

KIM S. BERNARD CURRICULUM VITA

EDUCATION AND EMPLOYMENT INFORMATION

EDUCATION

Ph.D.	Marine Biology	Rhodes University, South Africa	2007
M.S.	Marine Biology	Rhodes University, South Africa	2003
B.Sc. (Hons)	Marine Biology	Rhodes University, South Africa	2001
B.Sc.	Zoology, Environmental Science	Rhodes University, South Africa	2000

EMPLOYMENT

Associate Professor | 2019-present | Oregon State University | Corvallis, OR, USA
 Assistant Professor | 2013-2019 | Oregon State University | Corvallis, OR, USA
 Post-Doctoral Research Associate | 2009-2012 | Virginia Institute of Marine Science | Gloucester Point, VA, USA
 Coastal Science and Data Coordinator | 2008-2009 | South African Environmental Observation Network | Grahamstown, South Africa
 Coastal Data Scientist | 2007-2007 | South African Environmental Observation Network | Grahamstown, South Africa
 Tutor for Zoology I and Biology I | 2005 | Rhodes University | Grahamstown, South Africa
 Junior Consultant and Assistant | 2003 | Coastal & Environmental Services | Grahamstown, South Africa

AWARDS

NATIONAL AND INTERNATIONAL AWARDS

- *NSF Faculty Early Career Development Award*. July 2018. One of the NSF's most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization.
- *United States Antarctic Service Medal*. March 2012. Presented by the National Science Foundation for in recognition of valuable contributions to exploration and scientific achievement under the United States Antarctic Program.
- *Mail & Guardian Top 200 Young South Africans, Environment Section*. 2013. Award made to young South African (< 35 years) who have made a difference or contributed to society in some way.
- *Bronze Award for Best Emerging Young Scientist, Women in Science Awards*. 2009. South African National Department of Science and Technology Women in Science Awards in conjunction with L'Oréal.

SCHOLARSHIP AND CREATIVE ACTIVITY

PUBLICATIONS

From Google Scholar (as of 04/11/2020): H-index=17 (13 in last 5 years); i10-index=20 (15 in last 5 years); total citations=916 (542 in last 5 years)

** Denotes corresponding authors.*

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Publications Submitted or in Preparation

1. Barlow DR, Bernard KS, Escobar-Flores P, Palacios DM, Torres LG (2020) Links in the trophic chain: Modeling functional relationships between in situ oceanography, krill, and blue whale distribution under different oceanographic regimes. *Marine Ecology Progress Series*. In revision.
2. O'Loughlin JH**, Daly E, Zeman S, Fisher J, Brodeur R, Hurst T, Jacobson K, Bernard KS*. Spring grazing rates of *Pyrosoma atlanticum* in the Northern California Current. *Progress in Oceanography*. In revision.
3. Meyer B, Atkinson A, Bernard KS, Driscoll R, Hill SL, Kawaguchi S, Marshoff E, Maschette D, Perry F, Reid K, Reiss CS, Rombola E, Tarling GA, Thorpe SE, Trathan PN, Zhu GP, Brierley A. New data and new techniques, opens a new era for ecosystem-based management of Antarctic krill. Submitted to *Nature Communications*
4. Qualls KM**, Keen EM, Bernard KS, Piccard CR. Environmental drivers of *Euphausia pacifica* and *Thysanoessa spinifera* abundance in the Kitimat Fjord System, BC, Canada. Submitted to *Progress in Oceanography*
5. Goodrich C, Oliver MJ, Kohut J, Bernard K, Fraser W, Winsor P, Statscewich H, Fredj E, Cimino M, Patterson-Fraser D, Carvalho F. Putative prey fields aggregate based on vertical migrations and Lagrangian Coherent Structures. In Prep for *Limnology and Oceanography*

Peer-Reviewed Publications

1. Hudson K, Oliver MJ, Bernard K, Cimino MA, Fraser W, Kohut J, Statscewich H, Winsor P (2019) Re-evaluating the canyon hypothesis in a biological hotspot in the Western Antarctic Peninsula. Accepted in *Journal of Geophysical Research: Oceans* DOI 10.1029/2019JC015195
2. Bernard KS, Gunther, LA**, Mahaffey SH**, Qualls KM**, Sugla M**, Saenz, BT, Cossio AM, Walsh J, Reiss CS (2018) The contribution of ice algae to the winter energy budget of juvenile Antarctic krill in years with contrasting sea ice conditions. *ICES Journal of Marine Science* 76(1): 206-216. DOI 10.1093/icesjms/fsy145
3. Kohut J, Oliver M, Bernard KS, Fraser W, Winsor P, Statscewich H, Fredj E, Cimino M, Patterson-Fraser D, Carvalho F (2018) Central place foragers select Lagrangian coherent structures based on foraging strategy. Accepted by *Nature Scientific Reports*
4. Kohut JT, Winsor P, Statscewich H, Oliver MJ, Fredj E, Couto N, Bernard K, Fraser W (2018) Variability in summer surface residence time within a Western Antarctic Peninsula biological hotspot. *Philosophical Transactions of the Royal Society* 376(2122): 20170165. DOI 10.1098/rsta.2017.0165
5. Bernard KS, Cimino M, Fraser W, Kohut J, Oliver M, Patterson-Fraser D, Schofield OME, Statscewich H, Steinberg DK, Winsor P (2017) Factors that affect the nearshore biomass and aggregation structure of Antarctic krill in a biological hotspot. *Deep Sea Research Part I*. 126: 139-147. DOI 10.1016/j.dsr.2017.05.008
6. Steinberg DK, Ruck KE, Gleiber MR, Garzio LM, Cope JS, Bernard KS, Stammerjohn SE, Schofield OME, Quetin LB, Ross RM (2015) Long-term changes in zooplankton off the Western Antarctic Peninsula. *Deep Sea Research Part I*. 101: 54-70.
7. Kohut J, Bernard K, Fraser W, Oliver MJ, Statscewich H, Winsor P, Miles T (2014) Studying the impacts of local oceanographic processes on Adélie penguin foraging ecology. *Marine Technology Society*. 48(5): 25-34.
8. Tortell PD, Asher EC, Ducklow HW, Goldman JAL, Dacey JWH, Grzymiski JJ, Young JN, Kranz SA, Bernard KS, Morel FMM (2014) Metabolic balance of coastal Antarctic waters revealed by autonomous $p\text{CO}_2$ and $\Delta\text{O}_2/\text{Ar}$ measurements. *Geophysical Research Letters*. 41(19): 6803-6810.

9. Bernard KS, Steinberg DK (2013) Krill biomass and aggregation structure in relation to tidal cycle in a penguin foraging region off the Western Antarctic Peninsula. *ICES Journal of Marine Science*. 70(4): 834-849.
10. Schofield O, Ducklow H, Bernard K, Doney S, Fraser-Patterson D, Gorman K, Martinson D, Meredith M, Saba G, Stammerjohn S, Steinberg D, Fraser W (2013) Penguin biogeography along the West Antarctic Peninsula: Testing the canyon hypothesis with Palmer LTER observations. *Oceanography* 26(3): 204-206.
11. Goschen WS, Schumann EH, Bernard KS, Bailey SE, Deyzel SHP (2012) Upwelling and ocean structures off Algoa Bay and the south-east coast of South Africa. *African Journal of Marine Science* 34(4): 525-536.
12. Bernard KS, Steinberg DK, Schofield OME (2012) Summertime grazing impact of the dominant macrozooplankton off the Western Antarctic Peninsula. *Deep Sea Research Part I* 62: 111-122.
13. Cosa S, Mabinya LV, Olaniran AO, Okoh OO, Bernard K, Deyzel S, Okoh AI (2011) Biofloculant production by *Virgibacillus* sp. rob isolated from the bottom sediment of Algoa Bay in the Eastern Cape, South Africa. *Molecules* 16(3): 2431-2442.
14. Ogunmwonyi IH, Mazomba N, Mabinya L, Ngwenya E, Green E, Akinpelu DA, Olaniran AO, Bernard K, Okoh AI (2010) Studies on the culturable marine actinomycetes isolated from the Nahoon beach in the Eastern Cape Province of South Africa. *African Journal of Microbiology Research* 4(21): 2223-2230.
15. Sibanda T, Mabinya LV, Mazomba N, Akinpelu DA, Bernard K, Olaniran AO, Okoh AI (2010) Antibiotic producing potentials of three freshwater actinomycetes isolated from the Eastern Cape Province of South Africa. *International Journal of Molecular Sciences* 11(7): 2612-2623.
16. Bernard KS, Froneman PW (2009) The sub-Antarctic euthecosome pteropod, *Limacina retroversa*: Distribution patterns and trophic role. *Deep Sea Research Part I* 56(4): 582-598.
17. Hunt BPV, Pakhomov EA, Hosie GW, Siegel V, Ward P, Bernard KS (2008) Pteropods in Southern Ocean Ecosystems: a review. *Progress in Oceanography* 78(3): 193-221.
18. Bernard ATF, Ansoerge IJ, Froneman PW, Lutjeharms JRE, Bernard KS, Swart NC (2007). Entrainment of Antarctic euphausiids across the Antarctic Polar Front by a cold eddy. *Deep-Sea Research I* 54(10): 1841-1851.
19. van Wyk AWW, Froneman PW, Bernard KS, Davies-Coleman MT (2007) New isocopalane diterpene diester from a sub-Antarctic marine nudibranch. *ARKIVOC* ix: 121-128.
20. Bernard KS, Froneman PW (2005). Trophodynamics of selected mesozooplankton in the west-Indian sector of the Polar Frontal Zone, Southern Ocean. *Polar Biology* 28: 594-606.
21. Pakhomov EA, McClellan JW, Bernard KS, Kaehler S, Montoya JP (2004). Spatial and temporal shifts in stable isotope values of the bottom-dwelling shrimp *Nauticaris marionis* at the sub-Antarctic archipelago. *Marine Biology* 144:317-325.
22. Ansoerge IJ, Froneman PW, Bernard KS, Bernard A, Lange L, Lukáč , Backeberg B, Blake J, Bland S, Burls N, Davies-Coleman M, Gerber R, Gildenhuis S, Hayes-Foley P, Ludford A, Manzoni T, Robertson E, Southey D, Swart S, Van Rensburg D, Wynne S, Lutjeharms JRE (2004). Further investigations on the sources of mesoscale variability in the Antarctic Circumpolar Current at the South-West Indian Ridge. *South African Journal of Science* 100: 319-323.
23. Froneman PW, Bernard KS (2004). Trophic cascading in the Polar Frontal Zone of the Southern Ocean in austral autumn 2002. *Polar Biology* 27:112-118.
24. Bernard KS, Froneman PW (2003). Mesozooplankton community structure and grazing impact in the Polar Frontal Zone during austral autumn 2002. *Polar Biology* 26:268-275.
25. Bernard KS, Froneman PW (2002). Mesozooplankton community structure in the Southern Ocean upstream of the Prince Edward Islands. *Polar Biology* 25:597-604.
26. Froneman PW, Ansoerge IJ, Vumazonke L, Gulekana K, Webb AM, Leukes W, Risien CM, Thomalla S, Bernard KS, Hermes J, Knott M, Anderson D, Hargey N, Jennings M, Veitch J, Lutjeharms JRE, McQuaid CD (2002). Physical and biological variability in the Antarctic Polar

Frontal Zone: Report on the research cruise 103 of the M.V. *S.A. Agulhas*. *South African Journal of Science* 98:534-536.

Reports (Non-Peer Reviewed)

1. Bernard KS, Paterson AW (2008). South African Environmental Observation Network (SAEON) Elwandle Node Science Plan and Implementation Strategy. Versions 1-4. Grahamstown, South Africa.
2. Paterson AW, Bernard KS (2008). South African Environmental Observation Network (SAEON) Elwandle Node Business Plan 2008/09. Version 4. Grahamstown, South Africa.
3. Bernard KS, Jennings ME (2006). Research report: Preliminary findings of the pteropod survey conducted during ANTXXIII/2.
4. Ansoorge IJ, Bernard KS (2005). DEIMEC IV – 2005: Hydrographic and Biological Data Report. UCT Oceanographic Report 05-1.

Book Chapters (Non-Peer Reviewed)

1. Bernard K, Bernard A (2017). An overview of the impacts of global change on South Africa's coasts and oceans. In Mambo J, Faccar K (eds) *Understanding the Social & Environmental Implications of Global Change*. South African Risk and Vulnerability Atlas, Second Edition. 93-104.
2. Bernard KS (2011). The impacts of ocean acidification on a keystone Southern Ocean species. In Zietsman L (ed) *Observations on Environmental Change*. South African Environmental Observation Network, Pretoria. 303 pp.
3. Bernard KS, Goshen WS, Hermes JC (2011). Climate change and coastal upwelling. Potential implications for South African marine resources. In Zietsman L (ed) *Observations on Environmental Change*. South African Environmental Observation Network, Pretoria. 303 pp.

PROFESSIONAL MEETINGS, SYMPOSIA, AND CONFERENCES

1. Bernard KS, Steinke KB, Fontana JM. The effect of autumn and winter diet on the physiology of juvenile Antarctic krill. *Ocean Sciences Meeting 2020*, San Diego, CA. 16 – 21 February 2020.
2. Steinke KB, Bernard KS, Ross R, Quetin L. The environmental drivers of the physiological condition of juvenile and mature female Antarctic krill: Implications for krill recruitment. *Ocean Sciences Meeting 2020*, San Diego, CA. 16 – 21 February 2020.
3. Fontana JM, Bernard KS. Circadian Rhythms in Respiration Rates of juvenile Antarctic krill. *Ocean Sciences Meeting 2020*, San Diego, CA. 16 – 21 February 2020.
4. Brodeur RD, Bernard KS, Sutherland KR. Causes and consequences of the great pyrosome bloom in the Northern California Current. *6th International Jellyfish Bloom Symposium*, Cape Town, South Africa. 4 – 6 November 2019.
5. O'Loughlin JH, Daly EA, Zeman S, Fisher JL, Brodeur RD, Hurst TP, Bernard KS. Implications of *Pyrosoma atlanticum* grazing on phytoplankton standing stocks in the Northern California Current. *6th International Jellyfish Bloom Symposium*, Cape Town, South Africa. 4 – 6 November 2019.
6. Kohut J, Winsor P, Statscewich H, Olive M, Fredj E, Couto N, Bernard K, Fraser W. Horizontal advection critical for maintaining an Antarctic biological hotspot. *2019 IEEE/OES 12th Currents, Waves, Turbulence Measurement and Applications Workshop*, San Diego, CA. 10 – 13 March 2019.

7. Statscewich H, Kohut J, Winsor P, Oliver M, Miles T, Bernard K, Fraser W. Ocean circulation patterns in Palmer Deep. *2019 IEEE/OES 12th Currents, Waves, Turbulence Measurement and Applications Workshop*, San Diego, CA. 10 – 13 March 2019.
8. Brodeur RD, Bernard K, Sutherland KR, Sorensen HL, Blondheim ON. Causes and consequences of the great pyrosome bloom in the Northern California Current. *Science Board Symposium, PICES Annual Meeting*, Yokohama, Japan. 25 October – 4 November 2018.
9. Barlow D**, Palacios DM, Bernard KS, Escobar-Flores P, Sutton P, Torres LG. Cloudy with a chance of whales: Forecasting blue whale occurrence to mitigate industrial impacts based on tiered, bottom-up models. *Society for Conservation Biology Oceania Congress*, Wellington, Aotearoa, New Zealand, 3 – 5 July 2018.
10. Qualls KM**, Keen EM, Bernard KS, Picard CR. Environmental drivers of euphausiid abundance in the Kitimat Fjord System, BC. *ASLO 2018 Summer Meeting, Water Connects*, Victoria, BC, Canada. 10 – 15 June 2018.
11. Goodrich C, Oliver MJ, Kohut JT, Cimino MA, Miles TN, Nazzaro L, Winsor P, Statscewich H, Fredj E, Bernard K, Patterson-Fraser D, Fraser W. Project CONVERGE: Krill distribution in Palmer Deep Canyon on the West Antarctic Peninsula. *Mid-Atlantic American Fisheries Society Meeting*, St. Jones National Estuarine Research Reserve, Delaware. 26 – 27 October 2017.
12. Goodrich C, Kohut J, Cimino M, Miles T, Palamara L, Winsor P, Statscewich H, Fredj E, Bernard K, Fraser W, Patterson-Fraser D, Oliver MJ. Krill distribution in Palmer Deep Canyon on the West Antarctic Peninsula. *XIIth SCAR Biology Symposium*. Leuven, Belgium. 10-14 July 2017.
13. Kohut J, Bernard K, Fraser W, Oliver M, Winsor P, Statscewich H, Cimino M, Patterson-Fraser D, Miles T, Carvalho F. Project CONVERGE: Impacts of local oceanographic processes on Adélie penguin foraging ecology. Developing the West Antarctic Peninsula International Network within SOOS. *SOOS WAP Working Group Meeting*. Cambridge, UK. 15 – 16 May 2017.
14. Oliver M, Kohut J, Moline M, Nazzaro L, Miles T, Bernard K, Fraser W, Patterson-Fraser D, Irwin A, Cimino M, Winsor P, Statscewich H, Fredj E. Adélie Penguin Foraging Location Predicted by Tidal Regime Switching. *NSF Mobility Workshop*, The Ohio State University, Columbus, OH. 11 – 12 May 2017.
15. Walsh J, Reiss C, Bernard K, Watters G. How critical is sea ice for the overwinter survival of Antarctic krill? Oral presentation by first author. *XIth Scientific Committee on Antarctic Research Biology Symposium*. Leuven, Belgium. 10 – 14 July 2017.
16. Kohut J, Bernard K, Fraser W, Oliver M, Winsor P, Statscewich H, Cimino M, Patterson-Fraser D, Miles T, Carvalho F. Project CONVERGE: Impacts of local oceanographic processes on Adélie penguin foraging ecology. *Gordon Research Conference: Polar Marine Science*. Ventura, CA. 26 – 31 March 2017.
17. Oliver MJ, Kohut J, Bernard K, Fraser W, Winsor P, Statscewich H, Cimino M, Patterson-Fraser D, Miles T, Carvalho F. Project CONVERGE: Estimated physical and biological decorrelation time and space scales from coordinated AUV observations in coastal Antarctica. *Gordon Research Conference: Polar Marine Science*, Ventura, CA. 26 – 31 March 2017.
18. Bernard KS, Gunther LA**, Mahaffey SH**, Qualls KM**, Sugla M**, Dietrich KS, Driscoll RM, Reiss C. The contribution of an algal diet to the winter energy budget of Antarctic krill in the northern sector of the Western Antarctic Peninsula. Poster presented by LA Gunther. *2017 American Society for Limnology and Oceanography Meeting*. Honolulu, Hawai'i. 26 February – 3 March 2017.
19. ICES/PICES 6th Zooplankton Production Symposium. Session 7: Zooplankton in High Latitudes. **Invited Session Co-Convener**. Bergen, Norway. May 9-13, 2016.
20. Bernard K, Cimino M, Fraser W, Kohut J, Oliver M, Patterson-Fraser D, Paxton D, Raycroft S, Statscewich H, Steinberg D, Winsor P. Antarctic krill cohort determines dominant aggregation

- structure. **Invited poster presentation.** *2016 Ocean Sciences Meeting.* New Orleans, Louisiana. February 22-26, 2016.
21. Kohut J, Palamara L, Miles T, Bernard K, Fraser W, Patterson-Fraser D, Oliver M, Cimino M, Winsor P, Statscewich H, Fredj E. Project CONVERGE: Impacts of local oceanographic processes on Adélie penguin foraging ecology. Oral presentation by first author. *2016 Ocean Sciences Meeting.* New Orleans, Louisiana. February 22-26, 2016.
 22. Statscewich H, Kohut J, Winsor P, Oliver M, Fraser W, Bernard K, Cimino M, Todoroff K. Project CONVERGE: Initial results from the mapping of surface currents in Palmer Deep. Poster presentation by first author. *2016 Ocean Sciences Meeting.* New Orleans, Louisiana. February 22-26, 2016.
 23. Oliver M, Kohut J, Cimino M, Winsor P, Statscewich H, Miles T, Todoroff K, Carvalho F, Bernard K, Fraser W, Patterson-Fraser D. Project CONVERGE: Estimated physical and biological decorrelation time and space scales from coordinated AUV observations in coastal Antarctica. Poster presentation by first author. *2016 Ocean Sciences Meeting.* New Orleans, Louisiana. February 22-26, 2016.
 24. Bernard K, Paxton D, Cimino M, Oliver M, Fraser W, Steinberg D. Tidal variability in nearshore Antarctic krill distribution patterns in an Adélie penguin foraging hotspot. Oral presentation. *33rd Scientific Committee for Antarctic Research (SCAR) Open Science Conference.* Auckland, New Zealand. August 25-28, 2014.
 25. Bernard KS, Fraser WR, Steinberg DK. Krill distribution and Adélie penguin diet and Anvers and Avian Islands, Western Antarctic Peninsula. Poster presentation. *2012 Ocean Sciences Meeting.* Salt Lake City, Utah. February 20-24, 2012.
 26. Bernard KS, Steinberg DK, Schofield OME. Summer grazing impact of the dominant macrozooplankton in the Western Antarctic Peninsula. Oral presentation. *31st Scientific Committee for Antarctic Research (SCAR) Open Science Conference.* Buenos Aires, Argentina. August 3-6, 2010.
 27. Bernard K, Bornman T, Goschen W, Campbell E, Deyzel S. Summertime near-shore upwelling off Port Alfred, Eastern Cape: Implications for biological productivity and biogeochemistry. Poster presentation. *SAEON Elwandle Node Open Day.* Port Elizabeth, South Africa. March 25, 2010.
 28. Dali L**, Bernard KS, Froneman PW, Paterson AW. Baseline investigation towards long term monitoring in zooplankton dynamics in Algoa Bay, South Africa. Poster presentation by first author (Graduate Student). *SAEON Elwandle Node Open Day.* Port Elizabeth, South Africa. March 25, 2010.
 29. Goschen W, Schumann E, Bernard K, Paterson A. Aspects of some physical oceanographic processes occurring in northern Algoa Bay. Poster presentation by first author. *SAEON Elwandle Node Open Day.* March 25, 2010.
 30. Bernard KS, Hunt BPV, Pakhomov EA, Hosie GW, Siegel V, Ward P. Potential implications of a decline in Southern Ocean pteropod densities due to ocean acidification. Oral presentation. *13th Southern African Marine Science Symposium (SAMSS).* Cape Town. June 29 – July 3, 2008.
 31. Bernard ATF, Ansoorge IJ, Froneman PW, Lutjeharms JRE, Bernard KS, Swart N. Entrainment of Antarctic euphausiids across the Antarctic Polar Front by a cold eddy. Oral presentation by first author. *13th Southern African Marine Science Symposium (SAMSS).* Cape Town. June 29 – July 3, 2008.
 32. Hermes JC, Bernard K, Paterson A, Pauw J. An introduction to the South African Environmental Observation Network's two marine nodes – Elwandle and Egagasini. Plenary presentation by first author. *13th Southern African Marine Science Symposium (SAMSS).* Cape Town. June 29 – July 3, 2008.
 33. Dali L**, Bernard KS, Froneman PW, Paterson AW. Spatial dynamics of mesozooplankton in Algoa Bay, South Africa. Poster presentation by first author (Graduate Student). *13th Southern African Marine Science Symposium (SAMSS).* Cape Town. June 29 – July 3, 2008.

34. Goschen W, Hermes J, Bernard K, Paterson A, Chuntharpursat A, Pauw J, Grant T, Drapeau L. Towards a data management system for long term monitoring of the marine systems around Southern Africa. Poster presentation by first author. *13th Southern African Marine Science Symposium (SAMSS)*. Cape Town. June 29 – July 3, 2008.
35. Bernard KS, Froneman PW. Implications of the potential removal of a keystone sub-Antarctic species due to ocean acidification. Poster presentation. *Effects of Climate Change on the World's Oceans – International Symposium*. Gijón, Spain. May 19-23, 2008. Dr. Albrecht Götz, presented the poster on my behalf.
36. Bernard KS, Froneman PW. The ecological role of the thecosome pteropod, *Limacina retroversa*, in the Polar Frontal Zone. Oral presentation. *29th Scientific Committee for Antarctic Research (SCAR) Open Science Conference*. Hobart, Australia. July 12-14, 2006.
37. Bernard KS, Froneman PW. The trophic role of the thecosome pteropod, *Limacina retroversa*, in the Polar Frontal Zone of the Southern Ocean. Oral presentation. *12th Southern African Marine Science Symposium (SAMSS)*. Durban, South Africa. 2005.
38. Bernard KS, Froneman PW, McQuaid CD. Zooplankton community structure and grazing impact in the Polar Frontal Zone of the Southern Ocean during austral autumn 2002. Poster presentation. *28th Scientific Committee for Antarctic Research (SCAR) Open Science Conference*. Bremen, Germany. 2004.
39. Bernard KS, Froneman PW. Ecological role of mesozooplankton in the Polar Frontal Zone. Oral presentation. *9th International Conference on Copepoda (ICOC)*. Keelung, Taiwan. 2002.
40. Bernard KS, Froneman PW, McQuaid CD. Mesozooplankton community in the upstream region of the Prince Edward Islands (Southern Ocean). Oral presentation. *11th Southern African Marine Science Symposium (SAMSS)*. Swakopmond, Namibia. 2002.

SELECTED INVITED SEMINARS

1. Bernard KS. “Antarctic krill overwintering strategies in the Bransfield Strait.” School of Oceanography, University of Washington. Invited speaker. Seattle, WA. November 2017.
2. Bernard KS. “The Role of Phytoplankton in the Winter Diet of Antarctic Krill”. Institute for the Oceans and Fisheries Fall Seminar Series, University of British Columbia. Invited speaker. Vancouver, BC, Canada. October 2016.
3. Bernard KS. “Aggregation characteristics of Antarctic krill”. Andrews Forest Long Term Ecological Research project, Monthly Meeting. Invited speaker. Corvallis, OR. April 2016.
4. Bernard KS, Paxton D, Steinberg DK. “Regional and temporal variability in krill distribution patterns and densities: From the sub-mesoscale to the macroscale”. Palmer Antarctic Long Term Ecological Research project, Annual Meeting. Invited speaker. Williamsburg, VA. October 2014.
5. Bernard KS. “Why Sea Ice Matters – from the perspective of larval Antarctic krill”. Ocean Ecology and Biogeochemistry (OEB) Seminar Series. College of Earth, Ocean, and Atmospheric Sciences (CEOAS), Oregon State University. Corvallis, OR. May 2014.
6. Bernard KS. “The Influence of Key Antarctic Zooplankton and Food Web Dynamics”. Hatfield Marine Science Center. Invited speaker. Newport, OR. November 2013.
7. Bernard KS. “Climate Change Along the Western Antarctic Peninsula”. Dean’s List Lecture, Invited Speaker. Rhodes University, Grahamstown, South Africa. April 2012.
8. Bernard KS. “Climate Change in Antarctica”. South African Institute for Aquatic Biodiversity (SAIAB) Winter School, Invited Speaker. Grahamstown, South Africa. July 2009.

GRANT AND CONTRACT SUPPORT

Title	Role	Agency	Duration	Amount
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CAREER: “The Omnivore’s Dilemma”: The effect of autumn diet on winter physiology and condition of juvenile Antarctic krill	PI	NSF	09/18-08/23	\$576,174
Collaborative Research: Physical mechanisms driving food web focusing in Antarctic biological hotspots	PI	NSF	06/18-05/21	\$264,575
RAPID: The ecological role of <i>Pyrosoma atlanticum</i> in the Northern California Current	PI	NSF	06/18-05/19	\$190,378
Diet, energy budget and predation impact of early-juvenile coastal Pacific hake in the Northern California Current	PI	OR Sea Grant	06/17-06/18	\$9,996
**Building the STEM Pipeline through Oceangoing Research and Near-Peer Mentoring	Co-PI	State Funded Ship Days	09/17-08/19	\$100,000
**Tracking Ocean Acidification, Hypoxia, and Zooplankton Community Response through Experiential Research Education	PI	State Funded Ship Days	09/15-08/17	\$200,000
Collaborative research: Impacts of local oceanographic processes on Adélie Penguin foraging ecology over Palmer Deep	PI	NSF	06/13-08/17	\$165,000
Wind-enhanced upwelling off the Eastern Cape coast, north of Algoa Bay: Implications for biological productivity and biogeochemistry	PI	NRF ¹ and MCM ²	01/08-12/09	ZAR290,500 (~US\$36,000)
Digitizing historical datasets from the biological oceanographic research of the Southern Ocean Group	PI	SAEON ³	01/08-12/08	ZAR22,000 (~\$2,750)

Acronyms for South African funding agencies: ¹ National Research Foundation; ² Marine and Coastal Management; ³ South African Environmental Observation Network

** Denotes funding for ship time only.

MAJOR SEAGOING/FIELD EXPEDITIONS

Date	Research Vessel/ Field Location	Project/Class	Role
Apr 9-Oct 13, 2019	Palmer Station, Antarctica	CAREER	Station Science Leader
Sep 21-28, 2018	R.V. <i>Oceanus</i>	STEM Pipeline	Scientist
Oct 31-Nov 3, 2017	R.V. <i>Oceanus</i>	OAH	Chief Scientist
Mar 25-29, 2017	R.V. <i>Oceanus</i>	OC295	Instructor
Aug 2016	R.V.I.B. <i>Nathaniel B. Palmer</i>	NOAA AMLR	Invited Scientist
Jun 16-25, 2016	Toolik Field Station, AK	Arctic LTER	Invited Collaborator
Mar 22-25, 2016	R.V. <i>Oceanus</i>	OC295	Instructor
Feb 15-17, 2016	R.V. <i>Oceanus</i>	C-CAW	Invited Scientist
Jan 22-26, 2016	R.V. <i>Oceanus</i>	C-CAW	Invited Scientist
Ma 26, 2015	R.V. <i>Elakha</i>	OC521	Instructor
Mar 24-27, 2015	R.V. <i>Oceanus</i>	OC295	Instructor
Nov 2014-Mar 2015	Palmer Station, Antarctica	CONVERGE	Principal Investigator
Oct 8-11, 2014	R.V. <i>Point Sur</i>	UNOLS	Co-Chief Scientist
Jan-Mar 2014	Palmer Station, Antarctica	CONVERGE	Principal Investigator

Date	Research Vessel/ Field Location	Project/Class	Role
Jan 2013	R.V. <i>Point Sur</i>	Palmer LTER	Chief Scientist
Mar 2012-Dec 2013	Palmer Station, Antarctica	Palmer LTER	Field Team Leader
Oct 2011-Feb 2012	Palmer Station, Antarctica	Palmer LTER	Field Team Leader
Jan 2011	A.R.S.V. <i>Laurence M. Gould</i>	Palmer LTER	Scientist
Oct 2010-Apr 2011	Palmer Station, Antarctica	Palmer LTER	Field Team Leader
Jan 2010	A.R.S.V. <i>Laurence M. Gould</i>	Palmer LTER	Scientist
Nov 2008	R.V. <i>Dr. Fridtjof Nansen</i>	ASCLME	Scientist
Oct 2008	R.V. <i>Dr. Fridtjof Nansen</i>	ASCLME	Scientist
Nov 2005-Jan 2006	R.V. <i>Polarstern</i>	LAKRIS Project	Invited Scientist
Apr 2005	M.V. <i>S.A. Agulhas</i>	SOG	Group Leader
Nov-Dec 2004	M.V. <i>Akademik Sergey Vavilov</i>	Goodhope II	Group Leader
Apr 2004	M.V. <i>S.A. Agulhas</i>	SOG	Student
Apr 2002	M.V. <i>S.A. Agulhas</i>	SOG	Student
Apr 2001	M.V. <i>S.A. Agulhas</i>	SOG	Student
Apr 2000	M.V. <i>S.A. Agulhas</i>	SOG	Student

CAREER = NSF Career Award “The Omnivore’s Dilemma”; STEM Pipeline = Outreach and education cruise; OAH = Ocean Acidification and Hypoxia study; NOAA AMLR = National Oceanography and Atmospheric Administration, Antarctic Marine Living Resources; LTER = Long Term Ecological Research; OC295 = Introduction to Field Oceanography Class; C-CAW = Coastal Carbon in the Winter; OC521 = Applied Ecology & Biogeochemistry Class; CONVERGE is not an acronym; UNOLS = University-National Oceanographic Laboratory System, Chief Scientist Training; ASCLME = Agulhas-Somali Current Large Marine Ecosystem Project, operated by the United Nations Environment Programme; LAKRIS Project = Lazarev Sea Antarctic Krill Survey, operated by the Alfred-Wegener Institute for Polar and Marine Research; SOG = Southern Ocean Group, Rhodes University.

TEACHING AND ADVISING

Credit courses taught at OSU

Course No.	Title	Credit Hour	No. of Students	No. of TAs	Term, Year
OC334	Polar Oceanography (WIC)	3	11	0	Spring, 2014
OC295*	Introduction to Field Oceanography	3	10	0	Spring, 2015
OC334	Polar Oceanography (WIC)	3	13	0	Spring, 2015
OC295*	Introduction to Field Oceanography	3	13	1	Winter, 2016
OC334	Polar Oceanography (WIC)	3	11	1	Spring, 2016
OC295	Introduction to Field Oceanography	3	14	0	Winter, 2017
OC334	Polar Oceanography (WIC)	3	25	1	Spring, 2017
OC334	Polar Oceanography (WIC)	3	20	1	Spring, 2018
OC334	Polar Oceanography (WIC)	3	19	1	Winter, 2019

* Denotes classes where I have been listed as co-instructor.

Graduate Student Advising

Name	Major	Degree	Date Entered Program	Graduation Date	Role
Luzuko Dali*	Marine Biology	M.S.	Jan 2008	Apr 2010	Advisor

Katelyn M. Qualls	Ocean Ecology & Biogeochemistry	M.S.	Sep 2015	Apr 2019	Advisor
Kirsten Steinke	Ocean Ecology & Biogeochemistry	Ph.D.	Sep 2018	Enrolled	Advisor
Ashley Hann	Marine Resource Management	M.S.	Sep 2019	Enrolled	Advisor
Kelsey A. McBeain	Microbiology	M.S.	Sep 2014	Dec 2016	Committee
Stephanie Loreda	Wildlife Science	M.S.	Sep 2015	Jun 2018	Committee
Miram Gleiber	Integrated Biology	Ph.D.	Sep 2014	Enrolled	Committee
Dawn R. Barlow	Wildlife Science	M.S.	Sep 2016	Jun 2018	Committee
Jessamyn Johnson	Ocean Ecology & Biogeochemistry	M.S.	Sep 2016	Jun 2019	Committee
Jack A. Conroy*	Marine Science	Ph.D.	Sep 2017	Enrolled	Committee
Madeleine Eckmann	Fisheries Science	M.S.	Sep 2012	Nov 2014	GCR
Samara Haver	Wildlife Science	M.S.	Jan 2015	Jun 2017	GCR
Sheanna Steingass	Wildlife Science	Ph.D.	Mar 2014	Jun 2018	GCR
Alicia Rickborn	Integrated Biology	Ph.D.	Sep 2014	Jun 2019	GCR
Brandon Chasco	Fisheries Science	Ph.D.	Jan 2013	Mar 2019	GCR
Brittany Schwartzkopf	Fisheries Science	Ph.D.	Jan 2015	Feb 2020	GCR

*Rhodes University, South Africa; *Virginia Institute of Marine Science, College of William and Mary, VA; GCR = Graduate Council Representative

Undergraduate Advising

Name	Major	Date	Thesis/Program
Radhika Shah	Environmental Sciences (HC)	Fall 2017-Spring 2019	Honors Thesis
Julia Fontana	Ocean Sciences	Spring 2019	Senior Thesis
Monisha Sugla	Rutgers University, NJ	Summer 2016	REU
Charlie Donahue	Oregon State University, OR	Summer 2018	REU
Jessica O'Loughlin	Oregon State University, OR	Summer 2018	REU
Lacey A. Gunther	Environmental Sciences	Winter-Summer 2015	URSA-Engage
Radhika Shah	Environmental Sciences (HC)	Winter-Spring 2016	URSA-Engage
Adriana Amrhein	Environmental Sciences	Winter-Spring 2017	URSA-Engage
Charlie Donahue	Biology	Winter-Spring 2017	URSA-Engage
Taylor McAlister	Environmental Sciences	Winter-Spring 2017	URSA-Engage

REU = Research Experience for Undergraduates, funded by the National Science Foundation; URSA-Engage = Undergraduate Research, Scholarship and the Arts Program at Oregon State University.

Undergraduate Mentorship – Research Volunteers and Interns

Name	Major	Date
Sean H. Mahaffey	Earth Sciences	Summer 2016
Giovanna Bishop	Wheaton College	Summer 2016
Lacey Gunther	Environmental Sciences	Fall 2015 – Spring 2017
Sidney Gerst	Environmental Sciences	Winter-Spring 2016
Virginia Pritchard	Microbiology	Fall 2016
Adriana Amrhein	Environmental Sciences	Fall 2016
Shannon Guercio	Biology	Fall 2016 – Spring 2017
Pha Truong Phan	Earth Sciences	Spring 2017-present

WORKSHOPS/SHORT COURSES ATTENDED

- National Association of Geoscience Teachers (NAGT) Professional Development Traveling Workshops Program. September 2018. Oregon State University, Corvallis, Oregon, USA.
- Scientific Committee for Antarctic Research (SCAR) Krill Action Group. Workshop. July 2018. British Antarctic Survey, Cambridge, United Kingdom. Attended remotely.
- National Center for Faculty Development and Diversity (NCFDD), Faculty Success Program. 2017. On-line 12-week program.
- National Center for Faculty Development and Diversity (NCFDD), Teaching in No Time: How to Prepare for a Stress-Free Semester. 2016. On-line 4-week webinar.
- Oceans Observatory Initiative (OOI) Workshop. 2016. Portland, Oregon, USA.
- COMPASS CEOAS Science Communication Training. 2016. Corvallis, Oregon, USA.
- CONVERGE Project Data Analysis Workshop. 2015. Ruby Habitat Foundation, Montana, USA.
- UNOLS Chief Scientist Training Program. 2014. Moss Landing Marine Laboratories, Moss Landing, California, USA.
- CONVERGE Project Intensive Field Season Planning Workshop. 2014. Lockheed Martin Antarctic Support Contract (ASC) Headquarters, Centennial, Colorado, USA.
- EarthCube Ocean Ecosystem Dynamics Domain End-User Workshop. 2013. Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, USA.
- CONVERGE Project Pilot Field Season Planning Workshop. 2013. Lockheed Martin Antarctic Support Contract (ASC) Headquarters, Centennial, Colorado, USA.

SERVICE**UNIVERSITY SERVICE**

- Hiring Committee Member, Position of Marine Superintendent, CEOAS, OSU, September 2018 – present.
- Hiring Committee Member, Position of Assistant Professor in Polar Paleoclimatology, CEOAS, OSU, July 2018 – present.
- Chair, Ship Operations Committee, CEOAS, OSU, September 2018 – present.
- Ship Operations Committee, CEOAS, OSU, September 2017 – August 2018.
- Hiring Committee Member, Opportunity hire for position of Assistant Professor, Senior Research for Dr. Maria Kavanaugh, Ocean Ecology and Biogeochemistry (OEB) – April 2017.
- Assistant Professor Committee for the hiring of Associate Dean of Research and Faculty Advancement – January 2017.
- Promotion and Tenure Committee, CEOAS, OSU, September 2016 – June 2017.
- University Honors College Curriculum Committee, OSU, November 2015 – October 2017.
- Peer Review of Teaching Committee, CEOAS, OSU, September 2015 – June 2016
- Peer Review of Teaching Committee, CEOAS, OSU, September 2014 – June 2015.
- Hiring Committee Member, Position of Research Associate, Cooperative Institute for Marine Resources Studies (CIMRS) – December 2013.

SERVICE TO THE PROFESSION**Editorial service**

- Editorial board member for *Nature Scientific Reports*, Nature Publishing Group. May 2016 – July 2018. In this position, I typically had between 2 and 5 manuscripts in circulation at any one time.

Journal reviews

- I conduct manuscript reviews for journals 4-5 times per year. I have reviewed manuscripts for the following journals: Nature Communications Biology, Deep-Sea Research, Hydrobiologia, ICES Journal of Marine Science, Journal of Geophysical Research, Marine Biology, PLOS ONE, Canadian Journal of Zoology, Polar Biology, Progress in Oceanography, South African Journal of Science

Proposal reviews

- NSF OPP Antarctic Organisms & Ecosystems, 2019 (1 proposal)
- NSF OPP Polar Special Initiatives, 2018 (1 proposal)
- NSF GEO Arctic Research, 2017 (1 proposal)
- NSF GEO Biological Oceanography, 2016 (1 proposal)
- British Natural Environment Research Council, 2014 (1 proposal)
- South African National Antarctic Program, 2010 (2 proposals)

Other reviews

- South African National Research Foundation Competitive Program for Rated Researchers Reviewer, 2010.

Conference leadership

- Invited Session Co-Convener, *ICES/PICES 6th Zooplankton Production Symposium*. Session 7: Zooplankton in High Latitudes. Bergen, Norway. May 9-13, 2016.

Advisory committees

- Subcommittee of the NSF Office of Polar Programs (OPP) Advisory Committee on the U.S. Antarctic Program's Research Vessel Procurement, June 2018 – August 2019.

International committees

- SCAR (Scientific Committee for Antarctic Research) Krill Action Group, Executive member, July 2018 – present.

Panel participation

- NSF Office for Polar Programs, 2018.
- LTER Digital Education Library Review Camp, 2013.
- Eastern Cape Marine and Coastal Research and Management (ECRAM) Assessment Panels for the Marine Living Resources Fund, 2008-2009.
- Society, Ecosystems and Change (SEACChange) Advisory Panel for the National Research Foundation (NRF, South Africa), 2007.

SERVICE TO THE PUBLIC (PROFESSIONALLY RELATED)**Selected Outreach Events and Presentations (since 2011)**

- R/V *Oceanus* Open Day, Portland, OR (September 2018). I participated in a 2-day outreach and education event aboard the R/V *Oceanus*. The aim of the event was to highlight oceanographic research as an important STEM field, to engage high school students in the field of oceanography. During this event, I gave 42 10-minute presentations to middle and high school students and their teachers.
- R/V *Oceanus* STEM Pipeline Research Cruise (September 2018). I participated in a 4-day educational research cruise aimed at immersing students and teachers from local high schools as well as students from local community colleges in sea-going oceanographic research.

- National Ocean Science Bowl, Career Night (April 2017). Career mentor, talking about my research and career path with high school students from across the United States. Corvallis, OR.
- A Call to Life: Variations on a Theme of Extinction – So Much Worth Saving (April 2017). One of five scientists in a panel talking about the organisms we study as part of Oregon State University’s SPARK program in the School of Arts and Communication. Corvallis, OR.
- Project CONVERGE Teacher Workshop (August 2014). “Following the Food”. Rutgers University, NJ.
- Abercrombe & Kent Gift Acceptance Seminar (December 2012). “Palmer Antarctica Long-Term Ecological Research Project: Looking back in time through marine ecosystem space”. M.V. Le Boreal, near Palmer Station, Antarctica.
- SciFestAfrica, Invited speaker (March 2012). “Antarctica: Notes from the bottom of the world”. Supported by the South African Department for Science and Technology as part of the Youth into Science Strategy. Grahamstown, South Africa.
- Boston Museum of Science, Live Video Broadcast (January 2012). Speaking to visitors of the museum about the ecosystem of the Western Antarctic Peninsula and how climate change is impacting it. Live broadcast from Palmer Station, Antarctica.
- Abercrombe & Kent Gift Acceptance Seminar (December 2011). “Palmer Antarctica Long-Term Ecological Research Project: Looking back in time through marine ecosystem space”. M.V. Le Boreal, near Palmer Station, Antarctica.
- Society of Environmental Journalists 21st Conference (October 2011). Live video broadcast from Palmer Station, Antarctica during the conference opening ceremony. Discussed climate change in the Western Antarctic Peninsula. Live broadcast from Palmer Station, Antarctica.
- Virginia Institute of Marine Science (VIMS) Marine Science Day (May 2011). Zooplankton Ecology Laboratory exhibit and demonstrations. Gloucester Point, VA.
- TedX Pura Vida, Costa Rica (February 2011). Live video broadcast from Palmer Station, Antarctica. Discussed research being conducted at Palmer Station as part of the Palmer Antarctic Long-Term Ecological Research project and the impacts of climate change in the region. Live broadcast from Palmer Station, Antarctica.

Selected Media Releases

- *Oregon Public Broadcasting’s Think Out Loud* “Winter solstice in Antarctica”, by Sage Van Wing, with radio host Dave Miller. June 20, 2019.
- *IFL Science* “Meet the All-Women Expedition Team About to Spend Winter in Antarctica”, by Kristy Hamilton, April 2019.
- *Oregon Public Broadcasting’s Think Out Loud* “Oregon researchers will spend winter in Antarctica”, by Sage Van Wing, with radio host Dave Miller. March 21, 2019.
- *Terra* “Going in for the krill”, by Mark Floyd, Fall 2017.
- *Elements* “A Time to Krill”, by Abby Metzger, Spring 2017.
- *The Antarctic Sun* “Converging factors: New project to use radar array to determine how ocean currents affect food web”, by Peter Rejcek, May 9, 2014.
- *Popular Mechanics* “Science on Ice: What It’s Like to Live and Work in Antarctica”, by Jennifer Bogo, February 20, 2012.
- *New York Times* “Team Tracks a Food Supply at the End of the World”, by Susan Moran, March 12, 2012.
- *Nature News Blog* “Research Trip to the Antarctic: Antarctic krillers”, by Jane Qiu, December 15, 2010.

Authored Popular Articles

- Bernard KS (2010). Antarctic Meltdown: The Knock-On Effects of Climate Change in the Western Antarctica Peninsula. SAEON August '10 Newsletter. South African Environmental Observation Network.
- Bernard KS (2009). Exploring the South-West Indian Ocean (Agulhas and Somali Current Large Marine Ecosystem – ASCLME – Project). SAEON April '09 Newsletter. South African Environmental Observation Network.
- Bernard KS (2008). Coastal upwelling studies can help piece together climate change puzzle. SAEON February'08 Newsletter. South African Environmental Observation Network