

## Aquarium Caulerpa

### *Caulerpa taxifolia*

(M.Vahl) C. Agardh, 1817

<b>Division:</b>	Chlorophycota
<b>Class:</b>	Chlorophyceae
<b>Order:</b>	Caulerpales
<b>Family:</b>	Caulerpaceae



Copyright: Scullion Littler et al. 1989

#### Description

*Caulerpa taxifolia* is a light green macroalgae with upright leaf-like fronds arising from creeping stolons. The fronds are flattened laterally and the small side branchlets are constricted at the base (where they attach to the midrib of each frond), are opposite in their attachment to the midrib (as opposed to alternating) and curve upwards and narrow towards the tip. The invasive aquarium clone is morphologically identical to native populations of this species. Frond diameter is 6-8 mm and frond length is usually 3-15 cm in the shallows, 40-60 cm in deeper situations but can grow up to 2.8 m in height.

#### Reproduction & Growth

Native populations of *C. taxifolia* are known to reproduce sexually, however the aquarium strain is apparently an all-male clone (only producing male gametes). In the Mediterranean the aquarium strain spreads vegetatively by growth of the stolons or by regeneration from broken off fragments as small as 1 square centimetre in size.

#### Habitat

Found on a wide variety of substrates from rock, sand and mud to seagrasses. It is usually found in depths of 3-35 m, but has been recorded to 100 m in the Mediterranean. The invasive aquarium strain is able to occupy up to 100% of the available substratum. Native populations in tropical waters are found on rocky reefs and seagrass meadows in sheltered or moderately wave-exposed areas in both polluted and pristine waters.

#### Feeding Primary Producer

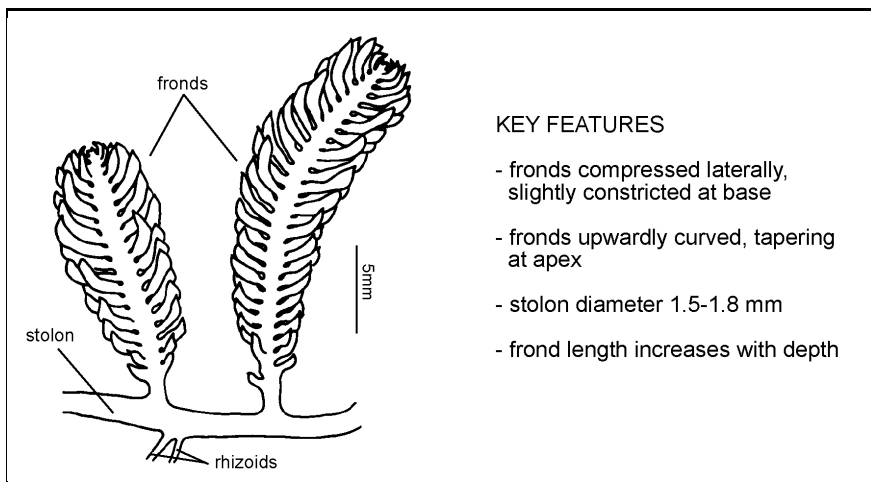
*C. taxifolia* produces its own food through photosynthesis.

#### Predators

*C. taxifolia* aquarium strain in the Mediterranean Sea is eaten by the sea slugs: *Oxynoe olivacea*, *Lobiger serradifalci* and *Elysia subornata*. Caulerpenyne, a toxin produced by *C. taxifolia* also deters other grazing species.

#### Impacts

*C. taxifolia* aquarium strain in the Mediterranean Sea is extremely invasive and smothers other algal species, seagrasses and sessile invertebrate communities. It does this by either out-competing them for food and light or due to the toxic effects of its caulerpenyne compounds. Its large monospecific meadows have vastly reduced native species diversity and fish habitat.



#### KEY FEATURES

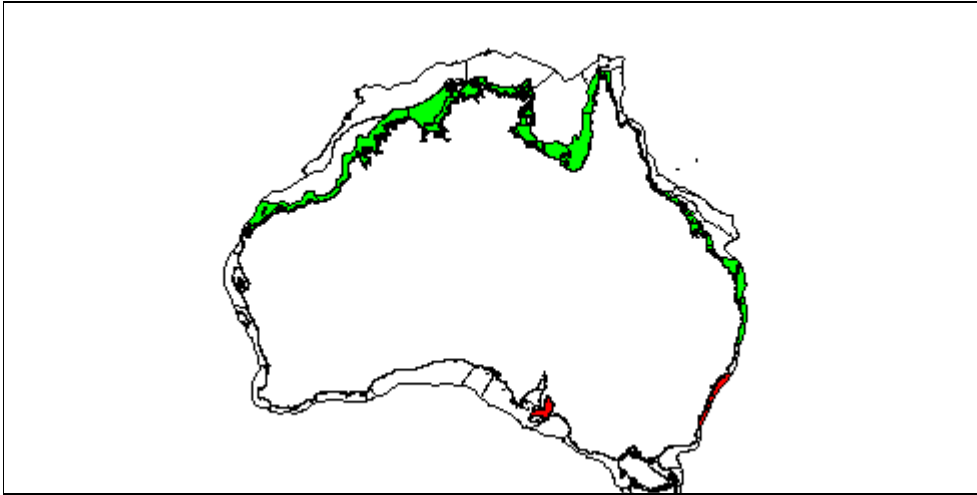
- fronds compressed laterally, slightly constricted at base
- fronds upwardly curved, tapering at apex
- stolon diameter 1.5-1.8 mm
- frond length increases with depth

Copyright: Diagram - Sartoni, 1978

#### Similar species

- Caulerpa mexicana* Kuntzig ex Sonder, 1849
- Caulerpa prolifera* (Forsskaal) Lamouroux, 1809
- Caulerpa racemosa* (Forsskaal) J. Agardh, 1873

## Australian IMCRA BioRegion Infection Status



### Control Options

For control information see the web site: <http://crimp.marine.csiro.au/nimpis>

### Likely Vectors - Class/Vector

Fisheries

Fisheries: accidental with delibera

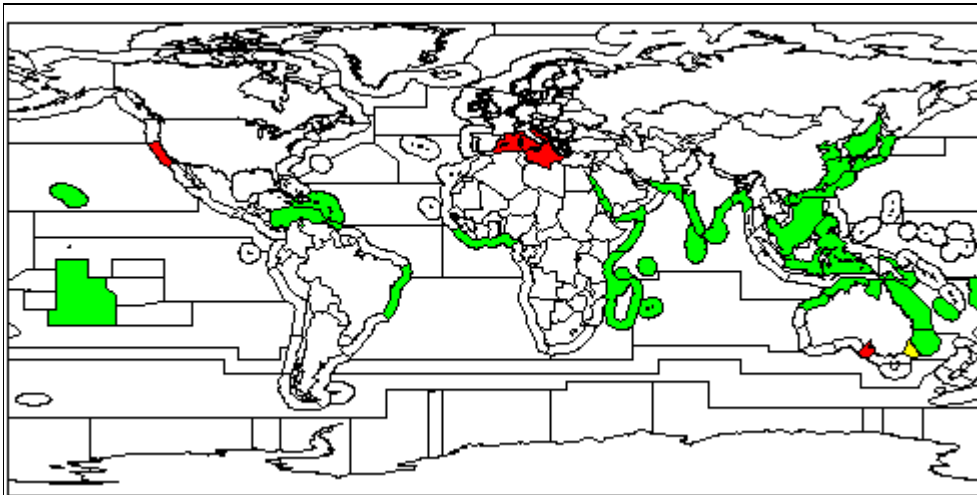
Natural Dispersal

Natural Dispersal

Ornamental

Individual release: accidental rele

## Worldwide BioRegion Infection Status



Introduced  
Native  
Cryptogenic

## Key References

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