Joshua Moyer Summer Research Grant Abstract

My research relates to the form and function of feeding in sharks. Over the last 400 million years, sharks have evolved and diversified more than many people may have thought. With that diversification came new ecologies – new habitats, diets, and life histories. Today, there are over 1,200 species of chondrichthyan fishes (the class of cartilaginous fishes that include sharks). Some are large, and some are small. Some eat turtles, seals, and other sharks. Others filter plankton from the water or specialize in eating crabs, clams, or lobsters. By looking at the similarities and differences in performance of an ecologically relevant task, such as feeding, we can learn a great deal. Linking feeding performance to similarities or differences in the body form (also known as *morphology*) of sharks allows me to address evolutionary questions related to how sharks diversified and evolved and why we see the distribution of life histories and morphologies of sharks that we do today.