

*Bryopsis hypnoides*

J.V. Lamouroux 1809

*Bryopsis hypnoides* forms delicate fronds that are part of a diverse, highly competitive intertidal community. This species may be more competitive in areas with high nutrient input.

Division Chlorophyta  
 Class Chlorophyceae  
 Order Bryopsidales  
 Family Bryopsidaceae  
 Genus *Bryopsis*



## IDENTIFYING FEATURES

## DESCRIPTION

Plants in filamentous tufts, to 10 cm tall, branching in irregular, scattered pattern. Primary axes highly branched. Fronds decrease in diameter with each successive division; branchlets form irregularly, undifferentiated from axes, constricted at base. Apices rounded. Rhizoidal system fibrous, tightly woven.

## COLOR

Dull or dark green.

## HABITAT

Common near freshwater and nutrient rich outputs. Attaches to hard substrates such as basalt, rocks, or rubble. Forms delicate fronds which move with currents.

## STRUCTURAL

Main axes 65-140  $\mu\text{m}$  diameter, branchlets 40-80  $\mu\text{m}$  diameter. Apices rounded. Vegetative pinnules function as the gametangia. Plants are dioecious, with male plants becoming yellowish-green and female plants turning dark green.

## DISTRIBUTION

### HAWAI'I

Northwest Hawaiian Islands, O'ahu, Maui, Kaua'i, Lana'i, Moloka'i and Hawai'i Island.

### WORLDWIDE

World-wide distribution: Australia, Atlantic Ocean, Mediterranean, Caribbean, Indian and Pacific Oceans.

### MECHANISM OF INTRODUCTION

Indigenous to Hawai'i.

## ECOLOGY/IMPACT

*Bryopsis hypnoides* is usually only a small part of the biomass of the diverse, highly competitive reef flat community. Soft, feathery tufts of this alga are often found attached to rocks among species of turfs and other low growing macroalgae. Like most green algae, *Bryopsis* species are highly opportunistic in eutrophic conditions. Communities found near fresh water output that is nutrient rich, or where water temperatures fluctuate will have a higher biomass of the fast growing green alga.

*Bryopsis* species are potentially invasive. Like the troublesome *Caulerpa taxifolia*, the genus produces chemical defenses that are toxic to most herbivorous organisms. Therefore, if environmental conditions occur that support fast growth of this species, it may become more competitive and dominant.

## REFERENCES

- 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 Publ.Co., Honolulu, Hawai'i.

### WEB LINKS

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