

Australian Tropical Rainforest Plants



The Rainforest

The Australian tropical rainforests contain over 2500 species of higher plants, representing more than 10% of the Australian flora. These rainforests stretch from the lowland and montane tropical rainforests of north east Queensland through to the drier and monsoonal rainforests of the Northern Territory and the Kimberley district of Western Australia.

The rainforests of the Wet Tropics area of north east Queensland are the most species rich, with over 1907 species. There is a decrease in species richness along the rainfall gradient to the monsoonal rainforests of Western Australia, where there are 332 species.



An interactive identification system

The "Australian Tropical Rain Forest Plants - Trees, Shrubs and Vines" (aka the rainforest key, or RFK) is an interactive multiple-entry identification and information system, where the user decides which characters to choose based on the specimen in hand. The latest version, published in 2003, includes 2154 species of trees, shrubs and vines of northern Australian rainforests.

A total of 138 characters, covering morphology - habit, bark, leaves, flowers, fruits and seedlings - and some geographic and ecological information ensure reliability and power of the key is high. Illustrated help notes assist with interpretation of characters. Plant images help to confirm identification.

A comprehensive information system for each species includes the common name and formal scientific name, together with nomenclatural synonyms, geographical and ecological information, distinguishing features and natural history notes. The descriptions are combined with high quality colour images for most species, leaf x-ray images and a map showing the geographical distribution.

Further development of the system is well underway to add modules for other plant life forms including orchids, herbs, ferns, parasites, saprophytes, palms and pandans. These modules will add approximately 865 species. It is anticipated that the new identification system for all plant groups will be available on the web by end of 2010, as well as on DVD and other novel technologies.

For further information please contact:

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Rainforest Key Modules Under Development

Herbs (grasses and forbs)

420 species



- Grasses, sedges, lilies and forbs
- Diagnostic features - floral structure, leaf form, growth habit
- Progress: coding complete for all species
- Currently working on collating additional information (eg. nomenclatural, geographic and ecological information, natural history notes) and images
- Research has been affected by recent drier wet seasons
- Anticipate release date late 2009 including publication to the web

Ferns

300 species



- Epiphytic, aquatic and terrestrial species
- Diagnostic features - frond morphology, sporangia and spores
- Many close-up images in forest floor and herbarium, depicting diagnostic features associated with habit, frond morphology, reproductive structures and indumentum
- Progress: 100 taxa coded for 80-100 characters
- Currently working on coding remaining species, collating images, illustrating characters and a glossary, compiling species profiles and distribution maps

Orchids

224 species



- Epiphytic and terrestrial species
- Diagnostic features - flower morphology, vegetative features
- Comprehensive information on species and images
- Feedback from workshop participants of north Qld orchid network led to several enhancements
- Progress: testing nearing completion
- Anticipate release date late 2008 including publication on the web

Parasites, Saprophytes

65 species



- Epiphytic and terrestrial species
- Parasites - plants that extract nutrients from other plants
- Saprophytes - plants living off decaying organic matter
- Diagnostic features - simple leaf structure, growth habit
- Progress: complete, beta version being tested

Palms, Pandans

55 species



- Free standing and climbing species
- Diagnostic features - leaf morphology, fruit, habit
- Prominent elements of the rainforest
- Progress: 23 species fully coded, 20 species coded for material at hand
- Work on remaining species continues