

Carpobrotus

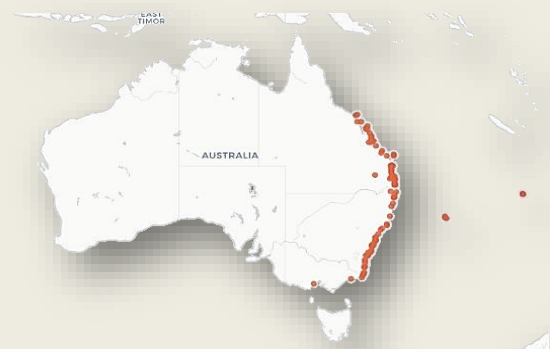
Pig Face, Ice Plant

Friend or Foe?

Pig Face, or *Carpobrotus*, that sprawling plant with thick, succulent leaves and large, colourful purple or yellow flowers, is a common occurrence on sand dunes along Australian coastlines, but is it one of our own? Or is it an invader? Well, both are true. There are about 20 – 25 species of *Carpobrotus*, most come from southern Africa, one comes from South America, and there are 6 species in Australia, 4 of which are endemic. Three species are common along the NSW coast, including 2 introduced species, *C. aequilaterus* and *C. edulis*, and a native species, *C. glaucescens*.

The flowers of *Carpobrotus* have a remarkable similarity to those of daisies (Asteraceae) but they're completely different. Daisy flowers are actually an aggregation of numerous tiny flowers, often with petals on only the outer ring of flowers, giving the appearance of one large flower. In contrast, flowers of *Carpobrotus* are exactly what you see, quite large, individual flowers, but the peculiar thing is that they *don't have petals!* The colourful petal-like structures that ring the flowers are modified stamens, known technically as *petaloid staminoides* – in other words, stamens that look like petals.

Carpobrotus glaucescens is common along the eastern coast of Australia, from Victoria to Rockhampton in Queensland. This pioneer plant is useful in stabilizing sand dunes providing a more stable substrate for later colonisation by other coastal species. Its succulent leaves and CAM metabolism enable it to survive in strong, salt laden winds.



**Carpobrotus glaucescens* from eastern Australia



**Carpobrotus edulis* from South Africa



**Carpobrotus aequilaterus* from Chile

How can you identify the species we would find on Sydney beaches? The South African species **Carpobrotus edulis* has yellow *petals* (petaloid stamens) and is quite distinctive. It's a bit trickier to tell the native *C. glaucescens* from the Chilean **C. aequilaterus* as both have purple 'petals', but if you look closely, the base of the 'petals' will be white if it's *C. glaucescens*, purple if it's *C. aequilaterus*.



White form of *Carpobrotus rossii* from southern Australian states

However, things are not always as they seem, and in South Australia, there are serious concerns that the South African *C. edulis* may hybridise with the endemic *C. rossii* and there are records of hybrids occurring between **C. edulis* and the Western Australian *C. virescens*. The State Herbarium of South Australia in Adelaide has a particularly interesting web page detailing their work on hybridisation between introduced and endemic species of *Carpobrotus* (see link below). Distribution maps from *Atlas of Living Australia* show how the exotic South African species overlaps the distribution of three Australian species.



South African *Carpobrotus edulis* in Australia



Carpobrotus rossii from southern Australian states



Carpobrotus virescens in Western Australia

Carpobrotus edulis is listed as a serious environmental weed in many parts of the world, including Australia. It is a particularly vigorous plant that can grow as a dense cover over sand dunes displacing local plant communities, decreasing species diversity

and inhibiting the natural movement of sand, and, in the process, disturbing the natural processes of disturbance and change in dune environments.



Australian native *C. glaucescens* (purple flowers) and the South African *C. edulis* growing in close proximity at Nobbys Beach, Newcastle.

Atlas of Living Australia: https://biocache.ala.org.au/occurrences/search?taxa=Carpobrotus+glaucescens#tab_mapView

Global Invasive Species Database: <http://www.iucngisd.org/gisd/species.php?sc=1010>

Jacobs S W L & Highet J. Plantnet:

<https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=gn&name=Carpobrotus>

State Herbarium of South Australia:

<https://data.environment.sa.gov.au/Content/Publications/CarpobrotusBrochureEnviroData.pdf>

Weeds of Australia, Biosecurity Queensland:

https://keyserver.lucidcentral.org/weeds/data/media/Html/carpobrotus_edulis.htm

Wikipedia: <https://en.wikipedia.org/wiki/Carpobrotus>

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