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Each author is responsible for the opinions and facts expressed in his or her article. Editor.

A BIG THANKYOU TO THE STATE GOVERNMENT

The Tasmanian Naturalist has successfully appealed to the State Government for a $500 grant to help support its continued publication. Recent increases in the costs of printing and postage have threatened our continued existence. Responding to our request, the Premier, Mr Gray, sought advice through the Minister for National Parks as to the value of this publication for the work of various government departments, and, as a result of favourable comment being received, the Premier has made a grant of $500 available to assist in the publication of our journal. We are grateful to the State Government for its recognition of the role that this publication plays in helping to disseminate knowledge of the unique flora, fauna and other aspects of natural history of our State. The grant will help us greatly to maintain publication at the present standard.

REPRINTING OF 'TASMANIAN BIRDS'

In addition to publishing the Tasmanian Naturalist, the Tasmanian Field Naturalists Club (TFNC) has also compiled the very successful field booklet "Tasmanian Birds", which sold out its original print run as well as a later reprint run. Originally published by The Jacaranda Press, the publication has now been taken over by the TFNC itself. The Club has recently authorised a reprinting of 2000 copies of Tasmanian Birds, as market research has indicated a continued demand for this pocket-sized introduction to the Tasmanian avifauna. The 10cm x 13.3cm booklet, containing 83 colour photographs of 77 species, includes illustrations of all species endemic to Tasmania. Brief notes on food, habit and habitat accompany each photograph. The booklet is now available in various bookstores and outlets throughout the State.

TASMANIAN TREE FERNS
A VEGETATIVE KEY AND DESCRIPTIONS

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Tasmanian National Parks and Wildlife Service

Introduction

The attractiveness of tree ferns is undeniable. Whether they occur in groves or as isolated individuals occupying a moist niche in an otherwise dry environment, their luxuriance and primeval appearance invite inspection.

The following key and descriptions of Tasmanian species of tree ferns are designed to assist those who wish to classify as well as inspect. To simplify diagnoses, the key uses vegetative characters only. More detailed comparisons of the vegetative and reproductive features and habitat preferences of the species are given in Table 1.

The key and descriptions are confined to true tree ferns, i.e. the five Tasmanian species which regularly form trunks which may exceed one metre in height in mature individuals. These species (nomenclature follows Jones and Clemesha, 1980) are *Dicksonia antarctica, Cyathea australis, Cyathea cunninghamii, Cyathea marcescens* and *Todea barbara*. It should be noted that mature individuals of three other species *(Polystichum proliferum, Blechnum nudum,* and *Diplazium australe)* may also form trunks, but these rarely exceed 30cm in height. Descriptions of the latter species, as well as the five species of tree ferns, are contained in several publications (see references).

Key to, and Descriptions of, Tasmanian Tree Ferns

Identification of species in the following key is based on characters of the frond. Note that it is important to examine the base of the stipe (i.e. the frond is not broken off above its base). Species can be classified using dead fronds, either from amongst the litter or still hanging down, if they are in good condition.

Identification of specimens can be checked by referring to other characters listed in Table 1. A glossary of technical terms used in the key and in Table 1 is given in the Appendix. Figure 1 shows the differences in tubercle and scale characters of *Cyathea australis* and *Cyathea cunninghamii*.

Key

A. Stipe smooth near base
  B. Stipe base hairless . . . . . *Todea barbara*
  *B. Stipe base covered with soft reddish hairs . . . . . *Dicksonia antarctica*
*A. Stipe rough near base
  C. Stipe base dark brown, with tubercles pointed . . . . . *Cyathea australis*
  *C. Stipe base black, with tubercles rounded or truncated
    D. Most pinnules petiolate . . . . . *Cyathea cunninghamii*
    *D. Most pinnules joined to rhachis . . . . . *Cyathea marcescens*

Records from the Public

The National Parks and Wildlife Service is currently compiling an atlas of Tasmanian ferns, using the standard 10km national map grid for plotting distributions of all fern species. Presently known distributions for tree ferns, based on herbarium, literature and reliable field records are shown in Figure 2.

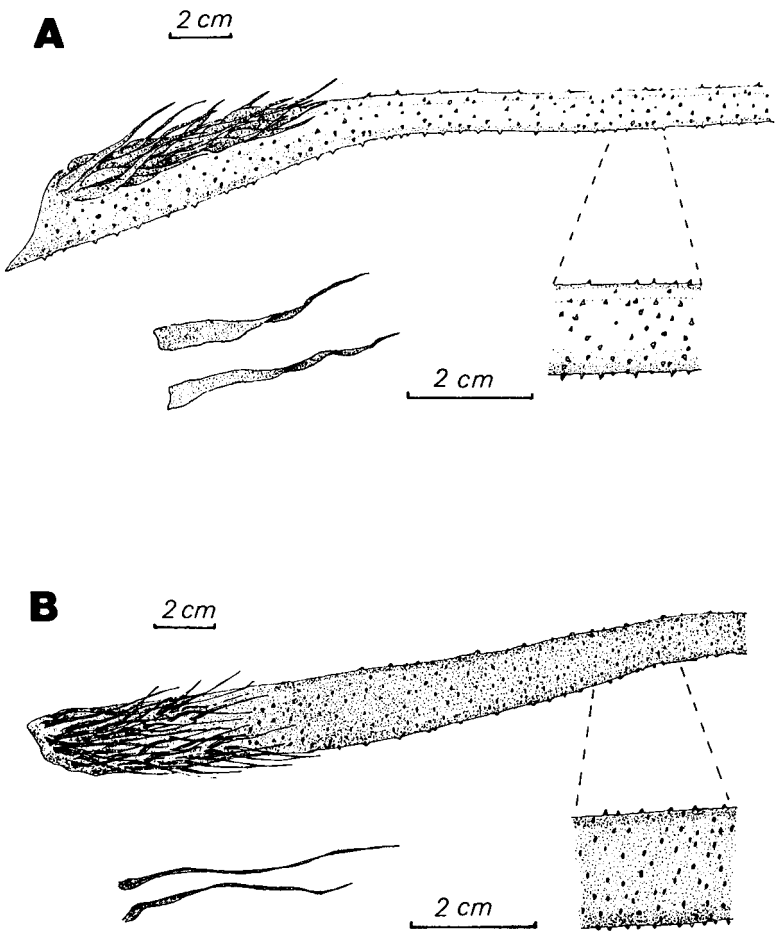

Figure 1. Stipe base and scales of *Cyathea australis* (A) and *Cyathea cunninghamii* (B).

Table 1. Characteristics of Tasmanian tree ferns.

Species	Maximum trunk dimensions	Trunk features	Maximum frond length	Stipe features
Dicksonia antarctica Soft tree fern	15m tall 100cm diam	Trunk often buttressed, sometimes divided. Old fronds persistent on upper trunk less so in older plants.	450cm	Stipes smooth. Bases with soft reddish brown hairs.
Cyathea australis Rough tree fern	12m tall 30+cm diam	Buttress developed in older plants. Stipe bases persistent on upper trunk, lower trunk fibrous.	450cm	Bases with dark shiny scales. Stipe base covered with sharp tubercules extending up stipe.
Cyathea cunninghamii Slender tree fern	20m tall 15cm diam	Trunk slender. Stipe bases persistent on trunk. Often moss covered.	300cm	Bases with thin brown scales, stipes rough with short tubercules mainly near base.
Cyathea marcescens Skirted tree fern	10m tall 40cm diam	Buttress developed in older plants. Trunk fibrous. Fronds very persistent on trunk.	500cm	Base with long dark brown glossy scales. Stipe base thick, black, tuberculate.
Todea barbara King fern	150cm tall 200cm diam	Trunk barrel shaped, black and fibrous on outside, bearing many crowns of fronds. Doesn't always form trunk.	200cm	Stipes smooth. Base hairless.

Information on occurences of tree ferns (and associated ferns and fern allies) from grid squares with no current records would be appreciated by the Service. Similarly, location and habitat information (including numbers of young and mature individuals) for *Cyathea marcescens* and *Cyathea cunninghamii*, the rarest of the Tasmanian tree ferns, would also be appreciated.

If in doubt about the identity of a species, a specimen of frond (including the base of the stipe) and fertile material (if possible) should also be sent for verification. Other information (trunk height and diameter, habitat, location) should also be supplied.

Acknowledgements

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Frond divisions	Texture and colour of mature fronds	Reproduction	Habitat and distribution
Tripinnate	Stiff, dark glossy green above, light below.	Sori marginal, protected by recurved leaf margin forming a two valved cup.	Widespread annd common. Fern gullies and wet forests. Southern Qld., NSW, Vic, Tas, SA (extinct)
Tripinnate	Soft, light green, above, green or bluish below.	Sori in rows, parallel to main pinnule vein on underside of frond. Indusia absent.	Fern gullies, wet forests, creek banks. Open forest in higher rainfall areas. Qld, NSW, Vic, Tas.
Tripinnate	Soft, dark green above, lighter below.	Sori circular, in rows. Covered by cup shaped indusia.	Very protected fern gullies. Southern Qld, NSW (?), Vic, Tas, N.Z.
Tripinnate	Soft, dark green above.	Sori in rows at base of pinnae, small scalelike indusia. Spores absent.	Found only where *C. australis* and *C. cunninghamii* occur together. Believed to be a hybrid. Vic, Tas.
Bipinnate	Leathery, bright shiny green.	Sori covering pinnules towards base of frond. Indusia absent.	Coastal, predominantly in the north. Gullies, rock crevices and creek banks. Northern and Southern Qld, NSW, Vic, Tas, SA (rare), N.Z., South Africa

Government through the Heritage Commission (F.D.), and the Australian National Parks and Wildlife Service (M.N.).

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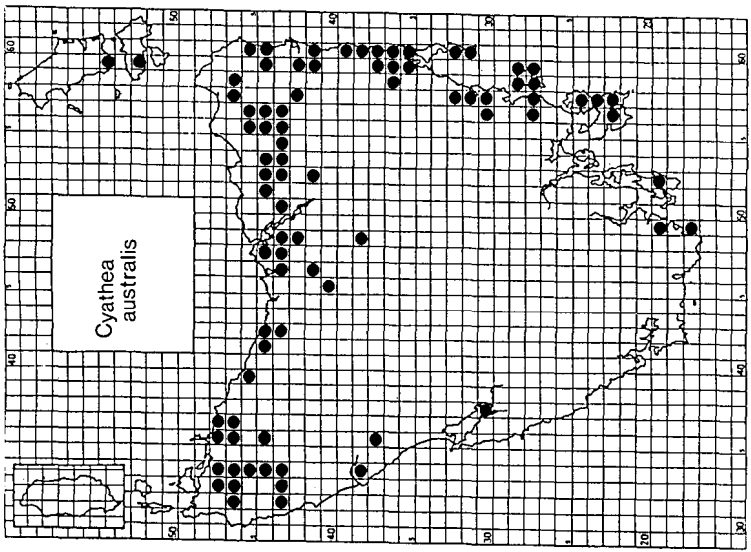
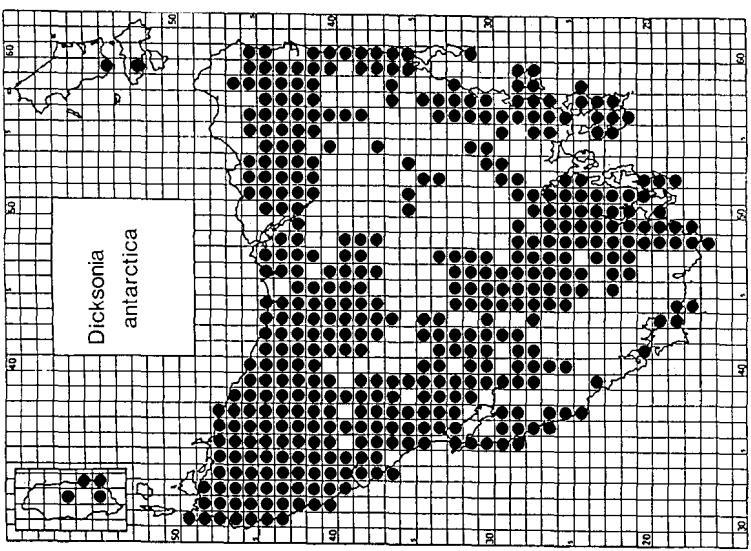

Cyathea
australis


Dicksonia
antarctica

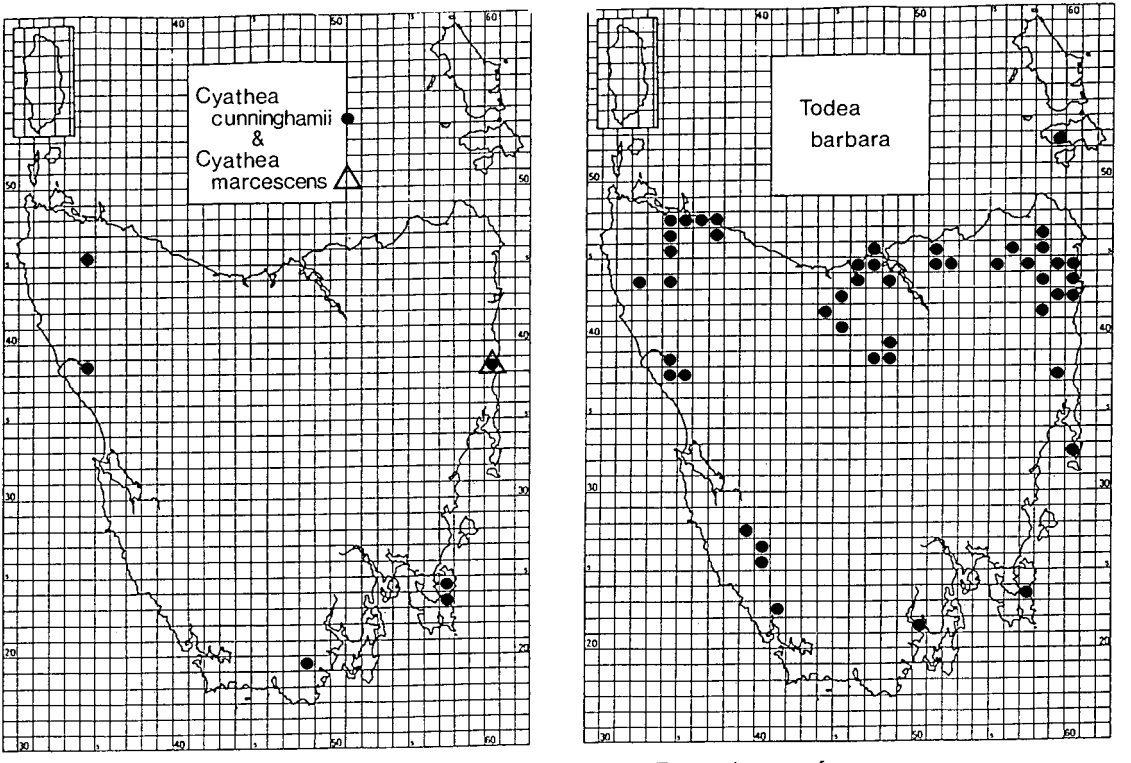
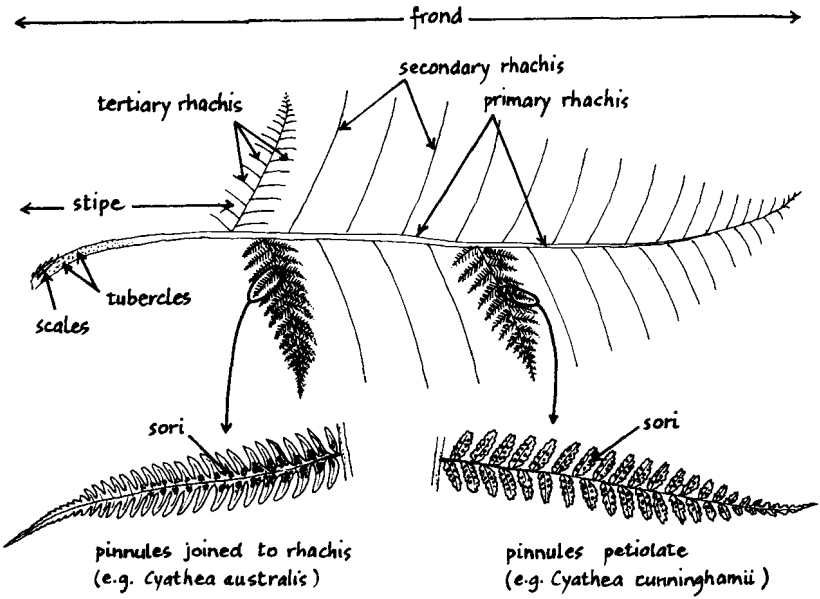


Figure 2. Presently known locations of Tasmanian tree ferns.

Appendix 1. Terms used in Key and Table 1.

Frond . . . . . full leaf of fern
Stipe . . . . . stalk of frond, from trunk to first divisions bearing leaflets
Tubercles . . . . . knobby projections
Bipinnate . . . . . frond is twice divided
Tripinnate . . . . . frond is thrice divided
Pinnules . . . . . smallest segment of the divided fronds
Petiolate . . . . . attached to the rhachis by the mid-vein only
Sori . . . . . clusters containing spores on the underside of fertile pinnules
Indusia . . membranes which cover or partly cover immature sori in many ferns
Rhachis . . . . . axes or framework of the frond above the stipe.



Stylised tripinnate frond of *Cyathea* spp.

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