

Alexandra Hettena

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Education

- Pace University**, Pleasantville, NY **August 2015-May 2019**
Master of Science, Environmental Science
Thesis: *Prey composition and kill rates of mountain lions in California's San Francisco Bay Area*
- Vanderbilt University**, Nashville, TN **August 2009-May 2012**
Bachelor of Arts, Ecology, Evolution and Organismal Biology
- Ben Gurion University of the Negev**, Beer Sheva, Israel **August 2006-July 2007**
First year, Overseas Student Program

Research Experience

- GIS Specialist, Borderlands Research Institute, Sul Ross State University** **December 2021-Present**
- Develop and maintain a relational database for geospatial data using PostgreSQL on a remote server hosted by Amazon Web Services.
 - Assist in the development of a modernized data management system and automated workflow guidelines to bring BRI into compliance with Reproducible Research standards.
 - Design graphical user interfaces for data entry and visualization using Shiny in R.
 - Produce digital maps of grazing pastures, treatment areas, and rangeland inventory sites to use in reports.
 - Provide technical assistance for GIS projects for the BRI's Center for Land Stewardship and Stakeholder Engagement.
 - Analyze spatial data of wildlife in the Trans-Pecos.
 - Mentor and support graduate and undergraduate students.
- Research Assistant, Texas A&M University** **February 2020-August 2021**
- Worked under the guidance of Dr. John Tomeček of the Texas Carnivore Ecology Lab to assist in managing a multi-year coyote spatial ecology project in South Texas.
 - Coordinated coyote capture events, organized and trained volunteers to handle, process, and release coyotes.
 - Led a ground crew in processing coyotes that are captured using net guns from a helicopter (50+ coyotes to date).
 - Ran a trap line with leghold traps to safely capture coyotes (9 coyotes over 5 nights).
 - Coyote processing included gaining control with a catchpole, placing muzzle, inserting PIT tag, fitting GPS collar, and collecting tissue sample.
 - Managed capture data and monitored GPS location data for 40+ collared coyotes. Regularly communicated with the collar company's technical support to troubleshoot issues with collars and to optimize data management.
 - Taught the Wildlife Techniques laboratory to undergraduate students during Spring 2021.
- Mountain Lion Research Associate, Audubon Canyon Ranch** **January 2017-January 2020**
- Worked under the guidance of Dr. Quinton Martins on the Living with Lions project to carry out research, outreach, and education about mountain lions in Sonoma and Napa counties, California.
 - Co-managed and raised more than \$8,000 for the Trail Camera Project, a community-based citizen science project.
 - Deployed and monitored trail cameras on 30 private properties, ran volunteer training programs, and analyzed camera data.
 - Assisted in mountain lion captures through baiting, trapping, handling, collecting tissue samples, and fitting GPS collars.
 - Monitored and tracked movements of collared mountain lions both remotely and in the field with VHF.
 - Navigated to GPS clusters of collared mountain lions and conducted kill site investigations to determine prey species, sex, age, health, and cause of death based on hair, teeth, bones, rumen, and carcass condition.
 - Determined home ranges, kernel density estimations, and mountain lion diet composition.
 - Contacted, visited, and established and maintained relationships with more than 400 private landowners and vineyard managers across 2 counties.
 - Engaged with landowners in response to livestock depredations and made recommendations to build and improve predator-proof livestock enclosures and deter future mountain lion activity.
 - Coordinated and gave 12 presentations to more than 600 members of the public across 3 counties.
 - Held informal talks and guided hikes for the organization's educational programs for volunteers.
 - Participated as an instructor/scientist in the Conservation Science Intensive camp for young women over 3 summers.

- Wolf Predation Technician, Washington State University** **June-October 2016**
- Worked under the guidance of Gabriel Spence and Dr. Robert Wielgus (WSU) to conduct wolf predation study.
 - Visited GPS clusters of collared wolves to differentiate between wolf kills, wolf scavenges, and no kills in NE Washington.
 - Determined prey species, sex, age, health, and cause of death based on hair, teeth, bones, rumen, and carcass condition.
 - Developed proficiency in identifying presence of native carnivores and ungulates from beds, scats, scratch marks, tracks.
 - Placed and monitored camera traps in areas heavily used by wolves.

- Research Assistant, International Research Experience for Students (IRES)** **June-August 2015**
University of Tennessee at Chattanooga
- Conducted a stress study with degus at Estación Experimental Rinconada de Maipú, RM and Parque Nacional Fray Jorge, Coquimbo, Chile under the guidance of Dr. Loren D. Hayes (UTC) and Dr. Luis Ebersperger (Pontificia Universidad Católica de Chile).
 - Baited, trapped, handled, bled, collected tissue samples, fecal samples, and ectoparasites from degus.
 - Conducted a home range study of degus using radio telemetry, during both day and night shifts.
 - Live-trapped degus, fitted with radio collars, and tracked using antennae towers (day) and Yagi antennae (night).

- Research Assistant, Estancia Faro Moro and Estancia Aurora, Paraguay** **July 2013**
- Captured pumas and jaguars using live bait, trailed with hounds, sedated, processed, and fitted with radio collars.
 - Tracked movements and activity of jaguars and pumas on cattle ranches using radio telemetry. Retrieved lost collars.
 - Evaluated predator-livestock conflict and threats to fauna in the Chaco region of South America.

- Research Assistant, Laboratory of Biological Conservation** **August 2012-June 2013**
São Paulo State University "Julio de Mesquita Filho" (UNESP)
- Conducted home range study of white-lipped peccaries at Ilha do Cardoso State Park, SP, Brazil under the guidance of Dr. Maria Luisa Jorge (Vanderbilt University).
 - Live-trapped white-lipped peccaries, sedated, processed, fitted with radio collars, and tracked using H-antenna.
 - Conducted a line transect census for one month using sightings, vocalizations, footprints and feces to record presence of mammal species at Ilha do Cardoso State Park.
 - Placed and routinely checked camera-traps and analyzed 5,000+ camera-trap photographs.
 - Baited, trapped, and marked rodents and marsupials using Sherman and Tomahawk traps.
 - Trapped and banded bats and birds using mist nets.

- Independent Research, Rocky Mountain Biological Laboratory (RMBL)** **May-August 2012**
- Conducted an independent field study of acoustic predator discrimination in mule deer in Gothic, CO under the guidance of Dr. Daniel Blumstein (University of California, Los Angeles).
 - Played back predator vocalizations to deer at different proximities to human buildings and recorded behavior using an ethogram. Analyzed behavior using JWatcher.

Scientific Manuscripts

- **Hettena, A. M.,** Munoz, N., Blumstein, D. T. (2014), Prey responses to predator's sounds: a review and empirical study. *Ethology* 120: 427-452.

Employment and Volunteer Experience

- Volunteer, Bay Area Puma Project, San Francisco, CA** **January-October 2014**
- Placed and routinely monitored camera-traps in remote locations (5–10 mile hikes).
 - Analyzed camera-trap photos for Felidae Conservation Fund's database.
 - Presented to elementary, middle, and high school students about pumas and bobcats in the Bay Area.
 - Tabled at community fundraising events around the Bay Area. Interacted with passers-by.

- Education Program Associate, Felidae Conservation Fund, Mill Valley, CA** **May-June 2014**
- Worked for the regional organization Bay Area Puma Project (BAPP).
 - Taught elementary, middle, and high school students about pumas and bobcats in the Bay Area.
 - Guided students in lab activity showing how human development affects predator-prey relationship.
 - Led field trips during which we searched for tracks and scat and taught about invasive and non-invasive field techniques.

Vet Technician / Receptionist, Veterinary Hospital, Beer Sheva, Israel**November 2008-April 2009**

- Aided veterinarians in check-ups and in the preparation room for surgery.
- Gave shots, took and developed X-rays, drew blood, ran laboratory tests, prepared microscope slides, prepared sterile surgical sets, and restocked medicine and supply cabinets.
- Worked at the front desk greeting clients, answered phones, scheduled appointments, tended the register and performed close outs, sold pet supplies, filed.

Weapons Instructor – Corporal, Israel Defense Forces, Israel**July 2007-September 2008**

- Served as a shooting instructor at a training base of the Nahal Brigade.
- Commanded large groups of recruits independently under harsh conditions.
- Trained recruits to use M-16 and M-4 automatic rifles.
- Received Certificate of Excellence during basic training.
- Received Certificate of Exemplary Soldier during the shooting course.

Conferences

66th Annual Meeting of the Western Section of the Wildlife Society, Yosemite, CA**February 2019**

Presentation: Fencing and the Foraging Behavior of a Large Carnivore – Are Mountain Lions Selecting for an Easy Lifestyle in California's Wine Country?

Skills

- Computer: MS Office, ArcGIS (Pro), R Studio, PostgreSQL, FileMaker Pro, Raisers Edge, InDesign, JWatcher, Image J.
- Languages: English – fluent, Hebrew – fluent, Spanish – fluent, Portuguese – proficient.
- Activities: Hiking, backpacking, rock climbing, running, snowboarding.
- Certified California Naturalist – February 2018.
- Track & Sign Level II Certificate through CyberTracker – October 2016.
- PADI Advanced Open Water Diver Certification – May 2009.