

# Sinai Survival

Visiting Egypt, **Nick Gibbs** discovers the Bedouin's simpler way of living, and a remarkable campaign to restore trees

## Composting



Jebelia Bedouin in the gardens above St Katherine's have been building composting toilets, funded by groups like the Makhad Trust. They all have a stone base for the waste, on which is built a bamboo hut. A pipe leads up from the chamber to take away smells and flies. There is no separation, and they don't seem to have been tested as far as emptying goes. They are a joy to use, but we suspect a twin may need to be built to give the waste time to break down enough for use.

**H**ussein Mousa Sala has an allotment with a difference. Actually it's more of a garden, but to reach it from his home in St Katherine, Sinai, he has to climb and clamber high up a winding path and over giant boulders, stopping occasionally to pick wild herbs. The two-hour trek takes him past a string of ancient walled gardens, in which fruit and nut trees prosper, till he reaches Wadi Zuweiten, Valley of the Olives.

One hundred years ago these gullies and watercourses were teeming with a patchwork of walled gardens like Hussein's, feeding local Bedouins and the famous St Katherine's Monastery beneath Mount Sinai with vegetables and fruit. Water was drawn from wells, filled by the rains. Gradually, though, the rainfall has diminished and many of the wells have dried up, vines have withered and the beans are long gone. Trees have survived but crops and the wider biodiversity have suffered and the traditional livelihood of the Jebelia gardeners who live in the mountains of Sinai has been threatened. Walls and wells were crumbling, and any pockets of fertile soil were swept away.

## Erosion

The problem is not only that the rain has lessened - now only four times a year at best - but it's also the wrong type of precipitation. Running off the granite cliffs it's gone before the moisture's had time to seep into the ground, eroding the landscape and only collecting in the odd natural basin here and there. After seven years of particularly poor rains, those gardeners who have persevered have had to dig deeper wells in the vain hope of finding a watertable worth tapping. Others have abandoned their



gardens. All, though, is not lost, and the survival of Bedouins across Sinai is a lesson in frugality, ingenuity and the vision of one man.

In the 1980s, Danny Smulevitch was travelling in the Sinai Desert, and came across the extraordinary gardens at Ein-Khudra, on an ancient Israeli pilgrim route through the wilderness. Danny met a young girl, who was unhappily selling cans of cola to tourists. He refused the fizzy drink, but asked for a glass of tea, invoking the tradition of hospitality to strangers, for which the Bedouin are renowned. She took him home, to her house in one of the gardens that had been cultivated by Bedouins for thousands of years.

Danny learnt that four out of five of these gardens were derelict, so he planted an acacia seedling in the family's garden, and promised to bring more help if when he returned the small tree had been cared for and was thriving. Sure enough, in May 1988, Danny arrived again in Ein-Khudra to discover the acacia had been nurtured, and he brought a group of students from Ruskin Mill College in Gloucestershire to help restore the village. They built a shelter, a water cistern and a compost toilet, and planted a small tree nursery.

From these small beginnings, the Makhad Trust was founded in 2002; named after the spirit of hospitality and a meeting place. Most of its early work was in the gardens of upland Sinai where the Jebelia live, and recently with the successful construction of dams, but projects have also aimed to help other Bedouin tribes, like the camel-raising Muzeina, who are still semi-nomadic in the desert.



**Since dams have been built in the mountains the watertable has risen, and now the wells in gardens are full again. Hussein (top) uses a pump to put water from his well into a reservoir built under the terrace. Other gardens use wooden devices. Thorny acacia trees (right) grow in the wadis in the desert if they can find a bit of moisture**

To fund their work, the Makhad Trust have run working journeys to improve the gardens and also to build a Desert Centre at Nawamis where the Sinai Bedouin tribes can gather and where the Muzeina can provide tourists with shelter, refreshments and activities. A further evolution, suggested by one of the volunteers, has been the Retreat Journeys, with visitors spending three days in the desert, fasting alone. My friend Rebecca experienced one of these retreats in 2009, and at the beginning of April my



family and hers went on a tour of the Makhad's operations in Sinai, to introduce our children to a different way of life and have a very good time.

From the modernity of Sharm-el-Sheik airport the nine of us were taken to Nawamis in a minibus, stopping only at Dhaba to buy petrol for 10p a litre. The children were amazed. Along the way we stopped at army and police checkpoints, the young soldiers smiling and waving at English tourists, supposedly aiming to make visitors feel safe. During

## Splitting logs



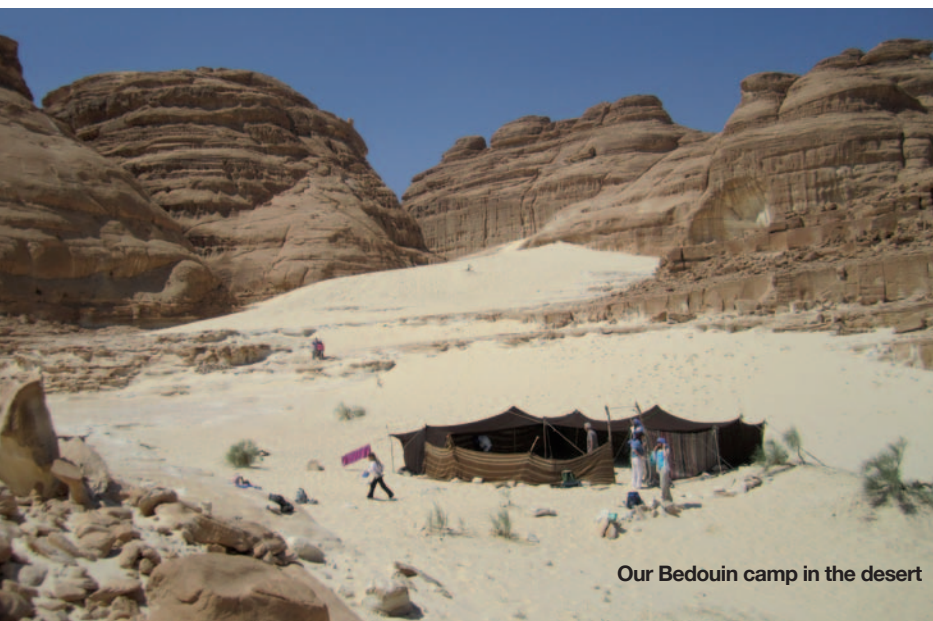
Hussein uses the tips from pneumatic road breaking 'drills' to split almond branches for burning. He starts at one end and then works his way along the split with the two tips. Even in the mountain gardens where fruit trees grow there is a shortage of firewood. Almond wood is a dark brown and hard. It seems to burn evenly and with a good hot flame.



You have to be resourceful in the mountains. The handle of Hussein's lump hammer is held in place with a piece of inner tube, which is also used to join sections of pipe together for Hussein's water pump.



The Bedouin in the desert tend to make fires with small brushwood and sticks, and one or two larger pieces to retain the heat, but burning only the end of the larger bits to keep the embers going. These bits will be used again.



Our Bedouin camp in the desert





Though this new dam was empty when we visited, the wells in gardens beneath were still full of water for irrigation and drinking

Walking Stick

Hussein showed us a walking stick he'd made from an almond branch. This would probably have come from prunings.

the recent revolution Bedouins are said to have joined the checkpoints to monitor who is entering their precious territory, with St Katherine's Monastery and Mount Sinai the most valuable sight-seeing venues in the area.

At Nawamis we were transferred to a battered old pickup, sitting in the back and roaring two miles across the desert, while our luggage was transported by camel. With no moon it was pitch black, and in shock we arrived at our new home, a Bedouin tent, half open, half roofed, with a fire and bowls of soup and glasses of tea. We learnt to remove our shoes, not to show the soles of our feet, and how to sit cross-legged, before collapsing onto thin mattresses to sleep under the stars.

Waking up next morning in an amphitheatre of vast sandstone lumps was one of the most dramatic moments of my life. Two Muzeina were already relighting the fire and making flatbreads, like pancakes. The Bedouin frugality with firewood is a lesson to us all. You can find brushwood kindling and some dead rootstock in the dried-up wadis, but there's very little of any substance. Their fires are started with dried grass, using a lighter or matches, and then thin twigs. One or two thicker, longer pieces are used as a constant source of heat, with the flames rekindled by adding thinner stuff for cooking or warmth. The top of an old oil drum is used as a 'pan'. Later, in the mountain gardens, we found the Jebelia using dry bamboo for instant heat to cook bread.

Everywhere we discovered composting toilets. Designed to make life more 'normal' for visitors, and more hygienic for the Bedouin, these are pretty basic, featuring a seat or hole over a large cavity. In the desert, at the Muzeina's campsite, one such facility has been built into a crack in the sandstone, with the consistent feature of all such loos being a pipe rising skywards to draw smells and flies away from the waste. Being so hot and dry in Sinai, and with relatively few users, the compost toilets need no urine separation, with just a sprinkle of sawdust helping to compost the poo and paper.

**Mountain Bedouins**

In the desert wadis you will find the occasional acacia, helping to retain a little moisture and save a little soil from erosion. In the mountains, however, trees do much more than resist desertification for the Jebelia Bedouin. After five days in the desert with the Muzeina, we rode by camel and 4x4 to St Katherine's, to trek up to Hussein's garden and discover the Makhad Trust's miracle.

Along the narrow valley floors up from the little town of St Katherine is strung a ladder of elongated gardens, filled with almond, olive, apricot, pear and



A Makhad Trust working party building a dam in the Sinai mountains (top). They also helped build and deepen wells (above), which are reviving vines that had been abandoned (right)

fig trees, as well as vines and herbs. Once they would also have been full of vegetables, providing food for the monastery, for the Bedouin families and for travellers. Most have wells, many of which have been dug deeper since the rains started failing badly seven years ago.

Now the wells are filling up again, thanks to the Makhad Trust. Our guide for the 12 days in the desert and mountains was Makhad trustee Dick Stainer who first came to the Sinai in 2007, having read an article about Makhad Working Journeys. "I worked in a garden owned by the herbalist Dr Ahmed," Dick says, "building steps to a compost toilet." He has returned every year, in the spring or autumn, building a dam in Wadi Tinya, above Hussein Mousa Sala's garden. "It was built from scratch in a week, using Bedouin stonemasons."

Dick has helped direct and build three more dams since then, but the early ones coincided with poor rainfall, so locals weren't convinced by the idea. "It was a lot of effort for not much result," Dick recalls. As the area around St Katherine's Monastery is a National Park you have to jump through various bureaucratic hoops for permission to build a dam. They can't be visible from a path, mustn't change the direction of a path, nor should too many stones be removed in the construction.

Fortunately, though, there have been better rains over the last couple of seasons. The effect has been remarkable. Some dams will hold water all year



Months after the rains and the lake behind the dam above Hussein's garden is still full (and very cold!). Vines in another garden had been abandoned (above), but the owner is now able to water them, and there is hope for the garden. Elsewhere trees are being grown for building (below)



Bedouin bread

How to bake bread in the desert and mountains

Flat, unleavened bread (quite like a pancake) is a staple of Bedouin life in the desert and mountains. Every morning in our Bedouin tent, the cooks would start the day by making up a dough and kneed it into bun-sized balls. These are then rolled out on a flat surface with a cardboard tube or a bottle, and tossed to stretch them to about 12in diameter. The top of an old oil drum is used as a 'pan', over a small fire of twigs. *In Seven Pillars of Wisdom*, TE Lawrence wrote that a man could survive on 45lb of flour on a camel for six weeks. He says camels could do 250 miles between waterings, and men would only carry a pint of water between nightly well stops.



In the mountains Hussein used a similar technique for making bread every morning. Instead of a cardboard roll he used, surprisingly considering most of Sinai is 'dry', a wine bottle. For fuel he uses bamboo, continually feeding the fire with short lengths to keep the flames going. Out of shot (above) is a container of diesel Hussein sometimes uses to get fires going! Small balls of camel dung are used to keep a fire going. It is very grassy but burns steadily.





# Permaculture

## Charcoal tray



The Makhad Trust have also helped in the establishment of the Fansina Bedouin Women's Craft Centre, which supports the development of an economy for Bedouin women. To keep tea and coffee warm they had a metal tray with a 1in layer of grit in the bottom. On top was a pile of burning charcoal, so as not to produce smoke. The tray table has two sliding bars so that you can rest a pan or pot over the charcoal. It's a delightful solution, and we'll be looking to make a version back in Britain. We've yet to work out how they separate the used charcoal from the stone pebbles.

round, but smaller ones may be dry within 20 days. Obviously some of the water evaporates, but much of it soaks into the granite bedrock, having a dramatic impact on the watertable. Hussein and Dick showed us a garden beneath one of the Makhad's newest dams. It has only been filled once, and is now empty, but the wells are still filling with water, despite being regularly 'harvested' to water the garden, which had previously been abandoned.

Such has been the transformation that Hussein has been able to build a reservoir beneath a raised terrace beside the stone building he uses for storing tools and materials, and for sleeping when he stays for a few days. Now he can water his garden at will, and has a ready supply of water for cooking and drinking. With the help of Makhad and other groups he's been able to buy a pump and build a compost toilet, and as a result he can be paid to accommodate groups like ours for a couple of days, or charge trekkers a small fee to stay for the night.

The fruit and nuts from their trees may not be a cash crop, but they help to feed the gardeners' families and the trees act as a bridgehead to cultivate the gardens more intensively. More importantly they act as a valuable feature to draw tourists to the mountains, and help to maintain a traditional way of life in keeping with the slow pace of Sinai.

The Jebelia people in the mountains are industrious, and welcome help from the Makhad Trust, which has supported some 70 gardens through grants or work, and has a growing list of requests for dams and community wells. Makhad has also supported the foundation of a craft centre in St Katherine's where a women's co-operative group sells embroidered bags made by local female outworkers.

Meanwhile, the Nawamis Centre in the desert aims to provide a facility for the Muzeina to gain a foothold by adding tourism services to their traditional role as camel-breeders. The village elder, Faraj, helped provide us with camels, a cook and a campsite for the desert part of our journey, but it is a huge leap for the Muzeina to embrace the challenges of establishing a permanent home. They are being encouraged to settle, and have been provided with a generator and free fuel. Theirs is a fate shared by travelling tribes the world over. The



**Almonds growing in one of the gardens at St Katherine's to have benefited from Makhad work**

women aren't permitted to work at the Nawamis Centre, and the men aren't much motivated by material goods nor are they good time-keepers.

In the heat of the desert you soon learn why Arab or Muslim conventions and rules have developed as they have. The sands are beautiful, but unforgiving, and increasingly under threat from adventure groups screaming their way across the dunes in 4x4s. The Makhad Trust's work in the mountains has been relatively simple, altering the flow of water to welcoming gardeners and trees. Their work in the desert is far more challenging, calling for a change of heart in both visitors to Sinai, and the custodians of this unique environment.

**Details** To learn more about the Makhad Trust visit their website ([makhad.org](http://makhad.org)) where you'll find details of projects, and find out how to join a Working Journey, organised through their trading arm, Nomadic Journeys.

**Hussein (right) returning from his garden**

