



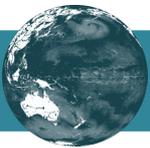
# Scaly tunicate

*Microcosmus squamiger* Michaelsen, 1927

## KEY FEATURES



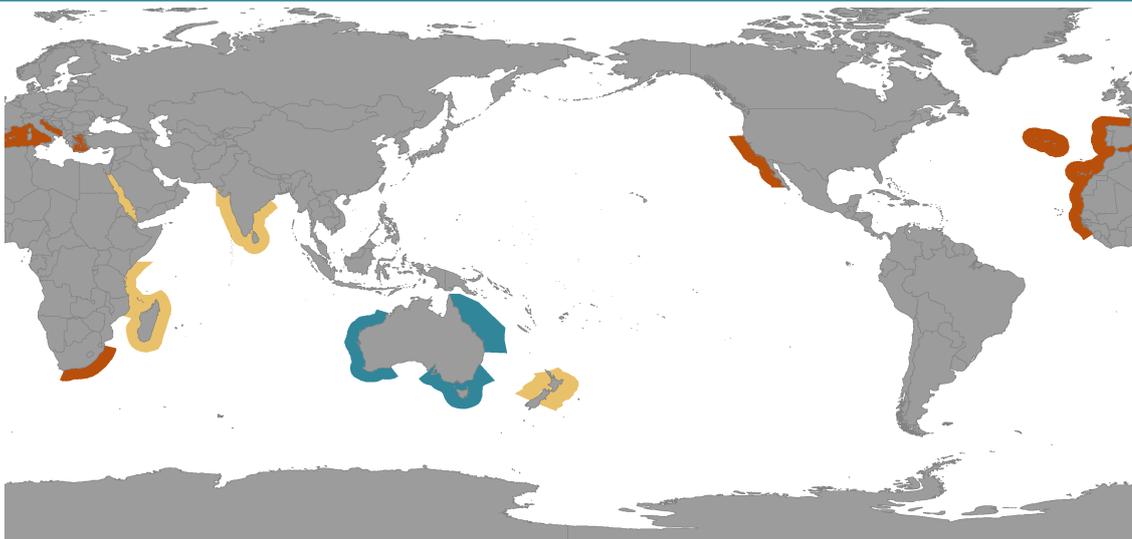
- Globular ascidian, elongate to oval, up to 4 cm long, apertures (openings) on two, short, wart-like siphons
- Outer tunic leathery, tough, often hard, occasionally brittle
- Colour brown to reddish orange, with maroon-striped siphons, usually covered or partially covered by epibionts
- Inner tunic softer with purple tones
- Simultaneous hermaphrodite and broadcast spawner, both eggs and sperms are released into the water column where fertilization and embryonic development occur
- Reproductive potential is very high and embryos hatch as tadpole larvae, which do not feed and must settle in a matter of hours before exhausting their reserves
- Ballast water transfer is an unlikely pathway of introduction



## PATHWAY

✓ biofouling

- Native
- Cryptogenic
- Non-indigenous





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## IMPACTS



**Environmental impacts**

Greatly outnumbers native ascidians in the Eastern Pacific. Forms single-species or dense crusts and can outcompete native species in shallow water communities. Can reach densities of 2300 individuals per m<sup>2</sup> and is considered as an indicator of perturbed areas subject to sedimentation, pollution, and water stagnation



**Human health impacts**

None known



**Social & cultural impacts**

None known



**Economic impacts**

Oyster culture racks, ropes, and Pacific oyster shells in Baja California, and Mexico were severely fouled by this species causing economic damage to the oysters and increasing maintenance costs

## ADDITIONAL DETAILS

- Internally, the most prominent feature is the branchial sac, which has more than eight folds
- Gut lies on the left side, forming a narrow loop which reaches up to two-thirds of the body length
- Gill slits simple, tentacles branched, left gonad crosses over the descending limb of the gut loop

## DISTRIBUTION

## NOT PRESENT IN TUVALU

**Native range** Native in Australia but cryptogenic in New Zealand, Madagascar, India, and the Gulf of Suez

**Non-indigenous range** Western Mediterranean and Eastern Atlantic, Southern Europe, and the West Coast of USA

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

**Images** Top: Charles L. Griffiths ([CC BY-NC-SA 4.0](#)), bottom: Stephen Thorpe ([CC BY 4.0](#))

**References** [Mastrototaro and Dappiano \(2008\)](#), [Rius et al. \(2009\)](#), [Rius et al \(2008\)](#)