

Water Resources for Native or Invasive Species?

Objectives

The sailfin armored catfish (SAC), or plecos are an invasive species increasingly found in Florida waterways. The purpose of this paper is to identify the present and potential future economic impacts of SAC within the state and to demonstrate that water resource management decisions can have unintended consequences with uncertain economic relevance.

Background

Biologists have identified several features that seem to attract the species to Florida, including flood and drought conditions; muddy soils; shallow water, such as that found in manmade structures and natural lakes in Florida; and degraded systems with sufficient supplies of algal detritus. Thus water management decisions affect populations of both native and invasive species. Plecos are a valuable ornamental fish, and egg masses of the wild fish are gathered for aquaculture facilities that grow and sell plecos to pet stores. However alleged negative impacts attributed to SAC include:

- Losses to tilapia fishermen using haul seine gear in central Florida lakes;
- Losses to homeowner associations from burrowing into reflection pond bank structures;
- Losses to cast net fishers, and haul seine fishers in Lake Okeechobee; and
- Displacement of valuable commercial and recreational species.

Data and Methodology

Each of the alleged impacts will be reviewed for associated economic impacts. Some information about commercial fishing prices and catch through time, burrowing, and fish populations in Okeechobee are available from the Florida Fish and Wildlife and Conservation Commission (FWC). This information will be supplemented with interviews from fishermen, biologists and fishery management experts.

Expected Results and Discussion

Favorable conditions for SAC invasions are dependent upon water management district decisions. It will be important for decision makers to consider the unintended environmental side-effects of future policy decisions, and where possible to include estimates of environmental economic fallout into the economic calculus associated with management decisions.

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