



# Red seaweed

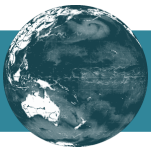
REPUBLIC OF THE  
MARSHALL ISLANDS

*Kappaphycus alvarezii* (Doty) Doty ex P.C.Silva, 1996

## KEY FEATURES



- Bushy, branched red seaweed that forms growths in shallow reef areas
- Thallus (frond with no tissue organisation) ranges from 24 to 48 cm; branches are cartilaginous and pliable, ranging from 8 to 12 cm in length, with unilateral to irregular branching
- Branch diameter ranges from a few mm at the branch tips to greater than 1 cm in older tissue
- Generally, branches are smooth, and the thallus can be short with many branches to much larger with long smooth branches
- Prefers coral to rocky substrates in areas where water flow is slow to moderate
- Wide tolerance to temperature conditions and a rapid growth rate in warmer waters i.e. 25–30°C



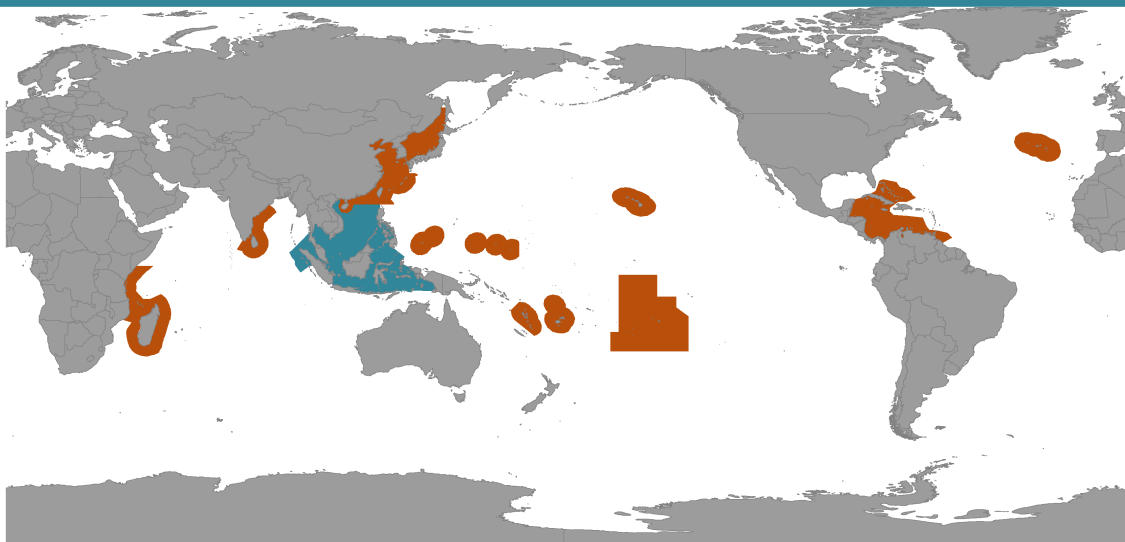
## PATHWAY

✓ ballast water

✓ biofouling

✓ aquaculture transfer

Native  
Cryptogenic  
Non-indigenous





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## IMPACTS



### Environmental impacts

Very high growth rate, doubling in 15–30 days; in Hawai'i has spread at a rate of 260 m per year. Has spread from abandoned cultivation sites in Panama to seagrass beds, coral patches, and mangroves, where it appears to smother native corals and vegetation



### Human health impacts

None known



### Social & cultural impacts

None known



### Economic impacts

Generally introduced for cultivation as a producer of kappa-carrageenan which is used in milk products, toothpaste, and jellies. In areas where it has escaped cultivation, through displacement of native algae, it may indirectly change the abundance of fish and invertebrates of commercial interest

## ADDITIONAL DETAILS

- Clone cultivation is generally used for farming
- Can be confused with other species in genus *Kappaphycus*

## DISTRIBUTION

Present in the Republic of the Marshall Islands

### Native range

Indo-West Pacific

### Non-indigenous range

Introduced to Fiji, Tahiti, Micronesia, Hawai'i, Kenya, India, Brazil, Venezuela, and Panama

## CREDITS AND REFERENCES (click reference for more information)

### Images

Top: Md. Simul Bhuyan ([CC BY -SA 4.0](#)), bottom: from [Kasim and Mustafa \(2017\)](#) ([CC BY-NC-ND 4.0](#))

### References

[Botany, University of Hawai'i at Manoa \(2001\)](#), [Kasim and Mustafa \(2017\)](#), [Rodgers and Cox \(1999\)](#)