

**A TAXONOMIC REVISION OF THE RICCIACEAE REICHENB.
(MARCHANTIALES : HEPATICAЕ) IN SOUTHERN AFRICA**

by

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Submitted in partial fulfilment of the requirements
for the degree

PHILOSOPHIAE DOCTOR

in the Faculty of Science (Department of Botany)

**UNIVERSITY OF PRETORIA
PRETORIA**

Promoter: Prof. Dr. A.E. van Wyk

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Dedicated to my mentor

**Prof. (emer.) Dr. O.H. Volk
(Würzburg University, Germany)**

in recognition of many years of guidance, help and encouragement.

ABSTRACT

A TAXONOMIC REVISION OF THE RICCIACEAE REICHENB. (MARCHANTIALES : HEPATICAEE) IN SOUTHERN AFRICA

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A taxonomic revision of 51 species of *Riccia*, nearly three quarters of which are probably endemic to southern Africa, as well as the cosmopolitan, monotypic species, *Ricciocarpos natans*, is presented. The systematic treatment includes keys to the genera, subgenera, sections, groups and species. Each species is described in detail, accompanied by its nomenclature, as well as information on its geographical distribution and ecology. Several thousand specimens have been collected by the author and by others, notably O.H. Volk, over the last 10 years or more, and are listed, together with older collections by Arnell, Duthie and Garside and by Sim, to name but a few. Illustrations include line drawings of the thalli of every species, plus photographs of the thalli of some and spore micrographs of all. The phylogeny is briefly considered with reference to the following criteria: palaeobotanical, phytogeographical, morphological, cytological and biochemical. A hypothetical ancestor is postulated and primitive character states as opposed to advanced ones are examined. An extensive bibliography is provided.

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PART 1

FORMAL TAXONOMIC TREATMENT

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