

GEM3 and Me: My Journey from Lab/Course-based Undergraduate Research Experiences (LURE/CURE) to Graduate School



GEM3
Genes by Environment
Modeling · Mechanisms · Mapping

Catherine Isaak, Post-Baccalaureate Fellow
Boise State University

Back to School

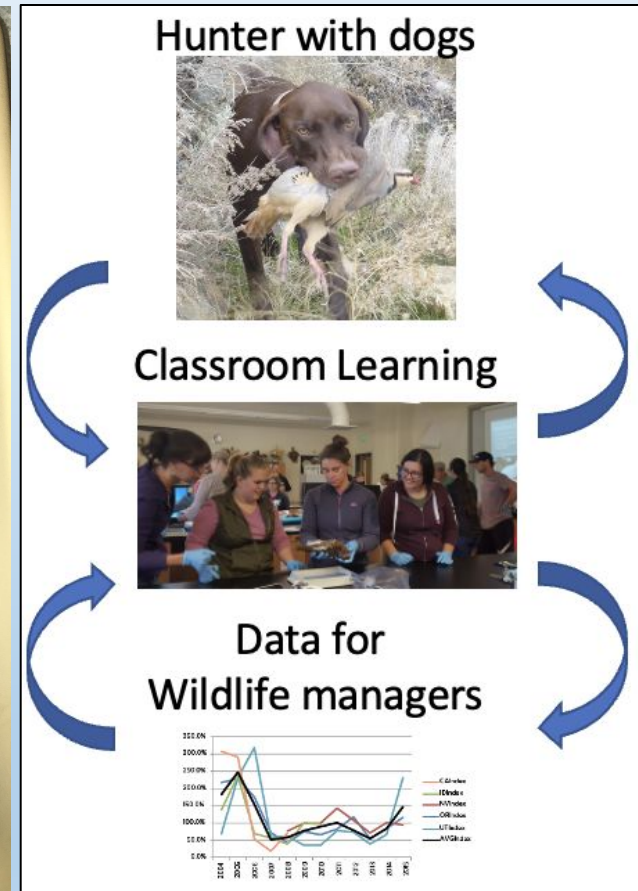


Course-based Undergraduate Research Experiences

ZOOL 401, Mammalogy



ZOOL 409, Animal Physiology &
Nutrition



Faculty Connections at BSU

Dr. Jen Cruz, Assistant Professor, Quantitative Conservation Research Lab



Dr. Jen Forbey, Professor, Forbey Lab



Dr. Amy Ulappa, Clinical Associate Professor




Post-Baccalaureate Experiences

**Chukars in the Classroom:
A 'CURE' for Training a Competent Workforce & Supporting Wildlife Management**

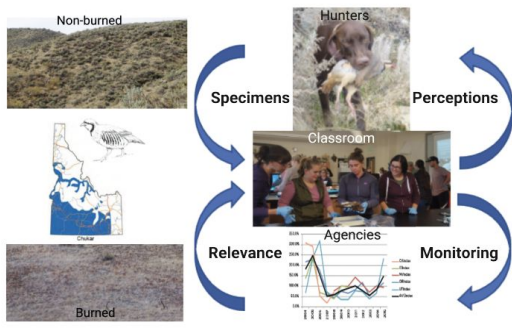
Jennifer Sorensen Forbey¹, Jeffrey Knetter², Michelle Commons-Kemner², Larry Szurgot³, Brant Petersen⁴, and Catherine Isaak¹ (representing Boise State Zoology 409 undergraduate classes of 2020, 2021, and 2022)¹.

¹Boise State University; ²Idaho Department of Fish and Game; ³Hunter; ⁴Idaho Chukar Chasers Foundation

Wing Length for Demographics



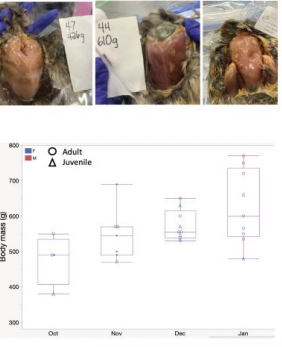
Course-Based Undergraduate Research Experience



Diet as Index of Habitat Quality



Fat as Index of Body Condition



Gut Length as Index of Diet Quality and Body Condition



Acknowledgements



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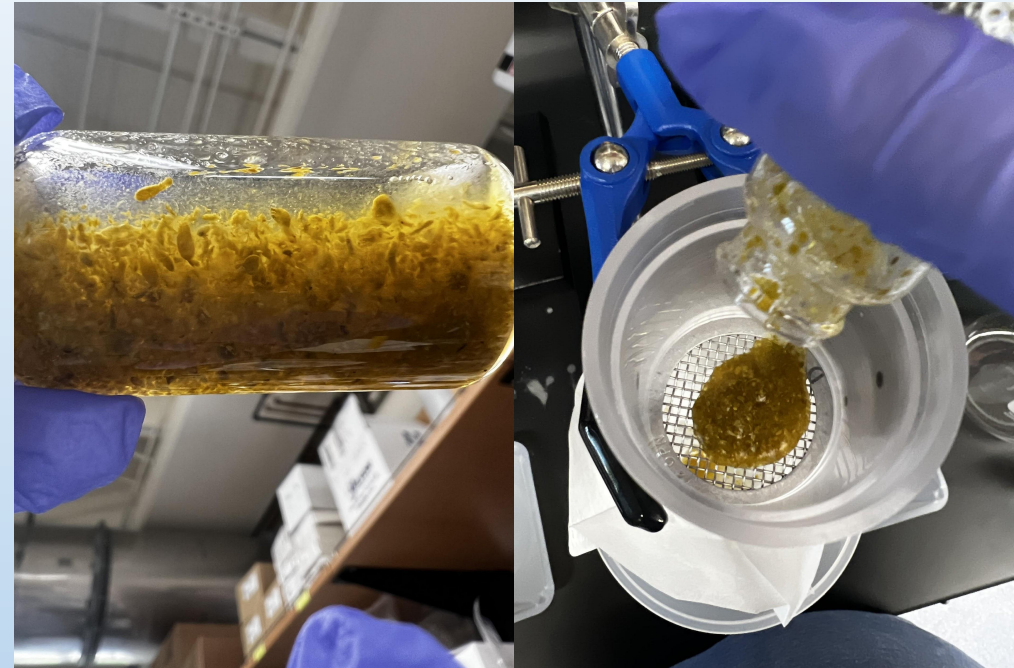


Idaho Chapter of The Wildlife Society Poster with Dr. Forbey & members from the Idaho Chukar Chasers Larry Szurgot and Brant Petersen

Post-Baccalaureate Experiences



Dr. Cruz and I microchipping and taking various data points on a Piute Ground Squirrel (*Urocitellus mollis*) population



Particle sieving for the Greater Sage-grouse (*Centrocercus urophasianus*) fecal pellets to analyze diet and digestibility

CURES = Significant Outcomes

- Two seasons of field experience with Dr. Cruz's lab
 - Lead technician in auditory point counts
 - Mentor undergraduate field technicians
- Post-baccalaureate EPSCOR/GEM3 fellowship in Dr. Forbey's lab
 - Mentor, TA, and develop undergraduates in particle size and animal dissections
 - Outreach lessons and opportunities
 - Develop laboratory protocols, practice in data analysis, develop spectral analysis skill sets with plant matter
- Volunteer beaver husbandry with Idaho Fish & Game
- Networking with biologists, ecologists, and clinical professors
- TWO graduate program offers for a Masters in Biology

Many Thanks and Heartfelt Appreciation



- Dr. Jen Cruz
- Dr. Jen Forbey
- Dr. Amy Ulappa
- Jamie Utz, Diversity Wildlife Biologist, IDFG
- Zoe Bonerbo, QCL Manager
- Morgan Calahan, Conservation Genetics Lab Manager
- Ashley Martwick-Holloway, Forbey Research Associate
- Dr. Cruz's graduate students