

# Socotra

In early spring 2022, despite conflict-zone liability issues, an expedition to this magical island in the Arabian Sea was organised and led by Ian Green of Greentours, assisted by Chris Gardener. Of the 14 participants 12 were members of the Society. FERGUS KINMONTH recounts the highlights of the tour.

**28 February** The weekly flight from Abu Dhabi left before dawn, flying southwards over the Empty Quarter and heading east to avoid Yemeni airspace. We crossed the coast west of Aden two hours later.

Socotra is a speck in the Arabian Sea, measuring  $125 \times 50$  km, lying 290 km from Somalia and 380 km from Arabia. Nominally belonging to Yemen, plate tectonics and continental drift separated the archipelago from its original position close to Madagascar some 65 M years ago.

As the light lifted, a rocky shard appeared below through skeins of cloud. Our approach was guided by the castellations of the Hajhir Mountains, rising to 1,500 m inland of the airport on the coastal strip. Our group of 14 were among the few tourist passengers on this lifeline flight which prioritises humanitarian aid to this beleaguered land. Our hand-luggage was limited to 10 kg.

We pushed through the milling chaos in the tiny arrivals hall and re-grouped outside with our drivers and their 4WDs. Heading for the capital we



A grove of *Boswellia elongata* on the Homhil Plateau. This species of the fabled frankincense trees, a member of the family Burseraceae, is endemic to Socotra.





A view of the Arabian Sea in the distance from the Homhil Plateau. The infinity pool of cool greenish water provided a refreshing swim for members of the group.

halted among a profusion of roadside flora. Everything was strange and new, distantly familiar genera represented by strangely specialised variants. A third of the plant species here are endemic.

We encountered our first giant succulent, *Adenium obesum*, waving its chubby arms in welcome. Each individual has its own physique and personality as did *Euphorbia arbuscula* with flanged paddles reaching a height of 2 m or more.

The capital Hadibo (pop 8,500 of 50,000 in total) was a rubbish-strewn chaos, the consequence of famine-stricken society unaccustomed to material consumption and too impoverished to care for its environment. Three years after invasion by UAE in 2018 administration is no longer by Yemen but the political situation remains fragile.

At length we followed an unstable gravel track taking us steeply uphill onto the Homhil Plateau. Our team had raced ahead in a pickup laden with six 'Arab' style tents, tables and chairs, mattresses and impedimenta. They already had a lunch of fish and fragrant rice ready before we set off on foot down the torrent course of a river. A little water remained amongst the polished rocks sustaining the gentian relative *Exacum affine* in damp patches. The stream culminated in a basin overhanging a deep valley where bands of blue and turquoise marked the distant coastline. This cradled an irresistible infinity pool of cool greenish water, deep and wide enough for a refreshing swim. The first of the legendary *Dracaena cinnabari*, known as dragon trees

appeared on the slopes opposite. These are distant relatives of *Dracaena draco* of the Canary Islands.

They once grew so densely that their canopies touched, but fodder-cropping has inhibited their reproduction outside fenced enclaves. Whilst they still present a spectacular sight, the population is becoming sparse and senescent. Amongst these were frankincense trees, principally *Boswellia dioscoridis* with rounded greyish leaves and a few *B. elongata*. Eight of the world's 20 species are endemic to the archipelago.

We found our first *Kalanchoe farinacea* (Crassulaceae) in fading bloom. A number of small Acanthaceae such as *Dicliptera effusa* and *Hypoestes pubescens* appeared with little mats of *Oldenlandia pulvinata*, an attractive herb of the Rubiaceae. *Indigofera pseudointricata* was also in flower. In the gathering dusk we returned to our camp where the cooks were roasting fish for our dinner.

The climate of Socotra is governed by the seasonal monsoons. May to July is dominated by incessant 100 mph winds while the sparse rainfall during the northeast/southwest monsoon in October and November amounts to only 800 mm on the mountaintops and 200 mm in the lowlands. Upland rainfall percolates through the cretaceous limestone emerging in seasonal wadis.

**1 March** Several of us set out on an early morning hike on the high ridge opposite. It was a tough scramble, zigzagging up the 70° gradient. Half an hour later we reached a range of low cliffs at the top. Here were an assortment of rare and fantastical flora. Flowering clumps of *Kalanchoe farinacea*, and *Aloe perryi* with spikes of orange flowers, some attended by the endemic Socotra sunbird. On the cliffs we found the extraordinary 'rock' frankincense *Boswellia nana* which resembles a reptile or geological specimen adorned with leaves. Its prostrate stem emerges from fissures in the rock. Another three *Boswellia* were present: *B. elongata* and *B. dioscoridis* as well as *B. socotrana* with tiny leaflets. The long-tubed white blooms of *Tamriddaea capsulifera* grew in the scree as did the lilac flowered *Barleria aculeata*. On the top of the cliffs was a low scrub of the so-called 'daphne' *Lasiosiphon socotranus* with bright yellow flowers, orange *Ballochia amoena*, yellow *Barleria tetraacantha*, and the blue pea *Zygocarpum caeruleum*. Another strange tree growing atop the ridge was *Croton pachyclados*. This 'phorb' is a variety of *C. socotranus* and has distinct differences. It is known only from this ridge and there are possibly less than ten specimens in existence.

After a fine breakfast of flatbreads with honey, cheese and eggs we reiterated yesterday's walk to botanise in more detail. It was a beautiful morning, the temperature around 24 °C. We encountered another swollen succulent, the cucumber tree. *Dendrosicyos socotranus* has the form of a dwarf baobab topped by a quiff of curving branchlets with acanthus-like leaves.

As the heat rose we retired to our infinity pool for a cooling dip. After lunch our tents had already been packed and gone to the next camp. Driving





*Boswellia dioscoridis*, one of the frankincenses endemic to Socotra.

182

across the plateau we stopped to explore another grove of frankincense trees. *Boswellia elongata* were the most widespread. This genus has been much sought after since ancient times and is still tapped for its valuable resin. The essential oils have a strong and evocative perfume and are used in the embalming of corpses. Many of these trees had fallen during a major cyclone in 2012.

We descended again to the north coast heading east along an increasingly dramatic coastline. We stopped at a little museum in a village (entry free to children, seniors and royal retinue). In the courtyard a *Dendrosicyos* bearing yellow flowers attended the bones of a *Balaenoptera* whale. Inside were a range of local artefacts including ingenious water containers, a little sailing boat and woven textiles.

Inland of the coastal strip a range of cliffs shelving steeply and increasing in height were flanked by dunes of windblown coral sand extending to 600 m up the cliff. This is a kind of 'longshore drift'. A few goats were visible, grazing on tiny patches of green far above. After a brief stop to look at the flock of sooty gulls on the beach we continued almost to the farthest tip of the island. At Irasel we were quite isolated apart from a few small fishermen's huts a kilometre distant. Our collection of white canvas tents presented a pretty picture, backed by the dunes and high escarpment of Arher. The beach was a compendium of seashells and in the low dunes were halophytes including *Limonium paulayanum* and *L. sokotranum*. We finished the day with a starlit dinner on the beach.

**2 March** Beachcombing before breakfast we found large conch fragments and box fish exoskeletons. Offshore, a small pod of bottlenose dolphins emphasised the richness of these waters. Large numbers of Heuglin's gulls were also seen along the coastline. After breakfast we packed off for a morning foray to Hoq Cave.

On the way was a fine example of *Cistanche phelypaea*, a parasite of *Indigofera* reminiscent of broomrape, its spike of yellow flowers emerging surreally from the white sand. A trail led us steeply uphill for nearly two hours through croton shrubland which diversified with altitude. In this succulent woodland we saw *Sterculia africana* (Malvaceae) the largest trees on the island. Their grey-purple and green patched bark and their robust sinuous branches had the form of *Platanus*. There were also numerous *Boswellia elongata* and further up we saw *Boswellia dioscoridis*. This has waxy blue-green leaves and always grows out of rock, presumably its only refuge from grazing stock. We also saw *Commiphora parvifolia*, *Vachellia pennivenia*, *Dirichletia obovata* and the pendulous *Maerua angolensis*. A lone *Lannea transulta* stood overlooking the blue and turquoise sea below. Little *Hypoestes pubescens* was commonplace and at a higher altitude the blue form of *Anagallis arvensis*.

The cave entrance was huge, curtained by cascades of *Adiantum balfourii* and the rare *Exacum caeruleum*. Once inside, stalactites and stalagmites vied for attention in a gothic parade, some fusing to form columns which supported the

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*Boswellia elongata* with *Jatropha unicosta* scrub, Hoq cave.

183





The deciduous *Sterculia africana* (African star-chestnut), is the largest tree on the island.

roof. The walls were glazed with translucent chalcedony. In the dim recesses a stagnant pool reflected the speleological architecture.

On adjacent terraces were *Paraerva microphylla*, the strange umbellifer *Rughidia milleri*, and a highlight, the twisted *Boswellia popoviana*. The vine *Dioscorea lanata* trailed through various bushes and trees including the pea *Paracalyx balfourii* and *Ficus vasta* with improbably large bright green leaves; *Lavandula nimmoui* were in flower, as was the shrub *Ballochia atrovirgata*.

After our descent we continued to Dihamry for lunch. Some spent the afternoon snorkelling offshore, where marine life was abundant and largely approachable. There were stunning yellow and blue Tang in the shallows and further exotica in the deeper lagoon. Large groups of Sohail surgeonfish and lined surgeonfish patrolled, sometimes both species together.

**3 March** After breakfast and bird watching, a boat landed on the beach and the fisherman eagerly traded their scalloped and long-legged spiny lobsters for \$10 bills. The lobsters were served at lunch, embellished by a miraculous egg mayonnaise.

At noon we struck camp and headed south through expanses of *Croton* scrub. This woody *chevaux de frise* protects subdominant flora from windblown sand and the rare flash flood. Goat browsing suppresses more palatable species. The utility of many woody shrubs is a matter of desperation and

gives some idea of the island's poverty. The greater part are useful only *in extremis*, during periods of drought and famine when stock must be kept alive by any means. Most of the available flora are toxic even when macerated and boiled to a distasteful concoction and reluctantly imbibed. The timber is mostly useless for construction and poorly inflammable although the smoke is useful as a pesticide. Edible plants are confined to inaccessible rocky ledges. Those associated with commerce such as *Dracaena* and *Commiphora* (producing myrrh) are repeatedly tapped, often leading to their collapse. Flowers and fruit may be harvested until the plants can no longer sustain themselves. Cattle and goats are prioritised beyond their limited food value, for their symbolic status. Endemic flora is largely thornless since there are no native browsing animals.

We continued uphill to rockier terrain populated by the cartoon figures of *Adenium obesum*. Although *Monolluma socotrana* was seen here, none were in flower. *Boswellia elongata* and *B. dioscoridis* sheltered among the boulder scree. Following a river valley we passed through the mountain range. Eventually we descended to sea level on the southern side of the island. This was a different landscape of arid flatlands with the occasional village and stockades of date palms. Soon we reached the coastal dunes. This was truly Arabia. An endless vista of pure whiteness stretched in a mirage to the Arabian Sea.

Our campsite was on the beach at Omeq in a sweeping stretch of sandy scrubland. This was the only occasion when we experienced the luxury of a watertank and toilets.

**4 March** The tideline was strewn with the macabre remains of masked porcupine fish, the record of some catastrophic event. Shell fragments included huge conches and sea urchins. A gaggle of camels passed us as we breakfasted, on their way to tout for trade among the tourists on the dunes. Sanderling, common sandpipers and whimbrel frequented the shoreline with Socotra cisticolas and a few desert wheatear among light scrub of *Tamarix nilotica* and *Limonium paulayanum* on the dunes.

Continuing across the arid coastal plain we reached the abrupt southern escarpment. This prominent geomorphological feature stretches down the south side of the island, separating the limestone inland plateau from the coastal plain. We visited Dagub Cave. The cave entrance was framed by a curtain of stalactites, dripping with water. Such wet seeps occurring along the escarpment sustain some of Socotra's rarest plants; two of these were *Exacum socotranum* and *Erythroxylum socotranum*. The latter is the only member of its genus to be found outside Madagascar. Inside the cave lesser mouse-tailed bats (as we were reliably informed) hung from the roof.

We ascended a defile onto the limestone plateau and along to Dixiam, crossing a largely bare landscape dissected by deep gorges where vegetation hanging from cliff edges had been sculpted by goats. During a brief stop to explore the plateau we saw the rare *Punica protopunica*, the endemic



The forest of dragon trees, *Dracaena cinnabari*, at Firmihin.

pomegranate, with flowers. It even bore some recognisable fruit. The seemingly barren landscape had an unusual assembly of plants growing in the canyons, one of which proved to be the aptly named *Ficus vasta*, with distinctively large and cordate leaves.

From Dixiam we followed gravel tracks towards the remnant dragon tree forests at Firmihin, where our advance party had pitched camp. The route descended a vertiginous road through the canyon and up the other side. The yellow-flowered composite *Euryops arabicus* occurred on the plateau, a member of the Asteraceae with whorls of succulent tridentate leaves, resistant to browsing. Dragon trees cropped up in groups and picturesque solitude, silhouetted against the distant hazy vista. Ecologically they are a cloud forest plants, sustained by dew condensing on their fronds and channelled inward to the stem. We reached our campsite in time for a lobster lunch from the coast, served with chicken, fragrant rice, ratatouille and lime chutney.

In the cool of the evening we rambled through the trees in a parkland setting of tumbled limestone stacks. Our guide was a self-appointed ten year-old who showed us how the dragon's blood was harvested. The water soluble resin with mystic connotations has been revered since ancient times. These dracaenas showed no sign of regeneration although a number of smaller specimens were in good condition at higher altitudes. The seedlings take 20 years to develop a complex of dividing stem branches and inverted umbrella like form. Amongst them were 'Frankincense' *Boswellia dioscoridis* with a few *Boswellia ameero*. Smaller trees included *Trichocalyx orbiculatus* and *Dirichletia obovata*; stands of *Aloe perryi* and *Kalanchoe farinacea* were no longer in flower until we got higher up. On an outcrop we found *Vernonia cockburniana*, a tree of

the Compositae, and *Plocama puberula* with the strange woody *Reseda viridis*, a mignonette.

This evening a local shepherd joined us round the campfire and regaled us with an oft-repeated tune on his pipe. Soon the drivers joined in a noisy percussion. Fuelled by Socotra firewater and newly found celebrity status they would have continued until daybreak but were discouraged from doing so.

**5 March** After breakfast we set off down Dirhor Canyon, which separates Firmihin from Dixaim. This narrow rift was cast in deep shade and contained pools of standing water. The lilac cushion-plant *Campylanthus spinosus* grew on the steep walls of the gorge with *Cryptolepis socotrana* in the form of small trees. The bottle fig, *Dorstenia gigas* is another pot-bellied tree superficially similar to the more widespread *Adenium* but belonging to the Moraceae. We spotted a few specimens growing high on the cliff above us. Driving up the far side of the gorge we stopped to look at *Ochradenus socotranus*, a relative of mignonette.

Descending from the highlands to the coast we saw some strange and unexplained Nazca lines in the baked mudstone plateau. Were these archaeological or features of natural geology? A Socotra riddle. A few rusting tanks abandoned on the shore were relicts of the Russian occupation during the 70s.

Thence to Qalansiyah. Socotra's second largest town is backed by hills cradling a sweep of white sand. Our camp was set beside a lagoon nearly a kilometre across. After a late lunch we found *Aloe jawiyan*. The paucity of dendrological interest was made up for by the rich bird life around the lagoon.

**6 March** After an early breakfast we went down to the shore to catch our boat to Shoab, which lies at the westernmost tip of Socotra where the Arabian Sea meets the Indian Ocean.

Our appearance on the strand caused great excitement among the locals as we boarded two high-powered skiffs with outboard motors. The boatmen enjoying their status, set off at spine-jolting speed across the billows. We were soon amidst a pod of spinner dolphins, racing alongside and beneath the boat



*Dorstenia gigas* (Bottle tree), on a limestone crag at Wadi Ayaf.





*Adenium obesum* subsp. *sokotranum*, above Dirhor Canyon.

and launching in their characteristic trajectories. The sapphire blue waters seemed super abundant with fish which were netted from small boats as we passed. Several tiny islets were roosts for lesser-crested terns and sooty gulls.

Weathering a choppy stretch of water we beached at Shoab. This idyllic cinnamon strand was backed by brakes of red mangrove (*Avicennia marina*) in the dune slacks. A plentiful halophyte here was *Atriplex griffithii*, with the local endemic *Heliotropium shoabense*. The wind had picked up considerably by our return giving us a rough ride around the headland. On a rocky stack separated from the coast we saw our final frankincense, *Boswellia bullata*. Late in the afternoon we returned to Qalansiyah for a late lunch.

That evening we made a brief visit to Wadi Ayaft, a valley stretching inland for about three miles, notionally a protected area but clearly being prepared for development. Nearly every plant already listed was to be found in the river gorge or inaccessibly perched on the benches above. Particularly notable was the lovely *Acridocarpus socotranus* which flowered among boulders in the riverbed. A parade of *Adenium* and *Dorstenia* of all shapes and sizes clung to high ledges, beyond the reach of succulent hunters.

It was dark by the time we reached our final campsite east of the airport. This was in a state of disarray; tents sagging and carelessly pitched on a patch of waste ground. An end-of-term mood prevailed among our drivers, one of whom went AWOL among the local fleshpots (taking with him a jeep and baggage). We faced the prospect of three hours of sleep before our return flight to Abu Dhabi the following day. In the event this departed several hours late and we missed onward connections.