

CIRRICULUM VITAE
KENT A. HATCH

September 22, 2021

(Pages 1-5 are an abbreviated summary; see Appendices I-V for full and complete details)

Contact Information

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Education and Degrees

Ph.D. University of Wisconsin - Madison, Madison, WI; Ph.D., Zoology, 1996 (Thesis Advisor: Dr. Warren P. Porter, Ph.D. minor in Conservation Biology and Sustainable Development).
M.S. University of Wisconsin - Madison, Madison, WI; M.S., Zoology, 1995 (Thesis Advisor: Dr. Warren P. Porter)
B.S. Brigham Young University, Provo, UT; B.Sc., Zoology, 1990 (Graduated Cum Laude, Honors Thesis Advisor: Dr. Duane E. Jeffery)

Foreign Languages

Spanish: Fluent German: Fluent Hebrew: Some

Professional Experience

Sept. 2021 – Present	Professor, Long Island University Post, Dept. of Biological and Environmental Sciences.
July 2021 – Present	Research Associate, Stony Brook University, Dept. of Ecological and Environmental Sciences
Sept. 2018 – Aug. 2021	Associate Professor, Long Island University Post, Dept. of Biological and Environmental Sciences.
Sept. 2012 – Aug. 2018	Associate Professor, Long Island University Post, Dept. of Biology.
Sept. 2008 – Aug. 2012	Assistant Professor, Long Island University Post, Dept. of Biology.
Jan. 2007 – Aug. 2008	Assistant Professor, Brigham Young University, Dept. of Biology.
Jan. 2002 – Dec. 2006	Assistant Professor, Brigham Young University, Dept. of Integrative Biology.
Aug. 2001 – Dec. 2001	Assistant Professor, Brigham Young University, Dept. of Zoology.
May 1999 – Aug. 2001	Postdoctoral Fellow, University of Nevada, Reno, Dept. of Biology (with Dr. C. Richard Tracy).

Jan. 1997 - Dec. 1998 Fulbright Postdoctoral Fellow, Ben-Gurion University of the Negev, Israel, Mitrani Center for Desert Research (with Dr. Berry Pinshow).

LEADERSHIP

2015 - 2019 Union Treasurer, CW Post Collegial Federation
2010 - 2014 Executive Council Representative, CW Post Collegial Federation

EXAMPLES OF GRANTS AND AWARDS

(See Appendix I for complete, detailed list)

External Research Support

2021-2025 **\$1,202,860. NSF 20-513** Understanding the Rules of Life: Microbiome Theory and Mechanisms, *EF: Collaborative Research: MTM 2: Marine Invertebrate Microbiome Assembly, Diversification, and Coevolution.*
1997 - 1998 **Fulbright Postdoctoral Fellow**, Ben-Gurion University of the Negev, Israel

PUBLICATIONS AND PRESENTATIONS

(See Appendix II for complete, detailed list)

Summary of Publications

- 37 Publications
 - 33 original research papers in peer-reviewed journals
 - 1 invited introduction to a special issue
 - 1 invited review
 - 1 invited book chapter
 - 1 paper in non-peer-reviewed journal
 - 28 undergraduate coauthors

Examples of Representative Publications (Mentored undergraduate co-authors in bold, mentored graduate students italicized, my name underlined)

1. **Sikes, A. M.**, C. J. Katz, K. A. Hatch. 2021. Exposure of American black bears to various pathogens in Wisconsin. *Ursus*. In press.
 - My role: Guided the development of the concept, statistical analysis, and writing. Conducted much of the statistical analysis. This paper resulted from research initiated, and the first draft was completed as part of my Bio 106, Research Methods II course.
2. *Hong, P.*, D. N. Wiley, K. D. Powers, R. H. Michener, L. Kaufman, K. A. Hatch. 2019. Stable isotope analyses of multiple tissues of great shearwaters (*Ardenna gravis*) reveals long-term dietary stability, short-term changes in diet, and can be used as a tool to monitor food webs. *Diversity*. 11(9): 163; <https://doi.org/10.3390/d11090163>.
 - My role: Originated concept, helped gather data, conducted data analysis, advised master's student in experimental design and thesis. I reanalyzed the data and rewrote the resulting paper based on Hong's thesis.

3. Hatch, K. A., **K. A. Kester**, J. Auger, B. L. Roeder, K. Bunnell, H. L. Black. 2019. The effect of sex, age, and location on carnivory in Utah black bears (*Ursus americanus*). *Oecologia*. 189: 931-937.
 - My role: Gathered data, did stable isotope analysis, conducted data analysis, wrote most of the paper, advised undergraduate student in updating citations and rewriting portions of paper.
4. Welch, K. C. Jr., F. Péronnet, K. A. Hatch, C. C. Voigt, and M. D. McCue. 2016. Carbon stable isotope tracking in breath for comparative studies of fuel use. *Annals of the New York Academy of Sciences*. 1365:15-32.
 - My role: Invited to write section on *fuel use during fasting and starvation*.
5. **Fisher, K.**, **K. Guilfoyle**, and K.A. Hatch. 2013. Stress induced by toe-clipping in cane toads (*Rhinella marinus*). *Copeia*. 2013 (3):539-542.
 - My role: Originated concept, experimental design, supervised data collection, statistical analysis, advised students in writing and revisions. This paper resulted from research initiated as part of my Bio 200, Comparative Animal Physiology Laboratory.

Summary of Professional Meetings Attended and Research Presented by

Undergraduates (Mentored undergraduate co-authors in bold, mentored graduate students italicized, my name underlined; see Appendix II for complete, detailed list)

- 18 *undergraduate* presentations at national and international scientific meetings.
- 4 graduate student presentations at national and international scientific meetings.
- 13 presentations by myself at national and international scientific meetings.
- 4 additional *invited* presentations by myself at professional and international scientific meetings.
- 7 invited seminars at universities.

PROFESSIONAL DEVELOPMENT

(For complete list of professional development activities see Appendix III)

Selected Professional Development Activities at LIU Post

Sept. – Nov 2021	Foundational Open Science Skills Training through CYVERSE
Sept. 2019 – Present	Learning methods of DNA extraction and Sequencing (PCR, gel electrophoresis, Qubit, Sanger Method, Illumina next generation sequencing) under Dr. Robert Thacker, Chair of Ecology and Evolution, Stony Brook University.
Sept. 2020	Finding Grants Using SPIN: LIU Zoom Online Seminar
Feb. 2019	Workshop: Getting on the ARC: Positioning for Successful Academic and Research Careers by David Stone, Chief Research Officer, Oakland University, and Director of <i>PI Academy for Research Engagement</i>
May 2018	Stable Isotope Mixing Model Workshop, PR-Statistics, by Drs. Andrew Jackson and Andrew Parnell, Magog, Quebec.
June 2018	Training on Synchrotron at Brookhaven National Labs.
May 2014	Seabird sampling and gavage workshop (DMV Mark Pokras, Tufts University)

July 2010 WACE Institute on Global and Experiential Education, Martha's Vineyard, MA.

TEACHING

Summary of Teaching Experience (see Appendix IV for complete, detailed list)

Faculty-led Study Abroad Course taught at Long Island University Post

Summer 2018 Biology 290, Special Topics: The Biology of Desert Bats (Sede Boqer, Israel, 1 section, 4 credits)

Classes Taught at Long Island University and Brigham Young University

Bio 200, Bio 535, InBio 380	<u>Comparative Animal Anatomy and Physiology</u> ; combined lecture and lab (4 credits, 6 contact hours): 13 sections over 16 years
Bio 106	<u>Research Methods II</u> ; class focused on training students in original research, combined lecture and lab (3 credits): 11 sections over last 10 years.
Bio 105	<u>Research Methods I</u> ; seminar focused on training students to read scientific papers (1 credit): 7 sections over 7 years.
Bio 110	<u>Evolution</u> ; combined lecture and lab (4 credits, 6 contact hours): 9 sections over last 10 years.
Bio 298, 500	<u>Physiological Ecology</u> (3 credits); combined undergraduate and graduate course: 1 section, 3 credits.
Bio 109, Zool 350	<u>Ecology</u> (3 credits): 2 sections in two different years.
Bio 290	<u>Emergent Diseases and Amphibian Ecology</u> (3 credits): 1 section.
Zool 101	<u>The Diversity of Biology</u> (3 credits): 4 sections. Introductory biology course for majors.
Biol 220	<u>Biodiversity</u> (3 credits); 5 sections. Second part of two-course introductory biology series for majors.
Bio 111	<u>Capstone Seminar</u> (1 credit): 4 sections.
Bio 103L, 104L	<u>General Biology I and II labs</u> ; for majors: 27 sections in last 12 years. Introductory biology series for majors.
Bio 7, 7L, Bio 8, 8L	<u>Human Anatomy and Physiology I and II</u> , lectures (3 credits) and labs (1 credit): 31 sections in last 7 years
Bio 85	<u>Scientific Literacy</u> (non-majors; 3 credits): 3 sections
Bio 298, 299, 385, 390 390, 700, 707, 708	<u>Independent research and thesis preparation</u> : Variable credits, multiple students, as needed. Meets individually, not as class.

LIU High School Scholar Program

The High School Scholar Program is a program in which professors from Long Island University Post work closely with High School teachers to create a class of college level rigor that high school students can take in their high school for college credit at LIU Post. As part of this, the college professor must visit the high school class three times during the semester to give guest lectures and other forms of instruction. From 2011 – 2019 I typically taught from 3-7 sections

per semester, with a high of 19 sections each in the Fall 2017 and Spring 2018 semesters. See Appendix II for details.

SERVICE

Selected Service at LIU Post (For complete list of service activities see Appendix V)

2008 – Present	Actively mentor undergraduate student research, usually 6-12 students per year. Currently, I am working with 4 undergraduates.
2012 – Present	Actively mentor high school student research, usually two students per year. Currently, I am working with two high school students.
2016 - 2018	LIU Post and Beyond Undergraduate Research Symposium Reviewer
2017	Member of Ad Hoc Search Committee for Assistant Professor of Biology
2015-2016	Member of Ad Hoc Search Committee for Assistant Professor of Biology
2014-2015	Advisor, Biology Club, LIU Post
Dec. 2013-Jan. 2014	Member of National Science Foundation committee evaluating Graduate Research Fellowship Proposals.
2010 - 2015	Member of Institutional Biosafety Committee, Feinstein Institute for Medical Research

Summary of Mentoring Student Researchers at Long Island University

- Total of 44 past and current, undergraduate students mentored
 - 50% Caucasian, 20% African American, 9% Latino, 7% Asian, 7% Indian, and 7% Middle Eastern; 80% are female and 20% male; 4 undergraduates currently being mentored
 - Currently mentoring 4 undergraduates and four former undergraduates who are continuing their research with the intent of publishing.
- 12 past, and 2 present high school students mentored: 8 Caucasians, 2 Hispanic, 2 Indian, and 2 Middle Eastern; 6 are female and 8 male. One was an Intel Finalist.
- Graduate students mentored: 1 current master's student, 3 past master's students, 1 past Ph.D. student.
- Currently on Ph.D. committee of Kevin Guilfoyle at the University of Central Florida and master's committee of Karolina Vera, Hofstra University.
- Have served in the past on master's committee of nine students at Long Island University and other universities.

Ad Hoc Reviewer for Such Journals as:

Scientific Reports – Nature
JEB
Ecology
Oecologia
Physiological and Biochemical Zoology

Invited Outside Reviewer

2020 Israel Science Foundation Grant
Proposal Review
2013 Advancement Committee, Dept.
of Integrative Biology,
University of Colorado, Denver

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Appendix I: Grants and Support

External Research Support

- 2021-2025 **\$1,202,860. NSF 20-513 Understanding the Rules of Life: Microbiome Theory and Mechanisms, *EF: Collaborative Research: MTM 2: Marine Invertebrate Microbiome Assembly, Diversification, and Coevolution.***
- 2006 One year, \$12,000 cost share agreement with US Forest Service to study ecology effect of man-made ponds on Columbia spotted frog ecology in the Toiyabe Mountains of Nevada.
- 2005 Conservation Action Network Grant, Memphis Zoo. F. T. van Manen (PI), K. A. Hatch., J. Ouellette, and M. Carr. Using stable isotopes to characterize the diet of black bears in the Great Smoky Mountains National Park. \$8,985
- 2004 – 2005 Grant from Utah Division of Wildlife Resources to study extent of chytrid fungus infection of Columbia spotted frogs in Utah, \$20,000
- 2002 – 2003 Two year, \$27,000 cost share agreement with US Forest Service to study ecology of Columbia spotted frogs in the Tioyabe Mountains of Nevada
- 1997 - 1998 Fulbright Postdoctoral Fellow, Ben-Gurion University of the Negev, Israel, (with Dr. Berry Pinshow).
- 1996 Lois Almon Small Grants Award for Translocation, reintroduction, and habitat use of ornate box turtles, \$900.
- 1996 Zoological Society of Milwaukee County for Translocation, reintroduction, and habitat use of ornate box turtles, for \$1200.

Internal Research and Travel Grants

- 2018 Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor: Stable isotope analysis of coastal Maine food web based on stable isotope analysis of nesting seabird feathers, breath, and blood. *Undergraduates supported: Indira Rojas, Lance Edwards Jr.*
LIU Support for Undergraduate Research, \$1296: Mice as models for detecting Anorexia Nervosa through stable isotope analysis and x-ray diffraction analysis of hairs. *Undergraduates supported: Mia Jensen, Aaron Mayo, Daniela Mathieu, Angela Sikes.*
- LIU Support for Faculty Research, \$1974: The Use of Exhaled CO₂ from Great Shearwaters (*Ardenna gravis*) to indicate diet and changes in food webs in Massachusetts Bay and Surrounding Areas.
- 2017 LIU Support for Undergraduate Research, \$1282. The viability of the mask-balloon collection method for stable isotope analysis of exhaled CO₂: *Undergraduate supported: Lance Edwards Jr.*
- Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor: The Use of Exhaled CO₂ from Great Shearwaters (*Ardenna gravis*) to indicate diet and changes in food

- webs in Massachusetts Bay and Surrounding Areas. *Undergraduate supported: Lance Edwards Jr.*
- 2016 Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor: Stable isotope analysis of drosophila gut bacteria. *Student supported: Lisa Greco.*
College of Liberal Arts and Sciences travel support \$1300: Meetings of the Society for Integrative and Comparative Biology, Portland OR. *Undergraduate supported: William Rosencrans.*
- 2015 Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor Stable isotope analysis of drosophila gut bacteria. *Student supported: Lisa Greco.*
- 2014 Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor. The Use of Exhaled CO₂ from Great Shearwaters (*Ardenna gravis*) to indicate diet and changes in food webs in Massachusetts Bay and Surrounding Areas. *Undergraduate supported: Peter Hong.*
College of Liberal Arts and Sciences travel support \$1300. Meetings of the Society for Integrative and Comparative Biology, Austin, TX. Graduate student supported: Peter Hong.
- 2013 Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor. Effect of toe clipping and stomach flushing on health and survival of leopard frogs. *Undergraduate supported: Nichole Ginnan.*
College of Liberal Arts and Sciences travel support \$2000. Meeting of the American Society of Ichthyologists and Herpetologists, Albuquerque, NM. *Undergraduate supported: Nichole Ginnan.*
- 2012 LIU Support for Undergraduate Research, \$2000: Effect of Trophic Shift on Stable Isotope Ratios of Carbon and Nitrogen in Crickets and Mealworms. *Undergraduate supported: Peter Hong.*
Biology Undergraduate Summer Intern, \$3000 for intern, \$500 for advisor: Effect of toe clipping on behavior and survival of leopard frogs and American toads. *Undergraduate supported: Nichole Ginnan.*
- 2010 College of Liberal Arts and Sciences travel support \$1700. Stress Induced by Toe-Clipping in Cane Toads (*Rhinella marina*). Meetings of the Society for Integrative and Comparative Biology, Portland, OR. *Undergraduates supported: Katie Fischer, Kevin Guilfoyle.*
- 2006 BYU Mentoring Environments Grant, \$17,000
- 2005 BYU Mentoring Environments Grant, \$15,000
 Sant Educational Endowment. K. A. Hatch, C. R. Nelson, R. Rader.
 Preliminary research of dispersal of amphibiotic insects between isolated rock pools in Southern Utah, \$10,000
- 2004 Sant Educational Endowment. Aspects of the wintertime ecology of spotted frogs (*Rana Luteiventris*) overwintering in streams, \$9792
 Red Center Grant for studying Ecology of Spotted Frogs, \$10,000
 BYU Mentoring Environments Grant, \$17,000.
- Fall 2002 Instructional Enhancement in Zoology 101, Faculty Center Course Development Grant, Brigham Young University, \$300

NSF Grants

2021-2025 \$1,202,860. NSF 20-513 Understanding the Rules of Life: Microbiome Theory and Mechanisms, *EF: Collaborative Research: MTM 2: Marine Invertebrate Microbiome Assembly, Diversification, and Coevolution.*

LIU Post Fieldtrips

March 2009 With Dr. Matt Draud: Spring break trip to Florida to obtain fish for ichthyology collection. Included one graduate student and 5 undergraduate students.

BYU Supported Undergraduate Fieldtrips

May 2005 With Dr. Beverly Roeder: two students to study stable isotope ratios of hair from polar, brown, black, spectacled, and sun bears at St. Louis Zoo, \$1,500.

May 2004 With Dr. Russ Rader and Dr. Riley Nelson: Two students to study stable isotope ratios of insects in rock pools near Moab, Utah, \$1,000

Dec. 2003 Two students to Sable Systems, Inc., Las Vegas, NV to learn aquatic respirometry, \$500

July 2003 Four students on five-day field trip to Toiyabe Mountains, NV to learn ecology and mark-recapture of frogs, \$400

June-July 2003 Five students on three-day field trip up Rio Negro and 3 day field trip to Amazon forest wildlife reserve, Brazil, \$2000

April 2003 Two students to National Wildlife Health Center, Madison, WI, (seven days) to learn histological identification of chytrid fungus infection of frogs, \$2300.

Sept. 2002 Five students to St. George to study lizard ecology and collect lizards for laboratory experiments, \$400

July, 2002 Five students on five-day field trip to Toiyabe Mountains, NV to learn ecology and mark-recapture of frogs, \$400

Graduate Research Assistantships

Sept. - Dec. 1996 Research Assistant to Dr. Warren P. Porter, Department of Zoology, University of Wisconsin – Madison

Jan. - May 1996 Research Assistant to Dr. Dr. Mark E. Cook, Department of Animal Science, University of Wisconsin – Madison

Sept.-Dec., 1995 Research Assistant to Dr. William H. Karasov, Department of Wildlife Ecology, University of Wisconsin - Madison

Sept. 1993 - May, 1994 Research Assistant to Dr. Warren P. Porter, Department of Zoology, University of Wisconsin – Madison

Sept. - Dec. 1990 Undergraduate Research Assistant to Dr. Duane E. Jeffery, Dept. of Zoology, Brigham Young University

Other Professional Research Experience

March 1995 - Dec. 1996 Research consultant - Ornate Box Turtle Relocation Project, Bureau of Endangered Species, Wisconsin Department of Natural Resources

Jan.-July, 1991	Biological Observer of Alaskan Groundfish Fishery, Alaskan Observers Inc., 130 Nickerson, Suite 206, Seattle WA, 98109 (phone: 907/283-7310).
May-June, 1990	Pesticide study crew leader, Environmental Laboratories Inc., 355 No. University Ave., Suite 275, Provo, UT 84604 (phone: 801/373-4108).
May-Aug., 1989	Mercury Project Assistant, Wisconsin Dept. of Natural Resources, University of Wisconsin - Trout Lake Station.
May-Aug., 1988	Summer Intern, Dupont Critical Care, McGaw park, IL.

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Appendix II: Publications and Presentations

(Mentored undergraduate co-authors in bold, mentored graduate students italicized, my name underlined)

Publications in Peer Reviewed Journals

1. **Sikes, A. M.**, C. J. Katz, K. A. Hatch. 2021. Exposure of American black bears to various pathogens in Wisconsin. *Ursus*. In press.
2. Chang, Y.-M., K. A. Hatch, M.-Y. Ho, S.H. Roxburgh, Y.-T. Wu, Y.-K. Wang, S.-R. Wang, Z.-X. You. 2020. Roosting site usage, gregarious roosting and behavioral interactions during roost-assembly of two lycaenidae butterflies. *Zoological Studies*. 59:10
3. *Hong, P.*, D. N. Wiley, K. D. Powers, R. H. Michener, L. Kaufman, K. A. Hatch. 2019. Stable isotope analyses of multiple tissues of great shearwaters (*Ardenna gravis*) reveals long-term dietary stability, short-term changes in diet, and can be used as a tool to monitor food webs. *Diversity*. 11(9): 163; <https://doi.org/10.3390/d11090163>.
4. Hatch, K. A., **K. A. Kester**, J. Auger, B. L. Roeder, K. Bunnell, H. L. Black. 2019. The effect of sex, age, and location on carnivory in Utah black bears (*Ursus americanus*). *Oecologia*. 189: 931-937.
5. **Hirt, J.S.**, K. A. Hatch. The effects of temperature on the turnover of $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ in juvenile corn snakes (*Elaphe guttata*): A novel study with ecological implications. 2019. *Diversity*. 11(2),19; <https://doi.org/10.3390/d11020019>.
6. Hsu, Wan-Tso, Chi-Shiun Wu, Kent A. Hatch, Yuan-Mou Chang, Yeong-Choy Kam. 2018. A full compensation of growth in salt-tolerant tadpoles after release from salinity stress. *Journal of Zoology*. 304:141-149
7. **Araos, H. L.**, **R. M. Bogardus**, Y. -M. Chang, *K. R. Donohue*, **K. L. Kroft**, Daniel Hanley, Krissy W. Wilson, K. A. Hatch. 2017. The Columbia spotted frog (*Rana luteiventris*) – another species persisting with amphibian Chytrid infection. *Herpetological Review*. 48:782-786.
8. Welch, K. C. Jr., F. Péronnet, K. A. Hatch, C. C. Voigt, and M. D. McCue. 2016. Carbon stable isotope tracking in breath for comparative studies of fuel use. *Annals of the New York Academy of Sciences*. 1365:15-32.
9. *Hamilton, B. T.*, B. L. Roeder, K. A. Hatch, D. L. Eggett, D. Tingey. 2015. Why is small mammal diversity higher in riparian areas than in uplands? *Journal of Arid Environments*. 119: 41-50.
10. **Ginnan N. A.**, **J. R. Lawrence**, **M. E. T. Russell**, D. L. Eggett, and K. A. Hatch. 2014. Toe clipping does not affect the survival of Leopard Frogs (*Rana pipiens*). *Copeia*. 2014(4):650-653.
11. Chang, Yuan-Mou, Wen-Hen Tseng, Ching-Chi Chen, Chia-Hsiu Huang, Ying-Fang Chen and Kent A. Hatch. 2014. Winter breeding and high tadpole densities may benefit the growth and development of tadpoles in a subtropical lowland treefrog. *Journal of Zoology*. 94: 154-160.

12. **Fisher, K., K. Guilfoyle, and K.A. Hatch.** 2013. Stress induced by toe-clipping in cane toads (*Rhinella marinus*). *Copeia*. 2013 (3):539-542.
13. **Chang, Y.M., K.A. Hatch, R. M. Bogardus, D. Eggett.** 2013. The influence of avian aerial predator location on perceived predation risk and foraging location in five passerine species. *Journal of Science and Innovation* 3:97-112.
14. **Chang, Y.-M. H.-Y. Lin, K. A. Hatch, P.-C. Hou, C.-T. Yao, H.-J. Shiu.** 2013. Brush-tipped tongue structure of the Taiwan Yuhina (*Yuhina brunneiceps*) and White-eared Sibia (*Heterophasia auricularis*). *The Wilson Journal of Ornithology*. 125: 204-208.
15. **Hsieh, T-Y., K. A. Hatch, Y.-M. Chang.** 2012. *Phlegmariurus changii* (Huperziaceae), a new hanging firmoss from Taiwan. *American Fern Journal*. 102: 283-288.
16. **Chan, Wei-Ping, Hsiao-Wei Yuan, Cho-Ying Huang, Chung-Ho Wang, Chou-De Lin, Yi-Chen Lo, Bo-Wen Huang, Kent A. Hatch, Hau-Jie Shiu, Cheng-Feng You, Yuan-Mou Chang, Sheng-Feng Shen.** 2012. Regional scale high resolution $\delta^{18}\text{O}$ prediction in precipitation using MODIS EVI. *PLoS ONE* 7(9): e45496.
17. **Hatch, K. A., B. L. Roeder, R.S. Buckman, B.H. Gale, S.T. Bunnell, D. L. Eggett, and J. Auger.** 2011. The correlation between gross fecal analysis of archived black bear scats and isotopic signatures. *Ursus*. 22: 133-140.
18. **MacDade, L. S., P. G. Rodewald, and K. A. Hatch.** 2011. Contribution of emergent aquatic insects to refueling in spring migrant songbirds. *Auk*. 128: 127-137.
19. **Chang, Y-M., K. A. Hatch, H-L. Wei, H-W. Yuan, C-F. You, D. Eggett, Y-H. Tu, Y-L. Lin, and H-J. Shiu.** 2011. Stable nitrogen and carbon isotopes may not be good indicators of altitudinal distributions in montane passerines. *Wilson Journal of Field Ornithology*. 123: 33-47.
20. **Lin, H. Y., H. J. Shiu, C. T. Yao, K. A. Hatch and Y. M. Chang.** 2009. Morphological characteristics of Tawny Owl (*Strix aluco*) in Taiwan. *Raptor Research of Taiwan*, 8: 35-39.
21. **Chang, Y-M., P-W Chang, B.V. Chu, K. A. Hatch H-J Shiu.** 2008. Besra Sparrowhawk (*Accipiter virgatus fuscipectus*) predation on prey larger than itself. *Journal of Raptor Research*. 42:226.
22. **Chang, Y.-M., K. A. Hatch, T. S. Ding, D. L. Eggett, H. W. Yuan, and B. L. Roeder.** 2008. Using stable isotopes to unravel and predict the origins of great cormorants (*Phalacrocorax carbo sinensis*) overwintering at Kinmen. *Rapid Communications in Mass Spectrometry* 22: 1235-1244.
23. **Castillo, L. P. and K. A. Hatch.** 2007. The effect of fasting and feeding on $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in tail, feces, and uric acid in lizards. *Rapid Communications in Mass Spectrometry*. 21:4125-4128.
24. **Goates, M. C., K. A. Hatch.** 2007. The need to ground truth 30.5 m buffers: A case study of the boreal toad (*Bufo boreas*). *Biological Conservation*. 138: 474 - 483.
25. **Hatch, K. A., M. A. Crawford, A. W. Kunz, S. R. Thomsen, D. L. Eggett, S. T. Nelson, B. L. Roeder.** 2006. An objective means of diagnosing anorexia nervosa and bulimia nervosa using $^{15}\text{N}/^{14}\text{N}$ and $^{13}\text{C}/^{12}\text{C}$ ratios in hair. *Rapid Communications in Mass Spectrometry*. 20: 3367-3373.
26. **Podlesak, D.W., S.R. McWilliams and K.A. Hatch.** 2005. Stable isotopes in breath, blood, feces and feathers can indicate intra-individual changes in the diet of migratory songbirds. *Oecologia*, 142, 501-510.

27. Hatch, K.A., B. Pinshow, J.R. Speakman. 2002. The analysis of $^{13}\text{C}/^{12}\text{C}$ ratios in exhaled CO_2 , its advantages and potential application to field research to infer diet, changes in diet over time, and substrate metabolism in birds. *Integrative and Comparative Biology*. 42:21-33.
28. Hatch, K.A., B. Pinshow, J.R. Speakman. 2002. Carbon isotope ratios in exhaled CO_2 can be used to determine not just present, but also past diets in birds. *Journal of Comparative Physiology B* 172:263-268.
29. Gannes, L.Z., K.A. Hatch, and B. Pinshow. 2001. How does time since feeding affect the fuels pigeons use during flight? *Physiological and Biochemical Zoology* 74:1-10.
30. Hatch, K.A. and D. Afik. 1999. Retention time in lizards - a comparison of methods and species. *Comparative Biochemistry and Physiology A* 124: 89-92.
31. Hatch K.A., **K.A. Sacksteder**, I.W. Treichel, M.E. Cook, and W.P. Porter. 1995. Catabolism causes change in $^{13}\text{C}/^{12}\text{C}$ ratios of chicken red blood cell protein lysate. *Biochemical and Biophysical Research Communications*. 212: 719-726.
32. Hatch, K.A. and J.D. Stein. 1994. *Cnemidophorus sexlineatus* (six-lined racerunner) oophagy. *Herpetological Review*. 25: 65.
33. Hatch, K. and D.E. Jeffery. 1992. Salivary gland chromosome map of *Zaprionus inermis*. *Journal of Heredity*. 83: 311-315.

Invited Papers

34. Wolf, B. O. and K. A. Hatch. 2011. Aloe nectar, birds and stable isotopes - opportunities for quantifying trophic interactions. *Ibis*. 153: 1-3.
35. Hatch, K. A., D. L. Spangler, **E. M. Backus, J. T. Balagna, K.S. Burns, B. S. Guzman, M. J. Hubbard, S. L. Lindblad, B. L. Roeder, N. E. Ryther, M. A. Seawright, J. N. Tyau**, D. Williams. 2007. Toward an objective test for diagnosing and monitoring treatment of eating disorders. *Expert Review of Molecular Diagnostics*. 7: 845-857.

Invited Book Chapters

36. Hatch, K. A. 2012. The use and application of stable isotope analysis to the study of starvation, fasting, and nutritional stress in animals, p. 337-364. *In: The comparative physiology of fasting and starvation*. M. D. McCue (ed.). Springer-Verlag, Berlin Heidelberg.

Other Non-Peer-reviewed Publications

37. *Bogardus, R. M.*, K. A. Hatch, *L. R. Jones*. 2007. Great horned owl diurnal response to a passerine distress vocalization. *Western Birds*. 38: 224-226.

Papers Accepted for Publication by Peer-Reviewed Journals but Currently in Revision

1. **Kroft, K. L.** and K.A. Hatch. 2021. Winterkill in lotic systems may be an important driver of amphibian population declines. *Ichthyology and Herpetology*. In Revision.

Papers Submitted to Peer-Reviewed Journals and in Review

1. *Guilfoyle, K. J.*, **A. M. McIntosh**, K.A. Hatch. Seasonal differences in hair growth rates of captive aye-aye, red ruffed, and black-and-white ruffed lemurs. 2021. *Zoo Biology*. In review.

Research Presented by Undergraduates (Undergraduate in bold)

- Rosencrans, W.**, T. Brummel, and K.A. Hatch. The effect of TOR signaling on nitrogen stable isotope fractionation. Society for Integrative and Comparative Biology. 2016. Portland, Oregon. Oral presentation.
- Ginnan, N.** and K.A. Hatch. 2013. The effects of toe-clipping on leopard frogs (*Rana pipiens*) and American toads (*Bufo americanus*). William Patterson University Undergraduate Research Symposium Albuquerque, NM, poster presentation. Wayne, NJ. Poster presentation.
- Hong, P.** and K.A. Hatch. 2013. Analysis of carbon and nitrogen stable isotope ratios between trophic levels in mealworms and crickets. William Patterson University Undergraduate Research Symposium Albuquerque, NM, poster presentation. Wayne, NJ. Poster presentation.
- Guilfoyle, K., K. Fisher,** and K.A. Hatch. 2010. Does toe-clipping cause marine toads (*Bufo marinus*) excessive stress? American Society of Ichthyologists and Herpetologists, Providence, Rhode Island, poster presentation.
- Russell, M.E.T.** and K.A. Hatch. 2007. The effects of toe-clipping and stomach flushing on leopard frogs (*Rana pipiens*) and Columbia spotted frogs (*Rana luteiventris*). Society for Integrative and Comparative Biology, Phoenix, Arizona, poster presentation.
- Wu, A.** and K.A. Hatch. 2007. A comparison of methods for collecting exhaled breath from birds for stable isotope analysis. Society for Integrative and Comparative Biology, Phoenix, Arizona, poster presentation.
- Castillo, L.** and K. Hatch. 2005. Fasting increases $^{15}\text{N}/^{14}\text{N}$ ratios in uric acid of *Anolis carolinensis* and *Uta stansburiana*. Ecological Society of America, Montreal Canada.
- Semon, H.** and K. Hatch. 2005 Testing metapopulation theory through insect dispersal among rock pools – a stable isotope study. Ecological Society of America, Montreal Canada.
- Peterson, E., D. K. Shiozawa,** and K. Hatch. 2005. Ecological Role of the New Zealand Mudsnaill in the Provo River. 53rd. Annual Meeting of the North American Benthological Society. New Orleans, Louisiana. May 22-27, 2005.
- Gonzalez, Y.M.** and K.A. Hatch. The effect of current velocity on the critical oxygen tension of *Rana pipiens*. Society for Integrative and Comparative Biology, 2004, New Orleans, Louisiana, poster presentation.
- Makin, J.L.** and K.A. Hatch. 2004. ^{15}N enrichment of lizard uric acid and feces; can ^{15}N be used as a measure of body condition in the wild? Society for Integrative and Comparative Biology, New Orleans, Louisiana, poster presentation.
- Peterson, M.R.** and K.A. Hatch. 2004. Validation of the two-endpoint mixing model to determine diet composition from $^{13}\text{C}/^{12}\text{C}$ of breath. Society for Integrative and Comparative Biology, New Orleans, Louisiana, poster presentation.
- Pfost, A., K. A. Hatch** and M.C. Belk. 2003. The effect of overwintering and toe clipping on *B. dendrobatidis* infected amphibians. International Ichthyologist and Herpetologist meetings, Manaus, Brazil, poster presentation.
- Hanks, J.** and K. Hatch. 2003. Genetic variation versus phenotypic plasticity in growth rates of side-blotch lizards. International Ichthyologist and Herpetologist meetings, Manaus, Brazil, poster presentation.

- Piper, S.I.** and K.A. Hatch. Assessment of age distribution of the frog *Rana luteiventris* in central Nevada using skeletal chronology. International Ichthyologist and Herpetologist meetings, 2003, Manaus, Brazil, poster presentation.
- Lloyd, S.** and K.A. Hatch. 2003. Dispersion corridors of Columbia spotted frog populations in the Toiyabe Mountains of Southern Nevada. International Ichthyologist and Herpetologist meetings, Manaus, Brazil, poster presentation.
- Walkenhorst, H.R.** and K.A. Hatch. 2003. The effect of current velocity on the critical oxygen tension of *Rana pipiens*. International Ichthyologist and Herpetologist meetings, Manaus, Brazil, poster presentation.
- Hanks, J.H.** and K.A. Hatch. 2003. Genetic variation vs. phenotypic plasticity in growing rates of side-blotch lizards. Ecological Society of America, Savannah, Georgia, poster presentation.

Research Presented by Graduate Students (Graduate Student in italics)

- Hong, P.* and K. A. Hatch. Analysis of carbon and nitrogen stable isotope ratios between trophic levels in mealworms. Society for Integrative and Comparative Biology. 2014. Austin, Texas. Poster presentation.
- Bogardus, M.* and K.A. Hatch. The effect of temperature and growth rate on nitrogen and carbon isotope fractionation in the feces, uric acid, breath and tissues of lizards. Society for Integrative and Comparative Biology, 2007, Phoenix, Arizona, Poster presentation.
- Goates, M.* and K. Hatch. Boreal toad (*Bufo boreas boreas*) movement patterns and habitat use in south-central Utah. Ecological Society of America, 2005, Montreal Canada. Oral presentation.
- Hadley, M. J., D. K. Shiozawa, and K. A. Hatch.* 2005. Using Stable Isotope Analysis to Assess Foraging Patterns of Brown Trout. 135th Annual meeting of the American Fisheries Society. Anchorage, Alaska. September 11-15, 2005.

Research Presented by KAH (Underlined)

- Hatch, K.A., B. Pinshow, J.R. Speakman, *J. Europe*, I. Vatnick, B.C. Weaver. Optimal flight theory and the effect of flight duration on mass-specific metabolic rates in free-flying pigeons. International Ornithological Congress, 2010, Campos do Jordao, Brazil, poster presentation
- Castillo, L.** and K. Hatch. Fasting increases $^{15}\text{N}/^{14}\text{N}$ ratios in uric acid of *Anolis carolinensis* and *Uta stansburiana*. Society for Integrative and Comparative Biology, 2007, Phoenix, Arizona, poster presentation.
- Hatch, K. and **J. Tschudy**. ^{15}N enrichment of lizard uric acid and feces: implications for physiological ecology. Ecological Society of America, 2005, Montreal Canada, poster presentation
- Hatch, K.A. and C.R. Tracy. Hibernation behavior of *Rana luteiventris* in a riparian habitat. Society of Integrative and Comparative Biology, 2003, Toronto, Ontario, oral presentation.
- Hatch, K.A. and **J.L. Makin**. ^{15}N enrichment of lizard uric acid and the use of stable isotopes to study the physiology and ecology of reptiles. International Ichthyologist and Herpetologist meetings, 2003, Manaus, Brazil, oral presentation.

- Hatch, K.A. and **J.L. Makin**. ^{15}N enrichment of lizard uric acid: can ^{15}N be used as a measure of body condition in the wild? Ecological Society of America, 2003, Savannah, Georgia, oral presentation.
- Hatch, K.A. and C.R. Tracy. Hibernation behavior of *Rana luteiventris* in a riparian habitat. Ecological Society of America, 2001, Madison, Wisconsin, oral presentation.
- Hatch, K.A., B. Pinshow, and J.R. Speakman. Carbon isotope ratios in exhaled carbon dioxide as an indicator of past diets, present diets and metabolic substrate in birds. Society for Integrative and Comparative Biology (Formerly the American Society of Zoologists), 2000, Atlanta, Georgia, poster presentation.
- Hatch, K.A., B. Pinshow, and J.R. Speakman. $^{13}\text{C}/^{12}\text{C}$ ratios in breath CO_2 as an indicator of past diets, present diets and metabolic substrate in birds. Ecological Society of America, 1999, Spokane, Washington, oral presentation.
- Hatch, K.A., B. Pinshow, and J.R. Speakman. The use of stable isotopes in assessing substrate metabolism of flying birds. 22nd International Ornithological Congress, 1998, Durban, South Africa, oral presentation.
- Hatch, K.A. and W. P. Porter. Common garden comparison of physiological and behavioral elements of growth in two populations of *Cnemidophorus Sexlineatus*. Third World Congress of Herpetology, 1997, Prague, Czech Republic, oral presentation.
- Hatch, K.A., I.W. Treichel, M.E. Cook and W. P. Porter. The impact of metabolic and nutritional state on the use of tissue carbon isotope ratios to determine diet. Ecological Society of America, 1996, Providence RI, poster.
- Hatch, K.A., I. Treichel, M.E. Cook and W. P. Porter. Early detection of catabolic state via change in $^{13}\text{C}/^{12}\text{C}$ ratios of blood proteins. American Society of Zoologists, 1995, St. Louis, MO, oral presentation.

Invited Presentations at Professional Meetings

- 3rd International Congress of Respiratory Science, Bonn, Germany, July 6-10, 2014.
Symposium: The combined use of respirometry and stable isotope tracking in comparative studies of fuel use and energetics. Oral Presentation: Combining respirometry and stable isotope tracking in comparative studies of fuel use and energetics.
- U.S. Forest Service, Intermountain Region, Ogden Utah: 2007 Interagency Aquatic Invasive Species Workshop, invited speaker: Chytrid fungus and Amphibians in the Intermountain West.
- Society for Integrative and Comparative Biology, 2001, Chicago, Illinois, invited symposium speaker: Stable isotopes in exhaled CO_2 and the assessment of substrate metabolism in flying birds.
- Society for Integrative and Comparative Biology: Biology 2000, 2000, Cambridge England, invited symposium speaker: The use of $^{13}\text{C}/^{12}\text{C}$ ratios in exhaled CO_2 to assess energetic substrate use in fasting and flying birds.

Invited Seminars

- Brigham Young University, Hawaii, March 2017. Undergraduate-oriented research and its value: from clipping amphibian toes to stable isotope analysis of great shearwater tissues and breath.
- Marion University, Fond du Lac WI, July 2014. Anorexics, bears and strange bedfellows. The use of stable isotopes to understand diet and fasting.
- Truman State University, May 2014. Undergraduate research. From the wintertime ecology of Columbia spotted frogs to molecular mechanisms responsible for stable isotope discrimination in fasting animals.
- Hofstra University, Hempstead, NY. April 2014. Combining respirometry and stable isotope tracking in comparative studies of fuel use and energetics.
- Adelphi University, Garden City, NY. April 2012. Stable isotope research.
- Utah Valley State College, Dept. of Biology. Provo, UT. April 2007. Stable isotope research.
- Tiawan National University, Dept. of Forestry, Taipai, Taiwan, June 2005. Stable isotope research.

Meetings, Workshops organized

- Great Basin Biological Research Conference, Provo, Utah, 2001, member of organizational committee.
- Great Basin Biological Research Conference, Provo, Utah, 2001, Workshop on Chytrid Fungus in the Great Basin.
- Regional Spotted Frog Workshop, Reno, Nevada, 2000.

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Appendix III: Professional Development

Professional Development Activities at LIU Post

Sept. – Nov 2021	Foundational Open Science Skills Training through CYVERSE
Jan. 11, 2021	Finding Grants Using SPIN: LIU Zoom Online Seminar
Feb. 21, 2020	Workshop: Getting on the ARC: Positioning for Successful Academic and Research Careers by David Stone, Chief Research Officer, Oakland University, and Director of <i>PI Academy for Research Engagement</i>
Sept. 2018 – Present	Learning methods of DNA extraction and Sequencing (PCR, gel electrophoresis, Qubit, Sanger Method, Illumina next generation sequencing) under Dr. Robert Thacker, Chair of Ecology and Evolution, Stony Brook University.
May 28-31, 2018	Stable Isotope Mixing Model Workshop, PR-Statistics, by Drs. Andrew Jackson and Andrew Parnell, Magog, Quebec
June 6-7, 2018	Training on Synchrotron at Brookhaven National Labs
June 2014	NSF Day Grant writing workshop, Cold Spring Harbor
May 2014	Seabird sampling and gavage workshop (DMV Mark Pokras, Tufts University)
Fall 2011	Russian 1, Basic Russian
June 2012	Council on Undergraduate Research National Conference, Weber State University, Ogden, Utah.
June 28–July 2, 2010	WACE (World Association for Cooperative Education) Institute on Global and Experiential Education, Martha's Vineyard, MA
Oct., 2009	Writing Across the Curriculum Workshop, LIU Post Campus, Long Island University

Professional Development Activities at Brigham Young University

Aug. 2004	Teaching Portfolio Seminar, Brigham Young University, by Peter Seldin
Jan. 2004	Session on Biology Education and Teaching, Jan. 9, 2004, Society for Integrative and Comparative Biology Meetings, New Orleans, LA
Jan. 2004	NSF Open Session, Discussion of Future Directions in the Directory for Biological Sciences, Jan. 8, 2004, Society for Integrative and Comparative Biology Meetings, New Orleans, LA
Jan. 2004	NSF with Bill Zamer, Division of Integrative Biology & Neuroscience, Director, Society for Integrative and Comparative Biology Meetings, New Orleans, LA
Dec. 2003	College of Biology and Agriculture Critical Thinking Workshop, Dec. 11-12, 2003, Brigham Young University
Jan. 2003	Publish, Don't Perish faculty writing workshop, Brigham Young University

Jan. 2002	Publish, Don't Perish faculty writing workshop, Brigham Young University
Winter 2002	Participation in writing circles during winter semester of 2002
March 2002	Mentoring Workshop, Brigham Young University
Spring 2002	Faculty Development Series, Brigham Young University
May 2002	Workshop on designing courses, by Dee Fink, sponsored by Brigham Young University Faculty Center.
Fall 2001	Faculty Development Series, Brigham Young University

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Appendix IV: Teaching Experience

Faculty-led Study Abroad Courses taught at Long Island University Post

Summer 2018 Biology 290, Special Topics: The Biology of Desert Bats (Sede Boqer, Israel, 1 section)

Classes Taught at Long Island University Post

Spring 2021 Sabbatical – no courses taught
Fall 2020 Biology 7L, Human Anatomy and Physiology Lab (5 sections)
Summer 2020 Biology 7, Human Anatomy and Physiology Lecture (1 section)
Biology 7L, Human Anatomy and Physiology Lab (1 section)
Spring 2020 Biology 8L, Human Anatomy and Physiology Lab (1 section)
Biology 106, Research Methods II (majors, 2 sections)
Biology 104L, General Biology II Lab (2 sections)
Biology 299, Undergraduate Research
Fall 2019 Biology 200, Comparative Animal Physiology, lecture and lab (1 section)
Biology 535, Advanced Topics in Biology (Topic: Comparative Animal Physiology), lecture and lab (1 section, cross listed with Bio 200)
Biology 103L, General Biology I Lab (majors, 2 sections)
Biology 389, Honor's Thesis
Biology 298, Undergraduate Research
Biology 7L, Human Anatomy and Physiology Lab (2 sections)
Spring 2019 Biology 104L, General Biology II Lab (majors, 3 sections)
Biology 106 Research Methods II (2 sections)
Fall 2018 Biology 103L, General Biology I Lab (majors, 4 sections)
Biology 7L, Human Anatomy and Physiology Lab (1 section)
Summer 2018 Biology 290, Special Topics: The Biology of Desert Bats (Sede Boqer, Israel, 1 section)
Spring 2018 Biology 110 Evolution (Lecture and Lab)
Biology 106 Research Methods II (1 section)
Biology 8, 8L Human Anatomy and Physiology Lab (Lecture and lab)
Fall 2017 Biology 7L Human Anatomy and Physiology Lab (4 sections)
Biology 103L, General Biology I Lab (majors, 2 sections)
Summer 2017 Biology 7, 7L, Human Anatomy and Physiology (lecture and lab)
Biology 103, 103L, General Biology I Lab (lecture and lab)
Spring 2017 Biology 8, 8L, Human Anatomy and Physiology (lecture and 3 labs)
Biology 106, Research Methods II (1 section)
Biology 110, Evolution (Lecture and Lab)
Fall 2016 Biology 7L, Human Anatomy and Physiology Lab (3 sections)
Biology 103L General Biology I Lab (majors, 2 sections)
Spring 2016 Bio 106, Research Methods II (1 section)

	Bio 110, Evolution
	Bio 200, Comparative Animal Physiology
Fall 2015	Biology 7L, Human Anatomy and Physiology Lab
	Bio 85, Scientific Literacy
	Bio 105, Research Methods I
	Bio 109, Ecology
	Bio 111, Senior Capstone Seminar
Spring 2015	Biology 8, 8L Human Anatomy and Physiology (lecture and lab)
	Biology 106, Research Methods II (1 section)
	Biology 110, Evolution (Lecture and Lab)
Fall 2014	Biology 7, Human Anatomy and Physiology (lecture and two labs)
	Bio 85, Scientific Literacy
	Bio 111, Senior Capstone Seminar
Spring 2014	Biology 8, Human Anatomy and Physiology (lecture)
	Biology 106, Research Methods II (1 section)
	Biology 110, Evolution (Lecture and Lab)
Fall 2013	Biology 7, Human Anatomy and Physiology (lecture)
	Biology 200, Comparative Physiology
	Bio 85, Scientific Literacy
	Bio 105, Research Methods I
	Bio 111, Senior Capstone Seminar
	Bio 290, Special Topics: Emergent disease and Amphibian Ecology
	Bio 500, Biology Graduate Seminar
Spring 2013	Biology 8L, Human Anatomy and Physiology Lab (3 sections)
	Biology 105, Research Methods I
	Biology 110, Evolution (lecture and lab)
Fall 2012	Biology 103L, General Biology I Lab (majors, 3 sections)
	Biology 105, Research Methods I
	Biology 500, Biology Graduate Seminar
	Biology 389, Honors Thesis
Spring 2012	Biology 105, Research Methods I
	Biology 106, Research Methods II
	Biology 110, Evolution (lecture and lab)
	Biology 298, Undergraduate Research
	Biology 386, Honors Tutorial
Fall 2011	Biology 103L, General Biology I Lab (majors, 4 sections)
Spring 2011	Biology 105, Research Methods I
	Biology 200, Comparative Physiology
	Biology 500, Biology Graduate Seminar
	Biology 651, Comparative Animal Physiology
	Biology 708, Preparation of Thesis
Fall 2010	Biology 103L, General Biology 1 Lab (majors, 3 sections)
	Biology 707, Thesis Research
	Biology 708, Preparation of Thesis
Spring 2010	Biology 105, Research Methods I (seminar)
	Biology 106, Research Methods II (lecture and lab)

	Biology 110, Evolution (lecture and lab)
	Biology 111, Capstone Seminar
	Biology 290, Physiological Ecology
	Biology 298, Undergraduate Research
	Biology 500, Biology Graduate Seminar
	Biology 700, Special problems in Biology (Independent Study)
Fall 2009	Biology 1L, General Biology 1 Lab (nonmajors)
	Biology 103L, General Biology 1 Lab (majors)
	Biology 200, Comparative Physiology
Spring 2009	Biology 104L, General Biology II Lab (majors)
	Biology 110L, Evolution Lab
	Biology 298, Undergraduate Research
	Biology 299, Undergraduate Research
	Biology 390, Honors Thesis
	Biology 651, Comparative Physiology
Fall 2008	Biology 103L, General Biology 1 Lab (majors, 2 sections)
	Biology 200, Comparative Physiology
	Biology 385, Honors Tutorial

LIU High School Scholar Program is a program in which professors from Long Island University Post work closely with High School teachers to create a class of college level rigor that high school students can take in their high school for college credit at LIU Post. As part of this, the college professor must visit the high school class three times during the semester to give guest lectures and other forms of instruction.

LIU High School Scholar classes taught at Long Island University Post and St. Anthony's High School

Spring 2018	Biology 8 Human Anatomy and Physiology (3 sections)
	Biology 250 Microbiology
Fall 2017	Biology 7 Human Anatomy and Physiology (3 sections)
	Biology 250 Microbiology
Spring 2017	Biology 7 Human Anatomy and Physiology (3 sections)
	Biology 250 Microbiology
Fall 2016	Biology 7 Human Anatomy and Physiology (3 sections)
Spring 2016	Biology 8 Human Anatomy and Physiology (2 sections)
	Biology 250 Microbiology
Fall 2015	Biology 7 Human Anatomy and Physiology (2 sections)
	Biology 250 Microbiology
Spring 2015	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2014	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2014	Biology 8 Human Anatomy and Physiology (3 sections)
	Biology 250 Microbiology
Fall 2013	Biology 7 Human Anatomy and Physiology (3 sections)
	Biology 250 Microbiology
Spring 2013	Biology 8 Human Anatomy and Physiology
	Biology 250 Microbiology

Fall 2012	Biology 7 Human Anatomy and Physiology Biology 250 Microbiology
Spring 2012	Biology 8 Human Anatomy and Physiology Biology 250 Microbiology
Fall 2011	Biology 7 Human Anatomy and Physiology Biology 250 Microbiology

LIU High School Scholar classes taught at Long Island University Post and Massapequa High School

Spring 2019	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2018	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2018	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2017	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2017	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2016	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2016	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2015	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2015	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2014	Biology 8 Human Anatomy and Physiology (2 sections)
Spring 2014	Biology 8 Human Anatomy and Physiology
Fall 2013	Biology 8 Human Anatomy and Physiology

LIU High School Scholar classes taught at Long Island University Post and Connetquot High School

Spring 2019	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2018	Biology 7 Human Anatomy and Physiology (2 sections)
Spring 2018	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2017	Biology 7 Human Anatomy and Physiology (2 sections)
Fall 2016-Spring 2017	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2015-Spring 2016	Biology 7 Human Anatomy and Physiology (3 sections)
Spring 2015	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2014	Biology 8 Human Anatomy and Physiology (2 sections)
Spring 2014	Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2013	Biology 8 Human Anatomy and Physiology (2 sections)

LIU High School Scholar classes taught at Long Island University Post and Northport High School

Fall 2019	Biology 7 Human Anatomy and Physiology (2sections)
Spring 2019	Biology 8 Human Anatomy and Physiology (3 sections)
Fall 2018	Biology 7 Human Anatomy and Physiology (3 sections)
Spring 2018	Biology 8 Human Anatomy and Physiology (3 sections)
Fall 2017	Biology 7 Human Anatomy and Physiology (3sections)
Spring 2017	Biology 8 Human Anatomy and Physiology (1 section)
Fall 2016	Biology 7 Human Anatomy and Physiology (1 section)

LIU High School Scholar classes taught at Long Island University Post and Commack High School

Spring 2018 Biology 8 Human Anatomy and Physiology (1 section)
Fall 2017 Biology 7 Human Anatomy and Physiology (1 section)

LIU High School Scholar classes taught at Long Island University Post and G. W. Hewlett High School

Spring 2018 Biology 8 Human Anatomy and Physiology (3 sections)
Fall 2017 Biology 7 Human Anatomy and Physiology (3 sections)

LIU High School Scholar classes taught at Long Island University Post and Kings Park High School

Spring 2018 Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2017 Biology 7 Human Anatomy and Physiology (2 sections)

LIU High School Scholar classes taught at Long Island University Post and Plainview Old Bethpage JFK High School

Spring 2018 Biology 8 Human Anatomy and Physiology (2 sections)
Fall 2017 Biology 7 Human Anatomy and Physiology (2 sections)

LIU High School Scholar classes taught at Long Island University Post and Floral Park Spring 2018

2018 Biology 8 Human Anatomy and Physiology
Fall 2017 Biology 7 Human Anatomy and Physiology

Classes Taught at Brigham Young University

Spring 2008 Biology 220, Biodiversity, section 1
Winter 2008 Biology 220, Biodiversity, section 1
Fall 2007 InBio 380, Comparative Anatomy and Physiology, lecture & lab
Spring 2007 Biology 220, Biodiversity, section 1
Winter 2007 Biology 220, Biodiversity, section 1
Fall 2006 InBio 380, Comparative Anatomy and Physiology, lecture & lab
Winter 2006 Biology 220, Biodiversity, section 1
Fall 2005 InBio 380, Comparative Anatomy and Physiology, lecture & lab
Fall 2004 InBio 380, Comparative Anatomy and Physiology, lecture & lab
Winter 2004 InBio 380, Comparative Anatomy and Physiology, lecture & lab
Winter 2003 Zoology 101, The Diversity of Biology, section 1
Fall 2002 Zoology 101, The Diversity of Biology, section 1 (new curriculum)
Spring 2002 Zoology 350, Ecology
Winter 2002 Zoology 101, The Diversity of Biology, sections 1 and 2

Teaching Assistantships

Spring 1993, Spring 1995 Zool. 611 and 612, Comparative Physiology, Department of Zoology, University of Wisconsin–Madison
Fall 1992, Fall 1994 Zool. 300 Invertebrate Zoology, Department of Zoology, University of Wisconsin–Madison

Spring 1992, Spring 1994	Zool. 400, Marine Biology, Department of Zoology, University of Wisconsin–Madison
Fall 1991	Zool. 120, Biological Problems and Their Impact on, Department of Zoology, University of Wisconsin–Madison

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Appendix V: Service and Other Additional Information

Leadership

2015 - 2019	Union Treasurer, CW Post Collegial Federation
2010 - 2014	Executive Council Representative, CW Post Collegial Federation

Service at LIU Post

2016 - 2018	LIU Post and Beyond Undergraduate Research Symposium Reviewer
2017	Member of Ad Hoc Search Committee for Assistant Professor of Biology
2015-2016	Member of Ad Hoc Search Committee for Assistant Professor of Biology
2014-2015	Advisor, Biology Club, LIU Post
Dec. 2013-Jan. 2014	Member of National Science Foundation committee evaluating Graduate Research Fellowship Proposals.
2012 – Present	Actively mentor high school student research, usually two students per year.
Spring 2011	Biology Department Search Committee
Sept. 2011-Apr. 2012	Led Underprepared Students at LIU Post Discussion Group, College of Letters and Sciences
2010 - 2015	Member of Institutional Biosafety Committee, Feinstein Institute for Medical Research
2010 – 2012	Member of Committee for Cooperative Education, LIU Post Campus, Long Island University
2010 - 2012	Member Faculty Technology Resource Advisory Committee, LIU Post Campus, Long Island University
2010 - 2012	Advisor to Delta X Club (high adventure), LIU Post Campus, Long Island University
2008 – 2010	Advisor to Biophilia Club, LIU Post Campus, Long Island University
2008 - 2010	Member, Academic Standing Committee, LIU Post Campus, Long Island University

Service at Brigham Young University and Elsewhere

2004 – 2005	With Dr. Steve Nelson (Dept. of Geology) successfully lead effort to obtain university funds (\$168,000) for purchase of thermocombustion elemental analyzer and isotope ratio mass spectrometer for stable isotope group
2004 - 2005	Organizer of Ecology Stable Isotope Discussion Group
Winter 2005	Invited to give lecture in American Studies 200 on Feb. 15, 2005

Winter 2004	Invited to give lectures in Hon P 244R March 9, 2004; American Studies 200 on March 25, 2004
Fall 2003	Helped organize and host Jared Diamond's visit to BYU and the Department of Integrative Biology seminar that he presented.
2002 – 2006	Dept. of Integrative Biology Curriculum Committee
2002 – 2008	Member of the Utah Spotted Frog Management Team
2002 – 2003	Organizer of Ecology Discussion Group
2002 – 2005	Organizer of Inter-College Stable Isotope Research Discussion Group
2002	Regular substitute for Dennis Shiozawa on College Curriculum committee
2002	Chair of ad hoc committee to develop the Biodiversity course (Zool 101)
1999 - 2008	Member of Spotted Frog Recovery Team (Nevada) for the Toiyabe Population
1999 - 2003	Work with and employ members of the Yomba Shoshone Indian Tribe, Austin, NV

Master's students currently advising

Aaron Mayo (Sept. 2021 – present)

Mentoring Undergraduate Researchers: Of the 44, undergraduate researchers I have mentored or am currently mentoring at LIU, 50% are Caucasian, 20% African American, 9% Latino, 7% Asian, 7% Indian, and 7% Middle Eastern; 80% are female and 20% male.

Undergraduate Research Mentoring – Current Students

Daniela Faria (Jan. 2021 – present)

Mariah Morgan (Jan. 2021 – present)

Apryl McIntosh (Jan. 2019 – present)

Abigail Bossa (Sept. 2019 – present)

High School Student Research Mentoring – Current Students

Alexandra Eder, North Shore High School, Glen Head, NY (Jan. 2021 – present)

Quinn Murphy, St. Anthony's High School, Melville, NY (May 2021-present)

Former Undergraduates Continuing Their Research

Zachary Abate (Jan. 2019 – present)

Angela Sikes (Jan. 2018 – present)

Yuanpu Yao (Jan. 2019 – present)

Kim Kester (Sept. 2015 – present)

Kelley Kroft (Jan. 2014 – present)

Lance Edwards Jr. (May 2017 - present)

Past LIU Post Undergraduates Mentored

Aaron Mayo (Jan. 2018 – Aug. 2021)

Sarah Audi (2014)

Daniela Matthieu (Jan. 2018 – May 2021)	Brianna Bell (2013 – 2014)
Nneka Carroll (Jan. 2019 – May 2021)	Shannon O'Dwyer (2013-2014)
Gabrielle Deligouri (Oct. 2017 – May 2021)	Shawn Akinlade (Jan. 2013 – 2014)
Damario Hussey ((Jan. 2019 – August 2020)	Chelsea Miller (2012 – 2013)
Freshtah Sarwari (Sept. 2019 – Aug. 2020)	Ruth Gonzales (2012 – 2013)
Chanpreet Kaur (Jan. 2018 – May, 2020)	Catherine Garibaldi (2012 – 2013)
Disha Lumsir (Jan. 2018 – May, 2020)	Nichole Ginnan (2012 – 2013)
Sarah Busse (Sept. 2018 – Sept. 2019)	Peter Hong (2011-2013)
Kyla Formey (Jan. 2018 – 2020)	Jordan Boylan (2011- 2013)
Mia Jensen (Jan. 2018 – July 2019)	Brianna Damadian (2010-2011)
Indira Rojas (May-Aug, 2018)	Kevin Guilfoyle (2009-2010)
Melissa Quintanilla (Sept. 2015 – May 2017)	Katie Fisher (2009-2010)
Alexis Watkins (Sept. 2015 – 2016)	Umair Kahn (2009)
Dreyana Heyward (Sept. 2015 – 2016)	Michelle Karimzada (Honors Thesis, 2008-2009)
Courtney Valenti (2014-2016)	Jennifer Guan (2009)
Lisa Greco (2013-2016)	Kris Woodhouse (2009)
Rachel Fitzimmons (2013-15)	

Colgate University Undergraduates Mentored

William Rosencranz (Sept. 2015-Jan. 2017, co-mentored with Dr. Theodore Brummel)

Mentoring High School Researchers: Of the 14, high school students I have mentored or am currently mentoring in research at LIU, 8 are Caucasian, 3 Hispanic, 2 Indian, and 1 Middle Eastern; 6 are female and 8 are male.

High School Student Research Mentoring – Past Students

Liam Boyle, South High School, Valley Stream, NY (Jan. 2019 – March 2021)
 Zeeshan Memon, South High School, Valley Stream, NY (2015 – 2020)
 Jack Rosencrans, North Shore High School, Glen Head, NY (May 2017 – Aug. 2019)
 Sarah Moran, North Shore High School, Glen Head, NY (May 2018 – Dec. 2018)
 Zakir Memon, South High School, Valley Stream, NY (2015 – July 2018)
 Jessica Jara, South High School, Valley Stream, NY (2014 – 2016)
 Samuel Epstein, North Shore High School, Glen Head, NY (2014-2015, co-mentored with Dr. Theodore Brummel, **Intel Finalist 2015**)
 William Rosencrans, North Shore High School, Glen Head, NY (2014-15, co-mentored with Dr. Theodore Brummel)
 Noelia Fernandez, South High School, Valley Stream, NY (2012 – 2015)
 Anam Lakhani, Syosset High School, Syosset, NY (2014)
 Jack McWilliams, St. Anthony's High School, Melville, NY (2012-2013)
 Ryan Kramer, St. Anthony's High School, Melville, NY (2012-2013)

BYU Undergraduates Mentored (2001 – 2008) (Diversity: 24 males, 18 Females, 4 East Asians, 2 Hispanics, 2 Muslims, 1 Indian, remainder white)

Mark Apker	Elizabeth M. Backus	John T. Balabna
Robert M. Bogardus	Rebecca Buckman	Jeffery Bullock
Julie Burgstrom	Kevin S. Burns	Laura Castillo

Bryt Christensen	Benjamin Chu	Morgan A. Crawford
Joshua Davidson	Julie Fazio	Michael Goates
Yessica M. Gonzales	Michael Gravett	Brooke Guzman
Joseph Hanks	Samuel Hirt	Scott Holdaway
Dallin Inouye	Amanda W. Kunz	Jonathan R. Lawrence
Stephany L. Linblad	Steven Lloyd	Amanda Loveless
Jessica L. Makin	Dustin W. Morrill	Eric Peterson
Mark R. Peterson	Adam Pfof	Shawn I. Piper
Megen E.T. Russell	Michael A. Seawright	Heather Stutz
Jamie N. Tau	Michael Toleman	Joseph Tschudy
Heather R. Walkenhorst	Alexander Wu	Savannah Gore

Past Graduate Students (Chair and thesis advisor)

Peter Hong	Master's student, LIU Post, Long Island University (Sept. 2013 – Dec. 2018).
Bryan Hamilton	Master's student, Brigham Young University (Sept. 2006 – Aug. 2008)
Yuan-Mou Chang	Ph.D. student, Brigham Young University (Sept. 2005 – Aug. 2008)
Robert Bogardus	Master's student, Brigham Young University (Sept. 2005 – Aug. 2007)
Michael Goats	Master's student, Brigham Young University (Jan. 2004 - Apr. 2006)

Ph.D. Committee Member

Peter Hong, Boston University, Dept. of Biology (2020 – present)
Kevin Guilfoyle, University of Central Florida, Dept. of Biology (2018 – present)

Master's Committee Member

Sarah Kudman, Master's student, Hofstra University (2017-2020)
Miranda Figueras, Master's student, Hofstra University (2014-2017)
Raymond Severin, Master's student, Long Island University (2012 – 2016)
Chau Zhang, Master's student, Long Island University (2012 – 2014)
Aakash Mehta, Master's student, Long Island University (2009 – 2013)
Meagan Fastuca, Master's student, Long Island University (2008 – 2010)
Michael Hadly, Master's student, Brigham Young University (2005 – 2007)
Shannon O'Grady, Ph.D. candidate, University of Utah. (2002 - 2006)
Michael D. Mills, Master's student, Brigham Young University (2002 - 2004)

Invited Guest Editor: Special issue on *Stable Isotopes in Ecological Research* for the Journal *Diversity*: 11(9):163; <https://doi.org/10.3390/d11090163>

Ad hoc reviewer for following journals

Scientific Reports – Nature
JEB
Ecology

Oecologia
Rapid Communications in Mass Spectrometry
Comparative Biochemistry and Physiology
Physiological and Biochemical Zoology
Ursus
Ibis
Condor
Auk
Western North American Naturalist
Copeia
Applied Herpetology
Chinese Journal of Mammalogy

Invited Outside Reviewer

2020 Israel Science Foundation Grant Proposal Review
2013 Advancement Committee, Dept. of Integrative Biology, University of Colorado, Denver
2013 St. Mary's University, San Antonio, TX competitive in-house research grant proposals
2012 St. Mary's University, San Antonio, TX competitive in-house research grant proposals

Meetings, Workshops organized

Great Basin Biological Research Conference, Provo, Utah, 2001, member of organizational committee.
Great Basin Biological Research Conference, Provo, Utah, 2001, Workshop on Chytrid Fungus in the Great Basin.
Regional Spotted Frog Workshop, Reno, Nevada, 2000

AWARDS AND HONORS

2003 Certificate of Appreciation, Nevada Dept. of Wildlife.
1997 - 1998 **Fulbright Postdoctoral Fellow**, Ben-Gurion University of the Negev, Israel
1996 Lois Almon Small Grants Award
1996 Zoological Society of Milwaukee County Award
1990 Graduated with honors, Brigham Young University
1989 Brunswick Company Scholarship
1983 Trustees Scholarship, Brigham Young University

Past and Present Society Memberships

American Society of Ichthyologists and Herpetologists	Ecological Society of America
Society for Integrative and Comparative Biology	Society for the Study of Reptiles and Amphibians
Council on Undergraduate Research	Wilson Ornithological Society
WACE Institute on Global and Experiential Education	American Ornithologists Union
	Society for Conservation Biology

