Emily N. Taylor, PhD

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EDUCATION

Ph.D. (Biology) 2005 Arizona State University

B.A. (English) 1998 University of California, Berkeley

PROFESSIONAL EXPERIENCE

2016-present	Professor, Biological Sciences, California Polytechnic State University
2011-2016	Associate Professor, Biological Sciences, California Polytechnic State University
2005-2011	Assistant Professor, Biological Sciences, California Polytechnic State University
2010-present 2018-2019	Co-author, <i>Biological Science</i> 5 th – 7 th editions (Introductory Biology Majors Textbook) Faculty Fellow, Graduate Education, California Polytechnic State University
2004	Adjunct Professor, Phoenix College
2004	Human Anatomy and Physiology Laboratory Coordinator, Arizona State University
1999-2005	Teaching Assistant, Human Anatomy and Physiology and Animal Physiology, Arizona
	State University

HONORS AND AWARDS

2016	Meritorious Teaching Award in Herpetology: American Society of Ichthyologists and
	Herpetologists, Herpetologists League, Society for the Study of Amphibians and Reptiles
2012	Distinguished Teaching Award: California Polytechnic State University
2010	Distinguished Educator Award: California Faculty Association
2008	Professor of the Year: California Polytechnic State University Delta Delta Delta and Chi
	Omega
2004	Storer Award: American Society of Ichthyologists and Herpetologists (ASIH)
2004	Doctoral Candidate Distinguished Achievement Award: Faculty Women's Association,
	Arizona State University
2000	Graduate Research Fellowship: National Science Foundation

GRANTS AND CONTRACTS

2019	United States Department of the Interior Office of Insular Affairs: \$187,976
2018, 19	United State Bureau of Land Management: \$40K over two years
2016	Research, Scholarly, and Creative Activity Grant, California Polytechnic State University: \$11,134
2014	Bridges to the Baccalaureate Grant, National Institutes of Health: \$996K over 5 years
2013	United States Air Force: \$9K
2012	United States Air Force: \$10K
2008	Bridges to the Baccalaureate Grant, National Institutes of Health: \$950K over 5 years
2007, 08	Honors Program Research Grant, California Polytechnic State Univ.: \$4K each
2006, 08	State Faculty Support Grant, California Polytechnic State Univ.: \$5K each

PUBLICATIONS

- 1. Stepanek, J., N. M. Claunch, J. A. Frazier, I. T. Moore, C. Escallón, B. Vernasco, and **E. N. Taylor**. 2019. Corticosterone-induced color change in Southern Pacific Rattlesnakes (*Crotalus helleri*). Herpetologica. 75:143-152.
- 2. Habroun S. S., A. A. Schaffner, **E. N. Taylor**, and C. R. Strand. 2018. Food consumption increases cell proliferation in the python brain. The Journal of Experimental Biology 221: jeb173377.
- 3. Claunch, N. M., M. L. Holding, C. Escallón, B. Vernasco, I. T. Moore, and **E. N. Taylor**. 2017. Good vibrations: Assessing the stability of snake venom composition after researcher-induced disturbance in the laboratory. Toxicon 133:127-135.
- 4. Claunch, N. M., J. A. Frazier, C. Escallón, B. Vernasco, I. T. Moore, and **E. N. Taylor**. 2017. Physiological and behavioral effects of exogenous corticosterone in a free-ranging ectotherm. General and Comparative Endocrinology 248:87-96.
- 5. French, S., L. Neuman-Lee, P. Terletzky, N. Kiriazis, **E. N. Taylor**, and D. F. DeNardo. 2017. Too much of a good thing? Ecotourism has a "dose-dependent" impact on innate immunity and oxidative stress in marine iguanas, *Amblyrhynchus cristatus*. Biological Conservation 210A:37-47.
- 6. DuBois, P. M., T. K. Shea, N. M. Claunch, and **E. N. Taylor**. 2017. Effects of oxygen on responses to heating in two lizard species sampled along an elevational gradient. Journal of Thermal Biology 68:170-176.
- 7. **Taylor, E. N.**, and W. Booth. 2017. Arizona rattlesnakes as model organisms for studies of reproductive physiology. In "Rattlesnakes of Arizona" (G.K. Schuett, R.S. Reiserer, C.F. Smith, eds.), Eco Publishing, pp. 121-157.
- 8. Heiken, K. H., G. A. Brusch IV, S. Gartland, C. Escallón, I. T. Moore, **E. N. Taylor**. 2016. Effects of long distance translocation on corticosterone and testosterone levels in male rattlesnakes. General and Comparative Endocrinology 237:27-33.
- 9. Capehart, G. D., C. Escallón, B. J. Vernasco, I. T. Moore, **E. N. Taylor**. 2016. No drought about it: Effects of supplemental hydration on the ecology, behavior, and physiology of free-ranging rattlesnakes. Journal of Arid Environments 134:79-86.
- Shea, T. K., P. M. Dubois, N. M. Claunch, N. E. Murphey, K. A. Rucker, R. A. Brewster, E. N. Taylor. 2016. Oxygen concentration affects upper thermal tolerance in a terrestrial vertebrate.
 Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology 199:87-94.
- 11. Brusch G. A. IV, **E. N. Taylor**, and S. M. Whitfield. 2016. Turn up the heat: thermal tolerances of lizards at La Selva, Costa Rica. Oecologia 180:325-334.
- 12. Pollock, N. B., E. Gawne, and **E. N. Taylor**. 2015. Effects of temperature on feeding duration, success, and efficiency of larval western black-legged ticks (Acari: Ixodidae) on western fence lizards. Experimental and Applied Acarology 67:299-307.
- 13. Sparks, A., C. M. Lind, and **E. N. Taylor**. 2015. Diet of the Northern Pacific Rattlesnake (*Crotalus o. oreganus*) in California. Herpetological Review 46:161-165.
- 14. Holding, M. L., D. A. S. Owen, and **E. N. Taylor**. 2014. Evaluating the thermal effects of translocation in a large-bodied pitviper. Journal of Experimental Zoology 321:442-449.
- 15. Holding, M. L., J. A. Frazier, S. W. Dorr, S. N. Henningsen, I. T. Moore, and **E. N. Taylor**. 2014. Physiological and behavioral effects of repeated handling and short-distance translocations on free-ranging Northern Pacific Rattlesnakes (*Crotalus oreganus oreganus*). Journal of Herpetology 48:233-239.
- 16. Holding, M. L., J. A. Frazier, S. W., Dorr, N. B. Pollock, P. J. Muelleman, A. Branske, S. N. Henningsen, C. Eikenaar, C. Escallón, C. E. Montgomery, I. T. Moore, and **E. N. Taylor**. 2014. Wetand dry-season steroid hormone profiles and stress reactivity of an insular dwarf snake, the Hog Island Boa (*Boa constrictor imperator*). Physiological and Biochemical Zoology 87:363-373.

- 17. Putman, B. J., C. M. Lind, and **E. N. Taylor**. 2013. Does size matter? Testing the effects of body size and sex on spatial ecology parameters of Northern Pacific Rattlesnakes (*Crotalus oreganus oreganus*) in Central California. Copeia 2013:485-492.
- 18. Pittman, W., N. B. Pollock, and **E. N. Taylor**. 2013. Effect of host anemia on host choice and feeding rate of larval western black-legged ticks (*Ixodes pacificus*). Experimental and Applied Acarology 61:471-479.
- 19. Pollock, N. B., L. K. Vredevoe, and **E. N. Taylor**. 2012. The effect of exogenous testosterone on ectoparasite loads in free-ranging Western Fence Lizards. Journal of Experimental Zoology 317:447–454.
- 20. Pollock, N. B., L. K. Vredevoe, and **E. N. Taylor**. 2012. How do host sex and reproductive state affect host preference and feeding duration of ticks? Parasitology Research 111:897–907.
- 21. Holding, M. L., J. A. Frazier, **E. N. Taylor**, and C. Strand. 2012. Experimentally-altered navigational demands induce changes in the cortical forebrain of free-ranging Northern Pacific Rattlesnakes (*Crotalus o. oreganus*). Brain, Behavior, and Evolution 79:144–154.
- 22. Lumbad, A. S., L. K. Vredevoe, and **E. N. Taylor**. 2011. Season and sex of host affect intensities of ectoparasites in Western fence lizards (*Sceloporus occidentalis*) on the Central Coast of California. Southwestern Naturalist 56:369–377.
- 23. DeNardo, D. F. and **E. N. Taylor**. 2011. Hormones and reproduction in free-ranging snakes. In "Reproductive Biology and Phylogeny of Snakes" (D. M. Sever and R. D. Aldridge, eds.). Science Publishers, Inc. Pp. 265–287.
- 24. **Taylor, E. N.** and D. F. DeNardo. 2010. Hormones and reproductive cycles in snakes. In "Hormones and Reproduction of Vertebrates," Vol. 3 (D. O. Norris and K. H. Lopez, eds.). San Diego, Elsevier. Pp. 355–372.
- 25. Amarello, M., E. M. Nowak, **E. N. Taylor**, G. W. Schuett, R. A. Repp, P. C. Rosen, D. L. Hardy, Sr. 2010. Potential environmental influences on variation in body size and sexual size dimorphism among Arizona populations of the western diamond-backed rattlesnake (*Crotalus atrox*). Journal of Arid Environments 74:1443–1449.
- Lind, C. M., J. F. Husak, C. Eikenaar, I. Moore, and E. N. Taylor. 2010. The relationship between plasma steroid hormone concentrations and the reproductive cycle in the Northern Pacific rattlesnake, *Crotalus oreganus*. General and Comparative Endocrinology 166:590–599.
- 27. **Taylor, E. N.** and D. F. DeNardo. 2008. Proximate determinants of sexual size dimorphism in the Western Diamond-backed Rattlesnake (*Crotalus atrox*). *In*: W. K. Hayes, K. R. Beaman, M. D. Cardwell, and S. P. Bush (eds.) Biology of Rattlesnakes. Loma Linda Press, Loma Linda, California. Pp. 91–100.
- 28. Davis, J., **E. N. Taylor**, and D. F. DeNardo. 2008. An automated temperature-based option for estimating surface activity and refuge use patterns in free-ranging animals. Journal of Arid Environments 72:1414–1422.
- 29. John-Alder, H. B., R. M. Cox, and **E. N. Taylor**. 2007. Proximate developmental mediators of sexual dimorphism in size: case studies from squamate reptiles. Integrative and Comparative Biology 47:258–271.
- 30. Schuett, G. W., R. A. Repp, **E. N. Taylor**, D. F. DeNardo, R. L. Earley, E. A. Van Kirk, and W. J. Murdoch. 2006. Winter profile of plasma sex steroid levels in free-living male western diamond-backed rattlesnakes, *Crotalus atrox* (Serpentes: Viperidae). General and Comparative Endocrinology 149:72–80.
- 31. **Taylor, E. N.**, M. A. Malawy, D. M. Browning, S. V. Lemar, and D. F. DeNardo. 2005. Effects of food supplementation on the physiological ecology of female western diamond-backed rattlesnakes (*Crotalus atrox*). Oecologia 144:206–213.
- 32. **Taylor, E. N.** and D. F. DeNardo. 2005. Sexual size dimorphism and growth plasticity in snakes: an experiment on the Western Diamond-backed Rattlesnake (*Crotalus atrox*). Journal of Experimental Zoology 303A:598–607.

- 33. **Taylor, E. N.** and D. F. DeNardo. 2005. Reproductive ecology of Western Diamond-backed Rattlesnakes (*Crotalus atrox*) in the Sonoran Desert. Copeia 2005:152–158.
- 34. Schuett, G. W., **E. N. Taylor**, E. A. Van Kirk, and W. J. Murdoch. 2004. Handling stress and plasma corticosterone levels in captive male Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Herpetological Review 35:229–233.
- 35. **Taylor, E. N.**, D. F. DeNardo, and D. H. Jennings. 2004. Seasonal steroid hormone levels and their relation to reproduction in the Western Diamond-backed Rattlesnake, *Crotalus atrox* (Serpentes: Viperidae). General and Comparative Endocrinology 136:328–337.
- 36. **Taylor, E. N.**, D. F. DeNardo, and M. A. Malawy. 2004. A comparison between point- and semi-continuous sampling for assessing body temperature in a free-ranging ectotherm. Journal of Thermal Biology 29:91–96.
- 37. **Taylor, E. N.** and G. W. Schuett. 2004. Effects of temperature and storage duration on the stability of steroid hormones in blood samples from Western Diamond-backed Rattlesnakes. Herpetological Review 35:14–17.
- 38. Lourdais, O., X. Bonnet, R. Shine and **E. N. Taylor**. 2003. When does a reproducing female viper (*Vipera aspis*) "decide" on her litter size? Journal of Zoology London 259:123–129.
- 39. **Taylor, E. N.** 2001. Diet of the Baja California rattlesnake, *Crotalus enyo* (Viperidae). Copeia 2001:552–554.

PUBLISHED NOTES

- 1. Claunch, N, R. Denton, M. Holding, **E. Taylor**, and S. J. Mullin. **2018**. *Scaphiopus couchii* (Couch's Spadefoot Toad). Predation. *Herp. Review* 49(2): 312-3.
- 2. Claunch, N. M, and **E. N. Taylor**. 2017. *Gambelia wislizenii* (Long-nosed leopard lizard). saurocaudophagy of *Dipsosaurus dorsalis* (Desert Iguana). Herpetological Review 48: 190-192.

PUBLISHED BOOK REVIEWS

1. **Taylor, E. N.** 2017. Review of *Amphibian and Reptile Adaptations to the Environment: Interplay Between Physiology and Behavior.* D. V. de Andrade, C. R. Bevier, J. E. de Carvalho (Eds.). 2016. CRC Press. In Copeia 2017:171-173.

INVITED SEMINARS

- 2019 Portland State University, Portland Oregon; Southern California Herpfest (Plenary Speaker); Biology of the Pitvipers 3 (Keynote Speaker)
- 2018 Sustainable Agriculture Expo, San Luis Obispo, California; Colorado State University, Fort Collins, Colorado; Humboldt State University, Arcata, California
- 2017 University of California, Berkeley; University of Nevada, Reno
- 2016 University of Central Florida; San Diego State University
- 2015 The Ohio State University (undergraduate Ecology and Evolution Club)
- 2014 University of Texas, Tyler
- 2013 University of Tulsa, Oklahoma; Southeastern Louisiana University, Hammond, Louisiana
- 2011 Desert Tortoise Council, Las Vegas, Nevada
- 2009 California State University, Fresno
- 2008 Truman State University, Kirksville, Missouri
- 2007 California State University, Long Beach
- 2006 California State University, Northridge

CONTRIBUTED PRESENTATIONS

- 2019 Eat, Prey, Live: Comparative thermal ecology and energy requirements of coastal and inland populations of Pacific Rattlesnakes (*Crotalus oreganus*). The Western Section of The Wildlife Society, Fish Camp, California
- 2018 The serpent and the rainbow: New insights into coloration in rattlesnakes. Rattlesnake of Arizona Book Signing, Rodeo, New Mexico.
- 2017 Stressed snakes: What can glucocorticoid hormones tell us about snake physiology? Biology of Snakes, Rodeo, New Mexico.
- 2016 What's behind the critical thermal maximum? Joint Meeting of Ichthyologists and Herpetologists, New Orleans, Louisiana.
- 2014 Lizard vs. spirochete smackdown: fat females take the bactericidal title. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, Tennessee
- 2014 Is translocation stressful to rattlesnakes? Biology of the Pitvipers, Tulsa, Oklahoma.
- 2014 Is translocation stressful to nuisance rattlesnakes? The Wildlife Society Western Regional Conference, Reno, Nevada.
- 2013 Is translocation stressful to nuisance rattlesnakes? 6th Snake Ecology Group Meeting, Okinawa, Japan.
- 2012 Tracking rattlesnakes on Vandenberg Air Force Base: What do the snakes do, and what should we do about them? The Wildlife Society, Portland, Oregon.
- 2012 Snakes on the juice: Effects of testosterone on the spatial ecology of rattlesnakes. 7th World Congress of Herpetology, Vancouver, British Columbia.
- 2011 Sex differences in rattlesnake spatial ecology: it's all in the mind. Biology of the Rattlesnakes Symposium, Tucson, Arizona.
- 2010 Effect of testosterone on the bactericidal properties of lizard blood. Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.
- 2009 Hormones and reproduction in free-living snakes. Invited talk in Reproductive Biology of the Ophidia Symposium. Joint Meeting of Ichthyologists and Herpetologists, Portland, Oregon.
- 2008 Annual body temperature profiles of free-ranging male Northern Pacific rattlesnakes (*Crotalus o. oreganus*). Joint Meeting of Ichthyologists and Herpetologists, Montreal, Canada.
- 2007 Testosterone is responsible for sexual size dimorphism in *Sceloporus* lizards. Joint Meeting of Ichthyologists and Herpetologists, St. Louis, Missouri.
- 2006 Effects of castration on body fat, growth rate, and home range size in free-ranging male rattlesnakes. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, Louisiana.
- 2005 Effects of testosterone on growth, body composition, and home range size in male Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Current Research on the Herpetofauna of the Sonoran Desert III, Phoenix, Arizona.
- 2005 Why are male rattlesnakes larger than females? Biology of the Rattlesnakes Symposium, Loma Linda, California.
- 2005 Why are male rattlesnakes larger than females? Society for Integrative and Comparative Biology, San Diego, California.
- 2004 Why are male rattlesnakes larger than females? Joint Meeting of Ichthyologists and Herpetologists, Norman, Oklahoma.
- 2004 Reproductive ecology of the Western Diamond-backed Rattlesnake in the Sonoran Desert. Joint Meeting of Ichthyologists and Herpetologists, Norman, Oklahoma.
- 2004 Effects of food supplementation on the reproductive ecology of female Western Diamond-backed Rattlesnakes. Society for Integrative and Comparative Biology, New Orleans, Louisiana.
- A comparison between point- and semi-continuous sampling for assessing body temperature in a free-ranging ectotherm. Society for Integrative and Comparative Biology, New Orleans, Louisiana.

- 2003 Effects of food supplementation on the physiology and behavior of female Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Joint Meeting of Ichthyologists and Herpetologists, Manaus, Brazil.
- 2003 Is testosterone involved in the sexual size dimorphism of the Western Diamond-backed Rattlesnake (*Crotalus atrox*)? Joint Meeting of Ichthyologists and Herpetologists, Manaus, Brazil.
- 2002 Seasonal steroid hormone profiles of wild female Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Joint Meeting of Ichthyologists and Herpetologists, Kansas City, Missouri.
- 2002 Growth plasticity of juvenile Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Joint Meeting of Ichthyologists and Herpetologists, Kansas City, Missouri.
- 2002 Seasonal steroid hormone profiles of wild female Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Current Research on the Herpetofauna of the Sonoran Desert II, Tucson, Arizona.
- 2002 Growth plasticity of juvenile Western Diamond-backed Rattlesnakes (*Crotalus atrox*). Current Research on the Herpetofauna of the Sonoran Desert II, Tucson, Arizona.
- 2002 Growth of juvenile Western Diamond-backed Rattlesnakes (*Crotalus atrox*) raised on different diets. Society for Integrative and Comparative Biology, Anaheim, California.
- 2001 Effects of storage time and temperature on the stability of steroid hormones in blood samples from a reptile. Society for Behavioral Neuroendocrinology, Scottsdale, Arizona.
- 2000 Diet of the Baja California rattlesnake, Crotalus enyo. Biology of the Vipers, Uppsala, Sweden.
- 1999 Diet and reproductive biology of the Baja California rattlesnake, *Crotalus enyo*. Joint Meeting of Ichthyologists and Herpetologists, State College, Pennsylvania.

COMMUNITY PRESENTATIONS

- 2019 Paso Robles High School
- 2018 Talks on Tap at 7Sisters Brewing Co.; San Luis Obispo Chamber of Commerce; SLO Morning Kiwanis Club
- 2017 Santa Barbara Science Pub; Atascadero Rotary Club; Sierra Club, Santa Lucia Chapter
- 2016 San Luis Obispo County Sheriff's Posse; San Luis Obispo County Search & Rescue
- 2015 TOO SLO Chapter of the California Turtle & Tortoise Club
- 2014 Science After Dark, San Luis Obispo
- 2012 RAMs (Retired Active Men), San Luis Obispo, California
- 2011,12 Cal Poly Pride Week, San Luis Obispo, California
- 2010 Central Coast Biological Society, San Luis Obispo, California; 20th Western Regional LGBTQIA College Conference, Cal Poly, San Luis Obispo, California
- 2009 Morro Coast Audubon Society, San Luis Obispo, California
- 2006, 08 Southwestern Herpetologists Society. Van Nuys, California
- 2005 Chicago Herpetological Society. Chicago, Illinois
- 2004 Tucson Herpetological Society, Arizona

UNIVERSITY SERVICE

2006-present	Curator of Herpetology Collections, Cal Poly
2005-present	Health Professions Resource Committee, Cal Poly
2011-2017	Graduate Coordinator, Biological Sciences, Cal Poly
2005-2016	Faculty Advisor, American Medical Student Association, Cal Poly Chapter
2014-15	Learn by Doing Award Committee, Cal Poly
2009-2014	College Representative, Commencement Committee, Cal Poly
2008-2011	Graduate Program Committee, Biological Sciences, Cal Poly
2008-09	Institutional Animal Care and Use Committee (IACUC), Cal Poly

PROFESSIONAL SERVICE

2009-14, 17-20	Governor, American Society of Ichthyologists and Herpetologists
2019-20	Education Committee, Herpetologists League
2011-13, 16-	Co-organizer and Instructor, Southwestern Research Station Herpetology Course, Portal,
	Arizona
2016-19	Johnson Award Committee, American Society of Ichthyologists and Herpetologists
2014-19	Governor, Society for the Study of Amphibians and Reptiles
2012, 2016	Chair, Resolutions Committee, American Society of Ichthyologists and Herpetologists
2014, 2018	Chair, Stoye and Storer Award Committee, American Society of Ichthyologists and
	Herpetologists
2011-2012	Nominating Committee, American Society of Ichthyologists and Herpetologists
2009-2011	Gaige Award Committee, American Society of Ichthyologists and Herpetologists
2009	Unit Advisor for Unit 8 of Biological Sciences by S. Freeman, published by
	Pearson/Benjamin Cummings
2009, 2016	Judge, Seibert Student Award, Society for the Study of Amphibians and Reptiles
2008, 2012,	Judge, Stoye/Storer Award Committee, American Society of Ichthyologists and
2015, 2016	Herpetologists
2007-2012	Associate Editor, Herpetological Review, published by the Society for the Study of
	Amphibians and Reptiles
2005	Program Co-chair, 3 rd Current Research on the Herpetofauna of the Sonoran Desert
	Conference (CRHSDIII)

GRADUATE STUDENTS

- 1. Nicole Gaudenti: M.S. expected 2021
- 2. Kathleen Ivey: M.S. expected 2020
- 3. Heather Neldner: M.S. expected 2020
- 4. Hayley Crowell: M.S. 2019
- 5. Luis Burgos: M.S. 2018
- 6. Natalie Claunch, M.S. 2016
- 7. Griffin Capehart, M.S. 2015
- 8. Kyle Weichert: M.S. 2015
- 9. Michael Maples: M.S. 2015
- 10. Kory Heiken: M.S. 2013
- 11. Julius A. Frazier: M.S. 2012
- 12. Matthew L. Holding: M.S. 2011
- 13. Nicholas B. Pollock: M.S. 2011
- 14. Craig M. Lind: M.S. 2009