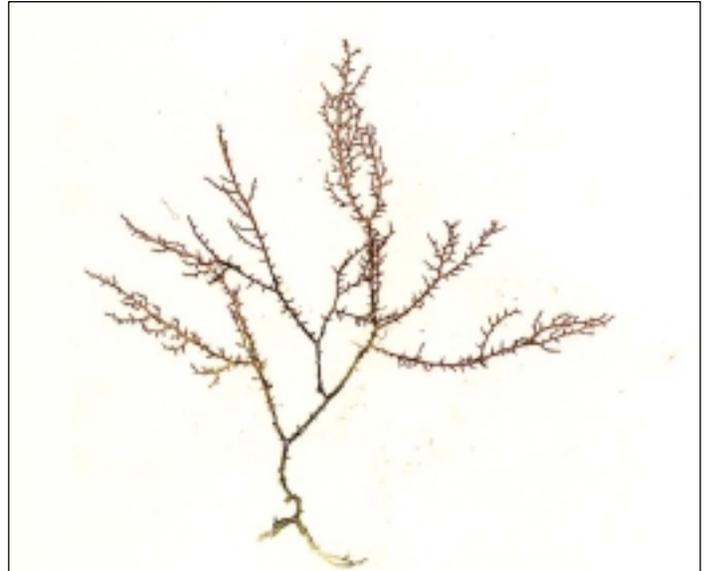


Hypnea cervicornis

J. Agardh 1851

Hypnea cervicornis was a common epiphyte attached to the upper branches of other reef algae in the subtidal until the introduction of *H. musciformis*.

Division Rhodophyta
 Class Rhodophyceae
 Order Gigartinales
 Family Hypneaceae
 Genus *Hypnea*

**IDENTIFYING FEATURES****DESCRIPTION**

Plant lax, from 3 - 30 cm long (most less than 15 cm) in tangled, bushy clumps. Axes extend through entire length of plant, but main branches absent; dichotomous branching throughout. Axils rounded, with sides symmetrically developed, with side branches at times growing almost horizontally for 1 - 5 mm before bending up or curling downward. This curling tendency produces the characteristic tangled branches. Branches coarser below (1.5 mm diam.) more slender above (0.25 mm), tapering abruptly to acute tips. Spine-like branchlets 1 mm long, few to many. Holdfasts small, inconspicuous, or lacking.

COLOR

Commonly yellowish, but deep red when shaded.

HABITAT

Hypnea cervicornis is found in intertidal tidepools and on shallow reef flats, where it varies in color from bright yellow in areas with bright sunlight to dark red in shaded areas. This alga is either attached to rock or coral rubble or epiphytic on other algae, commonly species of *Sargassum*.

STRUCTURAL

Medulla appear parenchymatous around central axial cell; cortical filaments with few divisions on radii, outer layer pigmented. Tetrasporangia zonately divided, in raised nemathecium, usually on ultimate branches; spermatangia borne in chains in slightly swollen nemathecium at base of branchlets. Cystocarps conspicuous, rounded, without discharge pore.

DISTRIBUTION

HAWAI'I

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

WORLDWIDE

Eastern Atlantic, Caribbean, Indian and Pacific Oceans.

ECOLOGY/IMPACT

Before the introduction of *Acanthophora spicifera* and *Hypnea musciformis*, *H. cervicornis* was one of the most common intertidal reef algae on Hawaiian reefs, and had a close association with *Laurencia* species. The native species were both quite common on reef flats with low to moderate wave action. *A. spicifera* entered the same niche and competed successfully with *Laurencia* spp. and enhanced the productivity of *H. cervicornis*. *H. musciformis*' successfully invaded into the same niche, and replaced *H. cervicornis* as the species most often found attached or entangled on the upper branches of *A. spicifera*.

H. cervicornis appears to be not as widespread as it once was, but is still epiphytic on many reef algae. This alga resembles its primary competitor, *H. musciformis*, except for the lack of the flattened broad hooks associated with the invader.

H. cervicornis is considered an economically important alga for its production of carrageenan, an important thickener in food and beauty products.

REFERENCES

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- 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 Hawaii. Oriental Publ. Co., Honolulu, Hawai'i.
- Russell, D.J. 1992. The ecological invasion of Hawaiian reefs by two marine red algae, *Acanthophora spicifera* (Vahl) Boerg. and *Hypnea musciformis* (Wulfen) J.Ag., and their association with two native species, *Laurencia nidifica* J. Ag. and *Hypnea cervicornis*. J.Ag. ICES Mar. Sci. Symp., 194: 110-125.

WEB LINKS

- Frondose Algae of Waikiki. <http://www.botany.hawaii.edu/reefalgae/>
- Marine Invasives of Hawai'i. <http://www.botany.hawaii.edu/Invasive/default.htm>
- The Indian River Lagoon Species Inventory; <http://www.serc.si.edu/sms/IRLSpec/index.htm>
- Virtual Herbarium. <http://www.botany.hawaii.edu/reefalgae/redskey.htm>