TALES FROM AN AQUATIC NUTRITIONIST: APPLYING FIELD STUDIES ON ELASMOBRANCHS TO MANAGED COLLECTIONS

Lisa A. Hoopes, PhD

Department of Research and Conservation, Georgia Aquarium, 225 Baker Street NW, Atlanta, GA 30313, USA

Abstract

Proper nutrition is the cornerstone of good health and a key component of preventative medicine programs at zoos and aquariums. Nutritional studies at zoological facilities have largely focused on terrestrial species due to relative ease in handling, feeding, and sampling, compared to their aquatic counterparts. Despite a growing number of elasmobranch species maintained in zoos and aquaria, little is known about species-specific nutrient requirements, and literature on wild diets are often lacking. Field studies on elasmobranchs provide a unique opportunity to collect non-invasive samples to understand baseline health and nutritional data on wild populations, which can be used to gauge the management of dietary health in aquarium collections. Blood sampling can provide information on trace mineral, vitamin, fatty acid, and heavy metal levels; while tissue sampling can provide information on trophic ecology and potentially, individual prey items in the diet. Ongoing field studies with spotted eagle rays (*Aetobatus narinari*), southern stingrays (*Dasyatis americana*), and sand tiger sharks (*Carcharias taurus*) suggest that there is room for improvement in managing the dietary health of these species. Additionally, the development of baseline data from wild populations may provide guidelines to assess not only health, but reproductive status, in managed elasmobranch collections.