Techniques needed and plant shape

Classification
- Phylum: Phaeophyta; Order: Sphacelariales; Family: Choristocarpaceae
- micro brown tufts

Features
- plants green-brown, forming tufts about 15mm tall on other algae

Special requirements
- view microscopically to see
  - threads with prominent apical cells containing dense contents
  - single lines of cells, unusual for this Order in which longitudinal walls are common
  - sporangia, stalkless, initially dividing into pairs of compartments, but finally forming plates or discs of many tiny compartments (plurilocular condition)

Occurrences
- originally from the Adriatic and Gulf of Naples, found in S. Australia on algae growing on artificial tyre reefs at Grange and Glenelg, 18-20m deep

Usual Habitat
- on other algae

Similar Species
- many filamentous brown algae, but *Discosporangium* has distinctive apical cells, disc-like chloroplasts and unique sporangia

Description in the Benthic Flora
- Part II pages 146-147, 149; Part IIID Appendix (of introduced species)

Details of Anatomy

1. densely staining apical cell (ap c) of a short side branch (A57406, slide 10255)
2. early paired compartments of two developing sporangia (sp), and disc-shaped plastids in vegetative cells (A56425, slide 10072)
3. later sporangial stages (#1 surface view, #2 side view) with 2 pads or discs composed of tiny compartments (distinctive plurilocular sporangia) (A57406, slide 10255)
4. *Discosporangium mesarthrocarpum* (Meneghini) Hauck, (A57486), (arrowed, one piece detached) on the red alga *Micropeuce*

5. *Discosporangium mesarthrocarpum* (Meneghini) Hauck, (A56425, slide 9087) stained blue and highly magnified to show the mass of filaments making up the plant body, the dense apical cells (arrowed) and disc-shaped chloroplasts (*chl*).

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

"Algae Revealed" R N Baldock, S Australian State Herbarium, September 2005