

## How do they do it? Specializations of Toads for Extremely Rapid Prey Capture



**Dr. Kiisa Nishikawa** is a Regents' Professor in the Department of Biological Sciences at Northern Arizona University. She received her Ph.D. in Zoology from the University of North Carolina. She was a postdoctoral fellow in the Department of Anatomy and Neurobiology at Dalhousie University and a Miller Postdoctoral Fellow in the Museum of Zoology at the University of California at Berkeley. Her research interests include evolution of brain and

behavior, biomechanics, muscle contraction, and neuromuscular control of ballistic movements. Twenty years of research in her laboratory has demonstrated that, among vertebrates, toads are uniquely adapted for ballistic prey capture. They achieve movement velocities more than 100 times greater than those of other anurans. In her presentation, Dr. Nishikawa will discuss adaptations of toads that contribute to extreme movement velocities and muscle power output, including anatomical substrates for catch and trigger mechanisms, muscle activation patterns, and muscle physiology.