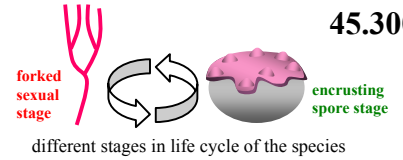
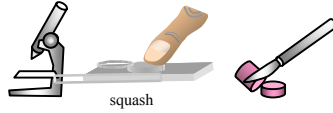


Kraftia dichotoma

Shepley & Womersley

45.300



Techniques needed and plant shape

Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Dumontiaceae

Descriptive name

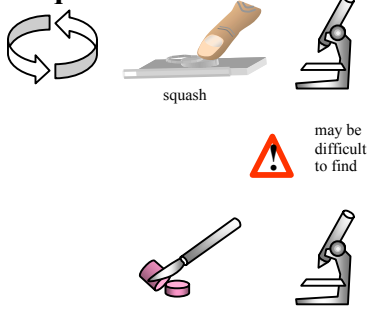
*red forked alga

Features

sexual plants: plants 10-30 mm tall, pink to dark red, attached by a disc-shaped pad \approx 1 mm wide to *Amphibolis* stems, regularly forked, branches slightly compressed, 2-3 mm wide near the base narrowing to \approx 1 mm near rounded tips

spore plants: dark red, 12 mm long with 1 mm erect branches wrapped around stems of the seagrass *Amphibolis*

Special requirements



1. view a tissue squash of the larger **sexual plants** microscopically to find:

- **numerous**, fine threads in cores of branches
 - outward-facing branched threads ending in **dense tufts** of small coloured cells forming a narrow, compact outer layer (cortex); some extremely fine, long, colourless hairs with swollen tips (floridean hairs) in the cortex
 - outermost layer of minute, short, **thick-walled**, colourless hairs **curved** towards the branch tip, characteristic of the species
 - in female plants, ball-shaped masses (carposporophytes) of large spores without a wrapping (involucre) lying within the branch, not forming bumps on the surface
2. view a cross section of the encrusting **spore plant** outer layers to find cigar-shaped tetrasporangia divided across (zonate)

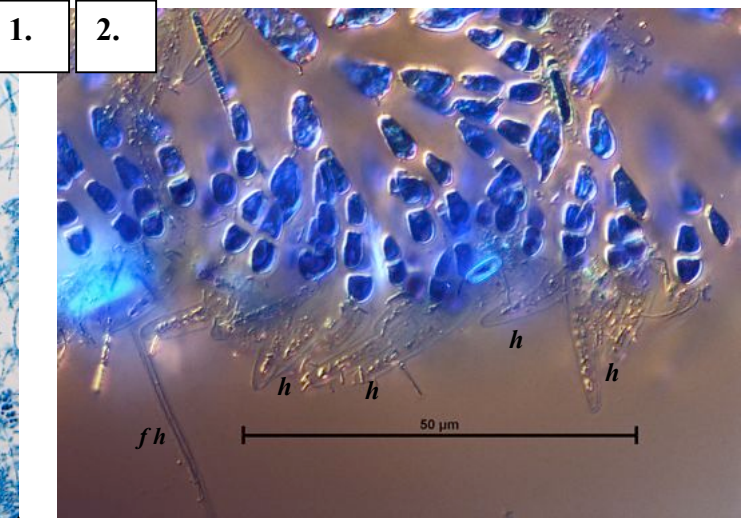
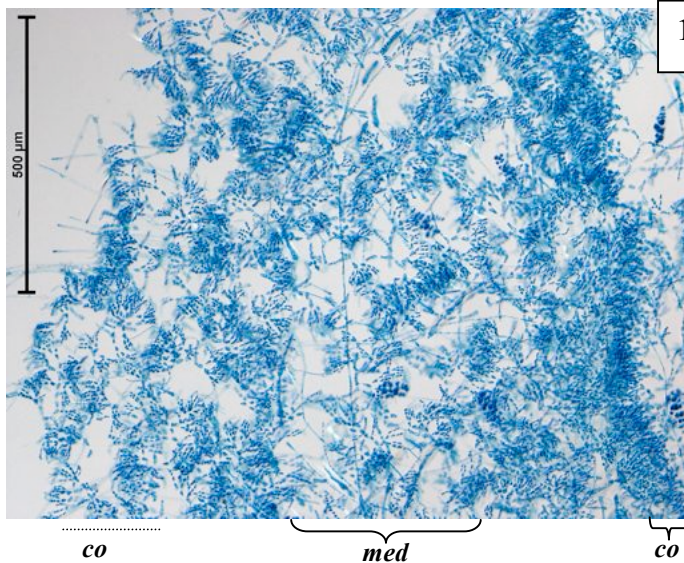
Similar Species

sexual plants of *Gibsmithia womersleyi* have numerous threads in branch cores, but that species has a swollen, knobby base, female structures form surface bumps and tetrasporangia are divided in a cross pattern (cruciate)

Description in the Benthic Flora

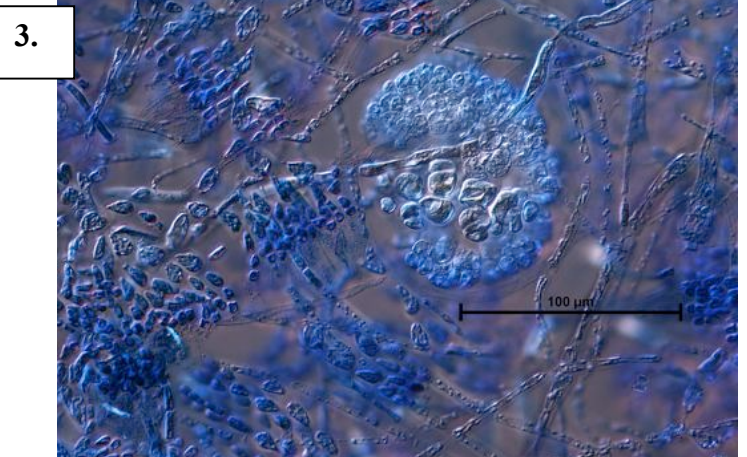
Part IIIA, pages 221, 226-228

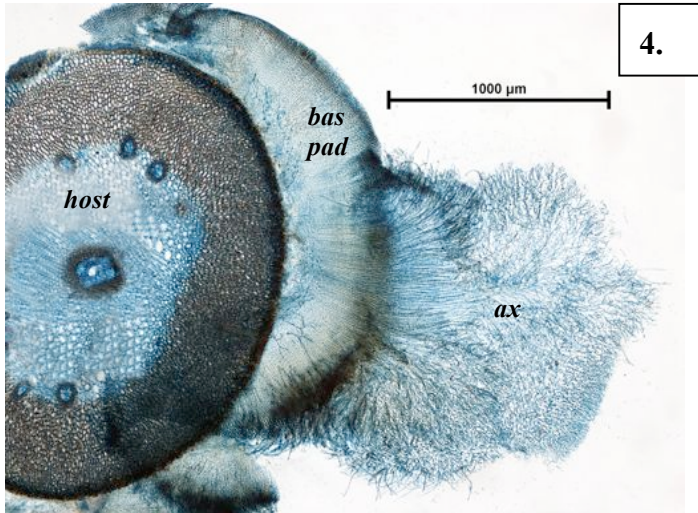
Details of Anatomy



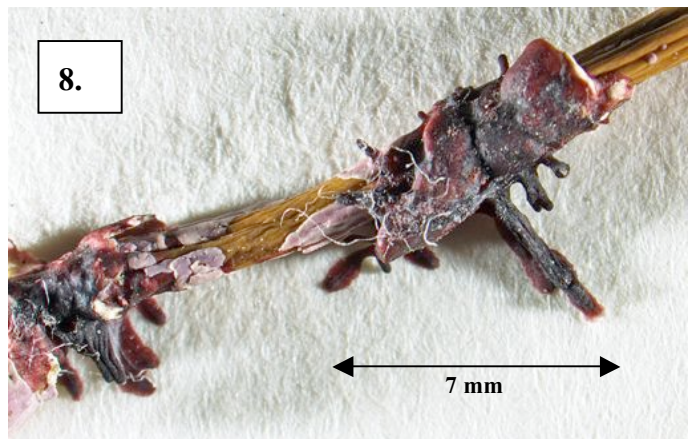
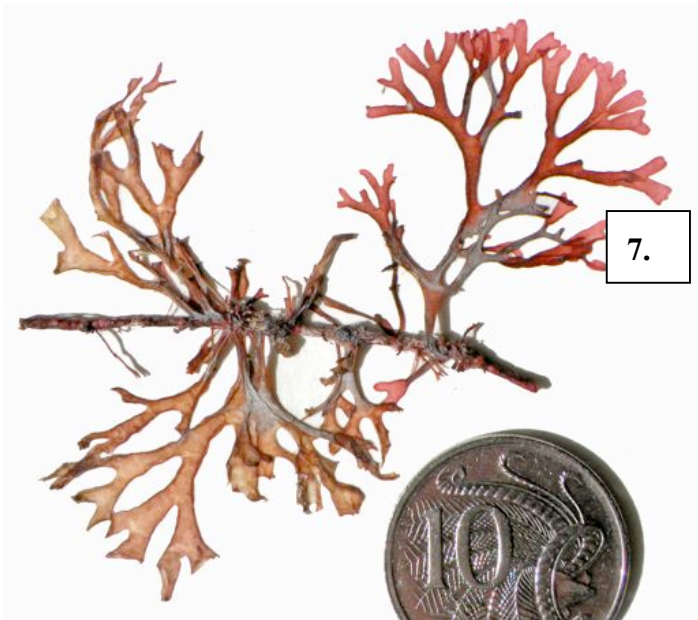
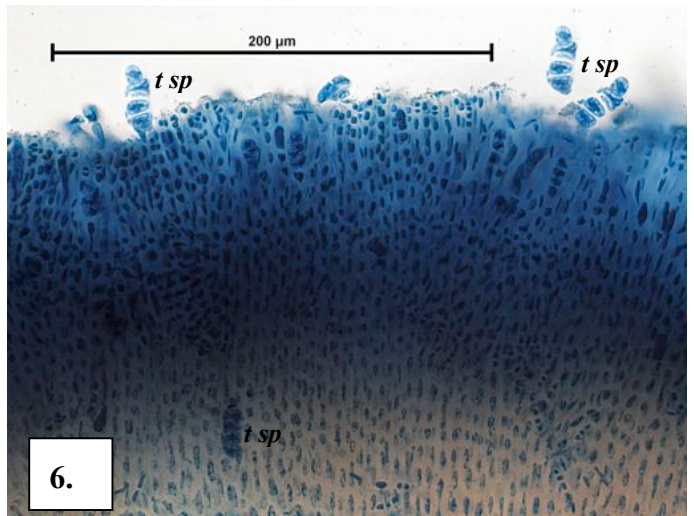
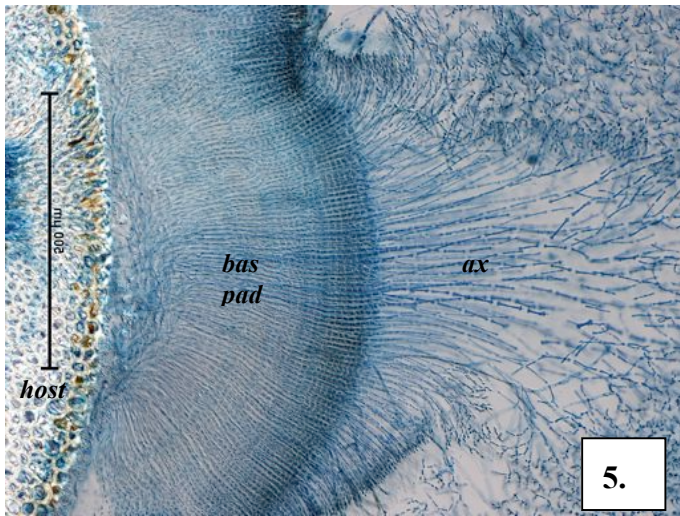
sexual stage of *Kraftia dichotoma* A52844 slide 7881:

1. tissue squash, many fine threads in the branch core (medulla *med*), narrow outer layer (cortex, *co*) of tufts of small coloured cells forming a compact layer (left side disrupted by the tissue squash procedure)
2. detail of cortical tufts, part of a long, thin hair (floridean hair, *fh*), thick-walled, curved, colourless hairs (*h*) characteristic of the species
3. mature female structure (carposporophyte) consisting of a ball-shaped mass of spores without a protective wrapping (involucre), amongst core threads and surface tufts of coloured cells





spore stage *Kraftia dichotoma* (A43937) on the stem of the seagrass host, *Amphibolis*:
 4, 5. two magnifications (slide 4795) showing the host (*host*), encrusting basal pad (*bas pad*), erect part (axis, *ax*) of many fine threads ending in branched chains of small coloured cells
 6. cigar-shaped sporangia (*t sp*) divided across (zonate) amongst compact threads of the encrusting part of the spore plant (slide 4786)



Kraftia dichotoma Shepley & Womersley on the stems of the seagrass *Amphibolis*
 7. **sexual plant** A2822, from between Wright and Granite Is, Encounter Bay S A, 5-7 m deep
 8. **spore plant** A43951 from Robe, SA, 8 m deep

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae Revealed" R N Baldock, State Herbarium S Australia, July 2013