



## Oreochromis aureus

### Blue tilapia

#### Threat scores

1. Ecological impact
  - “Out-competes and displaces native species, greatly increases total biomass in regional lakes. Aggressive behavior probably alters community structure where they are abundant” (Molnar 2008).
2. Invasive potential
  - Human assisted introductions: stocking for aquaculture, bio-controls, bait bucket releases. Intentional and accidental fish farm releases.
  - Wide spread in Florida & Texas, & continue to expand their range (Molnar 2008).
3. Geographic extent
  - Spread throughout Gulf States from Florida to Texas.
4. Management difficulty
  - Was successfully eradicated from Trinidad Reservoir in Texas, but so widespread now that eradication from riparian habitats impossible.



#### Geography and Habitat

1. “Origin: River Senegal, central Niger, upper tributaries of Benue River, Lake Chad, lower Shari & Logone Rivers, lower Nile, Na'amen River, Yarkon River near Tel Aviv, Lake Huleh, Lake Tiberias, River Jordan, oasis of Ain Fashkha on Dead Sea shore” (Molnar 2008).
1. First introduction: mid 1900's
2. Stocked by state fisheries in Alabama
3. Ponds, water courses, lakes, brackish water, marine habitats
4. Blue tilapia are found mostly in fresh waters, but occur in brackish estuaries and rarely marine waters also (Molnar 2008).

#### Invasion Pathways

1. Stocking in Open Water
  - Intentional known
  - Cause- fisheries stocked
  - “Stocked by state fisheries in Alabama. The source of introduction of blue tilapia in Texas is unknown (Hubbs in Hubbs et al., 1978), although Howells (1992) suggested they were introduced through fish farm and bait bucket releases” (Molnar 2008).
2. Biocontrol
  - Intentional known
  - Cause- algae control
  - “It has also been continually stocked in Alabama by state fisheries agencies for possible use in aquaculture and to control filamentous algae growth, but appears unable to survive the winters” (Molnar 2008).
3. Pet, Aquarium, and Water Garden Trade - including organisms & facilities
  - Accidental known
  - Cause- pet release
  - This species has been introduced throughout the Gulf of Mexico ecosystem through aquarium and fish farm releases (Molnar 2008).

4. Enclosed Facilities
  - Intentional known
  - Cause- fish farm release
  - Reported releases from fish farms.

#### Non native locations

1. 43- Northern Gulf of Mexico
2. 70- Floridian

#### 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.
2. <http://conserveonline.org/workspaces/global.invasive.assessment>
3. [http://www.fishbase.org/images/thumbnails/jpg/tn\\_Oraur\\_u2.jpg](http://www.fishbase.org/images/thumbnails/jpg/tn_Oraur_u2.jpg)