



GEM3

Genes by Environment
Modeling · Mechanisms · Mapping

Module Name: Chukar Diet Diversity & Particle Size

Institution: Boise State University

Principle Investigator(s): Jen Forbey, jenniferforbey@boisestate.edu

Summary:

In this module, students will:

- Understand the relevancy of diet quality to understand the physiology of animals
- Use scientific practices to quantify and compare diet diversity and digestibility
- Understand how the environment and animal morphology influences the physiological process of digestion
- Archive digital data on diet diversity and digestion by your animal for future iteration, collaboration and discovery

This module has been used in BSU's Animal Physiology & Nutrition (ZOOL 409) course.

Contents:

- Lab 3: Diet & Digestion
- Lab 3 Supply List
- Folder: Diversity Indices

This folder contains resources for calculating the Shannon Evenness Index of Diet Diversity

- Guide: *Calculate Shannon Evenness Index of Diet Diversity*
- Guide: *Shannon Diversity Index*
- Lab: Calculating Biodiversity (Species Richness, Species Diversity, and How to Know When to Stop Sampling)

Notes:

- At BSU, this module followed the Chukar Dissection module (Labs 1 and 2).
- The plan is to have a prestocked supply tote for this module that can be sent to participating colleges and universities.
- Remote options:
 - For diet diversity, pictures of crop contents can be provided for digital analysis.
 - For particle size, autoclaved feces can be provided. A sieve or perhaps a household strainer would be required.
- Graduate students are available to assist in teaching this lab remotely. Depending on travel and availability, they may be able to teach in person.

Questions? Contact the PI or the GEM3 PUI Liaison, Stephanie Sevigny, stephanieseigny@boisestate.edu

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