CHAETOMORPHA AT A GLANCE

(see Womersley, Part I, pages171-180 for full descriptions)

Correct identification of species requires microscope examination of plants in order to find:

1. sizes of cells and cell ***proportions*** measured as the ratio of length to breadth (L/B)
2. for species attached to hard surfaces, the ***shape of basal cells*** and ***rhizoids***
3. whether the threads ***increase in diameter*** from the base upwards

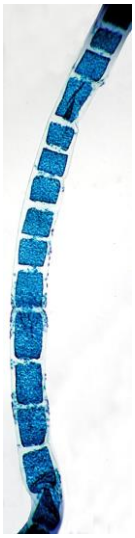
(microscope images below are stained blue; the coin scale is 24 mm or about 1" in diameter)

C. capillaris

- threads clumped
- cell L/B = 1-2
- cells ≈ 90 µm wide
- on pneumatophores of mangroves or under samphires in the mi-to upper-intertidal of calm bays

C. indica

- threads clumped
- cells L/B = 1.5-2.5
- cells ≈ 140 µm wide
- floating in shallow inlet waters

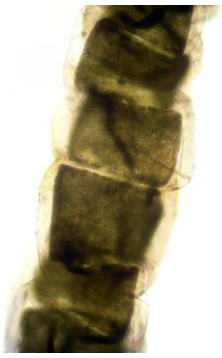


Ch. billardieri
Cells L/B=2-4
slide 7441, stained blue

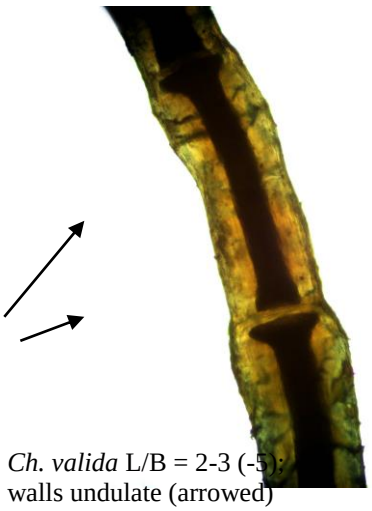
Ch. melagonium
Cells L/B =1.5-2.0
slide 7443, stained blue

4mm

Ch. aerea L/B = 1-1.5
slide 207132, preserved specimen, showing the variation in cell sizes



Ch. linum
L/B = 0.5-1
slide 20714, preserved specimen

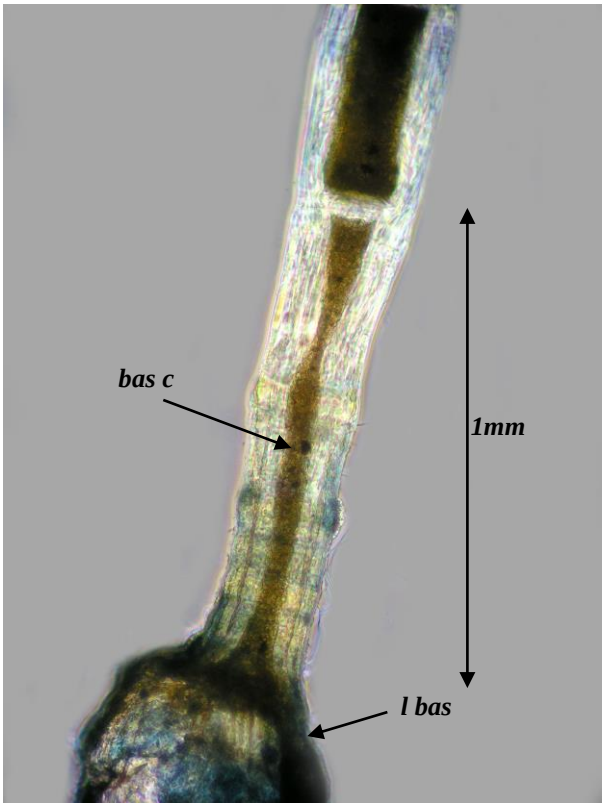


Ch. valida L/B = 2-3 (-5); walls undulate (arrowed)
slide 20715, preserved specimen

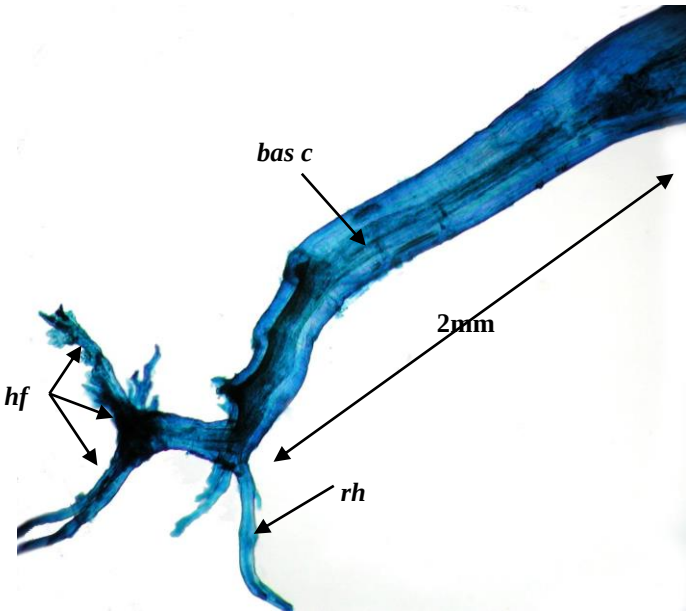
Ch. coliformis
Cells L/B = 0.5-1.0
A52991

Baldock, R.N. (2018). *Chaetomorpha* at a glance 2nd edition, 2 pages. *Algae Revealed*. Adelaide: State Herbarium of South Australia.
flora.sa.gov.au/algae_revealed

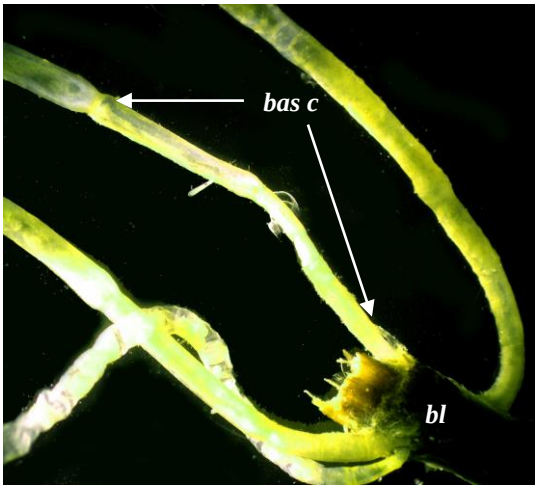
For threads attached to hard surfaces —



Chaetomorpha aerea showing the elongate basal cell (*bas c*) with a lobed base (*l bas*) attached to a sand grain,
slide 20713 using phase contrast microscopy



Chaetomorpha melagonium, showing the elongate basal cell (*bas c*), expanding at the tip, bearing rhizoids (*rh*) and a developing lobed basal holdfast (*hf*) slide 7443 stained blue



Chaetomorpha coliformis showing the contrast in shape between a single basal cell (*bas c*, attached to a piece of seagrass blade, *bl*) and cells of the upper part of a thread shown at right