

***Dilophus gunnianus* J. Agardh**

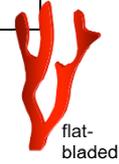
(now considered as *Dictyota gunniana* (J. Agardh) I. Hörnig, R. Schnetter & W.F. Prud'homme van Reine)



Some workers consider this genus should be sunk into *Dictyota*



MACRO  
PLANT

**Techniques needed****Classification**

Division: Phaeophyta; Family: Dictyotaceae; Tribe: Dictyoteae

**\*Descriptive name**

variable fork-tips

**Features**

1. plants dark brown, 50-200mm tall, with **variable** branching patterns
2. blades are **narrow**, 1-3mm wide, flat, often slightly expanded at the tips (spathulate)
3. branching near the base is **forked** (dichotomous) 5-20mm apart, but occasionally alternate in older parts

**Variations**

Plants from shallower regions have wider lower blades and much-divided, spathulate upper parts. Those from rougher conditions may be tufted at the base, deep-water ones with few main axes

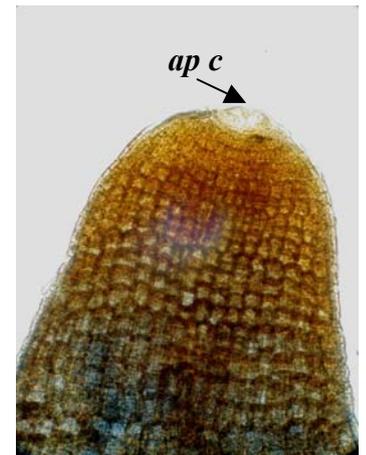
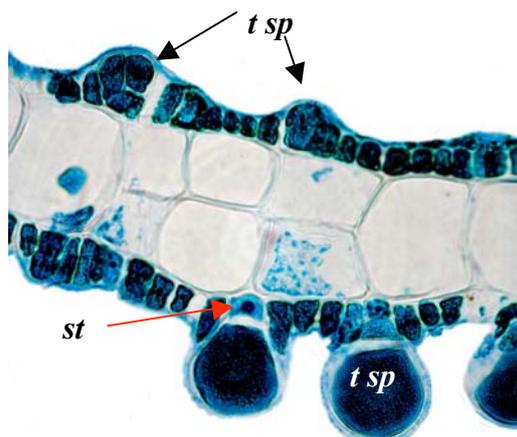
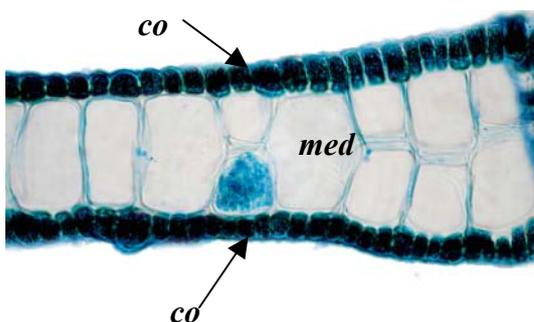
**Special requirements**

Diagnosis can be difficult

1. view the single apical cell that continues the growth of the branch
  2. essential to cut a cross slice from the middle of a branch, and view it microscopically. The middle (medulla) cells are **large** and in **2-3 layers** at least at the blade **edges**. The outer cells (cortex) are **small** and in **single layers**
  3. hair tufts are **scattered**.
  4. tetrasporangia **100-160µm wide** are sparsely scattered, on **single-celled** stalks from W Australia to N Tasmania and Victoria
- widespread in shallow rough and calm waters, on hard surfaces

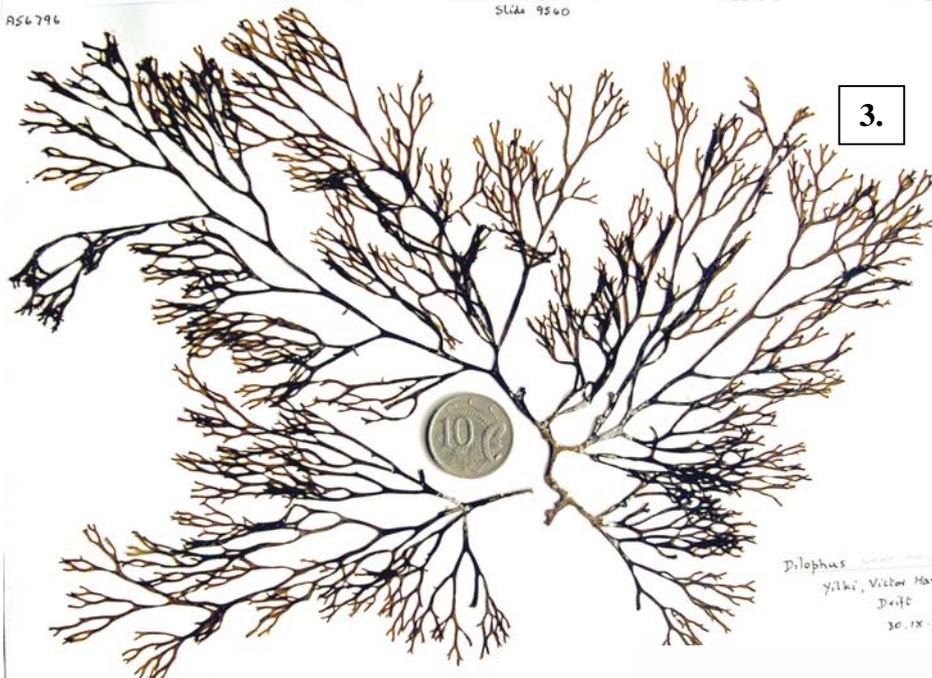
**Occurrences****Usual Habitat****Similar Species**

1. similar to *Dictyota* species with narrow branches. A microscopic examination is necessary to separate the genera.
2. differs from *Dilophus fastigiatus* that has **narrower** fronds and **2-celled** tetrasporangial stalks
2. Phillips (1992) included *Dilophus tener* in *Dilophus gunnianus*
3. Womersley Part II pages 208-209 lists 5 other species he considers forms of *D. gunnianus*:- *D. opacus*, *D. fasciculatus*, *D. foliosus*, *D. taeniaeformis*, *D. wilsonii*

**Description in the Benthic Flora** Part II, pages 208-210**Details of Anatomy**

*Dilophus gunnianus*, stained blue and viewed microscopically,

1. cross section showing large middle (medulla, *med*) cells in **2 layers**, at least towards the **edge** of the blades and outer (cortical, *co*) cells in a single layer (slide 13665)
2. cross section showing sporangia (tetrasporangia, *t sp*) with **single-celled** stalks (*st*), forming from the outer (cortical) layers (slide 13666)
3. surface view of large apical cell (*ap c*) dividing in two, a process that produces the forked branching (slide 9540)



Variations in form of *Dilophus gunnianus* J Agardh, all from S Australia

1. a drift plant from Port MacDonnell with much-branched, flattened tips (A62829)
2. a drift plant from Yilki, Encounter Bay with fewer branches at tips (A56796)
3. from the same locality, with narrower tip branches (A56796)
4. from Isles of St Francis, W Coast, 10m deep: a form with longer distances between branches, approaching *Dilophus fastigiatus* in form (A61972)

