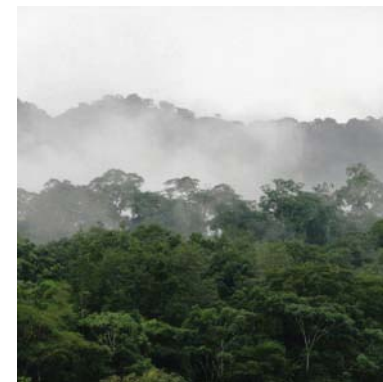




**Community Forestry
Plant Propagation
Tree Improvement
Forest Ecology
Agroforestry**



Natural Forest Ecology, Management and Utilization

This multifaceted project focuses on the understanding of the natural disturbance-recovery processes in natural forest and woodland ecosystems in Africa as a basis for developing applied integrated, multiple use forest resource management for timber and non-timber forest products from these systems, and for forest rehabilitation after degradation from resource use and mining or from alien plant invasions. The recently completed, ongoing and planned future studies focus on South African warm-temperate evergreen forests, Congo-basin tropical moist forests, and southern African Miombo woodlands.

Propagation of *Pinus maximinoi*

Popular vegetative propagation techniques include grafting, air layering, rooting of cuttings and fascicles. Grafting seems to be the preferred method of propagating, but *P. maximinoi* is known to be a difficult grafter. This study investigates alternative methods for establishing a clone bank of *P. maximinoi* for the purpose of seed production and controlled pollinations.

Viability testing of interspecific hybridisation

Interspecific hybridisation is becoming more important and popular in forestry to address pest and disease resistance, climatic adaptation, better wood qualities etc. Various hybrids have been planted commercially and invasiveness of these hybrids needs to be understood. This pilot study investigates the viability of *E. grandis* x *E. europylla* seed from a commercial clonal plantation.

Investigating the reproductive barriers of *Pinus radiata*

Pinus radiata is a very important species in plantation forests in South Africa due to outstanding wood quality, good commercial forestry value and climatic adaptability, but is highly susceptible to *Fusarium circinatum*. Forestry companies worldwide have tried to hybridise *P. radiata* with other *Pinus* species that have mild resistance/ tolerance to *F. circinatum* to overcome susceptibility, extend the geographic planting range and retain the excellent wood qualities, but there appears to be reproductive barriers hampering hybridisation success. The aim of this study is to establish a new protocol for successful hybridisation of *P. radiata* with other, *Fusarium*-resistant pines.