

The Channeled Apple Snail in Florida

Introduction

Recently the Channeled Apple Snail (*Pomacea canaliculata* group) has been receiving much media attention in Florida. This large, nonindigenous, freshwater snail is a native of South America and was most likely released in the in the early 1980s by persons in the tropical aquarium pet industry in the canal systems south of Lake Okeechobee. FWC biologists first observed these snails in 1987 and within the last ten years populations have rapidly expanded throughout the state. The Florida Department of Agriculture and Community Services (DOACS) has documented the spread of the snail from south Florida to as far north and west as Tallahassee. Large populations have been found near highly populated urban centers including Tampa, Orlando, Jacksonville, and Tallahassee and FWC biologists believe they were established due to releases or escapes from aquariums and culture tanks. In addition to Florida, introductions have occurred in Alabama, Georgia, North Carolina, Texas, Arizona, California, and Hawaii.

Identification and Biology

Currently, three apple snail species are known to occur in Florida, only one of which, the Florida Apple Snail (*Pomacea paludos*), is native. The Channeled Apple Snail is distinguished from the others by deeply incised grooves, or channels, on the shell. The primary diet consists of rooted aquatic vegetation. Channeled Apple Snails have rapid growth rates and relatively short lifespans (approximately 12 to 16 months). Apple snails have separate male and female sexes. Mating and egg-laying begins in March and can continue through September. Females emerge from the water, usually at night, to lay bright pink egg masses containing approximately 200 eggs on stable substrates such as tree trunks, pilings, or seawalls. Unlike the native apple snail (which lay one white egg mass per season), females of the Channeled Apple Snail can lay many egg masses throughout the reproductive season. They are tolerant of a broad range of environmental conditions and it appears colder temperatures may prevent their spread into temperate latitudes. In response to adverse conditions apple snails may burrow into sediments, seal their shells with a large operculum, and remain isolated from their surroundings in this condition for several months.

Potential Impacts

Although populations appear to grow unchecked, natural predators in Florida exist including limpkins, everglades kites, and alligators. In addition, redear sunfish most likely consume smaller immature snails. Impacts of Channeled Apple Snails in Florida aquatic ecosystems have not been scientifically determined, but damage to beds of rooted aquatic vegetation is a possibility. Significant damage to rice and taro fields in the Pacific islands and southeast Asia has been documented; however, no damage attributable solely to Channel Apple Snails has been noted in Florida, even with their presence in-state stretching back over 20 years. Eradication using chemicals has been

researched and attempted, however no effective chemical treatment has been developed to-date. Currently, the most effective control methods are hand or mechanical removal of snails and egg masses. Egg masses can be scraped off and allowed to fall into the water since eggs inundated with water will not hatch. **Only pink egg masses should be scraped or removed.** The larger white egg masses of the native Florida Apple Snail should be left undisturbed. **At no time should Channeled Apple Snails from aquaria be released in the wild!**

Agency Position

Channeled Apple Snails are non-indigenous to Florida and have been present in the state for over 20 years. They are a potential threat to our aquatic ecosystems, although no serious impacts have yet to be documented. Their greatest impact appears to be how they interact and possibly disrupt populations of native Florida Apple Snails, and FWC will be conducting research in this area. The agency stresses to the public the illegality of releasing captive snails from aquaria into the wild and if control measures of snail eggs is attempted that care be taken to destroy only those pink egg masses of exotic Channeled Apple Snails.

FWC Contact

Questions regarding Channeled Apple Snails or requests for assistance with snail identification should be directed to:

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