



**Living World Lecture 2015-2016**

**Dr. Demian Chapman**

School of Marine and Atmospheric Sciences, Stony Brook University

**Fin-ale: averting extinction of the world's sharks and rays**

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Earth and Space Sciences Lecture Hall 001

**Summary:** Sharks and rays have been part of marine ecosystems since well before the rise of the dinosaurs and many species may soon join the ancient reptiles in extinction. Rough estimates place total annual catch of sharks at 100,000,000 per year, where many are discarded but the rest are used for human consumption. The primary products derived from sharks and rays are meat and, for some species, fins. Certain sharks and rays have fins that when processed yield noodle-like material that form the basis of the Asian delicacy shark fin soup. Fetching upwards of \$100 for a bowl the demand for fins in the last several decades has fueled an expansion and intensification of shark and ray fishing on a global scale. Sharks and ray populations replenish themselves very slowly and have simply been unable to keep up with the rate at which individuals are being removed from the ocean. In this talk I will outline what we know about the shark fin trade based on the latest analysis of trade and genetic analysis of the markets. I will review what fishing to supply this trade has done to shark and ray populations in several parts of the world and highlight the repercussions for the ocean and for us. Finally, I will share details of new conservation efforts that are emerging all over the globe that may turn the tide for sharks and rays if we continue to invest in them.

**Bio: Dr. Demian Chapman** (Ph.D.) is an Associate Professor at Stony Brook University's School of Marine and Atmospheric Science. His research combines modern genetic analysis with field ecology to better understand the biology, trade and conservation needs of the world's sharks and rays. He is especially interested in how sharks and rays are connected to specific geographic locations and what this means for the structure and genetic composition of their populations. This avenue of research is useful for designing protected areas, assessing populations and tracing fins in trade to source region of origin, all of which are key strategies for saving these animals.

Christopher Gobler is a professor within the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. He received his M.S. and Ph.D. from Stony Brook University in the 1990s. He began his academic career at Long Island University (LIU) in 1999. In 2005, he joined Stony Brook University as the Director of Programs for SoMAS on the Stony Brook – Southampton campus. In 2014, he was appointed as the Associate Dean of Research at SoMAS. His research examines the functioning of aquatic ecosystems and how that functioning can be effected by man or can affect man. He investigates harmful algal blooms (HABs) caused by multiple classes of phytoplankton in diverse ecosystems. Another research focus within his group is the effects of climate change effects on coastal ecosystems. A final area of interest is investigating how anthropogenic activities such as eutrophication and the over-harvesting of fisheries alters the natural biogeochemical and/or ecological functioning of coastal ecosystems.