



Tilapia zilli

Redbelly tilapia, striped tilapia, Zilli's cichlid

Threat scores

1. Ecological impact

- Considered a potential competitor with native fish for food and spawning areas, and is potentially detrimental to California rice crops (Molnar 2008).
- A voracious herbivore which constitutes a serious threat to native aquatic plants, and the organisms that depend on these. Walter Courtenay in Hogg (1976) called it "the most destructive fish to submerged vegetation known next to the grass carp".
- Given their breeding habits, redbelly tilapia could compete with centrarchids for nesting sites and alter the stability of fish communities, through aggressive interactions.
- In Hyco Reservoir, North Carolina, feeding by introduced redbelly tilapia eliminated all aquatic macrophytes from the reservoir within a 2-year period that coincided with declines in populations of several native fishes; tilapia populations continued expanding in the absence of macrophytes because of its ability to switch to alternate food sources (Molnar 2008).



2. Invasive potential

- Introduced in most locations by state agencies, universities, or private companies for control of aquatic plants, to control mosquitoes and chironomid midges, as forage or food fish, and for aquaculture evaluation.

3. Geographic extent

- Native of Africa, now found throughout United States w/established populations in western and southern states and three Hawaiian Islands.
- Locally patchy

4. Management difficulty

Considered eradicated from all sites in Florida (Smith-Vaniz, personal communication) and Nevada (Molnar 2008).

Geography and Habitat

- Origin: West Africa through the Chad basin to the Nile, Lake Albert and Lake Turkana into Israel and the Jordan Valley (Molnar 2008).
- First introduction: 1974
- First reported in the Gulf by Hogg (1976) who collected specimens in 1974, in a small lake of Perrine, Dade county, Florida. This pop appears to have escaped from nearby fish farm, or aquarium release.
- Lakes, water courses, canals, brackish water, marine habitats
- Described as euryhaline, ventures rarely into brackish waters. Two specimens collected from marine waters in California (1977)

Invasion Pathways

1. Enclosed facilities
 - Accidental probable
 - Cause- fish farm escape
 - First reported in the Gulf by Hogg (1976) who collected specimens in 1974, in a small lake of Perrine, Dade county, Florida. This pop appears to have escaped from nearby fish farm, or aquarium release.
2. Pet, Aquarium, and Water Garden Trade - including organisms & facilities
 - Accidental probable
 - Cause- aquarium release
 - Most probably originated from the San Antonio Zoo's aquarium (Molnar 2008).
3. Stocking in Open Water
 - Intentional known
 - Cause- intentional stocking
 - They are annually stocked and have been collected in open waters of Alabama.
4. Biocontrol
 - Intentional known
 - Cause- weed control
 - Introduced into the Gulf of Mexico ecosystem, as well as to many other areas of the United States, primarily for aquatic weed control, to control noxious aquatic insects, and for culture as a food fish (Molnar 2008).

Non native locations

1. 41- Virginian
2. 42- Carolinian
3. 43- Northern Gulf of Mexico
4. 58- Northern California
5. 70- Floridian
6. 152- Hawaiian Islands

Sources

1. Molnar, Jennifer, et al. 2008. "Assessing the global threat of invasive species to marine biodiversity." *Frontiers in Ecology and the Environment*. 6 (9), pp. 485-492.
1. <http://conserveonline.org/workspaces/global.invasive.assessment>
2. http://images.harc.edu/Sites/GalvBayInvasives/Species/Photos/TIORSA_20051102125501_Nile%20tilapia.jpg