The journey to death; asian swamp eel fate in a non-native habitat

Keywords: Synbranchidae, habitat, spawning event, eggs, Monopterus

Introduction

Asian Swamp eels belong to Synbranchidae family. They live in fresh water and they hide in the mud when the water supply dries up. Most eel species are hermaphroditic because they start their life as females then later change into males, although there is a small number of individuals are born and remain as male throughout their lives. Spawning can happen throughout the year. Females can produce up to 1,000 eggs during the spawning event, eggs are laid in bubble nests float at the water surface. These bubble nests located in shallow waters.

Native habitat

Asian swamp eel Originating from tropical and subtropical areas of Asian countries including India, Burma, Indonesia, Malaysia, Japan, and China. Non–native habitat

The Asian swamp eel was first introduced into the Hawaiian Islands in 1900, and in 1990, it was introduced to different ponds near Atlanta and Georgia, within the Chattahoochee River drainage basin. In 1993, there are two more populations of the eel have been discovered; one outside of Tampa, Florida, and one in southern Georgia near the Chattahoochee River. In 1997, eel was collected in the southeast and in west–central of Florida. It has been reported that the introduction of Asian swamp eel into Georgia as an aquarium release, and to Florida it might be because aquarium release, escape from fish farm or release of from the life fish market.

Ecological effects

There is concern in Georgia and Florida, that the species will spread to adjacent water areas as has happened in the Everglades region of Florida. It has been reported that the presence of internal parasites in the imported and wild–caught swamp eels from a U.S. retail food market as well as from the population which introduced in Florida, finding parasites in almost all the specimens means that Monopterus can be a vector for introduction of macroparasites. However, due to their weak swimming, small mouths, poor vision, slow growth and other eco–morphological characteristics, it seems unlikely that swamp eel will cause major ecological or economic problems in Florida. Nonetheless, the effects of largely and randomly introduced of Asian swamp eel are difficult to predict, a practical effort should be made to prevent future introductions of this species.

Control

The United States Geological Survey (USGS) recommended different methods to control the Monopterus albus population in Southern Florida. Selected water management practice has been established to control swamp eel populations by not open the water supply especially into the waters of Everglades National Park.
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