

The Long Hot Summer: Getting Ahead of the Heatwave



IMAS & CMS special online webinar series

9:10am -10am every morning Mon 11th – Fri 15th December 2023

Heat stress impacts on abalone

Jaime McAllister

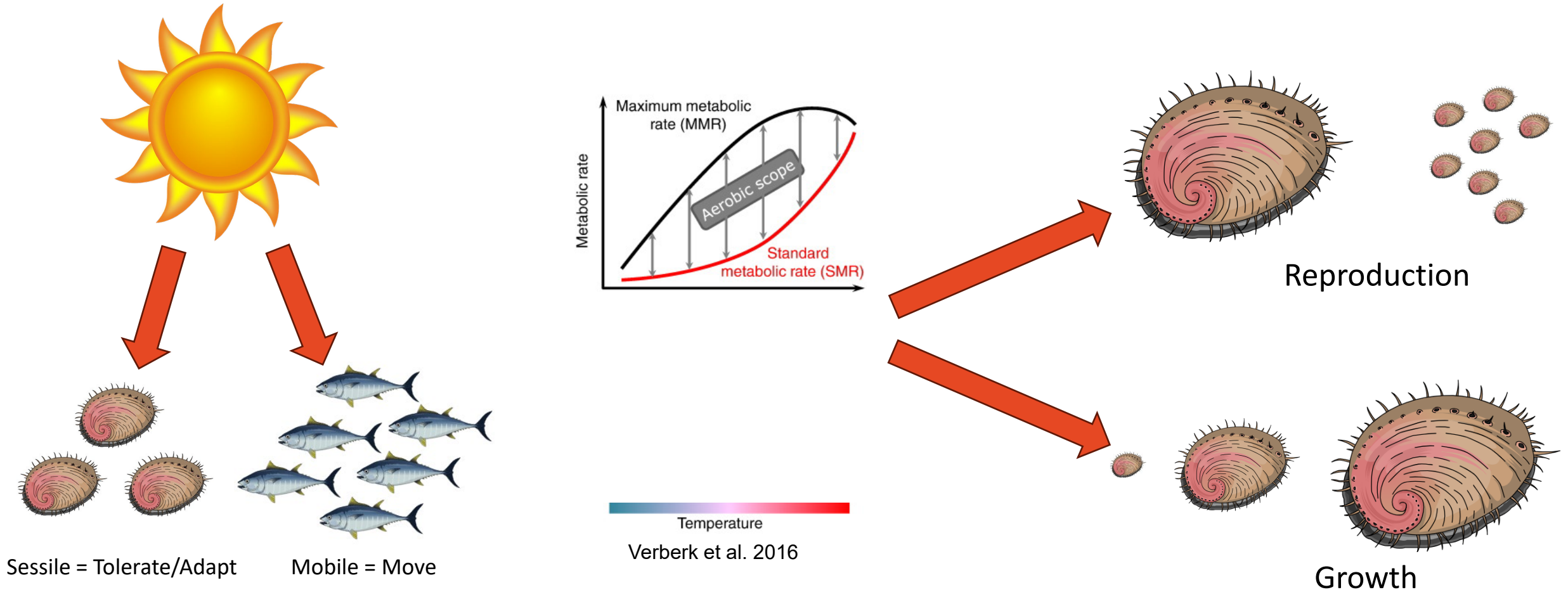


UNIVERSITY OF TASMANIA



Institute for Marine and Antarctic Studies

Temperature and abalone physiology



Blacklip abalone (*Haliotis rubra*)

$T_{opt} = 18^{\circ}\text{C}$

$T_{crit} = 26^{\circ}\text{C}$

Marine Heat Wave effects



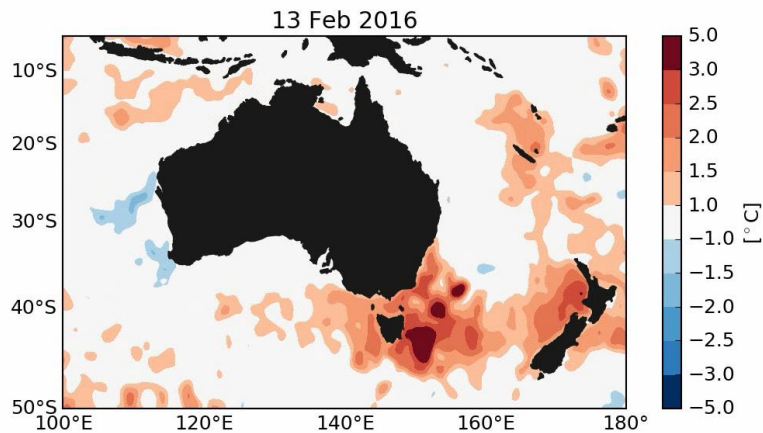
ARTICLE

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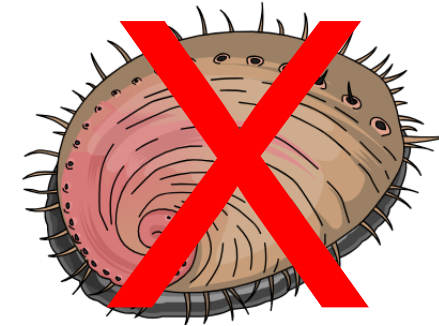
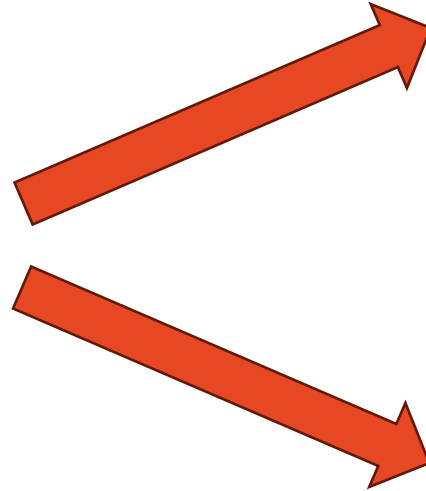
DOI: 10.1038/ncomms16101 OPEN

The unprecedented 2015/16 Tasman Sea marine heatwave

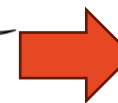
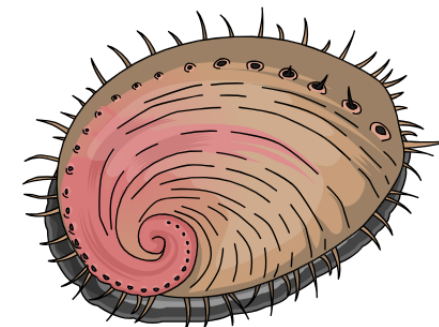
Eric C.J. Oliver^{1,2}, Jessica A. Benthuyzen³, Nathaniel L. Bindoff^{1,2,4}, Alistair J. Hobday⁵, Neil J. Holbrook^{1,2}, Craig N. Mundy¹ & Sarah E. Perkins-Kirkpatrick^{6,7}



Oliver et al. 2017

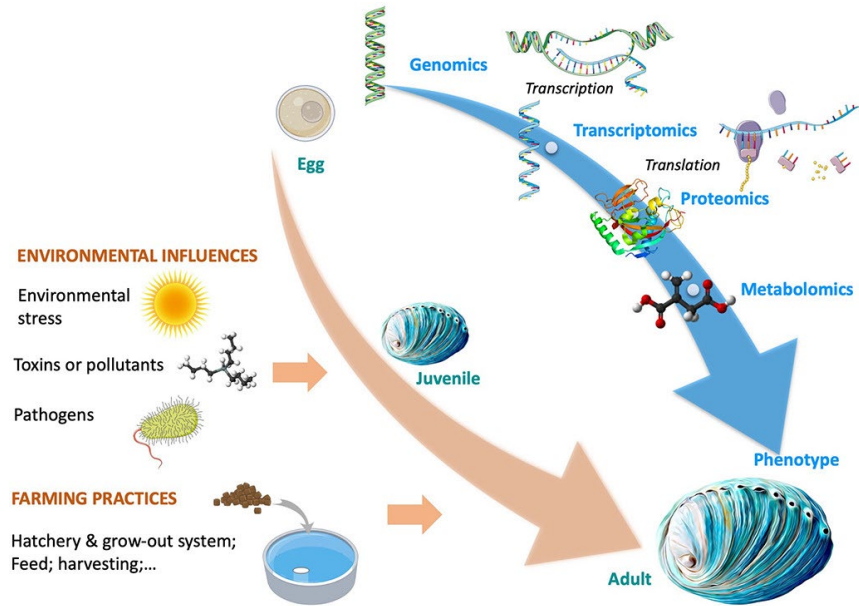


Mortality



Recruitment

What can we learn – Omics?



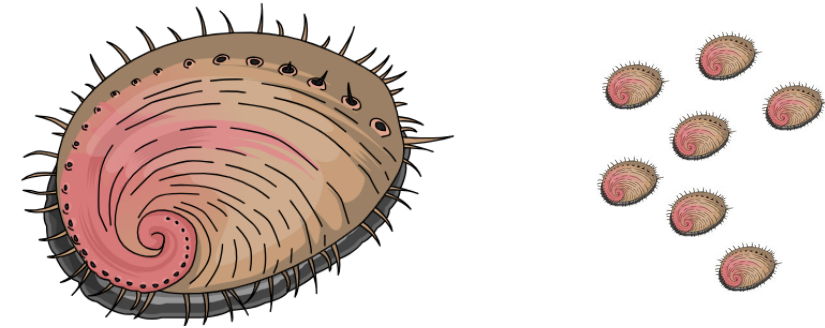
Nguyen et al. 2022

Omics Technologies
Molecular structure and function



Venter et al. 2022

Physiological Pathways
Energy transfer



Effects on Physiology
e.g. Reproduction

What are we doing?

