

Luz A. de Wit, Ph.D.

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Areas of expertise

Health Sciences: one health, veterinary medicine, epidemiology, public health, pathology

Biological Sciences: disease ecology, invasion biology, conservation biology, ecology, evolution

Education

University of California, Santa Cruz

Ph.D. in Ecology and Evolutionary Biology. August 2019.

Dissertation Committee: Don Croll, Marm Kilpatrick, Karen Shapiro, Dolores Correa Beltrán

Tufts University

MS. in Conservation Medicine. August 2012.

Universidad Nacional Autónoma de México (UNAM)

BS in Veterinary Medicine and Animal Husbandry. June 2010.

Residency in Systemic Pathology

Work Experience

One Health Specialist, Joint Centre for Zoonotic Diseases and Antimicrobial Resistance. Food and Agriculture Organization / World Health Organization. April 2021 – April 2023

Project Leader, Mexico Forest Restoration Offset Project. UC-initiated offsets, University of California Office of the President. March 2021 – July 2022

Postdoctoral Associate, Gund Institute for the Environment, University of Vermont, September 2019 – August 2021

Research consultant, Ecological Levers for Health. National Center for Ecological Analysis and Synthesis: Science for Nature and People Partnership (SNAPP). September 2019

Research consultant, Island Conservation, Santa Cruz, California, January – November 2014; April – August 2019

Veterinary Resident, Marine Wildlife Veterinary Care and Research Center, California Department of Fish and Wildlife. July 2012 – June 2013

Veterinary Intern, Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México. August 2009 – June 2010

Teaching Experience

Lecturer, Disease Ecology (*University of California Santa Cruz*).

Guest Lecturer, Conservation Biology & Human Functional Anatomy (*University of California Santa Cruz*).

Teaching Assistant

University of California Santa Cruz

- Physiology and Development (BIOE 20B). Spring 2015, Winter 2017 (Active Learning), Fall 2018, Winter 2019
- Evolution (BIOE 109). Summer 2018
- Ecology (BIOE 107). Summer 2018
- Disease Ecology (BIOE 149). Spring 2018
- Ecology and Conservation in Practice (BIOE 151). Spring 2016, 2017 and 2019
- Conservation Biology (ENVS 120). Fall 2017
- Microbiology (METX 119). Fall 2015, Summer 2016 and Fall 2016
- Human Functional Anatomy and Lab (BIO 135/135L). Spring 2014

Universidad Nacional Autónoma de México (UNAM)

- Systemic Pathology and Necropsy Lab. Fall 2009 - Spring 2010

Peer Reviewed Publications

8. Gourevitch J. D., A. M. Alonso-Rodríguez, N. Aristizábal, **L. A. de Wit**, E. Kinnebrew, C. E. Littlefield, M. Moore, C. C. Nicholson, A. J. Schwartz, T. H. Ricketts. Projected loss of ecosystem service benefits disproportionately affects non-white and lower-income populations. In print. *Nature Communications*

7. Fisher, B., **L. A. de Wit**, T. H. Ricketts. Natural Capital and Human Health. *Review of Environmental Economics and Policy*. doi: 10.1086/713024
6. **de Wit, L. A.**, Ziliacus, K., Quadri, P., Will, D., Grima, N., Spatz, D., Holmes, N., Tershy, B., Howald, G., Croll, D. Invasive vertebrate eradications on islands as a tool for implementing Global Sustainable Goals. *Environmental Conservation*. 47: 139 -148 doi:10.1017/S0376892920000211
5. **de Wit, L. A.**, Kilpatrick, AM., VanWormer, E., Croll, DA., Tershy, B., Kim, M., Shapiro, K. Seasonal and spatial variation in *Toxoplasma gondii* contamination in soil in urban public spaces in California, United States. *Zoonoses Public Health*. 2019; 00: 1– 9. <https://doi.org/10.1111/zph.12656>
4. K. Shapiro, L. Bahia-Oliveira, B. Dixon, A. Dumètre, **L. A. de Wit**, E. VanWormer & I. Villena. Environmental transmission of *Toxoplasma gondii*: Oocysts in water, soil and food. *Food and Waterborne Parasitology* 12: e00049. <https://doi.org/10.1016/j.fawpar.2019.e00049>
3. **de Wit L. A.**, D. Croll, B. Tershy, D. Correa, H. Luna-Pasten, P. Quadri, and A. M. Kilpatrick. (2019) Potential public health benefits from cat eradications on islands. *PLoS Negl Trop Dis*. 13(2): e0007040. <https://doi.org/10.1371/journal.pntd.0007040>
2. S. G. Crandall, J. L. Ohayon, **L. A. de Wit**, J.E. Hammond, K.L. Melanson, M.M. Moritsch, R. Davenport, D. Ruiz, B. Keitt, N.D. Holmes, H. G. Packard, J. Bury, G. S. Gilbert & I. M. Parker (2018) Best practices: social research methods to inform biological conservation. *Australasian Journal of Environmental Management*. 25:1, 6 – 23, <https://doi.org/10.1080/14486563.2017.1420499>
1. **de Wit L. A.**, D. Croll, B. Tershy, K. Newton, D. Spatz, N. Holmes, and A. M. Kilpatrick. Estimating burdens of neglected tropical zoonotic diseases on islands with introduced mammals to guide control and eradication assessments. *Am. J. Trop. Med. and Hyg.* 96(3), 2017, pp. 749-757. <https://doi.org/10.4269/ajtmh.16-0573>

[Research in Review, Submitted or in Preparation for Publication](#)

1. **de Wit, L. A.**, Ricketts, T. H. Trade and deforestation predict an invasive-driven zoonotic disease at global and local scales. Submitted to *Frontiers in Public Health*.
2. Cronin M., **de Wit L. A.**, Martinez-Estevéz M.L. Aligning conservation and public health goals to tackle the wildlife trade. Submitted to *Nature Sustainability*
3. **de Wit, L. A.**, Fisher B., Naidoo R., Ricketts, T. H. Do social costs of epidemics outweigh private benefits from wildlife consumption? In preparation for *The Lancet Planetary Health*
4. Vickery A. G., **de Wit L. A.**, Kilpatrick A. M. Trophic transmission of plague bacteria, *Yersinia pestis*, to mammalian predators. In preparation for *Ecology*.

[Presentations](#)

- Ecological drivers of COVID-19 and lessons for future pandemics. Gund Institute's Earth Day. Burlington, Vermont, USA. April 2020
- Potential public health benefits from cat eradication on islands. International Congress on Conservation Biology. Cartagena, Colombia. August 2017
- Invasive Vertebrate Species and Neglected Zoonotic Diseases of Islands. Third International Conference in Disease Ecology. Mérida, Yucatán. November 2013
- Brain and Optic Nerve Astrocitoma in an English Bulldog. XX National Congress of Veterinary Pathology, Puerto Vallarta, Jalisco, Mexico. June 2011

[Mentoring Experience & Membership](#)

- Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
- Doris Duke Conservation Scholars Program, Graduate Research Mentor for undergraduate students, Summer 2018
- Science Internship Program (SIP), Research Mentor for high school students, Summer 2017
- Small Mammal Undergraduate Research in the Forest (SMURF) program, UC Santa Cruz, Research Mentor for undergraduate students, Fall 2016, Winter and Spring 2017
- Koret Scholars Program, Spring 2017

[Honors and Awards](#)

- UC Carbon Offset Seed Grant, 2021 (\$ 55,000)
- Gund Institute Fellow, 2019-2021
- Gund Institute Research and Travel Grant (US\$10,000)
- UC MEXUS Dissertation Fellowship Grant, 2017-2018 (US\$ 11,800)
- Koret Fellowship for Research Mentors, 2017 (US\$ 2,000)
- Rufford Foundation Small Grant, 2015-2016 (US\$ 7,564)
- UC MEXUS Small Research Grant, 2014-2015 (US\$ 1,500)
- CONACYT-UCMEXUS Fellow, 2013-2018
- Beca Complemento, Secretaría de Educación Pública (Mexico) 2013-2016 (US\$ 14,500)
- CONACYT Fellow, 2011-2012

Languages

- Spanish: native speaker
- English: advanced (written and spoken)
- German: A1 level

Relevant Skills

- Advanced R programming (Data Scientist with R track)
- Geographic Information Systems
- Molecular biology techniques (DNA extraction, PCR, genetic sequencing)
- Necropsies (gross pathology and histopathology)