

Stanford



Murray Duncan

Postdoctoral Scholar, Geological Sciences

Bio

BIO

I am a marine scientist trying to understand how environmental conditions drive ecological patterns of fish and fisheries through a physiological lens. The goal is to generate knowledge that can be incorporated into fisheries management frameworks to enhance resource sustainability. I earned my PhD at the Department of Ichthyology and Fisheries Science, Rhodes University under the supervision prof. Warren Potts in the SAFER lab, Dr Nikki James and Dr Amanda Bates in the Physiological Diversity Lab at Southampton University. I subsequently did a postdoc with the South African Institute for Aquatic Biodiversity where I helped coordinate multiple research projects across southern Africa. I am currently based at Stanford University, working in Prof. Erik Sperling's Historical Geobiology Lab and Prof. Fio Micheli's lab at Hopkins Marine Station. During this postdoc I will use physiological models to predict climate impacts and identify spatial refugia of key California fishery species including Red Abalone and Purple Urchin.

STANFORD ADVISORS

- Erik Sperling, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Fiorenza Micheli (2/1/2020)
- Erik Sperling (2/1/2020)

Publications

PUBLICATIONS

- **Marine Heatwaves Exceed Cardiac Thermal Limits of Adult Sparid Fish (*Diplodus capensis*, Smith 1884)** *FRONTIERS IN MARINE SCIENCE*
Van Der Walt, K., Potts, W. M., Porri, F., Winkler, A. C., Duncan, M., Skeeles, M. R., James, N. C.
2021; 8
- **Thermal tolerance, safety margins and vulnerability of coastal species: Projected impact of climate change induced cold water variability in a temperate African region.** *Marine environmental research*
van der Walt, K., Porri, F., Potts, W. M., Duncan, M. I., James, N. C.
2021; 169: 105346
- **Do contemporary age-growth models overlook life-history complexities in protandrous fishes? A case study on the large protandrous polynemid, the giant African threadfin *Polydactylus quadrifilis*** *FISHERIES RESEARCH*
Butler, E. C., Childs, A., Milner, M., Farthing, M. W., Duncan, M., Winkler, A. C., Potts, W. M.
2021; 233

- **Different drivers, common mechanism; the distribution of a reef fish is restricted by local-scale oxygen and temperature constraints on aerobic metabolism** *CONSERVATION PHYSIOLOGY*

Duncan, M., James, N. C., Potts, W. M., Bates, A. E., Cooke, S.

2020; 8

- **Understanding the effects of recreational catch-and-release angling on an increasingly important foreign fishing tourism species, the giant African threadfin *Polydactylus quadrifilis* (Cuvier)** *FISHERIES MANAGEMENT AND ECOLOGY*

Butler, E., Childs, A., Duncan, M., Potts, W.

2020