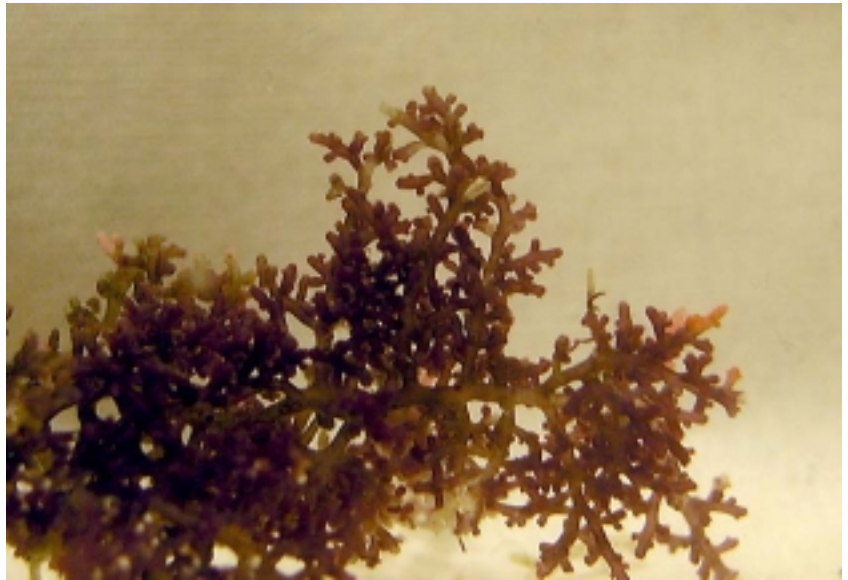


Laurencia nidifica

J. Agardh 1852

Laurencia nidifica, or *limu mane'one'o*, is an indigenous Hawaiian species which is in direct competition with the more successful invasive *Acanthophora spicifera*.

Division Rhodophyta
 Class Rhodophyceae
 Order Ceramiales
 Family Rhodomelaceae
 Genus *Laurencia*



IDENTIFYING FEATURES

DESCRIPTION

Firm, erect plant, to 10 cm tall, arising singly or in tufts from an entangled base. Terete axes are relatively thin, 0.5 - 1 mm in diameter, branching rarely more than 3 orders with the main divisions subdichotomous. Next orders are varied: alternate, opposite, or occasionally whorled. Branchlets are short, with blunt, indented tips.

Because of the high variation in color, branching pattern and texture, it is not simple to identify *Laurencia* species in the field.

COLOR

Among the most colorful in the field: rose, pink, dark brown. Highly variable, from straw colored in sunny locations to dark red in shaded habitats or along one plant from upper to lower portions.



Laurencia nidifica
herbarium sheet

HABITAT

Laurencia nidifica is often found on reef flats and in lower intertidal habitats, 1 to 3 meters deep, attached to eroded coral or basalt rocks. Often found with *Acanthophora spicifera*, with which *L. nidifica* may even be entangled.

Often found with epiphytic *Hypnea musciformis* or *H. cervicornis* attached to the upper branches.



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STRUCTURAL

Cortical cells subquadrate, walls not projecting; lenticular thickenings occasional, not in every section. Tetrasporangia of parallel type.

DISTRIBUTION

HAWAI'I

Laysan, O'ahu, Kaua'i, Moloka'i, Lana'i.

WORLDWIDE

South Pacific and Indian Ocean.

MECHANISM OF INTRODUCTION

Indigenous to Hawai'i.

ECOLOGY/IMPACT

Laurencia nidifica is a common shallow subtidal red alga that is often found in communities with *Acanthophora spicifera*, *Hypnea musciformis* and *H. cervicornis*. *L. nidifica* and *A. spicifera* are often found attached to one another or even entangled. *L. nidifica* was recorded in Hawaii as early as 1863, leading to the belief that it is an indigenous species on Hawaiian reefs. The near proximity and greater biomass of the invasive, *A. spicifera*, to *L. nidifica* suggests that the invasive is competing with the indigenous *L. nidifica* for substrate and forcing it seaward into deeper waters. In a study of the distribution of these species, *L. nidifica* was the only species that increased in biomass when *A. spicifera* decreased in biomass.

Hypnea cervicornis was often found epiphytically attached to the upper branches of *L. nidifica* until the introduction of another invasive, *H. musciformis*. Since then, both *Hypnea* species are found attached to *L. nidifica*, with the more competitively successful *H. musciformis* more prevalent. The introduction of the two invasives, *A. spicifera* and *H. musciformis*, has changed the community structure of the shallow reef flat from *L. nidifica* with the epiphytic *H. cervicornis* attached, to the more aggressive *A. spicifera* and the epiphytic *H. musciformis*.

This species is used as a condiment by Hawaiians because of its peppery taste.

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