



*Petalidium setosum*



*Adenolobus pechuelii*



*Desert edelweiss (Helichrysum roseo-niveum)*







Kohautia caespitosa



Dyerophytum africanum

## The marvel and uniqueness of Namib flora



*'Research for implementation' is the motto of renowned plant ecologist Antje Burke. Her fascination with the Namib started at Gobabeb in the Namib-Naukluft Park in October 1988, precisely 20 years ago. With the support of her late husband, she researched the plant life of the Namib and environment in a multitude of projects. Well over a hundred articles in international and local press are proof of her relentless effort to make research accessible to all people. Field guides to the Namib wild flowers are a popular outcome of her work. From her base in Windhoek, she undertakes environmental research and management in biodiversity and rehabilitation across Namibia and beyond. "Having been involved in many projects where my input made a difference to the way people treat our fragile, arid environment, I wish to continue making this contribution" is her resolve.*





A centenary sounds like a very long time to us – yet it is a blip in the times that have passed leading to the evolution of the Namib flora. Hundreds of millions of years of aridity, heat and the onslaught by wind and sand have resulted in the fascinating flora we see in the Namib-Naukluft Park today. Many of these plants grow nowhere else on earth and they are a mastermind of survival in challenging environmental conditions. Dense pelts of hairs cover some delicate plants and seedlings when they emerge from the ground (*Dyerophytum africanum*, *Helichrysum roseo-niveum*).

Some plants hardly venture above ground, and only show a small window on the surface so that sunlight can penetrate and propel their metabolism (*Fenestraria rhopalophylla*, *Lithops schwantesii*). Others store lots of water in their leaves which they draw from when soil moisture is depleted (*Ebracteola montis-moltkei*, *Zygophyllum stapffii*). Forming formidable hummocks and thereby stabilising moving dunes and providing a barrier to the seafront, *Salsola nollothensis* can thrive on saline water, almost as salty as seawater. A dense armour of spines not only keeps hungry plant eaters at

bay, but also helps to reflect heat (*Codon royenii*). Channelling precipitating fog water through grooves on stems and branches towards the base of the plant, fog moisture is harnessed by many desert shrubs in the Namib fog zone (*Arthroa leubnitziae*, *Acanthosicyos horridus*).

Many produce strikingly intricate flowers, making sure that would-be pollinators see them during their short life span (*Adenolobus pechuelii*, *Petalidium setosum*). Others exude a delicate fragrant scent, perfuming the desert evenings to attract night-active, pollinating moths (*Kohautia caespitosa*). And so the list continues... As the planet keeps warming, the desert flora will have a 'cutting edge' and may also harbour a blueprint of adapting to these changing climatic conditions. Most of our technical solutions to engineering problems are based on examples from nature – from water-repellent materials, fog and dew-harnessing techniques to adhesives – every desert plant may thus teach us something about how to survive in an ever-changing world. Let's marvel at their uniqueness and treat them with the respect they deserve. 