Gibsmithia womersleyi
Kraft & Ricker ex Kraft

A SPECIES WITH FEW RECORDS

45.300

MACRO PLANT

flat-bladed

Techniques needed and plant shape

squash

Classification Phylum: Rhodophyta; Order: Gigartinales; Family: Dumontiaceae

Descriptive name *knobby slime fronds

Features plants red-brown ***fading*** to grey-brown, 30-300 mm tall, complete specimens with a ***gristly knob*** or cylinder 4-11 mm broad at the base, upper parts ***slimy***, cylindrical and forked with rounded ends ***or*** lobed and fan-shaped, surface may appear fuzzy with microscopic hairs

Special requirements

squash

squash a fragment of the upper slimy parts and view microscopically to find:

- outer layer (cortex) of ***forked chains*** 9-15 cells long, some ending in long hairs
- core (medulla) of many ***intertwined threads*** of long cells and rhizoids, some with short cross connections

diagnosis can be difficult

- young female structures of short chains of dense cells (auxiliary cell filaments) in the cortex, the second is ***smaller***, box-shaped cell and receives a fertilized nucleus
- mature female structures of balls of dense cells (gonimoblast) in the cortex, formed as a result of fertilisation
- groups of tetrasporangia divided crosswise (cruciate) in the cortex of sporangial plants (image unavailable)

cruciate

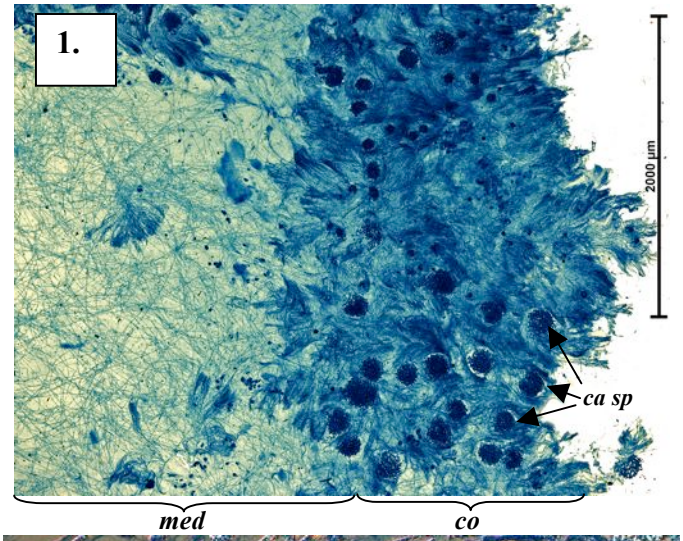
Occurrences known only from the original collection at Esperance, W. Australia and Waterloo Bay (Elliston) and Memory Cove, S. Australia

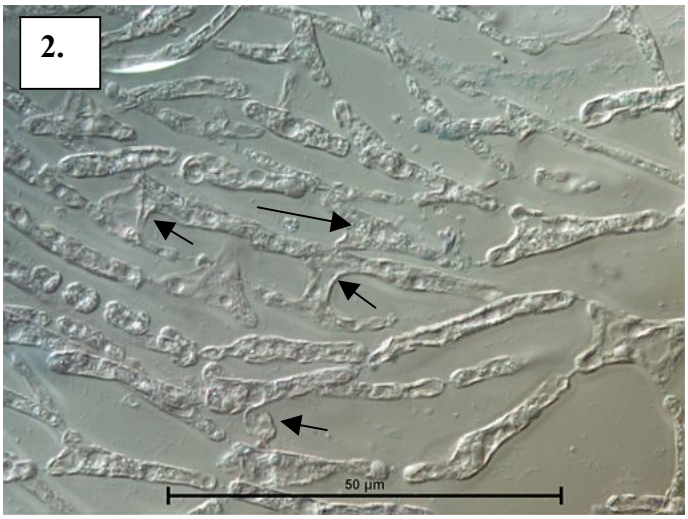
Usual Habitat on hard objects such as jetty structures

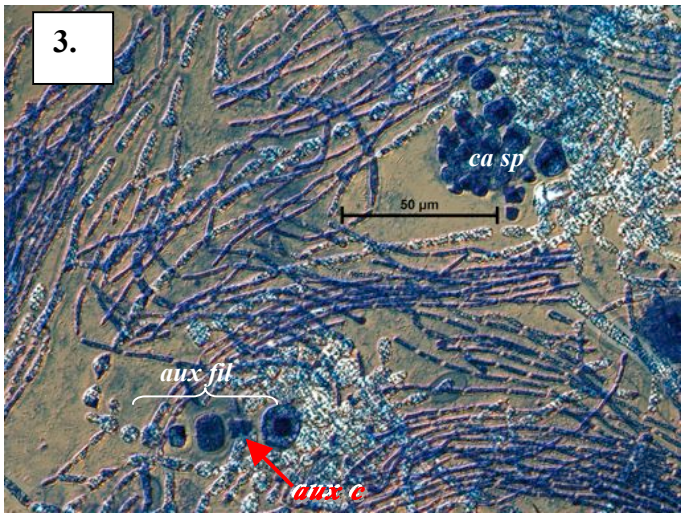
Similar Species *Kraftia dichotoma*, but that species does not have a knobby base, grows on the seagrass *Amphibolis*, has minute, curved thick-walled hairs on the surface, and no cross connections in core threads

Description in the Benthic Flora Part IIIA, pages 221, 228-229

Details of Anatomy







Gibsmithia womersleyi, tissue squash of upper parts:

1, 2. A60393 slide 11785

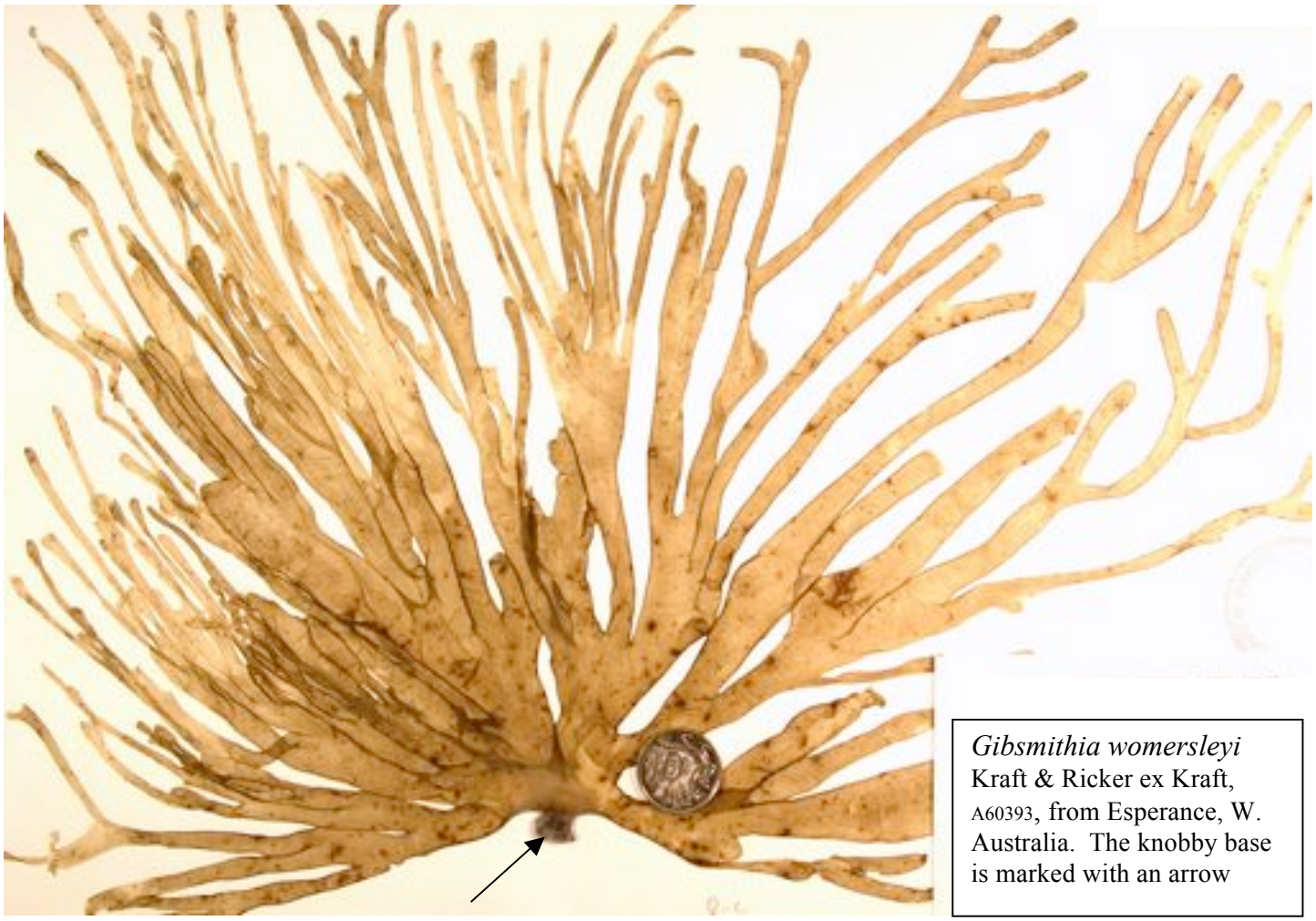
1. outer layer (cortex, *co*) of tufts of coloured cells with ball-shaped clumps of mature female structures (carposporophyte, *ca sp*), core (medulla, *med*) of extremely fine, branched threads
2. young female reproductive thread (auxiliary filament, *aux fil*) with second cell small, cube-shaped (*aux c*) that receives a fertilized nucleus; next female stage (carposporophyte, *ca sp*) with most cells becoming carposporangia

3. core threads (medulla filaments), cross connections arrowed (A88486 slide 2296)

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

Prepared initially December 2005, modified July 2013

Gibsmithia womersleyi Kraft & Ricker ex Kraft, A52746, from Waterloo Bay, S. Australia. The knobby base is marked with an arrow



Gibsmithia womersleyi Kraft & Ricker ex Kraft, A60393, from Esperance, W. Australia. The knobby base is marked with an arrow

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