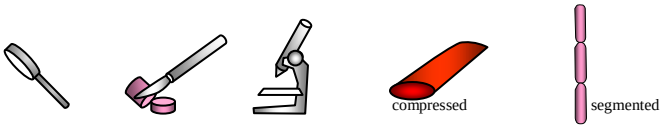
Rhodopeltis australis Harvey

45.260

Techniques needed and shape



Classification Phylum: Rhodophyta; Order: Gigartinales; Family: Polyidaceae

***Descriptive name** § false coralline

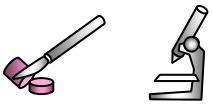
Features

plants, pink to dark red-brown, 50-120mm tall and wide, ***chalky and brittle*** when dry, a short stalk producing branches of 2-4 ***flat***, thin, rigid, calcified segments 10-20mm long ***notched*** at tips, connected by un-calcified, flexible joints about 1mm wide

Occurrences near Perth W Australia to near Anglesea Victoria

Usual Habitat on rock in shallow water to 11m deep

Special requirements cut cross sections and view microscopically to find

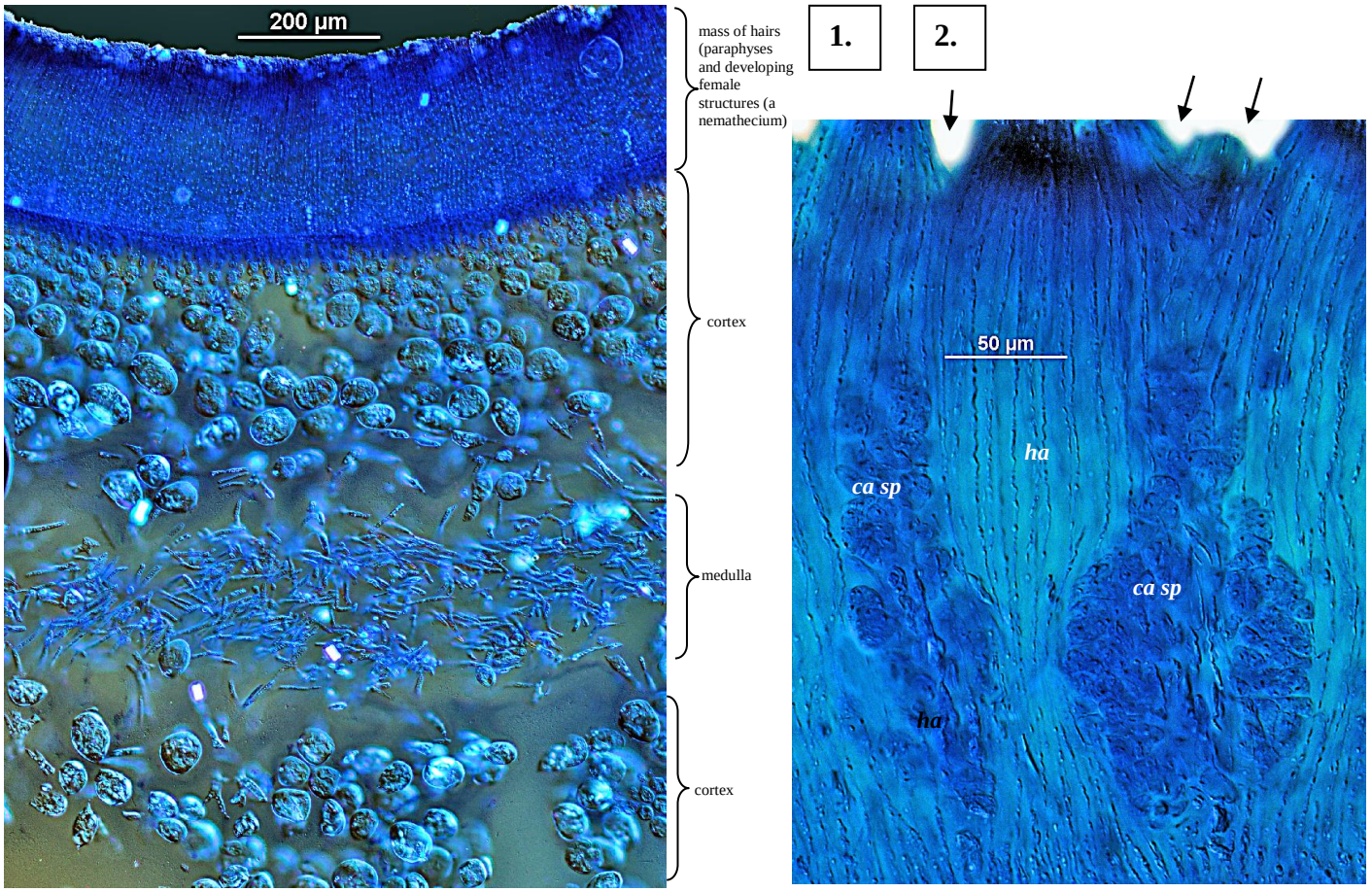


- ***un-calcified*** core (medulla) of threads, wide outer layers (cortex) of inner, large egg-shaped cells decreasing in size to ***calcified*** minute cells facing outwards. Clusters of ***starch grains*** fill cortex cells. Innermost cortex cells may become star-shaped
- in the cortex of female plants: ***deep*** patches (nemathecia) of elongate masses of carposporangia lying amongst the extremely elongate hairs, escaping through un-calcified parts of the nemathecia
- in the cortex of a sporangial plants: ***shallow*** masses (nemathecia) of ***irregularly*** divided tetrasporangia lying amongst single-celled hairs

Similar Species *Rhodopeltis* could possibly be confused with a member of the jointed coralline alga (Corallinaceae) but it differs in internal anatomy and reproduction

Description in the Benthic Flora Part IIIA, pages 144, 152, 166-167

Details of Anatomy

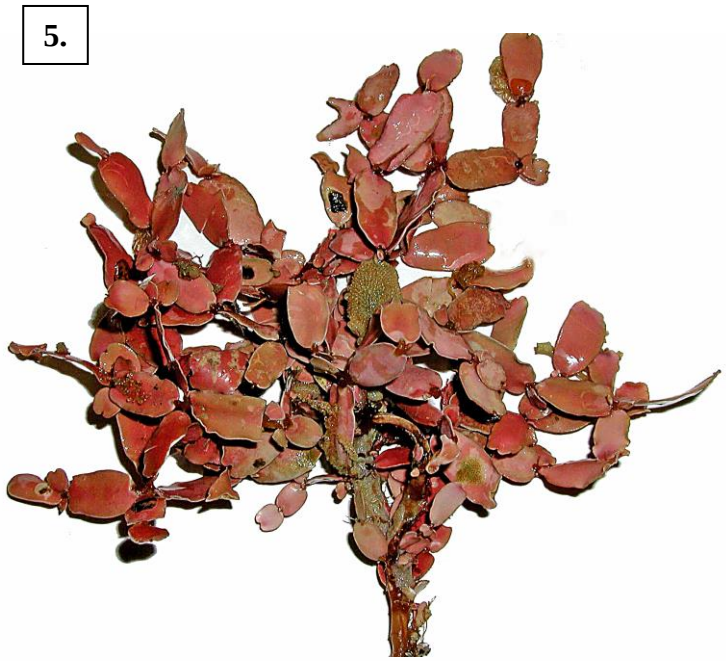


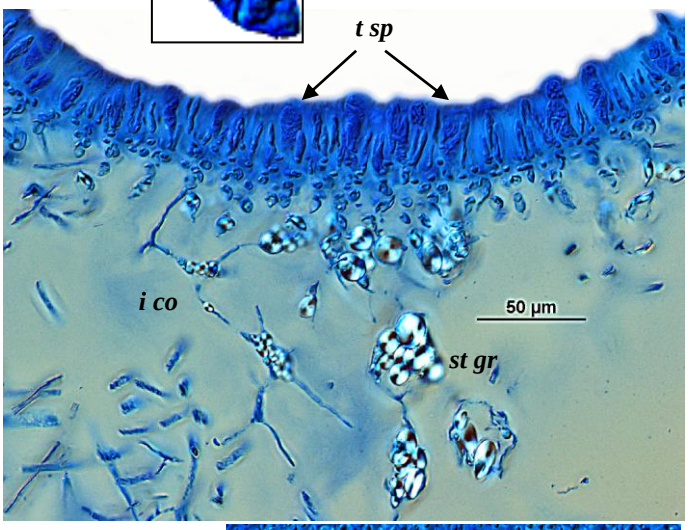
Rhodopeltis australis: cross sections stained blue and viewed with interference microscopy to highlight features

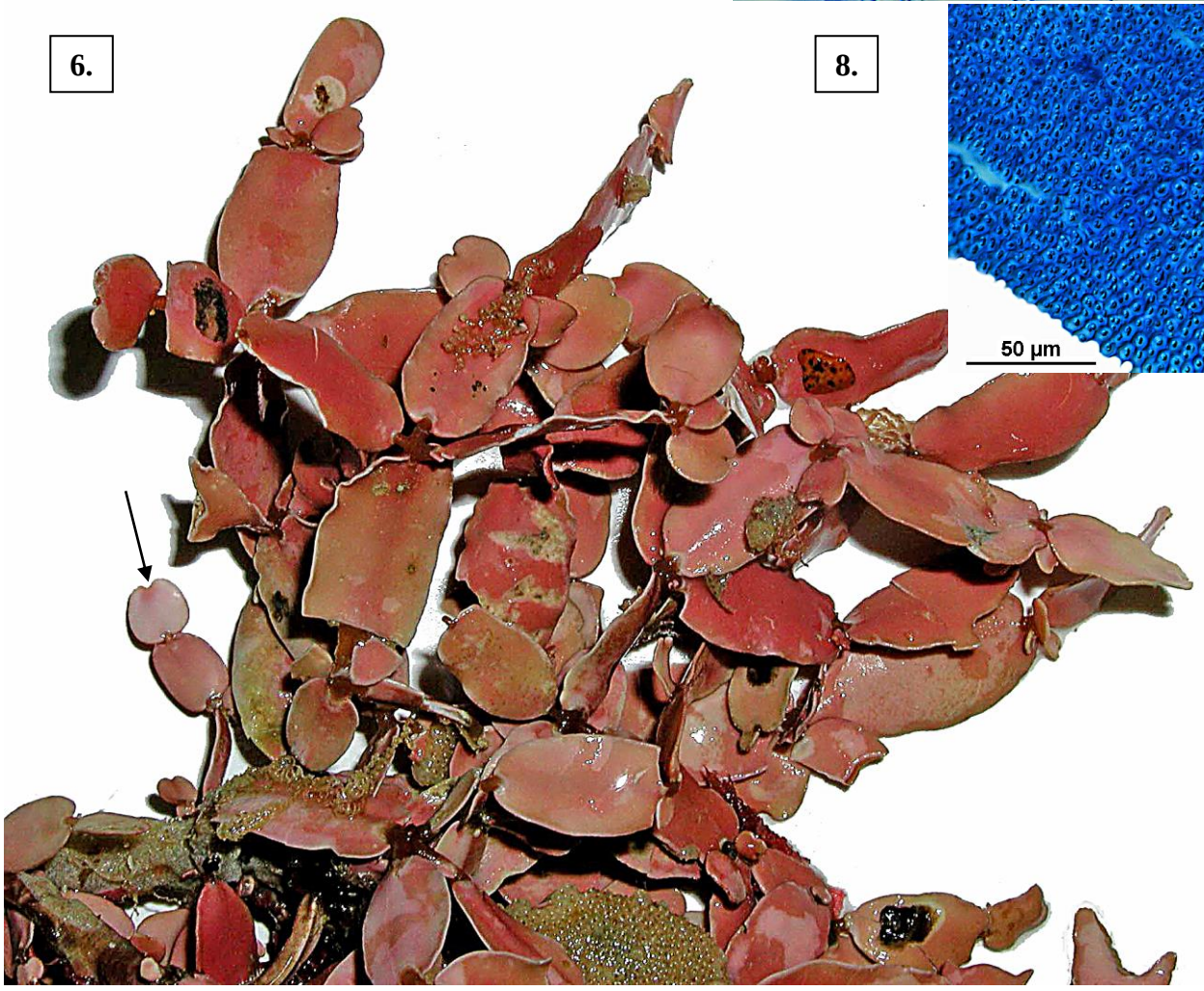
1. section through a segment with a developing female structure (nemathecium) (slide 12250)
2. detail of a part of a female nemathecium: hairs (***ha*),** elongate masses of carposporangia (***ca sp***), un-calcified exits (***arrowed***) (slide 12250)

Descriptive names are inventions to aid identification, and are not commonly used. §Name used by Edgar, G (2008) in Australian Marine Life .

"Algae revealed" R N Baldock, State herbarium of S Australia, November 2009; revised August 2014







Rhodopeltis australis Harvey

5, 6. from 27m deep, Western Isles, Althorpe Islands S Australia (A70557) with the apical notch of one segment arrowed

7, 8. material stained blue and viewed with interference microscopy

7. cross section of a sporangial mass (nemathecium) (slide 11253): tetrasporangia (***t sp***) lying between single-celled hairs**,** star-shaped inner cortex cells (***i co)*** and bright starch grains (***st gr***) **Insert:** enlargement of a single tetrasporangium**,** showing irregular division
8. surface view of minute, calcified outer cortex cells (slide 12250)

Descriptive names are inventions to aid identification, and are not commonly used. §Name used by Edgar, G (2008) in Australian Marine Life .

"Algae revealed" R N Baldock, State herbarium of S Australia, November 2009; revised August 2014