

## ALIEN PLANTS IN KAKADU NATIONAL PARK

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*Abstract.* A detailed assessment of weeds in Kakadu National Park was made in 1986-87 as a basis for future management of these species. The work was conducted by the CSIRO Division of Wildlife and Rangelands Research, Darwin, funded by the Australian National Parks and Wildlife Service.

Of over 1400 plant species in Kakadu National Park, 87 are naturalised alien species (6% of the flora). Most of these species are rare or sparse with low mean foliage cover levels. The most commonly found weed species were the annual herbs hyptis, *Hyptis suaveolens*, spiny-head sida, *Sida acuta*, and flannel sida, *Sida cordifolia*, and the perennial stinking passion vine, *Passiflora foetida*, but the potentially greater problems were due to less common perennial species with high local foliage cover levels such as para grass, *Brachiaria mutica*, mission grass *Pennisetum polystachion*, and salvinia *Salvinia molesta*.

Most species were associated with human activities, roadways, and other disturbed ground. On the natural habitats, the few severe infestations of weeds were often of single species, and most often in riparian communities, especially those frequented by the feral Water Buffalo, *Bubalus bubalis*. The buffalo is currently subjected to a legislated extermination program, and the secondary effect of their removal on weeds is yet unknown.

Many introduced plant species are under active, or recent past, cultivation around homes and businesses in the local area associated with the Park. More than 305 alien species, including 13 species of the 87 naturalised species, were in cultivation or ex-cultivation. These species represent a reservoir of potential problem plants of largely unknown importance. However, 47 cultivated species (including 3 declared noxious weeds) were persistent, adventive or naturalized.

Weeds which appeared to have a major potential to modify the habitats which they invaded were mimosa, *Mimosa pigra*, mission grass, *Pennisetum polystachion*, salvinia, *Salvinia molesta*, para grass *Brachiaria mutica*, candle bush, *Cassia alata*, leucaena, *Leucaena leucocephala* and purging cassia, *Cassia fistula*, and were given the highest priority for control. Further work is being done to identify the potential extent of spread and the significance to native flora and fauna of several of these species.

Weeds in other parts of Northern Australia which could be potential major weeds in Kakadu were water hyacinth, *Eichhornia crassipes*, parkinsonia, *Parkinsonia aculeata*, hyptis, *Hyptis capitata*, giant sensitive plant, *Mimosa invisa*, rubber vine, *Cryptostegia grandiflora*, and parthenium, *Parthenium hysterophorus*.