

**ABSTRACT**

## **A Global Integrative Systematic Revision of Brachioteuthidae Pfeffer, 1908**

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The deep-sea squid family Brachioteuthidae Pfeffer, 1908 has representative species in all oceans except the Arctic. While not commercially harvestable, they are a food source for many predators including dolphins, seabirds, seals, and large fishes. Unfortunately, specimens are rarely collected and often damaged upon capture, which has led to unstable taxonomy in this family. The lack of clarity regarding species has hindered the understanding of this family. Therefore, the overall goal of the present study is to use an integrative taxonomic approach to resolve the unstable taxonomy of the Brachioteuthidae, through three main aims. First, the global revision of this family will involve the examination of specimens from local and international institutions and will provide clear descriptions following the guidelines of Roper & Voss (1983). Second, ontogenetic series of species will be illustrated and described when sufficient material is available. Finally, species delimitation and the higher taxonomy in the family will be aided by the inclusion of three mitochondrial gene regions (cytochrome c oxidase subunit 1 [COI], 16S rRNA, and 12S rRNA). The results of this thesis will be of international significance to the systematics, ecology, and reproductive understanding of this complex and unstable group of deep-sea squids, making it a vital resource for future ecological and systematic research. This poster shows background information into this complex group of squid, planned methods, and some preliminary phylogenetic results using already available DNA sequences.

### **References**

- PFEFFER, D. G. (1908). Nordisches Plankton. Zoology, 2, 4-4.
- Roper, C. F., & Voss, G. L. (1983). Guidelines for taxonomic descriptions of cephalopod species. The biology and resource potential of cephalopods. Memoirs of the National Museum of Victoria.