

Techniques needed and plant shape



MICRO PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Hildenbrandiaceae
red rock-stain

*Descriptive name

Features

plants red, 50-200mm across, **very thin** forming a continuous sheet on rocks and **hard to remove** except by breaking the rock

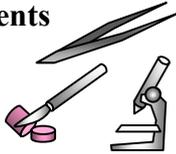
Occurrences

worldwide on temperate and tropical coasts. In southern Australia, from West Coast to the SE of S Australia but probably more widespread and overlooked

Usual Habitat

on rock, usually in shaded parts of the **intertidal**

Special requirements



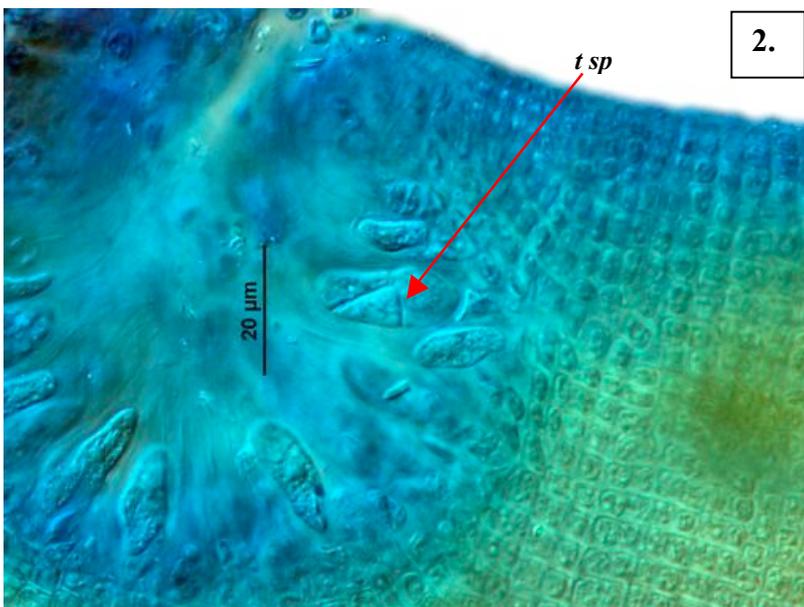
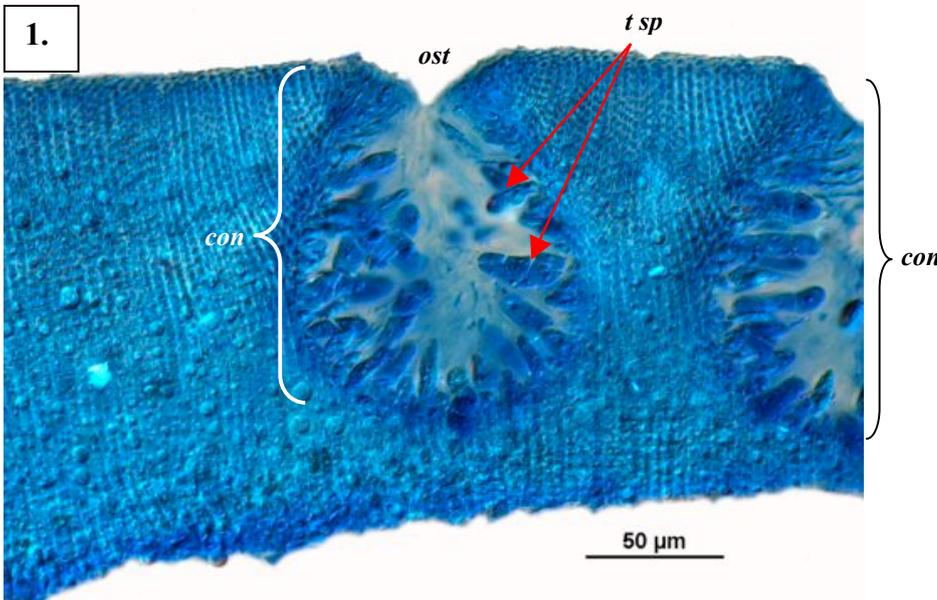
1. scrape off a piece of plant and view microscopically to find **rounded** surface cells and circular, cavities (**conceptacles**) containing tetrasporangia. Sexual stages are unknown.
2. a section through a conceptacle containing sporangia shows:
 - an egg-shaped cavity with an opening (ostiole) at the top
 - cigar-shaped tetrasporangia within, most with **irregular and intersecting divisions** when mature (although some may have slanting (oblique) divisions)
 - surrounding tissues consisting of **rows** and **columns** of **box-shaped** cells

Similar Species  Diagnosis can be difficult

Hildenbrandia crouaniorum, where the tetrasporangia are obliquely divided

Description in the Benthic Flora Part IIIA, pages 143, 144

Details of Anatomy



Hildenbrandia rubra stained blue and viewed microscopically

1. a section through two sporangial cavities (conceptacles, *con*) showing an opening (ostiole, *ost*), cigar-shaped tetrasporangia, *t sp*) and rows and columns of box-shaped surrounding cells (A61515 slide 12711)
2. detail of a conceptacle with a mature tetrasporangium showing irregular divisions (*t sp*) and many transparent residues of old sporangial walls (A60783 slide 12021)
3. highly magnified single tetrasporangium showing the intersecting divisions characteristic of this species (A60783 slide 12021)



Specimens of *Hildenbrandia rubra* (Sommerfelt) Meneghini on rocks from S Australia

4. from lower intertidal rock pools at Carpenter Rocks conforming to the smooth rock surface (A61515)
5. in a shaded pool, Vivonne Bay, amongst barnacles (*Elminius*), with an irregular profile due to the crystalline nature of the rock (A15336)