

RULON W. CLARK CURRICULUM VITAE

Rulon W. Clark
Associate Professor
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PROFESSIONAL EXPERIENCE

Associate Professor, Department of Biology, San Diego State University, 2013 – present.
Assistant Professor, Department of Biology, San Diego State University, 2007 – 2013.
Postdoctoral Research, Cornell University, Ecology and Evolutionary Biology, 2004 – 2007.
Ph.D., Cornell University, Neurobiology and Behavior, 1997 – 2004.
B.S., Biology, Utah State University, 1994 – 1997.

PEER-REVIEWED PUBLICATIONS

1. Schraft HA, Clark RW, 2017. Kangaroo rats change temperature when investigating rattlesnake predators. *Physiology & Behavior* 173:174-18
2. Putman BJ, Clark RW, 2017. Behavioral thermal tolerances of free-ranging rattlesnakes (*Crotalus oreganus*) during the summer foraging season. *Journal of Thermal Biology* 65:8-15
3. Whitford MA, Freymiller GA, Clark RW, 2017. Avoiding the serpent's tooth: predator-prey interactions between free-ranging sidewinder rattlesnakes and desert kangaroo rats. *Animal Behaviour* 130:73-78.
4. Higham TE, Clark RW, Collins CE, *Whitford MD, *Freymiller GA. 2017. Rattlesnakes are extremely fast and variable when striking at kangaroo rats in nature: three-dimensional high-speed kinematics at night. *Sci Rep* 7:40412.
5. *Rice SE, Beasley RR, Lance SL, Jones KL, Clark RW. 2016. Development of 24 polymorphic microsatellite markers for the Island Night Lizard (*Xantusia riversiana*). *Conservation Genetics Resources* 8:169–196.
6. Clark RW, Dorr SW, *Whitford MD, *Freymiller GA, Hein SR. 2016. Comparison of anti-snake displays in the sympatric desert rodents *Xerospermophilus tereticaudus* (round-tailed ground squirrels) and *Dipodomys deserti* (desert kangaroo rats). *J Mammal* 97:1709-1717.
7. *Kabes LE, Clark RW. 2016. The Use of Chemical Cues by Granite Night Lizards (*Xantusia henshawi*) to Evaluate Potential Predation Risk. *Copeia* 104:930–941.
8. *Rice S, Clark RW. 2016. *Xantusia riversiana* (Island Night Lizard) amelanism. *Herpetological Review* 47:675.
9. Maritz B, Penner J, Martins M, Crnobrnja-Isailović J, Spear S, Alencar LRV, Sigala-Rodriguez J, Messenger K, Clark RW, Soorae P, Luiselli L, Jenkins C, Greene HW. 2016. Identifying global priorities for the conservation of vipers. *Biological Conservation*, In press.

10. *Putman BJ, *Barbour MA, Clark RW. 2016. The foraging behavior of free-ranging rattlesnakes (*Crotalus oreganus*) in California ground squirrel (*Otospermophilus beecheyi*) colonies. *Herpetologica* 72:55-63.
11. *Rice S, *Putman BJ, *Schraft H, Clark RW. 2016. *Crotalus oreganus helleri* (Southern Pacific Rattlesnake), loss of rattle style and matrix. *Herpetological Review* 47:679.
12. Pike DA, Clark RW, Manica A, Tseng H-Y, Hsu J-Y, Huang W-S. 2016. Surf and turf: predation by egg-eating snakes has led to the evolution of parental care in a terrestrial lizard. *Sci. Rep.* 10.1038/srep22207
13. Clark RW, Dorr SW, Whitford MD, ‡Freymiller GA, *Putman BJ. 2016. Activity cycles and foraging behaviors of free-ranging sidewinder rattlesnakes (*Crotalus cerastes*): the ontogeny of hunting in a precocial vertebrate. *Zoology*, 119:196-206.
14. *Putman BJ, Clark, RW. 2015. Habitat manipulation in hunting rattlesnakes (*Crotalus* species). *Southwestern Naturalist*, 60:374-377.
15. *Hoss SK, Deutschman DH, Booth W, Clark RW. 2015. Post- birth separation affects the affiliative behaviour of kin in a pitviper with maternal attendance. *Biological Journal of Linnean Society* 116:637-648.
16. *Putman BJ, Clark RW. 2015. *Crotalus oreganus* (Northern Pacific Rattlesnake): non-rattling tail display. *Herpetological Review* 46:269–270.
17. *Putman BJ, Coss RG, Clark RW. 2015. The ontogeny of antipredator behavior: age differences in California ground squirrels (*Otospermophilus beecheyi*) at multiple stages of rattlesnake encounters. *Behav Ecol Sociobiol* 69:1447–1457.
18. *Santana FE, Swaisgood RR, Lemm JM, Fisher RN, Clark RW. 2015. Chilled frogs are hot: hibernation and reproduction of the Endangered mountain yellow-legged frog *Rana muscosa*. *Endang. Species. Res.* 27:43–51.
19. *Putman BJ, Clark RW. 2015. The fear of unseen predators: ground squirrel tail flagging in the absence of snakes signals vigilance. *Behavioral Ecology* 26:185-193.
20. *Hoss SK, Garcia MJ, Early RL, Clark RW. 2014. Fine-scale hormonal patterns associated with birth and maternal care in the cottonmouth (*Agkistrodon piscivorus*), a North American pitviper snake. *General and Comparative Endocrinology* 208:85-93.
21. Clark RW, Schuett GA, Repp RA, Amarello M, Smith CF, Herrmann HW. 2014. Mating systems, reproductive success, and sexual selection in a secretive species: A case study of the Western Diamond-Backed Rattlesnake, *Crotalus atrox*. *PLoS ONE* 9:e90616.
22. Rogers LL, Mansfield SA, Hornby K, Hornby S, Debruyn TD, Mize M, Clark RW, Burghardt GM. 2014. Black bear reactions to venomous and non-venomous snakes in Eastern North America. *Ethology* 120:641-651.
23. Brennan PLR, Clark RW, Mock DW. 2014. Time to step up: defending basic science and animal behaviour. *Animal Behaviour* 94:101-105.
24. *Hoss SK, Clark RW. 2014. Mother cottonmouths (*Agkistrodon piscivorus*) alter their antipredator behavior in the presence of neonates. *Ethology* 120:933-941.
25. *Barbour MA, Clark RW. 2012. Ground squirrel tail-flag displays alter both predatory strike and ambush site selection behaviours of rattlesnakes. *Proceedings of the Royal Society B Biological Sciences*, 279:3827-3833.
26. Clark RW, ‡Tangco S, *Barbour MA. 2012. Field recordings reveal factors that influence predatory strike success of free-ranging rattlesnakes (*Crotalus* spp.). *Animal Behaviour* 84:183-190.

27. Clark RW, Brown WS, Stechert R, Greene HW. 2012. Cryptic sociality in rattlesnakes (*Crotalus horridus*) kinship analysis. *Biology Letters* 8:523-525.
28. *Barbour MA, Clark RW. 2012. Diel cycles in chemosensory behavior of free-ranging rattlesnakes lying in wait for prey. *Ethology* 118:480-488.
29. Clark RW, †Ramirez G. 2011. Rosy boas (*Lichanura trivirgata*) use chemical cues to identify female mice (*Mus musculus*) with litters of dependent young. *Herpetological Journal* 21:187-191
30. Clark RW, Marchand MN, Clifford BJ, Stechert R, †Stephens S. 2011. Decline of an isolated timber rattlesnake (*Crotalus horridus*) population: Interactions between climate change, disease, and loss of genetic diversity. *Biological Conservation* 144:886-891.
31. Joshi SS, Johnson R, Rundus A, Clark RW, *Barbour M, and Owings DH. 2011. Robotic squirrel models: study of squirrel-rattlesnake interaction in laboratory and natural settings. *IEEE-RAM* 18:59-68.
32. Clark RW, Brown WS, Stechert R, Zamudio KR. 2010. Roads, interrupted dispersal, and genetic diversity in timber rattlesnakes (*Crotalus horridus*). *Conservation Biology* 24:1059-1069.
33. Clark RW, Brown WS, Stechert R, Zamudio KR, 2008. Integrating individual behavior and landscape genetics: the population structure of timber rattlesnake hibernacula. *Molecular Ecology* 17:719-730.
34. Clark RW, 2007. Public information for solitary foragers: timber rattlesnakes use conspecific chemical cues to select ambush sites. *Behavioral Ecology* 18:487-490.
35. Clark RW, 2006. Strike-induced chemosensory searching by timber rattlesnakes during natural predation events. *Ethology* 112:1089-1094.
36. Clark RW, 2006. Fixed videography to study predation behavior of an ambush foraging snake, *Crotalus horridus*. *Copeia* 2006:181-187.
37. Clark RW, 2005. Pursuit-deterrent communication between prey animals and timber rattlesnakes (*Crotalus horridus*): the response of snakes to harassment displays. *Behavioral Ecology and Sociobiology* 59:258-261.
38. Clark RW, 2004. Feeding experience modifies the assessment of ambush sites by the timber rattlesnake, a sit-and-wait predator. *Ethology* 110, 471-483.
39. Clark RW, 2004. Kin recognition in rattlesnakes. *Proceeding of the Royal Society of London Series B Biology Letters* 271, S243–S245.
40. Clark RW, 2004. Timber rattlesnakes (*Crotalus horridus*) use chemical cues to select ambush sites. *Journal of Chemical Ecology* 30, 607-617.
41. Clark RW, 2002. Diet of the timber rattlesnake, *Crotalus horridus*. *Journal of Herpetology* 36, 494-499.

* SDSU graduate student † SDSU undergraduate student

BOOK CHAPTERS AND BOOK REVIEWS

1. Clark RW. 2016. Hunting and feeding behavior in free-ranging snakes. In: *Rattlesnakes of Arizona* (Schuett FW, Feldner MJ, Reiserer RS, Smith CF, eds). Eco Publishing, Rodeo NM.
2. Schuett GW, Clark RW, Repp RA, Amarello M, Greene HW. 2016. Social behavior of rattlesnakes: a shifting paradigm. In: *Rattlesnakes of Arizona* (Schuett FW, Feldner MJ, Reiserer RS, Smith CF, eds). Eco Publishing, Rodeo NM.

3. Clark RW. 2015. Book Review: How Snakes Work: Structure, Function, and Behavior of the World's Snakes. *The Quarterly Review of Biology* 90:350.

RESEARCH GRANTS

1. Clark RW, 2016. High speed predator prey interactions between rattlesnakes and kangaroo rats, University Grant Program, SDSU, \$9600.
2. Glaudas X, Clark RW. 2015. Reproductive success and polyandry in puff adders, National Geographic Society, \$4000.
3. Rice S, Clark RW. 2015. Effects of climate change on island night lizards. Santa Monica Mountains Fund, \$5400.
4. Clark, RW. 2014. Mating system and ecology of Coronado Island rattlesnake, University Grant Program, SDSU, \$9800
5. *Rice S, Clark RW. 2013. Conservation genetics of terrestrial vertebrates in habitat fragments of Cabrillo National Monument. National Park Service, \$5,000.
6. Deutschman D, Clark RW, Long JD. 2013. Partnership to provide student internships in field sciences. National Park Service, funded at \$15,980 year, with ongoing renewal.
7. Clark RW. 2012. Using fine-scale population genetics to monitor the endangered San Clemente Island night lizard (*Xantusia riversiana*). United States Army Corps of Engineers, \$109,000.
8. Clark RW. 2012. Fine-scale genetic analysis of *Phaeognathus hubrichti*. Alabama Fish and Wildlife, \$11,500.
9. Clark RW (PI), Joshi S (Co-PI). 2010. Understanding predator-prey signaling interactions: the dynamics of antisnake displays in ground squirrels and kangaroo rats, National Science Foundation, \$390,000 over four years.
10. Clark RW. 2010. Conservation genetics of terrestrial vertebrates in San Diego County. University Grants Program, \$9,100.
11. Clark RW (PI), Fisher RA (Co-PI). 2009. Using landscape genetics to understand the impacts of habitat fragmentation on small animal communities in San Diego County. San Diego Foundation, \$70,700.
12. Clark RW. 2008. Understanding antisnake signaling displays in ground squirrels. National Geographic Society, \$14,400
13. Clark RW. 2007. Genetic diversity in an isolated timber rattlesnake population. New Hampshire Department of Fish and Game, \$7,100.
14. Clark RW. 2006. Population assessment of timber rattlesnakes in New York State. The Nature Conservancy, \$8,500.
15. Clark RW and Greene HW. 2005. Population genetics of timber rattlesnakes. New York State Biodiversity Research Institute, \$29,730.
16. Clark RW. 2004. Conservation genetics of timber rattlesnakes. Edna Bailey Sussman Environmental Internship, \$2,700.
17. Clark RW. 2004. Kin-based sociality in timber rattlesnakes. Student Research Grant, Cornell University, \$1000.
18. Clark RW. 2003. Ambush site-selection behaviors of timber rattlesnakes. Cornell University Sigma Xi Student Research Grant, \$550.

19. Clark RW. 2003. Optimal foraging models for ambush foragers. National Science Foundation Doctoral Dissertation Improvement Grant, \$9,986.
20. Clark, RW. 2001. Ecology and behavior of the timber rattlesnake, a unique Adirondack species. Kieckhefer Adirondack Fellowship, \$4,650.
21. Clark RW. 2001. The foraging ecology of timber rattlesnakes. Mellon Foundation Fellowship, \$400.
22. Clark RW. 2000. The evolution of venom variability in venomous snakes. American Museum of Natural History Theodore Roosevelt Memorial Grant, \$1,000.
23. Clark RW. Ultimate causes of venom variation in western diamondback rattlesnakes, *Crotalus atrox*. American Museum of Natural History Southwestern Research Station Grant, \$800.

REFEREED PRESENTATIONS AT PROFESSIONAL CONFERENCES

1. *Whitford MD, *Freymler GA, Clark RW. 2017. High speed snake strikes in nature. Society for Integrative and Comparative Biology, New Orleans.
2. *Freymler GA, *Whitford MD, Clark RW. 2017. How to avoid a snake strike. Society for Integrative and Comparative Biology, New Orleans.
3. *Hoss SK, Clark RW. 2016. Maternal care behavior in pitvipers. Joint Annual Meeting Ichthyologists and Herpetologists, New Orleans, CA.
4. *Schraft HA, Clark RW. 2016. Kangaroo rats change body temperature when interacting with rattlesnakes. Gordon Research Conference on Predator-Prey Interactions, Ventura CA.
5. *Whitford MD, Freymiller GA, Clark RW. 2016. Avoiding snake strikes: the effect of kangaroo anti-snake behavior on sidewinder rattlesnakes. Gordon Research Conference on Predator-Prey Interactions, Ventura CA.
6. *Putman B, Clark RW. 2015. Evasive responses of squirrels to rattlesnake strikes. Joint Annual Meeting of Ichthyologists and Herpetologists, Reno NV. **Note:** Clark grad student BJ Putman won the award for best student presentation for this talk.
7. Clark RW, Dorr SW, Whiford MD, Freymiller GA. 2015. Predator prey interactions between sidewinder rattlesnakes and desert kangaroo rats. Joint Annual Meeting of Ichthyologists and Herpetologists, Reno NV.
8. ‡Schefski J, *Putman B, Clark RW. 2014. Olfactory and visual cues used in snake discrimination by ground squirrels. SDSU Student Research Symposium, San Diego CA.
9. *Putman B, Clark RW. 2014. The unseen predator is the most fearful: evasive responses of squirrels to rattlesnake strikes. Gordon Research Conference on Predator-Prey Interactions, Ventura CA.
10. Clark RW, *Putman B. 2014. Predator-prey communication between ground squirrels and rattlesnakes. Gordon Research Conference on Predator-Prey Interactions, Ventura CA.
11. *Luckau T, Clark RW. 2013. Fine scale population genetics of two lizard species in southern California. Joint Annual Meeting of Ichthyologists and Herpetologists, Albuquerque NM.
12. *Williams L, Clark RW. 2013. Chemical cues used in predation risk assessment by granite night lizards. Joint Annual Meeting of Ichthyologists and Herpetologists, Albuquerque NM.

13. Clark RW, *Barbour MA, *Putman B, 2013. Natural interactions between ground squirrels and rattlesnakes. Animal Behavior Society, Boulder CO.
14. ‡Ayon R, Clark RW, 2013. Responses of ground squirrels to rattlesnake associated cues under field conditions. Animal Behavior Society, Boulder CO.
15. *Putman B, Clark RW, 2013. Experimental tests of ground squirrel vigilance toward rattlesnakes. Animal Behavior Society, Boulder CO.
16. *Putman B, Taylor E, Clark RW, 2012. Factors influencing the spatial ecology of northern Pacific rattlesnakes at different spatial scales. World Congress of Herpetology, Vancouver, Canada.
17. Clark RW, *Barbour MA, 2012. The response of rattlesnakes to the anti-snake displays of California ground squirrels. World Congress of Herpetology, Vancouver, Canada.
18. Clark RW, ‡Tangco S, *Barbour MA, 2011. Strike behavior of free-ranging rattlesnakes. Joint Annual Meeting of Ichthyology and Herpetology, Minneapolis MN.
19. Clark RW, ‡Tangco S, *Barbour MA, 2011. Predator-prey interactions between rattlesnakes and ground squirrels. Biology of the Rattlesnakes Conference, Tuscon, AZ.
20. *Santana F, Clark RW, Swaisgood R, Lemm J, Fisher RA, 2011. Measuring the Behavioral Effects of Artificial Hibernation in a Captive Population of Southern Mountain Yellow-Legged Frogs (*Rana muscosa*). Student Research Symposium, San Diego State University, San Diego, CA.
21. ‡Tangco S, Clark RW, *Barbour MA, 2011. The rattlesnake strikes under natural conditions. Student Research Symposium, San Diego State University, San Diego, CA. (*Student received Dean's Award for this presentation*)
22. *Santana F, Clark RW, Swaisgood R, Lemm J, Fisher RA, 2011. Measuring the Behavioral Effects of Artificial Hibernation in a Captive Population of Southern Mountain Yellow-Legged Frogs (*Rana muscosa*). California/Nevada Declining Amphibian Population Task Force Conference, Yosemite Valley, CA
23. ‡Tangco S, Clark RW, *Barbour MA, 2010. Timing and orientation of rattlesnake strikes under natural conditions (Poster). Annual Biomedical Research Conference for Minority Students, Charlotte, NC.
24. *Barbour MA, Clark RW, 2010. The response of free-ranging rattlesnakes to antipredator behavior of ground squirrels. Animal Behavior Society, Williamsburg, VA.
25. Clark RW, Barbour MA, 2010. Predator-prey interactions and the outcome of snake strikes. Animal Behavior Society, Williamsburg, VA.
26. *Santana F, Clark RW, Swaisgood R, Lemm J, Fisher RA, 2010. Captive husbandry and breeding program for the Mountain Yellow-Legged Frog (*Rana muscosa*) at the San Diego Zoo's Institute for Conservation Research. Climate Change and Conservation of Native Amphibians Meeting, Albuquerque, NM.
27. ‡Sabga, B, Clark RW. Manual lateralization in captive siamangs (poster). Student Research Symposium, San Diego State University, San Diego, CA.
28. Clark RW, Brown WS, Stechert R, Zamudio KR. 2009. Don't tread on them: roads, interrupted dispersal, and genetic diversity in timber rattlesnakes (*Crotalus horridus*). 5th Annual Meeting of the Snake Ecology Group, Lewiston ID.

29. *Barbour MA, Clark RW. 2009. Quantifying the foraging behavior of ambush hunting snakes, 5th Annual Meeting of the Snake Ecology Group, Lewiston ID.
30. Clark RW, *Barbour MA. 2009. Ambush foraging behaviors of free-ranging rattlesnakes. Joint Meeting of Ichthyologists and Herpetologists, Portland OR.
31. Clark RW. 2008. Cryptic social structure in reptiles: relatedness and aggregation in timber rattlesnakes. International Society for Behavioral Ecology.
32. Clark RW. 2007. Population genetics in road-fragmented habitats. Roads and Ecopassages Forum, Toronto Zoo, Toronto, Canada.
33. Clark RW. 2006. Mating behavior, gene flow, and population structure of timber rattlesnakes in fragmented habitats. Animal Behavior Society, Salt Lake City, UT.
34. Clark RW. 2005. Timber rattlesnakes alter foraging behavior in response to pursuit-deterrent signals. Animal Behavior Society, Salt Lake City, UT.
35. Clark RW. 2005. The use of fixed videography to monitor rattlesnake predatory behavior. Biology of the Rattlesnakes Symposium, Loma Linda University, Loma Linda CA.
36. Clark RW. 2004. Kin recognition in rattlesnakes. 4th Annual Snake Ecology Group, Indianapolis, IN.
37. Clark RW. 2003. Feeding experience and ambush site selection in *Crotalus horridus*. Joint Meeting of Ichthyologists and Herpetologists, Indianapolis, IN.
38. Clark RW. 2002. The use of prey-derived chemical cues by timber rattlesnakes (*Crotalus horridus*) to select ambush sites. International Society for Behavioral Ecology, Montreal, Canada.
39. Clark RW. 2001. The use of chemical cues in ambush site selection by timber rattlesnakes (*Crotalus horridus*). Joint Meeting of Ichthyologists and Herpetologists, State College, PA.

* SDSU graduate student † SDSU undergraduate student

OTHER PUBLICATIONS

1. Nowak E, Schuett GW, Clark RW. 2014. Climate change and pitvipers: a case study of the Arizona Black Rattlesnake (*Crotalus cerberus*). IUCN Viper Specialist Group Newsletter, Sept 2014.
2. Rypien KL, Anderson J, Andras J, Clark RW, Gerrish GA, Mandel JT, Riskin DK, 2007. Students unite to create State of the Planet course. *Nature* 447:775.
3. Clark RW, 2005. Social lives of rattlesnakes. *Natural History*, 114:36-42.
4. Clark RW, 2005. Chromatophores allow chameleons to change colors. *Ithaca Journal* January 27, 2005.
5. Sherman PW, Clark RW, 2003. Cornell class explores insect behavior at Plantations. *Cornell Plantation Notes* 80:2-3

TEACHING EXPERIENCE

Lead Instructor: Theories and Principles of Ecology, Fall 2010.

- Advanced ecology course team-taught by three ecology faculty members

Co-Instructor: Theories and Principles of Ecology, Fall 2016, 2014, 2012

- Advanced ecology course team-taught by three ecology faculty

Instructor: Animal Behavior, 2007-2016.

- Annual upper division lecture course in animal behavior

Research Mentor: Faculty-Student Mentoring Program, San Diego State University, 2008 - present

- Undergraduate research program designed to mentor students from disadvantaged socioeconomic backgrounds in scientific research

Instructor: Behavioral Ecology, 2012.

- Graduate seminar course in behavioral ecology

Instructor: Introduction to Biostatistics, Fall 2011, Spring 2017.

- Lower division course in statistics for biology majors at SDSU

Instructor: Advanced Topics in Ecology, 2010.

- Advanced seminar course in ecology

Instructor: Behavioral Ecology Laboratory, 2008-2009.

- Upper division laboratory course in behavioral ecology

Co-Course Coordinator: State of the Planet, 2006-2007.

- With other members of committee, developed and implemented this inter-disciplinary course designed to highlight the impending crises our society will face in the future, and how we might be able to best deal with them.

Head Teaching Assistant: Introduction to Neurobiology, 2004

- Administrative duties for large lectures, organizing and leading discussion sections

Head Teaching Assistant: Introduction to Animal Behavior, 2002

- Administrative duties for large lectures, designing curriculum for discussion sections and field studies in animal behavior, leading discussion sections

Teaching Assistant: Herpetology, 2001

- Organizing and administering laboratory component of course

Instructor: Writing in the Majors, Introduction to Animal Behavior, 2000

- Developed and taught discussion-based writing course for advanced undergraduates in animal behavior

Teaching Assistant: Introduction to Animal Behavior, 1998 and 1999

- Leading undergraduate discussion sections, running A/V component of large lecture hall

Teaching Assistant: Introduction to Biology, 1997

- Leading undergraduate laboratory in introductory biology

STUDENTS ADVISED

Doctoral Students:

- Shannon Hoss (2008 – 2013)
- Breanna Putman (2010 – present)
- Stephen Rice (2011- present)
- Hannes Schraft (2014 – present)
- Malachi Whitford (2015 – present)
- Grace Freymiller (2016 – present)

Masters Students:

- Matthew Barbour (2008 – 2011)
- Frank Santana (2008 – 2011)
- Laura Williams (2011- 2013)

- Tara Luckau (2010 – 2015)
- JP Montagne (2011 – 2015)
- Kelly Lion (2013 – 2016)
- Kelly Robinson (2016-present)
- Roman Nava (2016-present)

Undergraduate Students:

- Over 50 undergraduate students have served as research assistants in the Clark Lab since 2007. Several undergraduate research projects that have led to scientific publications and presentations (see sections on *Peer-reviewed Publications* and *Presentation at Conferences* above).

INVITED TALKS

- 2016 San Diego Zoo, San Diego CA
- 2016 Colorado Desert Natural History Research Symposium, Anza Borrego, CA
- 2016 Department of Ecology, Evolution, and Organismal Biology, Ohio State University
- 2016 Department of Ecology and Evolution, University of California San Diego
- 2015 Department of Biology, Southern Utah University
- 2015 Department of Biology, California Polytechnic State University San Luis Obispo
- 2014 Invited Keynote Speaker, Sociedad Herpetológica Mexicana, XIII Reunión Nacional de Herpetología en la Universidad Autónoma de Aguascalientes, 2014 (13th Annual Meeting of the National Meeting of the Mexican Society of Herpetologists)
- 2014 Department of Biology, Loma Linda University, Loma Linda CA
- 2013 Department of Evolution, Ecology, and Organismal Biology, UC Riverside, CA
- 2012 Department of Biology, Bucknell University, Lewisburg PA
- 2012 Institute for Conservation Research, San Diego, CA
- 2012 Department of Biology, CSU Fullerton
- 2011 Department of Biology, CSU Northridge
- 2011 Graduate Student Biological Society, CSU Long Beach
- 2011 Department of Ecology and Evolutionary Biology, UCLA
- 2010 Center for Teaching and Learning, SDSU, CA.
- 2009 Department of Biology, Loma Linda University, Loma Linda, CA
- 2009 San Diego Zoo Institute for Conservation Research, San Diego, CA
- 2008 Evolution, Ecology, and Organismal Biology Graduate Group, UC Riverside, CA
- 2008 Department of Geography, San Diego State University
- 2008 Department of Biology, San Diego State University
- 2007 Department of Ecology and Evolutionary Biology, Cornell University
- 2006 Department of Biology, California Polytechnic State University Pomona
- 2006 Department of Biology, San Diego State University
- 2006 Shawangunk Ridge Biodiversity Partnership Lecture Series, State University of New York, New Paltz.
- 2005 Department of Biology, Queen's University.
- 2005 Muhlenberg College Johnson & Johnson Pharmaceutical Research and Development LCC Seminar Series.
- 2005 New York State Outdoor Education Association, Featured Speaker.

ACADEMIC AND COMMUNITY SERVICE

IUCN Regional Coordinator:

- International Union for the Conservation of Nature, Viper Specialist Group, coordinator for North American Region, 2012 – present.

Associate Editor:

- Herpetologica, 2009 – present.

Undergraduate Curriculum Advisor, Ecology Emphasis

- SDSU, 2015 – present.

Ad Hoc Reviewer:

- American Midland Naturalist
- Animal Behaviour
- Animal Behaviour Student Research Grant Competition, 2010
- Biological Conservation
- Biology of the Rattlesnakes (book proposal)
- Behavioral Ecology
- Behavioral Ecology and Sociobiology
- Canadian Journal of Zoology
- Copeia
- Current Zoology
- Ethology
- Herpetologica
- Herpetological Review
- Journal of Chemical Ecology
- Molecular Ecology
- NSF International Research Fellowship Program
- Proceedings of the National Academy of Sciences

Committee member:

- Institutional Animal Care and Use Committee, San Diego State University, 2014 - present
- Campus-wide Committee on Undergraduate Research, SDSU, 2008-present
- Department of Biology Scholarship Committee, 2007-present.
- State of the Planet Course Development Committee, 2005-2006. Committee of Cornell University students and faculty led by Tom Eisner, with the goal of developing a comprehensive, interdisciplinary course on the future of our world.
- Vice President of Dept. Neurobiology and Behavior Graduate Student Body, 2001 - 2002.

Guided nature walks:

- Fingerlakes Land Trust, Ithaca NY, July 2005, August 2004. Led interested citizens on a guided walk of Steege Hill Nature Preserve to view timber rattlesnakes in their natural habitat.

Guest speaker:

- San Diego Zoo, Education and Outreach Department, 2016
- San Diego Kiwanis Club, 2012
- Chula Vista Middle School, 2010 (<http://www.scivee.tv/node/22456>)
- CyberBridge High School Teacher Science Education Program, 2010
- San Diego Herpetological Society 2009
- North American Field Herpetological Association 2008

- Principles of Ecology, San Diego State University 2008
- Field Ecology, University of Notre Dame 2007
- Herpetology, Cornell University 2007
- Corning Rotary Club, July 2006
- Downsview Middle School, October 2006
- Cornell Wildlife Society, November 2005
- Tanglewood Nature Center, Elmira NY, April 2004, April 2003.
- Cayuga Trails Club, Ithaca NY, January 2004.
- Introduction to Field Biology Cornell University, 2002, 2003, 2004, 2005, 2006.
- Cornell Herpetological Society, September 2001.
- Cornell Ethology and Animal Behavior Club, September 2001.
- Cornell Exotics Club, Ithaca NY, August 2001.
- Ovid High School, Ovid NY, October 1999
- Cayuga Elementary School, Ithaca NY, September 1999

BROADER IMPACTS

- 2015 Why ground squirrels go ninja over nothing, Susan Milius, Science News, <https://www.sciencenews.org/article/why-ground-squirrels-go-ninja-over-nothing>
- 2015 Radio interview with Robert Spies and Tim Bray, The Ecology Hour—Science Edition, KZYY
- 2013 Scientific consultant and guest interviewee for BBC One *Talk to the Animals* documentary, aided documentary crew filming study organisms in the field.
- 2012 Tail Shakes Scare Snakes, Krystnell Storr, Science Now, <http://news.sciencemag.org/sciencenow/2012/07/tail-shakes-scare-snakes.html>
- 2012 Robosquirrel Helps Tell Epic Story of Evolution, Tom Fudge, KPBS San Diego. Robosquirrel stories also in many other news sites, including Time Magazine, LA Times, CNN, etc. <http://www.kpbs.org/news/2012/jul/03/robot-helps-tell-epic-story-snakes-and-squirrels/>
- 2012 Rattlesnake Surprising Social, Charles Choi, (story posted at Huffington Post, MSNBC, eScienceNews, and many other news sites, http://www.huffingtonpost.com/2012/02/22/rattlesnakes-surprisingly-social_n_1293975.html)
- 2011 Scientific consultant and guest interviewee for NHK Japan nature documentary on ground squirrel-rattlesnake interactions, aided documentary crew filming study organisms in the field.
- 2011 UC Natural Reserve System blog, Kathleen Wong, <http://ucop.ucnrs.org/blog/?p=855>
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