

AUSSEABED PROJECT OFFICER

Canberra, Australia

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Personal Attributes

- Enthusiasm for all areas of ocean science
- Highly reactive and adaptable work ethic
- Optimistic and realistic "can-do" attitude
- Inclusive and collaborative nature

- Manages competing priorities
- Active communicator
- · Shows strong initiative with unfamiliar tasks
- Creative problem solver

Skills and highlights.

- Experience working in a multiinstitutional data synthesis program
- · Ability to work in a team and collaborate
- Synthesis and visualisation of complex information
- Science communication
- · Stakeholder and end-user engagement
- Understanding end-user requirements
- Delivering end-user products and resources
- Program and project reporting and management
- Data and document management
- Spatial statistics

- Understanding the strengths and limitations of ocean data for applications
- Strong research skills
- Funding and project proposals
- Critical gap analysis
- · Finding, sourcing and aggregating data
- · Microsoft 365 suite and TEAMS
- Agile Project Management and JIRA software
- Adobe suite (Illustrator, Premier Pro, Acrobat ect.)
- Proficiency in R, Python and MATLAB
- · Strong written and verbal presentation skills

Key ocean data knowledge areas.

- · Ocean carbonate chemistry
- Phytoplankton and pigments
- Bio-optics
- Air-sea flux
- Physical oceanography
- Seafloor bathymetry and habitats
- Tropical and coastal ecosystems
- Antarctic krill

- Biogeochemical sensors including Argo
- · Data synthesis and aggregation
- Satellite and remote sensing
- Ship-based sampling methods
- Analytical chemistry
- Ocean and ecosystem models
- · Lagrangian particle tracking
- Multi-platform methods

Key ocean science areas of expertise _

- Ocean observations
- The marine carbon cycle
- Biogeochemistry
- Marine ecology

- Southern Ocean Phytoplankton
- Tropical and coastal ecosystems
- Blue carbon storage
- Carbon sequestration through ocean iron fertilisation

Education and training

Doctor of Philosophy 2018-Present

University of Tasmania-Institute for Marine and Antarctic Studies

• Thesis: Multiplatform observations chlorophyll-a reveal deep diatom communities in the Southern Ocean

Interdisciplinary Marine Science Summer School

2020

Center for Marine Socioecology

IOCCP BONUS-Integral Biogeochemical Sensors Training Course

2019

International Ocean Carbon Coordination Project

Master of Marine Science 2016-2017

King Abdullah University of Science and Technology-Red Sea Research Center

• Thesis: Exploring the ecosystem engineering ability of Red Sea shallow benthic habitats using stocks and fluxes in carbon biogeochemistry

Bachelor of Science 2013-2016

The University of Western Australia-Chemistry and, Mathematics and Statistics

Marine Science Summer School 2015

King Abdullah University of Science and Technology-Red Sea Research Center

Employment ____

AusSeabed Project Officer - National Earth and Marine Observations Branch	2021-Present
Geoscience Australia	Canberra, AU
Software Developer - Southern Ocean Observing System	2021
University of Tasmania	Hobart, AU
Krill Biologist - Short-term contract	2020-2021
Australian Antarctic Division	Hobart, AU
Student Ambassador - Institute for Marine and Antarctic Studies	2019
University of Tasmania	Hobart, AU
Tutorial Facilitator (for two semesters) - Institute for Marine and Antarctic Studies	2018-2019
University of Tasmania	Hobart, AU
Research Assistant - Center for Social impact	2014-2016
University of Western Australia	Crawley, AU
Laboratory Demonstrator - School of Chemistry and Biochemistry	2016
University of Western Australia	Crawley, AU
Research Assistant - Marketing	2016
University of Western Australia	Crawley, AU
Tutor - School of Mathematics and Statistics	2015-2016
University of Western Australia	Crawley, AU
Vacation Scholar/Industrial Trainee - Biogeochemical Research Lab	2014-2016
Commonwealth Scientific and Industrial Research Organisation	Perth, AU

Publications

37 citations | 4 h-index | 1 i10-index

See my Google Scholar profile here for a full publication and citation report

Baldry K, Strutton PG, Hill NA, Boyd PW (2020). <u>Subsurface Chlorophyll-a Maxima in the Southern Ocean.</u> Frontiers in Marine Science, 7.

Baldry K, Saderne V, McCorkle DC, Churchill JH, Agusti S, Duarte CM (2020). <u>Anomalies in the carbonate system of Red Sea coastal habitats.</u> Biogeosciences, 17(2).

Anton A, Almahasheer H, Delgado A, Garcias-Bonet N, Carrillo-de-Albornoz P, Marbà N, Hendriks IE, Krause-Jensen D, Saderne V, **Baldry K**, Duarte CM (2020). <u>Stunted Mangrove Trees in the Oligotrophic Central Red Sea Relate to Nitrogen Limitation</u>. Frontiers in Marine Science, 7.

Anton A, **Baldry K**, Coker DJ, Duarte CM (2020). <u>Drivers of the Low Metabolic Rates of Seagrass Meadows in the Red</u> Sea. Frontiers in Marine Science, 7.

Saderne V, **Baldry K**, Anton A, Agusti S, Duarte CM (2019). <u>Characterization of the CO₂ System in a Coral Reef, a Seagrass Meadow, and a Mangrove Forest in the Central Red Sea.</u> Journal of Geophysical Research: Oceans, 124(11), 7513-7528.

Bach LT, Tamsitt V, **Baldry K**, McGee J, Laurenceau-Cornec EC, Strzepek R, Xie Y, Boyd PW (*submitted*). *Holistic re-evaluation of Southern Ocean Iron fertilisation for atmospheric CO*₂ *removal*. Global Biogeochemical Cycles.

Baldry K, Hardman-Mountford N, Greenwood J (2017). *Estimating total alkalinity for coastal ocean acidification monitoring at regional to continental scales in Australian coastal waters*. Biogeosciences Discussions.

For submission, in fulfillment of doctorate

Baldry K, Johnson R, Strutton PS, Boyd PW (in prep). BIO-MATE: A biological ocean data reformatting effort.

Baldry K, Strutton PG, Hill NA, Boyd PW (in prep). Non-photochemical quenching of chlorophyll fluorescence in the Southern Ocean.

Baldry K, Tamsitt V, Johnson R, Strutton PG, Hill NA, Boyd PW (*in prep*). *Multi-platform observations reveal environ-mental drivers in subsurface phytoplankton across the Southern Ocean*.

Baldry K, Eriksen R, Tamsitt V, Strutton PG, Hill NA, Boyd PW (*in prep*). The successional ecology of large-centric diatoms: Joining the dots with BGC-Argo floats.

Datasets_

Baldry K, Saderne V, McCorkle DC, Churchill JH, Agustí S, Duarte CM (2019). Surface Carbonate Chemistry of the Red Sea (offshore and coastal). PANGAEA.

Saderne V, **Baldry K**, Anton A, Agustí S, Duarte CM (2019). Characterization of the CO_2 system in a coral reef, a seagrass meadow and a mangrove forest in the central Red Sea. PANGAEA.

Baldry K and Johnson R. (submitted). BIOMATE data compilation (v1.0). IMAS Data Repository.

Selected software

BIO-MATE

• R package to reformat ship-based data sets

mapSOOSWG

R package to support map making for SOOS reporting

SIR within seacarb

· R functions to calculate substrate inhibitor ratios

Adaption of FluxEngine

• Python package to ingest biogeochemical Argo data and calculate air-sea fluxes

Selected communication material

Science writing

AusSeabed Annual Highlights Report 2020/21

• Lead the production of the report including graphics and textual content

ECO Polar Special Issue: Observing hideen phytoplankton in the Autonomous Era

Science article, an output of my 2019 SCAR Fellowship

Visual story for 2020/21 AusSeabed Achievements

Highlight article on RV Falkor voyages

Posters

GMRT-AusSeabed poster for the Forum for Operational Oceanography

Training material

Biogeochemical Argo Data Cheat Sheets

- Summarises important information and resources for new users of biogeochemical Argo data.
- Visited over 1760 times and over 400 downloads.

Biogeochemical Argo User training Workshop

• Workshop and tutorial delivered to biogeochemical Argo data users.

QAX Training Material

- User training videos for a quality assurance tool for multibeam echosounder (bathymetry) data.
- Designed in collaboration with experts and developers.

Website, promotional and social media

QAX Webpage

• Developed as a primary landing page for end-users of the new tool.

GMRT-AusSeabed Webpage

• Developed as a point of reference for interested end-users and stakeholders.

GMRT-AusSeabed Promotional video

• Developed for circulation in social media streams, newsletters and presentations to promote the project.

Awards, Funding and Grants _____

2019 SCAR Fellowship	
Scientific Committee on Antarctic Research	2019
Antarctic Gateway Postgraduate Award	
University of Tasmania	2018
IMAS Student Conference and Research Travel Scheme	
University of Tasmania	2019
CoSE Conference and Research Travel Scheme	
University of Tasmania	2019
Presentations, workshops and conferences	
SCAR Online Conference	2020
End-user workshop	
Ocean Sciences Meeting	2020
e-Lightning presentation and two posters	
Antarctic Gateway Program wrap-up meeting	2020
Research talk	
Department of Education on behalf of IMOS	2019
Capability presentation	
Working with Water	2019
High-school workshop	
Taroona Seaside Festival	2019
Interactive display	
Australian Marine Science Association Conference	2019

Research talk and lightning poster presentation

Antarctic Gateway Partnership Annual General Meeting Research talk	2019
Red Sea Research Centre Open Science Conference	2017
Research talk	
The Ocean in a High CO\$_2\$ World conference	2016
Research talk	
Presentation support and design	
GEBCO Map the Gaps Symposium	2021
AusSeabed Program presentation	
Geoscience Australia Seminar	2021
AusSeabed Program presentation	
Australian Marine Sciences Associiation	2021
AusSeabed Program presentation	
Working group participation	
Southern Ocean Observing System	2020-Present
Observing System Design working group leadership	
Ocean Best Practice System workshop IV	2020

References_____

Ocean Uncertainty Quantification working group

 Kim Picard
 kim.picard@ga.gov.au

 Professional referee - AusSeabed Program Director
 02 6249 9548

Philip Boydphilip.boyd@utas.edu.auProfessional referee - PhD supervisor03 6226 8554

Rob Johnsonrobert.johnson@bom.gov.au

Professional and personal referee - Data Scientist at Bureau of Meteorology

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