

**Techniques needed and plant shape**



MACRO  
PLANT

tubular

**Classification**

Phylum: Rhodophyta; Order: Ceramiales; Family: Rhodomelaceae  
Tribe: Chondrieae

**\*Descriptive name**

scribbly Chondria

**Features**

plants dark red, main branches 1-2mm across, radially branched with spreading, narrow, cylindrical side branches

**Special requirements**



view plants microscopically to find:



- **rounded** tips and internal rings and lobed **thickenings** (of cell walls) forming a scribbly pattern just visible through the surface layers (cortex)
- cut a cross section of a main branch to view microscopically a central filament, surrounded by 5 flanking (pericentral) cells, intermingled with rhizoids in older branches and distinct outer (cortical) layer
- short tetrasporangial branches (stichidia), narrow at their bases
- flask-shaped cystocarps, the results of fertilisation, on short stalks open at the tips, club-shaped carposporangia within

**Occurrences**

Port Phillip Heads to Walkerville, and Westernport, Victoria. (Male plants unknown.)  
unknown (drift plants only found)

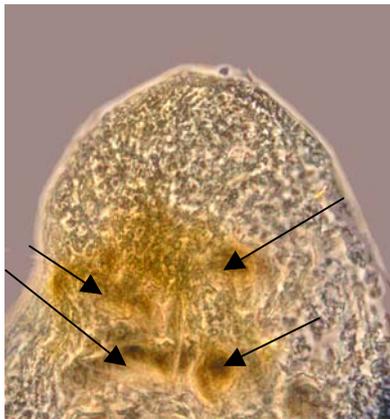
**Usual Habitat**

**Similar Species**

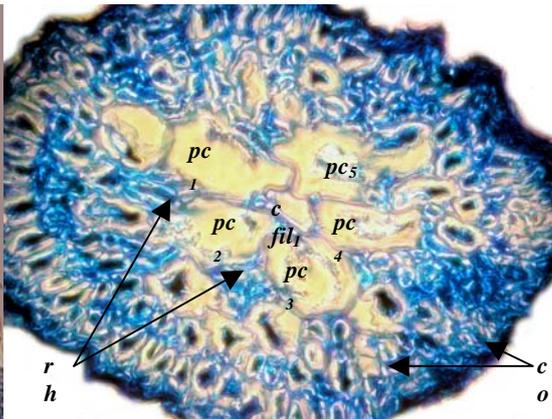
*Chondria capreolis* and *Ch. bulbosa* also have cell wall thickenings but in *Ch. hieroglyphica* these are more complex, and tetrasporangia are smaller (about 100µm across)

**Description in the Benthic Flora  
Details of Anatomy**

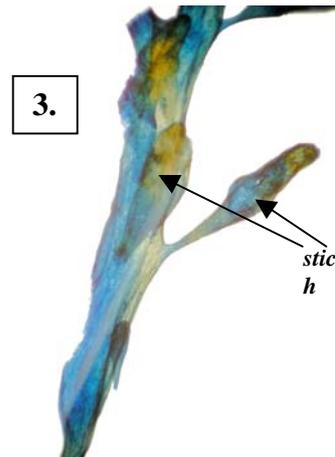
Part IIID, pages 432, 433



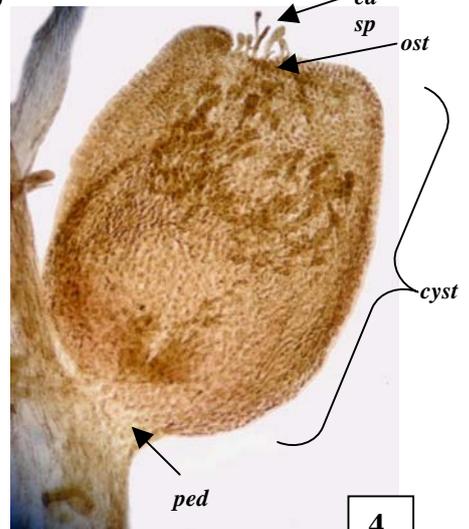
1.



2.



3.



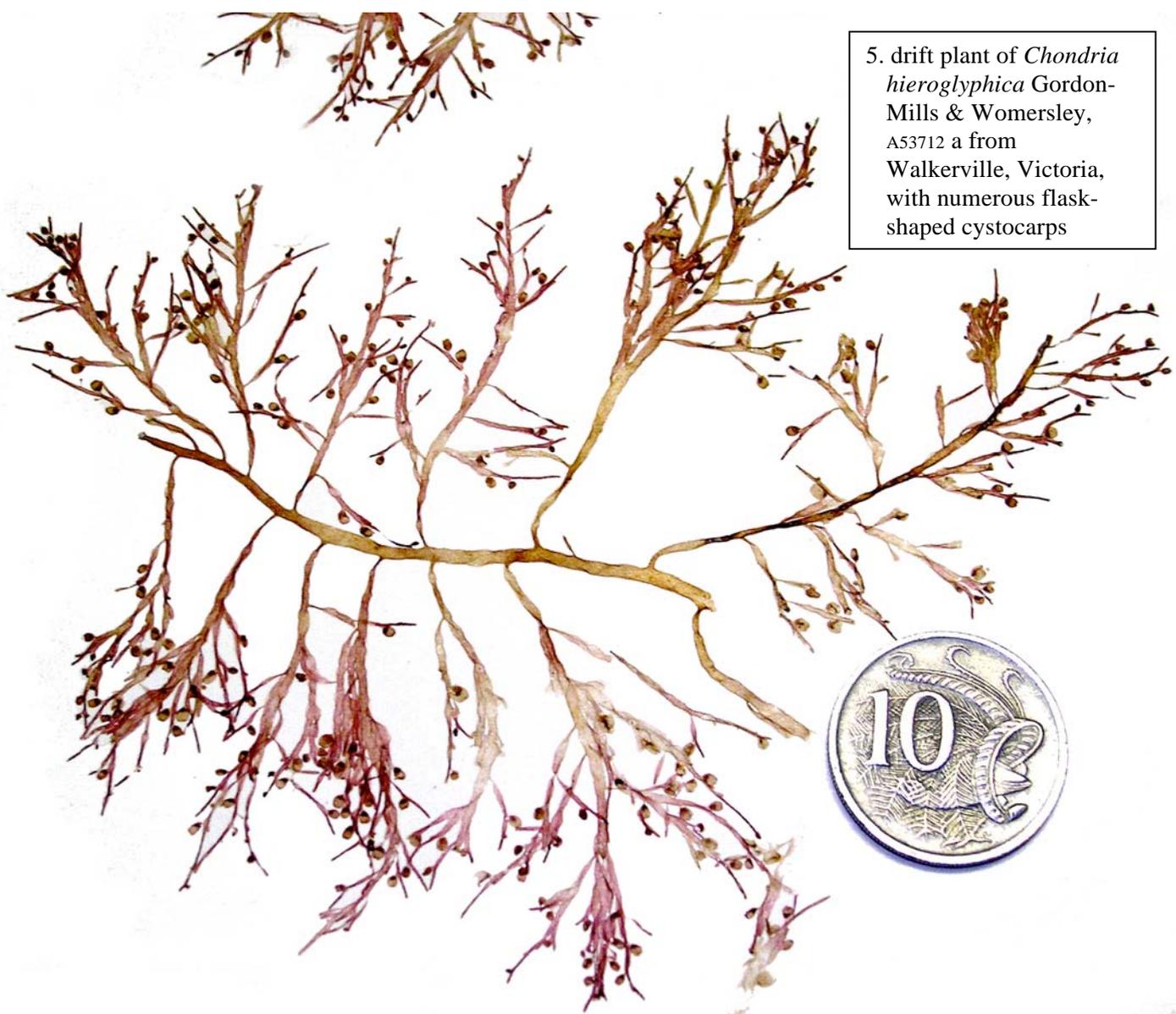
4.

*Chondria hieroglyphica* viewed microscopically at different magnifications

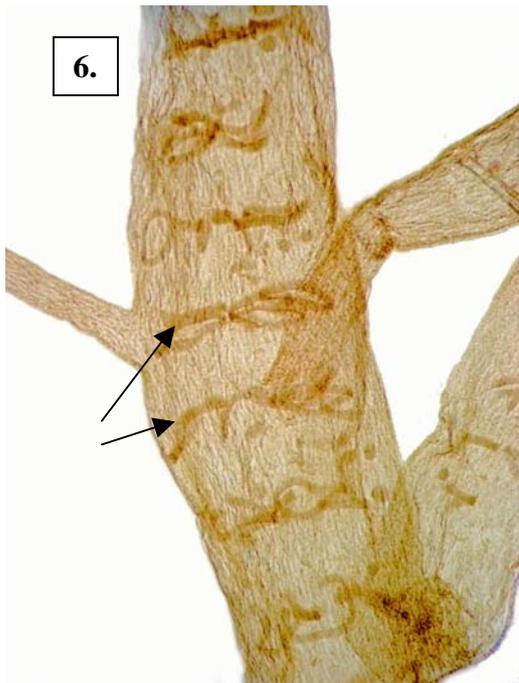
1. rounded plant tip with cell wall thickenings of internal (pericentral) cells (arrowed) visible through the surface layers (A53712 slide 7798)
2. cross section of a main branch stained blue, showing the central filament (*c fil*) surrounded by 5 flanking (pericentral) cells, (*pc<sub>1-5</sub>*) with some rhizoids (*rh*) between them, and a distinct outer layer (cortex, *co*) (A53712 slide 7798)
3. tetrasporangial branches (stichidia, *stich*) (A53362 slide 92389)
4. female structure produced after fertilisation (cystocarp, *cyst*) showing the opening (ostiole, *ost*), club-shaped spores (carposporangia, *ca sp*) and short basal stalk (pedicel, *ped*) (A53712 slide 7796)

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"Algae Revealed" R N Baldock, S Australian State Herbarium, April 2007

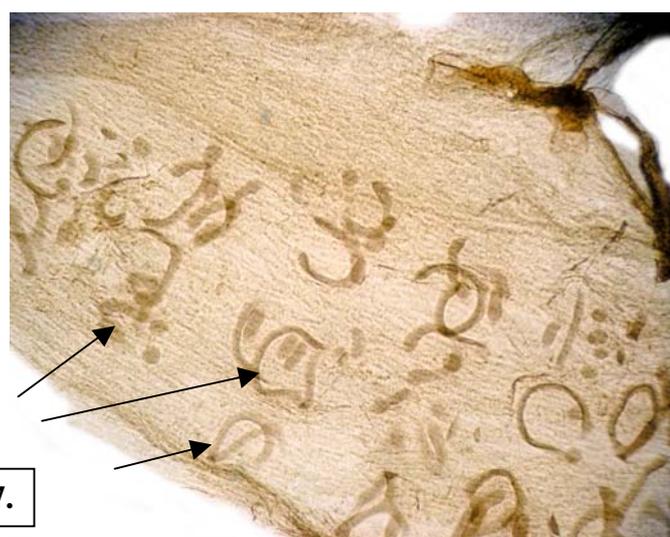
5. drift plant of *Chondria hieroglyphica* Gordon-Mills & Womersley, A53712 a from Walkerville, Victoria, with numerous flask-shaped cystocarps



6.



7.



6, 7. *Chondria hieroglyphica* viewed microscopically at different magnifications, focussing through the surface to see the rings and lobes of thickening (some arrowed) of the flanking (pericentral) cells inside (A53712, slide 7366)

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