



Aerial view of Rondevlei in the Wilderness National Park showing the triangular study site in the centre with gum trees and a pine plantation on either side. The natural vegetation occurring in the area is a mixture of dune fynbos and dune thicket. Photo: Nicholas Cole.

# Out of the dead land

Alien infested land is not necessarily wasteland

by Tineke Kraaij, Scientific Services, South African National Parks

The presence of alien plant infestations on land identified for development is often successfully used as a justification for the re-zoning of land for development (usually residential). The broad assumption is that alien-invaded land equals wasteland in that it has little or no value in terms of biodiversity, ecology, agriculture or recreation. But is this rationale valid?

The negative impacts of plantation forestry and alien plant invasions on the indigenous fynbos vegetation of the Cape Floristic Region have often been documented. Large-scale reductions in species richness and alteration of various ecosystem processes have been ascribed to alien plant infestations in the Fynbos Biome. Among these are changes in plant biomass and litter, soil characteristics, hydrology, fire regimes and sediment dynamics.

As part of the research programme of South African National Parks, a group of us studied the effect of alien plant infestations on biodiversity\*. We wanted to know if the negative impacts of alien plants on the indigenous flora were lasting or if they were reversible. The study area was at Rondevlei within the Wilderness National Park, which is one of several protected areas along the Western Cape's Garden Route that aims to conserve biodiversity and ecosystem functioning amidst a plethora of human influences. In coastal lowland with high tourism potential and intense land-use pressures, information on the value and potential for recovery of disturbed land is essential for sound land-use decision making. Furthermore, for conservation management and planning purposes it is imperative to understand the ability of vegetation to recover after different forms of disturbance or transformation.

We investigated natural (unaided) recovery of a 40 ha site that had been under pine trees *Pinus radiata* for approximately forty years. The pine plantation was felled in 1997, six years after incorporation into the Wilderness National



TOP RIGHT: Basterboegoe *Agathosma ovata* growing on the 40 ha study site that had been under pines for approximately forty years. Photo: Geoff McIlerron: Firefly Images.

ABOVE: Bloukanol *Aristea ensifolia* re-appeared on the Rondevlei site after a forty year old pine forest was removed. Photo: Geoff McIlerron: Firefly Images.