

● 31 | Camel Expeditions Michael Asher

Why travel by camel?

Having ridden more than 10,000 miles on camels in the deserts of Arabia, Wilfred Thesiger predicted that, though those who came after him would move about in cars and keep in touch with the outside world by radio, “They will bring back results more interesting than my own,” he wrote, “but they will never know the spirit of the land nor the greatness of the Arabs”

Thesiger knew that travel by camel offered an intimate relationship with the landscape and its people that could not be experienced through the windscreen of a motor vehicle. To travel by camel is to travel on the desert’s own terms, experiencing its realities at first hand. Yet, conversely, as speed inevitably changes one’s perception of the environment, the camel’s slow pace is actually ideal for those, such as archaeologists, botanists, geologists or other specialists, who need to observe the desert close up. Camels may still be used for major unsupported overland journeys in the desert; more frequently today, however, they are used in combination with motor vehicles for exploring a limited and perhaps less accessible area, or for longer treks with motorised back-up.

The following notes are derived mainly from my experience of almost 20,000 miles of unsupported camel expeditions, alone, with companions, and more recently leading adventure-tour groups, but may be modified according to circumstance.

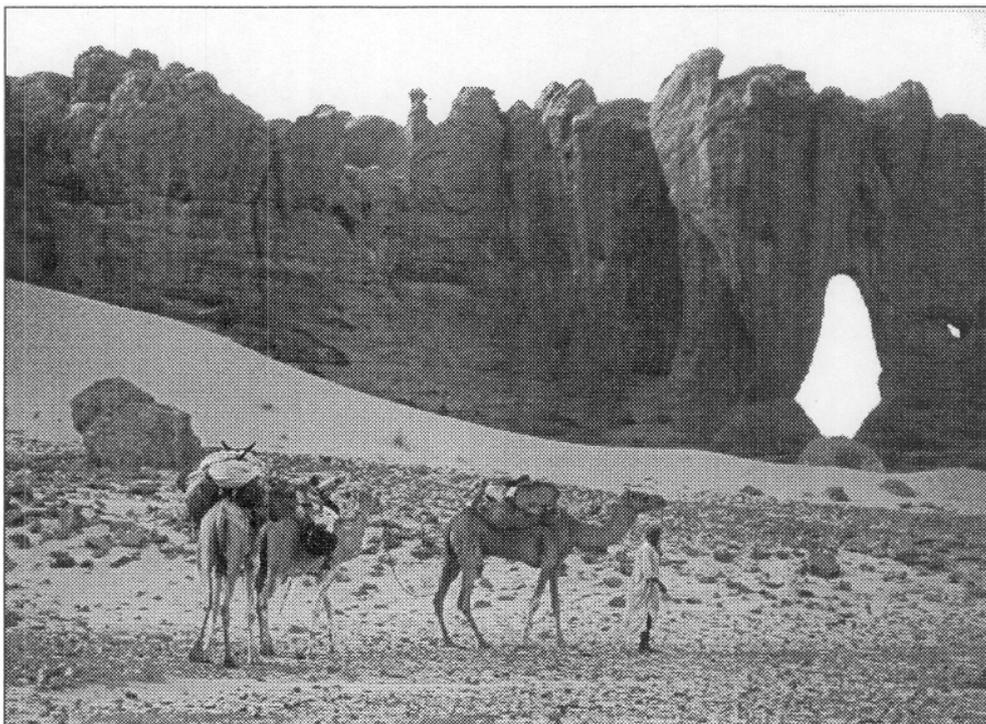


Figure 31.1 Camels provide ideal means of methodical macro-examination of the desert by specialists such as geologists. In some areas they can go where vehicles cannot

Choosing camels: buy or hire?

The great advantage for the novice of hiring camels is that it allows him to avoid the pitfalls of the market place. The disadvantage is that he is obliged to take along the camel's owner who may not be the ideal guide and who may try to influence route and rate of travel. Buying your own camels makes you totally independent and, assuming you look after them, you should be able to get some of your investment back at the end of the journey; I reckon generally on retrieving two thirds of the buying price.

If you buy, choose geldings where possible. They are hardier than bull camels and do not bite. She-camels can be equally enduring and are equally gentle but make sure they are trained for riding before you buy. In many parts of North Africa they are kept only for milk, though trained females are common in Arabia, Australia and the Indian sub-continent. Dominant bull-camels may be aggressive in the mating season, especially if they are prevented from getting near females. If you have a mix of males and females in your caravan, this problem may arise. A mating bull can easily be recognised by his 'warning flag' - a pink bladder which he blows out of his mouth, accompanied by much slobbering. If you see this sign, avoid the camel. In those countries where you must buy bulls, try to obtain four or five- year olds which will rarely cause trouble.

Judging a camel's age and condition takes experience and a novice will need the help of a local. However, certain facts can be ascertained by examining the animal closely. First, make the camel kneel and inspect its back and withers. Any open galls or wounds immediately rule it out as a mount: on a long desert trek it can mean death. Let the animal stand again and look for obvious defects like crooked legs, in-growing nails, a hobbling pace, excessive fat on the legs. Check the inside of the front legs where they meet the chest: if you find evidence of rubbing there, the camel will be weak and slow. Generally look for an animal that is well covered: no ribs showing, a fairly robust hump, bright eyes, well-formed long legs and an erect carriage of the head. Finally, have someone saddle and ride the camel: note whether it snaps, bolts or roars at its handler: lead it around and see that it walks freely; make it kneel and stand up several times.

Cost

Ask around about camel prices among nomads and anyone involved in the livestock trade before you go into the market. In North Africa, the price of a camel tends to go down as you get farther south, since great concentrations of camels are today in the Sahelian fringes. At the camel market in Cairo you can expect to pay about £250 for a bull or she-camel. At Atar in Mauritania the price might reach £450 for a gelding. At Tombouctou and Agadez the price will be around £300 for a gelding.

Saddles, head-ropes and hobbles

Unless you are simply flitting fast across short distances, try not to be seduced by romantic-looking riding-saddles: the Mauretanian 'butterfly' rahla and the Tuareg tirka with its long crossed arm, for instance, are designed to impress. They are much more likely to cause galls on the camel's back. If you are planning a long journey it may be better to go for the prosaic pack-saddle, which is not only far more efficient for carrying heavy baggage but also makes a more comfortable ride. The pattern varies from place to place but the best all-round packsaddle I have seen is the Sudanese hawiya - a wooden frame supported by straw or palm-fibre pads. In Asia, the double saddle or pakra is in use: this is heavy but efficient for both carrying and riding and has the advantage of stirrups. It has been exported to Australia and to parts of Kenya.

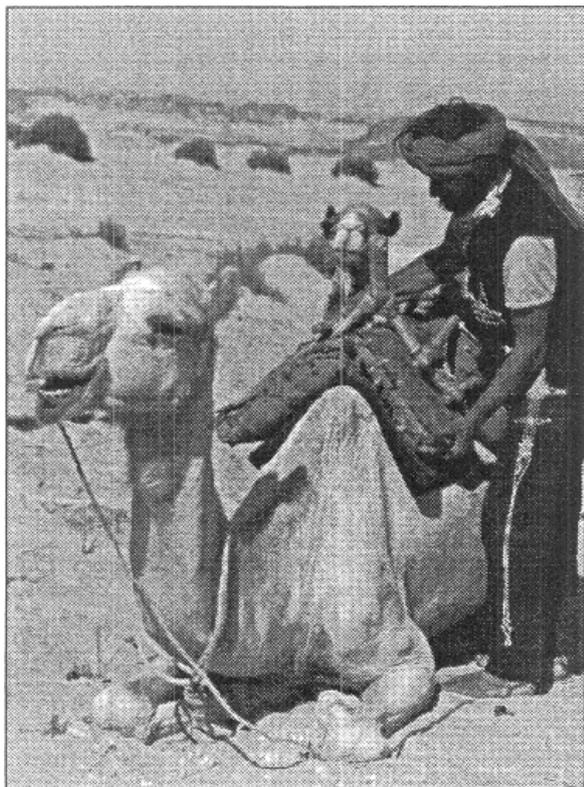


Figure 31.2 Pack saddle, Niger-
comfortable and efficient

In East Africa (Somalia, Djibuti, Ethiopia, and Kenya) camels are not generally saddled or bridled for riding: baggage is loaded on a rudimentary saddle of matting and sticks. In Sinai and the Middle East the best design is the two-poled shaddad found in most northern countries. The more primitive rahal or South Arabian saddle, of Wilfred Thesiger fame, is awkward and unstable - during Thesiger's expeditions in the 1940s one of his Bedouin companions fell off and smashed a leg. In some countries, such as Morocco, there is no tradition of camel-riding (the Moroccans, essentially hillmen, always preferred mules). Here, camels will take riders but only as

'baggage': the camel has to be led by someone on the ground.

For riding, a blanket, rug or sheepskin is useful for padding the saddle and can double as bedding. A sleeping bag won't do for saddle padding as the synthetic fibre slips about. An invaluable addition to saddle gear, invariably carried by Sudanese nomads, is a waterproof sheet, preferably of canvas. It can be used for watering or feeding the camels, for carrying firewood and other heavy material, for shade during the day, shelter against the rain and as a groundsheet at night.

On long treks avoid the traditional leather head ropes; they are comfortable for the camel but snap easily. Buy some lengths of strong fibre rope and make your own. You can cut shorter lengths for knee-hobbles and foreleg hobbles: you will also need ropes for most packsaddles. In some countries, such as India and Pakistan, and in Western and Central Sahara where nose-rings or nose-pegs are used, it may be necessary to buy special head-rope as a matter of course.

Like many animals, camels will try and intimidate their human handlers. Refuse to be intimidated. As a last resort even the fieriest animals can be controlled with a good grip on their nostrils or lips, which are very sensitive. When fixing the head-rope, however, remember to stand to one side. Camels do not spit, they vomit and if you are standing in front of an irate animal you may get the entire stomach contents in the face!

In the open desert take great care to secure your camels. No matter how well you have looked after them, they may be inclined to abscond: 'Never trust a camel', the Arabs say. It is unwise to leave your camels without tying them to a tree by the head-rope, or, in the absence of a tree, hobbling them by the knee. This means attaching a loop of rope around the kneeling animal's front leg, just behind the knee and makes it more difficult for the camel to rise. All trained camels are accustomed to this process. Some ready-made hobbles have wooden pegs attached, which makes the operation much easier. If not, then make sure they are tied as tightly as possible.

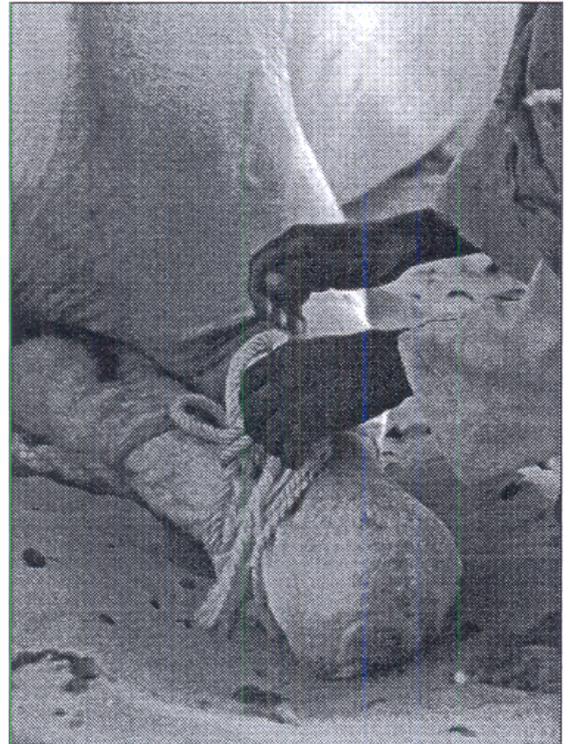


Figure 31.3 Close-up of a knee hobble

The Arabs have a comical folklore figure name 'The Father of the Knee-hobble' who forgets to hobble his camels at night and ends up hobbling himself in the morning after they have run away, while waiting for a thirsty death. A camel can stand fairly easily on three legs and hop a surprising distance, so most desert nomads will hobble both the animal's knees at night. There is even a special verb for this action in Arabic. Yet even this will not prevent a determined animal from crawling out of sight.

When camels are grazing, they should be hobbled with a different rope, which is looped around the lower joint of the forelegs and plaited double. The best foreleg hobbles are about a metre long and have a large knot at one end and a loop at the other. Fixing this hobble requires some practice, as it means bending down among the camel's massive legs as it stamps and fidgets and sometimes you may have to pull the forelegs closer together so that the hobble fits. Most well trained camels are accustomed to this, however. The foreleg hobble allows the camel to

shuffle about feeding while restricting its movements but again, beware. Camels can shuffle great distances during a night and can even - believe it or not - run with the hobble attached. A powerful camel will break a leather hobble with consummate ease: make sure your foreleg hobbles are tightly fixed and of the strongest material: double or treble the lengths if in doubt. Many, including Western travellers and hardy nomads have died because their camels disappeared in the desert: it pays to keep watch on them all the time.

Other saddle equipment

... Since camel-gear varies so greatly from country to country and culture to culture, it is impossible to generalise about equipment. You need large spacious bags in which to carry your food, fuel and other gear. Many of the Tuareg and the Moors merely pack their baggage in sacks and rope them to the packsaddle. In the Sudan and northern Arabia the more efficient double-poled saddle allows one to sling everything from the saddle-horns. The Egyptian Bedouin have solved the problem of loading by developing a cylindrical basket with an amazing capacity, which stands so tall it does not need to be lifted onto the camel's back. My instinct is always to choose the simplest, most robust and least flashy equipment: a sack is more dispensable than a hand-stitched saddlebag and probably more enduring. When packing, ensure that every item is individually wrapped inside the saddlebags or you will find nothing but a mess of bits and pieces after a few days. Fibre sacks, cheap and easily available, are ideal for this.

Water - for humans

The traditional water-skin has been used in the Sahara since before the camel was introduced there by the Persians in 525 BC. However, even Saharan nomads will today admit that the jerry can has its advantages. The 'standard' water-skin may carry an average of 25 litres, is comfortable for the camel, easy to load, simple to repair and also keeps water cool. Its great disadvantage is that it loses water by evaporation when suspended and by osmosis when lying on the ground. A very hot wind may deplete it seriously. On an unsupported camel-trek where water can be crucial to your survival, it is more advisable to rely on the plastic jerry can. It may be more awkward in shape and more difficult to repair but at the end of the week or a month it will contain the same amount of water as you put into it. Beware of the giant jerry can though - a rigid 25-litre container is murder to hump about and, if damaged, means the loss of several days' water supply. The Egyptian Bedouin, probably the last true long-distance caravaneers anywhere, use the 10



Figure 31.4 Loading water-skin.
Tradition is improved on by small 10 litre jerry cans.

litre jerry can which is handy to carry, easily stowed away in saddle bags and, if broken, only represents a limited water loss. For a supply of cool water, use one or two small water-skins, which can be topped up daily from the jerry cans. A small military-style canteen of 2-3 litres, preferably insulated, is useful but should have a strong carrying strap. Modern plastic water bags of 2 litres with drinking tubes are ideal. You will need a large enamel bowl or giant mug for pouring and transferring water from water skins: a funnel is useful for pouring water from jerry can to water-bottle.

The Bedouin of Egypt, who regularly cross 1500 miles of almost sterile and uninhabited desert in all seasons, reckon on five litres of water per man per day, including water for drinking and cooking, but not washing. This allows a reasonable margin for emergencies and unexpected rises in temperature. In the hot season the daily requirement doubles to 10 litres. If your trek involves three men travelling for 10 days between wells, therefore, your summer requirement for that period is at least 300 litres which, at a kilogram per litre, is one-and-a-half to two camel loads. If you carry this amount in water-skins you could reckon on up to a third of it being lost.

Guides and camel men

Now that desert navigation with GPS has become easy and efficient many people may think twice about taking a guide. If you decide to go it alone, first make sure you can handle the camels. Remember, if you are on an unsupported expedition and your camels disappear or die, then your life is in extreme danger. This is why, to the desert people, the camels always come first. Personally, though I have done and enjoyed treks alone, I generally prefer to take Bedouin companions even if I am doing the navigation myself. I believe, as my "mentor" Wilfred Thesiger did, that you can only really get to know the environment by travelling with people who were brought up there. If you do decide to travel with local people though, choose carefully.

Many who present themselves as desert guides today may have only a rudimentary knowledge of camels. Even those who are official desert

guides may have become so used to travelling in motor vehicles that they have grown lax. Do not fall for the 'Wise old Arab' syndrome. If you are perfectly confident of your navigation skills, you may prefer to take a 'camel-man' rather than a guide - someone who can help you with the camels, who knows the desert but who does not profess to know the particular route you wish to travel. There are still some excellent camel-guides about and in my experience they are generally very honest. To the Bedouin the crime of bowqa or 'treachery' to a travelling companion - once you have 'eaten bread and salt' together as the saying goes - is an unspeakable disgrace. However, this is only an ideal, and anyway, not all desert men are true Bedouin. The Tuareg, for instance have different standards, and once made a living out of pretending to befriend desert travellers, then attacking them.

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Choosing a guide or companion is very much more difficult than choosing a camel. As the Arabs say, 'you cannot know a man until you have been in the desert with him'. The only advice I can give here is to ask as many questions as possible - if your man is a guide you could ask him about the route and compare the answers with the information on the map. Ask him about his habits, his likes and dislikes - particularly concerning food, his family, his personal history and his opinions on the way you intend to run the expedition. His answers might help you to identify possible areas of conflict. In the end your choice is down to instinct. Some people, especially women, have a very good intuition about strangers. However good your guide or companion, there will inevitably be conflict sooner or later and this will tend to revolve around the age-old question of 'who is boss?'

Desert guides tend to be dominant characters and, however experienced you may be, they will inevitably regard you as a stranger in a strange land. If you have a clear objective in mind, it is important not to let your guide 'take over'. Stick doggedly to your purpose once agreed and, while having an ear for your companion's advice, retain the right to take decisions on rate of marching, halting places and route. When hiring a guide, as when hiring animals, you should agree together on the number of days your proposed journey is likely to take and calculate payment by the day. (To help calculate, see 'Marching' section below). If you don't agree beforehand your guide/camel-man may deliberately slow the pace to make more money. This has happened even to the most distinguished Western explorers.

Obviously, if you pay a lump sum for the trek, irrespective of time, he may tend to speed things up to get it over. Once you have agreed on the number of days, you can always pay an extra bonus at the end

should anything unexpected slow you down. A clear agreement with your guide will save many problems later. Agree, too, on how the guide is to return home and who is going to pay. It is accepted practice in the Sahara that the employer provides all food for his party. Since food is a notorious bone of contention on any trek, try to ascertain what your companion will and will not eat. As an extra precaution, I have found it wise to pay half the agreed sum before the journey and half on completion and, where possible, make the payment in the presence of witnesses, preferably the local police.

Marching

Camels are never trotted on desert journeys as it is crucial to preserve their stamina. A walking camel covers about five kilometres per hour (3 mph) - more or less according to the terrain. A reasonable day's trek will last from eight to ten hours and cover 40-50 km (25-30 miles). Marching ten hours a day, a camel journey of 200 km (120 miles) should take roughly four days; 1000 km (600 miles) 20 days. For long journeys there will be all manner of random delays to add to your original estimate of days for the journey - certainly on trips lasting more than a month. For these you should add roughly another day in three for watering, resting, grazing or administrative delays.

A strong camel can carry up to 300 kg for 50 km per day over a period of a month. A more practical weight for desert treks however, is between 150 and 200 kg per camel. The number of camels you require will be decided by circumstances but the ideal ratio is probably five camels to three humans.

Marching methods change from summer to winter. In the hot season, where noon temperatures may reach 50°C, camels will find it uncomfortable to travel in the early afternoons. Experienced cameleers will start before sunrise, halt at about 1130 and rest till around 1500. It is advisable to erect some kind of shelter for yourself during this period, or heat exhaustion may result. In winter, when camels shy from the intense night cold, cameleers will generally march from roughly sunrise to sunset with a short break at noon for a drink and some food. A shelter is unnecessary in these lower temperatures.

Most professional caravaneers combine walking and riding as the most efficient use of their camels. Many Western novices are tempted to walk all day, either because they are nervous about mounting the camel, or out of the desire to 'prove themselves'; forgetting that the more physical

effort they expend, the greater will be their water loss. This is fine if you are being re-supplied by motorised backup but otherwise it is advisable to do as the desert people do - walk during the cooler times, ride during the hot times. In East Africa, where camels are never ridden, marches are generally shorter and the country more inhabited and more watered than in the Sahara.

Camels - food and water

... It is the camel's legendary ability to go without water that, more than anything else, makes it the most efficient means of transport in deserts. In winter temperatures camels lose a tiny 1% of their body weight per day and if they find green grazing may go on almost indefinitely without water. I have seen camels refuse water after a hard 17 day slog across sterile desert in winter but the distinguished Saharan explorer Theodore Monod once travelled 28 days without watering his camels. In summer, however, it is a very different story. Laden camels on the march require to be watered every three days in high temperatures, though they may carry on for five. Like humans, camels are subject to habit and training and those accustomed to well-watered regions or to being watered every day, are of little use on unsupported desert expeditions. Check this when buying or hiring your camels.

Although a camel may be given a small amount of water from its own load in an emergency, it would be a fatal mistake to water camels from the caravan's own resources. Desert people never do this. Camels may drink up to 27 litres per minute and gulp down 120 litres per session. To satisfy all your camels would require a great many 10 litre jerry cans!

Although they can do without water, camels cannot do without food. They will eat many desert shrubs and grasses and in vegetated areas such as the Sahel their food will present few problems as long as they are given time to graze. In more arid regions however, you must provide either hay or grain. The Tuareg salt-caravans which still cross the Tenere Erg in Niger carry sheaves of hay for the camels but generally hay is awkward to carry and load. Grain is easier to handle, though a camel must be trained to eat it: if necessary you should ask the previous owner if the camel is so trained when buying it. Sorghum grain is preferred though in some areas camels eat wheat. Two to three kilograms of grain per camel per day is a good ration and should preferably be fed to the camels in cotton nose bags to prevent them fighting over it. On a journey of 10 days without grazing, therefore, with a caravan of five camels, you will require 100 to 150 kg of grain - half to three-quarters of a camel-load.

Water sources

Since water is crucial in the desert, your trek (assuming it is unsupported) will naturally be from water-source to water-source. You can keep a length of rope and a makeshift bucket for use in shallow wells. In some places, nomads water their flocks and herd from open pools in the wet season. In rocky areas there are frequently rock-pools, known in the Sahara as gueltas, which are hard to find without local knowledge. These pools are strictly temporary and the water is generally good. In other places, especially in the Thar Desert of India and Pakistan, nomads rely on hand-dug cisterns for a long-term supply and water from these places should be carefully boiled and sterilised for human consumption as they are teeming with Guinea-worm - a very nasty parasite indeed.

If you are lucky enough to experience a rainstorm, you may find that the rainwater has formed a shallow pool from which you can fill your vessels. The Arabs call such pools 'the bounty of God'.

Mostly you will rely on wells for your water supply. 'Hand dug' wells as opposed to modern 'deep-bore' wells are often very ancient and may vary tremendously in depth. Along the southern fringes of the Sahara the wells may be as much as 30 metres deep, so unless you wish to go to the trouble of carrying a 30 metre rope, not to mention a bucket, it is worth finding out in advance if the wells are currently in use by nomads whose equipment you can borrow. (Albeit 30 metres of nylon parachute cord is not bulky or heavy). Well water is generally fairly safe, though when travelling with clients I add iodine as a matter of course - one cap to a 20-litre jerry can. A last piece of advice: never pass a water-source without filling all your vessels. It is too easy to tell yourself that you have enough water when you are tired or itching to press on. Never lose the chance to get water. The desert is a harsh mistress and you can never tell what tomorrow will bring. No matter how high the temperatures soar, as long as you have water you can survive.

Food and cooking

Obviously the kind of Western luxuries some people take on motor journeys are impractical when travelling by camel. Food can be a major problem especially in winter when hunger rather than thirst becomes the dominant preoccupation. I find it best to live on local rations. The nomads generally eat rice, unleavened bread, couscous or polenta. In

the scale of efficiency, pre-packaged couscous scores highest; it is nourishing, very quick to cook and requires only a small amount of water. Rice scores lowest because of the large amount of water needed. Nomads bake bread in the sand beneath the ashes of the fire and serve it with some kind of seasoning. In the Thar Desert, where water is more plentiful, the nomads make chapattis over the fire. In the eastern Sahara, assida - a kind of porridge - is the norm. All these can be served with a stew or sauce made of dried tomatoes, dried 'ladies fingers' and onions with sun-dried meat. You can make the meat yourself by slaughtering a goat or a sheep and cutting the meat into small pieces, then hanging them to dry on a bush. The drying shouldn't take more than 24 hours. If some of the meat grows maggots, simply clean them out and leave it to dry again: some nomads eat the maggots too and they seldom come to any harm! If you meet nomads on your trek you can generally buy small stock for fresh meat to replenish your supply of sun-dried meat. Tins of corned beef and sardines are heavy but excellent supplements.

Tea and coffee, with plenty of sugar, are important luxuries in the desert and are especially valued by the desert people. Other valuable additions to the diet are peanuts, dates or biscuits, all of which require no cooking and can be eaten while you travel. Dried milk, mixed with sugar and water, makes a refreshing drink if your stomach revolts at the idea of food in 50°C heat. In many parts of the desert you will find dry firewood: in other, more arid parts, there may be none. Again, find out from local people whether or not there is likely to be fuel on your route. If not, either buy or collect firewood before entering the woodless region. Use the traditional nomad fireplace of three stones for cooking; it burns very economically. In sandy areas you can dig a three-pronged slit trench with the same effect, or carry three old tins to set up in the sand. The important factor when using this fireplace is to ensure that there is a small gap between the fuel and the base of the pot to allow the air to circulate.

Some nomads do use charcoal but it is extremely difficult to light and inefficient without a proper charcoal burner. In remote, treeless places, the nomads will use camel dung as a fuel. Fresh dung will not light, however, and they collect bone-dry stuff, which has been deposited months or years before. Even then, lighting a fire of dung and keeping it alive involves tremendous effort.

A small butane stove is a good standby and a quick method of making tea on icy winter mornings, though gas cylinders are not available in some countries and cannot, of course, be taken by air. For cooking, you

need a large, robust pot with a lid and a kettle. All the Saharan nomads eat from a communal dish, even the Tuareg who use a spoon while the others use hands. Although Islamic peoples do not normally eat with strange women, they will often make an exception for Westerners in these circumstances. To eat on your own in the Sahara is to be regarded as a very strange fish. In the Thar Desert however, even Muslims seem to eat from separate bowls. The Rajputs on the Indian side of the border, being Hindus, will not eat or drink from the same vessel as an 'unclean' Christian, nor allow a Christian to dip his water bottle into a Rajput cistern. You have to ask your Rajput guide to do it.

Unless water is plentiful, do not waste it in washing vessels: sand is just as effective for cleaning pots. The cooking utensils should be packed carefully in a separate bag; else the accumulated soot on their sides will quickly blacken everything.

Hygiene, Medical, Creepy-Crawlies

The desert people rarely wash on long desert journeys, and unless you have water to spare washing will be your lowest priority. However, if you are in a large group, stomach problems are far more likely to result from lack of hygiene than from food poisoning. When travelling with a group, and if there is water to spare, I recommend that everyone rinses his/her hands in a communal mess-tin or bowl of water laced with disinfectant or iodine before a meal. An indispensable requirement is an excellent medical kit, including painkillers and wide spectrum antibiotics. Travelling with clients I have found that the most common ailment is diarrhea. Another common problem is heat exhaustion. Remember that we humans only need to lose 5% of our body moisture to find ourselves in a critical condition, and it doesn't even have to be hot. The key to this problem is to drink sufficient fluids - remember that thirst, or the lack of it, is not a reliable indicator of dehydration.

I find that peoples' greatest fears of travelling by camel or on foot in the desert are of snakes and scorpions. Obviously the threat exists, but the fears are largely unfounded. Snakes and scorpions are generally only a danger in summer, when it becomes too hot for them to lie under their stones. Most scorpions, anyway, pack only a local toxin, which while unpleasant causes no more than a local swelling. There are 2 species of scorpions in the Sahara however, that carry potentially lethal nerve-toxins, and of course there are poisonous snakes such as puff adders. The chance of being bitten or stung by one of these is extremely low - after almost a quarter of a century and 20,000 miles by camel in the

world's deserts I have only ever been stung by a scorpion once. The number of snakes I have seen could almost be counted on my fingers. Two precautions that can be taken are:

1. Check out the sleeping place for snake-tracks and scorpion-tracks before making camp (snake tracks are 'wiggly', scorpion tracks are asymmetrical and large - almost like finger-prints - while beetles make a very symmetrical stitch-pattern). If they are present, move.
2. Shake out boots and clothes before putting them on. If you are using water skins, check the undersides before loading - this is favourite place for scorpions to hang out.

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A third potential hazard is the solifugid camel-spider, which has a nasty bite but is not poisonous. These things eat scorpions!

Navigation

Finding your way on camels in the desert, especially when it involves searching for wells in a vast area of rock and sand, is the single most important factor in desert survival. It is unwise to delegate the responsibility for navigation entirely to your guide, even if he knows the way well. Traditional guides can be excellent but this is either because they have been going that way since childhood or because they are very skilled at using the sun. The problem with sun navigation is that at noon, when the sun is directly overhead, there are no shadows to guide you. I have known an otherwise superb guide who swore we were going south at midday when my compass told me we were heading east.

Having covered tens of thousands of miles by camel, much of it with traditional guides, I am dubious about the nomads' supposed 'perfect sense of orientation' when outside the country they grew up in, although they can be astoundingly accurate in familiar country. Often illiterate, they also have a wonderful memory for descriptions and an extremely well developed vocabulary for geographical terms. Anyone who travels with them will notice how frequently they stop to talk to other travellers; this 'nomad grapevine' coupled with keen observation and a very exact classification of natural features, is the true strength of the desert people.

Before GPS was practical for camel-borne treks, I always relied on good maps and a pair of Silva compasses for my navigation. With a watch and a compass, you can navigate by dead reckoning (DR), calculating the camel's pace at roughly 5km per hour and recording the time you travel on each compass bearing. You must make allowances for halts,

differences in terrain, sandstorms and deviations but with a good map you should be able to pinpoint your exact position at any given spot.

Over the past few years, though, I have used a hand-held, battery-powered GPS unit. As long as the batteries last (take plenty of course) GPS makes desert travel a great deal easier and more independent than it was in the past. It will even tell you your rate of travel and distance covered. Still, I would not venture into any desert without at least one compass as a back-up, and of course, GPS is no substitute for an accurate DR record.

What to wear; what to bring

It seems to me that the West has devised no better dress for travelling by camel than that worn by desert people. The long, loose-fitting shirt allows a layer of cool insulating air to circulate beneath it. The baggy trousers or loincloths worn by most desert tribes are extremely comfortable for riding. When travelling with clients I advise men not, in any case, to wear underpants while riding as these will tend to rub and cause saddle sores. The turban or headcloth, with its many layers not only keeps the head cool but can also be used in a number of other ways, including veiling the face in a sand-storm. Personally I believe there is no such thing as a 'desert boot'; most desert people go bare-foot or wear sandals. Any kind of boot will make feet sweat in high temperatures and the perspiration softens the skin making it more prone to blisters. In some terrain, though - especially rocky hammada, there is no substitute for the boot. In winter you will need a pullover, some kind of warm jacket and perhaps some socks. A pair of sunglasses or ski-goggles is recommended: nomads do not wear them but blue or green-eyed Westerners are more susceptible to the sun.

Incidentally, the long Arab robes and baggy trousers are much more appropriate for answering nature's call in places where there is no cover. Nomads use stones to clean themselves after defecating where water is very scarce: despite the myth, sand is only used as a very last resort as it can work itself into some very awkward places! I can personally recommend the use of stones as a clean and efficient method, but if you are not prepared to do this, take a large supply of toilet paper. Remember to burn it after use, though, to preserve the environment.

For personal kit a torch is an essential, preferably two. I prefer something cheap and simple and with standard U2 batteries, since exotic bulbs and batteries are often impossible to obtain in developing

countries. A head-torch, though, is extremely useful. A Swiss Army knife or Leatherman is a must but a larger knife might be useful for slaughtering and butchering meat. You will need an axe or machete for cutting fire wood. Take a good strong cup, a supply of nylon parachute cord for repairs, a large packing-needle as well as a normal needle-and-thread, a sleeping bag, and groundsheet - and perhaps a sleeping mat. Most nomads normally sleep beneath the stars, though in some regions, such as East Africa, a tent is sometimes desirable because of the threat of dangerous game.

Training

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Whatever country you are trekking in, travelling by camel is inevitably going to involve a great deal of walking. Cardio-vascular fitness is therefore the main area to concentrate on when preparing yourself physically for a camel trek; jogging, long-distance running, cycling, swimming. Loading camels usually requires a certain amount of lifting so weight training is also appropriate. Stitching, knot-tying, leather-repair work and fire-lighting are among field skills that need to be mastered.

If you intend to make a long expedition - or even a short one - it is essential to spend some time getting used to the camels, their loads and developing general riding and operating skills on short local trips before departing on the main project. When I am asked what I consider the most important factor in the success of a camel expedition, most people find the answer surprising. My strongest advice is this: learn the language. As already noted, desert nomads have a superb intelligence system and are keenly observant. They will take great pains to stop and talk to any stranger they meet on the way and like this they learn where rain has fallen, which wells are open and which are closed, who has passed which way and for what reason. To learn their language is always worth the effort: if you can communicate directly with your guide and the people you are travelling amongst, even a little, then your chances of success are enhanced by at least 50%.

A Final Word

Some people go into the wilderness believing that it is a dragon to be slain, a foe to be conquered. While accepting that the desert can be dangerous, the Bedouin, who are for me the beau ideal of desert people, have never had this western attitude. They have survived by accepting that they are part of nature and by submitting themselves to its moods. Mobility and flexibility are the key to living in the desert - one of the

world's most extreme, most unpredictable of environments. Be open and flexible like the Bedouin and you too will survive.

Further Reading

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