Techniques needed and plant shape

Classification
*Descriptive name
Features

Phylum: Rhodophyta; Order: Bangiales; Family: Bangiaceae

§southern laver

plants consisting of grey-red to red-purple blades, 50-200mm or more long and 40-100mm wide, relatively tough with wavy edges, broadening with age and then attached to rocks towards the middle of blades (umbilicate)

Occurrences
Usual Habitat
Special requirements

southern hemisphere cooler waters (New Zealand and subantarctic islands, S South America). In Australia, from West Coast, S Australia to mid-NSW

on rock in the mid-intertidal on rough coasts, sometimes dense, especially in winter

view edges of blades microscopically.

1. blades are one cell thick. Cells may be in short rows, or have tails near where the blade attaches to rocks
2. female and male reproductive structures are on the same blade
   • spermatangia occur in packets of 32-64 tiny spermatia at blade edges or in patches amongst female carposporangia. Blade edges disintegrate, releasing the spermatia.
   • 4-16 female carposporangia occur in bunches forming irregularly shaped patches near blade edges, often interspersed with other cells.
3. spore plants (called the conchocelis stage) are minute and thread-like

Porphyra lucasti, but that species has thin blades, disintegrating with age

Similar Species

Description in the Benthic Flora Part IIIA, pages 38-40

Details of Anatomy

Porphyra columbina stained blue and viewed microscopically

1. cells of the blade, some in vague rows (A58631 slide:10559)
2. broken patches (arrowed) of female carposporangial packets near a blade edge (A39544 slide:4024)
3. detail of packets each of about 12 carposporangia (ca sp pkts) at the boundary with male spermatangia (sperm) each of 8 or more tiny spermatia (A39544 slide:4024)
4. edge of a blade disintegrating and releasing spermatia (A58631 slide:10559)

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Porphyra columbina Montagne

5, 6. two magnifications of specimens from the mid intertidal, Cape Lannes, Robe, S Australia (A42214) with detail in the right image of the fertile blade edge disintegrating

7, 8. two magnifications of a specimen from Warrnambool, Victoria (A42625) with a wider blade, and the attachment (arrowed) towards the middle of the blade

9. microscope view near the blade attachment stained blue to show the tails on cells (A58631 slide 10559)