

Most of the plants in the African Savannah area are native to the southern tip of Africa. The Cape Floral region of South Africa has one of the world's highest densities of plant species. It has the third-highest level of biodiversity in the world. The Cape Floral Region contains eight protected areas stretching from the Cape Peninsula to the Eastern Cape, cutting across mountains and along ocean coast. These areas are prone to natural fires. This region has the same climate as California with dry summers and mild wet winters. It is especially similar to the San Francisco area with its summer fog, which helps the plants survive the dry season.

Family Proteaceae

The large Proteaceae is an ancient one, probably one of the oldest groups of flowering plants. Its ancestors grew in Gondwanaland, 300 million years ago. In addition to the Cape Floral region, other Proteaceae can be found in the Southern Hemisphere, mainly in Australia.

Proteaceae naturally occur in temperate and sub-tropical climates on acidic sandy soils with low fertility. They are evergreen shrub with "flowers" are actually flowerheads made up of many individual flowers surrounded by large colorful petal-like leaves or bracts. After blooming, the flowerheads dry out forming a brown seedhead that resembles an upside down ice cream cone.

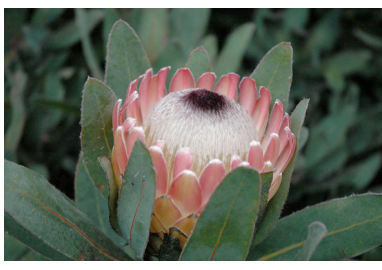
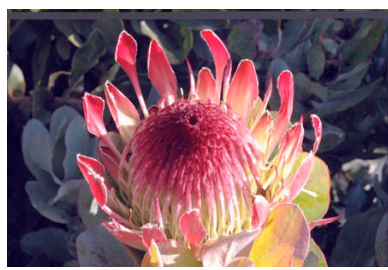
In the Savannah there are three genus's representing the Proteaceae Family: *Protea*, *Leucospermum* and *Leucadendron*.



PROTEA

Family	Genus	Species
Proteaceae	<i>Protea</i>	<i>spp.</i>

Range:	Cape Region of South Africa
Habitat:	Mediterranean climate with dry, hot summers and wet, cold winters
Type:	shrubs
Uses:	Ornamental
Bed Location:	African Savannah



Characteristics: The genus *Protea* was named in 1735 by Carl Linnaeus. In Greek mythology, Proteus, a sea-god, could change his shape and form at will; hence the name proteas, which are unusual flowering plants with a wide variety of sizes, shapes, textures and colors (~330 species in South Africa). They are very popular as cut flowers in arrangements.

Protea (Sugarbush) are native to South Africa. As early as the 1670's European settlers collected the plentiful nectar from *Protea repens* flowerheads. It was boiled into thick ruby-red syrup, which was used as a sugar substitute. This syrup was also believed to be an effective treatment for coughs and other chest ailments.

Protea are specially adapted against natural fires. Their seed heads are fire-proof, protecting the seeds. These seeds are released when the plant dies or is killed after a fire. Fire season is typically in late summer or autumn and is followed by the rainy season, which provides moisture for the new seedlings. The hairs on the seeds aid in wind dispersal across the area.

PINCUSHION or *Leucospermum*

Family	Genus	Species
Proteaceae	<i>Leucospermum</i>	<i>spp.</i>

Range:	Cape Region of South Africa
Habitat:	Shrub, forest and mountain slope
Type:	Evergreen shrubs
Uses:	Ornamental
Bed Location:	African Savannah



Characteristics: Pincushions have tough and leathery leaves with flowers in a group or cluster (inflorescence). They are named for the rings of brightly colored yellow, orange or red styles that protrude like curved pins from their flower heads. *Leucospermum* are extremely fire resistant. In a fire the above ground parts are burned, but the woody rootstock survives sending out multiple stems.



CONEBUSH or LEUCADENDRON

Family	Genus	Species
Proteaceae	<i>Leucadendron</i>	<i>spp.</i>

Range:	Cape Region of South Africa
Habitat:	Coastal and mountainous woodland
Type:	Evergreen shrubs to small tree
Uses:	Ornamental
Bed Location:	African Savannah



Silver Tree
(*L. argenteum*)



Characteristics: Conebush leaves are usually green, often covered with a waxy bloom. Their flowers are also produced in dense inflorescences. The Silver tree (see photo) has silky, silvery hairs on its leaves that reflect light. In the dry or windy conditions, the hairs lie flat to minimize water loss but in damp weather they are upright, trapping moisture from the air. The fruit is a heavy woody cone, containing numerous seeds; each seed is a small nut with a silky-haired helicopter-like parachute, enabling it to disperse by wind. Fire resistant.

AFRICAN LINDEN

Family	Genus	Species
Tiliaceae	<i>Sparmannia</i>	<i>africana</i>

Range:	Cape Region of South Africa
Habitat:	Sunny, tropical or temperate
Type:	evergreen shrub
Uses:	Ornamental
Bed Location:	African Savannah



Characteristics: African Linden has large leaves with white flowers that are present from during spring into the summer. The flowers have five white petals around a yellow center. The green leaves are not noticeably furry to the eye but have a distinctly velvety feel. The floral center has a trigger mechanism for actively pressing pollen onto visiting insects; they spread apart and the nodes on them enlarge when touched, which pushes pollen out so it lands on the insects' bodies.



Bibliography

San Francisco Botanical Garden Docent Training Material

Plant Life in the World's Mediterranean Climates © 1998 Peter R. Dallman, University of California Press.

San Francisco Botanical Garden at Strybing Arboretum: An Introduction to a World of Plants © 2005, Peter Dallman and Scot Medbury.