

# West Coast plants for a waterwise garden

by Gavin W. Maneveldt, Department of Biodiversity and Conservation Biology, University of the Western Cape, Bellville



ABOVE: The Sea Rose or Teringbos, *Orphium frutescens*, is a spectacular shrub bearing glossy, densely crowded, pink flowers with coiled yellow anthers. This tough plant is commonly found growing near the shore on sandy flats and in marshy areas along the West Coast. **Photo:** Gavin Maneveldt.

**T**he new gardening mantra is 'grow indigenous'. Besides their aesthetic value, most indigenous plants are less costly to maintain, largely because they have long adapted to the local climate and thus to the local rainfall. For this reason, many indigenous plants, particularly those adapted to low rainfall environments, are more cost effective in their water consumption and many have subsequently been termed waterwise plants.

But, why encourage waterwise gardens? First and foremost, it is important to mention that South Africa is a relatively dry country; most parts of the country receive less than 500 mm of rain per annum. With an ever-increasing population, the demand for this precious resource will grow. In response to

both of these factors, we have already become accustomed to municipal water restrictions in the Western Cape during summer, as well as legislation pertaining to its conservative use. Despite this, the most alarming fact is that gardens, particularly those with large lawns, are still singled out as the main water-wasting culprits, often consuming up to 50% of all domestic water used in suburban areas. So, it makes perfect sense to convert to a waterwise garden – if you do not already have one – because they cut down on this waste.

For various reasons, the southern West Coast of South Africa is becoming increasingly popular for new housing developments. This has meant that large tracts of indigenous vegetation are being removed to

accommodate these new concrete landscapes and are replaced with 'conventional' gardens with large lawns.

What many of these new home-owners do not realize, is that they have waterwise alternatives right in their backyards and, with some thought and consideration, their new gardens could look as appealing as any that they might imagine. The indigenous vegetation of the West Coast, while perhaps looking somewhat dull and dreary in the dry summer season, is perfectly adapted to the low rainfall of the area, and so will certainly outlast any introduced plants. Furthermore, many indigenous West Coast plants make attractive natural garden specimens when they flower. So, your first point of call is to simply leave



naturally adapted to low nutrient conditions, so regular composting is not necessary after an initial treatment. If you want to plant a lawn (remember, lawns are water guzzlers), first assess just how much area you'll need and then reduce this to the bare minimum in order to reduce the cost of watering to keep these areas lush. Ask your local nursery for local grass varieties that are indigenous and waterwise. Alternatively, or perhaps in addition, you could decide to pave some areas, particularly if they are to be used as paths or are located under trees.

Finally, once you've executed the design of your garden and planted everything you intended, apply a generous layer of mulch between the non-indigenous plants. This reduces water loss from the soil by reducing evaporation and by keeping the soil cool.

While many things can be used as mulch (e.g. pebbles and stone chips), organic materials (such as compost, bark, leaf litter, even grass cuttings) however, have the advantage in that they add nutrients to the soil. Again, remember that indigenous West Coast vegetation is naturally adapted to low nutrient conditions and before long, by shedding leaves and twigs, will naturally form a layer of mulch to reduce water evaporation. It is thought that the locally indigenous plants prefer not to have a thick layer of mulch that could harbour diseases harmful to them. (See Tony Rebelo's letter 'Mulch addo about nothing' on p. 230 in *Veld & Flora*, December 2008.)

Now that you have a step-by-step guide to starting your own waterwise garden, what are the sorts of indigenous plants that you should be incorporating into your garden, and



as much of the natural vegetation as intact as possible. If, however, much of the natural veld has been destroyed in the construction of the new home, there are some simple tips to reconstruct your waterwise West Coast garden, bearing in mind that the nearby intact landscapes could be your guide.

Firstly, remember that the more waterwise you make your garden from the start, the easier and cheaper it will be to keep it beautiful and maintenance free. If you are planning on incorporating some conventional, yet less waterwise plants, group these in an area close to your home so that they are easy to water regularly.

Before starting your garden, improve the quality of the soil by adding compost as this adds nutrients to the soil, and improves the water-holding capacity. Remember though that indigenous West Coast vegetation is

TOP: *Dideltia carnosa* var. *tomentosa* is a somewhat rounded shrublet with grey-green leaves and slightly fleshy stems. This plant is common on coastal dunes and sandy flats and is tolerant of the saline coastal region.

ABOVE: Vingerpol, *Euphorbia caput-medusae*, is a sprawling succulent that exudes a milky latex when damaged. It thrives in coastal dune sand. Photos: Gavin Maneveldt.



ABOVE: *Brunsvigia orientalis* is a bulbous geophyte, about 50 cm tall, commonly found on sandy flats on the coastal plains. It is pollinated by sunbirds. RIGHT: Wild Cineraria or Strandblometijie *Senecio elegans* is a robust annual commonly observed flowering profusely during spring on the sandy coastal flats of the West Coast. **Photos:** Gavin Maneveldt.

what are the sorts of plants that you should be avoiding, or eradicating? Before you can answer this question it is important to ask yourself what purpose the garden will have. Is it there for its aesthetic value, low-maintenance practical value, organic value, conservation value, or perhaps some other reason?

#### Allergy-friendly gardening

When I first planned my own indigenous waterwise garden, my and my family's health concerns were at the top of the list. As someone who loves gardening, but is also an acute hay fever sufferer, I have come to know the value of an indigenous, waterwise Western Cape garden in combating hay fever. I soon found out that I did not need to compromise with any of these reasons because my indigenous waterwise garden satisfied all of these criteria. So, for the many who are not willing to convert for the aesthetic, practical and conservation value of indigenous waterwise gardening, here is another good reason: many indigenous plants are actually allergy-friendly plants.

The main culprit of seasonal hay fever is pollen. Not just any pollen though, it is only the small, light, dry, wind-borne pollen which causes an allergic reaction. This type of pollen is often produced by plain looking plants that do

not have showy flowers but produce them in large quantities. Those suffering from seasonal allergies can however enjoy a beautiful garden with minimal allergy symptoms if they choose the right plants. The solution is two-fold. Firstly, plant trees, shrubs and groundcovers with large flowers that rely on animal or insect pollination and which have male parts recessed in the blossom. These plants produce relatively small quantities of large, sticky, heavy pollen grains that are too heavy to be carried by wind. Secondly, plant female dioecious (male and female organs occur on separate plants) plants that produce no pollen. We know that insect pollinated plants produce much smaller quantities of pollen than wind pollinated plants do. However, the Australian acacias (like Rooikrans and Port Jackson) are 'imperfect' insect pollinated trees that still release large quantities of pollen. Pines, on the other hand, are totally wind pollinated. Both these groups of plants are prime candidates for causing seasonal allergies in areas like the Western Cape where they have invaded, so avoid them at all cost.

Many West Coast plants are insect pollinated, mainly by beetles and flies. Bees, moths, butterflies, birds and mammals are also known to be important pollinating agents. Some

of the Proteaceae and all the Restionaceae however, are dioecious and wind pollinated. The solution is simply to avoid the male pollen-producing plants and choose only the female plants of these families for your garden. Also, avoid monoecious (both sexes on one plant) wind pollinated plants like the passerines (gonna bush). Besides its health benefits, it is important to realize that by planting and growing indigenous species you are helping to conserve our rich floral diversity.

#### Practical hints for your indigenous garden

Plan to do most of your planting in late autumn at the beginning of the rainy season when it is not so hot, so that the plants have had time to establish themselves before the next dry summer season.

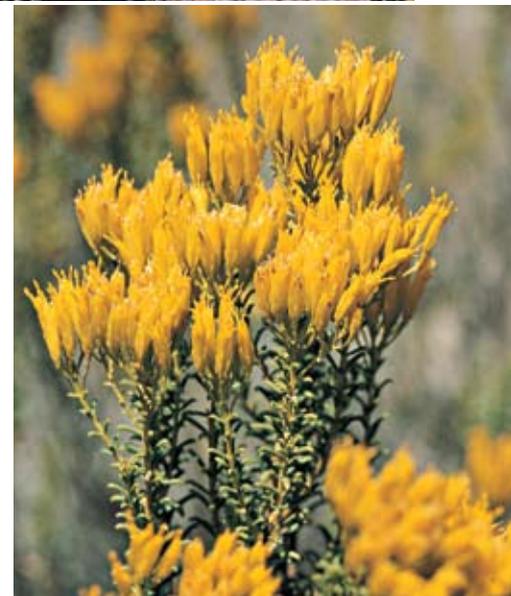
Channel and collect rainwater from the roof of your house for watering your garden. Water early in the morning, in the late afternoon, or at night to reduce evaporation. Never water while the wind is blowing; this is wasteful.

When choosing plants for your garden, look for some of these features. **Salt resistant** plants such as the Sea Rose or Teeringbos *Orphium frutescens* and gousblom *Dideltia* species can tolerate the saline West Coast environment and thrive in the coastal dunes. **Succulent**



plants, such as aloes and mesembs store water in their thick stems and leaves. **Ericoid** shrubs have small or needle-like leaves that minimize the surface area from which water is lost by evaporation. Many bulbous plants like the March Lily, Belladonna Lily or Maartblom *Amaryllis belladonna* and the Candelabra Flower, Koningskandelaar or Perdespookbossie *Brunsvigia orientalis* survive the dry season by going dormant and 'ducking underground'. Sea Lavender, Papierblom or Strandroos *Limonium* species, have papery inflorescences that can cope with low moisture environments. Hairy, or grey leaves also make it easier for plants to retain water and reduce heat. Many plants like the Tricolour Felicia or Driekleurbloemetjie *Felicia elongata* have sclerophyllous leaves (hard, tough and leathery with thick, waxy cuticles) that retain valuable water. 🌿

TOP LEFT & RIGHT: *Felicia elongata* mauve variety (left) and white variety (right) is an unusual tri-coloured felicia that has a distinctive reddish ring on the petals around the yellow centre. It grows naturally only on the limestone hills along the South African West Coast. ABOVE LEFT: Purple Carpet or Pers Douvygie *Drosantheum floribundum* is a succulent, prostrate mesemb shrublet, its leaves covered in glistening papillae. It is commonly found growing in dry clay or brackish sands along the West Coast. ABOVE RIGHT: The papery flowers of the Pink Statice or Strandroos *Limonium peregrinum*, a common inhabitant of dunes and sandy coastal flats. The leaves are sclerophyllous (hard, tough and leathery with thick waxy cuticles), an adaptation to reduce water-loss. RIGHT and BELOW: Strand Gombos *Pteronia uncinata* forms large, rounded bushes with narrow, succulent leaves and honey-scented flowers. These plants are particularly common on coastal sands behind the dunes along the West Coast. **Photos:** Gavin Maneveldt.



## READING

Maneveldt, G. 2002. Allergy-friendly gardening. *Veld & Flora*, 88(3), 99.  
 Maneveldt, G. 2008. Is your garden green? *Veld & Flora*, 94(4), 222 with Curriculum links on p. 227. (You can request a pdf version from the Editor at [veldflood@gmail.com](mailto:veldflood@gmail.com).)  
[www.plantzafrica.com](http://www.plantzafrica.com).

