

Dr Christina Emily Skinner

BSc (Hons), MSc, PhD

Home: +61-458-468-340; **E-mail:** christina.skinner@live.com; **Date of birth:** 03/09/1990
Nationality: Belgian/British **Languages:** English, French, Dutch

Education:

2020: **PhD Marine Science, Newcastle University, UK**

- **Thesis:** Elucidating coral reef predator trophodynamics across an oceanic atoll.
- **Advisors:** Professor Nick Polunin, Dr Steve Newman, Professor Aileen Mill.

2012: **MSc Tropical Coastal Management: Distinction, Newcastle University, UK**

- **Thesis:** Chronic spearfishing may indirectly affect reef health through reductions in parrotfish bite rates (see publications: <https://doi.org/10.1111/jfb.13939>).
- **Advisor:** Professor Nick Polunin

2011: **BSc Marine Biology: First Class Honours, Newcastle University, UK**

2008: **European Baccalaureate: 83.72%, European School Brussels III, Belgium**

Professional and research experience:

Jun 2022 – Present: **Postdoctoral Fellow, University of Queensland, Australia**

Modelling management responses to Crown-of-Thorn starfish outbreaks on the Great Barrier Reef.

- Contributed to the extension of ecosystem models of the Great Barrier Reef, with a specific focus on modelling management responses to Crown-of-Thorn starfish outbreaks and analysed outputs.
- Liaised with key stakeholders, including the GBRMPA, GBRF, and CSIRO, to ensure cohesion with management priorities and concerns, including the organisation of in-person workshops.
- Prepared scientific manuscripts and reports to contribute valuable insights to the scientific community and decision-makers.
- Supervised two staff members working on sub-projects related to the main objectives.
- Presented findings to diverse audiences at national conferences, workshops, and seminars.
- Engaged with local schools and communities, delivering educational talks about marine science and conservation to raise awareness about ongoing efforts to protect the Great Barrier Reef.

Jul 2020 – May 2022: **Postdoc Fellow & Lab Manager, HKUST, Hong Kong**

Exploring marine food webs across human-environmental gradients using an integrative approach.

- Conducted diverse projects requiring extensive fieldwork and laboratory analysis.
- Coordinated research activities, data collection, and oversaw the work of the research team.
- Led the analysis and write-up of several older datasets into scientific manuscripts.
- Appointed as lab manager - responsible for setting up and maintaining the research group's lab space, including training lab members in techniques, organising and ordering equipment, ensuring lab safety protocols were followed, and providing a conducive environment for scientific research.
- Trained students in various lab techniques and supervised and mentored students in their research projects, fostering a supportive and collaborative learning environment.
- Presented findings at national and international conferences, invited seminars, and workshops. Visited students at local schools and Skyped classes internationally to speak about marine science.

2018: Jan - Feb: **Visiting Scientist, Holland Lab, HIMB, Hawai'i**

Training in acoustic telemetry and satellite tagging techniques on large marine predators.

2015 Jan - Apr 2016: **Researcher, Newcastle University & Haribon Foundation, Philippines**

Lead field scientist for a Darwin Initiative project on fish extirpations in the Philippines.

- Organized three months extensive underwater fieldwork in challenging and remote environments. Ensured logistics, equipment, and safety measures were in place for a successful expedition.
- Supervised a field dive team of three researchers, providing guidance and support during the fieldwork. Determined appropriate surveying methods and techniques to accurately collect data.
- Prepared reports to summarize findings for local stakeholders, government entities, and project funders, ensuring accessibility to different audiences.

2014: Nov - Dec: **Researcher, CARMABI, Curaçao & ZMT, Bremen**

Field and lab manager for a project investigating brown algae distributions on reefs in Curaçao.

- Fish behaviour studies, algal growth and macroalgal removal experiments, sample analysis.
- Supervised field assistants in collecting data to ensure adherence to methods.
- Led all lab work back in Germany; measuring algae for phenolic content and stable isotopes.

2014: Apr – May: **Research Assistant, Bonaire**

Reef benthic survey scientist and dive supervisor for a project linking reef complexity to reef fish.

- Collected data on reef complexity, benthic characteristics, and fish communities.
- Supervised the fieldwork components of MSc students' thesis projects. Provided guidance and mentorship, fostering a collaborative and supportive research environment.
- Contributed to the writing of reports, effectively communicating research findings.

2013 Sep – Feb 2014: **CNRS Research Assistant, CRIOBE, Mo'orea, French Polynesia**

Field and lab manager for a project investigating microscale coral-algal interactions.

- Planned all field and lab components of the project while supervising an MSc student.
- Collection of coral cores for measuring in flow chambers, set-up of permanent photo quadrats.
- Extensive data collection and organisation, followed by preparing manuscripts for publication.
- Presented findings at scientific meetings and seminars.

2013 Feb – Apr 2014: **Research Assistant, and Visiting Scientist, Newcastle University**

Reef benthic survey scientist for a project on reef use impacts on Caribbean UKOT reefs.

- Conducted extensive coral reef benthic surveys in Caribbean UK Overseas Territories.
- Contributed to organizing and planning diving trips for fieldwork in various locations. Ensured smooth logistics, equipment readiness, and efficient scheduling for successful research expeditions.
- Engaged with local stakeholders in Anguilla, the Turks and Caicos Islands, and the British Virgin Islands. Presented research results at community and government meetings.

Publications:

1. **Skinner C**, Mourier J, Kiszka J. Mobile predators as vectors of pelagic subsidies to internal coral reef lagoons. *In prep.*

2. **Skinner C**, Prince KRF, Polunin NVC, Mumby PJ, Williams SM, Sánchez C, Dryden CS, Newman SP. **Coral Reefs**. MPA Success in the Caribbean: The influence of design, habitat, and management. *In review*.
3. **Skinner C**, Bozec Y-M, Fletcher CS, Mumby PJ. Maximising the benefits of local management for coral reefs amidst environmental change. **Journal of Environmental Management**. *In revision*.
4. **Skinner C**, Bozec Y-M, Matthews SA, Williamson DH, Beeden R, Mumby PJ. (2024) Advancing projections of Crown-of-Thorns Starfish to support management interventions. **Science of the Total Environment**. <https://doi.org/10.1016/j.scitotenv.2024.175282>
5. **Skinner C**, Gallimore G, Polunin NVC, Rushton S, Newman SP, Desbiens S, Mill AC. (2024) Corresponding planktivore and predator spatial distributions in an oceanic coral reef system. **Coral Reefs**. <https://doi.org/10.1007/s00338-024-02514-8>
6. Raoult V, Phillips AA, Nelson J, Niella Y, **Skinner C**, Tilcock MB, Burke PJ, Szpak P, James WR, Harrod C. (2024) Why aquatic scientists should use sulfur stable isotope ratios ($\delta^{34}\text{S}$) more often. **Chemosphere**. <https://doi.org/10.1016/j.chemosphere.2024.141816>
7. Robinson JPW, Benkwitt CE, Maire E, Morais R, Schiettekatte NMD, **Skinner C**, Brandl SJ. (2023) Quantifying energy and nutrient fluxes in coral reef food webs. **Trends in Ecology and Evolution**. <https://doi.org/10.1016/j.tree.2023.11.013>
8. **Skinner C**, Cobain MRD, Zhu Y, Wyatt ASJ, Polunin NVC. (2022) Progress and direction in the use of stable isotopes to understand complex coral reef ecosystems: a review. **OMBAR**. <https://doi.org/10.1201/9781003288602-8>
9. **Skinner C**, Pei Y-D, Morimoto N, Miyajima T, Wyatt ASJ. (2022) Stable isotopes elucidate body-size and seasonal fluctuations in the feeding strategies of planktivorous fishes across a semi-enclosed tropical embayment. **Front. Ecol. Evol.** <http://doi.org/10.3389/fevo.2022.942968>
10. Cybulski JD and **Skinner C (co-first authors)**, Wan Z, Wong CKM, Toonen RJ, Gaither MR, Soong K, Wyatt ASJ, Baker DM. (2022) Improving stable isotope assessments of inter- and intra-species variation in coral reef fish trophic strategies. **Ecol. Evol.** <http://doi.org/10.1002/ece3.9221>
11. Bennett-Williams J, **Skinner C**, Wyatt ASJ, McGill RAR, Willis T. (2022) A multi-tissue, multi-species assessment of lipid and urea stable isotope biases in mesopredator elasmobranchs. **Front. Mar. Sci.** <http://doi.org/10.3389/fmars.2022.821478>
12. **Skinner C**, Mill AC, Fox MD, Newman SP, Zhu M, Kuhl A, Polunin NVC (2021) Offshore pelagic subsidies dominate carbon inputs to coral reef predators. **Sci. Adv.** <http://doi.org/10.1126/sciadv.abf3792>
13. **Skinner C**, Mill AC, Newman SP, Alsagoff SN, Polunin NVC (2020) The importance of oceanic atoll lagoons for coral reef predators. **Mar. Biol.** <https://doi.org/10.1007/s00227-019-3634-x>

Christina Skinner

14. **Skinner C**, Mill AC, Newman SP, Newton J, Cobain MRD, Polunin NVC (2019) Novel tri-isotope ellipsoid approach reveals dietary variation of sympatric predators. **Ecol. Evol.**
<http://doi.org/10.1002/ece3.5779>
15. **Skinner C**, Newman SP, Mill AC, Newton J, Polunin NVC (2019) Prevalence of pelagic dependence among coral reef predators across an atoll seascape. **J. Anim. Ecol.**
<http://doi.org/10.1111/1365-2656.13056>
16. **Skinner C**, Newman SP, Box S, Narozanski A, Polunin NVC (2019) Chronic spearfishing may indirectly affect reef health through reductions in parrotfish bite rates. **J. Fish. Biol.**
<http://doi.org/10.1111/jfb.13939>
17. Jorissen H, **Skinner C**, Osinga R, de Beer D, Nugues MM (2016) Evidence for water-mediated mechanisms in coral–algal interactions. **Proc. Royal Soc. B.** <http://doi.org/10.1098/rspb.2016.1137>

Grants and awards:

2024: UQ Rising Star Award (nominated)

2024: University of Queensland CBCS Workshop Funding: AUD\$1500

2022: Distinguished Postdoctoral Scholar Fellowship, Florida International University: \$65,000*

2022: Research Travel Grant Award, HKUST: HK\$13,412

2018-2019: Life Sciences Mass Spectrometry Facility Grant-in-Kind, NERC: £32,533

2017-2018: Life Sciences Mass Spectrometry Facility Grant-in-Kind, NERC: £10,515

2016-2017: Life Sciences Mass Spectrometry Facility Grant-in-Kind, NERC: £19,051

2016-2020: Doctoral Training Award, Newcastle University: £80,000

2011-2012: Expeditions Committee Award, Newcastle University: £1000

*(Declined as I had another employment offer)

Conferences and invited presentations (first author/presenter only included):

Skinner C. Using stable isotopes to understand complex coral reef ecosystems: advances, challenges, and future directions. *Ozitope*. Nov 2024. **Oral presentation.**

Skinner C. Disrupting outbreaks of Crown-of-thorns starfish on the Great Barrier Reef. *UQ Centre for Marine Science TalkFest*. Jul 2024. **Invited presentation.**

Skinner C et al. Ecological assessments of alternative Crown of Thorns Starfish control strategies using regional models of the Great Barrier Reef. *Reef Resilience Symposium*. Cairns, Australia. April 2024. **Oral presentation.**

Skinner C et al. Evaluating the Effectiveness of Different Control Scenarios for Managing Crown of Thorns Starfish Outbreaks on the Great Barrier Reef. *Australian Marine Science Association*. Gold Coast, Australia. Jul 2023. **Oral presentation.**

Skinner C et al. Management Strategies for the Crown of Thorns Starfish. *Reef Check Australia – Coast to Coral Seminar Series*. Online. Jun 2023. **Invited presentation.**

Christina Skinner

Skinner C et al. Applying sulfur isotopes to delineate reef fish trophodynamics. *The 2nd International Symposium on Marine Science and Engineering for Young Scientists and Postgraduates*. Online. Jul 2022. **Invited presentation.**

Skinner C et al. Offshore pelagic subsidies dominate carbon inputs to coral reef predators. *ICRS*. Bremen, Germany. Jul 2022. **Oral presentation.**

Skinner C et al. Applying sulfur isotopes to delineate reef fish trophodynamics. *IsoEcol*. Gaming, Austria. Jun 2022. **Online presentation.**

Skinner C et al. Progress and direction in the use of stable isotopes to understand complex coral reef ecosystems: a review. BECoME: Stable Isotope Training Workshop, *City University of Hong Kong*. Jan 2022. **Invited presentation.**

Skinner C et al. Tracking human-environmental gradients in marginal coral ecosystems across Hong Kong. BECoME. *City University of Hong Kong*. Jan 2022. **Oral presentation.**

Skinner C et al. Tracking human-environmental gradients in marginal coastal systems across Hong Kong. *The 1st International Symposium on Marine Science and Engineering for Young Scientists and Postgraduates*. Online. Jul 2021. **Invited presentation and session chair.**

Skinner C et al. Offshore pelagic subsidies dominate carbon inputs to coral reef predators. *IsoEcol*. Online. May 2021. **Oral presentation.**

Skinner C. Role of predators in tropical ecosystems connectivity. *Division of Ecology & Biodiversity Seminar Series, Hong Kong University*. Hong Kong. Feb 2021. **Invited presentation.**

Skinner, C. Role of predators in tropical ecosystems connectivity. *Ocean Science Department Seminar Series, University of Science and Technology*. Hong Kong. Jan 2021. **Invited presentation.**

Skinner C. Coral reef predators and their food webs. *Delve Deeper: Newcastle University Distance Learning Marine Biology Course*. Online. May 2020. **Invited presentation.**

Skinner C. Disentangling the drivers of predators on coral reefs. *R Ladies User Group Newcastle*. Newcastle, UK. Sep 2019. **Guest lecturer.**

Skinner C et al. Carbon isotopes of essential amino acids highlight pelagic subsidies to predators on oceanic coral reefs. *Reef Conservation UK*, London, UK. Dec 2019. **Oral presentation.**

Skinner C et al. Prevalence of pelagic dependence among coral reef predators across an atoll seascape. *54th European Marine Biology Symposium*, Dublin, Ireland. Aug 2019. **Oral presentation.**

Skinner C et al. Prevalence of pelagic dependence among coral reef predators across an atoll seascape. *Marine Biological Association 16th Annual Postgraduate Conference*, Newcastle, UK. May 2019. **Oral presentation and session chair.**

Skinner C et al. Role of predators in tropical ecosystems connectivity. *European Coral Reef Symposium*, London, UK. Dec 2017. **Oral presentation.**

Skinner C et al. Responding to fish extirpations in the global marine biodiversity epicentre. *13th International Coral Reef Symposium*, Honolulu, Hawaii. Jun 2016. **Oral presentation.**

Teaching experience:

2025 January: **Postdoctoral Fellow, University of Queensland.**

- **Lecturer:** Delivered R workshop components for MSc course CONS7024.

2020 September – Jun 2022: **Postdoc fellow, Department of Ocean Science, HKUST**

- **Co-supervisor:** Joshua Bennett-Williams, MPhil - *Validating elasmobranch mucus as an ecological indicator in stable isotope studies.*
- **Co-supervisor of Undergraduate Research Opportunities Program:** *Characterising coral reef function across anthropogenic gradients.*
- **Lecturer and Group Project Supervisor** for ISOCAMP ASIA 2022: *Sulfur isotopes in the ocean and lithosphere.*
- Trained BSc, MSc, and PhD students in stable isotope processing and analysis techniques.
- Development and teaching of R skills workshops for BSc, MSc, and PhD students.

2016 April – March 2020: **Teaching assistant and demonstrator, Newcastle University**

- Completed **Introduction to Learning and Teaching in Higher Education** Certification.
- **Demonstrator** for modules involving field (terrestrial and marine), lab (including dissections), and computer (ArcGIS; PRIMER; R) components. Gave presentations, taught required skills, led group discussions for BSc and MSc modules.
- Marked assignments, assessments, and presentations.
- Developed and taught a multivariate ecological statistics workshop using R.

2014: April – May: **Field supervisor, Bonaire**

- Supervised fieldwork of two MSc projects: taught reef fish ID and underwater survey skills.

Voluntary service:

- **Queensland Wonder of Science Flying Scientist** (2023 – 2024).
- **Skype a Scientist** (2020 – current): Australia, France, Hong Kong, Sweden, UAE, UK, USA.
- **Associate Editor** for Ecology and Evolution.
- **Review Editor** for Frontiers in Marine Science.
- **Research Proposal Reviewer:** North Carolina Sea Grant.
- **Reviewer:** Belgian Journal of Zoology, Coral Reefs; Ecology and Evolution; Frontiers in Marine Science; Ecological Applications; Ecosystems; Isotopes in Environmental and Health Studies; Journal of Applied Ecology; Journal of Experimental Marine Biology and Ecology; Journal of Fish Biology; Marine Ecology Progress Series; Proceedings of the Royal Society B.
- **Deputy Chair** of the University of Queensland Centre for Marine Science *Early and Mid-Career Researcher Committee* (current).
- **Early Career Committee member** of the *International Coral Reef Society* (2022 – 2024).
- **School outreach** (classes in Hong Kong) and **Scientist for Skype a Scientist** (classes worldwide)
- **Co-chair & secretary** Marine Biological Association Postgrad Conference, 6-8 May 2019.
- **Student chair** of Newcastle University Ecology research group (2017-2019).
- **Undergraduate student representative** for one year (2010).
- **Postgraduate student representative** for three consecutive years (2017-2019).

Certifications:

- Scuba diving (18 yr+): PADI Divemaster, Deep, Nitrox, TDI Intro to Tech Diving, 1200+ dives

Christina Skinner

- BSAC Diver Coxswain and BSAC Dive Equipment Care and Maintenance
- DAN Diving First Aid for Professional Divers, EFR First Aid, First Aid at Work
- HLTAID011 & HLTAID015 (First Aid and Advanced Resuscitation) (current)
- NPLQ lifeguard, PADI Emergency Oxygen Provider
- Personal sea survival techniques (2009), approved by Maritime & Coastguard Agency, UK
- British Divers Marine Life Rescue Marine Mammal Medic (2010)
- Full clean Belgian driving license

Memberships:

- Australian Coral Reef Society (2022 - current)
- Australian Marine Science Association (2023 – current)
- International Coral Reef Society (2021 - current)