

JUSTIN P. SURACI, PhD

Postdoctoral Scholar, Environmental Studies Department, University of California, Santa Cruz
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EDUCATION

- 2016 **Ph.D.** Biology, University of Victoria
Dissertation: Fear in wildlife food webs: Large carnivore predation risk mediates the impacts of a mammalian mesocarnivore
Co-supervisors: Michael Clinchy, Lawrence Dill, Liana Zanette
- 2011 **M.Sc.** Biology/Behavioral Ecology, Simon Fraser University
Dissertation: Prey choice decisions by Glaucous-winged Gulls: Energetic and anti-parasitic hypotheses for size selection of sea stars
Supervisor: Lawrence Dill
- 2006 **B.S.** Biology (*with distinction*), University of Virginia

APPOINTMENTS

- 2016-Present **Postdoctoral Scholar**, Environmental Studies Department, University of California Santa Cruz, PI: Christopher C. Wilmers

PUBLICATIONS

IN REVIEW/IN REVISION

24. Nickel BA, **Suraci JP**, Nisi AC[∇], Wilmers CC. Energetics and fear of humans constrain the spatial ecology of pumas. *PNAS*.
23. **Suraci JP**, Nickel BA, Wilmers CC. Fine-scale movement decisions by a large carnivore inform conservation planning in human-dominated landscapes. *Landscape Ecology*.
22. Garvey PM, Banks PB, **Suraci JP**, Bodey TW, Glen AS, Jones CJ, McArthur C, Norbury GL, Price CJ, Russell JC, Sih A. Leveraging personality, motivations, and sensory cues for effective predator management. *TREE*.
21. Gaynor KM, Cherry M, Gilbert SL, Kohl M, Larson C, Newsome T, Prugh LR, **Suraci JP**, Young J, Smith JA. An applied ecology of fear: linking theory to management practice. *Animal Conservation*.

PUBLISHED

20. Smith JA*, **Suraci JP***, Hunter JS, Gaynor KM, Keller CB, Palmer MS, Atkins JL, Castañeda I, Cherry MJ, Garvey PM, Huebner S, Morin DJ, Teckentrup L, Weterings MJA, Beaudrot L. Zooming in on mechanistic predator-prey ecology: Integrating camera traps with experimental methods to reveal the drivers of ecological interactions. *Journal of Animal Ecology*. (In press)
*Co-first authors
19. Anton C[∇], Smith DW, **Suraci JP**, Stahler DR, Duane TP, Wilmers CC. Grey wolf habitat use in response to growing visitor activity along roadways in Yellowstone National Park. *Ecosphere*. (In press)
18. Nickel BA*, **Suraci JP***, Allen ML, Wilmers CC. (2020) Human presence and human footprint have non-equivalent effects on wildlife spatiotemporal habitat use. *Biological Conservation*. 241:108383. *Co-first authors

17. **Suraci JP**, Clinchy M, Zanette LY, Wilmers CC. (2019) Fear of humans as apex predators has landscape-scale impacts from mountain lions to mice. *Ecology Letters*, doi: 10.1111/ele.13344. *Altmetric score: 274 (top 5% of all tracked papers)*
16. **Suraci JP**, Smith JA, Clinchy M, Zanette LY, Wilmers CC. (2019) Humans, but not their dogs, displace pumas from their kills: an experimental approach. *Scientific Reports* doi: 10.1038/s41598-019-48742-9
15. **Suraci JP**, Frank LG, Oriol-Cotterill A, Ekwanga S, Williams TM, Wilmers CC. (2019) Behavior-specific habitat selection by African lions may promote their persistence in a human-dominated landscape. *Ecology*, e02644.
14. **Suraci JP**, Clinchy M, Mugerwa B, Delsey M, Macdonald D, Smith JA, Wilmers CC, Zanette LY. (2017) A novel Automated Behavioural Response system to integrate playback experiments into camera trap studies. *Methods in Ecology and Evolution*, 8:957–964.
13. Smith JA, **Suraci JP**, Clinchy M, Crawford A, Roberts DJ[◊], Zanette LY, Wilmers CC. (2017) Fear of the human 'super predator' reduces feeding time in large carnivores. *Proceedings of the Royal Society B*. 284:20170433. *Altmetric score: 216 (top 5% of tracked papers); Featured on cover*
12. Wilmers CC, Isbell LA, **Suraci JP**, Williams TM. (2017) Energetics-informed behavioral states reveal the drive to kill in African leopards. *Ecosphere*. 8(6):e01850.
11. **Suraci JP**, Clinchy M, Zanette LY. (2017) Do large carnivores and mesocarnivores have redundant impacts on intertidal prey? *PLoS One*, 12:e0170255.
10. **Suraci JP**, Roberts DJ[◊], Clinchy M, Zanette LY. (2017) Fearlessness towards extirpated large carnivores may exacerbate impacts of naïve mesocarnivores. *Behavioral Ecology*, 28:439-447.
9. **Suraci JP**, Clinchy M, Roberts DJ[◊], Zanette LY. (2017) Eavesdropping in solitary large carnivores: Black bears advance and vocalize toward cougar playbacks. *Ethology*, doi.org/10.1111/eth.12631.
8. **Suraci JP**, Clinchy M, Dill LM, Roberts DJ[◊], Zanette LY (2016) Fear of large carnivores causes a trophic cascade. *Nature Communications*, 7:10698. *Altmetric score: 552; Web of Science "Highly Cited Paper" (among the top 1% of most cited Ecology and Evolution papers from 2016)*
7. Clinchy M, Zanette LY, Buesching C, Newman C, Roberts DJ[◊], **Suraci JP**, Macdonald D (2016) Fear of the human "super predator" exceeds that of extant and extinct large carnivores in a model mesocarnivore. *Behavioral Ecology*, 27:1826-1832
6. **Suraci JP**, Clinchy M, Zanette LY, Currie CMA[◊], Dill LM (2014) Mammalian mesopredators on islands directly impact both terrestrial and marine communities. *Oecologia*, 176:1087-1100.
5. Zanette LY, Clinchy M, **Suraci JP** (2014) Diagnosing predation risk effects on demography: can measuring physiology provide the means? *Oecologia*, 176:637-651.
4. Robinson JPW, White ER, Wiwchar LD, Claar DC, **Suraci JP**, Baum JK (2014) The limitations of diversity metrics in directing global marine conservation. *Marine Policy* 48:123-125
3. **Suraci JP** and Dill LM (2013) Short timescale rate maximization by gulls and implications for predation on size-structured prey. *Behavioral Ecology*, 24: 280–292.
2. **Suraci JP** and Dill LM (2011) Energy intake, kleptoparasitism risk, and prey choice by Glaucous-winged Gulls (*Larus glaucescens*) foraging on sea stars. *Auk*, 128: 643-650.
1. Kilburn VL, Ibáñez R, Sanjur O, Bermingham E, **Suraci JP**, Green DG (2011) Ubiquity of the Pathogenic Chytrid Fungus, *Batrachochytrium dendrobatidis*, in Anuran Communities in Panamá. *EcoHealth*, 7: 537-548.

POLICY IMPLEMENTATION

Suraci JP and Wilmers CC (2019) Informing connectivity planning in the Coyote Valley through puma habitat selection in patchy environments. A report to the Peninsula Open Spaces Trust.

OUTREACH PUBLICATIONS

Suraci JP (2016) The power of fear. *Biosphere Magazine*.

Suraci JP (2016) Linking the Land and Sea, in *Our Threatened Coast: Nature and Shared Benefits in the Salish Sea*. Raincoast Conservation Foundation, Sydney, BC.

POPULAR PRESS ON RESEARCH

My work has been covered by **over 100 media outlets in 31 countries**.

Selected radio coverage, interviews and podcasts

[BBC News Hour](#), [The Naked Scientist](#), [Futureproof](#), [Scientific American's 60 Second Science](#), [NPR Science Friday](#), [CBC Quarks and Quirks](#)

Selected news articles

The Atlantic ([2016](#), [2019](#)), [Washington Post](#), [LA Times](#), [The Independent](#), [New Scientist](#), [National Geographic](#), [Popular Science](#), [Newsweek](#), [Daily Mail](#), [Gizmodo](#), [National Observer](#), [SF Chronicle](#), [The Wildlife Society](#)

FUNDING

EXTRAMURAL FUNDING – Total \$262,000

2019-2022	Foundation Funding , <i>Mitigating human impacts on pumas in the Santa Cruz Mountains</i> , Co-PI with C. Wilmers (\$200,000)
2018	Environment, Health, and Community Fund , <i>Mitigating human impacts on pumas in the Santa Cruz Mountains</i> , Grant writer and senior researcher with C. Wilmers (\$50,000)
2014	Animal Behavior Society George Barlow Most Outstanding Graduate Student Grant (\$2,000)
2013 & 2014	Toronto Dominion Friends of the Environment Grant with Raincoast Conservation Foundation (\$10,000)

FELLOWSHIPS AND SCHOLARSHIPS – Total \$101,183

2015	King-Platt Fellowship (\$13,000)
2012-2015	NSERC Industrial Postgraduate Scholarship (\$62,000) <i>in partnership with Raincoast Conservation Foundation</i>
2013	Maureen de Burgh Memorial Scholarship (\$425)
2013	Edward Bassett Family Scholarship (\$2,500)
2013	UVic President's Research Scholarship (\$4,000)
2012	W. Gordon Fields Memorial Fellowship (\$958)
2012	UVic Outstanding Graduate Entrance Award (\$5,000)
2010	Glen Geen Graduate Scholarship in Marine Biology (\$800)
2009	SFU Graduate Fellowship (\$12,500)

AWARDS & RECOGNITIONS, SELECTED

- 2018 **Highly Cited Paper** – Web of Science, for Suraci et al. (2016) *Nat Commun*
- 2017 **STEM Postdoc Travel Award** – UCSC STEM Postdocs Association
- 2014 **Most Outstanding Graduate Student Proposal** – Animal Behavior Society
- 2014 **Best Talk Award** – University of Victoria Biology Symposium
- 2013 **Best Talk Award** – Pacific Ecology and Evolution Conference

INVITED SEMINARS & CONFERENCE PRESENTATIONS, SELECTED

- 2020 Integrating large-scale field experiments and macroecological data to quantify human impacts on wildlife behavior. *Ecology and Evolutionary Biology Departmental Seminar, University of California, Los Angeles* (scheduled)
- 2018 Manipulating predators' fear of predators: Management implications of predation risk experiments. *Animal Behavior as a Management Tool Workshop, Landcare Research & University of Lincoln, Lincoln, NZ*
- 2018 Fear of humans affects wildlife interactions in protected areas. *The Wildlife Society*
- 2018 Anthropogenic landscapes of fear: Causes and consequences of human-induced changes in carnivore predation risk. *Environmental Science, Policy and Management Departmental Seminar, University of California, Berkley*
- 2018 Anthropogenic landscapes of fear: Causes and consequences of human-induced changes in carnivore predation risk. *Gordon Research Conference on Predator-Prey Interactions*
- 2017 Fear in wildlife food webs: The far-reaching effects of risk from large carnivores and human predators. *Environmental Studies Departmental Seminar, University of California, Santa Cruz*
- 2017 Fear in wildlife food webs: The far-reaching effects of risk from large carnivores and human predators. *Animal Behavior Seminar Series, University of California, Davis*
- 2016 Fear in wildlife food webs: The far-reaching effects of risk from large carnivores and human predators. *Wildlife Conservation Research Unit, Oxford University*
- 2016 Fear in wildlife food webs: The far-reaching effects of risk from large carnivores and human predators. *Zoology Department, Oxford University*
- 2016 Large carnivore risk mediates mesopredator impacts. *Biology Departmental Seminar, University of Victoria*
- 2015 Fear and balanced ecosystems: Large carnivores and coastal food webs. *Camosun College Wildlife Biology Program*
- 2011 Prey choice and information use in the glaucous-winged gull. *Les Ecologiste Seminar Series, Simon Fraser University*

CONTRIBUTED CONFERENCE PRESENTATIONS

- The Wildlife Society (2018, 2019)
- Gordon Research Conference on Movement Ecology of Animals (2019)
- Ecological society of America (2018)
- Gordon Research Conference on Predator-Prey Interactions (2014, 2016, 2018, 2020)
- Western Society of Naturalists (2016)
- Raincoast Conservation Foundation Research Symposium (2015)

CONTRIBUTED CONFERENCE PRESENTATIONS, CONT'D

University of Victoria Biology Graduate Research Symposium (2012, 2013, 2014)

Pacific Ecology and Evolution Conference (2010, 2011, 2013)

Interdisciplinary Ecology and Applied Sciences Symposium (2009, 2010)

TEACHING & MENTORSHIP

PEDAGOGICAL TRAINING

Scientific Teaching for Diverse Learners Workshop *offered by* The Science Education Partnership and Assessment Laboratory, San Francisco State University (August, 2019)

GUEST LECTURES

- 2019 Behavioral Ecology, University of California, Santa Cruz
- 2019 Conservation Biology Graduate Course, University of California, Santa Cruz
- 2018 Ecology and Society, University of California, Santa Cruz
- 2017 Conservation Biology, University of California, Santa Cruz
- 2017 Animal Ecology, University of California, Santa Cruz
- 2015 Study Design and Analysis, University of Victoria
- 2014 Study Design and Analysis, University of Victoria
- 2010 Vertebrate Biology, Simon Fraser University

WORKSHOPS TAUGHT

- 2015 Introduction to Data Visualization in R, EcoStats R Workshop Series, University of Victoria
- 2014 Introduction to Plotting and Graphics in R, EcoStats R Workshop Series, University of Victoria

TEACHING ASSISTANT POSITIONS

- 2015 Evolution and Biodiversity, University of Victoria
- 2010 Vertebrate Biology, Simon Fraser University
- 2008 General Biology, Simon Fraser University
- 2006 Introductory Organismal Biology, University of Virginia

UNDERGRADUATE THESIS STUDENTS MENTORED

- 2019 **Chloe Reilly**, Environmental Studies, University of California, Santa Cruz
Thesis: Experimentally investigating trade-offs between fear of humans and anthropogenic resources in wildlife (Ongoing).
- 2019 **Emily Engle**, Environmental Studies, University of California, Santa Cruz
Thesis: To assemble or disassemble: An exploration into natural and anthropogenic gradients affecting mammal community assemblages.
- 2017 **Zakery Pendleton**, Environmental Studies, University of California, Santa Cruz
Thesis: The common raccoon helps keep native species under control
- 2014 **Devin Roberts**, Biology Department, University of Victoria
Thesis: Naiveté in an island mesopredator
**Thesis research published in Behavioral Ecology (publication 10 above)*

GRADUATE STUDENTS MENTORED

- 2016-Present **Anna Nisi**, PhD Candidate, Environmental Studies, UC Santa Cruz
with primary advisor Prof. Christopher Wilmers
- 2016-Present **Colby Anton**, PhD Candidate, Environmental Studies, UC Santa Cruz
with primary advisor Prof. Christopher Wilmers

GRADUATE STUDENTS MENTORED, CONT'D

2015-2017 **Badru Mugerwa**, MSc Student, Biology Department, Western University with primary advisor Prof. Liana Zanette

INTERNS MENTORED

2019 Mentored Soledad Soto's project on puma feeding ecology through the UCSC **CAMINO internship program for underrepresented groups** in science

2018-2019 Supervised **2 paid student research technicians** in GIS-based wildlife behavior and conservation science for UC Santa Cruz undergraduate students.

2017-Present Supervised **20 UC Santa Cruz undergraduate interns** working on wildlife and behavioral ecology projects in both the field and lab

2015 Secured a **stipend for summer field experience** for intern Preston Charlie from the Tla-o-qui-aht First Nation in Tofino, British Columbia

2012-2017 Supervised **paid field tech positions for multiple undergraduate researchers**: Jennifer Sibbald, Natalie Gray, Lauren Cochenour, Laura Granger, Chris Currie, Aria Crabb

SERVICE AND OUTREACH

SERVICE TO PROFESSIONAL DEVELOPMENT GROUPS

ESA Early Career Ecologists Section

Secretary-treasurer (2018-2019); Officer at large (2019-present)

EcoStats R Workshop Series

Founder and contributor (2014-2016)

Stats Therapy Statistics Help Group

Founder and contributor (2012-2015)

Ecology@UVic Community

Founder, grad student representative, and webmaster (2012-2015)

MEMBERSHIP

Ecological society of America (2018-2019); The Wildlife Society (2018-2019); Animal Behavior Society (2009)

MANUSCRIPT REVIEW

PNAS, Nature Communications, Ecology, TREE, Proceedings of the Royal Society B, Current Biology, Journal of Animal Ecology, Biological Conservation, Landscape Ecology, Oikos, Oecologia, Behavioral Ecology, Nature Scientific Reports, Behavioral Ecology Ecology and Evolution, Ethology, Journal of Field Ornithology, Emu, Waterbirds, Bird Study

PUBLIC OUTREACH AND INCLUSION

2019 **Citizen science initiative** engaging homeowners around the Santa Cruz Mountains in a suburban wildlife ecology/coexistence experiment (Ongoing)

2019 **Public lecture** on fear of humans in wildlife, Science on Tap outreach event, Santa Cruz, California

2018 **Public lecture** on large carnivores in human-dominated landscapes, hosted by Midpeninsula Open Spaces District, Los Altos, California

2018 **Public engagement** on mountain lions in fragmented habitats, After Dark public science event, Exploratorium, San Francisco, California

2013-2017 Wildlife ecology and conservation **talks with seven middle and high school** groups in Canada, the US, and Australia

PUBLIC OUTREACH AND INCLUSION, CONT'D

- 2015 **Public lecture** on large carnivore ecology, hosted by Pacific Rim National Park, Tofino, British Columbia
- 2014 Outreach event on local ecology with middle and high-school students from **low-income First Nations communities** in British Columbia
- 2011-2012 **Public outreach and education events** on freshwater conservation with five naturalist societies and community volunteer groups in Vancouver, British Columbia
- 2011 Organized and led **hands-on ecological restoration field experience for low-income youth** in Abbotsford, British Columbia

REFERENCES

Dr. Liana Zanette, Professor

Department of Biology

Western University

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Dr. Christopher Wilmers, Professor

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