

**Kieran D. Cox**  
**Ph.D. Candidate and Hakai Scholar**  
**University of Victoria**  
**Curriculum Vitae**  
 Updated: March, 2020

## Education

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• <b>Ph.D. in Biology</b> University of Victoria	2015-Present
• <b>B.Sc. Biology</b> University of Victoria	2011-2014
• <b>General Biology</b> Okanagan College, University Transfer	2008-2011

## Professional Experience

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• <b>Link Fellowship</b> The Smithsonian Institute and Link Foundation	2018-2019
• <b>Research Associate</b> Research and writing contract, Dr. Natalie Ban	2015
• <b>Research Assistant, NSERC USRA</b> Juanes lab, University of Victoria	2015
• <b>Research Assistant, Scientific Diver, Diver Lead</b> Baum Lab, University of Victoria	2014-2015

## Research Grants and Funding: \$335,500 CAD

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• <b>University of Victoria</b> Montalbano Scholars Fellowship	\$30,000	2018-2021
• <b>Fisheries and Oceans Canada, National Contaminants Advisory Group</b> Trophic Transfer of Microplastic Within Coastal Environments Francis Juanes, <b>Kieran Cox</b> , Garth Covernton, Sarah Dudas	\$130,000	2018-2020
• <b>Link Smithsonian Fellowship</b> The Relationship Between Habitat Complexity and Marine Biodiversity <b>Kieran Cox</b> , Valarie Paul, Emmett Duffy	\$8,500	2018-2019
• <b>The Natural Sciences and Engineering Research Council</b> Postgraduate Scholarship-Doctoral (PGS D)	\$63,000	2017-2020
• <b>The PADI Foundation</b> Marine Ecosystems Responses to First Nation Clam Gardens	\$4,000	2017
• <b>The Hakai Institute, Soft-Sediment Biodiversity</b> Scholarship and Research Funding Sarah Dudas, <b>Kieran Cox</b>	\$100,000	2016-17

## **Awards and Honours: \$41,900 CAD**

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•UVic President's Research Scholarship	\$16,000	2017-2020
•The Randy Baker Memorial Scholarship	\$450	2020
•Aquaculture Association of Canadian, Student Scholarship	\$1,000	2016
•UVic Graduate Award	\$15,000	2015-2017
•Natural Sciences and Engineering Research Council, USRA	\$6,000	2015
•Dr. Michael Bigg Memorial Bursary	\$450	2013
•Irving K Barber, Transfer Scholarship	\$5,000	2011
•Ruther Sutherlands Memorial Award	\$1,000	2010-2011
•South Okanagan Environmental Award	\$1,000	2009-2011

## **Peer-Reviewed Publications** Citations: 158 | h-index: 7

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### **2020**

17. Claar, D.C., Tietjen, K., **Cox, K.D.**, R.D. Gates, and J.K. Baum. 2020. Chronic Disturbance Modulates Symbiont Beta Diversity on Coral Reefs. *Scientific Reports*. 10:4492
16. Osgood, G.J., Timmer, B., **Cox, K.D.**, Juanes, F., and Baum, J.K. 2020. Fractionation of  $\delta^{15}\text{N}$  and  $\delta^{13}\text{C}$  in the embryos of the ovoviviparous bluntnose sixgill shark *Hexanchus griseus*. *Journal of Fish Biology*.
15. **Cox, K.D.**, Davies, H.L., Davidson, K., Gerwing, T.G., Dudas, S.E., and Juanes, F. 2020. Shellfish Subsidies Along the Pacific Coast of North America. *Ecography*. 43: 1-14.
14. Gerwing, T.G., **Cox, K.D.**, Allen Gerwing, A.M., Campbell, L., MacDonald, T., Dudas, S.E., and Juanes, F. 2020. Varying Intertidal Invertebrate Taxonomic Resolution Does Not Influence Ecological Findings. *Estuarine, Coastal and Shelf Science*. 232:106516.

### **2019**

13. Covernton, G., and **Cox, K.D.**, Commentary on: Abundance and distribution of microplastics within surface sediments of a key shellfish growing region of Canada. 2019. *Plos One*. 14: e0225945. *Authors contributed equally*.
12. **Cox, K.D.**, Gerwing, T.G., MacDonald, T., Hessian-Lewis, M., Millard-Martin, B., Command, J.R., Juanes, F., and Dudas, S.E. 2019. Infaunal Communities Responses to Ancient Clam Gardens. *ICES Journal of Marine Science*. 76: 2362-2373.
11. **Cox, K.D.**, Covernton, G., Davies, H.L., Dower, J., Juanes, F., and Dudas, S.E. Human Consumption of Microplastics. 2019. *Environmental Science and Technology*. 53: 7068-7074. *Altmetric Score ~1700, F1000 Recommended*.
10. Holden, J., Collicutt, B., Covernton, G., **Cox, K.D.**, Lancaster, D., Dudas, S.E., Ban, N., and Jacob, A. 2019. Synergies on the coast: Challenges facing shellfish aquaculture development on the central and north coast of British Columbia. *Marine Policy*. 101: 108-117.

### **2018**

9. Gerwing, T.G., Campbell, L., Allen Gerwing, A.M., Allen, S., **Cox, K.D.**, Rogers, M., Gray, O., Drewes, M., and Juanes, F., 2018. Impact of Logging on Intertidal Infaunal Communities within the Kitimat River Estuary. *Journal of Natural History*. 52: 2833-2855.

8. Gerwing, T.G., Allen Gerwing, A.M., MacDonald, T., **Cox, K.D.**, Juanes, F., and Dudas, S.E. 2018. Assessing the Relationship between Community Dispersion and Disturbance in a Soft-Sediment Ecosystem. *Marine Ecology*. 39: e12505.

7. **Cox, K.D.**, Brennan, L., Gerwing, T.G., Dudas, S.E., and Juanes, F. 2018. Sound the alarm: A Meta-Analysis on the Effect of Aquatic Noise on Fish Behavior and Physiology. *Global Change Biology*. 24: 3105-3116.

## 2017

6. **Cox, K.D.**, Black, M., Filip, N., Miller, M., Mohns, K., Mortimor, J., Ricardo, T., Greiter Loerzer, R., Gerwing, T.G., Juanes, F., and Dudas, S.E. 2017. Community Assessment Techniques and the Implications for Rarefaction and Extrapolation with Hill Numbers. *Ecology and Evolution*. 7: 11213-11226.

5. Gerwing, T.G., **Cox, K.D.**, Allen-Gerwing, A.M., Carr-Harris, C.N., Dudas, S.E., and Juanes, F. 2017. Depth to The Apparent Redox Potential Discontinuity (Arpd) As A Parameter of Interest in Marine Benthic Habitat Quality Models. *International Journal of Sediment Research*. 33: 149-156.

4. Gerwing, T.G., Allen Gerwing, A.M., **Cox, K.D.**, Dudas, S.E., and Juanes, F. 2017. Relationship Between Apparent Redox Potential Discontinuity (Arpd) Depth and Environmental Variables in Soft-Sediment Habitats. *International Journal of Sediment Research*. 32: 472-480.

3. Gerwing, T.G., Allen Gerwing, A.M., MacDonald, T., **Cox, K.D.**, Juanes, F., and Dudas, S.E. 2017. Intertidal Soft-Sediment Community Does Not Respond to Disturbance as Postulated by the Intermediate Disturbance Hypothesis. *Journal of Sea Research*. 129: 22-28.

2. Gerwing, T.G., and **Cox, K.D.** 2017. Erosion of Trust in Government Consultation will Impede the Creation of Environmental Policy. *Marine Policy*. 83: 126-127.

## 2016

1. Reimchen, E.T., and **Cox, D.K.** 2016. Differential Temperature Preferences of Vertebral Phenotypes in *Gasterosteus*. *Canadian Journal of Zoology*. 94: 1-5.

## Forthcoming Peer-Reviewed Publications

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- Whalen A.M., Millard-Martin, R.B., **Cox, K.D.**, Lemay, A.M., and Paulay, G. (*In Revision*). Poleward range expansion of invasive parasite, *Orthione griffenis*, confirmed by establishment in Central British Columbia, Canada. *BioInvasions Records*.

## Book Reviews & Editorial Reviewed Publications

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- Holmes, K., **Cox, K.D.**, Cline, A., Hatch, M., Black, M., Salomon, A., Lepofsky, D., Nicole, S., and Dudas, S.E. 2020. Ancient Ecology: The Quadra Island Clam Gardens. *Fisheries*. 45: 151-156.
- Murchy, K.A., Davies, H., Shafer, H., **Cox, K.**, Nikolich, K., Juanes, J. 2019. Impacts of Noise on the Behavior and Physiology of Marine Invertebrates: A Meta-Analysis. *Proceedings of Meetings on Acoustics*. 37: 040002
- **Cox, K.D.**, 2017. The Unique Ecology of Lembeh Strait, Indonesia. *Fisheries*. 42: 519-525.
- Chalifour, L., Black, M., **Cox, K.D.**, Schroeder, S., Juanes, F. 2017. Review of "Ecology of Salmonids in Estuaries around the World: Adaptations, Habitats, and Conservation" by Colin D. Levings. *Fish and Fisheries*. 18: 790-791.
- **Cox, K.D.** and Bright, J. 2017. Raja Ampat: A Biodiversity Hot Spot and the Future of Marine Conservation. *Fisheries*. 42: 462-467.
- **Cox, D.K.**, Brennan, L., Dudas, S.E., and Juanes, F. 2016. Assessing the Effect of Aquatic Noise on Fish Behavior and Physiology: A Meta-Analysis Approach. *Proceedings of Meetings on Acoustics*. 27: 010024.

- Sopinka, N. and **Cox, K.D.** 2016. Back Page Photo Series: Boundaries. *Fisheries*. 41: 659-660.

## **Published Photography**

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- **Cox, K.D.** 2018. *Marine and Coastal Fisheries*, Journal Cover. 10.
- **Cox, K.D.** 2018. *Fisheries*, Journal Cover. 43.
- **Cox, K.D.**, and Bright, J. 2017. *Fisheries*, Journal Cover. 42.

## **Technical Reports**

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- Collicutt, B., Covernton, G., **Cox, K.D.**, Holden, J., Dudas, S.E. 2016. British Columbia Shellfish Aquaculture and Ecosystem Services: A Review. 59 pp.
- **Cox, K.D.**, Mohns, K., Dudas, S.E. Intertidal Biodiversity Annual Report 2015 Hakai Institute & Ecological Interaction Research Program. 86 pp.

## **Invited Seminars**

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- **Cox, K.D.\***, Juanes, F., and Dudas, S.E. Coastal Shellfish: Cultivation, Marine Subsidies, and Implications for Nearshore Biodiversity. Simon Fraser University, Les Écologistes. Vancouver, British Columbia, April 16, 2020. \*Cancelled due to COVID-19\*
- **Cox, K.D.\***, Covernton, G., Davies, H.L., Dower, J., Juanes, F., and Dudas, S.E. Human Consumption of Microplastics. NOAA Science Seminar Series. September 19, 2019.
- **Cox, K.D.\***. Integrating 3D Habitat Models into Marine Ecosystem Assessments. Smithsonian Marine Station, Seminar Series. Fort Pierce, Florida, November 13, 2018.  
\*Presenting Author

## **Conference Presentations**

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- Looby, A. \*, **Cox, K.D.**, Gonzalez Bravo, S., Rountree, R., Juanes, F., Martin, C.W., Reynolds, L.K. The Ecological Importance and Remote Sensing Applications of Fish Sounds. North Florida Marine Science Symposium, St. Augustine, FL. January 24, 2020.
- Looby, A. \*, **Cox, K.D.**, Rountree, R., Juanes, F., Martin, C.W., Reynolds, L.K. A global review of tested and reported sound production in fishes. Coastal and Estuarine Research Federation Conference, Mobile, AL. November 4, 2019.
- Mouy, X.\*, Black, M., **Cox, K.D.**, Qualley, J., Juanes, F., and Dosso, D. Identifying fish sounds of British Columbia with an autonomous audio and video array. Acoustical Society of America Meeting. San Diego, California, 2–6 December 2019.
- Mouy, X.\*, Black, M., **Cox, K.D.**, Qualley, J., Juanes, F., and Dosso, D. Identifying fish sounds of British Columbia with an autonomous audio and video array. Acoustical Society of America. PICES Annual Meeting. Victoria, British Columbia, October 16-27, 2019.
- Murchy, K.\*, Davies, H., Shafer, H., **Cox, K.D.**, Nikolich, K., and Juanes, F. Impacts of Noise on The Behavior and Physiology of Marine Invertebrates: A Meta-Analysis. The International Conferences on the Effects of Noise on Aquatic Life. Den Haag, The Netherlands, July 7-12, 2019.
- **Cox, K.D.\***, Juanes, F., and Dudas, S.E. Community Assessment Techniques and Implications for Diversity Indices and Species Accumulation Curves. Canadian Society for Ecology & Evolution Meeting 2017. Victoria, British Columbia. May 7 - 11, 2017.

- **Cox, K.D.**, Brennan, L., and Juanes, F.\* The Effects of Anthropogenic and Biological Noise on Fish Behaviour and Physiology: a meta-analysis. Canadian Society for Ecology & Evolution Meeting 2017. Victoria, British Columbia. May 7 - 11, 2017.
- MacLennan, E.\*, **Cox, K.D.**, Brittain, S., Nameth, B., and Juanes, F. Assessing the Behavioural Response of the Plainfin Midshipman to Anthropogenic Noise, and its Dependence on Habitat Complexity. Pacific Ecology and Evolution Conference, Bamfield, British Columbia, February 24-26, 2017.
- **Cox, K.D.\***, Juanes, F., and Dudas, S.E. A Comparison of Substrate Ecosystem Assessment Techniques and the Implications from Commonly Used Biodiversity Metrics. Pacific Ecology and Evolution Conference, Bamfield, British Columbia, February 24-26, 2017.
- **Cox, K.D.**, Brennan, L., MacLennan, E., Dudas, S.E., and Juanes, F.\* Assessing the effect of marine noise on fish behaviour and physiology: a case study and meta-analysis approach. The International Conferences on the Effects of Noise on Aquatic Life, Dublin, Ireland, July 10-16, 2016.
- **Cox, K.D.\***, Dudas, S.E., and Juanes, F. Assessing the effects of contemporary and traditional shellfish aquaculture on marine biodiversity. The Salish Sea Ecosystem Conference, Vancouver, British Columbia, April 13-15th, 2016.
- **Cox, K.D.\***, Dudas, S.E., and Juanes, F. 2016. The effects of shellfish aquaculture and First Nations clam gardens on species diversity and abundance. Pacific Ecology and Evolution Conference, Bamfield, British Columbia, February 24-26, 2016.

\*Presenting Author

## **Selected Media**

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- Hakai Magazine. March 5, 2020. How Seashells Feed Trees. Christopher Pollon
- Nature. June 11, 2019. What a bottled-water habit means for intake of 'microplastics'. By Helen Shen
- TIME. June 6, 2019 Americans Eat and Inhale Over 70,000 Plastic Particles Each Year According to a New Analysis. By Mandy Oaklander
- Smithsonian Magazine. June 6, 2019. Americans May Be Ingesting Thousands of Microplastics Every Year. By Brigit Katz
- Science. June 5, 2019. Americans eat more than 50,000 tiny pieces of plastic every year. By David Shultz
- The Guardian. June 5, 2019. People eat at least 50,000 plastic particles a year, study finds. By Damian Carrington
- VICE. June 5, 2019. Microplastic Is Everywhere and It's Sneaking into Our Bodies. By Anne Gaviola
- National Geographic. June 5, 2019. You eat thousands of bits of plastic every year. By Sarah Gibbens.
- Smithsonian's National Museum of Natural History, FacebookLive. October 2, 2018, Behind-the-scenes at our Smithsonian Carrie Bow Cay Field Station. By Maggy Benson (Video)
- Aquaculture North America. June 26, 2018. Noise Pollution Overlooked in Fish Welfare. By Matt Jones
- Hakai Magazine. April 6, 2018. Marine Noise Is Mentally and Physically Disturbing Fish. By Richard Kemeny
- CBC News. March 31, 2018. Underwater Noise Pollution Disturbs Fish. By Greg Rasmussen
- Global News. March 28, 2018. New UVic Study Shows Noise Pollution Affects Marine Life (Video)
- Life at Hakai. January 30, 2017. Racing Tides. By Ami Kingdon

## **Journals Refereed**

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- Fish and Fisheries
- Science of the Total Environment
- Journal of Fish Biology
- Journal of Freshwater Biology
- PLOS One
- Environmental Science and Technology
- Environmental Pollution
- Marine Pollution Bulletin
- Reviews in Fish Biology and Fisheries

## **Students Mentored**

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- Madeleine Springle, BSc Honours, Juanes Lab, UVic 2019-Present
- Benjamin Fortini, BSc Honours, Juanes Lab, UVic 2019-Present
- Brian Timmer, NSERC USRA, Juanes Lab, UVic 2019
- Wendy Fleming, NSERC USRA, Dower Lab, UVic 2018-2019
- Hailey Davies, NSERC USRA, UVic SURA, Research Assistant, Juanes Lab, UVic 2016-Present
- Hailey Davies, Directed Studies, Juanes Lab, UVic 2016
- Eva MacLennan, BSc Honours, Juanes Lab, UVic 2016-2017
- Layla Olefs, Undergraduate Research Project, Vancouver Island University 2016-2017
- Quinn Bishop, Directed Studies, Juanes Lab, UVic 2016
- Lawrence Brennan, Directed Studies, Juanes Lab, UVic 2015
- Rylan Command, Directed Studies, Juanes Lab, UVic 2015

## **Professional Certifications**

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- Canadian Association of Underwater Science Level 2
- Canadian Association of Underwater Science Level 1
- Small Vessel Operator Proficiency (SVOP)
- Oxygen for Scuba Diving Injuries: DAN
- PADI Divemaster
- Dive Accident Management
- Marine First Aid CPR/AED Level C
- Restrictor Operators (Maritime Radio)
- Marine Emergency Duties (MED A3)
- PADI Rescue Diver