

AIMS Annual Report 2023-2024
2023 publications

The following publications were Published to a Journal in 2023

1. Keren Maor-Landaw, Marion Eisenhut, Giada Tortorelli, Allison van de Meene, Samantha Kurz, Gabriela Segal, Madeleine J H van Oppen, Andreas P M Weber, Geoffrey I McFadden (2023) A candidate transporter allowing symbiotic dinoflagellates to feed their coral hosts, *ISME Communications*, Volume 3, Issue 1, <https://doi.org/10.1038/s43705-023-00218-8>
2. Li, J., Zou, Y., Li, Q. et al. (2023) A coral-associated actinobacterium mitigates coral bleaching under heat stress. *Environmental Microbiome* 18, 83. <https://doi.org/10.1186/s40793-023-00540-7>
3. Parsons, M.J.G. et al. (2023). *A Global Library of Underwater Biological Sounds (GLUBS): An Online Platform with Multiple Passive Acoustic Monitoring Applications.* In: Popper, A.N., Sisneros, J., Hawkins, A.D., Thomsen, F. (eds) *The Effects of Noise on Aquatic Life*. Springer, Cham. https://doi.org/10.1007/978-3-031-10417-6_123-1
4. Brooker, R. M., Carnell, P. E., Pocklington, J. B., Antos, M. J., & Weston, M. A. (2023). *A review of the potential effects of recreational wind-powered craft on coastal habitats and wildlife*. Journal of Environmental Planning and Management, 1–25. <https://doi.org/10.1080/09640568.2023.2228475>
5. Lisa A. Golding, Monique T. Binet, Merrin S. Adams, Justin Hochen, Craig A. Humphrey, Gwilym A.V. Price, Amanda J. Reichelt-Brushett, Matthew Salmon, Jenny L. Stauber. *Acute and chronic toxicity of manganese to tropical adult coral (Acropora millepora) to support the derivation of marine manganese water quality guideline values*, Marine Pollution Bulletin, Volume 194, Part B, (2023) <https://doi.org/10.1016/j.marpolbul.2023.115242>
6. Binet, M.T., Reichelt-Brushett, A., McKnight, K., Golding, L.A., Humphrey, C. and Stauber, J.L. (2023), Adult Corals Are Uniquely More Sensitive to Manganese Than Coral Early-Life Stages. *Environ Toxicol Chem*, 42: 1359-1370. <https://doi.org/10.1002/etc.5618>
7. Doering Talisa, Maire Justin, van Oppen Madeleine J. H., Blackall Linda L. (2023) Advancing coral microbiome manipulation to build long-term climate resilience. *Microbiology Australia* 44, 36-40 <https://doi.org/10.1071/MA23009>
8. Rebecca von Hellfeld, Christoph Gade, Darren J. Koppel, William J. Walters, Fenny Kho, Astley Hastings. An approach to assess potential environmental mercury release, food web bioaccumulation, and human dietary methylmercury uptake from decommissioning offshore oil and gas infrastructure, *Journal of Hazardous Materials*, Volume 452, (2023) <https://doi.org/10.1016/j.jhazmat.2023.131298>

9. Somaweera, R., Udyawer, V., Amarasinghe, A.A.T. *et al.* Apparent coordinated and communal hunting behaviours by Erabu sea krait *Laticauda semifasciata*. *Sci Rep* 13, 21471 (2023). <https://doi.org/10.1038/s41598-023-48684-3>
10. Stauber, J.L., Gadd, J., Price, G.A.V., Evans, A., Holland, A., Albert, A., Batley, G.E., Binet, M.T., Golding, L.A., Hickey, C., Harford, A., Jolley, D., Koppel, D., McKnight, K.S., Morais, L.G., Ryan, A., Thompson, K., Van Genderen, E., Van Dam, R.A. and Warne, M.S.J. (2023), Applicability of Chronic Multiple Linear Regression Models for Predicting Zinc Toxicity in Australian and New Zealand Freshwaters. *Environ Toxicol Chem*, 42: 2614-2629 <https://doi.org/10.1002/etc.5722>
11. Maire, J., Deore, P., Jameson, V.J., Sakkas, M., Perez-Gonzalez, A., Blackall, L.L. *et al.* (2023) Assessing the contribution of bacteria to the heat tolerance of experimentally evolved coral photosymbionts. *Environmental Microbiology*, 25(12), 3298–3318. Available from: <https://doi.org/10.1111/1462-2920.16521>
12. Jewell, O. J. D., D'Antonio, B., Blane, S., Gosden, E., Taylor, M. D., Calich, H. J., Fraser, M. W., & Sequeira, A. M. M. (2023). Back to the wild: movements of a juvenile tiger shark released from a public aquarium. *Journal of Fish Biology*, 103(3), 735–740. <https://doi.org/10.1111/jfb.15464>
13. Asunsolo-Rivera, A., Lester, E., Langlois, T. *et al.* Behaviour of mesopredatory coral reef fishes in response to threats from sharks and humans. *Sci Rep* 13, 6714 (2023). <https://doi.org/10.1038/s41598-023-33415-5>
14. Anderson-King, K.D., Wayman, C., Stephenson, S. *et al.* Branching coral growth and visual health during bleaching and recovery on the central Great Barrier Reef. *Coral Reefs* 42, 1113–1129 (2023). <https://doi.org/10.1007/s00338-023-02403-6>
15. Davies SW, Gamache MH, Howe-Kerr LI, Kriefall NG, Baker AC, Banaszak AT, Bay LK, Bellantuono AJ, Bhattacharya D, Chan CX, Claar DC, Coffroth MA, Cunning R, Davy SK, del Campo J, Díaz-Almeyda EM, Frommlet JC, Fuess LE, González-Pech RA, Goulet TL, Hoadley KD, Howells EJ, Hume BCC, Kemp DW, Kenkel CD, Kitchen SA, LaJeunesse TC, Lin S, McIlroy SE, McMinds R, Nitschke MR, Oakley CA, Peixoto RS, Prada C, Putnam HM, Quigley K, Reich HG, Reimer JD, Rodriguez-Lanetty M, Rosales SM, Saad OS, Sampayo EM, Santos SR, Shoguchi E, Smith EG, Stat M, Stephens TG, Strader ME, Suggett DJ, Swain TD, Tran C, Traylor-Knowles N, Voolstra CR, Warner ME, Weis VM, Wright RM, Xiang T, Yamashita H, Ziegler M, Correa AMS, Parkinson JE. (2023) Building consensus around the assessment and interpretation of Symbiodiniaceae diversity. *PeerJ* 11:e15023 <https://doi.org/10.7717/peerj.15023>
16. Scharfenstein, H. J., Alvarez-Roa, C., Peplow, L. M., Buerger, P., Chan, W. Y., & van Oppen, M. J. H. (2023). Chemical mutagenesis and thermal selection of coral photosymbionts induce adaptation to heat stress with trait trade-offs. *Evolutionary Applications*, 16, 1549–1567. <https://doi.org/10.1111/eva.13586>
17. Maire J, Tandon K, Collingro A, van de Meene A, Damjanovic K, Gotze CR, Stephenson S, Philip GK, Horn M, Cantin NE, Blackall LL, van Oppen MJH. (2023) Colocalization and potential interactions of *Endozoicomonas* and chlamydiae in microbial aggregates

- of the coral *Pocillopora acuta*. *Science Advances* 9(20) <https://doi.org/10.1126/sciadv.adg077>
18. Doering, T.; Maire, J.; Chan, W.Y.; Perez-Gonzalez, A.; Meyers, L.; Sakamoto, R.; Butugamuwa, I.; Blackall, L.L.; van Oppen, M.J.H. Comparing the Role of ROS and RNS in the Thermal Stress Response of Two Cnidarian Models, *Exaiptasia diaphana* and *Galaxea fascicularis*. *Antioxidants* (2023) 12, 1057. <https://doi.org/10.3390/antiox12051057>
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20. Castro-Sanguino, Carolina, Yves-Marie Bozec, Scott A. Condie, Cameron S. Fletcher, Karlo Hock, Chris Roelfsema, David A. Westcott, and Peter J. Mumby. 2023. "Control Efforts of Crown-of-Thorns Starfish Outbreaks to Limit Future Coral Decline across the Great Barrier Reef." *Ecosphere* 14(6): e4580. <https://doi.org/10.1002/ecs2.4580>
21. Hillberg AK, Smith MK, Lausen BS, Suwansa-ard S, Johnston R, Mitu SA, MacDonald LE, Zhao M, Motti CA, Wang T, Elizur A, Nakashima K, Satoh N, Cummins SF. 2023. Crown-of-thorns starfish spines secrete defence proteins. *PeerJ* 11:e15689 <https://doi.org/10.7717/peerj.15689>
22. Cornwall, C.E., Carlot, J., Branson, O. et al. Crustose coralline algae can contribute more than corals to coral reef carbonate production. *Commun Earth Environ* 4, 105 (2023). <https://doi.org/10.1038/s43247-023-00766-w>
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24. Bessey, C., Depczynski, M., Goetze, J.S., Moore, G., Fulton, C.J., Snell, M., Parsons, S.K., Berry, O. and Wilson, S. (2023), Cryptic biodiversity: A portfolio-approach to coral reef fish surveys. *Limnol Oceanogr Methods*, 21: 594-605. <https://doi.org/10.1002/lom3.10567>
25. Megan Porter, Diane P. Barton, Shokoofeh Shamsi, David A. Crook, and Jo Randall (2023) Deciphering the complex trophic relationship of the black-spotted croaker (Teleostei: Sciaenidae) and its parasites using stable isotope analysis. *Canadian Journal of Zoology*. 101(5): 385-392. <https://doi.org/10.1139/cjz-2022-0126>
26. Miles Parsons, Lucia Di Iorio, Audrey Looby, T A. Mooney, Steve Simpson, Sierra Jarriel; Developing a Global Library of Underwater Biological Sounds and a World Oceans passive acoustic monitoring day. *J. Acoust. Soc. Am.* (2023) 154 (4_supplement): A314. <https://doi.org/10.1121/10.0023644>
27. Price, G.A.V., Stauber, J.L., Jolley, D.F., Koppel, D.J., Van Genderen, E.J., Ryan, A.C. and Holland, A. (2023), Development and Validation of Multiple Linear Regression Models for Predicting Chronic Zinc Toxicity to Freshwater Microalgae. *Environ Toxicol Chem*, 42: 2630-2641. <https://doi.org/10.1002/etc.5749>

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32. Smith HA, Chen CCM, Pollock FJ, Re M, Willis BL, Bourne DG (2023) Drivers of coral mortality in non-acute disturbance periods. *Mar Ecol Prog Ser* 717:37-50.
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33. F. Mikaela Nordborg, Diane L. Brinkman, Rebecca Fisher, Thomas F. Parkerton, Michael Oelgemöller, Andrew P. Negri. Effects of aromatic hydrocarbons and evaluation of oil toxicity modelling for larvae of a tropical coral, *Marine Pollution Bulletin*, Volume 196, (2023) <https://doi.org/10.1016/j.marpolbul.2023.115610>
34. Yadav Sharma Bajagai, Yun Kit Yeoh, Xiuhua Li, Dagong Zhang, Paul G Dennis, Diane Ouwerkerk, Peter J Dart, Athol V Klieve, Wayne L Bryden, Enhanced meat chicken productivity in response to the probiotic *Bacillus amyloliquefaciens* H57 is associated with the enrichment of microbial amino acid and vitamin biosynthesis pathways, *Journal of Applied Microbiology*, Volume 134, Issue 5, (2023)
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39. Feeney, W.E., Brooker, R.M., Grutter, A.S. *et al.* First report of interspecific cleaning in a Pseudochromid, the dusky dottyback (*Pseudochromis fuscus*). *Mar. Biodivers.* 53, 65 (2023). <https://doi.org/10.1007/s12526-023-01370-z>
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41. Butler, C. C., Turnham, K. E., Lewis, A. M., Nitschke, M. R., Warner, M. E., Kemp, D. W., Hoegh-Guldberg, O., Fitt, W. K., van Oppen, M. J. H., & LaJeunesse, T. C. (2023). Formal recognition of host-generalist species of dinoflagellate (*Cladocopium*, Symbiodiniaceae) mutualistic with Indo-Pacific reef corals. *Journal of Phycology*, 59, 698–711. <https://doi.org/10.1111/jpy.13340>
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