

Tylocolax microcarpus
F Schmitz in Schmitz & Falkenberg

A SPECIES WITH FEW RECORDS

Techniques needed and plant shape



MICRO PLANT



parasite



endophyte

Classification

Division: Rhodophyta; Family: Rhodomelaceae.
Genera of uncertain position

*Descriptive name

Lenormandia pustules

Features

plants form tiny pustules on the surface of the red alga *Lenormandia spectabilis*
cut a cross section of a pustule on the host and view microscopically to find

Special requirements



- basal mounds of equal-sided cells (pseudo-parenchyma) infiltrating the host plant tissue
- outgrowths from the upper edges of pustules with single apical cells forming central filaments flanked by (5?) pericentral cells
- male pustules, egg-shaped structures on stalks, holding the spermatangia
- stalked, egg-shaped cystocarps, the results of fertilisation, with club-shaped carposporangia internally, at the edge of a fusion cell
- tetrasporangia, embedded irregularly in pustule outgrowths (but reported by others to be in 2 longitudinal rows), each divided into two opposite rows (decussate)



decussate

Occurrences

Point AVOID, Eyre Peninsula to Stanley Beach, Kangaroo I., S Australia

Usual Habitat

parasitic, all on drift *Lenormandia spectabilis* plants

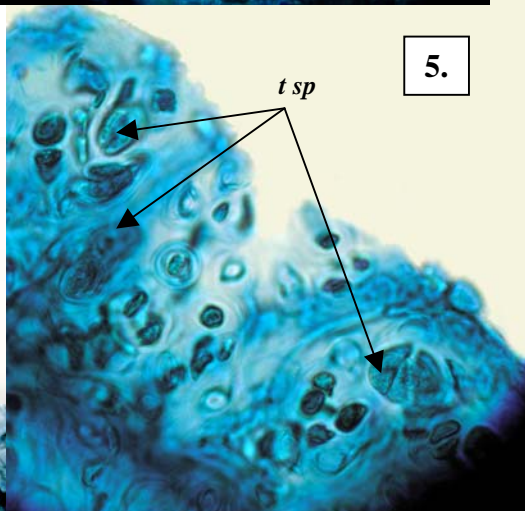
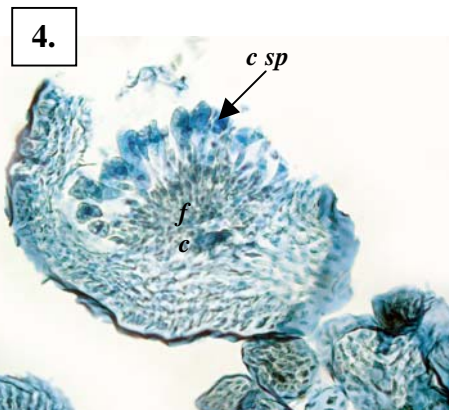
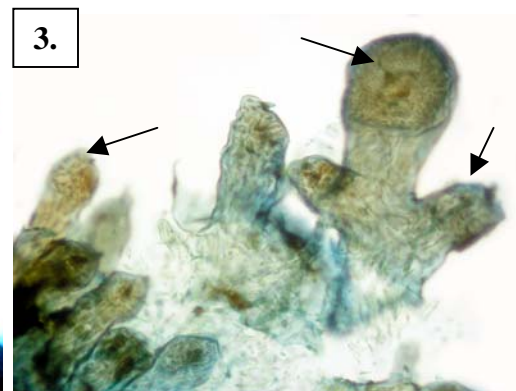
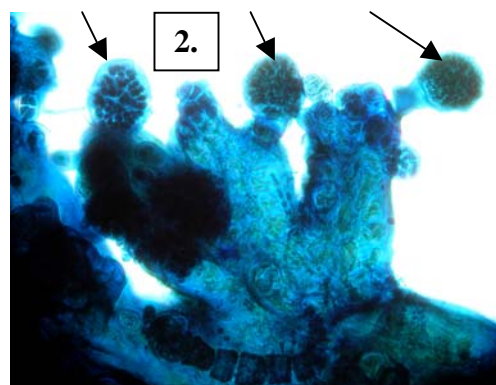
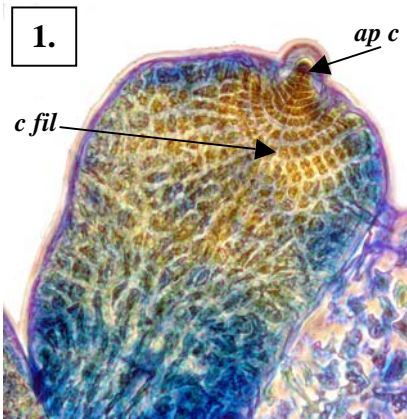
Similar Species

unique and difficult to place because of the specialised parasite niche

Description in the Benthic Flora

Part IIID, pages 497, 498

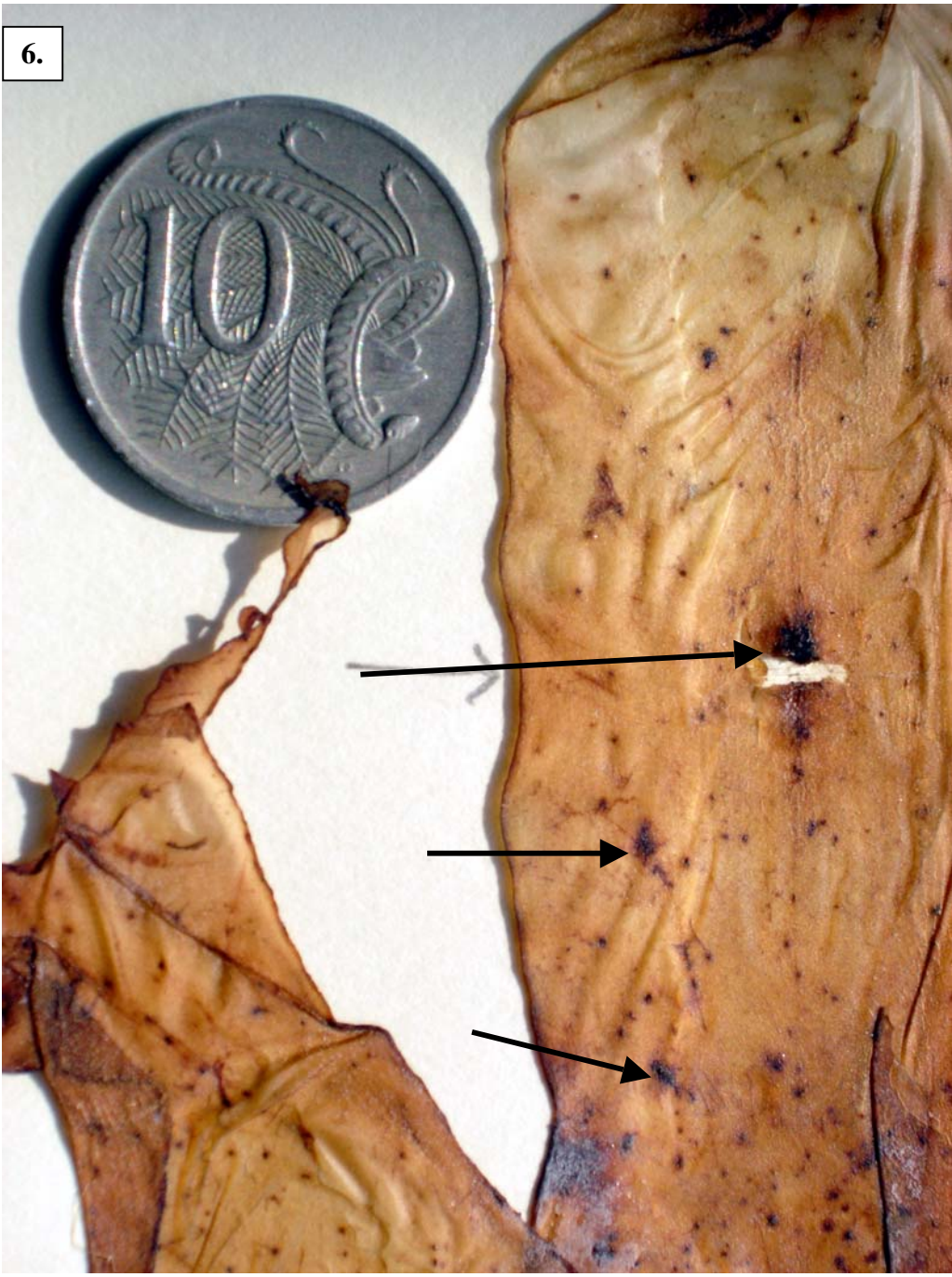
Details of anatomy



Tylocolax microcarpus: sectioned, stained blue and viewed microscopically

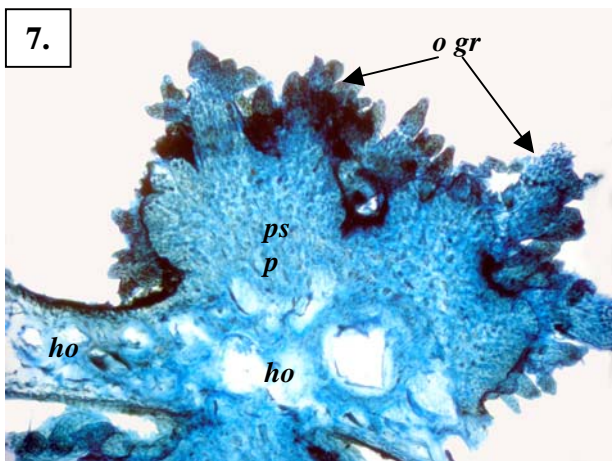
1. apex of an outgrowth showing a single apical cell (*ap c*) and central filament (*c fil*) (A20877 slide 18808)
2. male structures (arrowed) (A22177 slide 18817)
3. cystocarps (arrowed) (A3335 slide 18810)
4. detail of a cystocarp (one side broken and missing) showing the central fusion cell (*f c*) and club-shaped carposporangia (*c sp*) (A3335 slide 18810)
5. detail of outgrowth tissue with embedded tetrasporangia (*t sp*) (A20877 slide 18808)

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, May 2007

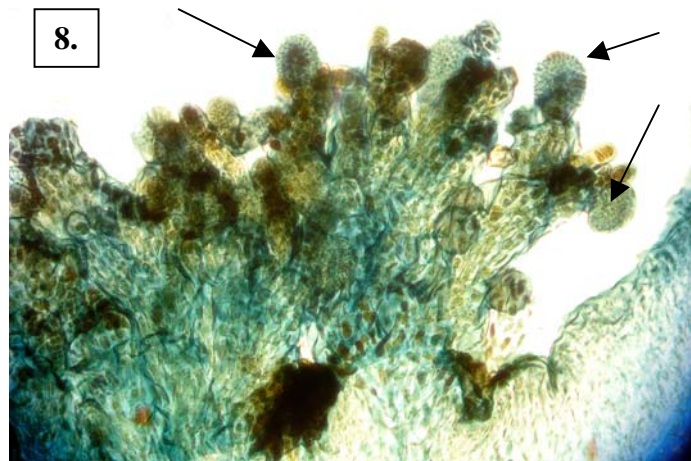


6.

6. *Tylocolax microcarpus* A46907. Pustules (arrowed) on drift plants of *Lenormandia spectabilis*, from Point AVOID, S Australia
 7, 8. specimens (slide 18802) stained blue and viewed microscopically:
 7 section through the host (*ho*) and pustule showing the pseudo-parenchymatous tissue (*ps p*), and outgrowths (*o gr*)
 8 pustule with male outgrowths (arrowed)



7.



8.

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