

Submission Type

Oral Presentation

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Presenter Bio

Dr Michael Schwarz is Associate Director of the Virginia Tech: Virginia Seafood Agricultural Research and Extension Center, Co-Director of the Controlled Environmental Agriculture Innovation and Education Center, Affiliate Faculty of the VT Invasive Species Collaborative, Past President of both the United States and World Aquaculture Societies, and President of Quantum Tides Inc., an int. aquaculture consulting firm. Over the past 3 years, Michael has helped lead Virginia's initiative to valorize the invasive Blue Catfish into a high quality and value seafood product from the Chesapeake Bay,

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Abstract Title

BLUE CATFISH (*Ictalurus furcatus*) – THE TASTY APEX PREDATOR IN THE CHESAPEAKE BAY

Abstract Summary

The blue catfish (*Ictalurus furcatus*) was introduced into Virginia tributaries of the Chesapeake Bay during the 1970s and 1980s to support recreational fisheries. Since introduction, this nonnative species has expanded rapidly throughout nearly all tributaries and the mainstem of the Chesapeake Bay. In response, Maryland and Virginia have initiated efforts to manage blue catfish populations through expanded commercial harvest and market development. This presentation synthesizes blue catfish population dynamics, ecological impacts, harvest trends, and emerging seafood market strategies as a tool for invasive species management. Lessons learned from the Chesapeake Bay highlight opportunities and challenges associated with using commercial utilization to control high-biomass aquatic invasive species while supporting regional seafood economies.

Conference Themes

- Outreach & Education
- Innovation & Technology
- Commercial harvest/industry development

TAXA

- Freshwater AIS
- Marine

BLUE CATFISH (*Ictalurus furcatus*) – THE TASTY APEX PREDATOR IN THE CHESAPEAKE BAY

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The blue catfish (*Ictalurus furcatus*) was introduced into Virginia tributaries of the Chesapeake Bay during the 1970s and 1980s to support recreational fisheries. Since introduction, this nonnative species has expanded rapidly throughout nearly all tributaries and the mainstem of the Chesapeake Bay. Blue catfish now occur throughout Maryland and Virginia waters, extending to the mouth of the Chesapeake Bay, and have established exceptionally large populations, with individual fish able to exceed 45 kg (100 lbs).

Recent biomass estimates for blue catfish in the Chesapeake Bay watershed range from approximately 700 million to over 1 billion pounds. Gut content analyses of harvested fish demonstrate that blue catfish function as apex predators, consuming a wide range of native and commercially important species, including striped bass, croaker, trout, spot, clams, oysters, blue crabs, and other estuarine organisms. These impacts raise serious concerns for native biodiversity and longstanding commercial and recreational fisheries in the region.

In response, Maryland and Virginia have initiated efforts to manage blue catfish populations through expanded commercial harvest and market development. In 2025, an estimated 7 million pounds of blue catfish were harvested for human consumption, with processing capacity expansions underway or planned to support annual harvests approaching 50 million pounds. Additional industrial initiatives in Virginia are focused on valorizing processing byproducts into higher-value co-products.

This presentation synthesizes blue catfish population dynamics, ecological impacts, harvest trends, and emerging seafood market strategies as a tool for invasive species management. Lessons learned from the Chesapeake Bay highlight opportunities and challenges associated with using commercial utilization to control high-biomass aquatic invasive species while supporting regional seafood economies.