

Curriculum Vitae
Dr. ALEJANDRO FRID

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Place of birth: Mexico City

Citizenship: Canadian

Languages: Fluent in English and Spanish

Education:

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|------|-----|--------------------------------|---------------------|
| 2006 | PhD | Simon Fraser University | Biological Sciences |
| 1994 | MSc | University of British Columbia | Animal Science |
| 1988 | BSc | Evergreen State College | Biology |

Professional Experience

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|------------------------|-------------------------------|---|
| 2015-Current | Adjunct Assistant Professor, | School of Environmental Studies, University of Victoria |
| 2013-Current | Ecologist/Science Coordinator | Central Coast Indigenous Resource Alliance |
| 2008-2013 | Postdoctoral fellow | Vancouver Aquarium |
| 2006-2008 | Postdoctoral fellow | Prince William Sound Science Center and Dalhousie University |
| 2000-2006 | PhD Candidate | Simon Fraser University |
| 1990-91, 1994-99, 2002 | Ecological Consultant | Self-employed |
| 1987 | Field technician | Canadian Wildlife Service |

Other qualifications: WorkSafe BC Unrestricted Occupational SCUBA Diver (certificate 201366), (>650 research dives conducted to date in British Columbia).

Publications in refereed journals

27. **Frid A.**, McGreer M., Haggarty D.R., Beaumont J. & Gregr E.J. (2016). Rockfish size and age: The crossroads of spatial protection, central place fisheries and indigenous rights. *Global Ecology and Conservation*, 8, 170-182.
<http://www.sciencedirect.com/science/article/pii/S2351989416300920>
26. **Frid A.**, McGreer M. & Stevenson A. (2016). Rapid recovery of Dungeness crab within spatial fishery closures declared under indigenous law in British Columbia. *Global Ecology and Conservation*, 6, 48-57. <http://www.sciencedirect.com/science/article/pii/S235198941630004X>
25. Wirsing A.J., Heithaus M.R. & **Frid A.** (2014). Cross-fertilizing aquatic and terrestrial research to understand predator risk effects. *Wiley Interdisciplinary Reviews: Water*. Published online: 4 AUG 2014. DOI: 10.1002/wat2.1039.
24. Marliave J, **Frid A.**, Welch D and Porter A. (2013.) Home site fidelity by Black Rockfish (*Sebastes melanops*) reintroduced to a fjord environment. *Canadian Field Naturalist* 127(3): 255–261.
23. **Frid A.**, Connors B., Cooper A.B., Marliave J. (2013) Size-structured abundance relationships between upper- and mid-trophic level predators on temperate rocky reefs. *Ethology Ecology & Evolution* 25, 253-268. DOI 10.1080/03949370.2013.798350
22. **Frid A.**, Marliave J, and Heithaus MR (2012). Interspecific variation in life history relates to antipredator decisions by marine mesopredators on temperate reefs. *PLoS ONE* 7(6): e40083. doi:10.1371/journal.pone.0040083.
21. **Frid A** and L Quarmby (2012) Take direct action on climate inaction. *Nature*. 487 (5 July 2012)

20. **Frid A** and Marliave J (2010) Predatory fishes affect trophic cascades and apparent competition in temperate reefs. *Biology Letters* 6:533-536.
19. **Frid A**, Burns J, Baker GG and Thorne RE (2009). Predicting synergistic effects of resources and predators on foraging decisions by juvenile Steller sea lions. *Oecologia*. 158:775-776
18. **Frid A**, Baker GG and Dill LM (2008). Do shark declines create fear-released systems? *Oikos* 117: 191-201.
17. Heithaus MR, **Frid A**, Wirsing, A and Worm B (2008). Predicting ecological consequences of marine top predator declines. *Trends in Ecology and Evolution* 23:202-210
16. Heithaus MR, Wirsing A, **Frid A** and Dill LM (2008). Seascapes of fear: evaluating sublethal predator effects experienced and generated by marine mammals. *Marine Mammal Science* 24:1-15.
15. **Frid A**, Dill LM, Thorne RE, and Blundell GM (2007a). Inferring prey perception of relative danger in large-scale marine systems. *Evolutionary Ecology Research*. 9: 635-649.
14. **Frid A**, Heithaus MR, and Dill LM (2007b). Dangerous dive cycles and the proverbial ostrich. *Oikos*: 116: 893-902.
13. Heithaus MR, **Frid A**, Wirsing A, Dill LM, Fourqurean J, Burkholder D, Thomson J, Bejder L (2007). State-dependent risk-taking by green sea turtles mediates top-down effects of tiger shark intimidation in a marine ecosystem. *Journal of Animal Ecology*. 76: 87-844.
12. Heithaus MR, Wirsing A, **Frid A**, and Dill LM (2007). Behavioral indicators in conservation biology. *Israel Journal of Ecology and Evolution*. 53: 355-370.
11. **Frid A**, Baker GG and Dill LM (2006). Do resource declines increase predation rates on North Pacific harbor seals? A behavior-based plausibility model. *Marine Ecology Progress Series*. 312: 265-275.
10. Heithaus, M.R., **Frid, A**, Wirsing, A., Bejder, L., and Dill, L.M. (2005). Biology of sea turtles under risk from tiger sharks at a foraging ground. *Marine Ecology Progress Series*. 288:285-294.
9. **Frid A** (2003) Dall's sheep responses to overflights by helicopter and fixed-wing aircraft. *Biological Conservation*. 110: 387-399.
8. Heithaus MR and **Frid A** (2003) Optimal diving under the risk of predation. *Journal of Theoretical Biology*. 223:79-92.
7. **Frid A** and Dill LM (2002) Human-caused disturbance stimuli as a form of predation risk. *Conservation Ecology*. 6:<http://www.consecol.org/Journal/vol6/iss1/art11/print.pdf>.
6. Heithaus MR, **Frid A** and Dill LM (2002) Shark-inflicted injury frequencies, escape ability, and habitat use of green and loggerhead turtles. *Marine Biology*. 140:229-236.
5. Heithaus MR, McLash JJ, **Frid A**, Dill LM and Marshall GJ (2002) Novel insights into green sea turtle behaviour using animal-borne video cameras. *Journal of the Marine Biological Association of the United Kingdom*. 82:1-2.
4. **Frid A** (2001) Habitat use by endangered huemul (*Hippocamelus bisulcus*): cattle, snow, and the problem of multiple causes. *Biological Conservation*. 100:261-267.
3. **Frid A** (1999) Huemul (*Hippocamelus bisulcus*) sociality at a periglacial site: sexual aggregation and habitat effects on group size. *Canadian Journal of Zoology*. 77:1083-1091.
2. **Frid A** (1997) Vigilance by female Dall's sheep: interactions between predation risk factors. *Animal Behaviour*. 53:799-808.
1. **Frid A** (1994) Observations on habitat use and social organisation of a huemul (*Hippocamelus bisulcus*) coastal population in Chile. *Biological Conservation*. 67:13-19.

Peer-reviewed book chapters

2. **Frid A** and Heithaus MR (2010) Conservation and Anti-Predator Behavior. In: Breed M.D. and Moore J., (eds.) *Encyclopedia of Animal Behavior*, volume 1, pp. 366-376 Oxford: Academic Press.

1. Heithaus MR, **Frid A**, Vaudo JJ, Worm B, and Wirsing, AJ (2010). Unravelling the Ecological Importance of Elasmobranchs. Pages 607-633 in: JC Carrier, MR Heithaus, JA Musick (editors) *Sharks and Their Relatives II: Biodiversity, Adaptive Physiology, and Conservation*. CRC Press.

Technical reports (selected)

15. **Frid A** (2015). Ages of rockfish in the territories of Central Coast First Nations: *Interim report for specimens collected in 2013 and 2014*. <http://ccira.ca/media/documents/pdf/rockfish-age-report-2013-14-v3-with-ack.pdf>
14. **Frid A** and J. Boulanger (2014). Dungeness crab research by the Wuikinuxv Nation: *Interim Report to the Central Coast Indigenous Resource Alliance*. <http://ccira.ca/media/documents/pdf/wuikinuxv-crab-2014-report4.pdf>
13. **Frid A**. (2014). Rockfish and Lingcod in the traditional territories of Central Coast First Nations: a pilot study on their relative abundance and body sizes. *Interim Report to the Central Coast Indigenous Resource Alliance*. <http://ccira.ca/media/documents/pdf/af-gf-non-spatial.pdf>
12. **Frid A** and Mooers A (2009) Arguments for legal protection under SARA for bocaccio, canary, and yelloweye rockfish. *Report to the Georgia Strait Alliance* (for submission to DFO under SARA consultations). http://www.georgiastrait.org/files/share/09_12_17_Rockfish_submission.pdf.
11. **Frid A**, Baker GG, and Blundell G (2006) Inferred prey captures and use of near-surface strata by harbour seals in Prince William Sound, Alaska. *Manuscript 3 in North Pacific Research Board Final Report* 313. 115 p. Available at http://doc.nprb.org/web/03_prjs/r0313_final.pdf.
10. **Frid A**, Rigg C, and Orr C (2002) Marine reserves as potential conservation tools for wild salmon in the Northeast Pacific. *Report to the Centre for Coastal Studies (Simon Fraser University) and World Wildlife Fund*.
9. **Frid A** (2002) The survivor's perspective: preliminary study design for quantifying hunting disturbance of caribou along the Dempster Highway, Yukon. *Report to the Yukon Fish and Wildlife Branch, Whitehorse, Yukon*
8. **Frid A** (2001) A focal species framework for designing Yukon reserves. *Report to the Canadian Parks and Wilderness Society*. Whitehorse, Yukon.
7. **Frid A** (2001) Applying conservation biology to the design of Yukon protected areas: a preliminary framework. *Report to the Yukon Protected Areas Secretariat*, Whitehorse.
6. **Frid A** (1998) Crater site selection by woodland caribou of the Southern Lakes Herd: differential effects of congeneric lichen species. *Report to the Yukon Fish and Wildlife Branch, Whitehorse, Yukon*.
5. **Frid, A** (1997) Mule deer use of selected Yukon sites, estimated with pellet group counts: Analyses of the 1997 data. *Report to the Yukon Fish and Wildlife Branch, Whitehorse, Yukon*.
4. **Frid A** (1997) An evaluation of wildlife research related to the Tulsequah Chief Mine. *Report to the Northwest Institute for Bioregional Studies, Smithers, British Columbia*. (This report sounded an early alarm for conservation issues in the Taku River Watershed. See a journalist's perspective published in Canadian Dimensions <http://canadiandimension.com/articles/3239/>.)
3. **Frid A** (1997) Human disturbance of mountain goats and related ungulates: a literature-based analysis with applications to Goatherd Mountain. *Report to Kluane National Park Reserve, Yukon*.
2. **Frid, A** (1996) How many collars, how many flights? A study design for estimating numbers of bison in the Yukon. *Report to the Yukon Fish and Wildlife Branch, Whitehorse, Yukon*
1. **Frid A** (1995) Dall's sheep of the Killermun Lake Region: Ecological and Behavioural data in relation to mineral exploration. *Report to the Yukon Fish and Wildlife Branch and Archer Cathro & Associates LTD, Whitehorse, Yukon*.

Science communication and essays

Selected writing for general audiences.

6. **Frid A** (2015). *A world for my daughter: An ecologist's search for optimism*. Caitlin Press (<http://caitlin-press.com/our-books/world-for-my-daughter-a/>).
5. **Frid A.**(2015). Connecting the dots between LNG, climate change and marine biodiversity. The ECOREport. <http://www.theecoreport.com/connecting-the-dots-between-lng-climate-change-and-marine-biodiversity/>
4. **Frid A** (2012) Troubled waters. *International Innovation*, November 2012, (Research Media, UK, pp 60-61) ISSN 2041-4552. <http://www.research-europe.com/magazine/REGIONAL/NA7/index.html>
3. **Frid A** (2012) Staying grounded: A climate scientist challenges carbon offsets by refusing to fly. *E-The Environmental Magazine*. Nov/Dec 2012: 18-19. <http://www.emagazine.com/magazine/staying-grounded>
2. **Frid A** (1997) Apocalypse cow: endangered deer compete with cattle for space in Chile's fjords. *Wildlife Conservation*, 100, 52-57.
1. **Frid, A** (1991) Into the last outpost of the huemul. *International Wildlife*. 21:14-19.

Sample of essays for scientists

3. **Frid A.** (2015) All (fisheries) models are wrong, but some are useful (to indigenous people) *Conservation Bytes*. <http://conservationbytes.com/2015/08/01/all-fisheries-models-are-wrong-but-some-are-useful-to-indigenous-people/>
2. **Frid A** (2013) Touchy feely ecologists. *Conservation Bytes*. <http://conservationbytes.com/2013/04/18/touchy-feely-ecologists/>
1. **Frid A** (2012) Who's responsible for climate change? Not ecologists, right? *Conservation Bytes*. <http://conservationbytes.com/2012/06/19/whos-responsible-for-climate-change/>

Selected public presentations.

3. **Frid, A.** (2014). Wild food: biodiversity and indigenous rights in a shifting planet. *Quest University*, Squamish, BC.
2. **Frid, A.** (2013). Rockfish fisheries: ecology & conservation. *Raincoast Education Society*, Tofino.
1. **Frid, A.** (2013) Vibrant tension: predators, prey and the changing face of ecosystems. *Vancouver Island University* and *Vancouver Natural History Society*

Selected talks for academic audiences

Seminars and conferences

10. **Frid, A.** (2015). Biodiversity and indigenous rights on a shifting planet. University of Victoria, Geography Department. <http://www.web.uvic.ca/~darimont/mon-jan-12-research-talk-by-alejandro-frid-uvic/>.
9. **Frid, A.** (2014). Size-structured predator-prey interactions as litmus tests for ecological recovery: Can the concept apply to groundfish management? *Western Groundfish Conference*. Victoria, BC.
8. **Frid, A.** (2013) Predator-prey interactions as litmus tests for ecological recovery: can the concept apply to groundfish management? *Seminar at DFO Pacific Biological Station*, Nanaimo.
7. **Frid, A.** (2012) Fast lane mesopredators: rising to the trophic top of exploited temperate reefs. *Les Ecologistes Seminar Series*, Biology Department at SFU, Burnaby, and *Western Groundfish Conference*, Seattle.
6. **Frid, A.** (2010) Fishing down predation risk? Mesopredator size refuges and the probable weakening of trophic cascades. *Western Groundfish Conference*, Juneau, Alaska

5. **Frid, A.** (2009) Risk effects and PCAD objectives. *Working group on the Population Consequences of Acoustic Disturbance on Marine Mammals (PCAD)*, University of California at Santa Barbara.
4. **Frid, A.** (2009). Why predation risk theory is relevant to conserving and restoring marine ecosystems. *Puget Sound Georgia Basin Ecosystem Conference*, Seattle, WA
3. **Frid, A.** (2009). Fishing down risk effects? A tale of little lingcod, scared shrimp, and risk-released rockfish. *Les Ecologistes Seminar Series*, Biology Department, SFU
2. **Frid, A.** (2008). Nonlethal predator-prey interactions between quillback rockfish and lingcod. *Western Society of Naturalists Annual Meeting*, Vancouver, BC
1. **Frid, A.** (2007). Do shark declines lead to 'fear-released' systems? *Fish 500 Seminar Series*, UBC Fisheries Centre, and *Departmental Seminar*, Biology Department, Dalhousie University

Guest lectures for graduate and undergraduate courses

2. Graduate class REM 611-Population and Community Ecology, Simon Fraser University
1. Undergraduate class BISC 406-Marine biology, Simon Fraser University

Funding sources and awards for research

19. Aboriginal Fund for Species at Risk-Prevention Stream (2015-16): \$20,000 CAD
18. Habitat Stewardship Program for Species at Risk (2014-16): \$29,977 CAD
17. Vancouver Foundation (2015-16): \$35,000 CAD
15. Tides Canada (with Central Coast First Nations) (2014-15): \$99,114 CAD
14. Tides Canada (Co-PI Ken Cripps) (2013):\$17,000 CAD
13. Florida International University Seed Funds Award (Co-PI Mike Heithaus) (2011-12) \$30,000 USD
12. SeaDoc Society (Co-PIs J. Marliave and M. Paddock) (2010-2011): \$48,000 USD
11. NSERC IRDF postdoctoral fellowship (2008-2010): \$60,000 CAD
10. Vancouver Aquarium (2008-2010): \$150,000 CAD
9. Prince William Sound Science Center (2006-8): \$65,000 USD
8. Simon Fraser University Graduate Fellowship (2005): \$6,000 CAD
7. Simon Fraser University President Research Award (2005): \$6,000 CAD
6. North Pacific Research Board (2003-5): \$172,886 USD
5. Project Aware Foundation (2003): \$1,000 USD
4. Yukon Government, Canadian Parks & Wilderness Society, World Wildlife Fund (2002): multiple projects.
3. NSERC PGSB Graduate Scholarship (2000-2): \$38,200 CAD
2. Wildlife Conservation Society (Bronx Zoo) (1995): \$10,000 USD
1. Yukon Government, Council of Yukon First Nations, Northwest Institute of Bioregional Studies, Parks Canada, Canadian Parks & Wilderness Society (1995-9): multiple projects.

Peer reviewing

I review multiple submissions per year for: **Journals:** PLoS ONE, Proceedings of the Royal Society B, Journal of the Royal Society Interface, Biology Letters, Oikos, Oecologia, ICES Journal of Marine Science, Animal Conservation, Aquatic Biology, Journal of Applied Ecology, Functional Ecology, Animal Behaviour, Marine Ecology Progress Series, Conservation Biology, Journal of Mammalogy, Behavioral Ecology, Biological Conservation, Rangifer, Northeastern Naturalist, Wildlife Biology, Canadian Field Naturalist, Zoology. **Edited Books:** Proceedings of the 2004 World Fisheries Congress; Boinski and Garber (editors) 2000. On the move: how and why animals travel in groups. Univ.of Chicago Press. **Funding agencies:** North Pacific Research Board; Netherlands Organisation for Scientific Research; Exxon Valdez Oil Spill Trustee Council; Wildlife Conservation Society.