

Alexander V. Alexiades

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Department of Environmental Science
Heritage University
Toppenish, WA 98948

Research Interests

Using quantitative approaches to understand, model, and predict effects of natural and anthropogenic disturbance on biodiversity, population/community dynamics, and ecosystem function.

Education

PhD Natural Resources, Cornell University (advisor Cliff Kraft), February 2016

M.S Biology, University of Nevada, Reno (advisor Mary Peacock), May 2010

B.S Biology, Montana State University, Bozeman, magna cum laude, August 2003

Professional Appointments

Assistant Professor, Heritage University, Toppenish Washington, 2015- present

Development of new Aquatic and Fisheries Science program and curriculum, classroom and lab instruction, development of undergraduate research program, secure funding for curriculum design and implementation, undergraduate student mentoring and advising, incorporate Traditional Ecological Knowledge into Environmental Science Education, develop courses (including computational biology courses such as Program R and GIS), outreach with Yakama Nation Fisheries and area K-12 students, EnvironMentor for high school students on Yakama Indian Reservation.

Fisheries Biologist, United States Fish and Wildlife Service, 2010

Duties included: raft and backpack electro-fishing, larval field sampling design and implementation, report and manuscript preparation, Microsoft access and excel data entry/analysis, GIS use, SYSTAT statistical software use, SIGMAPLOT figures/graphs, PIT tagging, adipose fin clipping, fish inoculations, gill netting, stomach content analysis, stream surveys, and habitat surveys.

Additional Appointments

Responsible Administrator, Washington First Nations MESA program, 2016- present, University of Washington and Heritage University

Affiliate Faculty, Center for Indigenous Health, Culture, and the Environment, WA, 2016-present

Contributing Editor, Bikepacker Magazine, 2016-present

Ultra-endurance athlete, Chumba Cycles and Wanderlust Gear, 2015-present

Research Experience

Fulbright Fellow, Universidad San Francisco de Quito, Ecuador, September 2014 – May 2015
Research fellow investigating and modeling effects of hydrological alterations from hydroelectric dams and climate change on stream physicochemistry, ecology, and fish communities in the Napo River Basin. Collaborating with two National Science Foundation projects: EVOTRAC and PEER to develop stream classifications to inform Ecuadorian government agencies and stream managers.

PhD Research Assistant, New York Cooperative Fish and Wildlife Research Unit, Cornell University, June 2011-August 2014

Duties included: coordination with state and federal agencies, grant proposal and report preparation, community outreach, scientific poster presentations, oral presentations, experimental design, population modeling, nitrogen and phosphorus concentration analysis, nutrient demand analysis, water chemistry analysis, hydrological modelling, hierarchical Bayesian modeling and simulation, uncertainty modeling and simulation, habitat modeling, species identification, creel survey analysis, field sampling and electro-fishing; use of GIS, Program R, MARK, PRESENCE, WINBUGS, SIGMAPLOT, database design, query, and analyses using MS Access, and GWLFE software.

Research Assistant, University of Nevada, Reno, August 2007-May 2010

Research assistant for the Peacock Conservation Genetics Lab. Duties included: report and manuscript preparation, ArcGIS, SAS, SPSS, SIGMAPLOT and MINITAB statistical software use, scientific poster presentations, oral presentations, ecological modeling, database entry and analysis, field sampling, radio tag implantation surgery, radio telemetry, habitat modeling, supervision and hiring of undergraduate assistants, and electro-fishing.

Fisheries Technician, Montana Department of Fish, Wildlife, and Parks, Billings and Townsend, Montana, 2001, 2002 (Summer Field Seasons)

Duties included public relations, habitat surveys, GPS use, camping, electro-fishing, necropsies, data entry, orienteering, and strenuous hiking (with pack up to 50lbs).

Teaching Experience

Assistant Professor of Environmental Science and Studies, Heritage University, Toppenish, WA 2015-present

Design and implement new curriculum and courses, teach lecture and lab courses, conduct research, secure funding, advise and mentor students, collaborate with regional academic institutions, tribes, and government agencies. (*see Courses Taught and Courses Designed sections below*)

Invited Faculty, Central South University of Forestry and Technology, Changsha, China, Summer 2015

Classroom instruction (Environmental Microbiology), curriculum development and design, mentorship

Instructor, Cornell Outdoor Education, February 2012-February 2014 (Seasonal, part-time position.)

Ice climbing skills, first aid, risk management, leadership, and Leave No Trace Ethics.

Adjunct Faculty Instructor, Truckee Meadows Community College, August 2009-May 2011
Classroom instruction, curriculum design, ANGEL online learning course design and facilitation, conducting multiday backcountry field trips, and supervision of a teaching assistant.

Tutor/Mentor, A to Z Tutoring, September 2007-May 2011

Tutored and mentored underprivileged Hispanic children in the Reno, NV area
Translated progress reports and facilitated parent-teacher communication for Spanish speaking parents

Head Teaching Assistant, University of Nevada, Reno, August 2008-May 2009

Head teaching assistant for Biology 192-Principles of Biological Investigation (Lecture, Lab, and Scientific Writing). Assisted course supervisor in leading weekly collaborative meetings with course TA's to design and improve course content and activities in addition to standard TA duties.

Teaching Assistant, University of Nevada, Reno, August 2007-May 2008

Teaching assistant for Biology 192-Principles of Biological Investigation.
Lectured and facilitated weekly four-hour labs; assisted students in conducting field and lab-based experiments, taught scientific writing, graded exams and term papers.

Teaching Fellow, Howard Hughes Medical Institute Science Partners Program, January 2008-May 2008

Assisted McQueen high school AP Biology instructors in curriculum design, lab and activity planning, exam proctoring, and tutoring.

English as a Second Language (ESL) Instructor, Inlingua, Wilhelmshaven, Germany, November-December 2006

ESL instructor for executives and employees at Peine Group (a large suit manufacturing company). Also instructed students preparing for English proficiency examinations.

ESL Instructor, Universidad Del Mar, Arica, Chile, March 2005-July 2006

Designed courses and curriculum for the Engineering and English Pedagogy departments.
Facilitated online learning program with National American University using WEBCT.

ESL Instructor and Eco Tourism Field Instructor, Corporation for the Development of Arica and Parinacota (CORDAP), Arica, Chile March 2005-July 2006

Taught advanced and conversational English courses. Instructed Adventure/Eco Tourism field courses including basic rock climbing skills, first aid, risk management, leadership, Leave No Trace Ethics, and trekking and camping techniques. Trained Aymara natives in outdoor and adventure tourism skills.

ESL Instructor, Berlitz, Ljubljana, Slovenia, July 2004- March 2005

Taught ESL to adults and children aged 5-65.

Publications

1. **Alexiades, A.V.**, Flecker, A. S. and Kraft, C. E. 2017. Nonnative fish stocking alters stream ecosystem nutrient dynamics. *Ecological Applications*, 27: 956–965. doi:10.1002/eap.1498
2. **Alexiades, A.V.** and Encalada, A. 2017. Distribution and habitat suitability of Andean climbing catfish in the Napo River Basin, Ecuador. *Tropical Conservation Science*.
3. **Alexiades, A.V.**, A. Encalada, J. Guayasamin, V. Ochoa, and J. Lessman. (Accepted 2017). Spatial prediction of stream physicochemical parameters for the Napo River Basin, Ecuador using Top-Kriging. *Neotropical Biodiversity*.

4. Encalada, A.C., Rieradevall, M., Rios-Touma, B., Garcia, N., Prat, N., and **Alexiades, A.V.** 2017. Los Ríos y Riachuelos de los Andes. In Encalada, A.C., Rieradevall, M., Rios-Touma, B., Garcia, N., Prat, N. *Protocolo Simplificado y Guía de Evaluación de la Calidad Ecológica de Río Andinos* (CERA-S). USFQ,UB,AECID, FONAG, Quito, 83 pp. (*Spanish only*).
5. Encalada A.C., Suárez E., **Alexiades A.**, Lessmann J. & J. M. Guayasamin. 2017. Biodiversidad a lo largo de la gradiente de elevación en la cuenca alta del Río Napo. In Medio ambiente: biodiversidad y paisajes de la Amazonia ecuatoriana. French Institute of Research Development (IRD), La Paz, Bolivia. (*Spanish and French*).
6. Encalada A.C., Suárez E., **Alexiades A.**, Lessmann J. & J. M. Guayasamin. 2017. Principales amenazas a los ecosistemas y a la biodiversidad de la cuenca alta del Río Napo. In Medio ambiente: biodiversidad y paisajes de la Amazonia ecuatoriana. French Institute of Research Development (IRD), La Paz, Bolivia. (*Spanish and French*).
7. **Alexiades, A.V.** and C.E. Kraft. 2016. Effects of stocked trout on stream invertebrate communities. *Journal of Freshwater Ecology*. DOI:10.1080/02705060.2016.1248502
8. Auerbach, D., Buchanan, B., **Alexiades, A.V.**, Anderson, E., Encalada, A., Larson, E., Mcmanamay, R., Poe, G., Walter, T., Flecker, A. 2016. Towards rapid, rigorous, and reproducible ecohydrologic classification of data scarce regions. *Ecohydrology*. DOI:10.1002/eco.1721
9. **Alexiades, A.V.**, B. Marcy-Quay, P.J. Sullivan, and C.E. Kraft. 2015. Measurement error in angler creel surveys. *North American Journal of Fisheries Management*. DOI: 10.1080/02755947.2014.996689
10. **Alexiades, A.V.**, W.L. Fisher. 2014. Broad-scale habitat classification variables predict maximum local abundance for native but not nonnative trout in freshwater streams. *Aquatic Conservation: Marine and Freshwater Ecosystems*. DOI: 10.1002/aqc.2476
11. **Alexiades, A. V.**, M. M. Peacock, and R. Al-Chokhachy. 2012. Movement patterns, habitat use, and survival of Lahontan cutthroat trout in the Truckee River. *North American Journal of Fisheries Management* 32(5):974-983.
12. **Alexiades, A.V.**, J. Dempster, and A. Gillespie. 2009. Cordillera Apolobamba, Huancasayani Valley: first ascents and new routes. *American Alpine Journal*. 51:190-191.

Manuscripts in Review or Preparation

Alexiades, A.V. , Flecker, A, and Encalada, A. (In prep). Native species displacement alters freshwater stream nutrient dynamics. Target journal: *Conservation Biology*.

Atkinson, C, **Alexiades, AV**, Encalada, A, and MacNeil, K. (in prep). Community wide excretion in Tropical Andean Streams. Target journal: *Ecosystems*.

Alexiades, A.V. and C.E. Kraft. (In review). Factors limiting wild trout populations in stocked streams. *Journal of Applied Ichthyology*.

Alexiades, A.V. and C.E. Kraft. (In review). Separating movement parameters from apparent mortality to estimate true survival. Target journal: *North American Journal Of Fisheries Management*.

Encalada, A., **Alexiades, A.V.**, J. Guayasamin, and J. Lessman. (In prep). Ecohydrogeographic classification of the Napo River Basin. Target Journal: *Freshwater Science*.

Recent non-peer reviewed publications

Alexiades, A.V. 2016. Fish Nutrient Excretion Rates New York. *Figshare*. DOI: <https://dx.doi.org/10.6084/m9.figshare.4488389>

Alexiades, AV. 2016 Part one: Searching for Singletrack on the Roof of the World. *Bikepacker Magazine*. <http://bikepacker.com/part-one-searching-singletrack-roof-world/>

Alexiades, AV. 2016 Part one: Searching for Singletrack on the Roof of the World. *Bikepacker Magazine*. <http://bikepacker.com/part-one-searching-singletrack-roof-world/>

Alexiades, A.V. 2017. Blizzards in the Desert: The Comstock Epic Part 1. *Bikepacker Magazine*. <http://bikepacker.com/blizzards-desert-comstock-epic-part-1/>

Alexiades, A.V. 2017. Blizzards in the Desert: The Comstock Epic Part 2. *Bikepacker Magazine*. <http://bikepacker.com/blizzards-desert-comstock-epic-part-2/>

Alexiades, A.V. 2017. Andean Breakfasts: Searching for Single Track Part 1. *Bikepacker Magazine*. <http://bikepacker.com/andean-breakfasts-searching-for-singletrack-part-one/>

Alexiades, A.V. 2017. Andean Breakfasts: Searching for Single Track Part 2. *Bikepacker Magazine*. <http://bikepacker.com/andean-breakfasts-searching-singletrack-part-two/>

Grants and Fellowships

1. **National Science Foundation (NSF), Improving Undergraduate STEM Education, 2016-2019, i-NATURE: Indigenous iNtegration of Aquatic sciences and Traditional-Ecological-Knowledge for Undergraduate culturally Responsive Education**, \$298,305. (see www.heritage-inature.org for details)
2. **Fulbright Student Fellowship, Ecuador, 2014-2015: Ecological Effects of Water Management on Tropical Highland Streams**. \$25,000.
3. **Rufford Small Grants for Nature Conservation, Ecuador, 2014-2015: Understanding the impacts of hydroelectric dams on stream ecology and endemic fish species** \$7,000.
4. **Mario Einaudi Center International Research Travel Grant, 2013: Ecological Effects of Water Management on Tropical Highland Streams**. \$1986.
5. **Keckhefer Adirondack Fellowship, 2013: Potential nutrient subsidy synergies between agriculture and stocked trout in Adirondack streams**. \$5000.
6. **Keckhefer Adirondack Fellowship, 2012: Implications of salmonid nutrient recycling for freshwater stream ecosystems**. \$5000.
7. **Truckee Meadows Foundation Award, Truckee Meadow Community College, 2009: Equipment purchases for multiday backcountry field courses for Environmental 115 course students**. \$1694.50
8. **McNeill-Nott Award, American Alpine Club and Mountain Hardwear, 2008: Exploration and first ascents of Cordillera Apolobamba, Bolivia**. \$4500.
9. **Howard Hughes Medical Institute (HHMI) Science Partners Program Teaching Fellow, University of Nevada, Reno, 2008: Designed, improved AP Biology Lab activities and curriculum, collaborated with teachers, and helped teach and facilitate labs and lectures at McQueen High School, Reno**. \$2000.

Grants pending

1. **NSF I-USE HSI:** Building Capacity: Culturally-Responsive Education in STEM (CREST). \$1,478,392. Co-PI.
2. **NSF S-STEM:** Engagement Achievement and Graduation for Low-income Students (EAGLES): a partnership in STEM education. \$4,999,301. Multinstitutional proposal with Portland State University. Principal Investigator (HU Subaward).
3. **NSF Faculty Early Career Development CAREER: River Ecosystem-function Research for Underrepresented minorities and Indigenous communiTies (RECRUIT).** \$822,000. Principal Investigator.
4. **NSF REU SITE:** A Transformative Approach for Engaging First-Generation Underrepresented Minorities in a Research Experience. \$344, 265. Senior Personnel.

Selected Professional Presentations

1. Alexiades, AV. Indigenous iNtegration of Aquatic sciences and Traditional-Ecological-Knowledge for Undergraduate culturally Responsive Education (i-NATURE): Piloting a culturally inclusive approach to STEM education for underrepresented minority undergraduates. American Fisheries Society Western Division Meeting Anchorage Alaska, May 2018.
2. Arakawa, H, Yanai, S, Lampman R, Moser, M, and Alexiades, A. Upper thermal tolerance of Arctic Lamprey and Pacific Lamprey larvae and instream thermal dynamics within larval lamprey habitat in Ishikawa, Japan and Yakima Subbasin, Washington State, USA. American Fisheries Society Western Division Meeting Anchorage Alaska, May 2018.
3. Alexiades, A.V, A.C, Encalada, and A.S. Flecker. Introduced Onchorynchus mykiss alter instream nutrient cycling in the Napo River Basin, Ecuador. Invited Speaker to Rios Tropicales Summit (an international summit focusing on Tropical River Conservation). Quito, Ecuador. July 2018.
4. Alexiades, AV and Encalda, AC. Tropical River Conservation: a Spatial Approach. Invited Speaker. University of Panama. June 2017. Panama City, Panama.
5. Alexiades AV, Encalada AC, Flecker AS, MacNeil KL. Native species displacement alters freshwater stream nutrient dynamics. Society for Freshwater Science, Raleigh, NC June 2017.
6. Alexiades, A.V., C.E. Kraft, and P.J. Sullivan. Measurement error in angler surveys. American Fisheries Society Western Division Meeting, Reno, NV March 2016.
7. Alexiades, A.V., C.E. Kraft, and P.J. Sullivan. Measurement error in angler surveys. American Fisheries Society Annual Meeting, Quebec City, Canada August 21, 2014.
8. Alexiades, A.V., C.E. Kraft, P.J. Sullivan. Measurement error in catch rate estimation from creel surveys using complete and incomplete fishing trips. New York American Fisheries Society Chapter Annual Meeting, Geneva, NY February 2, 2014.
9. Alexiades, A.V., C.E. Kraft, and A.S. Flecker. Potential nutrient subsidy synergies between agriculture and stocked trout in New York streams. American Fisheries Society Annual Meeting, Little Rock, AR, September 9, 2013.
10. Alexiades, A.V., W.L. Fisher, P.J. Sullivan. Stream trout abundance and mortality estimation. New York American Fisheries Society Chapter Annual Meeting, Watertown, NY February 1, 2013

11. Alexiades, A.V., W.L. Fisher, P.J. Sullivan. Stream trout population dynamics and angling behavior in New York streams: evaluation of a stocking model. American Fisheries Society Annual Meeting, St. Paul, MN, August 2012.
12. Alexiades, A.V., W.L. Fisher, P.J. Sullivan. Evaluating trout fisheries in New York State. New York American Fisheries Society Chapter Annual Meeting, Lake Placid, NY February 2012
13. Alexiades, A.V., M.M. Peacock. Movement patterns, habitat use, and survivorship of Lahontan Cutthroat trout in the Truckee River, Nevada. Presentation for Nevada Water Resources Association Truckee River Symposium, Reno, NV, November 3, 2009.
14. Alexiades, A.V., M.M. Peacock. Can a native cutthroat trout survive in the Truckee River? American Fisheries Society Annual Meeting, Nashville, TN, September 3, 2009.
15. Alexiades, A.V. Movement patterns and survivorship modeling of Lahontan cutthroat trout in the Truckee River, Nevada. Presentation for the Lahontan Cutthroat Trout Interagency Meeting, Reno, NV, January 21, 2009.

Invited non-academic presentations

1. Conserving the Andean climbing catfish (*Astroblepus vaillanti*) in the Napo River Basin of Ecuador. October 2016. Beer and Science Night, Yakima, WA.
2. Bikepacking Exploration around the Globe. Invited Speaker for Cascadian's Annual Meeting. January 2017. Yakima, WA.
3. Searching for Singletrack on the Roof of the World. Invited Speaker for Downtown Yakima Rotary. January 2018. Yakima, WA.
4. Searching for Singletrack. Invited Speaker for Southwest Rotary. February 2018. Yakima, WA.
5. Bikepacking Tibet. Invited Speaker for Pacific Northwest University. March 2018. Yakima, WA.
6. First ascents and new routes in Cordillera Apolobamba, Bolivia. 2009. Squaw Valley California.

Courses Taught – Primary Instructor

Heritage University

- General Ecology (Fall 2016)
- Introduction to Geographic Information Systems (GIS) (Spring 2017)
- Advanced GIS (Fall 2015 and Spring 2017)
- Introduction to Program R (Fall 2016 and 2017)
- Environmental Issues and Ethics (Spring 2018)
- Biology 101 (Non-majors Biology) (Fall 2015)
- Biology 110 (Majors General Biology) (Spring 2018)
- Introduction to Fisheries Science (Spring 2016, Spring 2017)
- Climate Studies (online course; Spring 2016 and 2017)
- Fundamentals of Atmospheric Science (online course; Fall 2015 and 2017)

Central South University of Forestry and Technology

- Environmental Microbiology (Summer 2015)

Truckee Meadows Community College

- Environmental Science 115 (Fall and Spring, 2 sections per semester; 2009-2011)

Courses and Curriculum designed

- Research Design- Senior level capstone course covering general principles of scientific inquiry and design with many examples coming from Biology, Social Sciences, and Environmental Sciences.
- Advanced Geographic Information Systems- a project-based research and communication course where students complete a spatial analysis and map then present their research to the public.
- Quantitative Fisheries Management-introduces basic quantitative approaches to objectively assess the status or health of a fishery population or aquatic biological community by applying statistical and mathematical models to real data collected on marine and freshwater species
- Advanced Applications of Program R- focus on practical applications of classic statistical methods in natural sciences. Examples will primarily derive from ecology, biology, and physical sciences. Lab sessions will provide practical training in using R for data processing and analyses.
- Ichthyology- introduction to the biology of jawless, cartilaginous, and bony fishes—their classification, evolution, form, physiology, and ecology.
- Aquatic and Fisheries Science Concentration- developed a new concentration with the Environmental Science and Studies program that was added to catalog at Heritage University
- Bachelor of the Arts in Biology- helped design a flexible BA in Biology offering to complement the BS in Biology to better serve students
- Environmental Science and Studies- worked with a colleague to completely redesign BA in Environmental Studies and BS in Environmental degrees to be more flexible and require fewer overall credits.

Supervision of Undergraduate and Graduate Research

2017: Dissertation committee and research support for AI/AN student Stephany Johnson (University of Oregon)

2016-2017: Research Advisor for four AI/AN undergraduate students (Aiyana Holt Zack, Robyn Raya, Michael Buck, and Cristy Fiander)-TEK, fisheries and aquatic ecology research

2015- 2016: Research Advisor for two AI/AN undergraduate students (Jacob Billy and Robyn Raya)-experimental research on *Arthrospira platensis*-both presented research at national AISES conference in 2016

Fall 2015: Geographic Information System research mentor and advisor for Barbara Blodgett, Yakama Nation Natural Resources and Heritage University student.

2014-2015: Field research supervisor and mentor for Christian Moreno, M.S. Biology, Universidad San Francisco de Quito, Quito, Ecuador.

2013: Field Research Supervisor for Gabriel Ng, Cornell University.

2009: Research Supervisor for Chris Fikovski -Independent Study, University of Nevada, Reno

2008: Research Supervisor for Kirsha Fredrickson- Independent Study, Univ. of Nevada, Reno

Honors and Awards

- New York Chapter of American Fisheries Student Travel Award, 2014.
- Best Student Paper 2013 New York American Fisheries Society Annual Meeting, Watertown, NY.
- National Society of Collegiate Scholars Honors.
- Golden Key National Honor Society.
- Graduated Magna Cum Laude from Montana State University.

University Service and Community Outreach

- Lower Yakima Valley Groundwater Management Area Advisory Committee Member 2018-present
- Board of Directors, Washington State MESA (Math Engineering Science Achievement) program 2016- present
- Re-designed B.S. Environmental Science, B.A. Environmental Studies, and B.S. in Biology degree programs at Heritage University.
- Designed new BA in Biology and Minor in Environmental Studies programs at Heritage University.
- Board of Directors Member, Yakima Musica en Accion, Yakima WA 2016- present
- Grant proposal reviewer and ESL instructor at La Casa Hogar, Yakima, WA
- Guest lecturer Yakama Tribal School, Toppenish, WA December 2015
- EnvironMentors, White Swan High School Junior, Yakama Indian Reservation
- Faculty Representative to Board of Directors for Tribal Relations, Heritage University 2016-2017
- University Technology Advisory Committee Member, Heritage University 2015-2016.
- President of the Cornell Student Subunit of the American Fisheries Society for 2012-2013.
- Caroline Elementary: Co-instructed an Aquatic Invertebrate Ecology Field Course for 1st Grade Class.
- Trout in the Classroom Program : Stream Fish Ecology Workshop for Ithaca, NY area elementary schools; worked with 4th Grade Students. May 2012 and 2013.

- Secretary-Treasurer of the Cornell Student Subunit of the American Fisheries Society for 2011-2012.

Selected Statistical and Computing Skills

Applied Hierarchical Abundance Modeling- Cornell University. (3 days). Taught by Marc Kéry of the Swiss Ornithological Institute and Andy Royle of USGS, Patuxent Wildlife Research Center. Introduced key hierarchical models used in the analysis of abundance and its spatial and temporal patterns using Bayesian and the frequentist methods. Used package “unmarked” in R as well as WinBUGS and JAGS to fit and understand binomial and multinomial N-mixture models, CAR modeling of spatial autocorrelation in abundance, hierarchical distance sampling models, and dynamic models of abundance.

Occupancy Modelling Workshop-Cornell University. (40 Hours). Taught by Dr. Darryl McKenzie. Theory and application of modeling patterns and dynamics of species occurrence in a landscape while accounting for the imperfect detection of the species. Participants were introduced to available software (OpenBUGS, PRESENCE, GENPRES) through worked examples, with special emphasis on aspects of study design.

Spatial Modelling And Analysis. Theory and practice of applying geo-spatial data for resource inventory and analysis, biophysical process modeling, and land surveys. Emphasizes use and evaluation of spatial analytical methods applied to agronomic and environmental systems and processes using Program R and ArcGIS Version 10.0.

Wildlife Population Analysis: Techniques And Models. Explores the theory and application of a variety of statistical estimation and modeling techniques used in the study of wildlife population dynamics, with primary focus on analysis of data from marked individuals. Computer exercises using STATA and Program MARK are used to reinforce concepts presented in lecture.

Quantitative Ecology And Management Of Fisheries Resources. Quantitatively characterize marine and freshwater fishery populations and how these populations change. Objectively assess the status or health of a fishery population or aquatic biological community by applying statistical and mathematical models to real data collected on marine and freshwater species. Program R and AD Model Builder.

Statistics For Experimentation: Theory and application of statistical inference with special emphasis on probability, parametric and nonparametric techniques including simple and complex analysis of variance, multiple comparison techniques and trend analysis. Use of SPSS and SAS statistical software.

Research Design In Ecology: Principles of research methods, including experimental design, for ecology-related fields. Discussion of statistical issues; development of research proposals. Use of Program “R” statistical package.

Population Dynamics Modeling: Estimation of parameters, modeling and inference about population dynamics in the face of uncertainty. Management decisions. Use of Program MARK population modeling software.

Geographic Information Systems And Science: Introduction to modern spatial data processing, development and functions of geographic information systems (GIS); and theory, concepts and applications of geographic information science.

Sponsorships

- **Chumba Cycles USA**- ultra-endurance multiday and 24 hour solo mountain bike racing, bikepack exploration www.chumbausa.com/riders/
- **Wanderlust Gear**- ultra-endurance multiday bike racing, bikepack exploration www.wanderlustgearusa.com
- **Stan's NoTubes**- Pro/Cat1 XC mountain bike racing (2012-2014)
- **Mountain Hardwear/American Alpine Club**- sponsored expedition to explore and climb in the Cordillera Apolobamba, Bolivia (2008)

Guide Experience

May-August 2007, Pangaea Adventures, Valdez, AK Lead Ice & Glacier Guide, Kayak Guide
Led ice climbing and glacier guide on the Worthington Glacier.
Guided sea kayaking groups on Prince William Sound, day tours and multiday trips

March 2006-July 2006, Sumapacha Adventure, Arica, Chile Lead Mountain Guide
Guided multiday high mountain ascents in the Andes (+ 6000m) with groups of up to 15 clients.

Certifications and Trainings

Principles and Techniques of Electrofishing Certification (36 hour), Department of the Interior, 2012.

American Institute for Avalanche Research and Education, Level 1 Instructor, 2010.

Certified Single Pitch Instructor (SPI), American Mountain Guides Association (AMGA), 2010. (expired)

Open Water Diver, Professional Association of Dive Instructors (PADI), 2010.

Leave No Trace Trainer Certification, 2009.

Teaching Assistant Workshop, University of Nevada Reno, 2007.

Wilderness First Responder (80 hours; includes CPR), Wilderness Medical Associates, 2007.(current)

Teacher Training, Berlitz, Ljubljana, Slovenia, 2004.

Teaching English as a Foreign Language Certification, ITC International, Prague, CZ, 2004.

Software

Program R, Program MARK, JAGS, WINBUGS/OPENBUGS, ArcGIS 10.0, AD Model Builder, Microsoft Access, Excel, Word, Powerpoint, SPSS, SIGMAPLOT, STATA, and MINITAB.

Languages

Spanish- fluent, Greek- conversational, French- intermediate, Quechua- basic, Aymara- basic.