

# Copyright

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# Surviving the Permian

## The concept

His marker slashed out areas on my pretty little map one by one. "Desert Valley? The Kalahari? The Gobi? Playgrounds. The Sahara? A fair attempt, but not good enough." It got slashed too.

I protested. "The Sahara is the largest desert on Earth!"

"Yes, it is. But not was. And it's not dry enough. Only a couple of thousands of years ago it was a savanna. Underground there is still water from that time! No, we need something better. For a proper desert you need proper conditions. A large landmass, so that much land is simply very far from the coast, too far for rainclouds to reach it. A *very* large landmass. A supercontinent." He spread his hands as if they were able to encompass it.

"Meaning?"

"Pangaea! The latest and the largest of the supercontinents. That's where we are going."

"Ha! You invented a time machine?"

"Sort of. We cannot physically transport the participants, but we can move their minds! Virtual Reality has come a long way since the first optical headsets, you know. We have the budget of the big studios backing us up. It will be a proper five senses experience, even for some of the wealthier consumers. Interactive too."

My knowledge of geology did not reach very deep. "So how big is this Pangaea desert? How big is Pangaea anyway?"

He pulled up his floatpad. "Again, not is, but was. We need another map. Lemme see ... Ah, there is a good one! You can see that it's not a solid disc, more a kind of Pacman figure. All our current continents are clumped together in it, though they are not very recognizable. The northern half is called Laurentia, that is North America, Greenland, Europe and Siberia lumped together. The south is even bigger: Gondwanaland, comprising South America, Africa, India, Australia and Antarctica at the bottom. The Variscan orogeny in the center is already deeply eroded."

"I don't recognize any of the modern continents."

"You will if I superimpose them." He activated an extra map layer. "See? But you are right, it is a world both familiar and alien. Here too are tropical rainforests at the equator, dry areas in the subtropics, temperate zones further away and ice at the south pole. But look at those vast yellow areas! In the west, where the supercontinents are joined together, that is where the great deserts are. Dry by themselves and drier still because they are shielded by mountains. We are targeting the northern one, the Great Laurentian Desert, almost as wide as the Sahara but three times larger in surface area and significantly more arid."

I saw more blue than yellow on the map. "Actually I find that single ocean more impressive."

"Yeah, right. Next time we'll organize an ocean race."

My eyes drifted back to the landmass. It was big indeed. How about life? My knowledge of paleontology was as shallow as my geology but I suddenly remembered the animals that inhabited Pangaea. "So they will be walking among dinosaurs?"

"No, this is the Late Permian, 260 mega annum ago. That is 'million years', for your understanding. The period is just *before* the rise of the dinosaurs."

'Mega' is Greek, 'annum' is Latin. Now *he* was ignorant. I overlooked the patronizing. "So why not move a couple of million years closer to our time, so we can have dinos?"

"Because this is the only period where everything is just right. In this time the level of oxygen is plummeting, carbon dioxide rising and both are more or less at modern levels. At the start of the Triassic, when your beloved dinosaurs start tramping around, they will be 15% and 7%

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respectively. 15% oxygen makes breathing hard, 7% carbon dioxide is quite toxic. It will take some 150 million years for those gases to approach our current levels once more. By then, Pangaea is broken up and the big deserts are gone."

"Who cares? It is a simulation, not the real thing. You can put dinosaurs in and more air too. Those are just details."

He stamped his foot in anger. "The details are what make this such a thrilling project! The contestants will descend into a *real* world, with *real* climate, *real* dangers and *real* death."

What did he say? Real death?

## Morituri

"Welcome back to the Adventure Channel! My name is Doran Salivat and I will be your host for most of the time during 'Surviving the Permian', a grand race through a prehistoric desert. Who will be the first to defeat the terrible sands? The winner will receive enough money to spend the rest of his or her life living like a prince.

We now present the participants of the great trek. Seven tough men and women will brace the dangers of the Paleozoic, the time just before the dinosaurs. Let's introduce our brave adventurers.

- Our first contestant is Rodney Hogman from Down Under, Woomera to be exact. He is 34 years old and happily married to Lindsey Collowi. In normal life he is a survival instructor, guiding the few tourists who are still willing to endure the extremes of the Australian Outback. A desert animal by birth and trade, Rodney seems superbly fitted for the contest.
- The next is Mada Kaza, born 31 years ago in Matsumoto, Japan. She is a lone survivalist who has climbed high mountains, trekked through the Gobi desert on foot and has been spent several years roaming Siberia, without any contact with the outside world. She is a small woman but possibly tougher than any of the other participants.
- Juma Marteau adds a scientific aspect to the competition. She is a paleobiologist from Plombières-les-Bains, France. As such, she knows more of the flora and fauna of the simulated world than anybody, even though it is not the real thing. She stresses that she has not in any way been involved in the creation of the environment.
- Her knowledge of animals is rivaled only by Felip Favel, the famous animal handler from Guatemala. His person needs no further introduction. Of course he hopes to meet many animals in the dry lands. Based on reviews of the simulation that has so painstakingly been put together by the creators, he is confident that he will.
- The USA is represented by Colin 'Eagle Eye' Boskovich, a hunter, tracker, explorer and former marine who lives in Barstow, CA. He has is a frequent visitor of Death Valley and the Mojave desert. His motto is "Never quit, never surrender."
- Another true desert survivor is Jamal Rawath. He is a 40 year old Berber from Algeria, a native of the Sahara, the largest desert in our modern world. He has stated that if he wins, he will donate all his winnings to the Amazigh Nation Foundation.
- Finally there is !Kebba-Gano, also called 'Old Leather', a San from the Namib. He is the eldest of the participants, 48 years and quite a phenomenon. This man has the unique ability to radiate heat as some African animals do. He can also lower and raise his body temperature somewhat. Some consider him a desert mutant and his abilities are have attracted the attention of several leading medical scientists.

So there you have them. You may have noticed that there is a lot of wilderness survival knowledge in the group. Though the contest plays out in a simulation, the environment is realistic and its effects will be transmitted to the participants, just if they were actually in it. So apparent thirst will be real thirst, imagined tiredness real weariness, etcetera. Likewise, real strength will

be virtual strength, actual physical endurance in-contest endurance and so on. That means that not only they have to know how to survive, but must also be physically fit.

Inside the simulation, modern technology is barred from the competition. There will be neither motorized transport nor pack animals, no navigation systems, no solar panels, neither vitamin nor energy pills, no antibiotics. But as the Great Laurentian Desert is an extremely hostile environment, each person is allowed to take as much clothing and simple hand tools as they are willing to carry. Also, everybody is equipped with a moisture mask that takes water vapor from the air. This will provide enough water to survive on a daily basis, though it is not enough to deal the the hardships of travel; the walkers will also have to find additional water themselves. This piece of equipment is the only exception to the no tech rule."

## Dragon crawlers

Marteau: "Is this thing working? Yes? Ok.

The first impression is one of dislocation. On one side I am talking to the studio staff to make sure that my voice is coming through, though in less than an hour the communication channels will become one way. I know they will be monitoring almost everything about me in the coming months: my temperature, heartbeat, hormone balance, ... No more privacy. But at least my thoughts remain my own.

On the other hand my senses tell me that I am alone in another world. I am standing on rock that has never felt the touch of human feet before and never will after; my nose sniffs strange scents that I cannot place; warm wind flows over my skin and my eyes gaze far to the north. The air is completely free of pollution and so dry that my throat is already protesting. From this height I can literally see for hundreds of kilometers across the desert! And it is vast, like a giant sea of of reds, browns and khaki lapping against the shores of the mountains. There are rocks and ergs and what looks like salt pans, but I can also see darker areas in the distance, possibly hills. Those will be important. They will act as landmarks and provide shade and maybe food and/or water.

I would have liked to bring a full set of binoculars, but they were too heavy. This small monocular will have to do. Of course as I scientist I brought some good old-fashioned paper and a pencil. Time to draw a map."

Boskovich: "Yes, the desert awaits. But for now it is mountains and jungle. Here the foliage is thick and I must rely mostly on hearing. By god, what a horde of creepers and critters, scrambling and hopping and scuttling about. Did they have scorpions in the Permian? I don't know, but if not there will no doubt be some other poisonous vermin crawling around. And larger beasts! No dinosaurs or megafauna yet, - What's that? My, that sounded like a big one! I must have a weapon. Let's see if I can find some proper wood here to fashion a few javelins and an atlatl."

Hogman: "I must praise the makers of the simulation. It feels so real, so natural. Feel with me the cool touch of this long leaf, listen to the insects buzzing. Look at the shadows among those ferns, and spot that pair of yellow eyes, glancing back with curiosity. This is what people were designed for: not sitting in gray concrete towers, gazing at computer screens, but roaming among wild green trees. If there was no big desert trek waiting, it would be like a holiday.

And yet something feels different, as if some things are missing. And there are. All around me ferns, conifers, cycads and ginkgos, but no broadleaf trees or flowers. Those have not been invented yet. Ha! Hear me talking, member of a race of inventors that is still 259 - 260 million years into the future, depending on where you draw the line between apes and humans.

It smells quite different than any Australian forest too. It makes me hungry. I am going to look if

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there is something edible. I brought as many iron rations as I can carry, but only a fool would ignore the natural bounty here."

Favel: "There are wings in the air. Not birds, but insects. I just spotted some kind of dragonfly with a wingspan of half a meter! Some think that the higher level of oxygen is responsible for that, but biologists know better. It is the absence of insect-eaters: birds. And so it is invertebrates who still rule the skies: beetles, barfkflies, scorpionflies, snakeflies, dragonflies and damselflies. A lot of flies, no? They buzz a lot, but alas, they do not sing.

There is life on the ground too: scuttling blattopterae, crawling amphibians and reptiles, and of course therapsids. I think I spotted a dinocephalus on the other side of the valley! There are traces of countless others: holes in the ground, trails through the bushes, droppings and grazed leaves. And of course the forest reverberates with their noise: shrieks, shouts and rumblings, which more than make up for the absence of bird calls. I could spend months exploring this ecosystem, but alas, I signed up for race through a barren desert. However I will make the most of this brief stay among the green. You wait and see!"

Kaza: "They have told me that these mountains are the Variscan orogeny, which separate the two major halves of Pangaea. But I prefer the name that the staff gave them: Dragon's Spine. By my ancestors, there are some nice peaks among them! Battered and worn yet still majestic, high enough to be capped with crowns of white, even in the tropics. I would love to climb those. But that must wait for another time. First a desert must be crossed. I must prepare myself mentally. The last few days were full of checkups, interviews, babble and fuss. It drove me me crazy! But now, back in the serenity of the wild, I am at peace again. It does not matter that all this is artificial, it feels real enough. This afternoon I will meditate; tonight I will sacrifice to the kami; tomorrow I will set off."

Salivat: "Though they don't know it, the contestants have been dropped in a line, 10 kilometers from one another. They all record their impressions and these can be followed live on the text channels, as the rattlebots transcribe their words instantly. Visual and audible impressions can be followed on vid channels, one for each adventurer, next to this one. Premium consumers can also enjoy olfactory and tactile sensations, depending on level. If you think you are missing out on something, consider to upgrade! It is worth the money.

As you can see, all seven are busy exploring the tropical region and preparing for the big trek across the plains. The bookmakers are fighting over who will be the first to leave the shelter of the greenery. Odds seem in favor of the American, though only slightly."

Kaza: "Whoa! Easy now, big beast! Oh-oh, I think he smelled my food. And he has never learned to fear humans. By the size of him, no need to either. I think he weighs at least 200 kilograms. What an ugly brute, with that pot belly, pale skin and those boar tusks."

Salivat: "Viewers, alert! Mada Kaza has encountered what looks like a large anomodont. It is a herbivore, but well capable of killing a human being. This is the first crisis of the show! Let's see if she can handle animals as well as Felip Favel."

Kaza: "Keep calm ... no trembling please. Ah, ignition! Blow carefully ... Quick, some twigs and leaves. There we go. That scares you, no? That is Kagutsuchi! Beware, dobotsu kami, he can burn holes in your clubby feet. That's right, scamper off, find food elsewhere. Phew. I must keep my fire burning from now on, that is safer."

Rawath: "At first there was green all around me. Green leaves, green insects, greenish streams, in countless hues and stumbling over each other in an abundance untouched by human technology. But lush as it is, the rainforest is not my land. I packed all the things that I need, so I moved north right away. With the descent the temperature rises and the air is drying. The

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climate zones are narrow here, one can walk from one to another in a single day. The trees are thinning rapidly. This is hardly a savanna anymore, closer to shrubland. That one with the oily seeds seems nutritious, though not much. I hope I will also find it in the deep desert. In the distance heat shimmer makes the horizon vague. This is better than that cockroach-infested jungle. It almost feels like home. Only at home there were camels and I knew where the waterholes were. Without them, it will be not just dangerous, but perilous. Personally, I give myself a one in three chance of making it. I wonder if the others realize how lethal this desert really is. But their fate is not in my hands. For now, I will concentrate on making it to the hawk hill in three hours."

Favel: "Now viewers, watch closely. One must be patient in matters like these. I have already fed her pieces of my seaweed rations, so she has come to regard me as a source of food. I am going to miss that stuff, but if I can bond with this animal, the reward is worth much more. And I have other sources. The blattoptera-trap that I devised is worth its weight in gold now. It yields a few dozen cockroaches per day. Fried, they provide me with valuable proteins, fat and minerals. Raw, they bind her to my spell. I am glad she is an omnivore. She is some kind of traversodont, though I don't know the exact species. Maybe the designers don't know either. She knows my smell now and has lost her instinctive fear of my nearness. See how she lets me stroke her skin? Hmm, it is not in good condition. Look here. Do you see how it is tormented by many pests? I think that I will set myself up as her groom, her cleaner fish. Haha, a fish in the desert! That will seal our first bond. The next level will be much more difficult. I doubt if it can be done, but I must try."

Boskovich: "That is why I took a machete with me. Look at its pretty sheen, fresh from the factory. It combines the functions of a knife and a hatchet: slicing and cutting. Two in one! This thing is made of hardened steel. It will last the entire journey and stay quite sharp. A good tool, and a weapon too, as you can see. Now I am going to use it to cut some firewood. Tonight I will feast on the meat of this, what is it, rat-dog-lizard. It may be the last meat that I will taste for a while, so I will savor it."

Salivat: "All adventurers have left the mountains now, except for Felipe Favel, who is still taming his traversodont, and !Kebba-Gano. The man from Africa is behaving oddly. He has built a modest base camp and is seen exploring the neighborhood, but makes no move to descend into the lowland, while the others are running out on him. Also, he has not yet uttered a single comment on what he is doing, though we can hitch hike onto his senses just as like with the others. The man is becoming something of mystery. What is his plan? Stay tuned to find out!"

## Trotters

Hogman: "Hi mates! I think that it is time to show you how I travel here. The basis for survival in the desert is good clothing. You can see most retro-aboriginals walking on bare feet, but trust me, the real bush walkers are wearing boots like me. These are tough trekking boots, carefully broken in and fitting my feet as if they were part of me. They will shield me from soil as hot as a baking tray, from sharp pebbles and other unpleasantness. They are tough and hardy and will last for a few years, more than enough for this adventure.

Higher up you find me not wearing khaki shirt and shorts like many tourist Aussies. I dress in Arab style: a long voluminous robe, black. It insulates from the heat during the day and also the cold in the night. The weaving is sparse so it breathes well. It is made from durafiber, tough enough to resist abrasion and tearing.

Finally on my head I wear a broad brimmed hat, which provides a little shade, reduces the

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glare of the sun and of course helps to regulate temperature too. It is made from old-fashioned leather, good enough for the job.

All combined I look like a mix of soldier, Bedouin and backyard sun tanner, not fashionable at all. But I don't mind, there are no pretty ladies here, just dumb animals."

Marteau: "Despite the constant fear of stumbling on a large predator, I already yearn back to the green of the mountains. This desert is so barren. It is all rocks and sand and sun and wind. The only inhabitants seem to be dust devils, which swirl around, dancing like formless dervishes without an audience. The wind spreads the dust and sand everywhere. The stuff gets into your mouth, your eyes, your clothes, scraping and chafing all the time. I hate it, but I know I must get used to it.

Of course I search for life. In the real Permian I would have studied it eagerly, but as the simulation is based on current scientific knowledge, I think it has few secrets. So I look upon the few other lifeforms here not as a human, but as an animal, and always ask the two basic questions: Is it dangerous to me? Can I eat it?

Unfortunately there is little to eat. Grass doesn't exist here, so grazers are stuck with ferns and such, though I haven't seen any grazers out here yet. Alas the ferns are all of the desert kind here: tough, prickly and with very little water. I would have liked some cacti, not for their water which is alkaloid, but for their flowers. But they have not evolved yet either.

The rate at which I am munching through my rations is too high, so I have been looking for local supplements. This morning I caught a blattoptera. I could tell that it was not a real cockroach because it lacked an ovipositor. It looked like a cockroach, though. Some ancestor of *Blaberus giganteus* perhaps; it was as large as half my hand! I roasted it over a fire, stripped off the parts that repelled me and was left with little meat, quite blackened. I ate it, but it was horribly bitter and I vomited it out almost immediately. Then I realized that the puking, plus the sweating from the chase, had cost me precious water. And I gained zero nutrients from it! I must learn to hunt more efficiently and overcome my aversion of ugly insects. I will limit my rations; hunger is the best sauce."

Rawath: "Most people associate the desert with bright sunlight and heat. But the daytime is the least exciting. During the day you rest and sleep, to conserve energy and moisture. Travel in the deep desert is done at night. One navigates by the stars and the occasional landmark noted during the day. Desert nights are bitter cold, not hot, but you can keep warm by walking and wearing good clothing, preferably wool. You should drink your water as tea, hot to warm yourself and with sugar for energy, though here I carry precious little sugar. During the day, I drink very little, saving the water that my moisture mask accumulates for my night tea. I have the advantage that a life in the desert has accustomed my body to a low water ration.

See how clear the night sky is, how one can see the Milky Way and thousands of stars? All the constellations are different because the stars have shifted over the many years, but I studied the Permian ones before I entered this simulation. I have devised names for the most obvious ones: the Snake, the Turban, the Book and many more. Maybe the astronomers will copy some of them.

The night is rapidly becoming my friend. This desert is several degrees hotter than the Sahara. At midday the heat is downright scorching, even with minimal activity and a little shade. I hope it will not get any worse."

Kaza: "Smell that? It reeks just like Asia. Just like camel dung, horse dung, sheep dung, any dung. Out here, it is the best fuel that you can get. By the size of that pile this must have come from one of those big ones. And that's another reason to burn it.

I always sleep downwind of the fire. That way you profit most from the warmth and can sense when it needs rekindling. You get used to the smell quickly enough and then you don't mind it

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anymore. The same goes for your own body odor. No baths here except dust baths, and human skin is not very suitable for those."

Hogman: "Of course this is a survival trek and of course the environment is dangerous and hostile. But people forget to look at the other side of it. Look around! A great jigsaw puzzle of ochres, siennas, khakis, buffs, blacks and countless other colors, all baking under the fiercest blue that you can imagine. Though seemingly endless, it is never the same when you move through it. Rustling sand dunes to the west, a salt pan north, red Martian rocks next to them. See where I am heading? That is a yardang. A lone rock scraped and shaped by erosion, yet still defiant among the shifting sands. It looks like horse's head, don't you think? Or maybe a heron waiting to catch a fish, a Heklar pump, or a snake rearing its head. Should dusk be approaching and shadows creep up to it, no doubt you could see many more things in it. Maybe it is only when you are all alone out in the great nothing, that you start to appreciate the beauty of nature, even this barren desert. Especially this barren desert."

Favel: "Easy now, very slowly ... She is not a horse that must be broken, but a gentler creature. I have stroked her so much that she is totally at ease with that. Also I have leaned on her, gradually putting more and more weight in. It makes her a bit accustomed to bear a load. Now for the final touch ... Calm down, Atravessara! Easy, easy, it's Felip, your companion. Easy. That's better, here is a biscuit.

Look, dear viewers, I'm sitting on a traversodont. Felip Favel, the first gaucho in the world! After all, I predate the American ones by 260 million years, haha! Now to make riding this a normal modus operandi, and then ... into the desert."

Boskovich: "The armies of the ancients marched 20 miles per day through the desert regularly. A lone traveler can go a little faster, though I have to do all the camp chores myself. Of course you must be in good shape, but heck, I trained like hell for this. I can outmarch any of us. The trick is not to overexert, to keep a steady rhythm, even if you feel tired or downcast. No heroic dashes, just perseverance and a monotonous pace, day after day. In a straight line it is 3,800 kilometers, so around 4 months.

They say that we start at the Great Lakes and end at the northernmost islands of Canada. Well, it sure doesn't look like that. All this dust and sand and rock. Canada in the subtropics, can you imagine that? But I don't care. Taiga, tundra or desert, it's all a matter of not giving up.

Hey, do you see that? That thing in the heat shimmer to the south? Jeez, I think it's one of the others! Could be one of those lizards, but the form is too slender and upright. Must be human. He or she is at least half a day behind me. Ha, I will make sure that it will soon be more. Boskovich is here to win."

## Green and red

Muirdak: "That Hottentot is starting to become obnoxious! What does he think, that this is his private vacation? He is under contract! We have a show to run here, gentlemen. Viewer ratings must be kept up at all times."

Vetacoda: "Legally he is under no compulsion to do anything while in the simulation. The contract actually states that each of the participants can handle the race as they see fit, as long as they do not hinder or attack each other."

Muirdak: "Don't give me that legal shit. You're the



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expert, you should have ensured that we have a leash on him. I don't care how it is done, find a way to handle him. If he is not getting off his feet then you give him a virtual rash on his African butt or something like that!"

Salivat: "Calm down. !Kebba-Gano has stated that he wants to win the race just like all the others. I think he has a plan, though nobody knows what it is. In the meanwhile he is attracting a horde of fans who are mesmerized by his mystery. You should read some of the theories they have concocted; some of them are outrageous. Through them, he attracts as many viewers as the others do. Leave him be for now, he will move eventually. I'm betting my reputation on it."

Muirdak: "You're betting your career on it."

Marteau: "Listen! What a noise! Low, loud and booming ... I can feel it on the ground too. I think it must be a herd of herbivores. But what kind, and why so many? What is here to eat for them? Maybe there is something to eat for me too! I need to see, but without artificial lights this night is too dark. I can't wait for daylight to see what is going on."

Marteau: "Now I understand. It was no animal herd, it is this sand dune here. Look at the sand grains, well polished but not completely rounded. The wind was howling last night. It swept them up and caused an avalanche. You can still see the traces there. We have this phenomenon on the real Earth too. It is called 'booming sand'.

I'm really depressed by this. I was hoping to find animals, maybe food or water. Instead I find jinns, sandy and raw and uncaring. This is their land. I'm just tumbleweed, an invasive species from another time."

Salivat: "We have been getting questions from viewers whether Pangaea is one big desert, like Tatooine from Star Wars. That is not so. In the north and south there are temperate zones and there is even ice at the south pole. To the east of the desert lies the Paleo-Tethys sea, hemmed in by the two arms of the supercontinent and islands that will later become East Asia. There a warm but humid climate reigns, with very strong monsoons: dry winters but torrential rains in the summer.

So there are also swamps, tropical rainforests, savannas, temperate forests, taiga and even tundra, just like on our modern day Earth. And, as an employee once remarked, one single enormous ocean surrounding it all, bigger than the Pacific and the Atlantic combined. Who knows, a sequel of the show may target a different environment, or a different time period!"

Kaza: "No, this will not do. A nice landmark for navigation, but of no use beyond that. Look at those hard baked rocks up there. It is arid enough on the plain, up there it is even higher and drier. But those peaks might catch the winds and with them, scraps of moisture. Let me look around ... Ah, there you have it! It looks an ordinary depression, but the desert travelers among you will recognize it for what it is: a wadi! Notice the the slightly higher density of shrub, the darker color of the sand? There is water here. I will do some digging with this slab of rock. No use wasting my knife on it, it will just go blunt. Let's dig somewhere ... here. It will cost energy and water but I'll risk it. Not now, though. It is too hot. I will find some blissful shade, make camp and take a rest. And dig in the evening, when it is cooler yet still light enough to see what I'm doing."

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Hogman: "I still can't believe they let us take all this stuff. I brought a heavy knife; an aluminum pan to boil and cook in, easy to clean yet light; a fire starter so that I don't have to mess with flints or fire bows; a water filter; a first aid kit; several tens of meters of cordage; a satchel; two canteens; a small compass; an extended sleeping blanket that can double as a miniature storm tent and several other handy tools. The whole package weighs less than 20 pounds and is worth every ounce of it. I am getting emotionally attached to several items, for example the pan where I made many a cockroach stew in. I know it is all virtual stuff, none of it existing outside my head, but here under the sun it is damn real. I think I will name my pan Lindsey. Though your roundings are more shapely, love."

Kaza: "There it is. Genuine mud, such lovely stuff. Suck the moisture up through my tube and filter to keep the sand out. Still murky, but not salty, so probably ok. Ah, that is refreshing! I will drink some more and then make a night trip. Another day survived."

Muirdak: "The show is losing pace and we are losing viewers. The people are getting bored with the endless stream of survival tips and the same bleak desert vistas over and over again. Something must be done."

Salivat: "This was all calculated and predicted. Like the travelers, the viewers too must have staying power. We knew very well that we would gradually lose the sensationalists and retain only the die-hard fans. But if you look at the numbers you can see some spikes in the forecasts. We *do* have some surprises in store, both for the contestants and the public."

Favel: "I do not mind the wobbling. However my legs hurt, because Atravessara is too wide, like a draught horse. Aw, my pelvis aches too. I guess I must get used to it, or start riding like a woman, sitting sideways.

But she is restless and even I cannot tell why. A predator, maybe? I don't have her sense of smell. My eyes are better, but there is not enough moonlight to see anything in the distance.

Caramba! Lightning, here in the desert? Oh, there comes the thunder. Easy, girl, easy! She is not used to this, I must keep her calm. That was maybe 10 seconds, so still several kilometers away. Mierda, we stick out of this flat plain like a lightning rod, inviting to be struck! We must find a ditch or something to hide in."

Kaza: "Mhmmm ... Don't do that, Kazura, it tickles. It - What? Where am I? Wet feet? Kami, half the bed is soaked! It's cold, no, I must gather it, where is my canteen, what is happening, am I dreaming or awake? Get my head out. It *is* water, a whole stream! Aaah, that hurt! Cursed rock! Aww, I hope it is not sprained. I must get out of here! I will be damned to *drown* in this devilish desert! Where is my bag? Washed away, of course. I will find it again later. Come on, blanket, I am not going to lose you too. By Izanami, think of what would have happened if I had camped higher up, where this thing is a narrow canyon?"

Favel: "Well, that did not last long. Violent but short, as befits thunderstorms in the desert. Atravessara was about to run off, but I managed to keep her under control. Whew, she is harder to manage than the docile livestock of our age. But she is still with me."

Kaza: "It was all gone before the sun even rose. Soaked up by this parched soil. No matter, I drank until I almost burst and filled everything that I could lay my hands on. Fortunately the ankle is fine. But it took two hours to retrieve all my stuff. The water purifier, of all the things, is

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wrecked. That may hurt me later on. I guess I have to rely on boiling from now on and hope that the water that I will find will be free of toxic chemicals. The shower was nice, but I would gladly trade it back for the purifier."

Rawath: "And so the desert blossoms. Well, actually there are no flowers, but the green is just as good. Whole swathes of it. It looks like one of those modern sprinkled circle fields, filled to the brim with crops. It fills my nostrils with sweet aromas, dampens my steps on the ground. It is almost like I have already crossed the desert and am back in the tropics again. But I must not let that thought distract me.

I tasted some of the plants, carefully and later chewed and swallowed some. No ill effects after several hours, so probably safe to eat. Succulent too, a veritable feast. It is tempting to linger here, but I know that will it last for a week at most and I must move on. Maybe I can dry some and take it with me as source of vitamins and seasoning."

Favel: "I tried to guide her, but lack bit, bridle and reins. So I have let her seek her own path. I was glad enough to see her continue into the desert, rather than back to the mountains. But now I see she was going towards the green after all. Look upon this: a whole sea of ferns! Where did this come from? There must be a well here somewhere, where both of us can quench our thirst. I guess we will be grazing here for a while.

Oh, and there are other traversodonts too. Dozens of them. Grunting and munching on the ferns as if their life depends on it. Which it does. All right Atravessara, go to them. Of course you want to meet your fellow animals. I would take comfort myself in seeing another human being too. I know they are out here somewhere! We crossed some footprints just a short while ago. Human footprints, in this vast emptiness, 260 million years before our time! Atravessara would not stop or follow them, but I may well find him or her among the green."

Favel: "Merda, it is a male, and he is big. Get away, Atravessara, his harem is big enough already. Hell, I wish I could interpret those head swings, it must be their language. Threat, courtship or something else? Atravessara, get away! Argh, it is no use, I'd better dismount. Ah, see how they sniff each other. I have been dumped for another man with more muscle and better pheromones. Well, the affair was good while it lasted. Goodbye my love, I will go look for my own desire now: water.

Oh, he still sees me as a rival; I can see he is preparing to charge. HEEEEEEEEEEY! HAH! Ha, that startles you, no? Never heard a human voice before? Now back off slowly, keep looking him in the eye ... That's better. I will keep my distance."

Favel: "Well, these ferns are green and fresh, but I lack the molars and stomach to make the best of them. I should wish to become a shepherd, guiding this flock and living on their milk, but I guess they are too big and wild for that. I may have to kill one for the meat and moisture, though the thought repels me. Humans enter the pristine Permian and start to kill right away? Not if I can prevent it. A vegetarian diet will have to -

What's that? Uh-oh. Stalking movement, legs below the torso instead of to the sides, must be a true therapsid. Half furred, half bare, camouflage colors. Big head, big jaw, massive canines. It looks a bit like a proto-sabretooth, with a longer snout and uglier. I think it is some kind of gorgonopsian. Meat-eater. And for now it seems also man-hunter. I see no others, so it probably hunts alone. Interesting to know, I must report this when I get ... I keep forgetting that this is but a simulation.

Not good. It is getting closer. Crouching, ready to sprint. I must attack, now! HEEEEEEEEEEY! HAH! HO! Ah, this one is not used to loud noise either. I will bang my pan, drumming it away. Where is that - Wait, no. Nooo!"

Muirdak: "Most people can't believe that he actually died. I have had to explain a zillion times the two-way physical interaction of the simulation, but that is not what people want to hear. They say we killed him. The famous Favel! There are threats of lawsuits, and worse."

Vetacoda: "They all signed the contract, they all knew the risks. That is why there is so much money going round in this thing. Let me handle those young lawyer hawks that are hunting for a quick buck; let the security people handle the death threats."

Muirdak: "But the audience? The consumers with a tactile channel who were online at the moment actually *felt* the bites and the death throws. They are our premium crowd. If we lose them we're done for! I thought we had an experience delay built in to be able to block horrors like this?"

Vetacoda: "Don't patronize us! You yourself insisted on a zero delay. Some of them actually *want* to feel it. They have signed contracts too."

Salivat: "And it it works as intended. The views are skyrocketing. Of course we didn't do this on purpose or with specific timing. All these predators and other dangers were programmed well in advance, though we cannot predict what the contestants will do. However it was only a matter of time before one of them would hit one. As we have stated over and over again: the desert is dangerous."

## Tumbleweed

Rawath: "Another ordinary day in the big desert. Once more the darkness splits into two halves, khaki and azure. I know you have seen this for weeks now and you will see it many times more. But the desert is greater than just two colors. Time to point out a few things about the landscape. Some people think that it is all just one big sandbox, but that is not so. That plain over there, strewn with gravel, is called a hamada. Camels hate it because their feet are soft, so they feel each stone and pebble. And the sandy area to the east is called an erg. Like in most deserts, they are actually less common than the rocky areas. Those sand hills there are called barkhans by the Khazaks. They walk through the desert like we do, only much slower, maybe a bowshot per year. Folklore has it that underneath each has a small army of black ghuls that is pushing it ahead.

What else? I would have liked to show a sabkha, but we are too far from the sea here. However I can show what Americans call a mesa. See that group of flat rocks over there? That is soft rock kept from being eroded away because of harder stone at the top. They do erode, of course, at the lower levels, slowly. There may be small caves over there. And shadow, possibly even water. That's where I'm going now."

Marteau: "Look at this. There are flowers in the desert after all. Stone flowers, but flowers nonetheless. And they are beautiful! 'Desert roses' they call them, I think. Oh, this one is a masterpiece. I can't help but suspect that some designer tweaked the generation algorithms a bit to make the result prettier than reality. Well, I would not begrudge him.

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I just wish there was water in them, like in real flowers. This moisture mask does not provide much. Also, the air is getting even drier than it was. I guess I am entering the inner desert now. I have made solar stills with the sheets of plastic that I brought, but they yield no more than a cup per day. Clean stuff, though far from enough.

These well carved rocksies make your thoughts wander. Stone flowers have their equivalent in the real world; I have seen them. They may last whole epochs, but don't do anything but sit pretty. We humans shine some much brighter, yet also so much briefer. We flicker and fade back into the mists of time, while the desert endures, silent and beautiful and grim."

Boskovich: "Lord, that thing is vast! I had hoped that this desert would be mostly rock like the Sahara, but this is the worst of ergs. Probably no wells, no vegetation of note, just sand and more sand. The stuff is very red here, like devil's blood. My feet keep sinking in it; every step is an effort.

Oh, this erg is really big. The question is to either push quickly through it, or take take the long route around. From this low viewpoint I can't see the end of it. I do not have enough data to make a proper decision, I must rely on my gut feeling."

Hogman: "I'm entering the deep desert now. You can see the signs everywhere: less than the already sparse vegetation, fauna reduced to small critters, air as dry as dust. It is too flat to see the end of it. To me it almost feels like a living creature, big and strong but dim, though malicious. I imagine that it creeps into me, slowly invading my limbs, dragging them them down into weariness. Crikey, those are depressing thoughts. I must not drift from my purpose.

There are still some large animals here. Look at those tracks for example, that was a whole herd. But none make this place their home. They all march through it as fast as they can. I guess I should do the same."

Marteau: "I'm not doing well. The dryness is taking its toll on my body. I'm so thirsty! My mouth is dry, my breath is shallow and quick and my head hurts. I would like to gulp all my water down in one big swig. It would be a taste of Heaven! But then I would have nothing left, that would amount to suicide. I drink as little as possible to conserve my stock. Sometimes even *too* little, so I go parched while there is still enough in the tank. My senses are becoming erratic. Last night I rose at midnight, cold to the bone, finding that I wasted half the night in sleep instead of walking. I'm not going to make up for that in the day heat, no sirrah! I'm just going to sit and read a bit in the mini-book that I brought. Would you like to hear some poetry? I have Stephen Crane."

In the desert

I saw a creature, naked, bestial,  
Who, squatting upon the ground,  
Held his heart in his hands,  
And ate of it.

I said, 'Is it good, friend?'  
'It is bitter-bitter,' he answered;  
'But I like it  
Because it is bitter,  
And because it is my heart.'

Hogman: "Just when I'm not wearing my boots ... Some critter just bit me in the foot. Blasted pest! It hurts like hell, maybe the thing was poisonous. I sucked the wound clean and bandaged it as best I could. Pesky, but this is not a picnic trip. I have to go on.

Those peaks over there look like a proper set of mountains, the Permian equivalent of the Tibesti highlands. I will walk over there, because it is a good goal to drag the tired feet

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towards, because it may have shade and water and because I'm damn well sick of this endless plain. Only three weeks into it and already it wears me out. Maybe I'll climb one of those peaks to get an overview over what is left. Or maybe not. Yes, I know that you viewers would love that view, but *I* don't have a lurk bottle at hand, I must balance the water cost against the profits. We will see once I get there."

Kaza: "Ok, I admit it. This thing may be grasping too high. In the wastelands of Asia there was always something to eat, something to drink, somewhere. But this, this is not an Empty Quarter, it is a Karappo Sotai, an Empty Whole. I am no stranger to the desert. I know my priorities and I know how to conserve moisture. But I can only do it by keeping exertion down to a minimum and traveling slowly. So slowly that the least of the desert worries is actually becoming a problem: hunger. I carry few rations and there is very little to forage or hunt here. I'm the skinny type, with few fat reserves. If I cut my food intake, my body will start eating itself. The muscles will be the first to go and without muscles, no travel at all and that would mean the end. I hope I can find a fat lystrosaurus. They should be common here, like salt. There is plenty of salt around here if you know where to look. Salted meat of one of those could keep me going for a month."

Salivat: "All of the contestants, except !Kebba-Gano of course, have now reached the 'Deep Desert'. This area is generally shunned by the local flora and fauna. There are many ergs, scourged by sandstorms that can last days, and water is very scarce. The rigors of the environment are taking their toll on the travelers. Hogman and Kaza and dragging their feet with effort and Boskovich has wandered into what our map calls the Hell Pit. Marteau is suffering from dehydration; the doctors fear that she will not make it. Stay tuned for the latest news!"

Rawath: "Essential to surviving the desert is to follow the Path. Obviously, there is a physical path, leading from one water source to the next. But there is also a spiritual one, which is even more important. A man must have *ashek*, honor; *tasaidert*, courage and patience; *ull*, heart and will. Lose any of them, stray from the path, and one is lost. There are many things that can make one lose the path, but few to get back on it. That is why it is important to keep walking."

Boskovich: "F\*\*king hell! Another sandstorm. Maybe going straight was not such a good idea. No, I musn't think like that. Always think positive, always persevere. Just adapt. I'll just dig myself half into the ground again and sit it out. The last one lasted half the day and scrubbed my skin nearly off. But it's no use moping over that. Ok, wrap up and bunker down again."

Marteau: "Rotten desert! There is glue all over the place. I have it on my tongue, makes it sticky. I have to stick the papers fast, or they'll blow away! Make such a pretty palette. Oh mammie, lemme finish it before we go! My head hurts mammie, can I have a candie to make it better? But not a sourball, they are stickey. No, I do'ne wanna go home yet!  
Ow, my hands are cold. Can't touch the beasties no more. Cannot see the beasties no more, no more hear them ..."

Boskovich: "God, these dunes are heavy. The sand keeps slipping and I keep stumbling. I should make some sandshoes, you know like snowshoes, broad. But there is no stuff and I don't have the energy for that anymore. I don't have energy for anything anymore. I just want to sit a bit and sleep.

No! This must not be. A marine, defeated by a heap of sand? Come on soldier, back on your feet! Take a - Aaargh! Auw! Aaaaah! Cramps, muscle cramps! Must stretch ... That's a little better. But if I try to stand again they will break down right away. Must be dehydration. I must find water. Maybe at those rocks over there. If I can't walk, I will crawl. Come on!"

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Marteau: "Seven little Injuns cuttin' up their tricks, One broke his neck and then there were six! Six little Injuns all alive, One slurped the bucket clean and then ..."

Rawath: "Hmmm ... tracks. Human tracks! Somebody is ahead of me. But he or she went into the russet erg, why? That seems an ill route. I will follow this other trail here. Some lizard made it, by the looks of the marks, swinging left and right. I would have liked to have birds in the sky that you can spot from afar, but this is the next best thing. Animals always know where the water is. Follow the animals and you will find water, the elders say. I hope that it is true, because my supplies are running low."

Marteau: "Gimme a hand, I can't gettup. Like sticked to the floor. The paper is all bittle. Look, I can peel the skin right off. It is not fair! I musse paint them in pretty colors and then glue them. It's not ... I wanna go home now."

Kaza: "Ah, the ugly face of death. The younger viewers may want to look away now. I recognize him. It is the American. Stone dead and recently too; there is no rot yet. That's one less competitor. As if I still care about the prize! It is sheer survival now. I will take some of his equipment, he has no need for it anymore. That's a nice machete, better than mine. I'll take it. Chobatsu! His water purifier is broken too. Those things are far too flimsy. I wonder if they were deliberately made so?

His flesh is cold, but intact. I wonder ... no, I cannot. Can't I? If I don't, then I may be next. Would it be a crime? It's not his real body, that lies in the sensor capsule, though I guess they have probably taken it out for burial. So what is this then? What I will I ingest, what will my real body be fed? Kami, I don't know what is real anymore!"

Kaza: "I will do it. Bless you, American soul, may you be reborn in a happier life. I will savor every piece of you and remember you with every step. Now, knife, fire and salt."

Muirdak: "Man, how can this be real? Two in one week, and then the ... I threw up when I tast-, saw it. It's inhuman!"

Vetacoda: "It is all too human. It is like humans have been dying for centuries. At least these ones get a burial ceremony right away, instead of being reported as yet another missing or killed in action."

Muirdak: "Shut up. Salivat, they are dying too fast now. This way we won't have enough left for the later stages of the show."

Salivat: "*That's* your concern? First too slowly, now too fast. You want them to die in a neat steady stream?"

Muirdak: "I don't need your sarcasm! You are on our payroll too, you know?"

Salivat: "Well, let's hope that the remainder will live long enough to keep us paid, no?"

## Stirrings

Rawath: "See that? It looks like a like a lake, no? A patch of blue just between the desert and those hills. But you have seen me see a lot of those fata morganas. This one is yet another fake;

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there are no lakes here. Instead look at that depression there. That is the closest thing to a lake, or actually more a small pond. It is so only occasionally, only briefly after one of those rare rains like that one a month ago. Now it is just a salt pan, and I have no shortage of salt.

I need water, and to a lesser degree, food. I know it is here somewhere, I can sense it! Or am I starting to suffer from mental *fata morgana*s too? I must stick to the Path!"

Kaza: "Finally, mountains again. Actually just one proper mountain surrounded by eroded hills. But I have lost the desire to climb it. Too high, too barren and too hot. Yes, hot. It is an active volcano. You can see it in the basalt, in the sulfur compounds. Maybe the whole region is volcanic. They could have mineral baths here like on Kyushu. Kami, how I would like a bath! Only there is no water."

Rawath: "There is less water here than I hoped. But there is something else. On some of the warm rocks grows a kind of thermophile orange lichen. I scraped some off, let it cool and tasted it. Edible, though not tasty and I don't know if it is nutritious. I wonder if I can find another use for it."

Hogman: "Tibesti Two stinks. It stinks like rotten eggs: hydrogen sulfide! And other sulfur compounds too. Maybe I can make some disinfectant out of it. I need something to clean the wound from last week. See? It is still swollen and has darkened a lot. You would think that the desert is cleaner than that humid jungle at the starting point, but that is not so. It's some kind of desert sore and it festers. I am also throwing some herbs against it, though I doubt if they will help. What my body really needs is some proper rest, but that is just what I cannot afford right now. Aw hell, I'm probably worrying over nothing. I am fit and strong and should shrug this off despite the heat."

Rawath: "I had a strange dream. In the sand that I was walking over lay an enormous jinn. It was irritated by my footsteps and rose up. It tried to slap me flat like one swats a fly. The fists, as large as houses, came crashing down again and again, while I ran for my life. I awoke drenched in sweat, precious water lost. I think that eating that lichen was not such a good idea."

Kaza: "I spent half the day thinking up a name for those mountain runners. That's how you spend your time when you are resting but not asleep. And there is plenty of time here. The best I could come up with was *monssaurus*, 'mountain lizard'. I know it is a bit of a bland name but it fits them. They are very nimble, running and climbing up the cliffs as it is the easiest thing in the world to do. Occasionally they stand on two feet; I like to imagine that they are the ancestors of birds. They are like mountain goats, only I don't know the Latin word for goat and they don't look like goats. They have scaly skins, ranging from orange to gray; long skulls with many pointy teeth and small red eyes that watch me from the sides. They are curious but afraid of me and keep their distance."

Hogman: "The sulfur patch is not working out. Actually the wound itself seems a little better, though it still hurts. But the infection has really spread inward. I'm feeling hot, even in the cold of the night; I must have a fever. The body is listless and sometimes cramps flare up in muscles that I didn't even know I had. Going to try to sleep a little."

Rawath: "Ouf! That was a missed chance. It is called a *lystrosaurus*. As ugly as a pig, but possible as tasty too. God forbids eating swine, except when necessary. Judging by the count of my ribs I am qualified. But it ran straight past me. I was so flabbergasted that I forgot to spear it. And look, the small rat-like creepers are running around too. Do they know something that I don't?"



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Hogman: "Well mates, it's not looking good. My vision is blurred, my throat is dry, fever and cramps are racking my body. I lack the strength to move or do anything. If the Outback has taught me anything it is knowledge of my limits. I have to admit it: I'm finished. Strange, how it often are the little things that kill you. I know that some people expected me to be gobbled up by some predator with huge teeth, but it was an insect that did me in.

Well, no use moping about it. I have had a good life, short as it was. People, I hope you have enjoyed the adventure. I'm sorry I could not be the triumphant hero, but as you can see the desert is better at killing those than producing them.

Pa and ma, I'm glad for all that you taught me and the fun we had fooling around in Woomera. Lindsey, I'm sorry it worked out like this, but we already talked about it before I left. I would like to say some other things, but I won't, knowing half the world is listening in. So I will just say that I love you, for what it is worth now. I hope you can forgive me.

Now I will swallow all my remaining painkillers. With luck, I'll go to sleep and not wake up anymore. There, that's it. Now rest.

What's that? Fireworks? Am I delirious or still alive? Well, it is a nice farewell present."

Kaza: "The ground is moving? Another flash flood? No, this is the Earth itself. The volcano! Look, it is erupting! Lava and ash too. It looks like small pebbles, but if you compare them to the mountain ... Those are not pebbles, but massive boulders! Only a few kilometers away. And ash. I must move, now! Perpendicular to the wind, that is the best. I must be far away before dawn."

Rawath: "Running to stay clear of this bombardment. Boom! Like jinn throwing rocks at little mousy humans. The lava is way behind, but it is still raining rocks, some of them as large as footballs. Bang! That was a close one. And if I manage to dodge them I may succumb to thirst, because I am sweating too much. It seems that my grandfather was right: Never ignore your dreams!"

Hogman: "Drowsy ... Who is pounding on the door? Lemme get it. Why can't I reach it? It is moving away! Get here, you.

Ach, it is no use. It is no door banging, but something else. You don't fool me, I know I'm dreaming. I just don't know how to wake up. I think I'm going to walk out of here."

!Kebba-Gano: "Time. I thought about keeping tally marks, but that would have given too much information away. Besides, I'm not some kind of prisoner scratching the days into the wall. I'm probably the most unchained man on this world!

I wonder how the others are doing. At least some of them set off right after landing. I spotted them trudging over the plain. Fools. Who is crazy enough to brave the most lethal desert ever in the heat of the summer? It is late October now. The temperature is dropping a bit. Time to leave my little home and set out. My equipment is in good repair, I have long since acclimatized and have learned everything about the flora and fauna that I could learn. Desert, here I come!"

## Endgame

Salivat: "Though we have lost one more contestant, we have regained another. Now you can see the true miracle of Old Leather. Parts of his skin look black, as if he is a negroid instead of a San. Do not be fooled by the color; it is radiating heat, not absorbing it. It is just that the radiation is infrared, invisible to the human eye. He is walking around in the hot desert like he is taking a stroll through cool forest! This man is truly a moving miracle. Some people have lost

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a lot of money betting on his plans, but others have become very rich overnight. Will he still be able to overtake the others? Opt for a rematch or further gains by placing new bets!"

Rawath: "One animal's misfortune is another man's gain. This is some kind of biarmosuchian. The rock crushed its spine. I put it out of its misery and then put it to use. Some of the meat will serve as food and the skin as a patch for the hole in my bag. I drank its blood like a vampire. It tasted horrible, but contains precious water and minerals. Now to finish repairing the bag and set off to the north again. The black plume from the volcano is blowing in that direction too. Maybe I will have some shade."

Kaza: "With sadness I leave the mountain behind. The kami is angry, though I don't see how we provoked it. Maybe I should have scratched its back? Though it should have known that this time I made a deal for the lowlands. The ways of the kami are strange.

You think that there are no kami here, in this place of imagination? Maybe in this place more so. They say that Olympus Mons on Mars is two times higher than Mauna Kea but so wide that standing on it, you wouldn't even notice its slope. The kami of this place are like that: vast and ancient, uncaring and unyielding.

Meanwhile my kokoro is not so strong; it is unraveling. But I know that I am approaching the finish line. It is like the final stretch to the summit of a mountain. The reserves have been worn away and one's core strength is put to the test. We will see who is the stronger."

!Kebba-Gano: "I had started to like the jungle and forgotten about the desert. This is worse than the Kalahari, more like the Namib. Flat and orangish and dry and going on and on forever. I'm bored, after only a week being out here. But fortunately I'm walking on sunshine! By Katrina and the Waves. Katrina is always in my head since Johnny played that song for me. Only there are no waves here. There is nothing here!"

Rawath: "This time it is not a mirage. I can see it and I can even smell it, though that may be my imagination. Green. An oasis, a real one. The leaves of the trees are waving hello to me. Water awaits!"

Kaza: "Well, it's a well. Nothing much, but I doubt I can find anything better. The water is salty and dirty. I am filtering it as best as I can. I really need every drop; that moisture mask is not good enough."

Rawath: "As you can see, it really is an oasis. Grass and shrub and even trees, gently swaying in the wind. Not large, but by far rich enough for a single man. There is one problem: It is already inhabited. See those big stocky shapes among the leaves? They are some kind of dicynodonts. All female I think, except for the big one there that is eyeing me warily. Probably he is the big male and that is his harem.

But I know how to deal with them. These animals are no match for a thirsty desert survivor. First I will make some fire. It will use up my last fuel but I can easily replenish that in the oasis. And to combine visual with optical effects I will test the capabilities of the human voice. I will mimic the call of a predator. Let's see how they will react to that. OOOOAAUUNKH! OOOOAAUUNKH!"

Salivat: "And so there is another casualty of the brutal desert. Watch the replay. Our adventurer actually seems to notice that something is wrong; the eyes suddenly angle downward. But then it is already too late. Too much weight on the left foot, the stone slides and then the fall. It could well have resulted in just a tumble and a bruise, but rock number two is lying in just the wrong place. The neck breaks quickly; at least there is no pain.

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We will miss Old Leather and his happy songs. He showed such great promise and yet he has perished too, just ten days out into the open. Now the group is down to two members. The betting is feverish. The lucky winners will walk away as millionaires."

Rawath: "This is the third oasis. There seems to be whole string of them. Maybe they are watered by an underground aquifer, just like the Tuat in the Sahara. The line stretches towards the northwest, so veering somewhat off course, but the benefit of water outstrips the detour. I may follow this line to the end.

Each appears to be occupied by dicynodonts. For desert dwellers, they know precious little of hospitality. Then again, they are just animals. I aim to deal with them just like the others. Scare them, take a little water and fuel and leave them only a little bit poorer."

Kaza: "Ugh. I just vomited out another load. I didn't think that there was anything left in my stomach, but apparently there was. Aa-argh! The cramps do not abate. My throat is dry and I'm sweating cold despite all attempts to not do so. This is the end, I know it. Even if I recover, I will never make up for the water loss that I am sustaining now.

Goodbye, world. All my life I tried to become one with you again in spirit; now I will once more in body.

Mono wo nomi  
omofisi fodo ni  
fakanakute  
asadi ga suwe ni  
yo fa narinikeri."

Salivat: "Well, that is that. The desert race is won by a desert nomad. Fitting, I would think."

Vetacoda: "Not so fast. Ending up as the last survivor is not enough. He still has to make it to the finish line."

Salivat: "What? That is still some six weeks walking! That is a hell of a job. In the light of the fate of the others, his chances are slim."

Muirdak: "And it's *your* job to keep the viewers entertained with only a single participant. Do it well, or you'll lose it. Showbiz is like the desert: dangerous."

Rawath: "I have heard stories of Westerners going crazy in the wilderness. They cannot cope with the shortage of comfort, lack of company and most of all absence of things to do. They live at a pace that is too high. In the wilderness, in the desert, that is dangerous. You must adapt to the environment. Live slow and wary, take comfort in simple things and natural beauty. And most of all: take care of your health and safety at all times. The desert is a simple place where you must live basically, or you will cease to be."

Rawath: "I spotted that large snakefly that I last saw back in the tropical mountains. It has been absent for months. It is a sign that I am nearing the edges of this vast desert. My spirits rise, yet I must keep calm and maintain my daily rhythm. The final stretch may take several weeks more."

Rawath: "It is not far now. Shrubs are becoming common again. The air smells different too. The drought has not numbed my nose; it has become sharper. The air ... It smells like trees."

## Surviving the Permian

Rawath: "What? A wall of red dust! It is several hundreds of meters high and as wide as the horizon. It is a habūb, and a mighty one! Ah, it is like a Permian jinn taking on form. It will be upon me in one or two minutes. This is worse than the average sandstorm. The winds could sandblast me, bury me under the sand, suffocate me. This is the worst the desert has thrown at me; it may be too much. Quick, a makeshift shelter."

Salivat: "Oh cruel desert, how thou torments both the flesh and the soul! A strong autumn wind has whipped up a sandstorm that may bury Jamal Rawath alive. It is a terrible thing indeed. Look at these pictures of a baby traversodont stumbling behind its mother's back and slowly succumbing under the onslaught. Without modern technology, can a man fare better?"

Salivat: "A spontaneous support group has emerged on the internet, petitioning for the rescue of the last participant in the contest. With heavy hearts we must refuse that request. During the entire race the staff of the Adventure Channel has not interfered with the simulation and will not do so now either. Accusations that the sandstorm was deliberately injected into it are based on speculation and vehemently denied."

Salivat: "The tension is unbearable. Will the Berber survive? Either his eyes are closed or he is buried, because his vision is dark. His voice is silent, the wind is droning out all sounds with thundering static. Only from the tactile input we know that he is still alive. Stay tuned for the latest news!"

Rawath: "I don't know how long it lasted. Everything was in it: a virga, a mud storm, a blaster. I felt like I have died several times, but now I have been reborn into a new Earth. My breath is irregular, my eyes sting and are watery like those of a baby. They will recover. Only my muscles and skin feel old and worn. It does not matter, they will carry me through the last stretch."

Rawath: "Though I have survived the habūb, I have lost much water and energy. The moisture mask is wrecked too. Under these conditions, this last piece of desert might prove too much. But I still walk the path."

Rawath: "So all of a sudden the land falls away. The top half of my view, which has been blue, red and black for months, turns gray, while the bottom half, filled with desert colors, becomes a ruddy blue. It is like the world is turned upside down. There is salt in the air instead of dust; the voice of the wind is drowned out by waves crashing against the rocks. Before I left they talked about the Laurussian Sea and the Azure Bay. I guess that this must be it.

It is something of an anticlimax, no? The audience expects jubilation about surviving all the way. I guess people want me to jump up and down, scream and shout.

But here, at the end of the wide desert, my mind is simply empty, my heart calm. I know that back home another desert will be waiting. A gentler one, with camels and companions and internet. Still, a desert, one that requires a man to walk the path.

All right studio, wake me up. I want to feel real again."