

A tale of two leaves

Think desert plant, the spectacular variety of Cacti and Euphorbias pops out. We know about their thorny leaves, green stem, deeper roots and even wonderful flowers, an all-out attempt to conquer environmental adversary. Well, *Welwitschiamirabilis* is a super adapter that deserves special mention. Named after Austrian botanist Friedrich Welwitsch, the plant was discovered in 1859 at Namib desert near south-western coast of Africa. *Welwitschia* is too much simple in structure compared to its existence on the earth. The name 'living fossil' is well suited due to its long term existence on earth since 113 million years and exceptionally long lifespan (~1500-2000 yrs.). It is a plant of a dwarf stem, two leaves and reproductive cones.

Welwitschia is eye catching to onlookers for its leaves. They are unique due to their unlimited growth throughout the plant life, thanks to the basal meristem (growth tissue) present at their base. As the leaves grow in size (growth rate is 13.8 cm./year), the tip portion get old, and is torn apart into ribbon like pieces due to continuous abrasion against desert wind and sandy ground. All these strapped ribbon like portions coiled around the short trunk mimicking a messy green bush amidst the pretty hot desert landscape.



Photo: Rajasri Ray

Despite the mere presence in numbers, the leaves play disproportionately large role in desert ecology. It is because of the length they are able to collect a good amount of dew from the morning fog and channel it towards the underground which eventually helps the plant to meet up the water demand partially. The long and thick coiled leaves create a perfect adobe for desert fauna especially during day time. They altogether create a shady and cooler environment for cape hares, snakes, agamas, geckos, skinks, spiders, scorpions and insects and a favorable spot for predators too. Moreover, desert bug, *Odontopus angolensis* gets its nutrition from the plant sap piercing it with its needle like beak. Similarly, Antelope and Rhinos also go for juicy leaves during food scarcity and humans are no less fortunate. Earlier, the core of the female plant was considered as a food for desert people, so the name 'desert onion'. Considering the depauperate

surroundings of the superarid Namib desert, a *Welwitschia* plant itself is a mini ecosystem surviving on its own.



Image : Rajasri Ray, www.info-namibia.com

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