

the small

# Plant Guide to Rao Jodha

DESERT ROCK PARK

pradip krishen

mehrangarh museum trust



Text & Photography  
PRADIP KRISHEN

Layout & Design  
KADAMBARI MISRA

Mehrangarh Museum Trust, Jodhpur  
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# Introduction

This is a short version of a more comprehensive field guide to the plants of Rao Jodha Desert Rock Park, a little morsel to whet your appetite while the longer version is in preparation. I hesitate to put a number to how many plants we have inside the Park because it goes up with each counting, but a reasonable estimate would be about 300 species of trees, shrubs, climbers and herbs, including grasses and sedges. We feature 42 plants in this Small Field Guide, some of the more common or interesting ones you are likely to see as you walk around the Park.

If you are visiting Rao Jodha Park for the first time, you will probably go through the Visitors Centre and descend into the stormwater gully under the City Wall, which is how we planned the start of our Visitors Trail. Over the next 2 years or so, the Trail will bifurcate and become a network of trails that you can use to explore the Park. This is of course the way we intend our visitors to experience the Park. But it is by no means the only way to walk through the Park and I'm

sure there will be some who will read this without ever having travelled to Jodhpur at all. To all of you, wherever you are, welcome to the wonderful world of desert plants from the Thar dryland.

## THE HEART OF ROCK COUNTRY

The rock that everyone knows in Jodhpur is Vindhyan sandstone because it is so extensively mined and used. *Everything* in Jodhpur is built with bricks of dressed sandstone. Not so well known is rhyolite, a hard, brittle volcanic rock which makes up the entire hill on the right as you wind your way up to Mehrangarh. It tends to form characteristic long, vertical columns with flat faces and once you notice it, has a signature that allows you to recognize it instantly. Rao Jodha Desert Rock Park is situated on an outcrop of volcanic rhyolite so special that the rock feature has been designated a National Geological Monument.

We began work on the Park early in 2006. Our aim was to try and restore the natural ecology of the rocky tract adjoining Mehrangarh Fort, an area of 70 hectares (about 175 acres). The historic City Wall had been repaired

in 2005 which made it possible to protect the land from foraging animals. If we were successful in bringing back native plants, we imagined that this tract could become an outdoor museum of Marwar's 'lithophytes' – plants specially adapted to living in rocky habitats. We also had a clear sense that 5 or 6 years down the line, we wanted to welcome our first visitors into the Park.

## HOW PLANTS ADAPT

Desert plants come in many different forms. Some – the so-called pantropical weeds – are unbelievably hardy, able to cling on somehow in a wide diversity of habitats. But desert rock is a harsh, difficult environment and most plants that are able to survive here have to be specially equipped in some way to deal with extremely low levels of moisture. Rock is even more unforgiving than sand and that is why scientists use a special term – 'lithophyte' – to describe plants that are able to eke out a living in rocky habitats. Rao Jodha Desert Rock Park has one plot of salty sand and some wet areas, so it's not *exclusively* about rock-adapted plants, but in most respects it is a park featuring lithophytes from the Thar desert.

If many of the plants look unfamiliar, it is because the vast majority belong to an ecological province that extends westwards into the great deserts stretching through Pakistan, Afghanistan and the Middle East into north Africa. This is in contrast with the rest of northern and eastern India, whose plants have affinities with northern (trans-Himalayan) or south-east Asian (Indo-Malayan) botanic regions. This makes perfect sense because, above all, plants need to be in tune with their environment. All the evolutionary adaptations that plants need to live here were wrought somewhere in the contiguous swathe of deserts stretching westwards.

Adaptations to desert-living are varied and inventive. Being succulent (able to store water in its tissues) like a cactus, is probably the most useful trick. Thhor (*Euphorbia caducifolia*) is the most prominent succulent of the Thar desert. It does so well, especially growing on rock, that it provides a microhabitat – cool, shady, protected by its spines – that allows many other plants to live within its wide embrace. No surprise then, that we chose thhor as the emblematic plant for our Park.

# Featured Plants

This Field Guide describes 8 trees, 12 shrubs, 18 herbaceous plants and 4 climbers. The wobbly grey numbers to the right of the plant names are plant numbers carved on stone inside the park. We thought this was a good way to label our plants without cluttering the landscape with signs.

Lithophytes in the Thar desert are up chiefly against low soil moisture, extremely high daytime temperatures in summer and intense sunlight. Some plants cope with these conditions by developing waxy leaves to reduce vapour loss. Others open their stomata to take up carbon dioxide only at night, when conditions are not so adverse. Many lithophytes grow a coating of fine hairs on leaf surfaces to reflect light and reduce surface temperatures. A few dispense with leaves altogether, assigning the crucial job of photosynthesis to green stems instead. Perhaps the simplest and most elegant adaptation of all is to shorten lifespans and live only in the short 'window of opportunity' when there is moisture in the ground. This is what desert ephemerals do, germinating with the first rains in July, then rushing through flowering and fruit-bearing so that they can disappear just as the soil starts to dry up again. But not before leaving behind hard-coated seeds – tiny time-capsules – that will spring to life when the rains return next year.

Lithophytes grow very slowly – their growing season is extremely short – and we have learned to be happy if we see a young kumatiyo (*Acacia senegal*) that has put on just 15-20 cm of new growth in a single year.

Rao Jodha Park is still a very young refuge for wild plants and it will be some years before you can expect to see mature trees and shrubs. But in the meantime, do pay special attention to the wonderful ephemerals that spring up in the rains. They provide the colour and the verve – the *raunaq* – in our Park.

There is clearly a 'best time' to visit the Park, and a 'less best' time. Late July to October is when the ephemerals are at their best. Some of the hardier ones could still be in flower in December, but by this time most will have made no-nonsense preparations for dropping their seeds and shipping out.

The rest of the year is by no means devoid of interest. Thhor and rohido flower extravagantly in February or March. A number of perennials like kumatiyo burst into flower as soon as the rains arrive. There is usually something or the other going on at all times of the year.

Don't forget to come back in 10 years time! There's quite a few big trees we'd like to show you.

Pradip Krishen  
PARK DIRECTOR



## TREES 6

Rohido *Tecomella undulata*  
Kumatiyo *Acacia senegal*  
Hingoto *Balanites roxburghii*  
Peeloo *Salvadora persica*  
Kharo Jaal *Salvadora oleoides*  
Sargooro *Moringa concanensis*  
Goondi *Cordia gharaf*  
Bordi *Ziziphus nummularia*

## SHRUBS 11

Bui *Aerva javanica*  
Aakado *Calotropis procera*  
Gangeti *Grewia tenax*  
Oont Kantalo  
*Echinops echinatus*  
Ghatbor  
*Flueggia leucopyrus*  
Kair *Capparis decidua*  
Kheer Kheemp  
*Sarcostemma acidum*  
Kheemp  
*Leptadenia pyrotechnica*  
Thhor *Euphorbia caducifolia*  
Dabi *Cadaba fruticosa*  
Googal *Commiphora wightii*  
Rabad Bel  
*Cryptostegia grandiflora*

## HERBS 20

Vajradanti *Barleria acanthoides*  
Peelo Vajradanti  
*Barleria prionitis* var. *dicantha*  
Kakori Booti *Ruellia patula*  
Melhanian *Melhanian magnifolia*  
Chirki *Pavonia arabica*  
Seddera *Seddera latifolia*  
Jungli pyaaz *Drimys indica*  
Missi *Striga gesnerioides*  
Geedar Tambaku  
*Verbascum chinense*  
Jalbooti *Phylla nodiflora*  
Dhamaso *Fagonia indica*  
Bekario *Indigofera cordifolia*  
Pindru *Lindenbergia muraria*  
Oont kanalo (2)  
*Oligochaeta ramosa*

Jungli gobi  
*Launaea procumbens*  
Ghamra *Tridax procumbens*  
Kunden  
*Heliotropium ovalifolium*  
Ringani *Solanum virginianum*

## CLIMBERS 30

Santari *Ipomea pes-tigridis*  
Orapa *Maerua oblongifolia*  
Peelvaan *Cocculus pendulus*  
Rota Bel  
*Rivea hypocrateriformis*



rohido desert/marwar teak

27

*Tecomella undulata* | FAMILY Bignoniaceae

HABITAT Sandy plains and valleys

FEB - MAR



One of the most striking flowering trees of the Thar Desert, coming into bloom at a time when most other trees in the desert are still dormant in late winter or early spring. The flowers vary from deep yellow to vibrant orange. Rohido is prized for its close-grained timber which makes one of the best carving woods in India. This tree features in the Red Data Book of India's endangered plants but is still fairly easy to spot in sandy places when you drive through Marwar.

kumatiyo gum arabic tree

2

*Acacia senegal* | FAMILY Mimosaceae

HABITAT Dry, rocky hills and gravelly plains

JUL - AUG

A small, thorny tree superbly adapted to growing in dry, rocky places in the desert. Kumatiyo starts putting on new growth with the first showers of the monsoon and is quickly covered by white bottlebrush-shaped flowering spikes. This is the only desert acacia with spines arranged in sets of 3—the 2 outer ones only slightly curved, the middle spine strongly hooked. Flat, pale brown pods decorate the tree in early winter and the seeds are collected when still green to make a Marwari vegetable. This tree is the source for gum arabic used in processed food. Kumatiyo's native range stretches right across the middle eastern desert into Arabia and Senegal.



hingoto desert date

8

*Balanites roxburghii* | FAMILY Balanitaceae

HABITAT Sand, clay or gravel

APR - MAY



Hingoto (also: hingua, hingoni) is a smallish tree with stiff, green twigs and stout leaf-bearing thorns. The curious, furry flowers appear early in summer and turn into woody fruit filled with a somewhat unpleasant smelling pulp that is relished by wild animals like the neelgai, porcupine and jackal. Another traditional use for the pulp—now very rarely employed—is for cleaning silk. Hingoto spreads rapidly by root-suckers and is often seen growing in clumps at the edges of sandy fields or in road cuttings.

# peeloo

 toothbrush tree

*Salvadora persica* | FAMILY Salvadoraceae

# 24

HABITAT Wastelands, marshy places

DEC-APR



Desert trees of great character with knobby trunks and a dark canopy of fleshy leaves. Peeloo (also: meettha jaal, dhalu) is found in a vast arid territory stretching west to Arabia and is thought to be the 'Mustard tree' of the Old Testament. The small, peppery berries come in colours ranging from bright ruby red to white. The miniscule greenish-yellow flowers are easily overlooked.

# kharo jaal

 olive-leaved salvadora

*Salvadora oleoides* | FAMILY Salvadoraceae

# 25

HABITAT Sandy plains, also rocky ground

MAR-APR



This salvadora usually grows in seasonal watercourses and rocky depressions. Its slim, graceful, olive-like leaves are unmistakable but so is the dense canopy which often droops right down to the ground hiding its bole altogether. The trunk is even more gnarled and wonderful than peeloo's and offers refuge to many small creatures within its corrugated folds and hollows.

# sargooro

 bitter drumstick tree

*Moringa concanensis* | FAMILY Moringaceae

# 21

HABITAT Sandy dunes and rocky hills

NOV-JAN

An unmistakable relative of the sonjna or drumstick tree, only wilder and capable of taking you completely by surprise when you see it in unlikely places in the desert. It looks a lot like sonjna with its much-divided ferny leaves, luminously pale green when they first appear. Its roots will alert you to the difference, for sarguro survives by growing enormous roots that anchor it in sand dunes and penetrate gravelly ground. This is surely one of the most beautiful wild trees of the Thar desert. Its white flowers – like little birds with their wings drawn back, about to take flight – are pink-tinged, but the fruit is bitter and is not eaten.





# goondi narrow-leaved sepistan

*Cordia gharaf* | FAMILY Ehretiaceae

# 17

HABITAT Rock and sand

✿ MAY-JUN



A smallish tree to about 5 or 6 m, common in dry forests and on bouldery hills. Hardy and adaptable, goondi (also: gundani, lasoodi) produces small orange berries that are sold in the marketplace as rude food. The seeds are embedded in a gelatinous pulp. When chewed, goondi bark stains the mouth red and children sometimes use it to look adult and mimic the effect of chewing paan.

# bordi jujube bush

*Ziziphus nummularia* | FAMILY Rhamnaceae

# 30

HABITAT Sandy plains

✿ AUG-OCT



In most parts of India, bordi (also: jhadber) is just a small, straggling bush but seems to relish desert conditions and flourishes in protected *orans* where it can grow to 7 or 8 m with a great, tangled, bushy crown. Like other plants in its genus, bordi is intensely thorny with one of its pair of spines straight, the other hooked. The fruits have a dry, mealy flesh that hardly seems worth the trouble to eat.

# bui desert cotton

*Aerva javanica* | FAMILY Amaranthaceae

# 59

HABITAT Sandy areas

✿ SEP-JAN

One of the most common desert shrubs, superbly adapted to growing in deep sand. Bui (also: buari) has cottony flowers and fruit and sometimes covers large expanses following lines of natural drainage. Bui ranges widely in sandy deserts in Africa and the middle-east and has colonized northern parts of the Australian desert too. Bui cotton is used by desert people to stuff mattresses and pillows.



# aakado

 giant milkweed

*Calotropis procera* | FAMILY Apocynaceae

# 58

HABITAT Sandy plains

ALL YEAR



A large bush or less commonly a small tree upto 4 m tall with pretty flowers, very common in some parts of the desert. Aakado (also: aak) likes disturbed soil (such as abandoned fields) where it can form nearly pure colonies especially in salty sand. Aakado fruits yield a fibre that finds many uses for desert folk.

# gangeti

 white crossberry

*Grewia tenax* | FAMILY Tiliaceae

# 69

HABITAT Rocky hills, ravines

JUL-SEP



Gangeti (also: gangerun) is a tall, leggy, somewhat untidy shrub upto about 2 m tall that survives surprisingly well in rocky, inhospitable places in the desert. Its small white flowers stand out but the best way of recognizing it in the wild is by its bright orange fruit, usually 2-4 berries joined together. The fruits are edible, but only just.

# oont kantalo

 globe thistle

*Echinops echinatus* | FAMILY Asteraceae

# 67

HABITAT Sandy plains, rock

DEC-MAR

A characteristic thistle from the daisy family though you have to peer quite closely past its spines to see tiny, blue flowers arranged in a compound head. Oont kantalo can grow nearly a metre tall and colonizes small tracts, especially sandy or rubbly wastelands. Its leaves are deeply divided into long, thin segments each of which ends in a spine.



# ghatbor

 bushweed

*Fleuggia leucopyrus* | FAMILY Phyllanthaceae

# 80

HABITAT Rocky hills, ravines

JUL-AUG



Ghatbor is a large, long-limbed shrub with attractive, orbicular leaves. It reaches its greatest size near water but does not mind making a niche on dry, rocky ground. The flowers are tiny, pale yellowish, both males and females produced in great profusion on separate plants. The fruits (only on female plants, of course) are white, spherical, only about 4 mm in diameter.



# kair

bare caper

*Capparis decidua* | FAMILY Capparaceae

HABITAT Sandy or rocky places

APR–MAY, SEPT–OCT



A spiny bush or small tree with a dense mop of wiry, green, leafless branches, one of the emblematic plants of the Thar desert. Kair (also: kerro, teent, dela) leaves are tiny and quickly shed, part of a strategem to deal with extreme drought. Twice a year, kair produces masses of bright orange flowers that make a very pretty sight. The dark pink fruits are pickled or cooked as a vegetable.

# 59

# kheer kheemp

rambling milkweed

*Sarcostemma acidum* | FAMILY Asclepiadaceae

HABITAT Dry rocky places

JUL–AUG

A rambling shrub full of milky latex with smooth, jointed branches and no leaves at all. Doing without leaves altogether is an adaptation that quite a few desert plants use to cut down on water-loss from leaf-surfaces. The essential work of photosynthesis is done by chloroplasts in green stems. Kheer kheemp (also: khursani tanto, art thhor) produces its white flowers at the butt-ends of flexuose twigs. The flowers have a delicious fragrance that is most intense at night and early in the morning. Kheer kheemp likes rocky hillsides and outcrops.



# kheemp

broom brush

*Leptadenia pyrotechnica* | FAMILY Apocynaceae

HABITAT Sandy places

SEP–DEC



A large, thin-stemmed bush up to 2.5 m high, beautifully adapted to living in dry, deep sand. Kheemp has slender leaves on stems packed with milky latex, and desert folks use the dried stems for thatching and to make brooms. The tiny flowers are velvety-hairy and resemble sea creatures more than anything else!

# thhor leafless spurge

*Euphorbia caducifolia* | FAMILY Euphorbiaceae

# 68

HABITAT Rocky areas, gravel plains

✿ JAN - MAR

A tall, multi-stemmed, cactus-like succulent that is a reliable indicator of rocky or gravelly substrates in the Thar desert and is one of its emblematic plants. Despite its English name, thhor (also: danda thhor) puts forth fleshy leaves at the tops of its stems for a short while at the height of summer. There are 2 forms of flowers – most commonly bright red but also green, with intermediate colours of red or pink. The flowers themselves are borne on curious structures that are peculiar to the very large and diverse spurge family (*Euphorbiaceae*). Thhor is a vitally important component of the desert flora. Because it is large, offers shade and protection (by its thorns), it often becomes a miniature ecological niche in itself, supporting a host of other plants and small creatures like rodents and lizards.





# dabi

 indian cadaba

*Cadaba fruticosa* | FAMILY Capparaceae

HABITAT Sandy/rocky places

DEC-MAR

A dense, rambling shrub from the caper family that arrests attention when it is in flower. Its pale white, delicate petals have long claws and a little tube-like structure in their midst. The ovary is borne at the end of a long stalk, like with many other plants in this family. Dabi fruit are cylindrical, about 2 cm long, with a mealy jacket that peels back to reveal a surprisingly bright orange inner covering.



# 56

# googal

 mukul myrrh

*Commiphora wightii* | FAMILY Burseraceae

HABITAT Dry rocky hills

JAN-FEB

Googal is the most valuable medicinal plant of the Thar desert, overexploited and now becoming rare because of its reputation in Ayurvedic medicine. It is in the Red Data List of endangered plants. Googal forms a low, stout, thorny shrub or rarely, a small tree with characteristic shiny, peeling bark and tiny red flowers. Googal's most important feature is its resinous sap known as 'Indian bdellium' or 'gum googal' which exudes from its trunk in the cold season. Ayurveda uses a steroid extract of this resin to make a medicine that is supposed to lower cholesterol. Gum googal releases a myrrh-like fragrance when burned over a naked flame and sells in a form known as 'dhoop' in Indian bazars.



# 62

# rabad bel

rubber vine / purple allamanda

*Cryptostegia grandiflora* | FAMILY Periplocaceae

HABITAT Dry habitats near water

ALL YEAR



An evergreen climbing shrub with milky latex and pretty, pale pink flowers, native to Madagascar. Rabad bel (also: vilaiti aakado) was introduced into India around World War I as a source of rubber for airplane tyres but interest quickly waned when efforts to tap its latex proved uneconomical. It has since run wild in dry parts of India and has taken up residence close to water. We feature it in Rao Jodha Park as a curiosity and try and ensure it does not become invasive!

# 64



# vajradanti spiny white barleria 134

*Barleria acanthoides* | FAMILY Acanthaceae

HABITAT Rocky plateaux in Marwar

✿ AUG-NOV



A low, spiny bush with pure white, long-tubed flowers that open at dusk and lie flat and spent when you see them in the morning. Pale brown leafy bracts with delicate veins are positioned on either side of the flowers and at dry times of the year when most leaves are under stress, these bracts form the most conspicuous part of the plant. Vajradanti (also: chapari) is found in rocky parts of the desert westwards through the middle-east as far as N Africa.

# peelo vajradanti 135

porcupine flower

*Barleria prionitis* var. *dicantha* | FAMILY Acanthaceae

HABITAT Rocky hillsides

✿ SEP-JAN



This barleria is endemic to Marwar and has been seen only in a few places in Barmer district. It has larger, more profuse flowers than the common variety *prionitis* and seems more at home in rugged, rocky hillsides. Peelo vajradanti often seeks refuge inside large thhor bushes, taking advantage of the cool microhabitat they provide.



# kakori booti desert petunia 173

*Ruellia patula* | FAMILY Acanthaceae

HABITAT Rocky areas, wastelands

✿ JUL-OCT



Like vajradanti, the pure white flowers of kakori booti open at dusk and the plant looks devastated when you see the flowers lying on their sides en masse in the morning. Most white flowers in the wild are pollinated by night-flying moths so it makes perfect sense that the flowers become redundant as soon as darkness lifts. Kakori booti is found in dry, rocky places in the desert west to Africa.

# melhania (no local or common names)

*Melhania magnifolia* | FAMILY Malvaceae

# 196

HABITAT Sandy or rocky sites

ALL YEAR



*Melhania* is an outstanding genus of flowering undershrubs from desert habitats and it is strange that the plants are not better known or cultivated. This species – one of 3 *Melhanias* in Marwar – has a curious habit of opening its lovely flowers at about 4 pm – varying a bit with the seasons, of course.

# chirki (no common names)

*Pavonia arabica* | FAMILY Malvaceae

# 203

HABITAT RSandy or rocky sites

JUL-OCT



A desert plant from a widespread genus sometimes called 'swamp-mallows', though the epithet seems singularly inappropriate for a species adapted to dry, rocky sites. This is a small herb, less than 25 cm high but it is hardy and flowers for many months and could easily find its way into cultivated dry gardens.

# seddera (no local or common names)

*Seddera latifolia* | FAMILY Convolvulaceae

# 221

HABITAT Crevices in rock

OCT-MAR

One of the hardiest plants of the Thar desert, able to survive in dry, bare rock. You can sometimes see it growing in straight lines, following minute fissures in volcanic rhyolite where it is able to access minuscule quantities of soil-dust and perhaps a little moisture. It is likely (though

we are not yet certain) that it is somehow able to utilise atmospheric dew to meet its requirements of moisture. *Seddera* has tiny white flowers that are intensely hairy when you look at them through a hand lens. It is surprisingly easy to germinate the seeds.





# jungli pyaaz indian squill 243

*Drimia indica* | FAMILY Liliaceae

HABITAT Rocky or gravelly places

APRIL



This lily is called jangli pyaaz (wild onion) because of its large, onion-like underground bulb. The flowers are sometimes referred to as 'dingy lilies' because they disdain bright, attractive colours and open only at night, fading by first light. Jungli pyaaz is highly esteemed in traditional Ayurvedic medicine and is widely distributed from the middle east to Africa.

# missi cowpea witchweed 230

*Striga gesnerioides* | FAMILY Scrophularaceae

HABITAT Rocky areas

AUG-SEP



Missi is in some contexts regarded as a pesky weed because it parasitizes wheat and millet crops but it behaves in exemplary fashion in the desert, growing on the roots of thorn bushes and doing them no harm at all. The pretty, pink flowers appear in the rains, then quickly turn into fruit before disappearing.

# geedar tambaku chinese mullein 244

*Verbascum chinense* | FAMILY Scrophularaceae

HABITAT Sandy edges of riverbeds

FEB-MAY

A one metre tall annual that comes up in winter at the edges of tanks and streams. The local name means 'jackal's tobacco' and refers to its lobed, tobacco-like leaves at the base of the plant. The plant can look very pretty with masses of large, yellow flowers borne all along its tall, erect stems, devoid of leaves.



# jalbooti frog fruit 206

*Phyla nudiflora* | FAMILY Verbenaceae

HABITAT Moist margins of ponds

ALL YEAR



Jalbooti is native to the Americas but has become naturalized in damp places throughout the warm tropics. You can sometimes see it growing in extensive turflike mats at the edges of ponds or marshy areas. Tiny white flowers surrounding a fleshy central axis are attractive. Jalbooti is also called 'sawtooth fogfruit', 'turkey tangle' and 'matchweed' in English.



# dhamaso

 indian fagonbush

# 178

*Fagonia indica* | FAMILY Zygothymaceae

HABITAT Gravel plains and sand

SEP-MAR



A hardy, small undershrub found on gravel, clay or sand in the desert in a vast native range stretching across the middle east to the Sahara in northern Africa. The purple or lilac flowers with long-clawed petals attract a host of small insects to pollinate them. The curious fruits are shaped like one of those fanciful Russian ribbed domes that you see in postcards of Red Square.

# bekario

 heart-leaf indigo

# 136

*Indigofera cordifolia* | FAMILY Fabaceae

HABITAT Sand and rock

AUG-NOV



This is without any doubt the most widespread ephemeral herb of the Thar desert, germinating with the first rains and quickly covering sand dunes and gravelly slopes alike. In the record rains of 2010, bekario blanketed dunes in south Jaisalmer to the extent that the sand was no longer visible. You have to peer closely to notice tiny red flowers which are pea-like in form and very pretty. Long after it has died out, bekario leaves a grey fuzz behind in the sand.

# pindru

 wall lindenbergia

# 194

*Lindenbergia muraria* | FAMILY Orobanchaceae

HABITAT Rocks and old walls

SEP-MAR

Pindru (also: basanti) has a curious habit of appearing in the grouting of walls in old monuments, as if it has a nose for history. A liking for lime mortar is probably the reason but it also likes dry, rocky areas in general. The small, bright, 3-lipped yellow flowers with red spots are worth looking at closely with a hand lens.



# oont kantalo (2)

# 200

knapweed

*Oligochaeta ramosa* | FAMILY Asteraceae

HABITAT Wastelands, disturbed sites

OCT-MAR

Like the globe thistle (*Echinops*) this plant also goes by the name 'oont kantalo'. One of the places you are most likely to find it growing wild is around ruins of old buildings or along dry, gravelly roadsides. It is easy to walk past this oont kantalo without paying it a second glance but the flower heads are most interesting when seen close up.



# jungli gobi

 creeping launea **189**

*Launaea procumbens* | FAMILY Asteraceae

HABITAT Abandoned fields, wastelands

OCT–JUN



A small, prostrate herb with gay, yellow flowers borne in great profusion. Jangli gobi (also: van gobi) is easy to confuse with 3 other species of *Launaea* found in the Thar desert, as well as *Sonchus*, all of which have bright yellow dandelion-like flowers. Both *Launaea* and *Sonchus* tend to inhabit waste spaces and abandoned fields and are sometimes found growing in rocky sites as well.

# ghamra

 coat buttons **240**

*Tridax procumbens* | FAMILY Asteraceae

HABITAT Waste places and roadsides

MAY–JAN



A small annual with low, spreading (hairy) branches and erect flowering stems. The centre of the flowering head is yellow, the outer ray petals pure white. Ghamra is sometimes considered an invasive pest but can brighten up difficult sites and the plant has a host of medicinal and healing uses too. Ghamra is a favourite forage-plant for many different species of butterfly.

# kunden

 grey leaf heliotrope **184**

*Heliotropium ovalifolium* | FAMILY Boraginaceae

HABITAT Rocky or sandy places

NOV–JUN

A small, common desert herb from a very large genus known as 'heliotropes' because they orient their flowers towards the sun. The tiny flowers are arranged in peculiar structures like the arms of an octopus, called 'scorpioid cymes'. Although kunden prefers to grow near the dry margins of water-bodies, you will sometimes find lone plants growing in dry spots in pure rock.



# ringani

 thorny nightshade **226**

*Solanum virginianum* | FAMILY Solanaceae

HABITAT Rocky or sandy places

ALL YEAR



An immensely prickly, low, perennial shrub that springs up unbidden on disturbed ground. You often find it growing in waste rubble near stone mines. Ringani (also: bhatkataiya, bhoo ringani, kateli) sports deep purple flowers most of the year and is an unmistakable relative of the baingan or eggplant.



# santari

 tigerpaw morning glory **309**

*Ipomea pes-tigridis* | FAMILY Convolvulaceae

HABITAT Rocky or gravelly places

SEP-OCT

Santari is a fairly common twining annual that comes up in the rains and flowers handsomely immediately afterwards. The deeply lobed leaves are thought to evoke the impression of a tiger's pugmark, a useful way to distinguish it from many other morning glories that flower at the same time. The petals are the faintest shade of lilac possible and open in the evening.



# peelvaan

 weeping cockle **303**

*Cocculus pendulus* | FAMILY Menispermaceae

HABITAT Sandy or rocky places

NOV-DEC



When you drive through a sandy landscape in the Thar, this is the most common climber you are likely to see, twining on khejdi trees. Small-leaved and with tiny, inconspicuous flowers, peelvaan looks immensely attractive in new leaf when it develops a grey-green canopy with a silvery sheen. Peelvaan is also capable of growing in rock crevices if it can find purchase in soil, and in good examples of such sites it forms great cascades of leaves tumbling down the rock.

# orapa

 desert bush-cherry **311**

*Maerua oblongifolia* | FAMILY Capparaceae

HABITAT Dry areas generally

MAR-APR



Orapa (also: hemkand) is a strong climber with a thick, woody stem, not very common in the desert. It attracts attention by its opulent long-stamened flowers. One of orapa's peculiar attributes is that the leaves on young shoots do not look at all like the adult leaves, making it hard to recognize unless you are aware of the disguise. The fruits are like a long, sticky string of knotty berries.

# rotabel

 midnapore creeper **334**

*Rivea hypocrateriformis* | FAMILY Convolvulaceae

HABITAT Rocky or gravelly places

AUG-NOV



Rotabel (also: phang, phanji) is the 'moonflower' of the Indian desert, opening at dusk and emitting a perfect perfume to elicit attention from the night-flying moths who seek it out. It can become a large, woody climber, inconspicuous except when it springs to life in the rainy season. The pure white flowers are among the loveliest of desert blooms.







FRONT COVER: Oont Kantalo (*Echinops echinatus*)  
BACK COVER: Vajradanti (*Barleria acanthoides*)

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