

LAUREL ELIZABETH KLEIN SERIEYS
13 Keurboom Weg, 7975, Cape Town, South Africa
Caracal@capeleopard.org.za & Laurelsérieys@gmail.com
UrbanCarnivores.com & UrbanCaracal.org
+27 (0)79-837-8814

RESEARCH INTERESTS

Urban wildlife ecology; Conservation biology; Effects of anthropogenic disturbance on wildlife populations; Evolution as a result of anthropogenic pressures; Use of molecular and other laboratory techniques to enhance field-based research questions.

EDUCATION

- PhD Ecology and Evolutionary Biology, University of California, Los Angeles, California, 2014.
PhD Dissertation: Critical effects of urbanization on a charismatic carnivore: genetic change, disease and toxicant exposure, and disease susceptibility in bobcat populations in an urban, fragmented landscape. Co-advisors: Robert K. Wayne, PhD (UCLA) and Seth P.D. Riley, PhD (National Park Service)
- BS Bachelor of Science, Zoology, University of Texas, Austin, Texas, 2003

CURRENT POSITION

- 11/2014 – Urban Caracal Project Coordinator, Cape Town, South Africa (UrbanCaracal.org)
09/2014 – Postdoctoral researcher. Exploring the behavioral and genetic response of caracal (*Caracal caracal*) to urbanization. Collaboration between Wayne Lab (UCLA), Wilmers lab (University of California, Santa Cruz), Cape Leopard Trust (South African nonprofit) and Bishop lab (University of Cape Town, Cape Town, South Africa)

PROFESSIONAL EXPERIENCE

- 06 – 09/2014 Assistant project scientist. Bobcat cytokine expression project, puma genetics project, sample archivist. Robert Wayne Lab (UCLA).
- 2007 – 2014 Teaching Assistant. University of California, Los Angeles. 4 Appointments. Courses: Ecology and Behavior Lab Component, Intro. Biology (for nonmajors), Vertebrate Biology, Intro. Biology (for Bio majors).
- 07/2011 Field Instructor. Opossum Genetics Project. Chamela Reserve, Mexico
- 05 – 07/2007 Field Assistant. National Park Service. Ecology of mountain lions in Grand Canyon NP, AZ.
- 01 – 08/2006 Field Assistant. National Park Service. Effects of urban development on native carnivores. Los Angeles, CA.
- 2004 – 2005 Research Assistant. Royal Botanical Gardens. Molecular phylogenetics of Mediterranean Malveae. Madrid, Spain
- 2003 – 2004 Research Assistant and Field Team Manager. Indiana University. Abiotic stress tolerance and anti-herbivore resistance in sunflower hybrids. Austin, TX & Bloomington, IN.
- 03 – 05/2004 Research Assistant. Universidad Autonoma de Mexico. Ecosystem process study of the impact of an invasive grass on nutrient cycling and resource availability in the Sonoran Desert. Hermosillo, Mexico

GRANTS AND AWARDS

- 2007 – 2010 National Science Foundation Graduate Student Fellowship, \$40,500/year
2007 EPA Star 3-Year Graduate Student Fellowship; Offer Declined, \$37,000/year
2008 – 2012 UCLA Research Awards, \$500–\$2,000 annually
2008 – 2013 Santa Monica Bay Audubon Society Student Research Grants, \$500 annually
2008 California Mediterranean Research Learning Center Fellowship, \$1,200
2010 Pfizer Dedicated Gift of Project Supplies, \$1,700
2010, 2012 Panthera Small Cat Research Awards, \$14,320
2010, 2012 Summerlee Foundation Research Grants, \$30,000
2011 Friends of Griffith Park Research Grant, \$2,100
2012, 2013 Gottlieb Scholarships, \$2,500
2012 – 2013 G2 Gallery Dedicated Gift, \$6,000
2013 Second Place– best student presentation. *TWS, The Western Section Conference*, Sacramento, California.
2012, 2013 UCLA Departmental Fellowship Awards
2011 – 2014 Santa Monica Bay Audubon Special Grants, \$1,500–\$2,500 annually
2015 – 2016 Claude Leon Foundation (South Africa) Postdoctoral Researcher Fellowship, \$23,500/year
2015 University of Cape Town, URC Postdoctoral Researcher Fellowship, \$15,000 (Can only accept \$10,000 per rules of holding two fellowships simultaneously)
2015 Woolworth’s Corporate Sponsorship, \$3,600
2015 Gottlieb Scholarship, \$3,000
2016 University of Cape Town, URC Postdoctoral Researcher Fellowship, \$15,000 (Can only accept \$10,000 per rules of holding two fellowships simultaneously)

PUBLICATIONS (PEER REVIEWED)

- Serieys, L.E.K.**, Lea, A., Pollinger, J., Riley, S.P.D., and R.K. Wayne. 2015. Disease and freeways drive genetic change in urban bobcat populations. *Evolutionary Applications* 8(1): 75-92. doi:10.1111/eva.12226
- Serieys, L.E.K.**, Tiffany, C.A., Moriarty, J., Boydston, E.E., Lyren, L., Poppenga, R.H., Wayne, R.K., Crooks, K.R., and S.P.D. Riley. 2015. Anticoagulant rodenticides in urban bobcats: measuring exposure, risk factors, and consequences. *Ecotoxicology*, 24 (4): 844-862.
- Carver, S., Bevins, S.N., Lappin, M.R., Boydston, E.E., Lyren, L.M., Alldredge, M., Logan, K.A., Sweanor, L.L., Riley, S.P.D., **Serieys, L.E.K.**, Fisher, R.N., et al. 2015. Pathogen exposure varies widely among sympatric populations of wild and domestic felids across the United States. *Ecological Applications* (in press)
- Riley, S.P.D., **Serieys, L.E.K.**, Pollinger, J.P., Sikich, J.A., Dalbeck, L., Wayne, R.K., and H.B. Ernest. 2014. Individual behavior dominates the dynamics of a mountain lion population in a highly fragmented urban landscape. *Current Biology* 24(17): 1989-1994. doi:10.1016/j.cub.2014.07.029
- Lee, J.S., Bevins, S.N., **Serieys, L.E.K.**, Vickers, W., Logan, K.A., Alldredge, M., Boydston, E.E., Lyren, L.M., McBride, R., Roelke-Parker, M., Pecon-Slattey, J., Troyer, J.L., Riley, S.P.D., Boyce, W.M., Crooks, K.R. and S. VandeWoude. 2014. The evolution of puma lentivirus in bobcats (*Lynx rufus*) and mountain lions (*Puma concolor*) in North America. *Journal of Virology*, 88(14):7727-7737. doi:10.1128/JVI.00473-14
- Troyer, R.M, Beatty, J.A., Stutzman-Rodriguez, K.A., Carver, S., Lozano, C.C., Lee, J.S., Lappin, M.R., Riley, S.P.D., **Serieys, L.E.K.**, Logan, K.A., Sweanor, L.L., Boyce, W.M., Vickers, W., McBride, R., Crooks, K.R., Lewis, J.S., Cunningham, M.W., Rovnak, J., Quackenbush, S.L., and S. VandeWoude. 2014. Novel gammaherpesviruses in North American domestic cats, bobcats and pumas: identification, prevalence and risk factors. *Journal of*

Virology, 88:3914-3924. doi:10.1128/JVI.03405-13

Serieys, L.E.K., Foley, J., Owens, S., Woods, L., Boydston, E.E., Lyren, L.M., Poppenga, R.H., Clifford, D.L., Stephenson, N., Rudd, J. and S.P.D. Riley. 2013. Clinical chemistry abnormalities in bobcats (*Lynx rufus*) with notoedric mange and anticoagulant rodenticide exposure. *Journal of Parasitology* 99(6): 989-996. <http://dx.doi.org/10.1645/12-175.1>

Stephenson, N., Clifford, D., Worth, J., **Serieys, L.E.K.**, Foley, J. 2013. Development and validation of a fecal PCR assay for *Notoedres cati* and assessment of a notoedric mange epizootic in bobcats (*Lynx rufus*) in northern California. *Journal of Wildlife Diseases*, 49(2): 303-311.

Moriarty, J.G., Riley, S.P.D., **Serieys, L.E.K.** et al. 2012. Exposure of wildlife to anticoagulant rodenticides at Santa Monica Mountains National Recreation Area: from mountain lions to rodents. *Proceedings of the Vertebrate Pest Conference*, 25: 144-148.

Schwochow, D., **Serieys, L.E.K.**, Thalmann, O., and R.K. Wayne. 2012. Efficient recovery of whole blood RNA – a comparison of commercial RNA extraction techniques. *BMC Biotechnology*, 12:33.

MANUSCRIPTS (IN REVIEW)

Serieys, L.E.K., Epeldegui, M., Riley, S.P.D., Lea, A., Armenta, T.C., VandeWoude, S., Carver, S., Foley, J., Schlottman, S., Wayne, R.K., and C. Uittenbogaart. Anticoagulant rat poison exposure induces persistent immune activation and increased disease susceptibility in urban bobcats. *eLife*

Benson, J.F., Mahoney, P.J., Sikich, J.A., **Serieys, L.E.K.**, Pollinger, J.P., Wayne, R.K., Ernest, H.B., Riley, S.P.D. Into the vortex: demography and genetics interact to threaten urban top predators. *Science*

Foley, J., **Serieys, L.E.K.**, Stephenson, N., Riley, S.P.D., Foley, C. Woods, L., Jennings, M., Wengert, G., Vickers, W., Boydston, E.E., Lyren, L.M., Moriarty, J., Clifford, D. The ecology of notoedric mange. *Journal of Parasitology*

Lee, J., Malmberg, J., Templin-Hladky, S., Troyer, R., Roelke, M., Cunningham, M., McBride, R., Vickers, W., Boyce, W., Boydston, E., **Serieys, L.E.K.**, Riley, S.P.D., Crooks, K., Vandewoude, S. Feline immunodeficiency virus cross-species transmission: Implications for emergence of new lentiviral infections. *Nature Microbiology*

MANUSCRIPTS (IN PREP)

Serieys, L.E.K., Riley, S.P.D., Foley, J. Pathogen exposure in bobcats and coyotes living on the urban edge. Prep for *Journal of Wildlife Diseases*

BOOK CHAPTER

Riley, S.P.D., **Serieys, L.E.K.**, Moriarty, J. 2014. Infectious disease and contaminants in urban wildlife: unforeseen and often overlooked threats. Pages 175-216 in McCleery, R.A., Moorman, C. and Peterson, N. editors. *Urban Wildlife Science: Theory and Practice*. Springer, New York, NY.

PUBLICATIONS (NON-PEER REVIEWED)

Serieys, L.E.K. 2010 – 2016 numerous blog postings- *UrbanCarnivores.com* and *UrbanCaracal.org*

Serieys, L.E.K. Summer 2015. Elusive cats and roads: some consequences may be just as hard to spot. *Environment Magazine*, 24.

Serieys, L.E.K. 2013. Anticoagulant rodenticides: a cryptic threat for wild felid populations. *Wild Felid Monitor*, 6(2): 13-15.

Serieys, L.E.K. 2012. Conference report: The Wildlife Society Meeting 2012. *Wild Felid Monitor*, 2(2): 10-11.

Klein, L.E. 2011. Rat poisons putting predators at risk. *Animal Welfare Institute Quarterly: Winter Issue*.

CONFERENCE PRESENTATIONS

Serieys, L.E.K., Lea, A., Pollinger, J., Riley, S.P.D., and R. Wayne. 2015. Toxicant exposure, immune overdrive, and genetic change in an urban bobcat population. *Urban Wildlife Conference*, Chicago, Illinois. **Invited Talk.**

Serieys, L.E.K., Lea, A., Pollinger, J., Riley, S.P.D., and R. Wayne. 2013. Disease and urbanization drive temporal and spatial genetic changes among bobcat populations in an urban, fragmented landscape. *The Annual Wildlife Society Meeting*, Milwaukee, Wisconsin. **Talk.**

Serieys, L.E.K., Lea, A., Pollinger, J., Riley, S.P.D., and R. Wayne. 2013. The genetic signature of a disease epizootic associated with poison exposure in bobcats in an urban landscape. *TWS, The Western Section Conference*, Sacramento, California. **Talk.** *Awarded second place for best student presentation*

Serieys, L.E.K., Boydston, E., Lyren, L.M., Poppenga, R.H., Wayne, R.K., and S.P.D. Riley 2012. Anticoagulant rodenticides: Is a rodent poison a big problem for bobcats in an urban, fragmented landscape? *The Annual Wildlife Society Meeting*, Portland, Oregon. **Talk.**

Serieys, L.E.K., Riley, S.P.D., Foley, J., Owens, S., Boydston, E.E., Lyren, L.M., Crooks, K., and R.K. Wayne. 2011. Blood chemistry values for bobcats with severe mange and anticoagulant rodenticide exposure in Southern California. *The Annual Wildlife Society Meeting*, Kona, Hawaii. **Poster.**

Klein, L.E., Riley, S.P.D., Foley, J., Owens, S., Boydston, E.E., Lyren, L.M., Crooks, K., and R.K. Wayne. 2011. Notoedric mange in bobcats in Southern California. *TWS, The Western Section Conference*, Irvine, California. **Invited Talk.**

Klein, L.E., Riley, S.P.D., Foley, J., Owens, S., Boydston, E.E., Lyren, L.M., Crooks, K., and R.K. Wayne. 2010. Anticoagulant rodenticide exposure in bobcats in Southern California. *Pacificem Conference*, Honolulu, HI. **Poster.**

Klein, L.E. and S.P.D. Riley. 2009. Hematological characteristics of bobcats in an urban, fragmented landscape. *Urban Wildlife Conference*, Amherst, MA. **Poster.**

PROFESSIONAL AND COMMUNITY SERVICE

- Journal referee: *Journal of Wildlife Diseases* (1), *Molecular Ecology* (1)
- Website Founder and Editor. **UrbanCarnivores.com**, **facebook.com/UrbanCarnivores**, **UrbanWildlifeGroup.org**, **UrbanCaracal.org**, **facebook.com/UrbanCaracal**
- Expert witness: the effects of anticoagulant rodenticides on wildlife in southern California. Los Angeles City Council Hearing (04/2014) to review policy regarding poison use on city properties.
- Vice President and Newsletter Committee. Wild Felid Research and Management Association.
- Board Member & Communications Officer. TWS Urban Wildlife Working Group.
- Symposium organizer and mediator. "Urbanization as a driver of change in wildlife." The Annual Wildlife Society Meeting. Milwaukee, Wisconsin. 2013.
- Invited Speaker – more than 50 public or academic talks
- Mentorship. 12 master's student; 15 Undergraduates/recent graduates; 2 high school students.
- G2 Photography Gallery Emerging Environmentalist Collaborator- 2012
- Interviews: Newspapers, magazines, websites, nationally syndicated radio, and podcast. The Los Angeles Times, Ventura County Star, BBC, NPR, etc.