

# Ornamental Lantana varieties: Friend or Foe?

While most Australians know Lantana has a darker side – as an environmental and production weed – it is commonly believed that garden plantings are sterile and therefore pose no risk. Unfortunately, research has proven these beautiful garden plants are not as benign as they may seem.

In Australia, Lantana has been listed as a Weed of National Significance because of its economic, social and environmental impacts. Research shows it is smothering or destroying the habitats of more than 1300 of our precious native species, including 279 plant and 93 animal species listed as rare and threatened under state and/or national threatened species legislation. This makes Lantana one of our worst environmental vandals.

In addition, Lantana costs our struggling farmers in Qld & NSW more than \$104 million in lost production and \$17 million in management costs each year (2005/06 figures) and has the potential to effect our valuable eco-tourism industry.

Garden plantings of Lantana pose a risk in two main ways: through the spread of seed by birds and mammals and through the introduction of 'enhanced' genetic material into wild populations.

While plants may not germinate within a garden, seeds can be spread for kilometres by birds and mammals and often germinate more effectively once passed through an animal's digestive system.

Even more concerning, the yellow cargo of pollen carried by bees and butterflies can spread un-noticed well beyond the garden boundaries. Because of its long history of cultivation, Lantana hybridises extremely easily and the danger is that additional drought and frost tolerances will be introduced into the weedy population, thus increasing its potential distribution. Added to this, more than 90 years of biological control research could be undermined as many of the insects and pathogens that have been introduced are so species specific they don't recognise other Lantana hybrids as potential host plants.



Garden plantings are still common in many areas



Seed on an ornamental lantana variety

In simple terms, the key factor driving the infertility of many horticultural varieties is the presence of an uneven number of chromosomes. The majority of ornamental Lantana varieties are triploid (they have three sets of chromosomes instead of two). However, according to research, triploid Lantana plants that seem sterile when planted in isolation often prove to be fertile when planted among diploid plants (the wild-type Lantana) (Sples & du Plessis, 1987). In other words, when cross fertilization occurs, viable seeds are produced. Furthermore, a proportion of the offspring have a balanced number of chromosomes, reversing the factor that hinders reproduction in the so-called sterile forms.

While ornamental varieties produce less pollen, with lower levels of viability, and fewer viable seeds compared to weedy varieties; levels are still biologically significant considering the huge flowering potential of *Lantana* (Neal, 1999).

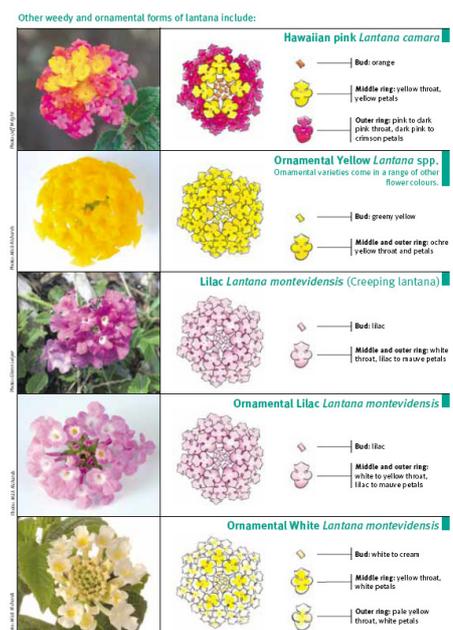
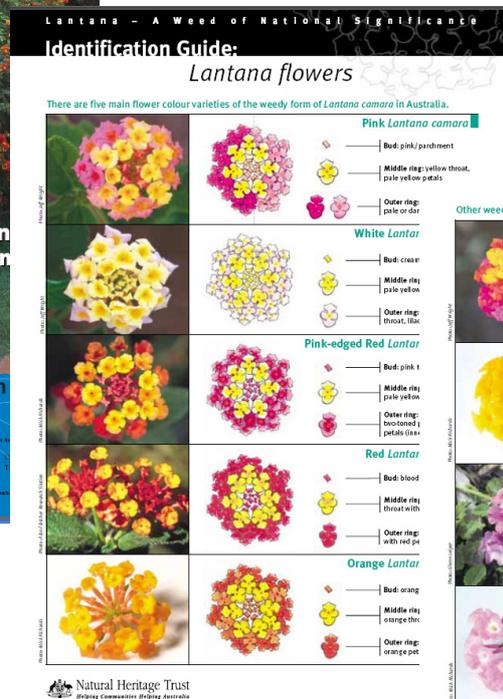
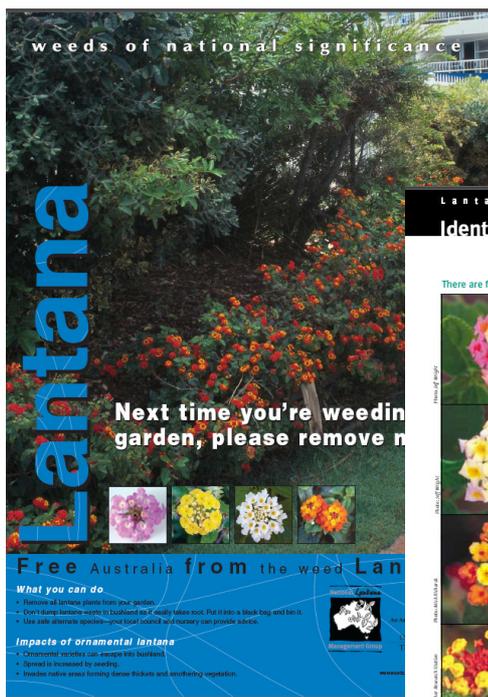
As a result of this evidence and field observations suggesting that hybridisation has already occurred, it is now illegal to sell, propagate and distribute *Lantana camara* in all States and Territories of Australia. This includes propagation of new plants for personal use or the passing of cuttings 'over the garden fence' to friends and relatives.

A range of beautiful non-invasive species are available that can be used as replacements for lantana. These include the stunning Rock Rose, *Cistus x hybridus* or Veronica, *Hebe cultivars*, that grow well in the greater Sydney region; or the Dogwood, *Jacksonia scoparia* or Wild may, *Leptospermum polyglifolium*, that grow well in the Brisbane region. 'Grow Me Instead' publications are available for many areas of Australia or you can talk to your local council or nursery owner for information on suitable replacements for your region.

## References

Neal, J. (1999) Assessing the sterility of ornamental *Lantana* varieties: Are we exacerbating the weed problem? Honours Thesis, The University of Queensland.

Sples, J.J. and du Plessis, H. (1987) Sterile *Lantana camara*: fact or theory. *South African Journal of Plant Soil* 4(4), 171-174.



Both species and all ornamental varieties of lantana are considered to be weeds. For more information: [www.arn.qld.gov.au/pests/wons/lantana](http://www.arn.qld.gov.au/pests/wons/lantana)

Some of the ornamental lantana resources available through the Lantana WoNS group.