

Chapter 1 : Wild Flowers of the Southern Namib, by Antje Burke vorgestellt im Namibiana Buchdepot

Wild Flowers of the Southern Namib, authored by Dr. Antje Burke, includes plants which occur in the area of LÄ¼deritz, Aus, Rosh Pinah, Oranjemund, i.e. Sperrgebiet and surroundings, but also some plants of the Namib sand sea, northwards to Sossusvlei.

During this time, a unique landscape of dunes, clay soils and trees was created around the Sossusvlei and it has adapted perfectly to suit the desert surroundings. Travelling time between the two is around two hours. Animals in Sossusvlei In addition to the dead trees there is actually an abundance of life in the form of plants and animals in Sossusvlei. Besides snakes, geckos, birds and antelopes there are also a wide variety of acacia plants and grasses are found in the area. Sossusvlei in the heart of Namibia â€” A truly unique natural beauty. Namibia is divided into four major regions. The salt pan of Sossusvlei in Namibia is located in the middle of the Namib-Naukluft Park in the area of the central Namib dunes , which is about 32, square kilometers in size. In , some areas of the park, including the Sossusvlei were affiliated. The Namib-Naukluft Park was founded by German colonists in Through the ages of time the park has expanded and it is now the largest national park of Africa with nearly 50, square kilometers in size. The meaning of the Nama word for the Namib was derived from this apparent vast emptiness of the vlei. The spectacular height of these dunes creates a phenomenal attraction to visitors who come to witness the highest dunes in the world situated in the area. Experiencing the beauty of the Sossusvlei is a must for Namibia visitors. The entrance gate to the park is located in Sesriem on the eastern edge of the park. Day visitors are allowed to enter the park is from sunrise to sunset. Park guests are welcome to enter and exit as they wish. The Sossusvlei is located around 96 kilometers from the park entrance. The road to get there was tarred and is in good condition. At the end of the tarred road there is a parking area among camel thorn trees. Alternatively, there is a fee-based shuttle service. An entrance free is payed at the gate. The spectacularly beautiful Dead Vlei and Hidden Vlei offer stunning contrasts. Who would have thought that this plant can be up to years old? The Welwitschia is a true survivor. Ballooning over the Namib offers unique views.

Chapter 2 : Namib - Wikipedia

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The flats pictured here were caused by the Tsauchab stream after summer rains. An area known as the "Moon Landscape". The Welwitschia plant is considered a living fossil, and is found only in the Namib Desert. Yellow desert. Thick morning fog rolls in from the ocean, near Sossusvlei; moisture from the fog allows the native flora to survive the aridity. Gemsboks, Oryx gazella are the biggest antelopes found in the Namib. The Namib Desert is one of the distinct physiographic provinces of the South African Platform physiographic division. To the south, the Namib borders on the South African Karoo semi-desert. In the Sossusvlei area, several dunes exceed meters feet in height. The complexity and regularity of dune patterns in its dune sea have attracted the attention of geologists for decades, but it remains poorly understood. Moving north from Sossusvlei, the sand gradually gives way to a rocky desert that extends all the way from Sossusvlei to the Swakop river. This area is traversed by the Tropic of Capricorn and is mostly flat, although some scenic canyons and elevations are found in some areas, for example in the Moon Valley system. While most of the soil is rocky, sand dunes are still occasionally found in this region; for example, sand dunes occupy much of the coastline between Walvis Bay and Swakopmund. The Namib desert is an important location for the mining of tungsten, salt and diamonds. Several rivers and streams run through the Namib, although all of the rivers south of the Cunene River and north of the Orange River are ephemeral and rarely or never reach the ocean. Besides rain being scarce, it is also hardly predictable. This is due to several factors. Winds coming from the Indian Ocean lose part of their humidity when passing the Drakensberg mountains, and are essentially dry when they reach the Namib Escarpment at the eastern end of the desert. Winds coming from the Atlantic Ocean, on the other hand, are pressed down by hot air from the east; their humidity thus forms clouds and fog. Morning fogs coming from the ocean and pushing inwards into the desert are a regular phenomenon along the coast, and much of the life cycle of animals and plants in the Namib relies on these fogs as the main source of water. The dry climate of the Namib reflects the almost complete lack of bodies of water on the surface. The Swakop and the Omaruru are the only rivers that occasionally drain into the ocean. All along the coast, but mostly in the northernmost part of it, interaction between the water-laden air coming from the sea via southerly winds, some of the strongest of any coastal desert, and the dry air of the desert causes immense fogs and strong currents. It causes sailors to lose their way; this is testified by the remnants of a number of shipwrecks that can be found along the Skeleton Coast, in northern Namib. Some of these wrecked ships can be found as much as 50 metres (55 yards) inland, as the desert slowly moves westwards into the sea, reclaiming land over a period of many years. Warm waters with depth and associated water flows from the northwest were first fully catalogued by Sea Fisheries researchers, Cape Town L V Shannon et al. Rainfall records also show positive values variously across the Namib, Desert Research Station, Gobabeb for instance. This event recurs approximately mid-decade, and are recent examples. Animals and plants [edit] A number of unusual species of plants and animals are found in this desert, many of which are endemic and highly adapted to the specific climate of the area. One of the most well-known endemic plants of the Namib is the bizarre Welwitschia mirabilis; a shrub-like plant, it grows two long strap-shaped leaves continuously throughout its lifetime. These leaves may be several meters long, gnarled and twisted from the desert winds. The taproot of the plant develops into a flat, concave disc in age. Welwitschia is notable for its survival in the extremely arid conditions in the Namib, mostly deriving moisture from the coastal sea fogs. An area where Welwitschias are a common sight is found in the surroundings of the Moon Valley, including the eponymous Welwitschia Plains. The Namib fauna mostly comprises arthropods and other small animals that can live on little water, but a few species of bigger animals are also found, including antelopes such as oryxes and springboks, ostriches, and in some areas even desert elephants. All these species have developed techniques to survive in the Namib environment. A number of endemic darkling beetles species such as the Namib Desert beetle have

bumpy elytrons with a pattern of hydrophilic bumps and hydrophobic troughs. Another beetle, the *Lepidochora discoidalis*, builds "water-capturing" webs. Black-backed jackals lick humidity from stones. The desert is also home to meerkats and several species of lizards. Human activity[edit] A warning sign in the Sperrgebiet from the government of South West Africa , picture taken in Before the 20th century, some San roamed the Namib, gathering edible plants on the shore, hunting in the interior, and drinking the juice of the tsama melon for water. Nowadays, some Herero still herd their livestock in the Kaokoveld in the Namib and take them from waterhole to waterhole. A few Nama Khoikhoi still graze their livestock on the banks of the Kuiseb River in the desert. Most of the native people have left, however, leaving the vast majority of the desert uninhabited. Most of the rest of the desert is set aside for conservation. A vast portion of the desert, called the Sperrgebiet , was access-restricted due to the presence of diamonds, which are mined in the area at the mouth of the Orange River. Although the desert is largely unpopulated and inaccessible, there are year-round settlements at Sesriem , close to the famous Sossusvlei area, and other small outposts in other locations. Namib-Naukluft National Park[edit] Main article: While most of the park is hardly accessible, several well-known visitor attractions are found in the desert. The prominent attraction is the famous Sossusvlei area, where high orange sand dunes surround vivid white salt pans, creating a fascinating landscape.

Chapter 3 : Wild Flowers of the Central Namib: Antje Burke | NHBS Book Shop

Some 50 sketches and over colour photographs illustrate the most commonly seen plants in the area around Swakopmund, Walvis Bay and the central Namib plains and inselbergs up to Skitzkoppe.

The Namib is an immense expanse of relentlessly moving gravel plains and dunes of all shapes and sizes that stretch along the entire coastline. The most widespread and dominant type of desert sand dune are linear dunes, with crescent shaped dunes common along the coast and clusters of star dunes, such as the towering horseshoe of dunes at Sossusvlei , found in the eastern reaches of the sand sea. It comes as no surprise therefore to discover that the entire western section of Namibia is comprised of the Namib, which spreads beyond the borders of Namibia and flows into southern Angola and the northern Cape Province of South Africa. With ephemeral rivers flowing unexpectedly across an ancient landscape, its dunes, plains, rivers and a foggy coast have all become vital components to support an outstanding and fascinating array of bizarre desert flora and fauna. Evidence of humans living in the Namib through time extends back to the early stone age era. The most famous rock paintings are at Brandberg and Twyfelfontein. The Topnaar are a well-known clan of long term residents of the Namib. More famous for living in the Namib-Naukluft Park, there are at least a dozen villages scattered along the lower Kuiseb River today. A section of the central Namib Desert incorporates the Namib Naukluft Park, the largest park in Namibia and the 3rd largest on the African continent. There is also an interesting historical back story to the region as they were the base of Hendrik Witbooi , an important player in the history of Namibia. The celebrated freedom fighter terrorized German Colonizers at every opportunity from his well protected mountain strongholds. In recognition of his exploits, Hendrik is fondly remembered with portraits on Namibian bank notes, an honour he shares with the founding father of Namibia, Sam Nujoma. The harsh environment of the park challenges man and mammal alike. Carnivores are no exception and 3 of the larger species – black-backed jackal, brown hyena and spotted hyena have adapted to life in the desert. Spotted hyena live in the central and eastern regions, travelling in small groups where gemsbok, mountain zebra and occasionally Namib feral horses are taken. Black-backed jackals often scout the beaches in large groups for marine carrion, Cape fur seal pups and breeding birds. Brown hyena search for smaller items of food, usually alone and also take seal pups, eat insects and fruit as well gemsbok and springbok carcasses. Mountain zebra, chacma baboons , kudu, klipspringer, Cape fox , gerbils, steenbok and a healthy population of leopard are also resident. Reptiles such as lizards and geckos, the sand snake and the side-winding adder inhabit this long, narrow wilderness. Smaller still are the scorpions , spiders, fishmoths and beetles that have adapted over centuries to survive in the dune dynamics of the desert. Insects use a swimming motion to travel through the sand beneath the surface, others dig burrows whilst certain adaptations such as shovel-snouts, protective eyelids and tubular nostrils allow other lizards to live below the surface. Hiking around Naukluft Mountains is a very rewarding wildlife experience. Namaqua sandgrouse gather in the morning at waterholes in their hundreds, the Karoo eremomela can be seen along the hilly areas of the escarpment and water in the rivers attract amongst other the rosy-faced lovebird. The riverine forests of the Swakop and Kuiseb Rivers entice pririt batis, swallow-tailed bee-eater and long-billed crombec. Sossusvlei in the Namib Desert is the one attraction that should not be missed while you are in Namibia; the dunes are amazing and even though this is a popular tourist destination it is still easy to gain a sense of solitude while climbing one of the dunes or walking to Dead or Hidden Vlei. Vegetation and wildlife are seemingly scarce in any desert and this is one of the most harshest environments in Namibia. Wild flowers in the Namib Desert can be defined as growing in the following areas: The southern Namib - is characterized by winter rainfall and succulent plants falling into the northernmost extension of the Succulent Karoo biome of southern Africa, notably from the Orange River in the south and to the coastal town of Luderitz further north. The central Namib - an area confined by the Atlantic Ocean in the west and the escarpment to the east, sandwiched between the Kuiseb River in the south and Huab River in the north. The central Namib provides a number of habitats for plants, notably expansive gravel and gypsum plains, rocky outcrops and dry river courses with associated drainage lines. The northern Namib – is a very dry place with low and unpredictable

ranges and amounts of rainfall varying from zero to over mm. Rain and the chances of it become less towards the coast. It is fog that provides reliable moisture and as with the central Namib area, a fog belt can stretch some 20 and 30 km inland and on occasions further inland. Unique meteorological phenomenon distinguishes the Namib from all other deserts. In the southern Namib, continuous high wind speeds are channelled through valleys. They batter the landscape without respite, forcing the surface of the earth to become uncharacteristically dry. In particular, the Sperrgebiet experiences the highest wind speeds ever recorded on earth. Erratic annual rainfall compounds the regional aridity. Rain can only fall over the Namib Desert when warm, moist air is blown onto the eastern side of the African subcontinent by south-east trade winds. It is highly seasonal and coincides with weak South Atlantic anticyclone activity. Coastal fog regulates the climatic extremes. Desert rainfall is sporadic and unpredictable. It is a most reliable source of moisture and although the amount of water captured from a blanket of fog is relatively small, plants and animals have adapted to the amounts on offer. But like rain, it is life-giving. Over and above these constraints, the southern Namib is home to over species of plants, the central Namib species and some 1, species in the northern Namib. Despite being starved of water for most of the year, succulents and shrubs still survive in ridges and valley floors during periods of extremely windy conditions. All of these camp sites offer very basic facilities, and as they do not have receptions or shops or even game wardens a permit is required to visit them. On the coast Sandwich Harbour is a paradise for ornithologists and nature lovers visiting Namibia. The lagoon is fed by fresh water and is a sanctuary for large numbers of coastal birds. Sandwich Harbour is only accessible by four wheel drive vehicles due to the large Namib Desert sand-dunes that meet the Atlantic Ocean. Angling is not permitted from January 25 to April 15, camping is not permitted in the area. Visitors to Swakopmund should take time to visit the Welwitschia trail. The route has several numbered beacons which identify areas of particular interest. A map and brochure as well as permits to visit the area should be obtained from the MET office in Swakopmund.

Chapter 4 : Plant wonders of the Namib - Travel News Namibia

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We were, after all, on a Moon Landscape Tour on the outskirts of Swakopmund. And, like many of the extraordinary sights in this remarkable country, the landscape in the Namib Desert constantly surprises. One of the greatest wonders revealed to us on the tour, is the ability of the tenacious flora and fauna not only to survive in this arid environment but also to exhibit a fragile loveliness. Although only filling with water and flowing into the sea in years of exceptional rainfall, the underground water feeds the river vegetation and supplies water to the riverbank plots on which vegetables, olives and asparagus are cultivated. Dorob National Park The dune sea south of Swakopmund is thwarted by the river, leaving exploration of the curvaceous beauties for another day. We drove into the Dorob National Park, the central park in the Namib Desert, accompanied by the pocket of mist for which Swakop is well-known. Although often cause for much muttering, the mist bank is appreciated in the summer months when the rest of the country scorches under a vengeful Namibian sun. It is also valued for its life-giving properties. The hardy flora and fauna we were beginning to notice only exist because of this precious moisture that drifts in from the coast, thanks to the cold Benguela Current that flows up the south-western coastline of Africa to laze contentedly further north. The first was the opportunity for an impromptu musical recital on the dolerite rocks that jut out from the granite in dark dykes and tumble over the hills in musical stones. Our group lacked any musical ability but we amused ourselves for a while, clinking and clunking tunelessly on the rocks. By the time we reached the prickly! Cleo stopped the vehicle just in time. He introduced us to ice-plants also called ostrich lettuce with droplets of water glistening like diamonds, Namib edelweiss with its tiny snow-white and pink blooms, tsamma melon flowers peeping delicately from the creeping stems, aloes, the euphorbia plant with its rod-like leaves and toxic milky latex, sweet-smelling commiphora, and lithops taking on the guise of pebbles on the waterless sand. Ice Plant, Mesembryanthemum guerichianum. Guide Cleo continued to have fun in his garden, showing us a chocolate mountain and a Matterhorn and an elephant skull in the rocks. He also used his excellent eyesight to spot klipspringer on the mountain ridges, springbok grazing across the desert plains, and a toktokkie beetle that was hastily trying to escape the vehicle on the track. They lived up to our expectations. These granddaddy plants demanded considerable respect, not only because they have mystified scientists for decades with their out-of-the box taxonomy, but also for their determination to grow and bloom in the desert, astounding us all with their resilience and singular appearance. The welwitschia, as we unanimously decided, is a suitably wonder-full national plant for an unusually fantastic country. The mirage glimmered invitingly. Tracks from vehicles not only wipe out populations of lichen and compact the soil, but remain on gravel plains for many decades. There are ox-wagon tracks in the vicinity left over a century ago that are still visible today. Vehicle tracks leave the desert landscape scarred and visually polluted. Nara oases in the desert This tenacious desert plant, reliant on underground water and ocean fog, becomes the centre around which hummock dunes form, which in turn become home to numerous small creatures. The spiny melons of this intriguing plant also support countless organisms, providing a food source for humans, jackals, gerbils, crickets and beetles. Appearances are often deceptive in the desert where adaptations such as thorns reduce transpiration and offer protection, enabling this the plant to survive. Nara bushes are found in the lower reaches of the ephemeral river courses and against the dunes in places where they are able to reach all the way down to the water table with their long tap roots. A million to one A slow-growing prehistoric species, with separate male and female plants, the welwitschia depends on perfect conditions for germination. The female plant produces up to of the cone-like flowers in one season. The male plant produces an abundance of pollen, which is blown about by the dry autumn winds. The cones are often brightly coloured, the male cones orange to salmon pink, the female ones much larger and greenish yellow, banded with reddish brown. In an area where the annual rainfall of 15 mm is not guaranteed, it is quite miraculous that these dwarfed trees can survive for years or longer. A pocket of welwitschias may not see new plants for close to a century, making the germination of a seed a rare and significant event. The welwitschia produces only two leaves in its lifetime, which grow very long and become

shredded over time by the sun and the wind. The plant absorbs moisture from the life-giving fog generated by the cold Benguela Current flowing from the Antarctic up the west coast of Africa and meeting the warm onshore winds from the interior , and from underground water. A protected plant, it is a Namib endemic that grows in isolated communities along the desert coastal strip from Namibe in southern Angola southwards to the Kuiseb River in Namibia. It has befuddled scientists for decades as to where it fits in the plant kingdom. It is simply the only one of its kind. Supposedly related to the flora of the Jurassic period when gymnosperms were abundant, the plant is thought to have survived and adapted as the environment became more arid. Eventually, after much bewilderment, scientists gave the plant its own taxonomic category, naming it *Welwitschia mirabilis* after Austrian botanist and naturalist, Friedrich Welwitsch, who fell to his knees in awe when he saw the remarkable plant whilst in southern Angola in A species of tenebrionid beetle found in the Namib. Travel News Namibia Travel News Namibia is a high-quality glossy Namibia travel and lifestyle magazine tasked with promoting Namibia to the world. With riveting stories, first-hand encounters and magnificent photographs showcasing tourism, travel, nature, adventure and conservation, TNN is the ultimate and most comprehensive guide to exploring Namibia. Travel News Namibia is published in five different editions per year. These include four English- language editions and one German.

Chapter 5 : Plants - Namib Desert!

From the series of Antje Burke, this is a special guide to wild flowers of the Central Namib. Wild Flowers of the Southern Namib Wild flowers of the southern Namib includes plants which occur in the area of LÄ¼deritz, Aus, Rosh Pinah, Oranjemund, Sperrgebiet and surroundings.

Pre-colonial period[edit] The dry lands of Namibia have been inhabited since early times by San, Damara, and Nama. Around the 14th century, immigrating Bantu people began to arrive during the Bantu expansion from central Africa. From the late 18th century onward, Oorlam people from Cape Colony crossed the Orange River and moved into the area that today is southern Namibia. They received the missionaries accompanying the Oorlam very well, [22] granting them the right to use waterholes and grazing against an annual payment. The Nama-Herero War broke out in , with hostilities ebbing only after the German Empire deployed troops to the contested places and cemented the status quo among the Nama, Oorlam, and Herero. Like most of interior Sub-Saharan Africa , Namibia was not extensively explored by Europeans until the 19th century. At that time traders and settlers came principally from Germany and Sweden. In the late 19th century, Dorsland Trekkers crossed the area on their way from the Transvaal to Angola. Some of them settled in Namibia instead of continuing their journey. From to , the Herero and the Namaqua took up arms against brutal German colonialism. Most Africans were confined to so-called native territories, which later under South African rule after were turned into "homelands" Bantustans. Indeed, some historians have speculated that the German genocide in Namibia was a model used by Nazis in the Holocaust. Self-governing tribal homelands appear as tan with red stripes. South Africa began imposing apartheid , its codified system of racial segregation and discrimination, on South West Africa during the late s. Development was concentrated in the region of the country immediately adjacent to South Africa, formally denoted as the "Police Zone", where most of the German colonial era settlements and mines were also located. Outside the Police Zone, indigenous peoples were restricted to theoretically self-governing tribal homelands. Growing war weariness and the reduction of tensions between the superpowers compelled South Africa, Angola, and Cuba to accede to the Tripartite Accord , under pressure from both the Soviet Union and the United States. The country officially became independent on 21 March Sam Nujoma was sworn in as the first President of Namibia at a ceremony attended by Nelson Mandela of South Africa who had been released from prison the previous month and representatives from countries, including 20 heads of state. Multiparty democracy was introduced and has been maintained, with local, regional and national elections held regularly. Several registered political parties are active and represented in the National Assembly, although the SWAPO has won every election since independence. It issued an amnesty for those who had fought on either side during the liberation war. The civil war in Angola spilled over and adversely affected Namibians living in the north of the country. In , the national government successfully quashed a secessionist attempt in the northeastern Caprivi Strip. It wanted the Caprivi Strip to secede in order to form its own society.

Chapter 6 : Plants of Namibia

Wild Flowers of the Southern Namib/ PflanzenfÄ¼hrer fÄ¼r die SÄ¼dliche Namib and Wild Flowers of the Central Namib/ PflanzenfÄ¼hrer fÄ¼r die Zentrale Namib.

Resources While much of the Namibian landscape is characterised by deserts and mountains, the country extends far enough north to have a varied range of plant life. Namibia can be split into four distinct vegetation zones which together support more than 4, seed bearing vascular plants, different species of tree, over endemic plant species and varieties of lichen. The zones are defined as follows: The tropical forests and wetlands along the banks of the perennial rivers in the Kavango and Caprivi regions. The savannah plains with occasional trees in the Kalahari. Mountainous escarpment regions such as Kaokoland and Damaraland Low altitude coast lands and Namib Desert. Plants play a large part in Namibian folklore such as The Omumborombonga or ancestral tree that grows north of Windhoek. It can be found in both highland savannah and sandveld woodlands and is called the leadwood in English as its wood is the heaviest in the world. According to Herero storytellers it was out of the first Omumborombonga tree that the first human beings a man and a woman came forth. The wild animals of the veld, as well as the cattle and the sheep, came out of this tree, but the Bergdama black slaves came out of a rock as did goats and baboons. Plant life in Namibia is classed by: Trees - essential for the sustainability of every environment. They are extremely important and provide shade, homes and food for human and the animal kingdoms alike. Stem succulents - usually the larger plants in the desert. They store water in their stems and examples of these succulents include the milk bush *Euphorbia virosa* and the quiver tree *Aloe dichotoma*. They are prevalent all along the western escarpment, mainly in rocky habitats and isolated inselbergs or mountains far into the desert. Leaf succulents - can range from small to tall shrubs that store water in their leaves. They are the most abundant in the southern Namib and can survive by adapting to a relatively stable supply of moisture in the form of winter rainfall. Therefore, they flower and grow substantially in the winter month June-September. Leaf succulents can also funnel water from their leaves to their roots. Dwarf succulents- the southern Namib is home to many dwarf succulents. The window plant is a dwarf succulent. During the drier winter months they tend be rather inconspicuous, but at the onset of the rains, they are transformed into a magnificent little plant, popular in many gardens. Dwarf shrubs - as the name suggests, dwarf shrubs have a low growth form, but their resilience is a distinct advantage in the colder winter months. The desert environment restricts their growth, but nonetheless when they do flower, dwarf shrubs are capable of a most eye-catching display. Shrubs - are woody plants with a number of stems growing from the base. They are usually defined as being plants over 0. Shrubs are an important vegetation type as it has both winter and summer-rain-adapted species. Many low shrubs make up the majority of plant life near the coast. Most of them are fairly unglamorous, but respond to the influence of fog, the vegetation and numbers decreasing as you move away from the coast as the amount of fog decreases. Bulbs - many bulbs are the first plants to appear after rainfall. They have very bright and attractive flowers which attract predators. To protect themselves, the leaves contain toxic substances, which affect the circulatory systems of some animals, mainly livestock. Young leaves and flowers are the most toxic; cattle, goats and sheep falling victim when they are tempted for a nibble. Herbs - have a short lifespan, normally completing their life cycle within a season. They reproduce by seed, which can remain dormant in the soil for years. Once the conditions are favourable it will develop. Multi-seasonals " are herbs that live for more than one season. They grow and produce seeds and flowers until the water dries up, depending on locality and rainfall. White codon in the central Namib is a multi-seasonal. Grasses - cultivated grasses are the most important staple food for man. Natural grasses provide food for livestock. Grasses are obviously less abundant in the Namib Desert than in the rest of the country and spiny cladoraphis *Cladoraphis spinosa* occurs throughout the Namib Desert.

Chapter 7 : Namib Desert | Namibia

in the central Namib are likely to be a result of former environmental conditions (i.e. winter rainfall) and/or the influence of fog, in contrast to the southern Namib where phylogenetics play a more important role.

Wild Flowers of the Southern Namib, authored by Dr. Sperrgebiet and surroundings, but also some plants of the Namib sand sea, northwards to Sossusvlei. Antje Burke The southern Namib, one of the harshest environments in Namibia, is home to well over species of plants. The area, shown on the map opposite, is covered by Namib sands, the Sperrgebiet and extends eastwards to the rise of the escarpment at the Huib Hoch-Plateau. What makes the Namib such a harsh environment? Several wind corridors channel onshore winds along valleys, some of which - like the one at Pomona - produce persistently high wind speeds that continually pummel the landscape. The effect of these winds is compounded by extreme aridity. Rains, which do not necessarily fall every season, produce annual averages of 54 mm in the Rosh Pinah area and decrease to 20 mm in Luderitz. However, moderating these climatic extremes is the influence of fog along the coast. The south-western section of the southern Namib comprises the northernmost extent of the areas regularly receiving winter rainfall in southern Africa. Although winter rains can occasionally occur as far north as the Brandberg, this is rare. The remaining parts of Namibia receive summer rains. It is the variety of habitats, its position at the interface of the winter- and summer-rainfall areas in southern Africa and the coastal influence, that makes the southern Namib so rich in biodiversity. The southern Namib falls into the northernmost extension of the Succulent Karoo Biome of southern Africa. The Succulent Karoo is characterised by winter rainfall and a prevalence of succulent plants. From north to south, the Namib Sand Sea is characterised by one massive dunefield of shifting sand, with a few inselbergs and koppies isolated mountains or rocky outcrops interrupting these mobile dunes. To the south, the central and eastern parts of the Sperrgebiet are dotted with inselbergs positioned in vast stretches of gravel plains, mobile and semi-stabilised dunes and sandy plains. A network of rivers and smaller drainage lines surround each inselberg. Two prominent complexes, the Klinghardt Mountains in the central Sperrgebiet and the Aurus Mountains in the south-east, are worth mentioning as areas of special biodiversity importance. The coastal strip of the Sperrgebiet is an interwoven mosaic of sandy beaches, rocky shores, coastal hummocks, small dune fields, low outcrops, sandy, gravel and gypsum plains, and salt pans. The Orange River valley is another important habitat consisting of a perennial river and surrounding mountain slopes that provide a foothold for plants. This is an excerpt from the guide: Wild Flowers of the Southern Namib Author: Antje Burke 3rd, revised edition.

Chapter 8 : Books on the plants of Namibia - Travel News Namibia

The Namib is a coastal desert in southern calendrierdelascience.com name Namib is of Nama origin and means "vast place". According to the broadest definition, the Namib stretches for more than 2, kilometres (1, mi) along the Atlantic coasts of Angola, Namibia, and South Africa, extending southward from the Carunjamba River in Angola, through Namibia and to the Olifants River in Western Cape, South Africa.

See Article History Alternative Title: It reaches inland 80 to miles to km to the foot of the Great Escarpment. The southern portion merges with the Kalahari on the plateau atop the escarpment. Namib desert The diverse landscapes and wildlife of the Namib desert, Namibia. It is important because of the trade routes that cross it, its mineral deposits, the fisheries of the bordering sea, and its increasing utilization for recreational purposes. Physical features The Namib is divided into three successive north-south-trending strips: The boundaries between them consist of broad transition zones. Physiography The desert basically consists of a relatively smooth platform of truncated bedrock of various types and ages. Mica - schist and other metamorphics and granite and similar intrusives predominate. The platform rises gradually from the coast to about 3, feet metres at the foot of the Great Escarpment. Scattered isolated mountains rise steeply and abruptly above the platform, and in the northern half several streams have carved deep steep-walled gorges into it. Namib desert Namib desert, Namibia. The dunes run in lines from north-northwest to south-southeast, individual dunes having lengths of 10 to 20 miles 16 to 32 km and reaching heights of to feet 60 to metres. The troughs between these lines of dunes are interrupted by smaller transverse dunes. The extreme southern coastal area consists of wind-scoured bedrock and a few rapidly moving crescent-shaped barchans i. The northern third the Kaokoveld region consists of gravel plains and rock platforms occurring between scattered rugged mountains, interspersed with a few large dune fields. Drainage Being an almost rainless area, the Namib has a poorly developed and fragmentary drainage pattern. Water from the interior plateau flows through or into the desert. In the northern half the larger streams reach the sea, but between the Kuiseb and the Orange rivers every stream terminates in a vlei salt pan or mud flat against or among the dunes. Sand dunes surrounding Sossusvlei, the termination of the Tsauchab, an intermittent stream in south-central Namib, Namibia. The underflow of the Kuiseb River has been tapped 25 miles 40 km inland to provide water supplies for the towns of Walvis Bay and Swakopmund. Only the Cunene Kunene and Orange rivers flow permanently on the surface. Other streams have surface flow only after heavy rainfall in the interior plateaus; they normally flow for no more than a few days in several years. Soils Large areas of the Namib are completely soilless, with bedrock at the surface. Other areas are covered with shifting sand. Soils that do occur are often highly saline, impregnated with gypsum, or cemented firmly by calcium carbonate, the latter forming a calcrete layer just below the surface. Arable soils in the Namib are limited to floodplains and the terraces of major rivers and are subject to occasional inundation. Climate The coastal area is almost totally rainless, yet its air is almost always at or near the saturation point. The cold Benguela Current flows northward along the coast, chilling the air above it and thus producing fog. This cool air moves inland as a southwest sea breeze, creating a temperature inversion about 1, feet metres thick, with fog below and hot, dry air above. At the coast there is little difference in temperature between day and night or between winter and summer. Along the inland margins, summer temperatures normally reach the upper 80s F low 30s C. Only in areas sheltered from the cooling sea breeze lee sides of mountains and bottoms of canyons do temperatures frequently approach those expected in low-latitude deserts. Freezing temperatures occur occasionally along the inner edge of the desert. The rare rains occur usually as short-lived torrential thunderstorms. Average annual precipitation is generally about 0. In some years, however, no rain falls at all. Dew, on the other hand, is heavy and for some types of vegetation is more important than the rainfall. In the extreme south, some winter precipitation occurs from frontal storms passing farther south over the Cape region; on rare occasions, snow may fall on the higher southern mountains. Plant life Six vegetational regions are found in the Namib: A curious Namib plant is the tumboa, or welwitschia *Welwitschia mirabilis*, whose two gigantic leaves sprawl over the surface of the ground from the crest of its huge root crown see *Welwitschiaceae*. Animal life The plains and the dunes of the Inner Namib

support large numbers of several varieties of antelope , especially gemsbok oryx and springbok , as well as ostriches and some zebras. Elephants , rhinoceroses , lions , hyenas , and jackals are found in the northern Namib, especially along the rivers that flow from the interior highlands to the Atlantic. The dunes of the Outer Namib provide habitats for various types of insects and reptiles , especially beetles, geckos , and snakes , but virtually no mammals. The shore area is densely populated by marine birds – notably flamingos , pelicans , and, in the southern part, penguins – as well as a few jackals, some rodents , and a few colonies of seals. Large quantities of guano are scraped annually from the rocks of several offshore islands. A small number of Herero continue to herd cattle and goats from water hole to water hole in the desert part of the Kaokoveld, living in their traditional manner. A few Topnaar Nama Khoekhoe graze their sheep and goats on the riverine vegetation along the Kuiseb River. A great part of the Namib is now totally unused and unoccupied, the aboriginal people having left to adopt new homes and new ways of life. A few areas, however, are productive in some way. Much of the central and northern Namib has been set aside for recreation and conservation. The Namib Desert Park in the central area is a desert range for antelopes, zebras, and ostriches. A strip about miles km in length along the coast northwest of Swakopmund constitutes the National West Coast Tourist Area; within it is the Cape Cross Seal Reserve, which protects a breeding area. Farther north is the Skeleton Coast National Park, where entry is restricted in order to preserve the fragile desert environment. Diamonds are extracted from alluvial beds near the coast by large-scale equipment, chiefly in the area near the mouth of the Orange River. There are four cities on the Namib coast. Swakopmund , the summer capital for Namibia and a popular coastal resort town, still retains much of the atmosphere from the days when South West Africa was a German colony. Swakopmund has been greatly changed by the development of a large uranium mine located some 25 miles 40 km inland. Walvis Bay , just to the south of Swakopmund, is a coastal enclave formerly belonging to South Africa that was transferred to Namibia in . It is a modern port city with a mixed population – the Africans consisting partly of Nama families from south-central Namibia but largely of male Ambo from Angola and the northern part of Namibia who have found employment at the port. The port serves as a base for fishing fleets that supply both shore canneries and cannery ships on the open sea. It is the major transshipment port for Namibia. Oranjemund , a company town of the Namdeb Diamond Corp. Otherwise, little was known of the Namib until the latter part of the 19th century. After South West Africa was established as a colony of Germany in the early s, the German military began detailed exploration and mapping of the desert.

Chapter 9 : Namibia - Wikipedia

The central Namib provides a number of habitats for plants, notably expansive gravel and gypsum plains, rocky outcrops and dry river courses with associated drainage lines. The northern Namib - is a very dry place with low and unpredictable ranges and amounts of rainfall varying from zero to over mm.

Namibia Scientific Society; 2nd edition. The area nestles between the Atlantic Ocean in the west and the escarpment in the east. The northern Namib is an arid area, punctuated with prominent mountains and crossed by numerous, westward-flowing and mainly ephemeral rivers. In many ways similar to the central Namib, it provides habitats of vast gravel plains, dry river courses and drainage lines, as well as rocky outcrops and mountains rising from a few to several hundred metres above the plains. Locally confined habitats related to water sources and soil conditions dot this vast landscape - saline springs, pans, patches of gypsum and calcrete hardpan, as well as pockets of small, mobile dunes along the main river courses. Towards the coast and the north, dunes and sandplain habitats dominate. Unique in Namibia is the landscape that developed from the volcanic Etendeka lavas. Now broken up by many millions of years of erosion, prominent flat-topped mountains and hundreds of isolated mesas dot the landscape between the Huab and Hoanib rivers, and to the north of the Hoarusib River. This area, colloquially known as Damaraland, boasts breathtaking landscapes roamed by a variety of game which is unparalleled in other parts of the country. One permanently flowing river - the Kunene - and numerous western-flowing, ephemeral rivers, including the Huab, Koigab, Uniab, Hoanib, Hoarusib and Khumib, are the lifeline of the northern Namib. With their large stands of riparian forest, seepage areas and springs, they provide food, water and shelter for a host of animals. The northern Namib is a very dry place. From the coast to the escapement average rainfall ranges from 0 to mm per annum - rainfall is also unpredictable highly variable and patchy. The amount of rain a particular spot receives every year can range from nothing to well over mm. The chance of good rains becomes slimmer as one moves westwards towards the coast. Here, fog provides a much more reliable source of moisture. As in the central Namib, the fog belt stretches between 20 and 30 km inland from the coast, and occasionally reaches much further inland. This system, however, also creates a pronounced coast-inland gradient with respect to humidity and temperature. Humidity is high at the coast and temperatures are moderate, with an annual average temperature at a comfortable 16C. Humidity, in contrast, decreases when moving inland and away from the coast. Wild flowers of the Northern Namib, by Antje Burke. Wild flowers of the Northern Namib Author: Antje Burke 2nd edition.