



# Flora And Fauna Of South Africa In Comparison With India.

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## Introduction:

Learning about the ecosystem of South Africa (SA) was really fascinating. The excursion trip initiated from Cape Town and ended with Johannesburg. It included places like the Cape Peninsula, Tsitsikamma National Park, Knysna, etc. Having known the fact that SA shares some similarities with India in terms of weather conditions, abiotic and biotic factors. To a certain extent, I have tried to understand the reasons behind such similarities. The origin of the term flora is widely known to have stemmed from Latin. In Latin, flora means the goddess of the flower but the term floral is another origin of the word flora. In summary, flora is understood to encompass all things relating to flowers. More specifically, flora refers to all native plant species found in a specific geographical area at a particular time. Flora encompasses a very large category of plant life in a particular region, there are a multitude of subcategories within flora that help to understand plant species in different regions. The origin of the term fauna is substantially more difficult to identify. It has been traced back to three possible sources: Fauna stemming from the Roman goddess of fertility and earth or Faunus, another Roman God. Simultaneously, Fauns which were best known to be the spirits of the forest. Nevertheless, fauna, as we understand it, refers to the collective animal species found in a particular region at a particular time. South Africa is considered a megadiverse country meaning that it houses some of the largest indices of biodiversity, including a large number of endemic species. Just as flora is essential for harmony within our ecosystem, fauna in South Africa plays a substantial role in harmony as well. Fauna liberates the carbon dioxide that is consumed by flora. Moreover, animal droppings are a source of fertiliser for food and minerals.

## Abstract:

This article highlights the common features of SA and India and how. SA is recognized as one of the most biodiverse countries in the world. Apart from National Parks, SA has an even more diversified ecosystem and it's kind of like India. The domestic and wildlife of SA has many common features. I have sorted the plant life as per the places. In the list I have included the plants like some weeds, herbs and shrubs. Large trees show quite a lot of differences from India in terms of canopy style, leaves, plant species, etc. I have selected genuine references for concluding my article.

## Flora findings:

- Herbs or weeds -

According to the observations at Hermanus, Cape Town and Ostrich farm at Oudtshoorn, certain weeds or herbs like *Euphorbia hirta*, *Oxalis species* and some grass sps were widely observed. Herbs from Euphorbiaceae are also quite common in India. *Euphorbia hirta* in India has a typical nectary gland (as given in one of my books - Preliminary studies of Nectary Glands in and around Mumbai). The morphology of nectary glands in the same species in SA is absolutely similar to India's.

- Shrub findings:

1. Succulents - *Aloe species*. :-

Aloe is one of the most diversified Flora in the world. It was really remarkable to have observed *Aloe sps* at Table Mountain and Kirstenbosch Botanical Garden near Cape Town.



Aloe succotrina on Table Mountain, Photo by Abu Shawka.

Large varieties of succulents like Aloes to tiny mesembs, the Flora includes thousands of plant species across SA. Also, *Aloe ferox* dominated places near Cape Town. I had visited Kirstenbosch Botanical Garden (one of the most famous botanical gardens) where these *Aloe sps* were widely observed. This botanical garden displays SA native varieties of plants.



Aloe ferox plant, photo by the author.

Well, not forgetting the fact that Aloe has been given an important place in the list of Indian medicinal plants. These plants are used in making Aloe products in India as well.

2. *Acacia* [family Fabaceae] :-

*Acacia*, commonly known as the wattles or acacias, is a large genus of shrubs and trees in the subfamily Mimosoideae of the pea family Fabaceae.

The *Acacia* is of spiritual significance in that it symbolises regeneration, perseverance, and integrity. The evergreen nature of this tree denotes the immortality of the human spirit. These shrubs are widely spread in Tsitsikamma National Park and the places around it. It is highly cherished by wild animals like herbivores there. Indian *Acacia* shrubs are predominantly present in most Tropical states of India. Native SA tribes have been using these plants for artefacts like toothbrush, jewellery, medicines, etc. which is also practised in rural India. I have a fond memory of using a 'babul' toothbrush at my native place. It is still used by many villagers here in India.

3. *Carissa carandas* [family Apocynaceae] :-

*Carissa* or commonly known as 'karanda' in India is a species of flowering Shrub. It produces berry-like fruits which are commonly used as hair bun accessories and in Indian

pickles. *Carissa species* were observed in SA too. They are grown as an ornamental plant or observed as wild varieties as well.



Carissa carandas plant, photo by the author.

#### 4. *Hibiscus species*:-

*Hibiscus* is an ornamental plant grown mainly for its beautiful flowers. It belongs to the family Malvaceae. It is also grown largely in India for vegetables.

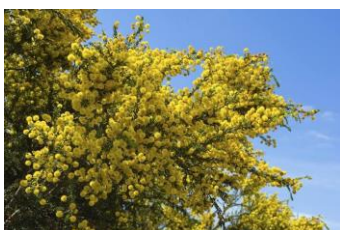
- Trees:-

##### 1. *Vachellia species*. :

*Vachellia karroo*, also commonly known as the Sweet Thorn, is part of the acacia species and native to southern Africa. These trees can grow up to 12 meters and are recognizable by its rounded crown, yellow flowers, finely textured leaves and twin thorns.

*Vachellia karroo* is a useful and widespread tree in Africa. It belongs to the family Fabaceae, which is the third largest woody plant family in southern Africa. This is an ecologically and economically important species as almost all of its parts, including bark, pods, seeds, leaves and thorns, are extremely useful to both humans and animals. Various commercial products are also obtained from the tree, and gum is one of the most important products.

*V. karroo* in South Africa has an extensive distribution range that includes several biomes. It is very adaptable and has wide habitat tolerance, growing under many differing conditions of soil, climate, and altitude. Although it is often associated with heavy, clayey soils on the banks of rivers and streams, it also grows in bushveld, dry thornveld, grassland and woodland. *V. karroo* is easy to grow and as a result can become an aggressive invader of valuable farming land and grazing areas, a phenomenon usually referred to as bush encroachment.



Vichellia karroo plant.

##### 2. *Acacia melanoxylon*, known as Australian Blackwood, is native to eastern Australia, and grows prolifically in South Africa. It is an upright tree growing up to 30 m tall. scaly. Younger branches are ribbed, angular, or flattened towards their tips and are greenish in colour.





Acacia species, photo by the author.

All I can say about Acacia is that India is one such countries like SA which exclusively dominates in having these plant species. The varieties of Acacia we have here in India which are useful in many ways, especially by the native tribes and rural dwellers.

- Similarities in Fauna of South Africa and India:-

Reasons :

According to the references, about 80 million years ago, India was an island which was stucked to the modern eastern coast of south Africa. So particularly, India was also a part of Africa at that time and therefore many animals migrated from there and lived in india. But thats too long ago. So about 12000 years ago, the african animals living in Africa migrated from Africa to south west asia and india. So they started living in these parts and evolved as time passed by. But when the ancient period began in Asia about 5000 years ago, then humans started hunting them in southwest asia as well as india. So these african animals declined in India at the same rate. And when these african species were pushed to a brink of extinction in southwest asia and india, the southwest countries didnt took any measures to conserve them and therefore they went extinct from there. For example, in 1941, Asiatic lion was declared extinct in Iran and in 1918, it went extinct from Iraq.

So India took conservation efforts to save these animals, and now they thrive in india but went extinct in southwest asia about a 100 years ago because no conservation efforts were taken by them.



India's drift

Picture courtesy - MIT News, Massachusetts.

Conclusions:-

- Morphologically, there are many similarities in Flora and Fauna of South Africa and India which indicates geographical attachments of the continents many decades ago. Although the seasonal months differ, weather conditions show much similarities as well.
- Acacia species show a dominant footprint in South Africa and India. Many plant families like Euphorbiaceae, Fabaceae, etc. can be observed dominantly in both the countries.
- Both the countries have some common diversified Flora and Fauna but the human population makes them drastically different then each other. It is indeed the matter of pride that though India being highly populated, it has managed to conserve it's Flora and Fauna since the past decade.

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