

PHYCOPELTIS KOSTERIANA SP. N., AN EPIPHYLLOUS ALGA OF
THE FAMILY CHROOLEPIDACEAE FROM AUSTRALIA

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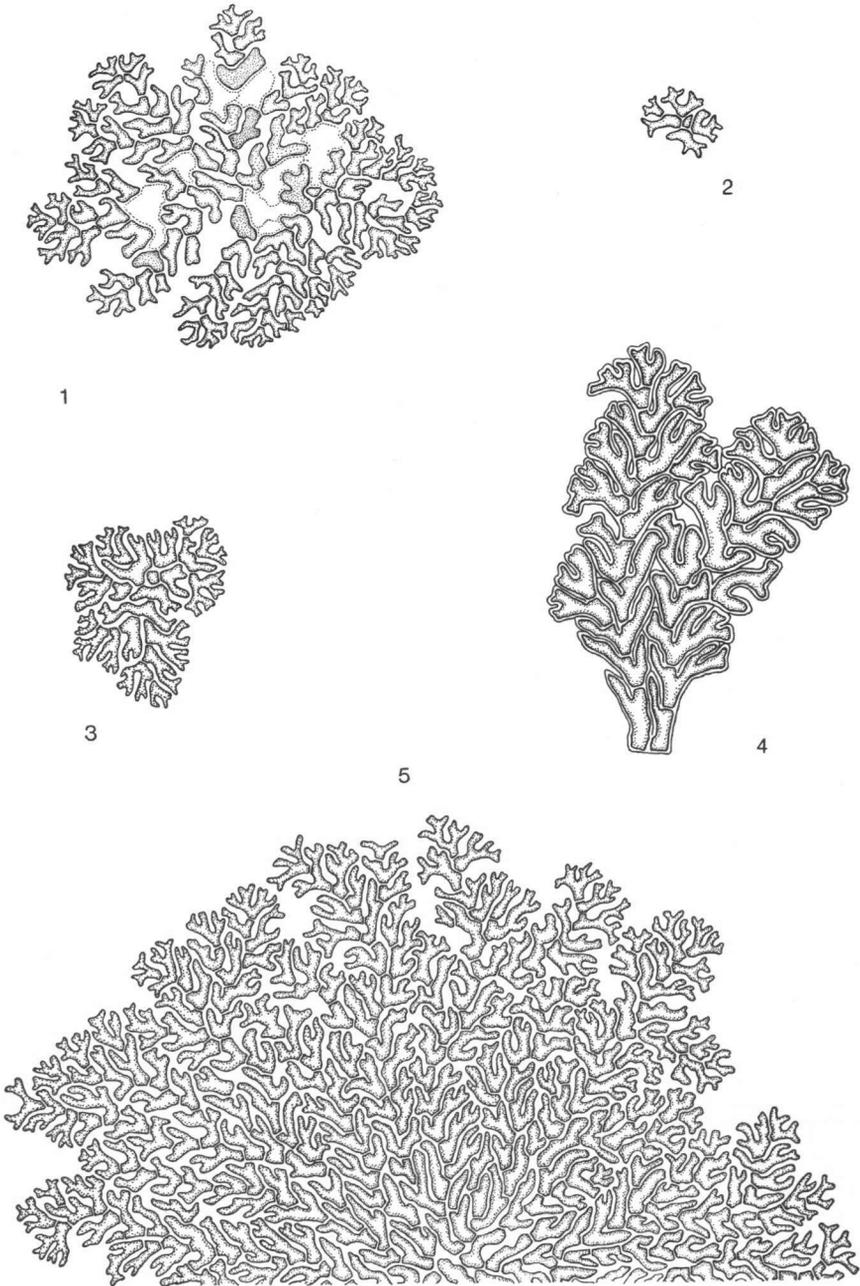
Phycopeltis kosteriana A. B. Cribb, *sp. n.* — Thallus pallidus viridis, usque ad 250 μ diam., margine inaequale; filamenta prostrata, inaequaliter radiata, plerumque contigua extra margine; thallus paucis parvis foraminibus; cellulae inaequales, plerumque inaequaliter 1, 2 vel 3-furcatae, (1.5)2—3(3.5) \times (5)7—12(15) μ ; gametangia (?) in thallo usque ad 4 μ ; ab *Phycopeltis* ceteris in cellulis parvis et inaequalis differt.

Typus: In lamina, Kuranda, N. Queensland, 28-5-1963.

Disc up to 250 μ diam., usually rounded, with margin irregular; filaments all prostrate, radiating irregularly from centre of disc, more or less sinuate, with branching irregularly alternate or irregularly secund; axes of branch systems comprising the disc often detectable but not obvious except sometimes near the margin where the protruding branch systems and filament apices are more or less separated giving the disc a broken and irregularly undulate edge; cells of adjacent filaments otherwise mostly contiguous with only small, irregularly occurring perforations in the disc which is thus essentially continuous except near the margin; form of cells irregular, often 1, 2, or 3 times irregularly forked, (1.5)2—3(3.5) μ diam., (5)7—12(15) μ long, usually more slender near the apices; in some thalli a few cells, in any part of the disc but usually near the centre, becoming slightly enlarged up to 4 μ diam., developing denser contents and presumably functioning as gametangia since empty cells of similar size and form often occur in the same thallus; empty gametangia often eventually in part losing their identity through compression by adjacent cells; some cells with orange oil globules but colour of disc pale green.

P. kosteriana is one of the smallest of the described species of the genus and is distinguished by its small size and the irregular, often forked form of the cells comprising its sinuate filaments.

The species is named for Dr. J. Th. Koster in recognition of her contribution to phycology.



Phycopeltis kosteriana A. B. Cribb. 1. Colony with discharged and non-discharged gametangia (?), $\times 745$, 2 & 3. young discs, $\times 745$, 4. branch system from edge of disc, $\times 1090$, 5. part of a mature disc, $\times 745$. Figs 1—3 and 5 show only the protoplast outlines as seen in discs mounted in lacto-phenol; fig. 4 shows also the cell wall outlines of similar material.