Rainforest Rescue – Saving the world one tree at a time

(Written by Allan Fong – HOPE researcher NSW)

Introduction

While it is common knowledge protecting trees is good for the environment, preserving and replenishing tropical forests deserve special attention. Natural ecosystems play an essential role in mitigating climate change by removing carbon from the atmosphere, but two-thirds of all carbon removed is by tropical forests alone. Sadly, tropical forests are subject to high levels of deforestation due to industrial agriculture and commercial logging. Rainforests are a sub-type of tropical forests and are evolutionary hotspots where a single hectare may contain over 480 tree species, and this level of diversity supports a healthy local ecosystem. In addition, many modern medicines (e.g. cancer and hypertension drugs) are derived from rainforest plants, so protecting these forests ensures the potential for discovering future life-saving treatments (Why Maintaining Tropical Forests Is Essential and Urgent for a Stable Climate).

Rainforest Rescue

Rainforest Rescue (Rainforest Rescue - Together we can Protect Rainforests Forever) is a non-profit organisation that has been protecting and restoring rainforests since 1999. They do this by purchasing and protecting value conservation rainforest land, restoring rainforests through planting, as well as maintenance and weed removal and other related programs.

Summary of their mission:

Rescue *vulnerable rainforests by strategically buying properties;*
Restore *damaged and fragmented habitat through reforestation;*
Conserve *the biodiversity and cultural heritage of Rainforest; and*
Learn *from the forest, sharing and raising awareness.*

The Daintree Rainforest

Most of the Rainforest Rescue team are based in Far North Queensland with their work centred in and around the Daintree, which was world heritage listed in 1988 having been recognised as an internationally important, ancient and unique area which required protection.

History: During the 40 million years after Australia separated from Gondwana, the continent was made up of mainly rainforest. The Australian climate became drier over time, leaving only small regions of rainforest including the Daintree. Hence, the Daintree offers a vital insight into the continent's rich history of flora and fauna, providing vital scientific information for interpreting fossils and understand evolution.

First Nations People: The Kuku Yalanji People are the traditional owners of the northern Queensland rainforest area and have lived in the region for over 50 000 years. The Daintree is of tremendous cultural and spiritual significance to the traditional owners.

Colonisation: The Daintree was first colonised in 1873 by George Elphinstone Dalrymple and named it after his friend, geologist and photographer Richard Daintree. Over the years, parts of the rainforest have been subject to development with significant sections of the coastal lowlands subdivided for residential development 10 years prior to world heritage listing.

Wildlife and biodiversity: The Daintree is extremely biodiverse containing a high concentration of plants and animals including many ancient plants. In addition, rare and endangered are found in the Daintree Lowlands amongst ancient flowering plants. Protecting these lands ensures crucial habitats are maintained, providing a safe haven and source of nourishment to local species.

Topical news: Replanting Rainforest trees on former sugarcane land

(Conservation group plans to replant Daintree Rainforest trees on former sugarcane land - ABC News)

Rainforest Rescue has received partial approval to plant rainforest trees on former sugarcane farms near the Daintree Rainforest. They propose using locally propagated seed to regenerate about 405 hectares of rainforest over 15 years. Some local farmers have expressed reservations over the revegetation, concerned it could lead to more farms being rezoned for other purposes. Rainforest Rescue advocate replanting rainforest trees would protect the Great Barrier Reef, reduce the severity of flooding, generate income through the carbon market and help grow nature-based tourism.

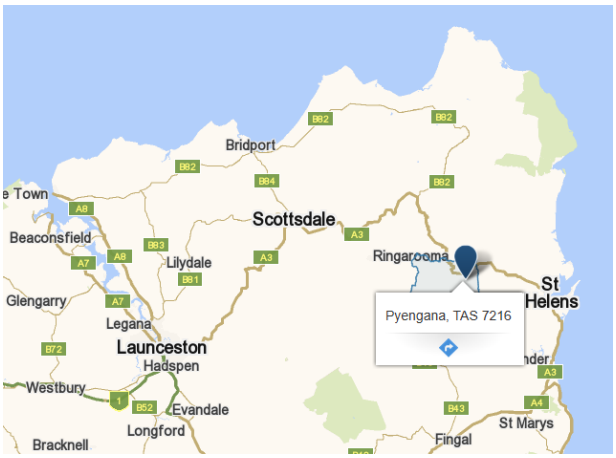
The Southern Cassowary – a keystone species

There are two subspecies of the Southern cassowary: one living in southern Papua New Guinea and the other in the wet tropics of Far North Queensland. They are direct descendants of the dinosaurs, and the Australian Southern Cassowary is listed as an Endangered species due to habitat loss, vehicle strikes, dog attacks and increasing incidence of natural disasters.

Through eating rainforest fruits and excreting the seeds in their droppings, the cassowary plays a vital role in seed dispersal. Without them, rainforest regeneration and diversity are in danger. More than 240 rainforest plant species rely on the cassowary for this method of seed dispersal, as many of their seeds are too large to be spread by other animals. For this reason, Southern Cassowaries are described as a "keystone species".

It is illegal to feed cassowaries without a permit (maximum penalty $5222, as hand feeding alters the cassowaries' natural behaviour and disorients them, making them dependent on humans.

Forest Lodge – Pyengana, Tasmania

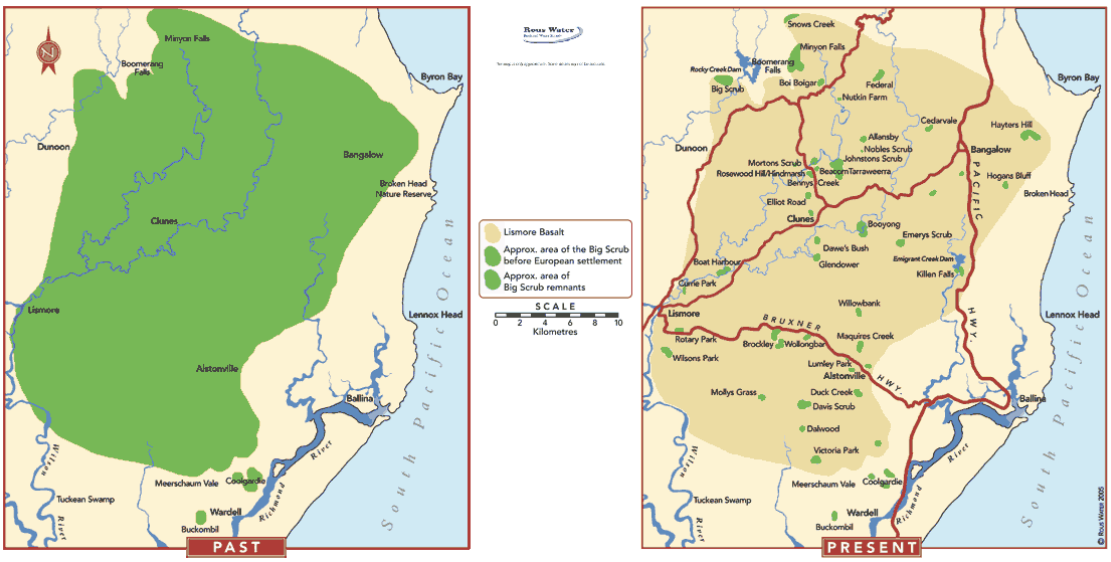


Rainforests are often associated with warm tropical regions, but cool temperate rainforests also exist such as the Forest Lodge Rainforest Reserve at Pyengana in Northeast Tasmania, which was purchased by Rainforest Rescue in 2012. The property was previously owned by a timber company but is now protected forever through a Conservation Covenant which is registered on the title of the land which permanently protects its conservation value.

Myrtle Beech and Sassafras are the dominant trees in this region, and under their cool damp canopy, the microclimate provides ideal conditions for ferns, mosses, and lichens to thrive. Forest lodge features a very large number of Soft Tree Ferns (pictured below on left), also known as Man Ferns. The property also provides suitable habitat for the Tasmania Wedge-tailed eagle and Tasmanian devil (pictured below on right) who is in great danger of extinction due to habitat loss and facial tumour disease.

Big Scrub Restoration

The Big Scrub was an area of rainforest in NSW covering approximately 75 000 hectares extending from Lismore eastward to Ballina, then northwards to Byron Bay (see diagram below on the left). European settlers began clearing the area in the 1840s for its cabinet timber, especially red cedar, ultimately opening up the land for agriculture and other development. Today, only scattered remnants of rainforest remain (see diagram below on right) covering less than 700 hectares in total.



The big scrub remnants provide habitat for birds and bats which seasonally migrate between the forests of the coast to the south, and the Nightcap and Border Ranges. In addition, the remnants are home to 61 threatened species of fauna and 38 threatened plant species.

Damaging weeds represent the biggest threat to the Big Scrub remnants today, as they smother native plants and damage the forest structure preventing natural regeneration. Rainforest Rescue has been working with project partners “Big Scrub Landcare” (Big Scrub Landcare Group — NSW Landcare Gateway) since 1999 to restore the Big Scrub by removing weeds and facilitating rainforest regeneration, as well as through education, fundraising and promotion.