Evolution of endless fish forms most beautiful

Abstract: Organismal biology is at the cusp of the big data generation and museum collections are at the heart of this revolution. Using fishes I illustrate how we can generate large trait datasets on museum specimens and use them to improve our understanding of phenotypic evolution, through the integration of undergraduate research and modern technology. I discuss how we can quantify fish shape diversity and body size and highlight the neglected issue of "*researcher degrees of freedom*" which are the multitude of decisions made when designing, running, analyzing, and reporting results its impact on our conclusions.