

# A NEW TERRESTRIAL ALGA FROM AUSTRALIA.

(With one Plate.)

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Nine species of *Oedocladium* have been described from various parts of the world, but the genus has not previously been reported from Australia. During June, 1952 an undescribed species was found on moist ground at the cleared margin of what is generally known as a tea-tree swamp; a coastal, low-lying, poorly drained area in which numerous paper-bark tea-trees, *Melaleuca viridiflora* Soland. ex Gaertn. are present. These swamps may hold water for several weeks after heavy rain. The alga occurred as a dense or sparse fur over the substratum, particularly where a light deposit of charcoal had been left after a bush fire. In locally shaded areas it appeared bright green, but where more exposed, became bright orange or orange-red.

This species is named in honour of Professor L. H. Tiffany for his contribution to the study of the Oedogoniaceae.

## OEDOCLADIUM TIFFANYANUM n.sp.

Dioica, macrandra; oogoniis terminalibus deinde apice conicis vel intercalaribus, globosis vel subglobosis,  $52-67\mu$  latis,  $35-63\mu$  longis, singulis vel aliquando jugatis vel in serie dispositis a cellula suffultoria separatis; poro inferiore; cellulis suffultoriis hyalinis; oosporis globosis vel subglobosis,  $45-52\mu$  latis,  $35-52\mu$  longis, oogonia complentibus vel fere complentibus, membrana triplici, episporio et endosporio laevibus, mesosporio angulato; antheridiis usque ad 50 vel pluribus,  $14-20\mu$  latis,  $7-21\mu$  longis; cellulis vegetativis cylindricis vel subcylindricis,  $14-30\mu$  latis,  $42-120\mu$  longis, cellula terminali apice conica basim versus angustata; cellulis rhizoideis  $7-21\mu$  latis,  $40-300\mu$  longis.

Hab.: In terra, Southport, Queensland, 7-6-1952.

Dioecious, macrandrous; oogonia terminal or intercalary, globose or subglobose, with a conical apex if terminal,  $52-67\mu$  broad,  $35-63\mu$  long, occurring singly, occasionally paired, or in a row of up to 5, each separated from the next by a suffultory cell; pore inferior; suffultory cell colourless; oospore globose to subglobose,  $45-52\mu$  broad,  $35-52\mu$  long, almost or quite filling the oogonium, wall of 3 layers, outer and inner layer smooth, middle layer angulate; antheridia up to 50 or more,  $14-20\mu$  broad,  $7-21\mu$  long; vegetative cells cylindric to subcylindric, terminal cell with conical apex tapered below,  $14-30\mu$  broad,  $42-120\mu$  long; rhizoidal cells  $7-21\mu$  broad,  $40-300\mu$  long.

The type specimen is located in the Herbarium of the University of Queensland.

Of the described species of *Oedocladium* (see Tiffany 1930, 1936, Biswas 1938, Whitford 1938, Randhawa 1941), *O. tiffanyanum* is probably morphologically closest to the aquatic *O. hazenii* Lewis, but differs from this species and from all other hitherto described species in being dioecious and macrandrous. Previously described species are either monoecious or dioecious-nannandrous.



The finding of *O. tiffanyanum* makes it necessary to emend the description of the genus *Oedocladium* to include dioecious macrandrous species.

The author is indebted to Professor L. H. Tiffany, North-Western University, Evanston, U.S.A. for confirming that the specimen represented an undescribed species, and to Professor D. A. Herbert, Department of Botany, University of Queensland, for reading the manuscript.

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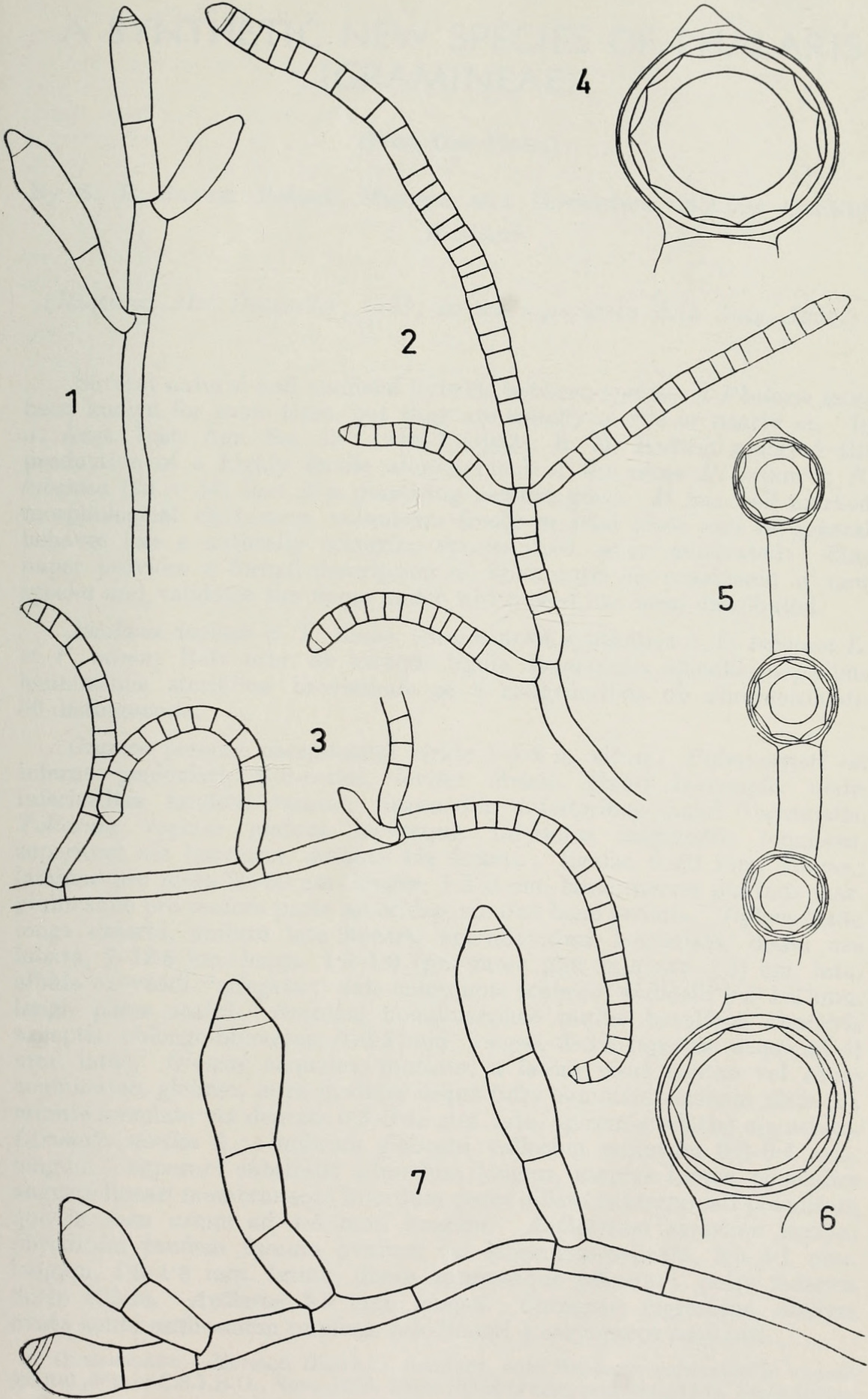
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#### EXPLANATION OF PLATE II.

##### *Oedocladium tiffanyanum* n.sp.

- |          |                                    |
|----------|------------------------------------|
| Fig. 1   | Portion of sterile filament, × 230 |
| Fig. 2-3 | Antheridial, filament, × 230       |
| Fig. 4   | Oogonium, × 450                    |
| Fig. 5   | Oogonia, × 230                     |
| Fig. 6   | Oogonium, × 450                    |
| Fig. 7   | Portion of sterile filament, × 320 |







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