

*Caulerpa sertularioides*

(Gmel.) Howe 1905

*C. sertularioides* is a small delicate green alga found only in O'ahu and Kaua'i. This species closely resembles *C. taxifolia*, the invasive "killer weed" of the Mediterranean.

Division: Chlorophyta  
 Class: Ulvophyceae  
 Order: Bryopsidales  
 Family: Caulerpaceae  
 Genus: *Caulerpa*



## IDENTIFYING FEATURES

## DESCRIPTION

Branches, feather-like, flattened, and upright, 3 - 5 cm high, rising from a creeping stolon (runner), 1 - 2mm in diameter, anchored by rhizoids to the substrate. Branchlets oppositely attached to midrib, flattened, slightly curved upwards and tapered at both base and tip. Midrib is slightly flattened, appearing oval in cross-section.

This species resembles another native Hawaiian *Caulerpa* species, *C. taxifolia*. *C. sertularioides* is more delicate and the branchlets are rounded, compared to the flattened branchlets of *C. taxifolia*. The rising branches are also more rounded toward apices, compared to the more angular, squared-off branches of *C. taxifolia*.

## COLOR

Light green to yellow green.

## HABITAT

This delicate plant is usually found in warm, quiet waters in tide pools or on sandy, calm reef flats. It anchors to sandy bottoms or coral rubble by the creeping rhizoids.



## STRUCTURAL FEATURES

Thallus non-septate, coenocytic, traversed by trabeculae, which are extensions of cell wall; reproduction vegetative and sexual, latter anisogamous. Gametes liberated through papillae that develop on frond or occasionally on frond.

## DISTRIBUTION

### HAWAI'I

Northwest Hawaiian Islands, O'ahu, Kaua'i.

### WORLDWIDE

Pacific Mexico, Caroline Islands, Micronesia, North Marianas, Marshall Islands, Gilbert Islands, New Caledonia, Solomon Islands, Japan, China, Australia, Philippines, Tahiti, Indonesia, Indian Ocean, Caribbean to Brazil.

### MECHANISM OF INTRODUCTION

Indigenous to Hawai'i.

## ECOLOGY/IMPACT

Little information has been recorded on *Caulerpa sertularioides*. This green alga is a native of Hawai'i, and is quite common throughout the world. The Hawaiian version is small and delicate and grows in small patches in quiet, warm waters on reef flats.

This species is an unassuming, uncommon alga that can easily be mistaken for *C. taxifolia*. *C. taxifolia* is on Invasives lists elsewhere in the world because of its highly invasive nature. Though not an invasive in Hawaiian waters, *C. taxifolia* communities should be watched for invasive tendencies. For this reason, it is important to differentiate between the two species.

The extensive rhizoid system of *C. sertularioides* aids in nutrient acquisition from sediments. Similar to other *Caulerpa* species, recruitment primarily occurs by fragmentation, but *C. sertularioides* also reproduces sexually.

## REFERENCES

Abbott, I.A., 2001, unpublished manuscript.

Eubank, L.L., 1946. Hawaiian Representatives of the Genus *Caulerpa*. University of California Publications in Botany, V. 18 : 409-432.

Larned, S.T., 1998. Nitrogen- versus phosphorus-limited growth and sources of nutrients for coral reef macroalgae. *Marine Biology*, 132: 409-421.

Littler, D.S. and Mark M., 2000. *Caribbean Reef Plants*. OffShore Graphics, Washington, D.C.

Magruder, W.H, and J.W. Hunt, 1979. *Seaweeds of Hawai'i*. Oriental Publishing Company, Honolulu, Hawai'i.

### WEB LINKS

Virtual Herbarium. <http://www.botany.hawaii.edu/reefalgae/greenskey.htm>

*Caulerpa sertularioides* herbarium sheet

