 125-137.
- Lindfield SJ**, Harvey ES, Mcllwain JL, Halford AR (2014) Silent fish surveys: bubble-free diving highlights inaccuracies associated with SCUBA-based surveys in heavily fished areas. *Methods in Ecology and Evolution*. 5: 1061-69
- Taylor BM, **Lindfield SJ**, Choat, JH (2014). Hierarchical and scale-dependent effects of fishing pressure and environment on the structure and size distribution of parrotfish communities. *Ecography*. 38: 520-30.
- Lindfield SJ**, Mcllwain JL, Harvey ES (2014) Depth refuge and the impacts of SCUBA spearfishing on coral reef fishes. *PLoS ONE* 9: e92628.
- Houk, P, Rhodes, K, Cuetos-Bueno, J, **Lindfield, S.**, Fread, V, Mcllwain, JL (2012). Commercial coral-reef fisheries across Micronesia: A need for improving management. *Coral Reefs* 31: 13-26.
- Gladstone W, **Lindfield S**, Coleman M, Kelaher B (2012) Optimisation of baited remote underwater video sampling designs for estuarine fish assemblages. *Journal of Experimental Marine Biology and Ecology* 429:28-35
- Malcolm H, Gladstone W, **Lindfield S**, Wraith J, Lynch TP (2007) Spatial differences and temporal stability in reef fish assemblages of marine parks in New South Wales, Australia, observed using baited underwater video. *Marine Ecology Progress Series* 350: 277-290

Technical reports

- Lindfield, S.**, (2017). Palau's reef fisheries: changes in size and spawning potential from past to present (Technical Report). Coral Reef Research Foundation, Palau
- Lindfield, S.**, (2016). Summary of the 2015 fishery creel and market survey in Palau (Technical Report). Coral Reef Research Foundation, Palau.

CONFERENCE PROCEEDINGS

- Lindfield S**, Gouezo M, Olsudong D, Prince J, Victor S (2016) Palau's northern reefs: Science and monitoring used to guide the management and assess the recovery of coral reef fish stocks. *13th International Coral Reef Symposium*, Honolulu, July 2016
- Lindfield S**, Harvey E, Mcllwain J (2013) Diver surveys affect counts and behavioural response of fish across MPA boundaries. 9th Indo-Pacific Fish Conference, Okinawa, Japan, June 2013.
- Lindfield S**, Taylor B, Mcllwain J, Harvey E (2012) Sampling reef fish communities in the remote waters of Micronesia. *12th International Coral Reef Symposium* Cairns, July 2012
- Lindfield S**, Gladstone W, Jordan AJ (2007) Spatial, temporal and depth-related variation in reef fish assemblages of the Port Stephens-Great Lakes Marine Park, detected with baited remote underwater video stations (BRUVS). *Australian Society for Fish Biology*, Canberra, Sept 2007.
- Gilbert P. Whitley Award (best junior student oral paper at the Annual conference)

ACADEMIC SUPERVISION

- Angela Beer (MSc) - Royal Roads University, Victoria, British Columbia, Canada
 - Primary thesis supervisor (May 2013 – January 2015)
 - *Diversity and abundance of sharks in no-take and fished sites in the marine protected area network of Raja Ampat, West Papua, Indonesia, using baited remote underwater video (BRUV).*

SKILLS / EXPERIENCE

- Experienced scientific SCUBA diver (over 1500 dives), ADAS Scientific diver (AS 2815), AAUS Scientific diver, experienced mixed gas closed-circuit rebreather diver with experience to 130 m depth.
- Extensive use of stereo-video techniques for fish and benthic surveys: Baited remote underwater video stations, stereo diver-operated video, fish landing surveys using 3D camera. Video analysis using SeaGIS software (EventMeasure, CAL, TransectMeasure).
- Coral reef fish stock assessments using length based spawning potential ratio (LB-SPR).
- Coral reef fish life history: Reproductive biology from dissection and interpretation of fish gonads using histology, collection of otoliths, stable isotope samples and DNA.
- Fish survey projects in tropical and temperate regions: Good knowledge of reef fish diversity in the Indo-Pacific, scientific surveys and statistical analysis of ecological data
- Coastal oceanography: Deploying and recovering of benthic mounted ADCPs and thermographs to depths of 100 m, ROV and wave glider deployment and recovery.
- Commercial fishing experience and scientific observing for commercial fisheries in NSW.
- Programming using R - Statistical analysis and data visualisations.
- Project management and reporting for contract work.
- Experienced skippering vessels to 12 m with NSW Coxswains certificate.
- Participated in acoustic fish tagging projects on grouper spawning aggregations and manta rays in Palau and Pohnpei.
- Research cruise experience: Mariana Islands on the NOAA ship Oscar Elton Sette (Feb 2010), Yap to Chuuk - Federated States of Micronesia on the SS Thorfinn (July 2011). Ambon to Morotai Indonesia on the LIPI research ship Baruna Jaya VII (Sept 2012).

SCHOLARSHIPS / GRANTS

- NOAA Saltonstall-Kennedy Competitive Research Program 2017
 - Validating Underwater Stereo-video for Determining Life-history Parameters of Aggregation Spawning Coral Reef Fishes (\$183,000 USD). Nov 2017 - Nov 2020.
 - National Fish and Wildlife Foundation (via NOAA Coral Reef Conservation Program) - PI
 - Abundance and Size Structure of Reef Fish at Galvez Bank in Guam (\$9000 USD)
 - Benthic Habitat Mapping for Reef Fish Monitoring in the CMNI (\$9000 USD)
 - National Geographic Society Committee for Research and Exploration
 - Young explorer grant for "Reef fish communities in the remote waters of Micronesia" (\$4800 USD)
 - University of Western Australia
 - Australasian Postgraduate Award with UWA Safety Net Top-Up Scholarship
 - Jean Rogerson Postgraduate Top-Up Scholarship
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- Our World-Underwater Scholarship Society
 - 2008 Australasian Rolex Scholar

ACCREDITATIONS / LICENSES / PROFESSIONAL MEMBERSHIPS

- AAUS Scientific diver (with eCCR Inspiration rebreather endorsement)
- ADAS Scientific diver (AS 2815)
- IANTD CCR Trimix diver
- IANTD Poseidon se7en rebreather diver
- PADI Dive Master
- NSW Maritime unrestricted Coxswain
- Certificate II in Transport and Distribution (Maritime Operations)
- Occupational Diving: Research and Limited Scientific Diving (AS/NZS 2299.2)
- Unrestricted drivers licence with 4WD experience
- Senior First Aid Certificate
- DAN oxygen for dive accidents with CPR
- Explorers club - Member since 2008

PROFESSIONAL REFEREES

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