

Extinction forestalled

By Kevin Thiele

On average, 50–100 new species of plants are described in Western Australia each year. A number of recent plant discoveries have highlighted the existence of short-range endemics surprisingly close to Perth—and rediscovered a species presumed extinct.

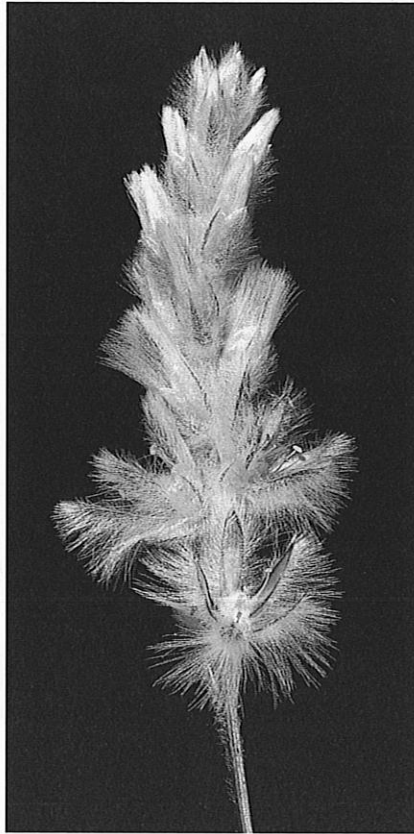
Short-range endemic plants are species that occur naturally only in a very restricted area. They occur throughout WA, though mostly in areas that are floristically diverse, such as the Mount Lesueur area, Fitzgerald River National Park, the Banded Iron Formation ranges on the edge of the South West Botanical Province and, perhaps surprisingly, the Swan Coastal Plain.

In 2010, during a flora survey of clay-based wetlands in the Kenwick area of Perth, botanist Cate Tauss collected an unusual specimen of *Ptilotus*. Unable to name the specimen, Cate brought it to the attention of *Ptilotus* expert Rob Davis at the WA Herbarium. Rob had also not seen another *Ptilotus* like it. The specimen was subsequently described as the new species *Ptilotus christinae* in 2011.

Further research at the herbarium, however, uncovered a small drawing of the presumed-extinct species *Ptilotus pyramidatus*, described by a French botanist in 1849 based on a specimen collected by colonial botanist James Drummond a few years previously. Labelled simply 'New Holland', the specimen was clearly collected somewhere in south-west WA. The drawing and the new species were similar. Careful examination of an original specimen of *P. pyramidatus* at the National Herbarium of Victoria showed that they matched. *Ptilotus pyramidatus*, not seen for 160 years and listed as 'presumed extinct' by DEC, had been rediscovered less than 15 km from the Perth CBD!

A similar rediscovery, this time in a highly cleared area of the Avon Wheatbelt, again involved Colonial botanist James Drummond. In 2009, botanist Mike Hislop at the WA Herbarium brought to me a specimen of *Hibbertia* he had collected several years previously near Goomalling. It was collected while surveying remnant bushland on private property as part of the DEC-WWF Woodland Watch project. Again, this matched no recognised species of *Hibbertia*.

Searching through the herbarium brought to light three other specimens which were all collected since 2003 in the same general area. A literature survey revealed a species that appeared to match—*Hibbertia leptopus*, described in 1863, again based on a single specimen collected by Drummond.



Presumed-extinct species *Ptilotus pyramidatus* was recently discovered 15 km from the Perth CBD. Photo – Cate



Hibbertia leptopus was rediscovered near Goomalling after 160 years. Photo – Kevin Thiele

Examination of the original specimen showed that it was indeed the same. *Hibbertia leptopus* had been rediscovered after 160 years. In this case, the species was not listed as presumed extinct, having been removed altogether several years previously from the census of WA plants.

These rediscoveries highlight the continuing importance of botanical research, both in the field and at the WA Herbarium. Research such as this has in recent years reduced the list of presumed extinct plant species in WA from 53 in 1991 to 13 at present. This is a significant achievement for conservation.

Completely new and highly localised species are discovered every year, many of them rare and restricted. Unfortunately, the high incidence of short-range endemics in areas such as the Swan Coastal Plain and Avon Wheatbelt also means that clearing probably resulted in many species becoming extinct before they were discovered or scientifically described. These are lost forever.

For the two species discussed here, extinction has been forestalled, at least for now, by careful floristic surveys and taxonomic research. It remains for equally careful planning and conservation efforts to ensure that these vulnerable species continue to thrive in their special and restricted habitats.