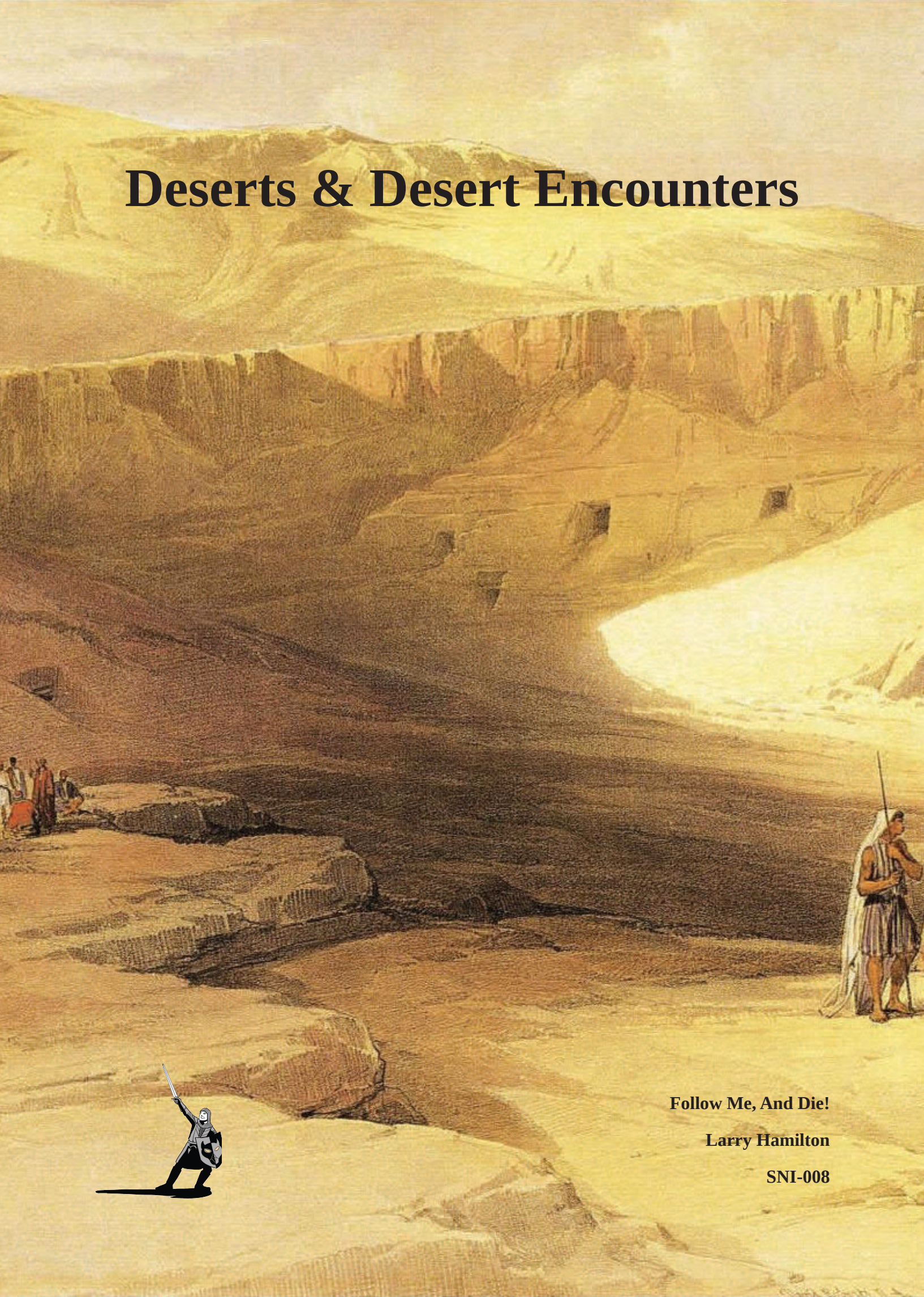


# Deserts & Desert Encounters



**Follow Me, And Die!**

**Larry Hamilton**

**SNI-008**

# Deserts and Desert Encounters

Ideas for Terrain, Travel, Weather, Hazards, and Encounters

This is inspired by ideas I needed for my own campaign world in the area I call *The Broken Lands*, it is based on the [Range and Basin Province](#) of the western United States and northwestern Mexico. It has mountains, valleys, high plateaus, rocks, caves, rivers, canyons, and deserts, all very dry.

A lot of this was in loose or vague notes but most was in my head. It was greatly in need of organizing those notes and thoughts for more easily running the game in that area. It also makes for a good RPG supplement to share with others. I hope it inspires you to create many sessions of adventure!

I am indebted in various articles on Wikipedia for helping me cover a broader spectrum of information to allow a more realistic presentation of desert life from the perspective of deserts like the Sahara.

Author: Larry Hamilton

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Deserts are areas of low moisture content, which technically includes arctic and antarctic regions on earth. However, polar regions are more like other forms of terrain like glaciers. Due to their cold nature, they will be considered in a future supplement.

Most tend to think of deserts as varying from sandy to rocky and being in warmer climates. This is the focus of this document.

### **TERRAIN TYPES:**

Deserts may be located in nearly any terrain, and may border regions of vastly different terrain and climate.

- Sand & Sand Dunes
- Bare Earth
- Rocks & Rocky Terrain
- Salt Flats
- Oases
- Rivers
- Marshes & Swamps
- Hills & Mountains
- Plateaus & Mesas
- Valleys & Depressions
- Lake & Sea Coasts

### **WEATHER:**

One usually associates deserts with lack of water, unbearable heat, and oppressive sunshine. However, the temperature and weather conditions can vary widely.

- Wide temperature fluctuations.
- Rains in rainy season tends to run off causing flash floods in low areas, and seasonal rivers and streams flow.
- Thunderstorms combine high winds with rain and lightning.
- Snow and frost in winter.
- Strong winds give rise to dust storms.

### **ENVIRONMENTAL HAZARDS:**

- Flash floods & erosion: Monsoon, drought, microburst, broken or breached dam.
- Strong winds carry sand and dry desert soils causing damaging dust storms or haboobs (sand/dust storm).
- Groundwater withdrawal can lead to fissures a mile long. Sinkholes and other unstable conditions.
- Sand devils (Dust devils)
- Earthquakes and Vulcanism.
- Landslides when slopes are weakened by rainfall, earthquakes, or wildfires. Rockfalls and avalanches.
- Biological Hazards: Plants & animals with toxic components. Plants with caustic, milky sap that cause temporary or permanent blindness.
- Poisonous snakes, spiders, scorpions, and lizards (gila monster).
- Locust swarms.
- Pathogenic, soil-borne fungus called valley fever that can be fatal, in American SW.
- Biting Sand Flies, carry the disease leishmaniasis
- Sand Traps: my idea, sinkhole formed over cave with small opening and sand is thin. Allows animals or people to sink in. In worst case, the cave becomes filled with sand, crushing and suffocating its victims.
- Sinkholes.
- Quicksand: Dry or wet. Wet tends to be near oases.
- Mirage: - A real physical phenomena caused by how air of different temperatures affect light rays.
- Hallucinations – Seeing things that aren't there. Can be caused by being too hot or too cold, or bad food & water or other illness, or magic.

## HEALTH HAZARDS IN THE DESERT: HEAT RELATED ISSUES:

- Heat Stroke: High body temp. 103F plus, hot, red, dry, or damp skin. Fast pulse. Headaches, dizziness, nausea, confusion, fainting. Must cool down immediately, do not drink anything.
- Heat Exhaustion: Heavy sweating and cool, pale, or clammy skin. Nausea, vomiting, cramps, tired, weak, sip water. Weak pulse. Tiredness, weakness, dizziness, headache, fainting.
- Heat Cramps: Muscle pain or spasms.
- Heat Rash/Prickly Heat: Red Clusters of small blisters that appear to be pimples. Wearing clothes at 3/4 normal movement, and armor at 1/2 normal movement. Armor causes -2 penalty to AC.
- Sunburn: Painful red, warm skin, or even blisters. Don't pop blisters.
- Dehydration: Not urinating, very dark yellow pee. Very dry skin. Dizziness, rapid heartbeat, rapid breathing, sunken eyes, sleepiness, lack of energy, confusion or irritability, fainting. Rehydration of a mildly dehydrated person who is physically active about 25 years old, with a weight close to 160 pounds, 600 ml of water prior to training was enough to rehydrate.

## COLD RELATED ISSUES:

In Sahara daytime in summer of 104F/40C and drastically cooler at night. In winter can be freezing and have snow on the dunes. Usual winter temperatures are 55F/13C.

60F to 70F (15C to 21C) temperature swings from daytime to nighttime in summer. 70 F/21C high in winter with freezing or slightly below in valleys.

## Hypothermia & Frostbite

Signs and symptoms of hypothermia include:

- Shivering
- Slurred speech or mumbling
- Slow, shallow breathing
- Weak pulse
- Clumsiness or lack of coordination
- Drowsiness or very low energy
- Confusion or memory loss
- Loss of consciousness
- Bright red, cold skin (in infants)

Specific conditions leading to hypothermia include:

- Wearing clothes that aren't warm enough for weather conditions
- Staying out in the cold too long
- Being unable to get out of wet clothes or move to a warm, dry location
- Falling into the water, as in a boating accident
- Living in a house that's too cold, either from poor heating or too much air conditioning

## Risk factors:

- Exhaustion. Your tolerance for cold diminishes when you are fatigued.
- Older age. The body's ability to regulate temperature and to sense cold may lessen with age. And some older adults may not be able to communicate when they are cold or to move to a warm location if they do feel cold.
- Very young age. Children lose heat faster than adults do. Children may also ignore the cold because they're having too much fun to think about it. And they may not have the judgment to dress properly in cold weather or to get out of the cold when they should.
- Alcohol and drug use. Alcohol may make your body feel warm inside, but it causes your blood vessels to expand, resulting in more rapid heat loss from the surface of your skin. The body's natural shivering response is diminished in people who've been drinking alcohol. In addition, the use of alcohol or recreational drugs can affect your judgment about the need to get inside or wear warm clothes in cold weather conditions.

## Complications:

People who develop hypothermia because of exposure to cold weather or cold water are also vulnerable to other cold-related injuries, including:

- Freezing of body tissues (frostbite)
- Decay and death of tissue resulting from an interruption in blood flow (gangrene)

## DESERT SURVIVAL

It is best to travel at night in the desert and rest during the day in shade if water is limited. Don't travel unless you know the correct direction and path to water.

Desert survival skills include finding potable water in liquid or plant form, and locating shelter from the daytime sun and heat, and nighttime cold.

Clerics who can create food & water are cherished members of any desert caravan, and members of the caravan will fight to the death to protect a cleric, since water is life or death in the desert.

A typical camel can drink 200 liters (53 gallons) of water in three minutes. **[NOTE:** 1 gallon c. 8 pounds. To be exact 8.34 lbs.]

Military camel corp can travel 80 to 120 miles per day.  
Arabian Baggage Camel can carry 200 kg up to 40 miles per day.

Average speed of a camel is 40 mph in short running bursts, and can sustain speeds of 25 mph.  
Camels can survive losing up to 25% of their body weight to sweating, most other animals have cardiac failure at 12-14% dehydration.  
Hybrid Bactrian + Dromedary Camel has one hump with an indentation, but can carry 400 to 450 kg.  
Camel urine is like a thick syrup. Their dung is so dry that it can immediately be used for fires.

### How long can X go without water?

Humans (including elves, dwarves, goblins, orcs, etc.) 3-4 days. Up to 3 weeks with no food if sufficient water.

Horses: 3-4 days  
Mules: 3-4 days Rarely founder from eating or drinking too much.  
Donkey: 3 days  
Cattle: 60 days without food, 7 days w/o water  
Sheep: 10 days w/o water  
Goats: 3-4 days  
Camel: In cooler winter months, can go up to 6 months without drinking water, but in heat of desert summer, if not hydrated, their stamina drops after about 5 days.

## Animals in the Sahara Desert:

Saharan Silver Ant  
Deathstalker Scorpion  
Sand Viper  
Desert Crocodile  
Monitor Lizards  
Black-Faced Firefinch  
African Silverbell  
Red-necked Ostrich  
Dung Beetles

### Oases:

#### Agriculture: 3 stratums

\* Date Palm  
\* fruit trees (orange, banana, pomegranate, apple, etc.)  
\* herbaceous plants (market gardening, fodder, cereals.)

Can be more than a day apart.

**Sahara** - 3,320,000 sq miles or 8.6 million square KM c. same size as continental USA.

Oases - c. 80,000 sq miles

Composition is c. 30% sand and 70% gravel/solid ground.

c. 90 large oases in the desert

$3,320,000/90 = 3688.89$  sq miles per oasis.  
c. a square 60.74 miles on a side, if evenly distributed.

Nile and other rivers in deserts could be considered elongated oases.

Oases poison due to high salt content, more salt than any ocean or sea. Birds eat the swarms of flies who are filled with filtered water.

**NOTE:** Seeps with petroleum are a hazard to travel and water sources.

Some areas can have wells if there is solid ground and the water table is high enough. Water could be alkaline from drinkable to caustic or poisonous.

## TRADE ROUTES

Trade routes will follow paths that are at most four days apart, as that is the limit of humans and most animals to go without water. Enough water for one or two days will be carried as a cushion in case of bad weather. A minimum of 1 gallon, roughly 8 pounds, per person and animal per day is required. This will reduce the total amount of food and trade goods that may be carried. If bad weather delays long enough to exhaust the carried water supply, the people and animals will be exhausted and need time to re-hydrate and rest to recover enough to make the next stage in the journey. Those who push too hard and too fast will suffer constitution damage and risk death due to dehydration or exhaustion.

The routes for travel, transportation, and trade will follow paths that avoid long stretches across open sand, as that is an exhausting terrain to walk. Animals adapted to travel on sand will be preferred, such as camels.

Oases and other water supplies will be natural points contested for control. If one nation does not control the entire trade route, the incidence of bandits will increase. Oases may suddenly and unexpectedly shift hands as a disease or other misfortune might wipe out or weaken a garrison, making them more susceptible to overthrow by bandits or a neighboring government expanding its control of the area. Oases near borders and bandit territory will tend to be better fortified and guarded.

Caravansaries will develop at oases on the boundary between solid ground and open sand. A market for the selling of horses in exchange for camels and vice versa depending on the volume of trade and travel in opposite directions.

For intelligent species and most animals, 4 days is the most they can go without water. For each day without water, such creatures lose 20% of their base movement and take 1 point of temporary constitution damage. Horses at risk of foundering from drinking too much water too fast.

See my [Caravans & Trade](#) for specifics of trade.

## DISTANCE TO WATER SUPPLY ON TRADE ROUTE D10 DAYS

4 days – Maximum distance for animals well watered before travel carrying additional water.

5 days – At this distance and greater the presence of traders specializing in horses and camels at a caravansary is likely.

**NOTE:** 1 day of travel assumes normal conditions with the typical mode of travel for the area.

d8	TYPE OF TERRAIN: LASTS D6 DAYS
1	Hard Earth
2	Salt Flats
3	Bare Rock
4	Rocky Dunes
5	Hills
6	Valleys
7	Sand
8	Dunes

d8	WATER SUPPLY: Amount Varies By Season
1	Cistern
2	Well
3	Oases
4	Stream/River
5	Underground viaduct
6	Structure to capture and store moisture from the air.
7	Religious order creates food & water for travelers.
8	Melting wall of Ice

d6	AVAILABLE TRAVEL ANIMALS:
1	Donkey
2	Horse
3	Mule
4	Camel
5	Lizard/Reptile pack animal
6	Ostrich or None currently available.

The trade route may not be a straight line, as it will follow the way that has both the easiest terrain and closest water. While straight line travel is possible, either the terrain, water supply, or both makes it very dangerous. Those unable to carry or create water are unlikely to meet success. This is compounded by the featureless terrain where getting lost is easy.

<b>d8</b>	<b>DESERT ENCOUNTERS:</b> d6 1-2: left, 3-4: right, 5-6: dead ahead
1	Bandits*
2	Marauding Humanoids
3	Caravan
4	Patrol
5	Sand Vikings (looking to trade/raid)
6	Lizard People (May hide beneath sand, can "swim" through sand)
7	Sand Worms (as purple worm)
8	Flying Table

\*deserters, former guards, unemployed mercenaries, starving peasants)

<b>d6</b>	<b>FLYING TABLE</b>
1	Roc from nearest mountains.
2	Hawk or Eagle (day) Bat (night)
3-4	Vulture/Buzzard
5	Flying lizard from sparrow to giant sized
6	Dragon

<b>d10</b>	<b>OTHER ENCOUNTERS (NORMAL OR GIANT)</b>
1	Insects possible swarm, attracts bats at night
2	Snakes – adders & vipers
3	Lizards – some poisonous
4	Toads (frogs in oases)
5	Mice, rats, etc.
6	Spiders – poison hazard
7	Scorpions – poison hazard
8	Carnivorous plants survive on fluids of their meals.
9	Crocodiles
10	Ostriches

<b>d6</b>	<b>PLANTS – BETWEEN WATER SUPPLIES</b>
1	Cactus
2	Yucca
3	Tumbleweed
4	Brush
5	Scrub Trees
6	Flowers

<b>d6</b>	<b>PLANTS – AT OASES</b>
1	Grasses
2	Non-Food Trees
3	Date Palms
4	Fruit Trees
5	Grain
6	Flowering plants/Flowers

<b>d6</b>	<b>DISPOSITION OF TRAIL ENCOUNTERS</b>
1	Lost d6 1-3 know it, 4-6 don't know it
2	Illness or Desert Affliction (dehydration, heat stroke, hypothermia, etc.)
3	On their desired path.
4	Low or out of water.
5	Low or out of food.
6	Fleeing something else from the encounter table.

<b>d6</b>	<b>CONDITION OF THE OASIS</b>
1	Abandoned or Unoccupied
2	Fire damage to plants and buildings.
3-4	Normal Occupants
5	Signs that something left recently.*
6	Something still there.*

\*From the encounter table

<b>d6</b>	<b>OFF THE TRADE ROUTE (ROLL FOR TERRAIN TYPE)</b>
1	Ancient Ruins
2	Lost or not traveler(s) (from desert encounters table)
3	Signs of a recent caravan.
4	Signs of a large creature.
5	Water supply
6	Lair of something on encounter table

<b>d6</b>	<b>CONDITION OF WATER OFF THE TRADE ROUTE</b>
1	Alkaline (from bad taste, but drinkable, to poisonous and caustic)
2	Salt (From merely undrinkable to so salty you can almost walk on it.)
3-4	Fresh
5	Oil Seep 10% chance it is on fire from the last thunderstorm
6	Bodies of prey animals or large predator lies dead in the water source.

Water supplies may contain various fish, water fowl, and even crocodiles.

## **CREATING DESERT CREATURES**

Take aquatic monsters and animals and make sand dwelling variants.

For example, sand squids. Tougher hide, sand jet to travel, dust/sand cloud instead of ink, or the ink combines with sand to form a sticky mess to restrain enemies.

10% chance they are intelligent with telepathic abilities. They control their unintelligent kind to coordinate control of a larger territory.

Deep sand will have giant squid or even a sand kraken.

As mentioned in the encounter tables, sand desert lizard people. Also sand worms as purple worms.

## **DESERT VEHICLES**

Sand ships and sand vikings. With sand ships I wanted sand vikings in my campaign world. The ships will be of the general shape of viking ships and vary from small 10 or 20 crew to large 100+ crew ships.

Sand ships have runners to lift them above the sands and are propelled by either sails or magical means. Of course, those propelled by magical means are the most difficult to obtain.

The wind powered type on runners is limited on the distance it can travel on rock surfaces without damaging the runners. A mile or so is plenty to remove any sand barnacles. Those whose hulls are well maintained against blowing sand might even be sea worthy, or need a good caulking to avoid the need for incessant bailing to stay afloat. They do well on salt flats if the runners are well maintained.

The magical variety either have magical propulsion, but still ride on sand runners, or they actually levitate over the surface, and thus can travel over any surface even water.

Rarest of all would be any kind of flying vehicle able to change altitude above the surface. This is determined solely by what exists in your world.

## **BURIED CITIES, RUINS, AND DUNGEONS**

And of course, buried cities. Ruins. And dungeons.....

Pillars or surviving stone towers might peek above the dunes periodically.

Ancient stone circles of long ago druids might be found. Could a druid restore the fertility of this area?

## **TECHNOLOGY & MAGIC**

In a profound desert environment where life is normal, devices from clothing to equipment to water harvesting and storage will be prominent.

## **ECONOMICS & POLITICS**

Those who lose access to water are weak and likely to fall under the sway of those who control the water. Trade will be at the mercy of those who control the water without a means to obtain water independently.