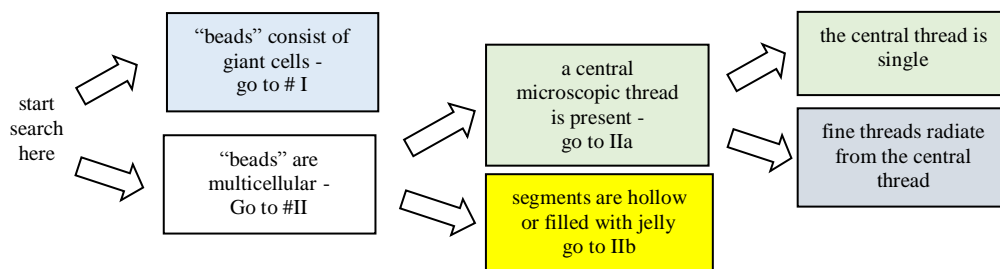
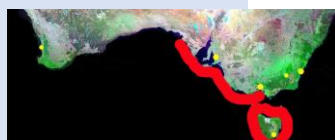
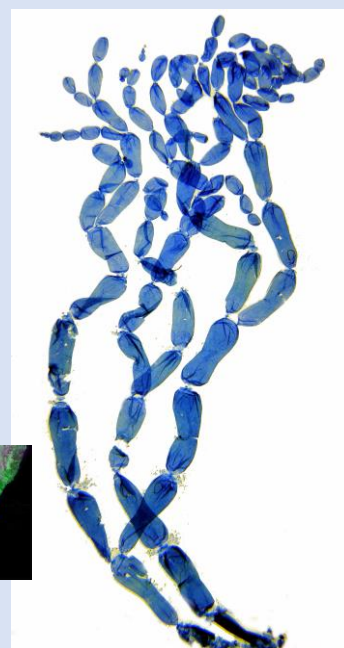
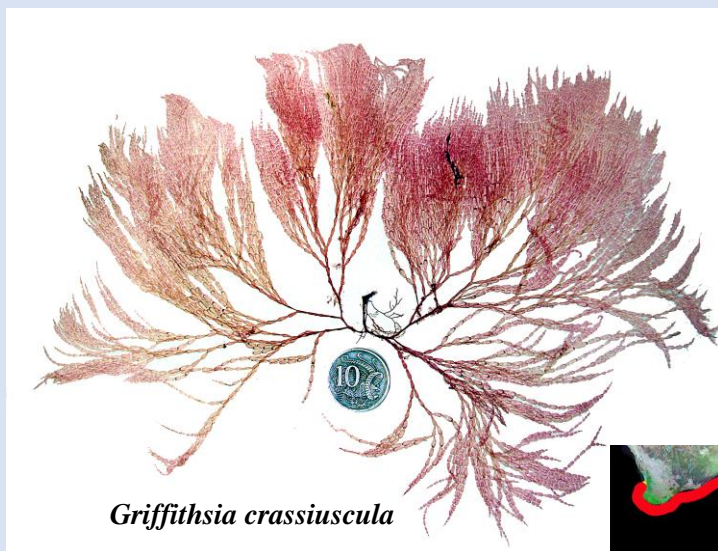


BEAD-LIKE RED ALGAE OF SOUTHERN AUSTRALIA AT A GLANCE. 2nd EDITION

(magnified cell detail may be in blue)



I. segments (“beads”) consist of *single*, giant cells – *GRIFFITHSIA* (Family: Ceramiaceae)



Griffithsia grandis



II. segments (“beads”) consist of *many* cells of varying sizes

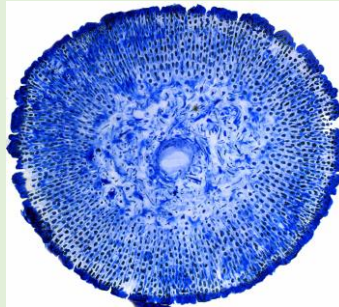
Erythroclonium amongst other algae, 1 m deep, Cape Jervis, SA



**IIa a central thread runs through segments, more obvious in cross sections of mature branches
ERYTHROCLONIUM and *RHABDONIA* (Family: Areschougaceae),**



segments 4-10 mm long

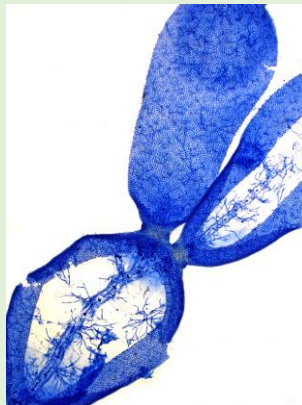


Cross section near the plant base: central thread prominent

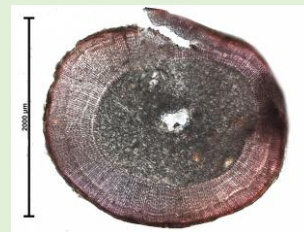
Erythroclonium sonderi



segments 2-5 mm long



A window cut in a segment shows a central large thread wrapped in rhizoids



Cross section near the plant base: central thread prominent



Erythroclonium muelleri



segments about 2 mm long, in clusters about the wiry axes



Erythroclonium sedoides

An additional species of *Erythroclonium* exists (*E. angustatum*) but segments are so thin (to 0.8 mm wide) and long (10 mm) they cannot be considered to be “beaded”

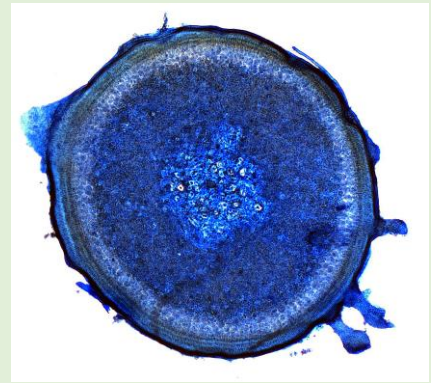
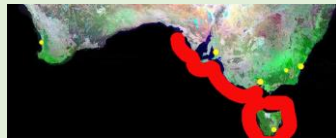


Rhabdonia verticillata

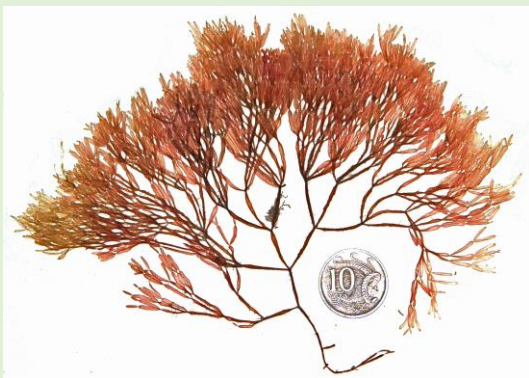
⚠ Plants can be confused
with *Erythroclonium*
muelleri



“beads”
in rings

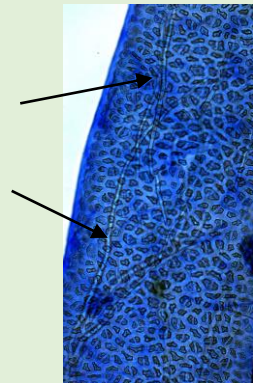
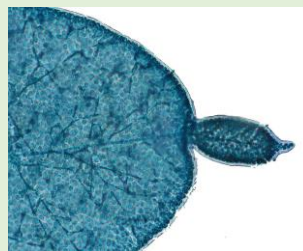


cross section of an axis near
the plant base:
numerous but obscure central
threads present (compared to a
single obvious thread in
Erythroclonium)

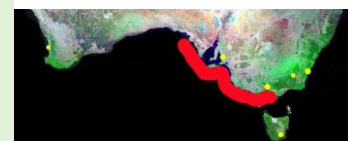


Rhabdonia clavigera

a single central thread is only
visible **near plant tips**



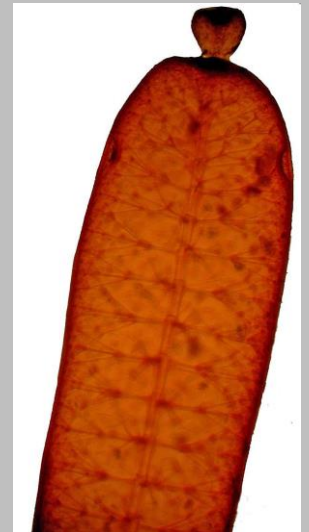
surface view: microscopic bright
threads (arrowed) may be visible



An additional species of *Rhabdonia* exists (*R. coccinea*) but it is not “beaded” (segmented). It does have, however, microscopic bright threads seen in surface view, similar to *R. clavigera*

5 THREADS RADIATE FROM EACH CELL OF THE CENTRAL THREAD, LIKE THE SPOKES OF A WHEEL - *COELOCLONIUM* - (Family: Rhodomelaceae) :

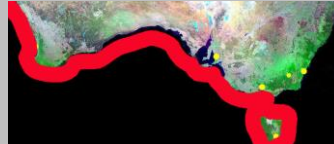
Coeloclonium tasmanicum



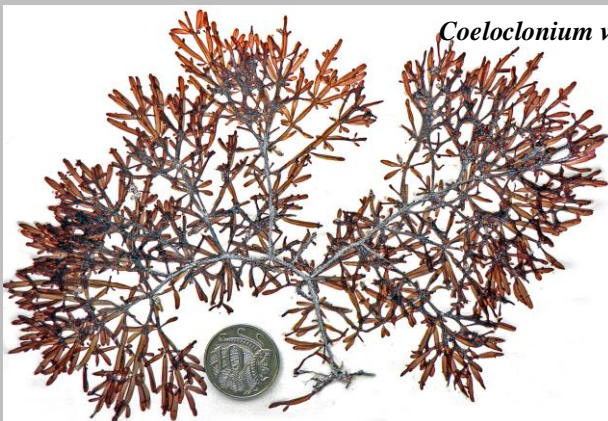
Central thread with radiating spoke-like threads seen in side view near a branch tip

Coeloclonium tasmanicum

Plants 100-300 mm tall, usually on rock



Three additional species of *Rhabdonia* exist, and, although these have inflated segments similar to *C. tasmanica*, they are in bunches or forked patterns rather than in chains



Coeloclonium verticillatum

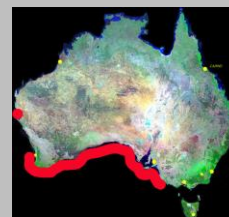


cylindrical inflated segments in rings about branches

Coeloclonium debile



plants tiny, about 30 mm tall with few branches, growing on seagrasses



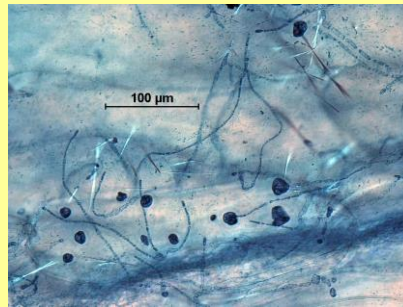
Coeloclonium umbellula

plants tiny, about 30 mm tall, growing on seagrasses, branches arising from the same point

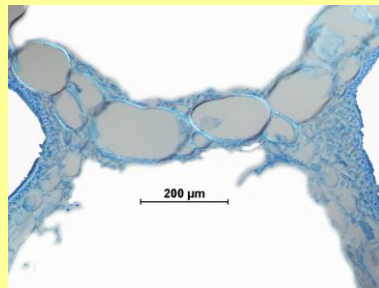


IIb segments completely hollow (or filled with jelly) – WEBERVANBOSSEA and COELARTHURUM (Family: Rhodymeniaceae)

Webervanbossea kaliformis central main branch (axis) with obvious swollen segments



surface view, internal threads and densely stained secretory cells showing through the outer layer



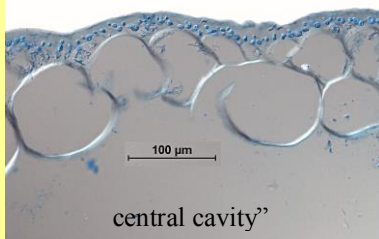
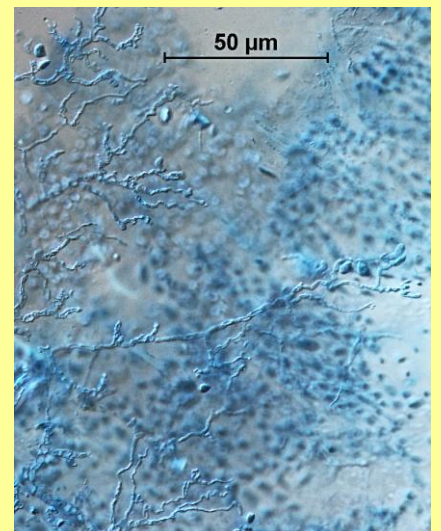
Right: lengthwise section, showing the single layer of cells forming the partition between 2 adjacent hollow segments



Three additional species of *Webervanbossea* exist but these do not have “beads” in chains

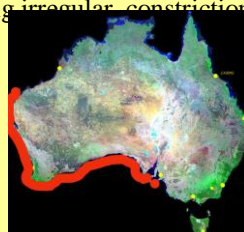
Coelarthrum spp - no single main branch (axis),

Coelarthrum cliftonii



cross section through the wall of a “bead”

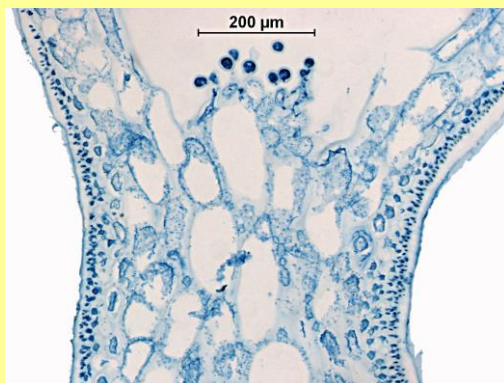
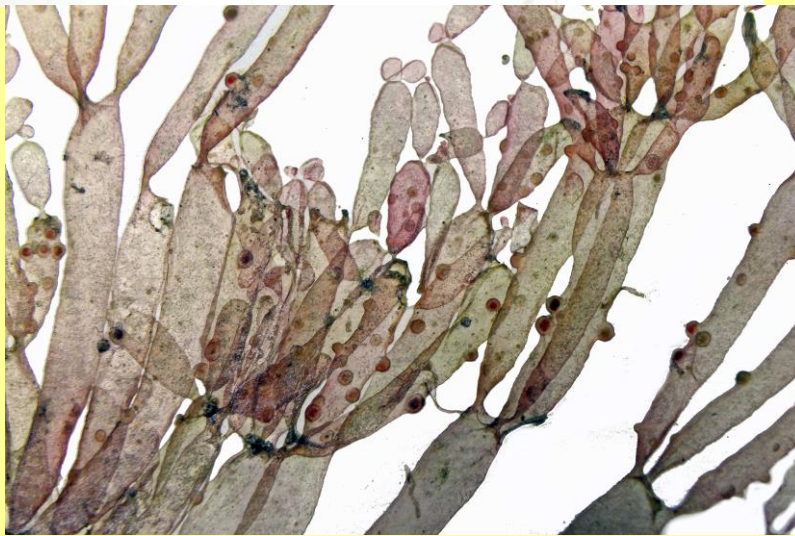
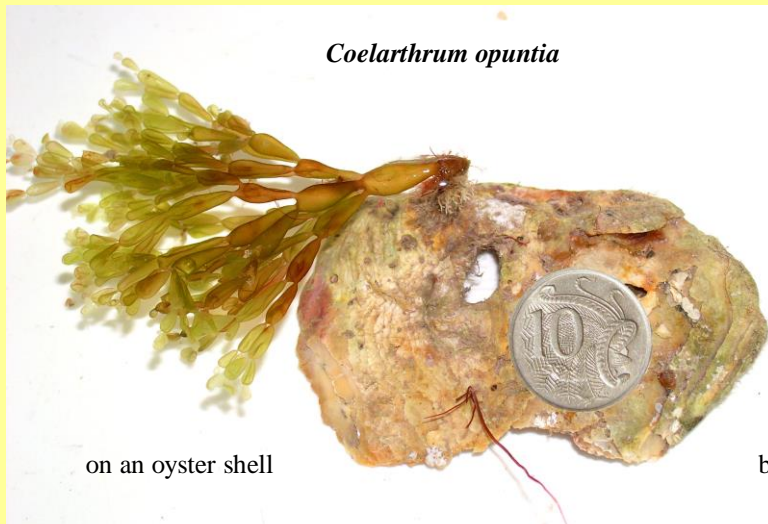
branching irregular, constrictions very short



also found in the Canary Is, Mauritius, and Indonesia

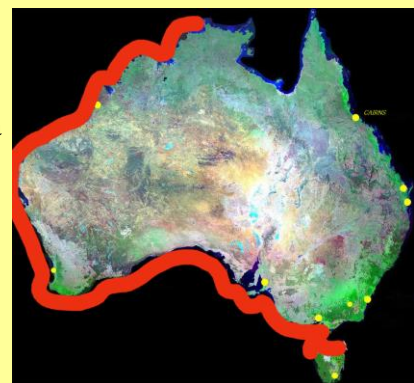
tissue squash: surface threads with bright secretory cells

IIb segments completely hollow (or filled with jelly)- continued



constrictions seen in lengthwise section are about 1 mm long and multicellular compared to a single layer of cells in *Coelarthrum cliftonii*

also found in the N Indian Ocean



individual Fact Sheets are also available for these species in the “Algae Revealed” Website