



Caulerpa taxifolia

Green algae, Caulerpa, Killer alga, Sea weed

Threat Scores

1. Ecological Impact

- Out-competes other algal species, seagrasses & sessile invertebrates for food & light or due to toxic effects of caulerpenyne compounds
- Its large monospecific meadows vastly reduced native species diversity & fish habitat (NIMPIS, 2002a)
- Reduction of catches for commercial fishermen due to the elimination of fish habitat, & entangling of nets & boat propellers also affect efficiency (NIMPIS, 2002f)
- Fish able to eat *C. taxifolia*, such as the Mediterranean bream (*Sarpa salpa*), accumulate toxins in their flesh that make them unsuitable for human consumption (Meinesz & Hesse, 1991)

2. Invasive Potential

- Although it also reproduces sexually, settlement takes place primarily by fragmentation increasing the rate of dispersion
- Species' success as an invader in non-native habitats is the lack of natural predators
- Genetic evidence indicates that the most likely source of infestations in areas where *C. taxifolia* is not native is through release from aquaria. Once introduced, *C. taxifolia* spreads by fragmentation, and even a small, broken-off fragment can form a new plant

3. Geographical Extent

- Regionally pervasive

4. Management Difficulty

- Economic impacts of eradication include approx \$US 6 million spent in Southern California by 2004 (Anderson, 2004) & \$AUS 6-8 million in South Australia
- Chemical controls



Photo: A. Meinesz

Geography and Habitat

1. Native: Caribbean coasts, Gulf of Guinea, Red Sea, East African coast, Maldives, northern Indian Ocean coasts, southern China Sea, Japan, Hawai'i, Fiji, Australia
2. Introduced: California
3. Habitat
 - Marine, intertidal zones, coral reefs, estuaries, bays, coastland
 - Substrates from rock, sand and mud to sea grasses
 - Usually found in depths of 3 - 35 m, but has been recorded to 100 m in Mediterranean

Invasion Pathways

1. Freshwater/Marine transportation - cleansing anchors and fishing nets
2. Pet, aquarium, and water garden trade - intentional release probable
3. Ballast water and sediments

Non-Native Locations

1. 58- Northern California

2. 59- Southern California Bight

Sources

1. Molnar, Jennifer et al. 2008. Assessing the global threat of invasive species to marine biodiversity. *Frontiers in Ecology and the Environment*. Vol. 6, No. 9, pp. 485-492.
2. <http://conserveonline.org/workspaces/global.invasive.assessment>
3. http://swr.nmfs.noaa.gov/hcd/HCD_webContent/CAULER7.jpg