



MARTINO MALERBA

POST-DOCTORAL RESEARCHER | MONASH UNIVERSITY

EDUCATION

Ph.D. in Ecological Modelling and Plant Science

James Cook University (QLD)

Thesis: Modelling nitrogen-limited dynamics in phytoplankton populations.

2012-2015

Honours in Ecological Modelling and Plant Science

James Cook University (QLD)

Thesis: Modelling the effects of cell size on demography and nutrient dynamics in microalgal cultures

2010

Marine Biology Advanced Major

James Cook University (QLD)

Awarded with Academic Medal for Coursework

2007-2009

CONTACT

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PEER REVIEWED PUBLICATIONS [IMPACT FACTOR]

- **Malerba, M.E.**, Palacios, M.M. & Marshall, D.J. (2018) Do larger individuals cope with resource fluctuations better? An artificial selection approach. *Proc R Soc B Biol Sci.* [4.9]
- Palacios M.M., **Malerba M.E.** and McCormick M. (2018) Multiple predator effects on juvenile prey survival. *Oecologia* [3.1]
- **Malerba, M.E.**, White, C.R. & Marshall, D.J. (2018) Eco-energetic consequences of evolutionary shifts in body size. *Ecol. Lett.*, 21, 54-62. [9.5]
- **Malerba, M.E.**, Palacios, M.M., Delgado, Y.M.P., Beardall, J. & Marshall, D.J. (2018) Cell size, photosynthesis, and the package effect: An artificial selection approach. *New Phytology.* [7.3]
- Sezmis, A.L., **Malerba, M.E.**, Marshall, D.J. & McDonald, M.J. (2018) Beneficial mutations from evolution experiments increase rates of growth and fermentation. *J Mol Evol*, 1-7. [2.4]
- **Malerba, M.E.**, White, C.R. & Marshall, D.J. (2017) Phytoplankton size-scaling of net-energy flux across light and biomass gradients. *Ecology*, 98, 3106-3115. [4.8]
- Dubuc, A., Waltham, N., **Malerba, M.E.** & Sheaves, M. (2017) Extreme dissolved oxygen variability in urbanised tropical wetlands: The need for detailed monitoring to protect nursery ground values. *Estuar Coast Shelf Sci*, 198, 163-171. [2.1]
- Cameron, H., Monroe, K., **Malerba, M.E.**, Munch, S. & Marshall, D.J. (2016) Why do larger mothers produce larger offspring? A test of classic theory. *Ecology*, 97, 3452-3459. [4.8]
- **Malerba, M.E.**, Heimann, K. & Connolly, S.R. (2016b) Nutrient utilization traits vary systematically with intraspecific cell size plasticity. *Funct Ecol*, 30, 1745-1755. [5.2]
- **Malerba, M.E.**, Connolly, S.R. & Heimann, K. (2015) An experimentally validated nitrate-ammonium-phytoplankton model including effects of starvation length and ammonium inhibition on nitrate uptake. *Ecol Modell*, 317, 30-40. [2.4]
- **Malerba, M.E.**, Connolly, S.R. & Heimann, K. (2016) Standard flow cytometry as a rapid and non-destructive proxy for cell nitrogen quota. *J App Phycol*, 28, 1085-1095. [2.6]
- **Malerba, M.E.**, Heimann, K. & Connolly, S.R. (2016) Improving dynamic phytoplankton reserve-utilization models with an indirect proxy for internal nitrogen. *J Theor Biol*, 404, 1-9. [2.1]
- **Malerba, M.E.**, Connolly, S.R. & Heimann, K. (2012) Nitrate-nitrite dynamics and phytoplankton growth: Formulation and experimental evaluation of a dynamic model. *Limnol Oceanogr*, 57, 1555-1571. [3.4]



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APPOINTMENTS

Centre for Geometric Biology
Monash University (VIC)

- **Research topic:** Eco-evolutionary role of size in ecology
- **Supervisor:** Prof. Dustin Marshall, Prof. Craig White
- 2016-2020

Statistical Consultant
James Cook University (QLD)
Supervisor: Emeritus Prof. Rhondda Jones
2015

SELECTED PRESENTATIONS

INVITED SPEAKER

- Evolution Montpellier 2018, as part of the upcoming symposium “In vivo, in vitro, in silico experimental evolution. Convergence and insights into evolution” • France • 2018
- EAWAG research station, Zurich • Switzerland • 2016
- University of California, Berkley • USA • 2016
- James Cook University • Australia • 2016

INVITED LECTURER

- Marine Ecology course • Monash University • 2016-2017
- Ecological modelling course • James Cook University • 2014-15
- Biostatistic course • James Cook University • 2012-15

SCIENTIFIC CONFERENCES

- Joint Congress on Evolutionary Biology • Montpellier • 2018
- Australasian Evolution Society • Hobart • 2017
- Western Society of Naturalists • Monterey • 2016
- American Ecological Society • Baltimore • 2015
- Australian Society for Phycology and Aquatic Botany • Sydney • 2014
- Metacommunity in Ecology and Evolution • Michigan • 2013
- Asia-Pacific Conference on Algal Biotechnology • Adelaide • 2012

GRANTS & AWARDS

- Science-IT-Engineering ECR Interdisciplinary Research Seed Grant Scheme • Monash University • \$ 10,000 AU • 2018
- Graduate Research Scheme • James Cook University • \$ 4,000 AU • 2014/15
- Australian Institute of Marine Science scholarship • \$ 75,000 AU • 2012/15
- Academic Medal for Bachelor Coursework • James Cook University • 2010

PROFESSIONAL DISCIPLINARY INVOLVEMENT

Comitee member, Australasian Society for Phycology and Aquatic Botany (ASPAB) • 2013-2015