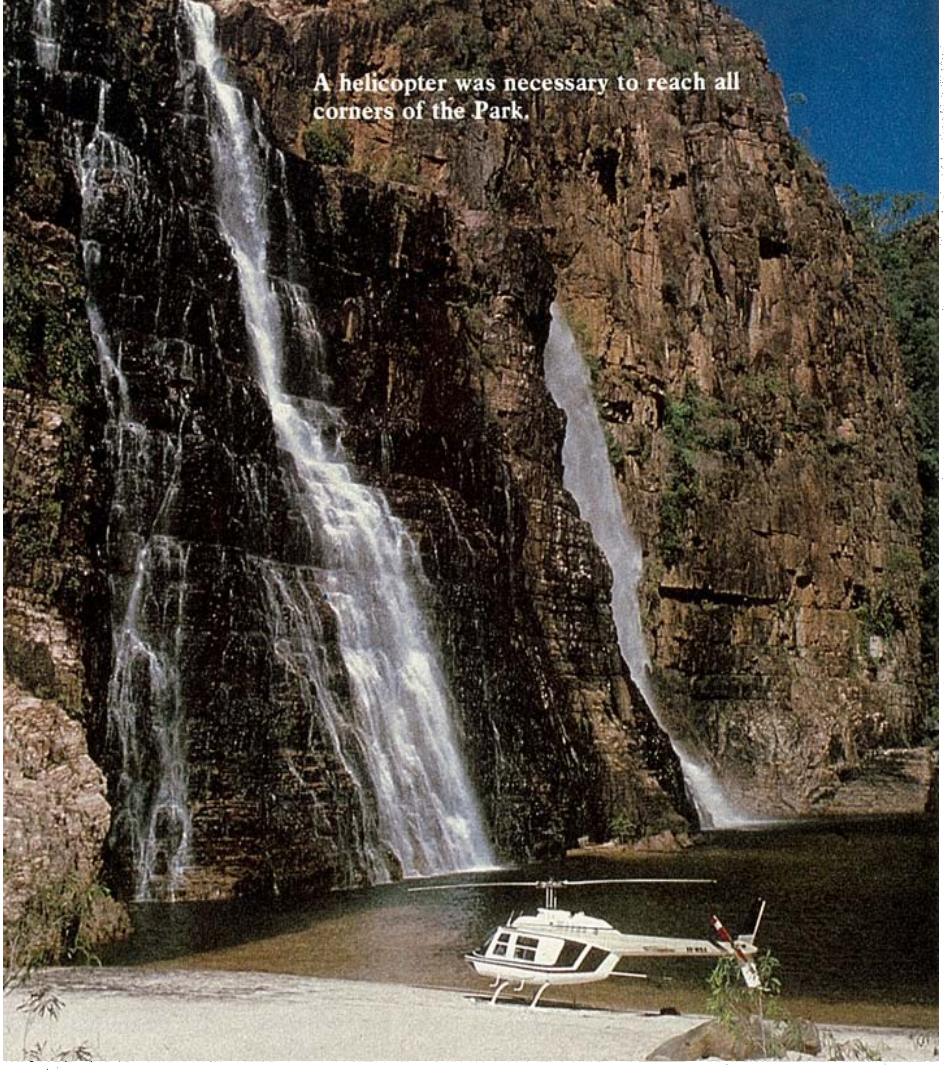
The unique gardens of Jabiru

Jabiru is the Northern Territory township being established in the Kakadu National Park for miners working the uranium deposits in the region.



A helicopter was necessary to reach all corners of the Park.

One of the implications of the township's National Park status is that Jabiru will have unique gardens. Only plants native to the Park, and exotic plants considered to be environmentally safe, will be allowed to be grown. That also applies for trees lining the streets, all amenity plantings, and plants used in erosion control and mine-site revegetation.

The Australian National Parks and Wildlife Service is trying to avert the danger of accidental spread of exotic plants from somebody's garden into the National Park. Australians should bear in mind that Paterson's curse escaped from Mrs Paterson's beautiful garden, and other weeds (such as prickly pear and water hyacinth) have got started in a similar way.

So what will grow in a Jabiru country garden?

Last year the ANPWS provided funds to enable two officers of the National Botanic Gardens in Canberra, Mr John Wrigley and Mr Ian Telford, to go on two field trips to Kakadu (one in April, the other in August).

Travelling by four-wheel-drive vehicle and helicopter, they set out to collect propagating material — cuttings, seeds, or rootstocks — from as many species as they could find. At the end of each day they packed the material and sent it by air back to Canberra. The aim was for the National Botanic Gardens to propagate as much of it as they could in their glasshouses and to assess the suitability of plants for ornamental planting, soil stabilization, and revegetation of disturbed areas.

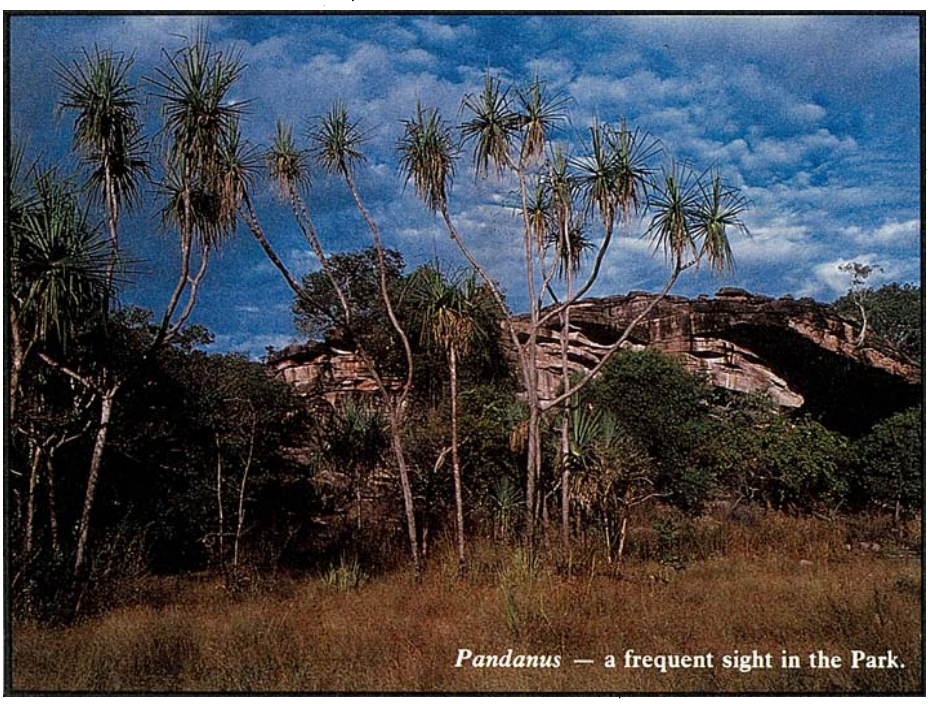
An additional aim was to increase the number of Northern Territory plants growing in the Gardens.

Mr Wrigley and Mr Telford took cuttings of 304 species, made 244 seed collections, and dug up 123 specimens for transplanting. In addition, they collected 1153 herbarium voucher specimens. This rich collection of more than 500 species included dozens of new ones, including several un-named *Boronia* species.

Most of the collection had never been grown in cultivation before and considerable experimentation was needed to determine the optimum conditions for their germination and growth.

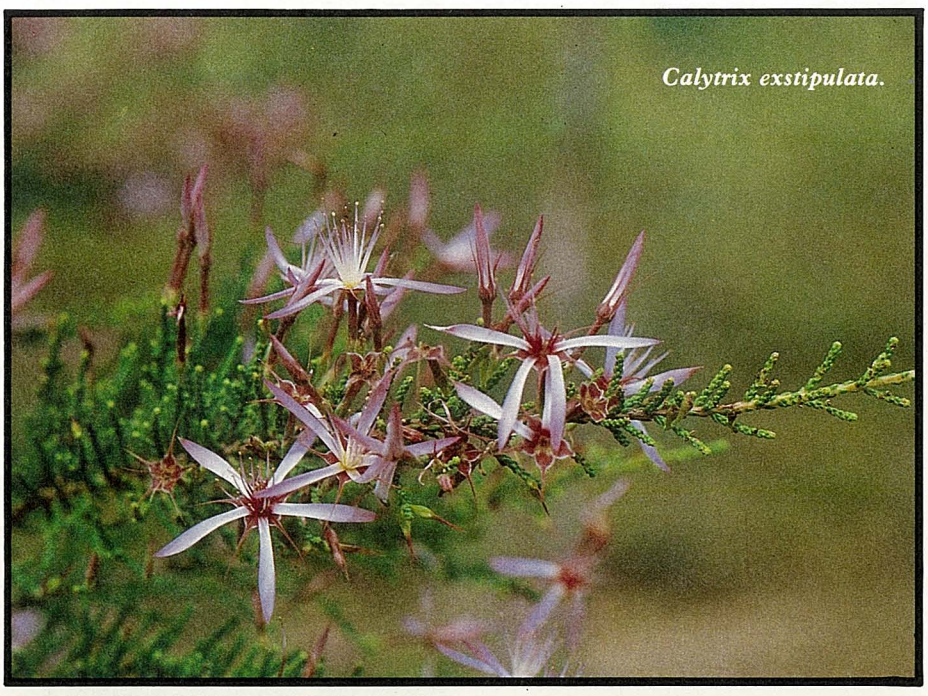
Despite the heat and distance, the cuttings travelled remarkably well, arriving in Canberra in fresh condition and, in general, they struck root at an encouraging rate.

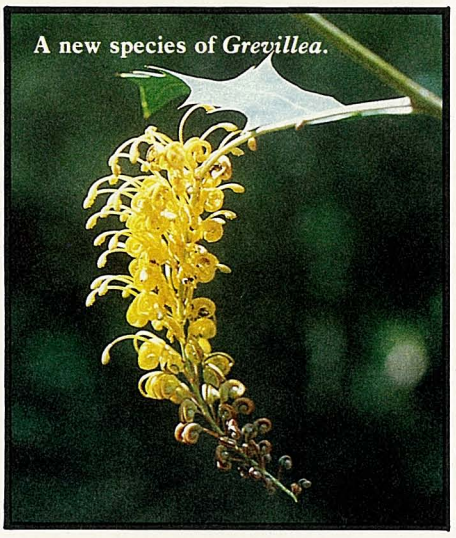
The results of seed germination varied. In many cases this was because the seed could not be collected at its optimum maturity. Many of the seeds needed high



Pandanus — a frequent sight in the Park.

Some of Kakadu's beautiful flowers.





temperatures (around 30°C) to persuade them to germinate.

Transplanted material didn't do very well as a rule. Aquatic plants didn't respond kindly to transport, and improved collection techniques are proposed for future collections. Nevertheless, some successful and worth-while transplants were made.

In all, about 150 plant species were thought to have horticultural value. This indicates that the flora of the Kakadu National Park has potential for horticultural exploitation, at Jabiru and at other places besides. Almost 1000 plants, propagated at the Gardens, have now been sent to the Northern Territory for trial planting.

The list of 150 is, however, only a beginning, and more collecting trips to the Park are planned.

Andrew Bell

More about the topic

'Kakadu National Park — Preliminary Examination of the Flora in Relation to its Horticultural Value.' J. W. Wrigley. (Australian National Parks and Wildlife Service: Canberra, no date.)

A taxonomic inventory of the Park

The scientists from the National Botanic Gardens were largely interested in collecting plant material that could be propagated. In May and June last year, the Australian National Parks and Wildlife Service also sponsored a taxonomic inventory of the plants of the Kakadu National Park by Mr Mike Lazarides and Mr Lyn Craven, two botanists from the Herbarium Australiense of the CSIRO Division of Plant Industry.

In a closely related project, Mr Colin Totterdell, the Division's photographer, was given an assignment to compile a portfolio of Kakadu's distinctive flora.

The aim of the inventory was to collect and list as many as possible of the plant species that grew in the area. The scientists obviously could not collect everything in the time available, but their collection of more than 1600 specimens represents 857 different plants and is probably close to a complete inventory. It was the first large-scale plant survey done at Kakadu, although the scientists had collected in the area before as part of the Alligator Rivers Region Environmental Fact-finding Study. However, the previous expeditions encompassed a much wider area.

The collectors travelled by four-wheel-drive vehicle and helicopter.

Of the 857 plants in the inventory, 192 were not fully identified. Many of these represent new species, while others are related to plants from South-east Asia and require further study. Some of the plants that grow in the Park are relatives of cultivated crop and pasture species and may prove useful sources of genetic material for plant breeders when they want to develop new lines.

The taxonomic inventory of the Park's flora is important for conserving this resource; it is also contributing to research on the diversity and evolution of the whole Australian flora.

'Report on the Kakadu National Park Flora Project — Checklist of the Flora of Kakadu National Park.' M. Lazarides and L.A. Craven. (CSIRO Division of Plant Industry: CANBERRA, no date).