
TRACEY K. BROWN

Professor

Department of Biological Sciences

California State University, San Marcos

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EDUCATION

- University of California, Los Angeles**, Ph.D. Biology 1999
Dissertation: The physiological ecology of the desert horned lizard, *Phrynosoma platyrhinos*.
Advisor: Dr. Ken Nagy
- University of California, Berkeley**, B.A. Integrative Biology 1991
Honors Thesis: The shrinking range of the coast horned lizard, (*Phrynosoma coronatum frontale*),
in the Greater Bay Area.
Advisor: Dr. Harry Greene (now at Cornell)

PROFESSIONAL EXPERIENCE

- Biology Student Success Coach (Dept. Advisor)** 2018-present
- Department Chair, Biological Sciences, California State University, San Marcos** 2013-2016
- CSUSM Coordinator for Bridges to Baccalaureate Program (CO-PI as of 2018)** 2013-present
- Full Professor, California State University, San Marcos** 2013- present
- Director, Biology Graduate Program** 2005-2009
- Associate Professor, California State University, San Marcos** 2007- 2013
- Assistant Professor, California State University, San Marcos** 2002-2007
- Post-doctoral Researcher, Center for Research on Endangered Species, SD Zool. Society** 2000-2002
- Graduate Researcher and Teaching Fellow, University of California, Los Angeles** 1992-1999
- Teaching Assistant, Earthwatch Student Challenge Awards Program, Chiricahua Mnts., AZ** 1999

COURSES TAUGHT AT CSUSM

[detailed course history at end of CV](#)

- Biol. 211 Introduction to Organismal and Population Biology Lecture
- Biol. 211 Introduction to Organismal and Population Biology Lab
- Biol. 338 Human Impact on the Environment (UDGE)
- Biol. 353 Comparative Animal Physiology Lab
- Biol. 354 Principles of Ecology Lecture
- Biol. 354 Principles of Ecology Lab
- Biol. 463 Principles of Conservation Biology (created course)
- Biol. 400 Vertebrate Biology Lecture (created course)

Biol. 400L Vertebrate Biology Lab (created course)
Biol. 505 Physiological Ecology Lecture (created course)
Biol. 565 Seminar in Ecology
Biol. 567-4 Dept. of Biology Seminar Series

Other CSUSM Teaching/Advising

Undergraduate Advising – Biology students are assigned alphabetically and juniors/seniors are required to meet with their advisor each semester. Actual number can vary each semester from 10-20 students.

Independent Study – As indicated above (Biol. 489, 495, 499). Typically these students are assisting me in the field or lab with projects and require both training and supervision. I also review their final write-ups. To date I have mentored nearly 50 undergraduates.

Chair, Thesis Committee – As indicated above (Biol. 697/698/699). Three additional students began their M.S. with me but did not complete the program.

Victoria Apaldetti (in-progress) – Effects of habitat fragmentation on diet diversity of Blainville's Horned Lizard

Andrew Cacciguida (in-progress) – Post-fire bird community recovery in Mediterranean ecosystems

Kendall Hines (finishing Sp 2019) – Using GIS for predictive modelling of perinatal bighorn sheep sites.

Ken Morgan (deceased) – Blainville's Horned lizard foraging patterns and overwintering locations

Brian Greco (2011) – Social learning in captive adult African elephants.

Received Ph.D. from UC Davis, currently Assistant Professor U. Wisconsin, River Falls

Jennifer Keating (2011) – Implications of vocalizations during giant panda breeding encounters.
Currently employed as Passive Acoustic Technician for National Oceanic and Atmospheric Association (NOAA).

Justin Chuven (2009) – Behavioral responses of the Chinese dhole to vocalizations. Currently working at Al Ain Wildlife Park in United Arab Emirates.

Beth Principe (2009) – Overwintering habits of Southwestern Pond Turtles.

Employed as Land Use/Environmental Planner II, County of San Diego

Janene Colby (2008) – Compared radio-telemetry methods on White-tailed Deer.

Employed as CA Fish and Wildlife Biology, oversees Desert Bighorn Sheep monitoring

Thesis Committee Member

Lydia Stroupe. In-progress. Ecological Interactions among the Salt Marsh Harvest Mouse and Co-Occurring Species

Liberty Isbell. In-progress. Nitrogen Deposition Effects on Hermes Copper Butterfly (*Lycaena hermes*) Habitat in Southern California

Elayna Flanders. 2016. Assessment of the state of information needed for conservation of birds in the Birds of North America.

Michelle Bagood. 2015. Voluntary Exercise and *Heligmosomoides bakeri* Parasitic Infection Change

- Body Composition and Blood Physiology of the Laboratory Mouse (*Mus musculus*) Host
 Kelcey Stricker. 2015. The Effect of Interstate 15 on Mammalian Communities in Southern California's Conserved Lands
- Zarela Guerrero. 2015. Effects of Nitrogen Addition on the Litter Decomposition Dynamics of the Deciduous Coastal Sage Shrub *Artemisia californica* Less.
- Robyn Coole. 2014. Multi-Scale Habitat Associations of Shorebirds in Connection with Land Cover Change in the San Elijo Lagoon, CA. USA
- Brian Sodeman. 2014. The Effect of Soil Moisture on the Susceptibility to Invasion by the Argentine Ant (*Linepithema humile*) in Chaparral Communities.
- Samantha Lane. 2014. Cytokine responses to *Heligmosomoides bakeri* after long-term calorie restriction comparing slow- & fast-responder strains of mice
- Sarah Lopez. 2013. Host Ingestion of Rapamycin Increased Nematode and Cestode Reproduction
- Erin Lane. 2013. Sexual Selection of Beard Color in the Inland Bearded Dragon (*Pogona vitticeps*)
- Amanda Cornell. 2012. Using Stable Isotope Tracers and Remote Sensing Data to Explain Seasonal Trends in Evapotransp. in Watersheds in Orange Co., CA Associated with Anthropogenic Water.
- Kari Coler. 2009. Population viability analysis of *Hazardia orcuttii*, a state-protected species, using a stage class model.
- Wendy Acosta. 2008. Long-term calorie restriction does not predict susceptibility of laboratory mice (*Mus musculus*) to a secondary infection by the parasitic nematode *Heligmosomoides bakeri* .
- Linnae DeCamp. 2008. Seasonal shifts in corvid abundance in relation to reproductive output by wading birds
- Crystel Knight. 2008. Effects of spatial distribution of corvids on nest predation risk.
- Julie Miller. 2008. Reproductive biology and germination requirements of the California state threatened species *Hazardia orcuttii* (Asteraceae).
- Sarah Pasquini. 2008. Vegetation responses to anthropogenic nitrogen deposition and nitrogen fertilization in chaparral and coastal sage scrub of southern California.
- Joanna Kroon. 2007. The physiology of the invasive grass, *Cortaderia selloana*, in response to variations in water table depth and soil nitrogen content.
- William Porter. 2005. An evaluation of a passive infrared motion detector (PID) for biological applications
- Terrence Wright. 2004. Neuromodulation in the medicinal leech, *Hirudo medicinalis*.

RESEARCH ACTIVITY

PEER-REVIEWED – ACTIVE IN-PREP AND PUBLISHED

- Brown, T.K** and K.A. Nagy. (In-prep) Field energetics of Desert Horned Lizards (*Phrynosoma platyrhinos*): the effects of environmental variation. Working with co-author on finalizing manuscript. To be submitted to *Journal of Animal Ecology*
- Brown, T.K.**, Sherbrooke, W. and L. Young. (In-prep) Reference hematologic and plasma chemistry values of free-ranging Texas Horned Lizards (*Phrynosoma cornutum*). To be submitted to *Journal of Zoo and Wildlife Medicine*.

- *Keating, J., **Brown, T.K.**, Bowles, A. and R.R. Swaisgood. Implications of vocalizations in giant panda breeding encounters. In final prep for *Animal Behaviour*
- *Greco, B., Andrews, J. **Brown, T.K.**, Swaisgood, R.R. and N.G. Caine. 2012. Social learning in captive African Elephants (*Loxodonta africana africana*). *Animal Cognition*, Published Online 12/14/2012. DOI 10.1007/s10071-012-0586-7
- Eifler, D. A., Eifler, M.A. and **T.K. Brown**. 2012. Habitat use and foraging patterns of Texas Horned Lizards, *Phrynosoma cornutum*. *Southwestern Naturalist*. 57:39-43
- Brown, T.K.** 2009. Blainville's Horned Lizard Species Account. In *Lizards of the American Southwest, A Photographic Field Guide*, ed. L.C. Jones and R.E. Lovich, pp. 162-165. Rio Nuevo Publishers, Tucson, Arizona.
- Brown, T.K.** 2009. Desert Horned Lizard Species Account. In *Lizards of the American Southwest, A Photographic Field Guide*, ed. L.C. Jones and R.E. Lovich, pp. 190-193. Rio Nuevo Publishers, Tucson, Arizona.
- Brown, T.K.** and K.A. Nagy. 2007. Lizard energetics and the sit-and-wait vs. wide-foraging paradigm. In *Lizard Ecology. The Evolutionary Consequences of Foraging Mode*, ed. S.M. Reilly, L.B. McBrayer and D.B. Miles, pp. 120-140. Cambridge University Press, New York.
- Brown, T.K.**, J.M. Lemm, J. Montagne, J.A. Tracey and A.C. Alberts. 2005. Spatial ecology, habitat use, and survivorship of resident and translocated Red Diamond Rattlesnakes (*Crotalus ruber*) in Hayes, W. K., K. R. Beaman, M. D. Cardwell, and S. P. Bush (Editors). *The Biology of Rattlesnakes*. Loma Linda University Press, Loma Linda, California.
- Brown, T.K.**, Nagy, K.A. and D.J. Morafka. 2005. Costs of growth in tortoises. *Journal of Herpetology*, Vol. 39:19-23.
- Diffendorfer, J., Fisher, R.J. C. Rochester and **T.K. Brown**. 2005. Movement and space use by rosy boas (*Charina trivirgata*) in coastal Southern California. *Journal of Herpetology*, Vol. 39:24-36.
- Bott, K., **Brown, T.K.** and D. Eifler. 2001. *Phrynosoma cornutum* (Texas horned lizard). Diet. *Herpetological Review* 32:41

Nagy, K.A., Girard, I.A., and **T.K. Brown**. 1999. Energetics of free-ranging mammals, reptiles and birds. *Annual Reviews of Nutrition*. 19:247-77 **CITED BY 648**

OTHER MANUSCRIPTS IN SUBMISSION/REVIEW/PREPARATION

Brown, T.K. and K.A. Nagy. Water relations of a desert lizard, *Phrynosoma platyrhinos*. Developing draft for prep for *Physiological and Biochemical Zoology*

Brown, T.K., J., Montagne, J.P. and A. Alberts. Ecological implications of habitat restoration for coast horned lizards, *Phrynosoma coronatum*. In prep for *Journal of Wildlife Management*

Brown, T.K., Nagy, K.A. and D. J. Morafka. Not so negative effects of habitat disturbance on desert horned lizards (*Phrynosoma platyrhinos*).

BOOK REVIEWS

Inouye, C.Y., Girard, I.A., **Brown, T.K.**, Hayse, D., Hertel, F. and K.A. Nagy. 1997. Book review: Avian Energetics and Nutritional Ecology. *Auk* 114:663-664.

Brown, T.K., Henen, B.T., Myer, M., La Pierre, L. and K.A. Nagy. 1995. Book review: Lizard Ecology: historical and experimental perspectives, L.J. Vitt and E. Pianka, eds. *Ecology* 76:1687-1688.

REPORTS

Alberts, A.C., **Brown, T.K.**, Grant, T.D., Lemm, J.M., Montagne, J.P., Milroy III, L.G. and L.A. Jackintell. 2004. Conservation of the San Diego Horned Lizard on the Southwestern Riverside County Multi-Species Reserve. Final Project Report to Metropolitan Water District of So. Cal. for Agreement No. 1550. 61 pp.

Brown, T.K. and K.A. Nagy. 1997 & 1998. Biological monitoring and environmental impact assessment: Goldstone reptile surveys and physiological studies. Final report to U.S. Army – Fort Irwin. 45 pp.

Brown, T.K. and K.A. Nagy. 1995 & 1996. Herpetological surveys and physiological studies on the western portion of Fort Irwin, NTC. Final report to U.S. Army - Fort Irwin. 50 pp. (1995), 43 pp. (1996)

Nagy, K.A. and **T.K. Brown**. 1994. Ecology and Impact Sensitivity of Reptiles at Fort Irwin, CA. Final Report to U.S. Army - Fort Irwin. 28 pp.

GRANTS AND AWARDS

External

- 2018 Bridges to the Baccalaureate – NIH** **\$1,440,000**
Co-PI with Denise Garcia. Program supports 20 scholars at two local community colleges to increase completion of BS degrees in the biomedical sciences among under-represented groups.
- 2018 Howard Hughes Medical Institute** **\$1,000,000**
One of five primary members - co-wrote application equally.
- 2006 Submitted to NSF**
Movement, space use, and survival of vertebrates in a heterogeneous urban landscape. CO PIs Douglas Bolger (Dartmouth), Jay Diffendorfer (Illinois Natural History Survey), Phil Unit and Scott Tremor (SDNHM). *Several positive reviews, re-submitted but eventually rejected.* Requested Individual Amount **\$182,185**. Total Request Amount **\$1,044,632**
- 2003 Favrot Fund** **\$30,000**
Effects of road design on native vertebrates, with Allison Alberts
- 2002 Favrot Fund** **\$35,000**
Habitat monitoring and adaptive management project, with Allison Alberts
- 2001 Bud Heller Fellowship** **\$30,000**
Ecological studies of native snakes at the Wild Animal Park, with Allison Alberts **\$30,000**
- 2000 Joan Irvine Smith Foundation, Favrot Fund, Metropolitan Water District of So. Cal.** **\$53,910**
Partial support for coast horned lizard restoration ecology project, with Allison Alberts
- 93/98 U. S. Department of Defense** **\$374,673**
Physiological research and annual herpetological studies at Fort Irwin Army NTC and Comparative tortoise metabolism study

Internal

- 2017 CSUSM RSC Grant**
Given funds to support sabbatical research project in the molecular scatology of reptiles **\$5,680**
- 2012 CSUSM UPD/RSC Grant** **\$2,682**
Request for fund to present at 7th World Congress of Herpetology (Vancouver, B.C.) and Ecological Society of America (Portland, OR) meetings in August **\$2,682**
- 2011 CSUSM UPD/RSC Grant** **\$11,906**
A Collaborative Metabolic Equipment System to Measure Energy use by Reptiles and Mammals, CO-PIs Deborah Kristan and Bianca Mothe
- 2011 CSUSM Faculty Center Development Grant** **\$840**
Funds for horned lizard blood sample analyses and supplies,

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| 2010 | COAS Professional Development Grant | \$600 |
| | Funds for horned lizard blood sample analyses and supplies | |
| 2007 | CSUSM UPD/RSC Grant | \$4,856 |
| | Metabolic Ontogeny in Bearded Dragons: Is Reptilian Growth Cost-free | |
| 2007 | CSUSM UPD/RSC Grant Supplemental | \$1,570 |
| | Respirometry Training Course | |
| 2007 | CSUSM Faculty Center Development Grant | \$500 |
| | Travel funds to attend and present at a conference in Memphis, TN | |
| 2005 | CSUSM IRA Fund Award | \$9,091 |
| | Development of the CSUSM Wetland as a Living Laboratory, submitted along with Dr. Richard Bray and Dr. George Vourlitis | |
| 2005 | CSUSM Faculty Development Award | \$2,375 |
| | Development of Laboratory Exercises and Teaching Materials for Biol. 211 | |
| 2004 | CSUSM Lottery Funds | \$4,800 |
| | Acquisition of vertebrate biology teaching equipment | |
| 2004 | CSUSM Faculty Center Development Grant | \$500 |
| | Travel funds to attend and present at a conference in South Africa, | |
| 2004 | CSUSM UPD/RSC Grant | \$3,400 |
| | Effects of Habitat Disturbance on the Physiological Ecology of Coast Horned Lizards | |
| <u>CSU</u> | | |
| 2016 | Course Redesign with Technology – Promising Practices – Course redesign of Biol 211 –Intro. to Organismal and Population Biology Lecture | \$10,464 |
| 2015 | Campus as a Living Lab – Raising a Mixed-Use Greenhouse: Connecting Students, Facilities, Courses and Research. Faculty Lead | \$32,000 |
| 2015 | Course Redesign with Technology – Promising Practices – Course redesign of Biol 338 – Human Impact on the Environment | \$10,447 |
| 2015 | Course Redesign with Technology – Promising Practices – Course redesign of Introduction to Anatomy and Physiology. | \$22,932 |
| <u>Other</u> | | |
| University of California, Los Angeles | | |
| | Graduate Division Travel Award \$800 | 1998, 1999 |
| | UC President’s Dissertation Year Fellowship \$24,000 | 1997-1998 |
| | Departmental Quarter Fellowship \$4,500 | 1996 |

PRESENTATIONS & MEETINGS

At Professional Conferences:

- Contributed Paper – 7th World Congress of Herpetology, Vancouver, B.C.** 2012
“Field energetics of horned lizards (*Phrynosoma* spp.), the effects of myrmecophagy”
- Contributed Poster – Ecological Society of America Meeting, Portland, Oregon** 2012
“Energetics of Blainville's Horned Lizards, *Phrynosoma blainvillii*, in disturbed and undisturbed habitat”
- Contributed Paper – Ecological Society of Meeting, Memphis, Tennessee** 2006
“Spatial ecology, habitat use, and survivorship of resident and translocated Red Diamond Rattlesnakes”
- Invited Symposium Speaker – Fifth World Congress of Herpetology, Stellenbosch, South Africa** 2005
“Lizard energetics and the sit-and-wait versus widely-foraging paradigm”
- Invited Symposium Speaker – Biology of the Rattlesnakes Symposium, Loma Linda Univ., CA** 2005
“Movement, Denning, and Relocations of Red Diamond Rattlesnakes (*Crotalus ruber ruber*)”
- Contributed Poster – Ecological Society of America Meeting, Portland, Oregon** 2004
“Ecological responses by San Diego Coast Horned Lizards, *Phrynosoma coronatum blainvillei* to habitat restoration efforts.
- Contributed Poster – 2004 ESRI International User Conference, San Diego, CA** 2004
“Ecological responses by San Diego Coast Horned Lizards, *Phrynosoma coronatum blainvillei* to habitat restoration efforts” *Note:* title same as ESA meeting, however different data given
- Contributed Paper – Annual meeting of Society of Conservation Biology. Hilo, HI** 2001
“Biological impacts of human disturbance on two horned lizard species (*Phrynosoma*) in southern California.”
- Invited Paper - Joint conference of the ASIH, SSAR, and HL. La Paz, Baja California Sur.** 2000
“Biological impacts of human disturbance on two horned lizard species (Genus *Phrynosoma*) in southern California”.
- Contributed Paper - Joint conference of the ASIH, SSAR, and HL. University Park, PA** 1999
“Physiological consequences of environmental variation in desert horned lizards, *Phrynosoma platyrhinos*.”
- Contributed Paper - Joint conference of the ASIH, SSAR, HL., Guelph, Ontario, Canada** 1998
“Aspects of the physiological ecology of the desert lizard, *Phrynosoma platyrhinos*.”

To University, Scientific and Community Organizations:

- Invited Speaker – Tijuana River National Estuarine Research Reserve** 2019
“Reptile Biodiversity: Highlighting Horned Lizards
- Invited Speaker – Lake Hodges Native Plant Club** 2009
“Reptiles and Amphibians of San Diego County”

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| Invited Seminar Speaker – La Sierra University | 2007 |
| “Horny and thorny devils: Is the devil a sloth?” | |
| Invited Seminar Speaker – Perspectives in Science, Point Loma Nazarene College | 2004 |
| “Reptile biodiversity in Southern California” | |
| Invited Seminar Speaker – The Wildlife Society Western Section’s Identification Workshop | 2003 |
| “Coast Horned Lizard, <i>Phrynosoma coronatum</i> ” | |
| Invited Seminar Speaker – Loma Linda University. Loma Linda, CA | 2002 |
| “The physiological ecology of Desert Horned Lizards, <i>Phrynosoma platyrhinos</i> .” | |
| Invited Banquet Speaker – CRES Summer Colloquium. San Diego, CA | 2002 |
| “Biodiversity in our backyard: ecology of native snakes at the Wild Animal Park.” | |

SERVICE

DEPARTMENT

| | |
|---|-----------|
| Director, Departmental Program Review (BS, MS) | 2016-2018 |
| Department Chair, Biological Sciences | 2013-2016 |
| Director, Departmental Program Review (BS, MS) | 2010-2012 |
| Director, Biology Graduate Program | 2005-2009 |
| Assisted with preparation of Academic Recruitment Plan for Biology Hire | 2005 |
| Assisted with preparation of Program Evaluation and Planning (PEP) document | 2004 |

COLLEGE & UNIVERSITY

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|--|--------------|
| Lead Faculty, Wildfire Science BS program development (EL degree) | 2014-present |
| WASC Campus Steering Committee | 2013-2016 |
| Lead Faculty, Pre-Health Certificate program development (EL degree) | 2013-2015 |
| Chair, Institutional Animal Care and Use Committee | 2012-2015 |
| Member, Institutional Animal Care and Use Committee | 2008-2012 |
| Chair, CSM Faculty Development Committee | 2011-2013 |
| Chair, Faculty Grants Committee | 2008-2009 |
| Steering committee for Environmental Science major development | 2002-present |
| Academic Senator | 2006-2007 |
| Member, Escondido Chamber of Commerce | 2005-2006 |
| Member, Faculty Affairs Committee | 2004-2006 |
| University Village Faculty Fellow at on-campus student dormitories | 2003-2005 |

COMMUNITY

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|---|------------|
| Lecturer – Vertebrate Biology, UC ANR California Naturalist Program | 2016, 2017 |
| Member, Technical Advisory Board for Nature Reserve of Orange County | 2010-2013 |
| Board of Directors, Friends of Daley Ranch | 2004-2010 |
| Participation in Wild Animal Park Children’s Program | 2005 |
| Participation in “Girls in Science” programs with Zoological Society of San Diego | 2002 |
| Expanding Your Horizons, UCSD hosted program to introduce girls to science and math | 2002 |

PROFESSIONAL

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|---|-----------|
| Associate Editor, <i>Journal of Herpetology</i> | 2012-2014 |
| Journal Reviewer for <i>Zoology</i> (1 manuscript), <i>The Biology of the Rattlesnakes II</i> (chapter) | 2012 |
| Journal Reviewer for <i>Herpetologica</i> and <i>J. of Fish and Wildlife Management</i> | 2011 |
| Journal Reviewer for <i>Copeia</i> | 2006 |
| Invited Member to California Partners in Amphibian and Reptile Conservation (PARC) | 2005 |
| Journal Reviewer for <i>Physiological and Biochemical Zoology</i> (1 manuscript) | 2005 |
| Book Reviewer for 2 chapters in <i>The Biology of Rattlesnakes Symposium Volume</i> | 2005 |
| Book Reviewer for 1 chapter in <i>Lizard Ecology: The Evol. Consequences of Foraging Mode</i> | 2004 |
| Journal Reviewer for <i>Herpetological Review</i> (1 manuscript) | 2003 |
| Journal Reviewer for <i>Oecologia</i> (5 manuscripts) | 1998-2001 |

PROFESSIONAL TRAINING

| | |
|---|---------------------|
| GIS Resources and Instructional Development Workshop, Palomar College | October 21-22, 2011 |
| Geospatial Technology Summer Workshop, Nat. GeoTech Center, SDSU | July 18-20, 2011 |

PROFESSIONAL AFFILIATIONS

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| Society for Conservation Biology (SCB) | American Society of Ichthyologists and Herpetologists (ASIH) |
| Ecological Society of America (ESA) | Horned Lizard Conservation Society (HLCS) |
| San Diego Partners for Biodiversity | Society for the Study of Amphibians and Reptiles (SSAR) |

DETAILED CSUSM COURSE LIST

*denotes course release(s) that semester

Fall 2019*

| | | |
|-----------|-------------------------------|-------------|
| Biol. 354 | Principles of Ecology Lecture | 48 students |
| Biol. 685 | Instr. Internship | 1 student |
| Biol. 697 | Directed Studies | 2 students |
| Biol. 699 | Thesis Extension via EL | 1 student |

Spring 2019*

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|-------------|--------------------------|-------------|
| Biol. 565 | Seminar in Ecology | 17 students |
| Biol. 596-4 | Dept. of Biology Seminar | 23 students |
| Biol. 699 | Thesis Extension | 1 student |

Fall 2018*

| | | |
|------------|-------------------------------|-------------|
| Biol. 354 | Principles of Ecology Lecture | 48 students |
| Biol. 354 | Principles of Ecology Lecture | 48 students |
| Biol. 699F | Thesis Extension | 1 student |

Spring 2018* (sabbatical)

Fall 2017*

| | | |
|------------|-------------------------------|-------------|
| Biol. 354 | Principles of Ecology Lecture | 37 students |
| Biol. 354 | Principles of Ecology Lecture | 49 students |
| Biol. 489 | Inter. in Biology | 1 student |
| Biol. 698D | Thesis Units | 1 student |

Spring 2017*

| | | |
|------------|----------------------|-------------|
| Biol. 211 | Intro. Bio. Lecture | 72 students |
| Biol. 496 | Sup. Lab Instruction | 3 students |
| Biol. 697F | Directed Studies | 1 student |

Fall 2016*

| | | |
|------------|---------------------------------|-------------|
| Biol. 338 | Human Impact on the Environment | 39 students |
| Biol. 698D | Thesis Units | 1 student |

Spring 2016* (chair)

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|------------|----------------------|------------|
| Biol. 496 | Sup. Lab Instruction | 3 students |
| Biol. 697F | Directed Studies | 1 student |

Fall 2015* (chair)

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|-----------|----------------------|------------|
| Biol. 496 | Sup. Lab Instruction | 2 students |
|-----------|----------------------|------------|

Spring 2015* (chair)

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|------------|----------------------|------------|
| Biol. 496 | Sup. Lab Instruction | 3 students |
| Biol. 697F | Directed Studies | 1 student |

Fall 2014* (chair)

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|------------|----------------------|------------|
| Biol. 489 | Inter. in Biology | 1 students |
| Biol. 496 | Sup. Lab Instruction | 3 students |
| Biol. 697C | Directed Studies | 1 student |

Spring 2014* (chair)

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|-----------|------------------------------|------------|
| Biol. 489 | Intro. to Lab/Field Research | 3 students |
| Biol. 496 | Sup. Lab Instruction | 2 students |
| Biol. 498 | Senior Lib. Thesis | 1 student |

Fall 2013* (chair)

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|-----------|----------------------|------------|
| Biol. 495 | Inter. in Biology | 1 students |
| Biol. 496 | Sup. Lab Instruction | 2 students |
| Biol. 699 | Thesis Extension | 1 student |

Spring 2013*

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|-----------|-------------------------------|-------------|
| Biol. 505 | Physiological Ecology Lecture | 23 students |
| Biol. 354 | Principles of Ecology Lab | 25 students |
| Biol. 489 | Intro. to Lab/Field Research | 2 students |

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|---------------------|-------------------------------|-------------|
| Biol. 499 | Senior Lab Thesis | 1 student |
| Biol. 699 | Thesis Extension | 1 student |
| Fall 2012 | | |
| Biol. 354 | Principles of Ecology Lecture | 47 students |
| Biol. 354 | Principles of Ecology Lab | 23 students |
| Biol. 354 | Principles of Ecology Lab | 24 students |
| Biol. 698 | Thesis Supervision | 1 student |
| Spring 2012* | | |
| Biol. 400 | Vertebrate Biology Lecture | 45 students |
| Biol. 400L | Vertebrate Biology Lab | 18 students |
| Biol. 489 | Intro. to Lab/Field Research | 2 students |
| Fall 2011 | | |
| Biol. 211 | Intro. Bio. Lecture | 41 students |
| Biol. 211 | Intro. Bio. Lab | 21 students |
| Biol. 211 | Intro. Bio. Lab | 20 students |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 698 | Thesis Supervision | 1 student |
| Spring 2011 | | |
| Biol. 354 | Principles of Ecology Lecture | 49 students |
| Biol. 354 | Principles of Ecology Lab | 22 students |
| Biol. 354 | Principles of Ecology Lab | 27 students |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 698 | Thesis Supervision | 3 students |
| Fall 2010* | | |
| Biol. 211 | Intro. Bio. Lecture | 40 students |
| Biol. 211 | Intro. Bio. Lab | 23 students |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 698 | Thesis Supervision | 2 students |
| Spring 2010 | | |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 495 | Internship in Biology | 1 student |
| Biol. 499 | Senior Lab Thesis | 2 students |
| Biol. 697 | Directed Studies | 2 students |
| Biol. 698 | Directed Studies | 2 students |
| Fall 2009 | | |
| Biol. 685 | Instr. Internship | 2 students |
| Biol. 697 | Directed Studies | 1 student |
| Biol. 698 | Thesis Supervision | 2 students |
| Spring 2009 | | |
| Biol. 338 | Human Impact on Environ. | 60 students |
| Biol. 400 | Vertebrate Biology Lecture | 20 students |
| Biol. 400L | Vertebrate Biology Lab | 14 students |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 498 | Senior Lib. Thesis | 1 student |
| Biol. 685 | Instr. Internship | 2 students |
| Biol. 697 | Directed Studies | 1 student |
| Biol. 699 | Thesis Extension | 2 students |
| Fall 2008 | | |
| Biol. 211 | Intro. Bio. Lecture | 35 students |
| Biol. 211 | Intro. Bio. Lab | 20 students |
| Biol. 211 | Intro. Bio. Lab | 15 students |

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|--------------------|---------------------------------|--|
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 499 | Senior Lab Thesis | 1 student |
| Biol. 685 | Instr. Internship | 2 students |
| Biol. 697 | Directed Studies | 3 students |
| Biol. 698 | Thesis Supervision | 1 student |
| Spring 2008 | | |
| Biol. 354 | Principles of Ecology Lecture | 28 students |
| Biol. 354 | Principles of Ecology Lab | 12 students |
| Biol. 354 | Principles of Ecology Lab | 7 students |
| Biol. 495 | Internship in Biology | 1 student |
| Biol. 685 | Instr. Internship | 3 students |
| Biol. 698 | Thesis Supervision | 1 student |
| Fall 2007 | | |
| Biol. 211 | Intro. Bio. Lecture | 23 students |
| Biol. 211 | Intro. Bio. Lab | 12 students |
| Biol. 211 | Intro. Bio. Lab | 11 students |
| Biol. 489 | Intro. to Lab/Field Research | 2 students |
| Biol. 496 | Sup. lab. research | 1 student |
| Biol. 697 | Directed Studies | 1 student |
| Biol. 698 | Thesis Supervision | 2 students |
| Spring 2007 | | |
| Biol. 400 | Vertebrate Biology Lecture | 29 students |
| Biol. 400L | Vertebrate Biology Lab | 21 students |
| Biol. 354 | Principles of Ecology Lab | 19 students |
| Biol. 489 | Intro. to Lab/Field Research | 2 students |
| Biol. 697 | Thesis | 2 students |
| Fall 2006 | | |
| Biol. 505 | Physiological Ecology | 26 students, New course |
| Biol. 338 | Human Impact on the Environment | 59 students |
| Biol. 565 | Seminar in Ecology | 12 students |
| Biol. 489 | Intro. to Lab/Field Research | 1 student |
| Biol. 698 | Directed Studies | 1 student |
| Spring 2006 | | |
| Biol. 354 | Principles of Ecology Lecture | 50 students |
| Biol. 354 | Principles of Ecology Lab | 50 students, 2 lab sections taught |
| Biol. 697 | Directed Studies | 4 students |
| Biol. 698 | Thesis Units | 2 students |
| Fall 2005 | | |
| Biol. 211 | Intro. to Organ. & Pop. Biology | 28 students, New prep, rewrite lab manual, 2 labs, |
| Biol. 489 | Intro. to Lab./Field Research | 1 student |
| Biol. 697 | Directed Studies | 5 students |
| Spring 2005 | | |
| Biol. 211 | Intro. to Organ. & Pop. Biology | 72 students, co-taught with Dr. William Kristan |
| Biol. 400 | Vertebrate Biology Lecture | 28 students, New course |
| Biol. 400L | Vertebrate Biology Laboratory | 20 students, New course |
| Biol. 489 | Intro. to Lab./Field Research | 2 students |
| Biol. 685 | Internship in Bio. Instruction | 3 students |
| Biol. 697 | Directed Studies | 1 student |
| Fall 2004 | | |
| Biol. 338 | Human Impact on the Environment | 194 students, all students in 1 section |
| Biol. 565 | Seminar in Ecology | 25 students |
| Biol. 697 | Directed Studies | 2 students |
| Biol. 698 | Thesis | 1 student |

Spring 2004

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| Biol. 354 Principles of Ecology Lecture | 51 students, New prep. |
| Biol. 354 Principles of Ecology Laboratory | 51 students, 2 labs, New prep. |
| Biol. 697 Directed Studies | 1 student |

Fall 2003

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| Biol. 338 Human Impact on the Environment | 136 students, 2 sections |
| Biol. 353 Animal Physiology Laboratory | 22 students, New prep. Dr. Norris taught lecture |
| Biol. 489 Intro. to Lab./Field Research | 1 student |

Spring 2003*

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|---|---|
| Biol. 211 Intro. to Organ. & Pop. Biology | 54 students, New prep., co-taught with Dr. Norris |
| Biol. 396J (now 363) Conservation/Rest. Biol. | 12 students, New course |
| Biol. 489 Intro. to Lab./Field Research | 1 student |
| Biol. 565 Seminar in Ecology | 20 students, New prep. |

Fall 2002*

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|---|------------------------------------|
| Biol. 338 Human Impact on the Environment | 132 students, New prep, 2 sections |
| Biol. 489 Intro. to Lab./Field Research | 1 student |
| Biol. 495 Internship in Biology | 1 student |