Techniques needed and plant shape

Classification
Phylum: Rhodophyta; Order: Nemaliales; Family: Scinaiaceae, (as Family: Galaxauraceae in the Flora).
Huisman (Algae of Australia: Nemaliales, 2006) placed members of Galaxauraceae lacking lime into the new Family: Scinaiaceae)

Descriptive name
$Tsinglan$ alga

Life cycles
only plants belonging to the mature sexual phase (gametophytes), upright and relatively large, are described below.
The asexual spore phase (sporophyte) known only for several other species may consist of microscopic, tufted threads but is unknown for this species.

Features
plants soft, 30-100 mm tall, red to red-brown, branches 0.5-2.0 mm wide, forked about every 5-20 mm, and only sometimes pinched at the forks into segments, rounded at tips

Special requirements
view microscopically:
- in surface view, focus through the outermost compact, colourless cells arranged in a honey-comb pattern, to find well-separated bunches of small, coloured, ball-shaped cells just beneath (Figs 1-3)
- in a tissue squash, find the central mass of fine, twisted threads, ends radiating outwards to bunches of coloured, egg-shaped cells at their tips beneath the outermost, colourless, compact surface layer

Occurrences
China, Philippines and Papua New Guinea. On all Australian coasts

Usual Habitat
in the intertidal to 30 m deep on rock or coral in slight water movement

Similar Species
S. arborealis, but the branches are narrower and taper to a point in that species

Description in the Benthic Flora
Part IIIA, pages 102-104

Details of Anatomy

Scinaia tsinglanensis A8367:
1. surface view of colourless cells in a compact honey-comb pattern
2. a focus through the outermost layer exposing the bunches of small, coloured cells beneath

$^\dagger$Name used by Edgar, G (2008) in Australian Marine Life (2nd ed.).
“Algae Revealed” R N Baldock, State Herbarium of SA, June 2013
**Scinaia tsinglanensis** A8367:

3. tissue squash showing fine threads (*rad fil*) radiating from a narrow central mass of threads, (not visible) and ending in bunches of egg-shaped, coloured cells (*col c*) beneath the compact surface layer of colourless cells (*utricles, utr*)

4. cross section near the branch edge, with a mature female structure (*cystocarp, cys*) growing into the middle of the branch and a wrapped in threads (an involucre)

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*Scinaia tsinglanensis* Tseng A52843 from Yilki, Victor Harbor, SA, 2-3m deep

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1 Name used by Edgar, G (2008) in Australian Marine Life (2nd ed.).

“Algae Revealed” R N Baldock, State Herbarium of SA, June 2013