Hildenbrandia lecannellieri Hariot

A SPECIES WITH FEW RECORDS

45.220

Techniques needed and plant shape

MICRO PLANT

Classification Phylum: Rhodophyta; Order: Hildenbrandiales; Family: Hildenbrandiaceae

***Descriptive name** red warty rock crust

Features

1. plants dark red-brown to purplish about 10mm across but merging together to form warty or bumpy ***crusts*** on rocks in pools high in the ***intertidal***
2. crusts about 1mm thick at the edges reaching ***6mm*** thick in the middle, easily detached when old, fragmenting when dried

Special requirements

1. prise off a piece of crust. View the surface microscopically near the crust edge to view:
   - radiating rows of small cube-shaped cells, in the outer or cortical layer
   - a central disc of ball-shaped or polygonal cells forming a middle or medulla layer in vague rows
   - in old plants, gaps appear between the rows of medulla cells

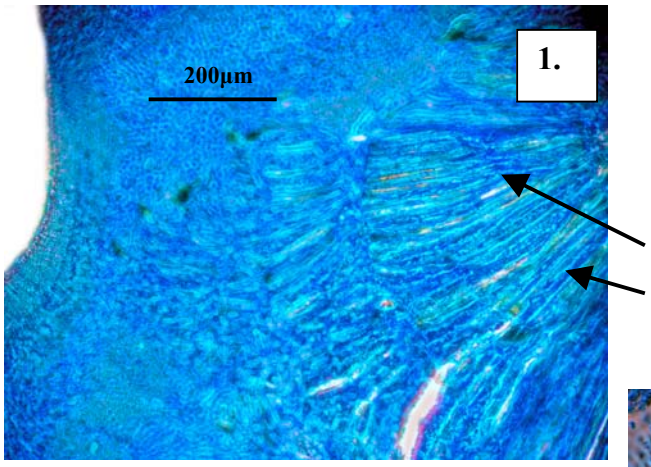
2. if possible, slice across a warty lump through a fertile pit or conceptacle and view microscopically to find:
   - hairs (paraphyses) lining the pit
   - cigar-shaped tetrasporangia, divided finally into 4 sporangia roughly in a line (zonate)
   - the conceptacle opening by a small pore (ostiole)

Usual Habitat widespread in sub-Antarctic regions (such as Tierra del Fuego). In southern Australia only from Cape Willoughby, Kangaroo I., S. Australia, but possibly also in Tasmania

Similar Species a unique crustose alga because of its warty or lumpy surface

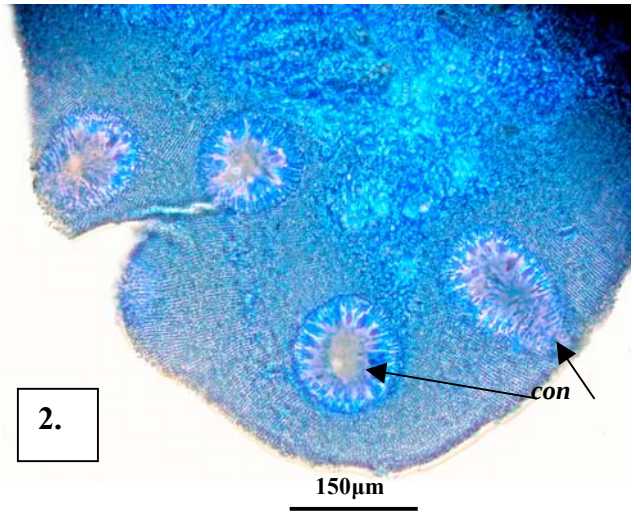
Description in the Benthic Flora Part IIIA, pages 144-145, 146

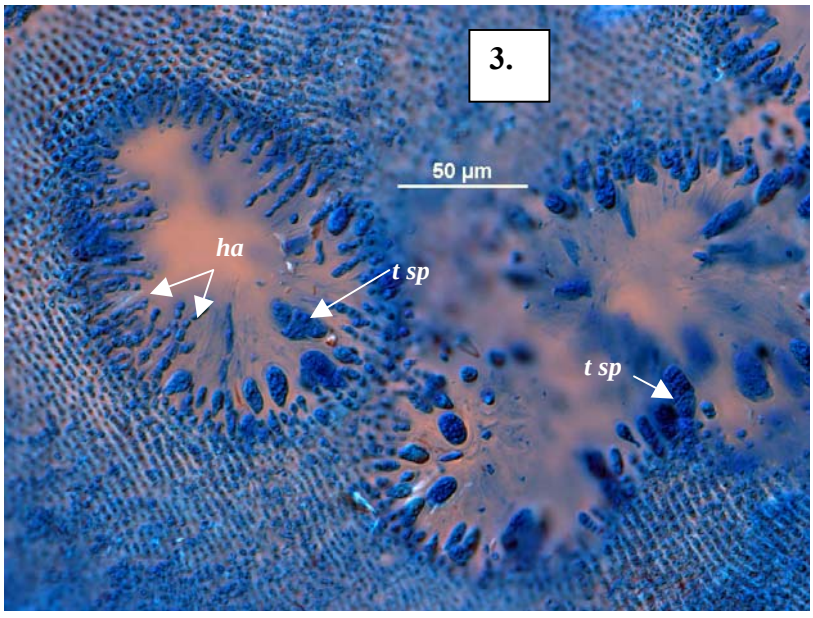
Details of Anatomy



Various magnifications of *Hildenbrandia lecannellieri* Hariot, stained with aniline blue:

1. older part of a crust with central cell rows separating (arrowed) (A7018, slide 11463)
2. slice through microscopic sporangial pits (conceptacles, ***con***) with cigar-shaped sporangia (***t sp***) (A12986, slide 11462)
3. detail of conceptacles with hairs (***ha***) and irregularly divided tetrasporangia (***t sp***) (A12986 slide 11462)





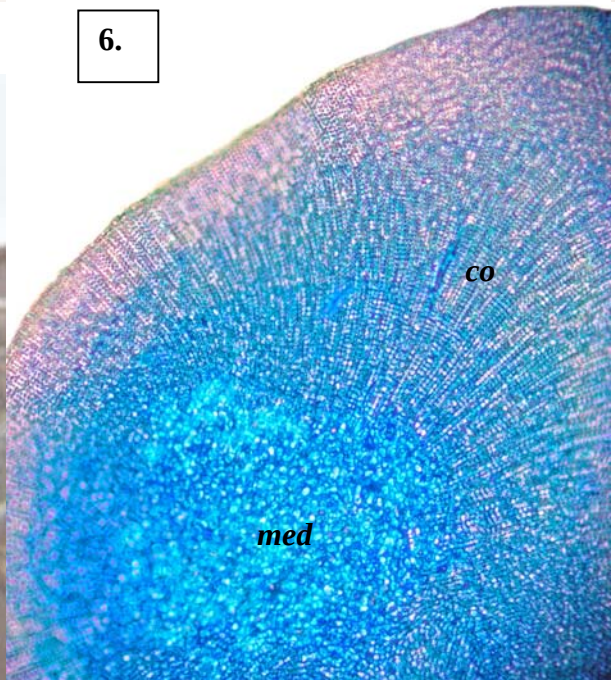
* Descriptive names are inventions to aid identification, and are not commonly used

"Algae Revealed" R N Baldock, S Australian State Herbarium, January 2010

4.

5.

6.



4, 5.	two fragmented crusts of *Hildenbrandia lecannellieri* Hariot, (A7018, A12986 a) from Cape Willoughby, Kangaroo I., S. Australia, chipped from rocks found in a pool high in the intertidal. A littorinid snail from the same zone is included for comparison in the top image
6.	surface view of a the edge of a crust showing a central patch of rounded cells (medulla, ***med***) and outer layer (cortex, ***co***) of radiating rows of cells (A7018, slide 11463)

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