Nitospinosa littledipensis Womersley

A SPECIES WITH FEW RECORDS

45.880

Techniques needed and shape

MACRO PLANT

foliose

Classification Phylum: Rhodophyta; Order: Ceramiales; Family: Delesseriaceae
Tribe: Nitophylloideae; Group: Nitospinosa

***Descriptive name** red Film-plant

Features plants red, upper parts often bleached, 30-50mm tall, of flat, ***filmy*** broad blades with thicker ***narrower*** stalks at the base; blades edges crinkled, ***microscopic teeth*** present; branching in a fan pattern (in one plane)

Special requirements

1. view microscopically to find: growth occurs by divisions of ***single*** cells at the tips of the ***marginal teeth***; microscopic veins are ***absent***. In cross sections find generally 3 layers of equal-sized cells but more layers in the basal stalks and blade midribs
2. in sporangial plants find tetrasporangial patches (sori) restricted to blade ***edges***
3. in cross sections of the pustule-like female structures (cystocarps) find amoeba-like (fusion) cells and ***chains*** of spores (carposporangia), features separating this genus from others in the Family: Delesseriaceae

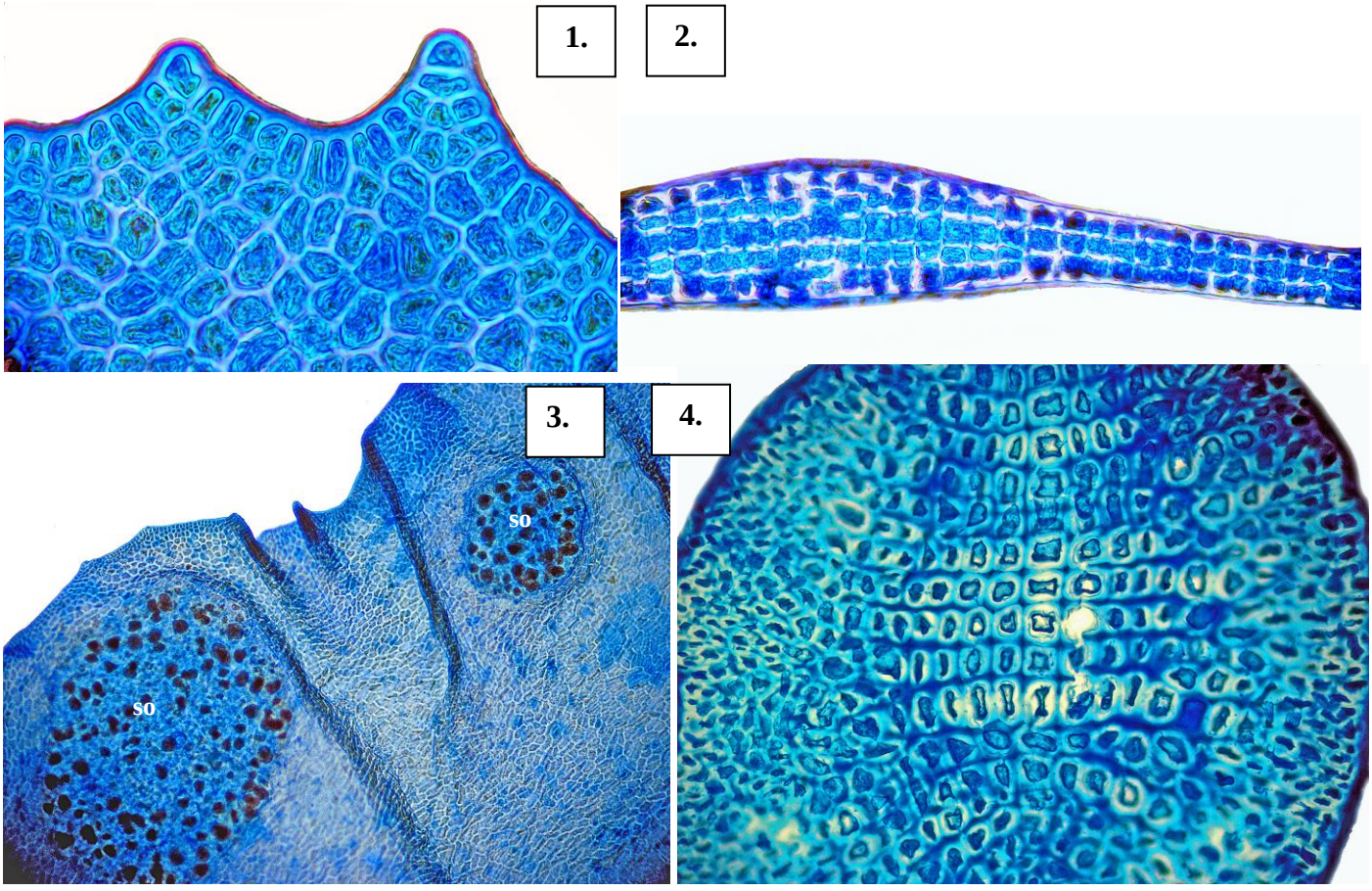
Occurrences known only from Back Beach, Little Dip Conservation Park, SE of S Australia

Usual habitat shallow reef pools

Similar Species *Robea* which also has thickened midribs, but no marginal teeth, and carposporangia are terminal, not in chains on the fusion cells of cystocarps as they are in *Nitospinosa*. *Nitospinosa tasmanica* is similar but has more prominent teeth and spines, and no thickened mid-rib in basal parts

Description in the Benthic Flora Part IIID, pages 89-91

Details of Anatomy



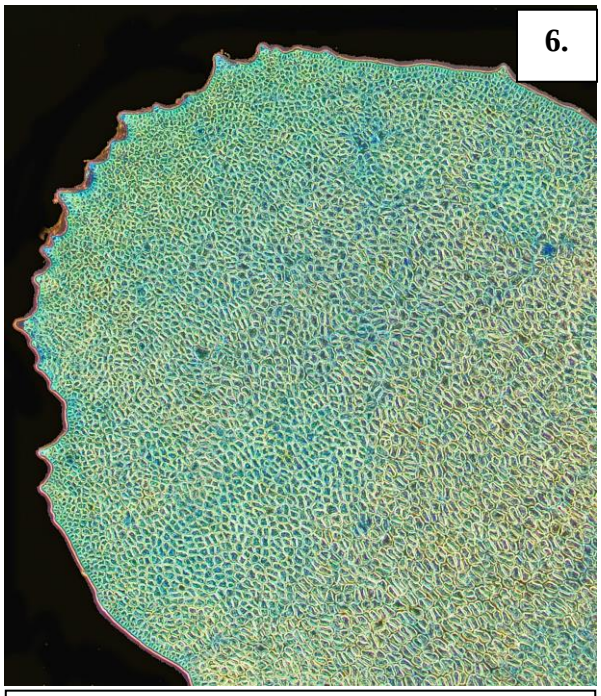
Different magnifications of *Nitospinosa littledipensis* stained blue and viewed microscopically:

1. blade edge: teeth with apical cells that divide, continuing the growth of the blade (slide 19167)
2. cross section of a blade: 3 cell-layers present, more in the midrib (slide 18776)
3. surface view: crinkled blade edge, patches (sori, ***so***) of tetrasporangia (slide 13881)
4. cross section of a basal stalk: many layers of equal-sized cells (slide 13884)

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

"Algae revealed" R N Baldock, State Herbarium S Australia, October 2005; re-formatted April 2014

5.



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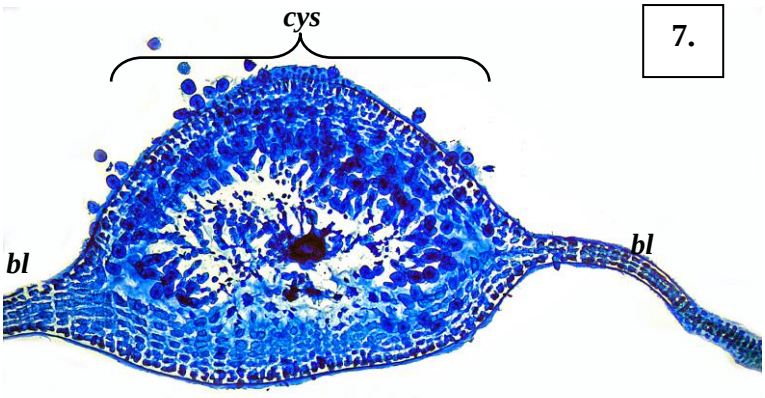

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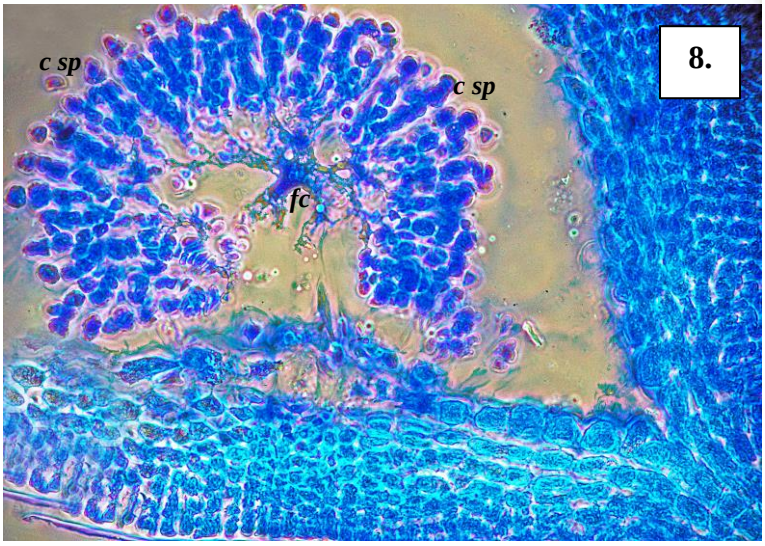

8.

5. *Nitospinosa littledipensis* Womersley, A63227, from Back Beach, Little Dip Conservation Park, SE of S Australi
6. surface view: blade edge with microscopic teeth
7. cross section through a cystocarp (***cys***) bulging out of a blade (***bl***) (slide 18781)
8. detail of a fusion cell (***fc***) and chains of carposporangia (***c sp***) from a cystocarp (slide 18775)

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