



Analysis of Morphological Feeding Behavior in Giant Coastal Salamanders (*Dicamptodon tenebrosus*)

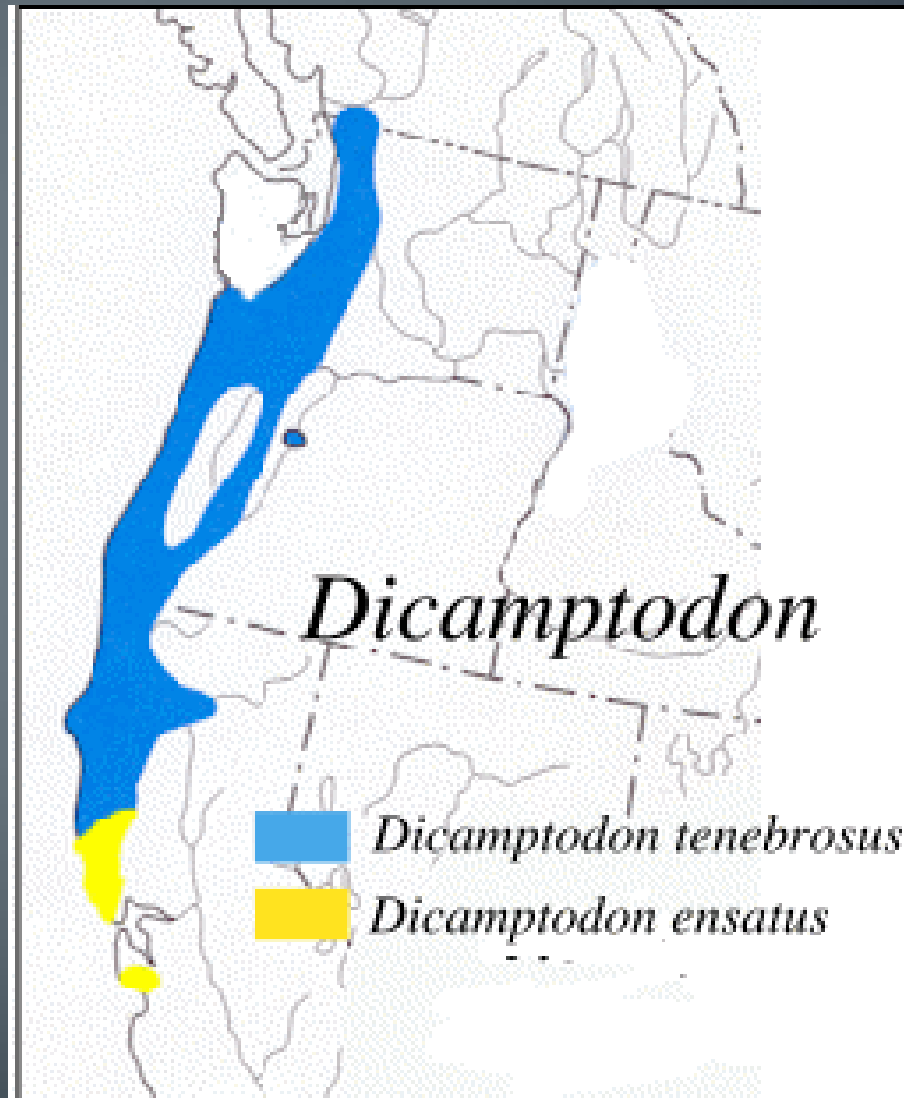
by Laura Westervelt, Steven Wagner, David Reavill, Robert Weaver, Brandon Fessler, and Sara Richbourg

Introduction

- One of four largest terrestrial salamanders
- Fairly common in Washington and Oregon wetlands
- Terrestrial adults are not often studied



Dicamptodon Distribution



Experimental Design



- Objective:
 - Describe and quantify behavior when feeding on three distinct prey items

Experimental Design

- Collected high speed video of feeding bouts
 - Casio XILim 100
 - 240 fps
- Scored feeding behavior
 - Velocity of strike
 - First point of contact

Experimental Design

- 3 prey per salamander



- Replication
- Statistics
 - ANOVA, Chi-square

Earthworm Feeding Video



<https://www.youtube.com/watch?v=LbZkKs77DsU&feature=youtu.be>

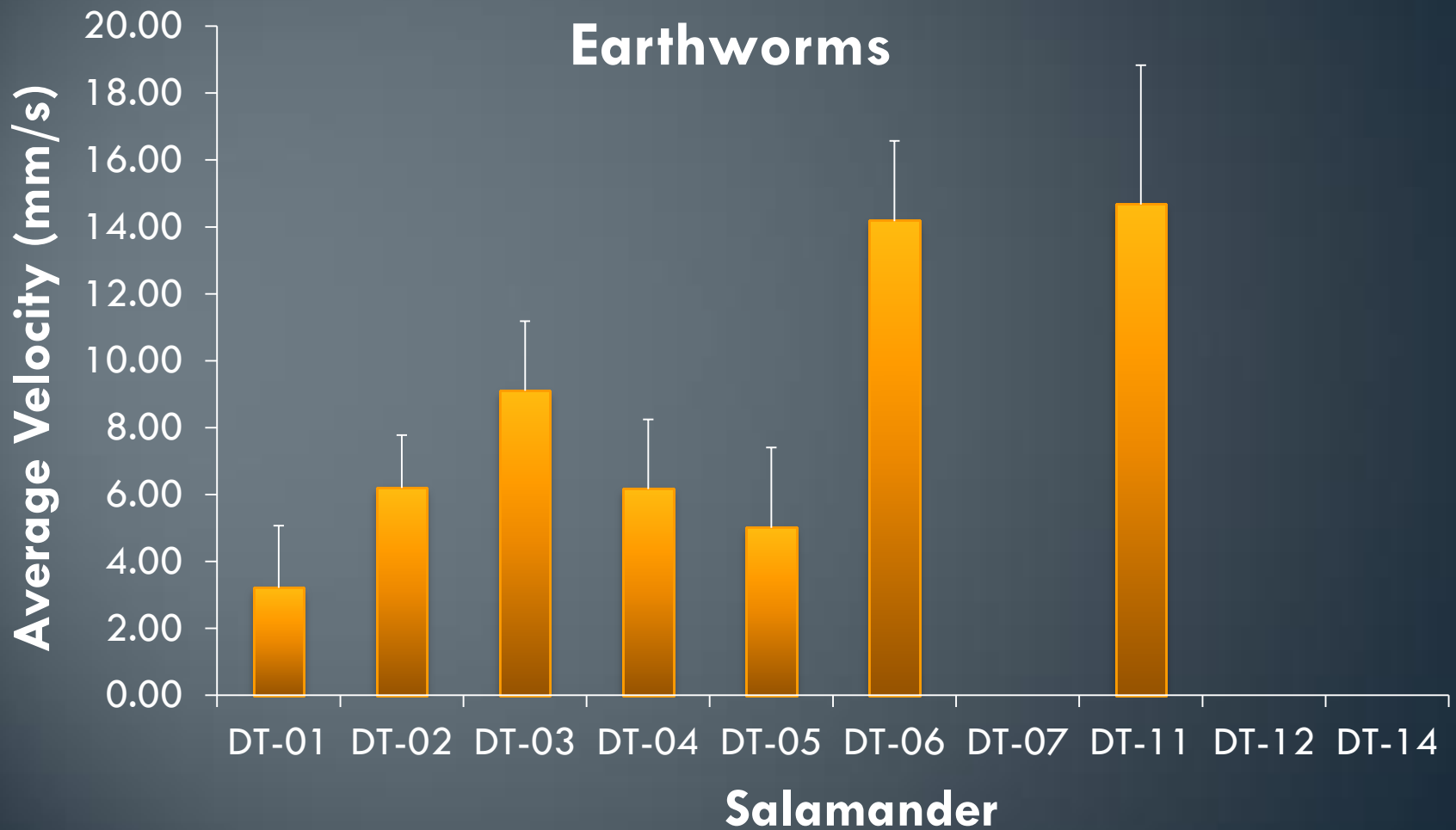
Slug Feeding Video



<http://www.youtube.com/watch?v=B0MTtJQTLIA>

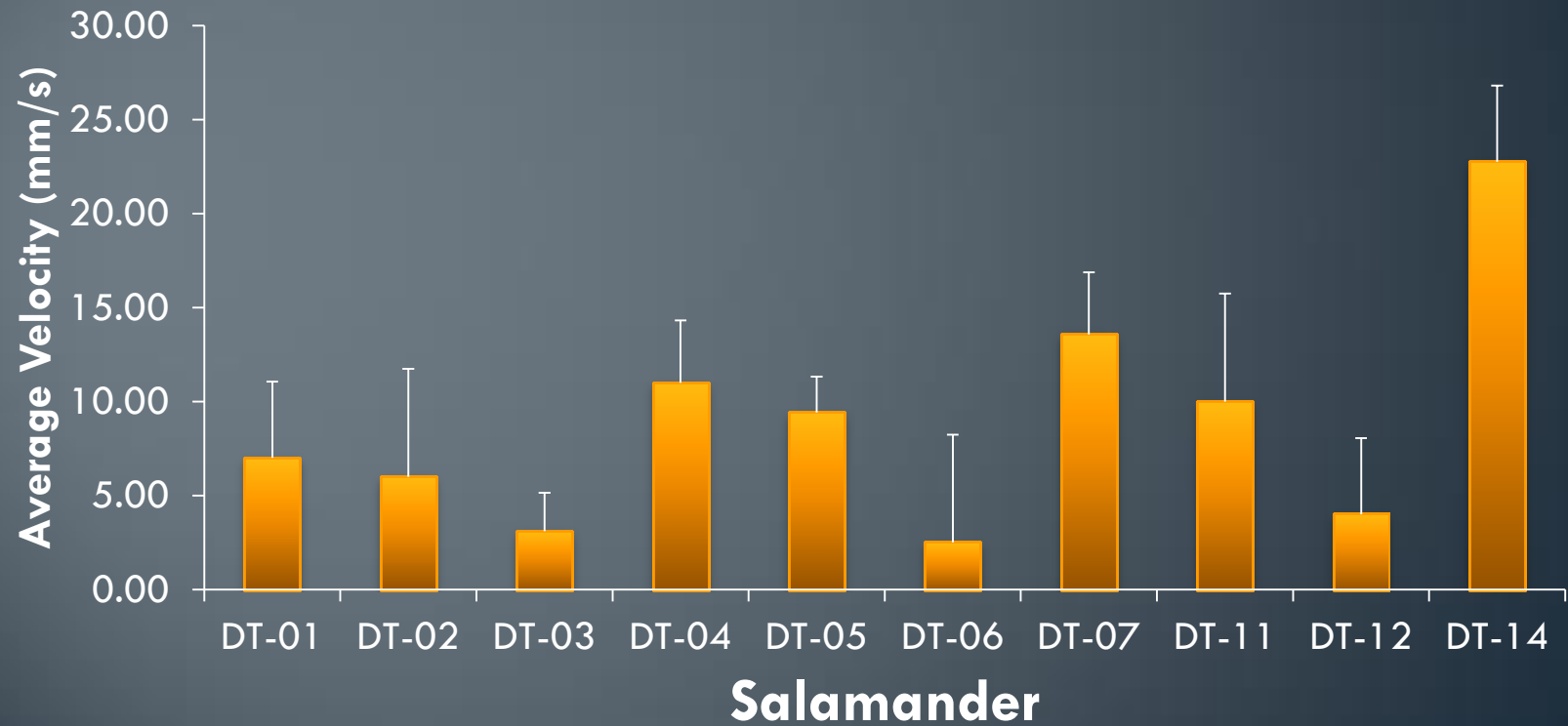
Video by: Robert Weaver Ph.D.

Results

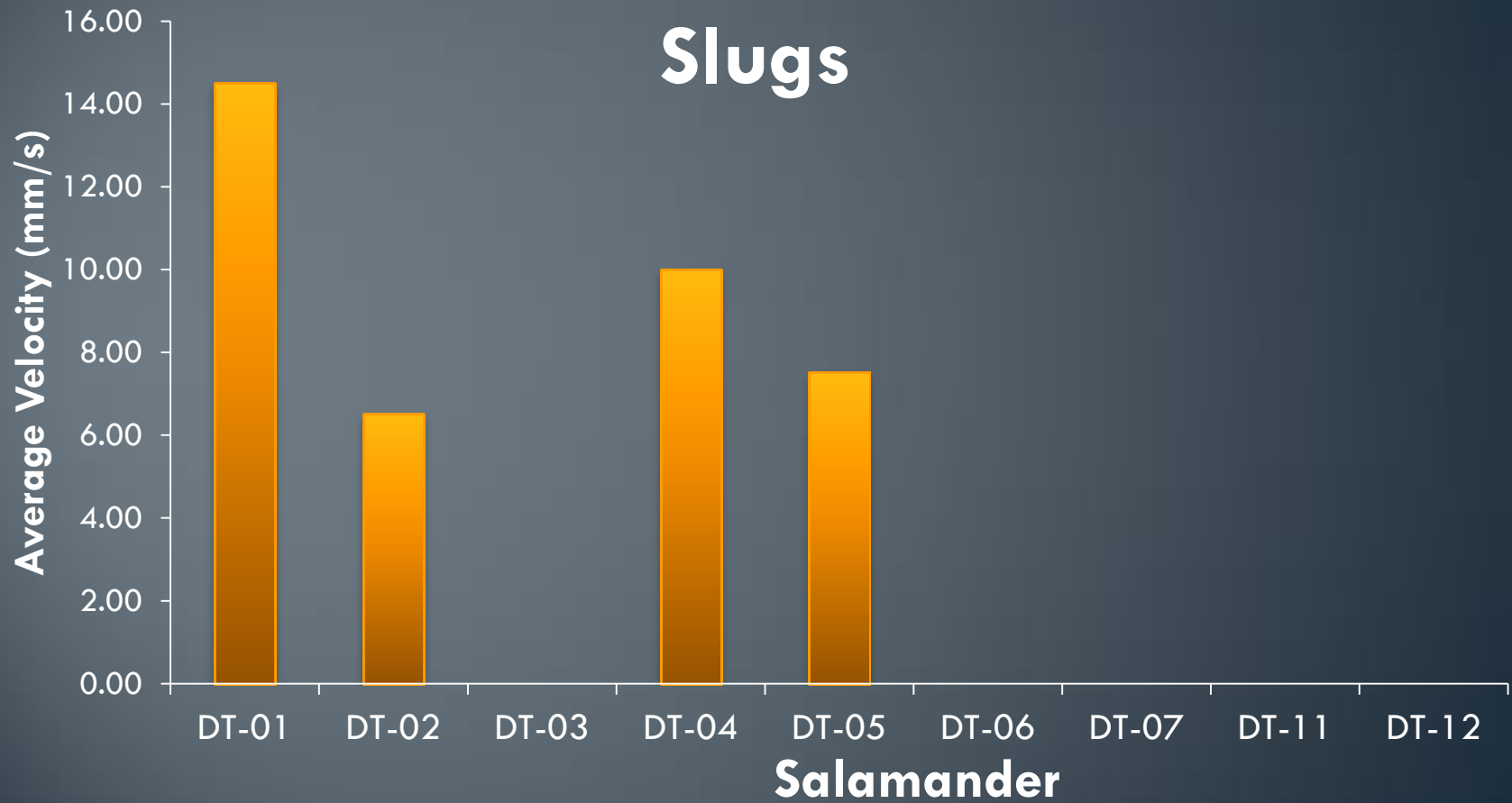


Results

Crickets

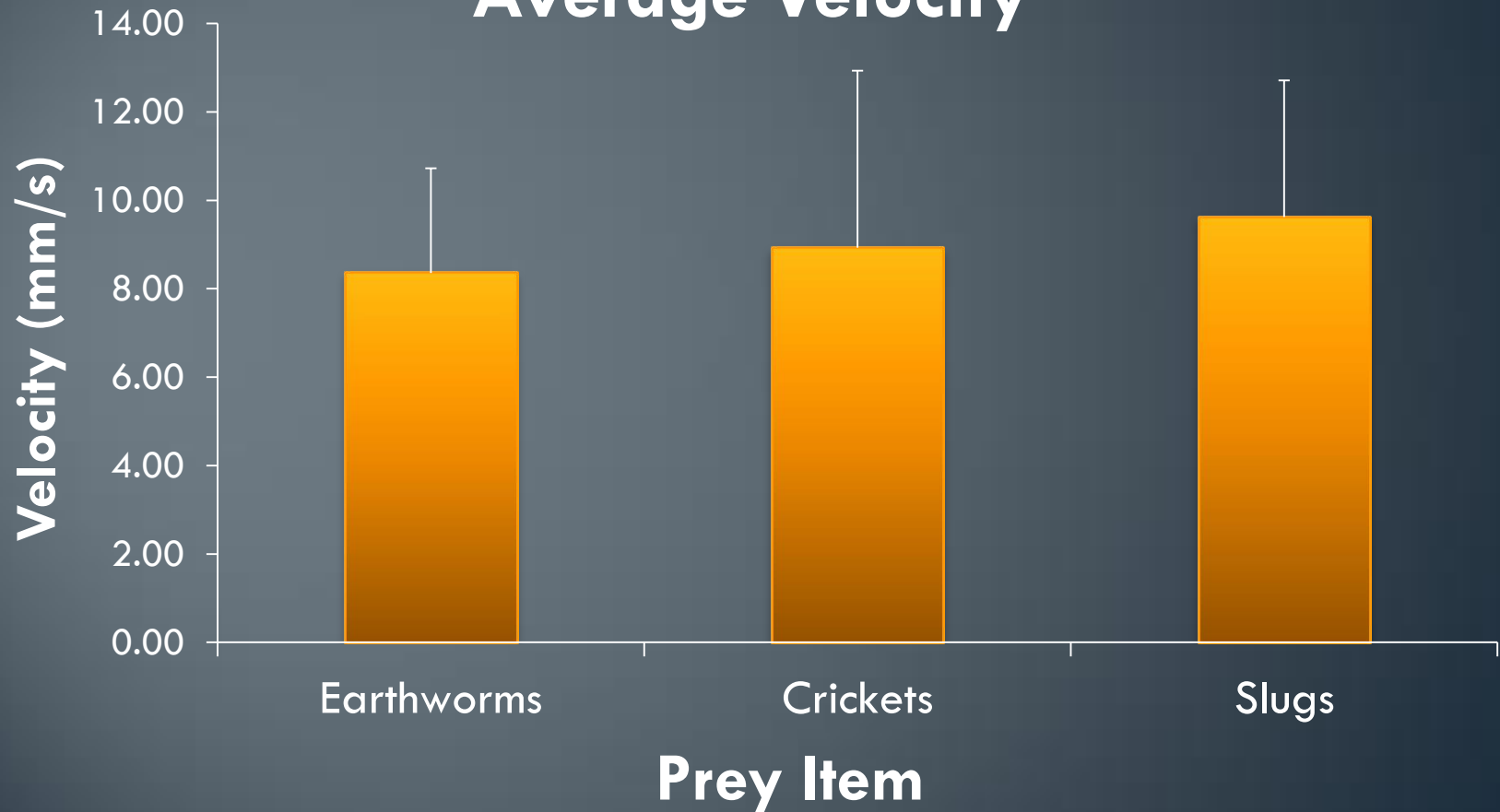


Results



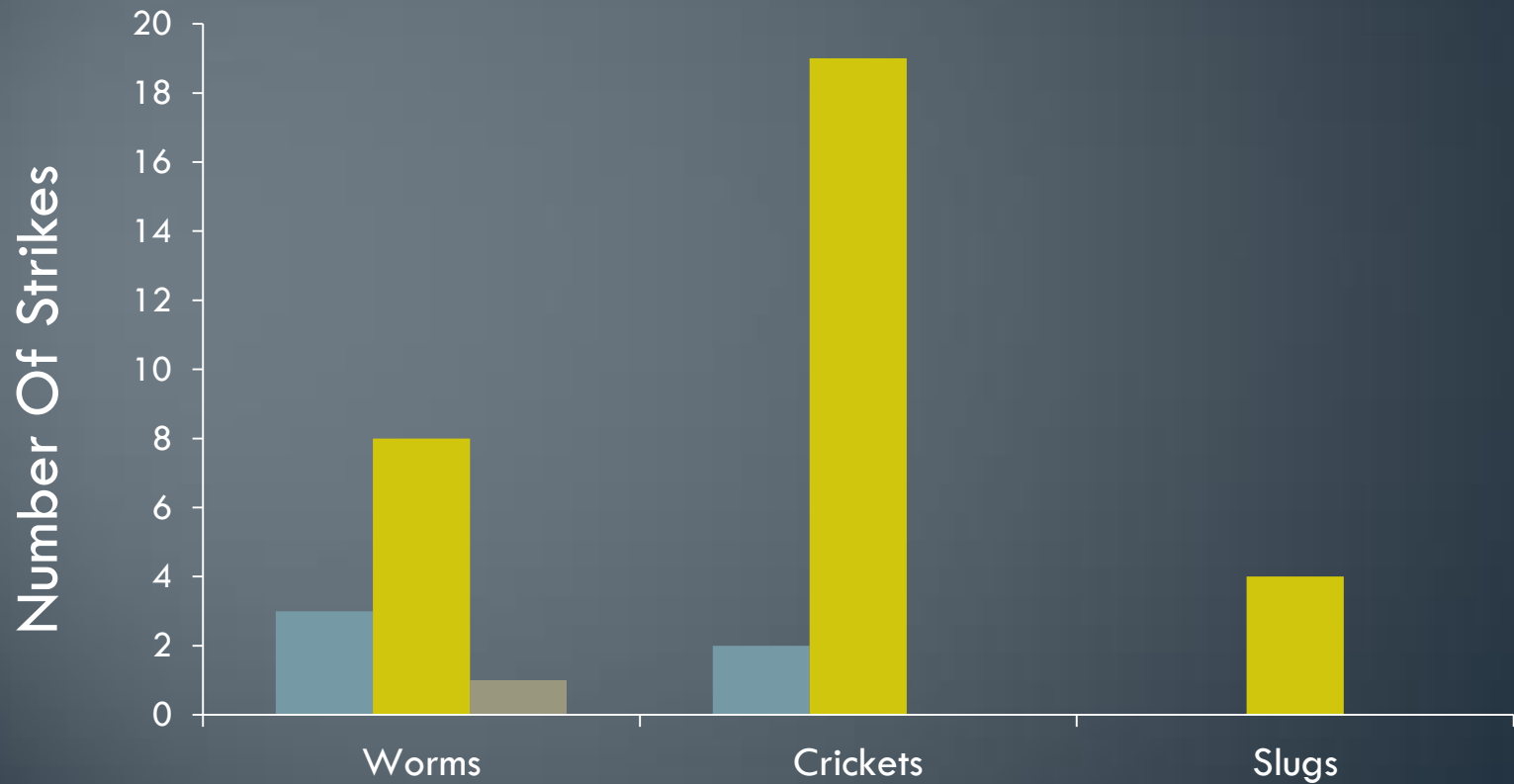
Results

Average Velocity



Results

Chi-Squared Results (Jaw Use)



Summary



- Variation is observed between individuals
- No significant difference average velocities between prey items
- Use of lingual is prominent

Acknowledgments

- Dr. Steven Wagner
- Dr. Robert Weaver
- Brandon Fessler
- David Reavill
- Sara Richbourg

- THANK YOU

