

SINAI FIELD TRIP NOTES
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The following body of material is a series of notes taken from lectures given by Ora Lipschitz on many aspects of Bedoin life, animal life, geography, geology, and political history of Sinai. The descriptions of the land are my own.

ROUTES OF SINAI- A road in the desert does not necessarily follow the most level terrain but is simply a joining together of stations where water is available. Often there are two or more tracks between watering stations. There were never any real roads in the Sinai in the sense that we think of roads, as definite beds or paths which could be traced. We only know the general area of the routes. The routes extending north to south (the length of Sinai) were generally used by miners, pilgrims, and the military. The eastern coastal route went along the Gulf of Suez and a western coastal route went along the entire coastline of the Gulf of Eilat from the present sites of Sharn El Sheik in the south to Eilat in the north. The east-west routes, crossing the width of Sinai, served as the overland junctions between cultures of Africa and Asia. The northern coastal route was known as the Way of the Philistines or the Via Maris. It followed the Mediterranean Sea Coastline. The Central Route or Way of Shur connected the present site of Ismailia with Beersheba and joined the Trunk Road or central range of the Judean Hills through Hebron and Jerusalem. The Southern Route joined Suez at the northern end of the Gulf of Suez with Eilat at the northern end of the Gulf of Eilat. Only the east-west routes will be dealt with here since they concern the route of the Exodus and continue to form the most important lines of communication and commerce across the desert up to the present.

NORTHERN ROUTE- This is the most ancient route in the world, used by pharaohs, Syrians, and Romans. A belt of sand blown in from the Nile delta extends up to 100km. inland. Much of the Northern Route goes through deep

sand dunes. Sweet water is very near to the surface and palm trees grow where Bedouins have dug down to the water table to plant palm shoots. Even though walking through so much sand would be very tiring, this was a favored route because water was readily available. The route is easy to keep in good condition. When in Egyptian control, well stocked supply stations were placed at intervals along the route. This was also the shortest route to reach Philistia or Syria and once in Palestine, the Via Maris of the plain was much easier marching over than the Trunk road of the rugged Judean Hill country.

CENTRAL ROUTE- The Central plateau dominates this route. The endless flat plains reach a height of 1,000 feet in places. There are no mountains, but some hills along the wadis and very little water is to be found. This was the route of the fugitives. Only those nomads who wanted to avoid Egyptian garrisons would take it. The Central Route was also known as the route of the wall because the Egyptians at one time built a great wall approximately on the same line as the present Suez Canal. Routes in the ancient middle east are always named according to their destination not by their origin and therefore the route of the wall was basically used by those traveling from Canaan to Egypt.

SOUTHERN ROUTE- The South of Sinai is very ancient geologically. The mountains rise to a height of 2,600 meters. The ravines separating them are deep, narrow, and rugged. The country is beautiful but the terrain makes travel difficult and only possible in the wadis. Scholars of the nineteenth century and pilgrims traveled through here but the region could scarcely be considered a route, being so rugged and out of the way for peoples traveling between the two ends of the fertile crescent. North of the far southern routes, the pilgrim's route (Dab El Khadj) came into

importance in the ninth century when Moslem pilgrims from Africa began taking it to the holy cities of Mecca and Medina. Stations were built along the route and maintained by Arab rulers. Systems were devised to catch and hold rainwater. The terrain of the pilgrim's route is similar to that of the Central Route, both being north of the southern mountainous region. The main advantage to this route seemed to be that it was the shortest, most direct passage to Mecca. In the twentieth century, the route fell into disuse with the invention of the steamship, making it possible to travel to Mecca by ship.

FACTS THAT SUPPORT THE EXODUS- The captivity in Egypt and the story of the Exodus made a great impression on the Israelite people. Egyptian names of the people, especially the priests (Moses, Aaron, etc.) point to an early Egyptian influence among the Israelites. It is an established fact that peoples from Canaan did migrate to Egypt for ^{economic} economic reasons. The Israelites are the only people in the world to record their history as beginning in captivity and slavery. It is contrary to human thinking to imagine a state of captivity as the beginning point of one's history. Every race and nationality likes to think of themselves as superior to the rest of humanity. The Israelites must have had a very strong tradition of slavery to avoid the temptation of embellishing the beginnings of their history.

PROBLEMS OF THE EXODUS

CHRONOLOGICAL PROBLEM- I Kings gives the date of the Exodus as 1440, that is 480 years before the temple was built (960), but the reference in Exodus to the city of Ramses, built in the reign of Ramses II seems to indicate the Exodus should have taken place about 1260. This ^{problem} ~~problem~~ could be resolved if I Kings was trying to say 12 generations had elapsed at an

average length of 25 years apiece, which would also give us a date of around 1260.

PROBLEM OF NUMBERS- If 603,550 ^{Numbers} men (Exodus 1:46), took part in the Exodus then the total number of Israelites including women and children must have numbered at least 3 million. It is historically and logically impossible for 3 million people to be sustained for any length of time in the Sinai desert. No more than 10,000 people ever lived in southern Sinai and no more than 50,000 ever lived in all of Sinai at one time. The dynamics of the group as described in the Bible is characteristic of a small group. ~~In several cases, numbers given in different parts of the pentateuch are in contradiction.~~ The number 600,000 could just be an exaggerated number to show many. The same word is used for 6,000 and family so the Bible could mean 600 families. *(objection - such an exact, odd number as 603,550 men should not have been used in this case)*

ORA'S IDEA OF THE EXODUS- Immigration should not be limited to one or two Exodi but was probably a prolonged exodus. The religious experience of being delivered from bondage was so great that the Israelites began to tell stories of miracles occurring along the way. When looking backwards, there is a tendency to see an event spread out over a long period of time as a single event occurring at one point in time. No one route fits all ~~the~~ the descriptions in the Pentateuch so all routes must have been taken. Two traditions are mingled in the account, one of accurate dates, with 3 days to reach Gannan and one of a long period of time (40 years). Neither is an accurate figure. Different groups took different lengths of time.

PROBLEM OF THE ROUTES

SOUTHERN THEORY- Christian pilgrims walked along the coast and inland to Mt. Sinai, a very logical but roundabout route. Midianites did roam in the far south and the very Mountainous region, containing the only impressive

mountains of Sinai, could be the mountains of God.

NORTHERN THEORY- The miracle of parting the sea can be logically and rationally explained if this route was taken. This was the shortest route to Canaan. Quail are only found in the far north near the sea shore. Any peaks, even low ones would be more impressive in a very large, flat area. In the south, there are so many peaks that ^{maybe} no one would stand out as impressive to the Israelites.

CENTRAL THEORY- The description of the desert is very dry and terrible with little water. The people are always complaining about the lack of water. There is some water in the north and the south. The Exodus carries hardly any mention of the sea along the route. Why would the people remember with lust the fish of Egypt if they were taking the northern route? The central route is good for pasturing but the mountainous south is difficult to pasture sheep on. No matter which route the Israelites took, one cannot ^{dismiss the use of} ~~dismiss~~ miracles and the presence of God if the Exodus account is to be trusted.

The NORTHWESTERN NEGEV is in many ways similar to the Judean wilderness and the barren, gray-white, chalky, ^{rounded} ~~rounded~~ hills reminds me of the Wadi Kidron. In other places, the country is just flat and barren without a tree. Only small bushes are scattered across the land,

GRAPE HEAPS- In this area small heaps of stones are to be found on some of the slopes. They were thought to have been built to protect the roots of vines (Job 8:17). When several of the heaps were opened, no remains of vines were found. A new theory which has gained general acceptance among archaeologists is that these were part of the Nabatean drainage or irrigation system. Stones, which tend to hold water back were piled in heaps so that more water would be drained into the valleys which could

then be farmed.

NITZANA, in Arabic means, "the cool springs". The border between Israel and Egypt prior to 1967 passed through this area. The site was occupied during Hellenistic times by the Nabateans and through the Roman-Byzantine period, flourishing between the first and ninth centuries. It is especially noted for its Papyri, 150 of which have been found from the early Arabic period, sixth to seventh centuries.

DIVISION BETWEEN EGYPT AND ISRAEL- The southern boundary of modern Israel up to 1967 was the result of an agreement in 1906 between Britain and Turkey. It was an artificial administrative division never internationally recognized. There is no geographical difference between the Negev and Sinai. The Wadi El Arish would make a much more logical boundary. This is the largest drainage system in Sinai, draining one third of the Sinai or 20,000 square kilometers. This wadi has been identified with the River or Brook of Egypt given as the southern boundary of Judah in the book of Joshua simply because it is the only major wadi between southern Canaan and the Nile.

Along this stretch of the road ^{east} ~~east~~ of the old border, sand dunes are piled high immediately to the north of the road. A series of low sand dunes stretch as far into the distance as one can see, some with desert brush growing on them. It fits perfectly my conception of the Sahara desert except the dunes here are a little too low. Occasional lone palm trees and small herds of camels can be seen. Much of the area is still mined. Rusted out tanks and bits of war implements attest to the fact that this worthless land was the scene of heavy fighting. Battles were fought every few miles along this route.

JEBEL LIBNAH, mountain of the three year old camel, stands near the

junction of the central route and the road going south to the Pilgrim's Route. Whoever holds this road and the junction ~~and the junction~~ controls the Sinai. One cannot ever go a few meters off the road without sinking into the deep sand. At this point we turned off the ~~Central~~ Route. The landscape is very bland and flat. It gets boring looking at the same uninteresting scenery after a while. A few darker ranges of hills can be seen in the distance.

The TAMARISK TREE plays an important role in the production of MANNA. ^(according to one theory) An insect living in the trees bores into the trunk and lives off the sap. The sap has a high sugar content, higher than the insect can use in its own body and so it excretes a sugary substance in small white drops. Manna is only produced in April, May, and early June and it can only be found in the early day ^{before the ants} ~~before the ants~~ start eating it. There is a dominant ^{local} Christian tradition that manna is angelic bread from heaven. The quantity of manna in even a good year, that is a rainy year, would not exceed 100 kg on the whole peninsula ^{per} ~~per~~ day. Bedouins mix manna with water in the proportion of 1:1 to keep it from getting hard. Recently it was discovered that manna is produced by other smaller bushes and could be a much wider spread phenomena than previously thought. Tamarisk trees are taller here ^{than down farther south,} because of the good underground supply of water. In other places they are small and scraggly. The leaves of this tree are more like scaly clumps of green twigs than anything else. The small surface area of these leaves and their thick skin help the tree conserve moisture. The abundance of these trees in this area is a factor favoring the Central Route as that of the Exodus.

DEHYDRATION- The humidity is so low here that tremendous amounts of water leave the human body without one feeling sweaty or noticing the water

loss. Water evaporates instantly from the skin. One is never thirsty enough to satisfy his body's need for water. The average person must drink 1/2 to 1 quart of water per hour just to maintain the body's level of water. Symptoms of dehydration are head ache, apathy, sleepiness, nausea, and poor spirits. This might partly account for but does not excuse the constant grumbling of the Israelites. Bedouins tend to move slowly because most of them are in a state of dehydration. The breeze is very warm and dry, but it keeps us cool enough to remain comfortable with our coats on into the afternoon. Even with a haze hanging over the horizon, the reflected sunlight off the chalk white landscape is almost blinding to the eyes. Heat is very penetrating, especially noticeable on the exposed skin.

WAY OF MT. SEIR- We turned onto the pilgrim's route. The Mitha Pass is not very steep compared to most mountain passes but it is the only level route through the hills. The pass has had great strategic importance in modern and ancient times. As far back as the fourth millenia, Calcolithic people inhabited this area. In the 1967 war, 700 tanks were left by the fleeing Egyptians. A huge field, many acres of left over equipment of the Russians took Israel several years to clear away and pieces of rusted equipment still dot the fields.

JEBEL SIN BISHER is the site of Mt. Sinai according to an Israeli scholar advocating the central route as the path of the Exodus. The mountain^s is literally three days from Goshen. Moses requested of Pharoah a three day journey into the wilderness to sacrifice to the Lord but if this number is taken in a typological sense as we use the word, "million", we are not limited to this mountain in our search for Mt. Sinai. Jebel Sin Bisher is rather low and uninspiring for a mountain. The terrain along the Gulf of Suez is rolling hills.

RAS SUDAR is an early but exploited oil field along the coast.

EIN CHAWARA, just a little farther south along the coast consists only of a clump of palm trees but this has been identified with the Waters of ^{Marah} ~~Mosbah~~ ^{Ex. 15:23-25} (~~Exodus 17:7~~) according to the Southern Theory. Clear, flat gypsum crystals of all sizes, some as big as one's hand could be found on the sand surface. The area is rich in gypsum and was even used commercially by the Egyptians. Dissolved gypsum makes the water brackish and gives the drinker diarrhea.

ARENDAL, a very large oasis farther south is identified with Elim (Numbers 33:10) according to the same theory.

ABU ^{Znina} ~~ZNAMA~~ The Egyptians beginning in 1913 mined manganese ore and shipped it from here to Suez. No spring or well existed to draw a population. It has always been just a mining town. Ten km south of here the ancient Egyptians had a port for shipping turquoise. Modern Egyptians were only able to mine the manganese because of their efficient mining equipment, the cheap Bedoin labor, short routes, and an efficient transportation system run by burning gas from the oil fields.

MADAFI is the local social institution of the Bedoin. Strangers go there to meet villagers. Guests may stay and buy coffee and flour for making their pitas. The Madafi is usually built next to the Sheik's tomb. Only important Sheiks involved in prophecy have the honor of burial in a tomb.

Inland from Abu Znana we travel up a wadi. The country is very wild and rugged. Signs of ^{geological} ~~geological~~ uplift are still clearly visible. There are no rounded hills but instead sharp cliffs and sharp crests to the hills. Gulleys erode all the way up to the top of the hills on all sides. The stones are mostly sedimentary. One can see the bands or layers very clearly, white chalk, and various shades of red, brown, and gray-green. Sand and

sharp rocks cover the floor of the wadi. The wadi opens up into a broad sandy plain on one side and a sheer cliff on the other. We are at the edge of the central plateau ^{which drops} ~~which drops~~ off in a 1000 meter sheer cliff. Deep red sand with sharp black stones scattered over the top are heaped up against some of the rock formations. The sand thins out and the plain becomes a bed of sharp black and red rocks with just a few scattered trees.

^{BIR}
~~BIR~~ NASIB (WEST)- A red plaster, clay and stone wall encloses an area of tall lush palm trees. Arab flat clay huts cluster around this enclosure. The well, not over 20 feet deep, a wide oval pit with wooden crosspiece, is just outside the wall. A five gallon tin with rope attached serves as the dipper. Boys search the hills for turquoise stones and trade them for balloons or candy. Once the other tour bus left and our group had mostly dispersed, the women covered in black and wearing ^{golden, glittering bangles} ~~beads, ghaggharunghekas~~ began coming out with little children to fill their water containers. One Arab woman whom I offered cookies, would not take one for herself until her children each had been given a cookie. The romantic concept of the Bedoin without a home, roaming around in the desert is completely wrong. A Bedoin might have a home or even two but he often leaves them to wander. So long as a person defines himself not by a location but by tribal ~~and~~ association, he is a Bedoin. Wandering is done by Bedoins within well-defined tribal areas. ~~A great copper~~

BIR NASIB IN ANCIENT TIMES- A great copper slag heap lies piled against a nearby hill. The Romans and Byzantines may have contributed to the heap but it is also the work of the ancient Egyptians. Some small deposits of copper are nearby but so far no large pockets of the ore have been found locally. Copper was probably brought here for logistical reasons. Many ^{acacia} ~~Acacia~~ trees then grew in the wadi to be burnt for smelting heat. ^{Water} ~~Water~~ was available for settlement and the site was relatively near a

waterway. The raw ore was smelted here and only refined copper was carried to Egypt. Egyptian inscriptions are also in the area, ^{Copper and turquoise} ~~Agassian and Agassian~~ ^{were eagerly sought out by the ancient Egyptians in Eastern Sinai but the ~~small quantity~~} ~~Agassian and Agassian~~ ^{because of the small quantity and poor quality of the ores makes it unfeasible to mine them today.}

BEDOIN CONCEPT OF PLACE NAMES- Bedoin think in terms of areas. Often all the wadis and mountains in one area have the same name. It is not important or even conceived of that each mountain should be categorized as the western mind demands.

BEDOIN WOMEN- No polite Arab under desert rule would ever approach a woman. They dress in black so that they can be seen far off and men have no excuse for mistaking them. Arab men may wear any color combination they choose. In a society where women spend much of their time out in the field tending animals, or drawing water, they are protected by the threat of severe penalties to be imposed upon anyone who harms them. The death of one woman is punishable by taking the lives of four men from the tribe of the killer.

SERABIT EL KHADIM (hump + slave)- As we climb up a wadi to the temple site, the colors and formations of the rocks totally absorb one's attention. The yellow sands of the desert plain and lower wadi floor contrast with the shiny tinted black igneous rocks and black metamorphic rocks of the lower levels and the red, white, and black sandstone of the upper mountain levels. The floor ascends abruptly above the desert sands to a height to ~~as great~~ ^{high} as Masada. On the highest levels, pieces of black sand stone are littered over the red sandstone layers. The wind blowing against against the stone cliffs and hillsides erodes the sandstone into fantastic shapes, twisted holes, arms, and hollows, exposing the layers and streaks of orange, red, yellow, and white. In other places, the softer layers

above and below a strata erode away, leaving thin protruding shelves of stone. The sandstone is treacherous to walk on. Its gritty surface gives an excellent foothold but the thin shelves of rock are often ready to break off with any little weight placed on top of them. The grains in the sandstone vary greatly in coarseness from layers the size of grains of sand to layers of small pebbles cemented together. The wadi here looks similar to Nahil David, instead of ~~uniform~~ ^{a uniform} incline, the floor is made of a series of successively higher platforms with cliffs separating each level. At the top of our climb is a plateau cut into by many wadis similar to the one we traveled up.

The EGYPTIAN TEMPLE sits on this plateau. The hills and gorges all look so similar that the temple is hard to find. Egyptians came to mine turquoise. The temple was erected for prayer to the goddess Hathor, patron of mining and foreign affairs, for help in finding turquoise. Her most outstanding features are the cows ears and two curls ^Ω by which she can be readily recognized. At first only a cave was dedicated to her but over many generations, a complex of rooms was built. Each strong emperor sent expeditions out and had rooms built, named after him that he might be remembered. The plan of the temple became that of a string of rooms, like a train. Never did a colony occupy this site. Expeditions were only sent out during the mining season, from January to March. After this, the weather becomes too hot. The temple was standing and in use at the time of the Exodus but the local terrain is so rugged and divided into gorges that a few Egyptians would pose hardly any threat to the Israelites' safety. If the Israelites came this way, they could easily get around the temple without being seen. From 300 to 800 workers a year came here to mine and at least 1,000 donkeys were needed to carry water from Bir Nasib, a three hour walk. The temple was used for 1,000 years, until the Egyptians

pharaohs became so weak that they could no longer hold Sinai, about 1250. Turquoise was valuable only for its aesthetic qualities. Except for a smaller temple at Timna, this is the only Egyptian temple outside of Egypt proper. The style is not purely Egyptian, as it had to be modified to fit the terrain and local Semite labor used in the building also had its influence. The turquoise mined in this area is a poor quality stone which fades after a few years, so the Egyptians had to keep coming back for more to replace the faded stones. Free standing steles stand at the entrance and around the sides of each room. Each stele was inscribed with a frame. Pharaoh is pictured with hands lifted up, making an offering to Hathor. Statues of Hathor are scattered throughout the rooms.

PROTOSINIATIC INSCRIPTIONS- Nearby are the turquoise caves. Turquoise is always found near a yellow vein of sandstone. The marks on the sides and ceiling are the work of steel chisels. Five symbols inscribed to the left of the entrance are the forerunners of our alphabet. Discovered in 1904 by Petri, they are one of 30 protosiniatic inscriptions in the world and one of 3 in situ. Writing developed independently during the fourth millenia in Egypt and Mesopotamia. From a pictorial system evolved a syllabical system and then the abstract idea of representing sounds with letters and an alphabet. Semites worked these mines for the Egyptians and came in contact with Egyptian ideas. The Semites influenced by the Egyptians, adopted the signs of the Egyptians but did the abstract work necessary for an alphabet themselves, creating a phonetic meaning for the Egyptian symbols. The first alphabet originated in this area and these five letters are a record of this development. A Semitic miner between 1900 and 1400 B.C. but probably in the fifteenth century, contemporary with the Exodus, carved the letters into the wall. According to one theory, the inscription reads roughly, ^{"el dēgālām"} "Eldēgālām" or "God, the eternal (has been

Cave M



= ?
= i
= lamed
= water or māim = M

here). The Semitic counterpart of Hathor, Baalat, female companion of Baal, was worshipped by the

local Semites. This word is related to El, ~~the~~

~~the~~ The statement, "God is eternal",

does not necessarily mean God is one. It could mean Hathor is eternal

In another cave, L, only a few feet away is the inscription:

According to oneththeory it reads, "(Listen) men, eight portions

(of turquoise you shall give to _____), I give my approval,

Abed, Shāmm Rāv (head of the workers)F. Writing was in-

vented for very practical everyday uses and to preserve great

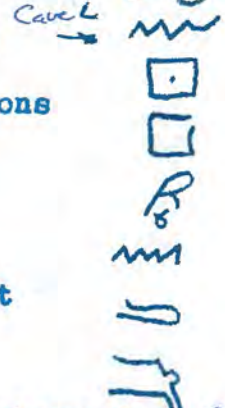
ideas for following generations.

The ACACIA TREE was to be used in the building of the tabernacle. ~~It~~

Its branches spread out like an umbrella to make shade for its own roots and protect them from dehydration so that the crown often looks rather flat. The tree has also been endowed with very hard, very sharp, and very long thorns which cover the branches and protrude much farther out than the small leaves. Animals have learned to eat them, thorns and all. The tree has a habit of dropping its thorns so that one must be careful to clear away the top layer of soil before sitting down under one.

DESERT LAW: POSSESSION- Bedoin do cultivate areas but do not necessarily live ^{beside} ~~beside~~ them. When a Bedoin plows a ditch across a wadi, it belongs to him for that season and no one else may use it even if the Bedoin does not return to plant for several weeks. Desert law says that anything lying on the ground does not belong to anyone but an object placed in a tree or on a pile of stones is personal property and may not be touched.

CAMELS are an important part of the Bedoin's possessions. They can go up to 20 days without water. Their body can vary in temperature in a 10 C range without adversely affecting them. The human body requires great




quantities of water in this climate because it must maintain a constant temperature and evaporation of water is its primary mechanism for cooling. Good camels are for riding. Pedigree camels are white, they can trace their lineage five generations back. When bargaining for a pedigree camel, the owner holds a stick in his closed fist. With the ~~opening~~^{naming} of each previous parent, he releases one finger. When the stick falls to the ground, the camel is considered pedigree. Poor camels are for bearing burdens.

Egyptian presence was felt in Sinai during the third millennia. The Egyptians established their rule over the Semites in Sinai but the Semites were there first. The Egyptians may have had a good working relationship with the Semites, paying them for their services and administrating them through local ~~chiefs~~^{chiefs}. One inscription has been found reading, "..... prince of the Semites"

The MIDIANITES according to an old tradition occupied the west coast of Arabia. Their center was in Arabia but they were nomads and often wandered on their borders including Sinai. We may assume that southeast Sinai was Midianite territory but there is ~~no~~^{no} reason to assume the Midianites had organized into a nation. Very little is known about them.

TUVIA'S FOREST is a series of clumps of heavy black stone pillars up to three feet high with broken pieces of pillars strewn all over several hills. Reed vegetation once flourished here, minerals became attached to the roots and eventually encased them. Many broken off pieces look like ice cycles with holes in the center, very dense with a high iron content.



BEDOIN TENTS (Beit Sharf, House of Hair)- is used to differentiate from the Bedouin real house of stone. The tent is woven by the women, and divided into 3 compartments. The central pole is called, "wasip".

One room is for animals. In cold weather the goats are tied inside the tent. A tent is private and outsiders are rarely invited inside. When visitors come, men sleep with the man of the house and women sleep with the wife in separate rooms. It is considered rude to approach from the open side of the tent. One must cough or create some other noise to make his presence known.

CALCOLITHIC SITES- Numerous rocky slopes ^{alongside} ~~alongside~~ bends in the wadi are places of late Calcolithic or early bronze settlement. Tumaloose are heaps of stone with religious significance attached to burial. Rocks placed in circles were used to hold tents down. With very little searching we could find flat knives, axes, scrappers, and hammers just lying on the surface. Only one such site has been excavated in Sinai.

WADI SIDRI* WADI SEIKH- The floor is flat and white. The hills are black with orange and red sand heaped against the sides.

MUYAT KURAK (watering place)- is the home of the Gualcha tribe, about 60 members, of southern Sinai. There has been little contact with tourists because only four wheel drive vehicles can reach the village. About ten of us flocked over to see some women drawing water from the village well. The well with a tripod built over it, is well ^{outside} ~~outside~~ the small cluster of stone and mud houses. We were expected to give them presents because we have and they do not and because we are using their land just by driving through it and using their acacia tree by eating under it, but they did not stretch out their hands to ask us to give. After the presents stopped coming (shoes and red cloth were favorites with the women and noise making balloons with the children) the women told us to leave. This is not impolite. We were interfering with their work by talking with them. The three women had remained sitting and standing idly

eying us. To be seen working is degrading but begging is honorable. It is not customary for Bedouins to give thanks. When sufficient payment had been made in candy and balloons, we were free to take all the pictures we wanted.

On the border between the sandstone hills and the Great Masif of southern Sinai, the terrain changes from low, rugged hills of colored sandstone to high solid red granite walls closing in around the wadi. The wadi floor remains flat and covered with white sandy soil, with areas of large rounded rocks, low bushes and acacia trees. The change in the sides of the wadi is ^{sudden} ~~and~~ as the walls of the canyon rise spectacularly. We leave Wadi Saikh and the canyon effect to enter a wide valley with ^{low} ~~low~~ granite hills, Wadi Merara. From now on throughout southern Sinai, DIKES are present in the granite. These are eruptions from the inside through cracks in the granite, usually black, crossing the hills in streaks. Positive dikes are harder than the neighboring rock and thus form layers of protruding stone, whereas negative dikes are softer and form an indentation.

WADI MERARA, valley of the caves, was an early turquoise mining center for the pharaohs. Inscriptions at the entrances have been either moved to Cairo's museum or blown up by Bedouin in search of turquoise.

WADI MUKHATIB, valley of the inscriptions or writings. The inscriptions in this wadi and in most parts of Sinai are Neosiniatic. They date from the second century A.D. to the present. The contents of such inscriptions are ^{always the equivalent of, "I, _____, have been here", fulfilling} ~~like a base between~~ ^{the need of travelers to leave behind a record of their presence. Most} ~~inscriptions~~ ^{inscriptions} are Nabatean, the script looking similar to Arabic, dated to the second and third centuries A.D. It is a riddle why all Nabatean inscriptions are ^{from} ~~from~~ this period when ^{their} ~~the~~ ~~their~~ center was destroyed by

the Romans in 106 A.D. There are several theories that attempt to explain them:

1. The Nabateans were here for commerce, to lead caravans. Objection- The inscriptions are not limited to the main routes but can be found even in remote places.

2. The names may indicate possession. Objection- Clusters of names on the same rocks make this illogical.

3. The Nabateans may have had a holy mountain in Sinai, the center of their cult. Objection- This does not explain the existence of names all over southern Sinai.

4. The best theory so far is that mining activity was renewed about this time which would explain the presence of names in the mountainous south and the absence of names in the north. Probably some are from pilgrims and caravans.

The value of the inscriptions is mainly historical, showing the development that led to the Arabic script. The private nouns used by a culture tell us what things the culture valued. In their enthusiasm to find traces of the Israelites, many early scholars interpreted the inscriptions as belonging to the Exodus. Patina, the process of tanning exposed light colored rock over the years, can only aid paleographers in determining the relative dates of two inscriptions, not in giving an absolute date for inscriptions. Patina is a poor criterion for dating because inscriptions ^{turn} brown after only a few years.

A BEDOIN GIRL, 12-13?, had burned her foot by stepping on hot coals. The Bedoin after an injury continues to carry through his duties as though nothing had happened. What is a hardship in western culture is commonplace for the strong Bedoin body. When we offered to take the girl to the hospital, the father complained of his hoarse throat that had bothered him

for over a year. If we could not give medication to heal the foot, it was not worth the inconvenience to have her taken to a hospital.

WADI FEIRAN, wadi of the mice, is one of the largest in Sinai.

CARVINGS are all along the sides of the wady. The same style is used in modern as in ancient inscriptions. The influences of the jet age are already ~~influencing~~ ^{penetrating to the} children ^{of} in Sinai. Beside the Nabatean camel inscriptions on one rock are modern children's carvings of jets, tanks, and cars. Carving inscriptions has become an industry. Many modern white carvings and paintings have been created to attract tourists and money. The Bedoins still have sense, not like tourists, to carve to the side of Nabatean inscriptions.

EIN FEIRAN- After traveling for several hours, seeing nothing but barren rock and white sand, the bright green palm trees of the oasis appear. The oasis is scattered in patches, each with a stone and mud wall encircling a palm grove. This is the largest oasis in Sinai, 8 km. long. Feiran is a good example of how an ancient name is preserved. It was the name for the whole peninsula in Biblical times and Sinai (Sin) was just a name for the area around Mt. Sinai. Gradually Feiran became associated only with this place. ~~Modern Arabs~~ ^{Modern Arabs} forgot the historical explanation behind the name but the holes in the cliffs around the oasis reminded them of mouse holes and the existing name was the same sound as their name for mouse so the name remained. The oasis was in existence during the Biblical period but nothing has been found before the Hellenistic period. It was a flourishing city and a See from the fourth century onward. During Roman times, the third legion was stationed here. In the Byzantine period from the third century onward, Christians came here to study the Bible and get close to God. They identified the mountains with Biblical names.

The population of monks and hermits became too great for the oasis to support so some moved farther up the wadi founding their own community and identifying Jebel Musa as Mt. Sinai. In the Arab conquest, the Christians were driven out and the churches destroyed, Jebel Musa becoming the only Mt. Sinai. From the second to the seventh centuries, Mt. Tahoma, immediately behind the oasis was identified as Rephadim. There were five chapel stations on this mountain. Pilgrims would stop at each station to pray or read appropriate scripture in their climb to the summit. The five peaks of Mt. Serbaal, (palm tree gardens of Baal), 2,070 meters, is south of the oasis and was believed to be Mt. Sinai from the second to the seventh centuries. Mt. Serbaal is the closest major peak to the coast and the first major peak one sees when traveling along the coast. It certainly looks impressive enough to be Mt. Sinai. NUTROOT are the holes in the sides of the chalky cliffs alongside the wadi where the early Christian hermits lived in very austere and harsh conditions. Ein Feiran is now the cosmopolitan oasis of Sinai. All the tribes of Sinai have representatives here. Great tribal decisions are made here. At the west end the oasis ^{consists of} ~~is~~ only groups of small separated clusters of trees but to the east are long stretches of ^{densely} ~~densely~~ packed palm and date trees which fill the wadi. These long stretches are intermittently broken up where the water table drops to a lower level.

FLOODS- Every few years a major flood covers the area. The wadi ~~drains~~ ^{drains} a very large area and in all this area there is no ^{soil} ~~vegetation~~ above the wadi floors), to hold down the water. Within a few minutes, without warning, the flood is upon the oasis, covering the wadi and rolling boulders. Eight people were killed in the last flood in 1968. Within a few hours, the oasis is dry again.

CHARACTERISTICS OF BEDOIN CULTURE- MECHANICAL GENIUS- They have a strange ability for repairing the mechanical, making musical instruments out of junk and repairing cars with wire and tin cans. LACK OF AMBITION- Their vitality for building and doing comes when outsiders with new ideas, motivation, and ambition are attracted to the area. When left to themselves, the people are apathetic and stagnant. The desert changes very little. Sinai is once again coming to life with the presence of tourists.

PARENTAL RELATIONSHIP- Up to age 4, children are in their mother's care. After this boys are transferred to their father. A close tender relationship to the parents continues throughout childhood. SEX ROLES- Duties are very clearly defined. Taking the goats out into the field and tending them is woman's work. Men are ashamed to be seen doing this. Bedoin culture assigns men the role of warrior-protector. All dealings with strangers are his business. Women are to stay out of sight when strangers are present. Men even cook when strangers are in the house. As protectors, they must stay at home. Even if they are sitting around drinking coffee, appearing to be doing nothing, they are fulfilling their primary responsibility if they are at home. Men spend part of their time over coffee, asking questions of strangers and by this maintain an excellent intelligence system. News of approaching strangers travels very fast. EDUCATION- School is free but ~~many boys do not attend~~ ^{even many boys do not attend}. Women are happier if they have not gone to school. Education is not of any use to them in Sinai and will just make them dissatisfied with the harsh local life.

PRESENT ORIENTATION- Bedoins cannot resist money and will sell anything to get it. They do not think far enough ahead to realize they will miss their possessions if they sell them. In some ways the society is psychologically more healthy than western civilization. The Bedoins do not share our inhibitions. They are able to touch each other more freely and

laugh more. The pace of living is slower.

DATES- Climbing a hill, we get the full impact of the oasis with green date palms filling the wadi and stretching as far as we can see, up to the bend in the wadi. The bedoin farm the wadi inefficiently, allowing an equal number of female and unproductive male trees to grow. A more efficient ratio would be 90:10. The dates here are dried and look inedible. They have a higher sugar content and less moisture than El Arish dates. The fruit is ground into a pulp. Leaves are woven into baskets, stems from the beams and crosspieces of houses and the remainder is burned in cold weather so that every part of the palm is used

An **ANCIENT LAKE** once filled the Ein Feiran area. Remains of this lake are the yellow-white chalky hills along the sides of the wadi, very similar in composition and appearance to the cliffs of Qumran. Bedoins never build beside them because of danger of collapse. Behind them tower the higher red granite mountains. The higher water table that makes the oasis possible is also an evidence of the lake. The acacia tree is a good ^{indicator} ~~indicator~~ of elevation, growing only between 0 and 800 feet. Acacia trees stop growing in this wadi as the level of the floor climbs toward Mt. Sinai Katherine's.

^{KARNAVET} ~~KARNAVET~~ Black dikes running along the ridges of red granite hills give the effect of a cock's comb. Dikes become more common and show up in the shape of crosses and x's.

FOOTPRINTS outlined by carving into the rock are found all over Sinai. Their exact purpose is unknown but they may have been used to seal marriage contracts, the father of the bride's print, signifying his approval, being placed between the print of ^{each} ~~each~~ partner.

~~TARFA EL KIDREN~~ (tamarisk- 2 bowls, may have gotten its name from the Tarfat el Kidren

process of mixing manna in a 1:1 ratio with water.

MOSES SEAT- A polished granite stone shows that local tradition has been very influenced by ~~local tradition and that local tradition is a~~ mixture of Moslem, Jewish, and Christian traditions.

NEBI SALEK is the only bronze age site in Sinai yet excavated. A chain of square-round rooms with adjoining kitchens are situated around a larger central, round courtyard. This is one in a chain of many such stone settlements. Its style is similar to Arad and shows that the cultural and architectural links of this area were with the north. Commercial links were with Egypt. The main means of subsistence for the area was goat grazing.

SALAKH was an important sheik mentioned in the Koran. Sheik tombs are always on the crossroads of two wadis, permitting easy access. The cemetery around the tomb can serve several tribes and the area is recognized as a meeting place for the tribes of an area.

ST. KATHERINE'S- The church was built about 547 in memory of Justinian's wife. In the original basilica, simplicity was emphasized. Six solid granite pillars on each side of the main sanctuary hold up the six wooden beams that support the ^{roof} ~~ceiling~~. At the end is a hollow with a beautiful inlaid mosaic. In the last 200 years, additions have been made totally out of character with the Justinian architecture but more in keeping with eastern tastes. An elaborate Iconostasis, partition of Icons, was built in front of the mosaic, the columns were painted white, a lower plaster ceiling with painted sky, stars, sun, and moon was added, along with a marble floor.

METHOD OF BURIAL is part of the monk's conception of life and death. The monks practice secondary burial. When one dies, his body takes the

place in the five man cemetery of the oldest body. The oldest bones are taken out, dismantled and become one of many in heaps of arms, legs, and skulls. As they were one in life, so they wish to be one in death and to further illustrate that man is only flesh and bones. Secondary burial may have been started out of necessity, to protect the bones from outside attack, and later a philosophy was developed to justify it.

EFFECT OF TOURISTS- The monastery was equipped to handle the steady trickle of pilgrim's that came to visit in past centuries, but the current flood of tourists has destroyed the atmosphere of the monastery. Young, inexperienced monks deal with the tourists, rushing them through the grounds in groups. As many as 100 tourists a night, flying down from Jerusalem, stay in the monastery dormitory. The tourists are disappointed with the monastery. The monks who came here for serious prayer and study are annoyed to have so many tourists disturbing them. One gets the impression that the priests care only for money, but the tourists have behaved so badly that the monks were forced to fence in the stacks of bones.

St. Katherine's is built in a wadi, against the side of a ^{sharp} jagged granite peak. The wadi comes out onto a small plain on which one scholar calculated that three million people could camp and each would have one square meter of space. All around this plain rise high red granite mountains.

PROBLEM OF MT. SINAI- There are two methods for determining the ~~the~~ location of Mt. Sinai. 1) Setting up a route and looking for a mountain along the route or 2) looking for a certain kind of mountain regardless of the route. Some scholars believe Mt. Sinai must be volcanic because of the smoke, quaking, and thunder mentioned in connection with it in Exodus 19. The peak was most probably in southern Sinai because the only

inspiring mountains are here. Serabaal is the first and most impressive mountain near the coast in the Israelite's flight from Egypt. At Jebel Musa there is much water for gardens. The Davidic monarchy may have obliterated all traces of Mt. Sinai to protect Mt Moriah's reputation. There is no mention of Mt. Sinai in the Bible after Exodus 19. The name Horeb is a description of an area, meaning "dryness". It may be a description of the area ^{around} of Mt. Sinai.

BEER ZAFRA (yellow) is a typical Chalcolithic site established at the junction of two important wadis, Wadi Saal and Wadi Hajaj. ~~A sand plain~~

JEBILYEA-, numbering 1,000, are the newest tribe of Sinai, descendants of 200 Roman soldiers brought in from Eastern Europe by Justinian to defend the monastery. Their relationship to the monastery has traditionally been one of slavery. The monks have just paid them bread for their work but they have also had the security of the monastery in times of distress. Gradually they converted to Islam but they continued to ^{serve} ~~serve~~ the monastery. Israel offered them jobs after 1967 and made them less dependent on the monastery, which will never again be able to bring them back into serfdom. The relationship of the Jebilyea with other tribes is poor. Daughters of the Jebilyea are considered beautiful. Bedouin will not give their daughters to sons of the Jebilyea but will let their sons marry daughters of the Jebilyea. They are not a fighting tribe but produce the best builders, best medicine men, and best writers because of their contact with the ~~the~~ monastery. The monastery does not consider its mission to convert the tribe but until 1967 the two were dependent on each other.

VEGETATION, RAINFALL OF SINAI- About 1 1/4 inches or 30 mm falls in the higher mountains, and less in the rest of Sinai. Vegetation of St. Katherine is typical of the steppes. The Rodim bush, producing beautiful white flowers this time of year, is very useful to the Bedouin.

Its thin leaves can be used to ignite fires, and its stems can be used to make charcoal. This is the bush that has been scattered throughout most of the wadis we have traveled through. The Acacia tree's roots go down 10-20 meters deep. A few edible plants grow in Sinai but not enough to survive on. The Bedouin use them as herbs. Bedouin are dependant on the dates from oasis, goats, fish, and flour from trade. Grazing of the goats and burning of the Acacia trees to produce charcoal used up much of the vegetation. There was much more vegetation in the time of the Exodus but very little climatic change. Every area has its own characteristic native plants. In open wide plains, the wind can blow more freely and it gets colder.

ANIMALS- Hyena, fox, and wolf and maybe tiger are native. There are rumors of tigers and tiger traps are still made by Bedouin. Snakes, lizards, mice, and birds are eaten. Rabbits, mountain goats, and gazelle were hunted out by Bedouin and pilgrims so that they are now extinct.

NAMOS (plural of fly)- are all over Sinai but more than 30 are found on several hills in this area, untouched. Bedouin legend says they were built by the Israelites to protect themselves from flies and mosquitos. *Local stone slabs were built up*
~~The~~ ~~structures~~ ~~were~~ ~~built~~ ~~up~~ ~~in~~ ~~a~~ ~~circular~~ ~~way~~ ~~gradually~~ ~~coming~~ ~~together~~ ~~at~~ ~~the~~ ~~top~~ ~~in~~ ~~a~~ ~~domed~~ ~~roof~~. All entrances face west or south-west and all have small entrances, often too small to crawl through. Animal and human bones are found inside. The flat sandstone slabs of which the structures are built blend in perfectly with the sandstone cliffs in the background and the loose slabs of sandstone lying all around. Secondary burial was practiced here. Once a year, tribes would come here to bury their dead ⁱⁿ (a representative part) in this holy spot and bring gifts of vessels, beads, shells, etc. to the tombs. Each Namos was a family ^{or} tribal grave. Beads

are different from Namos to Namos, each tribe apparently had its own design. In the early bronze period, it was very important to have a central holy place for burial. The Jewelry here is typical of the Early Bronze age, 3,000 B.C. A society built these who attached great importance to having holy places for the final resting place of bones but did not mind leaving them for long periods of time and living far away. An example of this custom is found in the burial of Joseph, Jacob, Issac, and Abraham at the family tomb in Hebron. The architecture is more Semitic than Egyptian and here too, the cultural links were with the north and the chain of settlements from Arad to Nebi Salakh. The Nawamis were ^{used} for a period of 200-300 years by a large population ^{spread} over a large geographical area. In one Namos alone were found 127 representative bones. Most are not found intact because Bedouin use them for shelter and burial of their goats.

WADI HAJAJ, the valley of the pilgrims is rich with inscriptions. Moslem pilgrims took this wadi in their trek to Mecca and early Christian pilgrims used it on their way to St. Katherine's. Camel inscriptions are usually small. Criterion that aid in their dating are: 1) if one is on carved over another, 2) certain world-wide changes that occurred in styles of drawings, and 3) inscriptions of the same period beside them. Popular motifs are camels, ibex, and ships. Primitive drawing only tries to arrest movement, so that palm trees are never carved. The camel is a late development, only domesticated in the 11th or 12th century so those carvings could not be older. Some camels are pictured with square humps. This is the Makmal, a box first used to carry wealthy ladies and later to carry the Koran.

EIN CHUDRA was the first station along the pilgrim's route for Christians coming from Eilat. The Romans maintained the station to control the

east of Sinai and routes into the interior. At this oasis is an abundant supply of water. Shortly after this stop, the pilgrims had to climb a very steep hill and cross the wide wadi in the hot sun, until they had another good place to rest, this time in the shade of the rock walls along a bend in the wadi. Greek Christian inscriptions on this rock date between the fourth and sixth centuries. Hebrew square characters and menora may have been ^{carved} by guides. The menora has only been a Jewish symbol since the second century. Most pilgrims must have been discouraged from the heat and their weariness at this early stage along the route for some inscriptions read; "O God bless my soul, help me", "O God, O Christ, help your servant Theodorus", "O God bless me" Christian symbols for the cross and the trinity are also plentiful. According to the Southern Theory, Ein Chudra, is the site of Hazereth, (Numbers 11:35). Already in the time of Moses there was a tradition of graves attached to the place. The Zani tribe, looked down ^{on} upon by other Bedouin because they are newcomers ^{live here}. They are poorer and beg more than other Bedouin.

WADI HAJAJ- In the afternoon, the heat is penetrating and the sun very bright. The wadi floor is wide and sandy chalky white. The sides are steep, white or light brown in color so that they reflect the light very well. The sky is deep ~~blue~~ blue even though it is the middle of the day. A slight breeze, when blowing, keeps one from getting too hot. It is very barren and desolate.

MUYAT MLEICHES- (good), may be named because of the springs which flow out at the fault between the sandstone and granite. The underground watertable follows the line between the sedimentary and granite because it cannot penetrate the granite. Bedouin do not live here because there is no food for goats but they come as far as ^{away} four km to draw water.

VEGETATION CON'T- Bedouin use the thorns of the Acacia to pierce ears and nose for the wearing of jewelry, and as needles. The Kaper bush bears a soft, red, sweet fruit. Its ^{and like green pieces} leaves can be soaked in salt and vinegar for salads.

NUWEIBBA- A castle was built here in the 1880's ^{as} a result of the border disputes between Egyptians and Turks. It only consisted of a fortification around the spring but that is all that was needed. Whoever controls the spring controls the whole area, so dependant is the local population on the oasis.

The **TIMNA VALLEY** is very rich in copper. A fault in the Nubian sandstone exposes it. There is no mention of Solomon's mining activity in the Bible. The periods of mining activity at this site are; 1) the Chalcolithic or early Bronze age period, 3500-2500, contemporary with the Nawanis, 2) the eighteenth and nineteenth dynasties of Egypt, 1,500-1,100 B.C., contemporary with Serabit, and 3) the Byzantine period. There are no evidences of copper mining during Solomon's time, 960 B.C. A Hathor temple is built against the cliff wall in the valley. Included in the temple are a courtyard and Holy of holies room. Small votive objects and a brazen ^{snake} ~~snake~~ was found here. The presence of this temple here means that Egypt controlled all of Sinai and the Negev at the time of the Exodus. One worshipper of Hathor climbed the hill and left an inscription on the stone wall high above the temple. Pharoah is pictured holding a bowl of metal up to Hathor. Hathor is drawn with crude feet, sun dial on her head and a balance in her hand, possibly weighing men's souls. The pharoah is probably Ramses III who reigned in 1200 B.C. or earlier. This may be the land of Attina he took and if so, he may have taken Transjordan also.