Techniques needed and shape

**Classification**

*Descriptive name*

**Features**

Phylum: Rhodophyta; Order: Gigartinales; Family: Gigartinaceae

giant pimply sheets

plants red-brown, of a single or several, large, tough blades 150-400mm long (over 1m long in Tasmanian specimens!), lance-shaped when young, broad (~200mm) or narrow (~50mm) when mature, with small, pimply (papillose) growths on the surface and edges of fertile blades; attached by a minute, inconspicuous stalk (2-8mm long); some plants form dark, narrow, side blades, and edges of blades may be wavy or have small teeth

**Occurrences**

Robe, S Australia to Victoria and around Tasmania

generally in shallow water of moderate water movement on rough coasts

**Usual Habitat**

cut cross sections and view microscopically to find

- a wide core (medulla) of inter-connecting, branched threads; outer layer (cortex) of chains of small cells facing outwards
- in female plants: numerous, prominent, dark, pimply outgrowths (papillae), spherical mature female structures (cystocarps) embedded within, containing a weak envelope of threads (involucre), and clumps of carposporangia
- in sporangial plants: tetrasporangia, in numerous, deeply embedded spotty masses (sori), divided in a cross (cruciate) pattern, finally escaping through a common pore

**Similar Species**

calm-water forms of Rhodoglossum gigartinoides in the Gigartinaceae and Pachymenia orbicularis, Aeodes nitidissima and Grateloupia ovata in the Halymeniaceae also have large, tough blades and short stalks, but there are no papillose growths in female plants; tetrasporangia in the Halymeniaceae are scattered and do not occur in well defined spots

**Description in the Benthic Flora**

Part IIIA, pages 290-294

**Details of Anatomy**

*Sarcothalia radula* (Esper) Edvyane & Womersley

| 1. | one side of a blade: core of stout, inter-connected threads (medulla, med), chains of outward-facing, small cells of an outer layer (cortex, co) (slide 12394) |
| 2. | tetrasporangial masses (sori, so) deeply embedded in a blade (slide 12391) |
| 3. | detail of tetrasporangia, in various stages of dividing into a cross (cruciate) pattern (slide 12394) |
| 4. | mature female structure (cystocarp, cys) embedded in an outgrowth (papilla) of a blade, with central mass of carposporangia and threads (slide 12395) |
| 5. | detail of a cystocarp: masses of carposporangia (ca sp), loose envelope of threads (involucre, inv) (slide 12391) |

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

“Algae revealed”, R N Baldock, State Herbarium S Australia, May 2009; revised May 2014
*Sarcothalia radula* (Esper) Edyvane & Womersley

6-7. large plant, over 1m long, from 10m deep, NW of Schouten Passage, Tasmania (*A68743*): detail of the minute holdfast and stalk at the base, *(arrowed)*, spotty surface due to embedded masses of tetrasporangia

8, 9. specimen from a shaded, upper intertidal pool, Back Beach, Little Dip Conservation Park, S Australia (*A63226*): minute basal stalk *(arrowed)*, detail of the pimply (papilllose) surface and edge

10, 11. two magnifications of a narrow-bladed specimen from a wave-splashed rock platform at Cape Lannes, Robe S Australia (*A56938*): detail of stalked papillae bearing cystocarps

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“Algae revealed”, R N Baldock, State Herbarium S Australia, May 2009; revised May 2014