

Functional Studies of Native Fish Foraging Mechanisms

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The broader goal of all studies in Dr. Ferry's lab is to understand how complex muscle-skeletal systems change through evolution, and the consequence of change for function in ecological contexts. We study fishes because they are the most successful, diverse, and speciose vertebrate group alive today. We are specifically interested in the muscular and skeletal elements associated with feeding because it is paramount to organismal survival. Arizona's native cyprinodontiform fishes are a diverse radiation of fishes under tremendous threat of habitat loss and degradation. The proposed research aims to understand how cyprinodontiform jaw mechanisms work for prey capture and which essential features of habitat must be restored in order to retain viable populations.