

RANIKOT FORT (It's Odd Location and Why?)

BY
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The only published material on Ranikot Fort is Col. Rashid's article in Iqbal Review; February 1965. I accompanied Col. Rashid and Messer, Sayed Hassamuddin, Ibrahim Joyo and Rabani on a visit to Ranikot Fort in January 1965. We availed of the hospitality of G.M. Sayed at Sann for 2 days. He sent six camels a night before, from Sann to receive us in the morning at the main gate (Sann Gate) of the fort, when we drove in a four wheel drive van. During the light hours of day, we visited some parts of the main fort and also Miri and Sher Garh forts inside. We could not see the other three gates. Col. Rashid had been briefed on the Fort by William Abbe of the USAID, who had visited the fort and taken photographs of it. Most of the information in his article came from G.M. Sayed, who had been visiting the site for years and had also some huts built or repairs carried out in the Miri enclosure, for his casual stay. The names of the fort and the main gates of the Fort as mentioned by Col. Rashid in his article also came from G.M. Sayed. The latter's opinion was that the fort may have been built by Bactrian Greeks, Scythians, Parthians or Sassanians. He narrated the chronology of various rulers of Sindh, which with slight modifications was reproduced by Col. Rashid and is inaccurate. Many of photographs used in his article are from Abbe's collection.

In the present article attempt is made, to rectify the errors of Col. Rashid and give historical and scientific analysis, of the necessity and odd location of this usually big a Fort, presumably the largest Fort in the world.

- 1) Col. Rashid is doubtful of 4000-5000 feet height of Khirthar range as stated by Aitkin. The Khirthars reach a height of about 7000 feet at Darhyaro, and Kutte-ji-Kabar in the northern Dadu and Larkana districts, but the height of hills near the Ranikot Fort is indeed less than 2000 feet.
- 2) Col. Rashid has correctly given the location of the Fort. The circumference of 18 miles as narrated by G.M. Sayed, and 16-17 miles as calculated by Col. Rashid, would actually be between 14 and 15 miles and close to the figure of 15 miles, originally estimated by Alexander Burnes 150 years ago. This figure was adopted by A.W. Huges in his

Gazetteer of Sindh 1876 AD edition, and has now been verified from aerial photographs, as shown in map number 1.

- 3) Col. Rashid's contention that the main gate was the gate of entry, a drawe-bridge and a dam is correct.
- 4) His contention that the draw-bridge and the dam, served to increase quality of water in the valley and to form a lake stretching over the entire valley is incorrect. The levels are such that the lake could not extend more than a few hundred feet without sub merging and damaging the Fort walls, near the gate. The fort walls too are not designed to withstand water pressure of that immensity. The purpose of the dams could not be other than storing some water for use of occupants. This could nothave been an irrigation dam.
- 5) He thinks that the valley (inside the fort) was fertile, flourishing and a great attraction to invaders. To protect themselves from invasions, the rulers built themselves a strong-hold of such unique dimensions. These statements. This statement is incorrect as:
 - a) The total area inside the fort could not be more than about 8.9 square miles or say about 6000 acres of land, and of this, cultivable area, even under best soil and water management conditions, could not exceed 1500 acres, which at the best could support a population of maximum 6000 souls, if the present yields in Sindh were obtainable those days.
 - b) The annual rainfall pattern in Sindh has remained the same during the past 5000 years. The area under discussion falls within 6 inches annual rainfall and there are usually 3 years of scanty or no rainfall in every 11 years. With this pattern of rains, the valley would face famine conditions as frequently, as it does to this day. Today, nomadic population exists in and around the Fort.
 - c) One redeeming feature of the area is that the ground water flows in a line running from north to south through the Fort, near its western or Mohan gate. Part of this water out-flows from a spring near Miri fort. Although the maximum flow is limited to hardly 1/6th of a cusec, the ground is saturated with water below a depth of 65 feet in Miri fort area, as measured by sounding in 1965.

Today this water could be developed, but the ancients neither had adequate know-how, nor is there any evidence that they attempted it.

6) Col. Rashid has correctly named the four gates:-

- i) Sann or the Eastern gate.
- ii) Shah Pir or the Southern gate.
- iii) Amri or the Northern gate.
- iv) Mohan or the Western gate.

These are current rather than ancient names and any attempt in philology to reconstruct the past history from such names, will be misleading Col: Rashid thinks that, as the northern gate is named Amri, so the Fort came to be built when Amri was still flourishing. Amri flourished between 3500-2500 BC. The Fort could not be that old. There was no concept of the Ranikot type of fortifications then. Beside how could it be said that the 5500 years old settlement, buried under mounds, near the present 16th century village of Amri, was also called Amri.

- v) The two forts inside the main Fort shown in map No. 1, have been correctly named as Miri and the Shergarh. The Survey of India maps mention Amri or Aemiri fort instead of Miri, but this is definitely a Surveyors' mistake who usually are unfamiliar with local names and their pronunciation. Miri is a word commonly used in Sistan for a small fort, and I would prefer to use this word. This name may have some connection with sistan, but under the present state of knowledge, I hesitate to insist on such a statement.
- vi) Col. Rashid's description of entrance gate (The Sann gate) of the main fort, the oval pillars, having holes in them, for inserting metallic bars, 16 support metallic or wooden planks for holding water is correct. The present-entrance gate (The Sann gate) is not of the original construction. It must have been repaired or renovated by Talpurs about 160 years back.
- vii) The assumption that the valley was made fertile by rainfall and nai systems passing through the Fort is equally erroneous. The mean annual rainfall for Ranikot Fort is 6-7 inches and the mean annual evaporation is 90-100 inches. The mean of monthly rainfall for the Ranikot area is:

- January 0.1

-	February	0.3
-	March	0.2
-	April	0.2
-	May	0.2
-	June	0.3
-	July	2.4
-	August	2.5
-	September	0.1
-	October	0.1
-	November	0.0
-	December	0.1

	Total	7.3
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inches.

This quantity of rainfall distribution cannot sustain agriculture unless well planned and engineering water conservation techniques are adopted. The ancients lacked such know-how.

The total catchments of Ranikot River outside the western gate as well as inside it, is hardly 48 square miles. Assuming 16.6% as the maximum runoff, from the rainfall of 6 inches in 24 hours, and with the best arrangement to conserve this water, the total water available from runoff would be 3072 or say 3000 acre feet, just enough to cultivate 2300 acres of jawar under, the most efficient conservation techniques. But high evaporation form August to March and low evaporation (April to July) as compared to adjoining irrigated areas, makes it comparatively an unfavorable situation for growing crops on residual moisture of the summer rains.

The probably of rainfall of 5 inches occurring within specified period for Ranikot Fort area is:

-	In 1 day.	1 year out of every 10 years.
-	In 5 days	1 year out of every 5 years.
-	In 30 days	2 years out of 5 years.

But exceptionally heavy rainfall of about 14 inches could occur in July and of 21 inches in August once in 33 years.

This type of heavy rainfall occurring within a short period would definitely cause damage to the gates and wash them away. Such rainfall occurred in Dadu District's Gaj Valley in 1956, causing flood in three Talukas: Johi, Dadu and Sehwan and washing away the Manchar Lake. Loss of such a magnitude was caused only by the great floods of the river Indus in 1942 and 1948 in these Talukas. Since total run of water passes down to the Indus in 2-3 hours, gates have to discharge 25,000 cusecs.

I am inclined to believe that at least once a century rains would wash away the Mohan and Sann gates of Ranikot Fort and therefore they may have gone under periodic repairs and renovation.

Other climatic data of the area are:

Month	Relative humidity	Mean Monthly Temperature	Dew point
January.	59	45	50
February	66	46	50
March.	76	52	40
April	85	55	30
May	93	66	40
June	96	67	55
July	93	76	60
August	91	74	65
September	88	70	60
October	82	60	55
November	72	51	50

The climatic data have been derived from iso-bars of the area and they clearly show that the area could neither have been fertile nor fertility could be brought to it, without transporting water to it from else-where, for which neither the know-how nor the means were available, until the beginning of this century.

- viii) Col. Rashid is correct in assuming that circular bastions or towers are later additions and built by converting the rectangular towers into circular ones, and are meant for positioning artillery fire. He points out that these are built from sandstone and not original lime-stone from which the entire Fort is built. Original towers, rectangular in shape, are placed along the wall, and still exist. The circular bastions exist only near the gates.
- ix) Col. Rashid again is right when he states that the Fort wall was originally constructed for the bow-and-arrow warfare and subsequently machicolation was enlarged for better play of cross-bow and perhaps to accommodate fire arms.
- x) Col. Rashid claims similarities between the Great Wall of China and Ranikot fort and does not hesitate to state direct connection between the builders of the two. This is too far-fetched and sweeping a statement, and would require basic archaeological substantiation to reach such a conclusion.
- xi) The apartments in the small forts of Miri and Shergarh must have been built in the early 19th century by Talpurs and probably kept under repairs by the British at least between 1870 and 1885 AD. The British army never used the Fort. It was the British geologists, namely: Stoliczka, Martin Duncan, Percy Sladen and W.T. Blanford, who worked on fossils of Ranikot, Laki, Khirthar, Nari, Gaj and Manchar formations, and during this period, must have occupied huts (Landhis) in Miri fort for their October-March field trips. The hills on which Ranikot fort stands are about 63-48 million years old and extend from the point opposite of Budhapur to the one opposite of Sann, a total length of about 25 miles. Blanford named rocks of the whole South-Asia after their Sindh parallels, namely: Ranikot, Laki, Khirthar, Gaj, Nari and Manchar series in his text book of Indian geology and these have become scientific names for the whole of South

Asia over the period of a century. The Ranikot series contain fossils of life that existed then, i.e., insects, chonerich, fish thyes (Cartilious) and bony fish. Mammals did not exist then, and birds were evolving. Below the housing quarters in Miri Fort may be debris of old settlements. Debris and mounds of old settlements do exist and the age of the Fort won't be a problem if archaeologists put a few trenches for exploration.

- xii) The entrance to the Miri, which originally had a rectangular tower, was later on converted into a circular one, as has been pointed out by Col. Rashid.
- xiii) Dr. N.A. Baloach in a communication to Col. Rashid has pointed out that the main Fort with two inside mini-forts was built under his personal supervision by Nawab Wali Muhammad Khan Laghari for Talpur rulers. However, the gates, which were done in his absence turned out to be defective and the steel gates with iron bars were washed away by rain water – the bars twisting like ropes. The cost involved was 1.7 millions of rupees. The Fort as reported in Fateh Namah was constructed during the period 1227-1244 AH i.e., 1812-1828/29 AD. A.W. Hughes in Sindh Gazetteer 1876 accepts similar version, to the effect that it was constructed by two of Talpur Mirs in early 19th century. He quotes the report of Captain Delhooste, Assistant Quarter Master General of Bombay army, who stated that the fort was constructed by Mirs, Karam Ali and Murad Ali, in 1812 AD, at the cost of Rs.1.2 millions.
- xiv) Col. Rashid is right in rejecting these versions on the basis of the job requiring huge labor and finances, organization and engineering skill. Talpurs were the ones who got the Fort minimally repaired, but the eastern gates re-done by them were washed away by the heavy rains, which do come probably twice a century, and further work on the same must have been abandoned. Earlier experiences must have been similar, and must have discouraged continuous use of the Fort.
- xv) Col. Rashid, on the authority of G.M. Sayed, considers the main Fort to belong to Scythian period i.e., 1st century BC and the Miri fort to Scythio-Sassanian era, i.e., 1st century BC, to 6th century AD. For his analysis, he gives a chronology of various dynasties of Sindh, which is defective. Below is the correct chronology of the period:

S.No.	Dynasty chronology	Col. Rashid's Chronology	corrected
1.	Achaemenians.	-	519-450/400BC.
2.	Sindh Principalities.	-	450-400-325BC.
3.	Alexander and his successors.	325 BC.	325-323 BC.
4.	Mauryans.	-	321-187 BC.
5.	Bactrian Greeks.	-	184 BC – 70 BC.
6.	Scythians.	200-100 BC	70 BC – 46 AD.
7.	Parthians.	100-50 BC.	46 AD – 78 AD.
8.	Kushans (Upper Sindh).	-	78-175 AD.
9.	Parthians (Lower Sindh).	-	78-283 AD, and the whole Sindh 175-283 AD.
10.	Sassanians.	325-50 BC	283-356 AD.
11.	Vahlikas.	-	356-415 AD.
12.	Sindh Principalities.	-	415-475 AD.
13.	Huns of Malwa.	-	475-499 AD.
14.	Rais.	-	499-641 AD.
15.	Brahmans.	-	641-711 and 715-725 AD.
16.	Umayyad Governors.	-	711-750 AD.
17.	Abbasid Governors.	-	751-854 AD.
18.	Habaris.	-	850-1011 AD.

19.	Soomras.	1250-1310 AD	1011-1351 AD.
20.	Sammās.	1325-1350 AD	1351-1524 AD.
21.	Arghoons.	1350-1450 AD	1524-1554 AD.
22.	Tarkhans.	1450-1550 AD	1554-1591 AD.
23.	Mughal Governors. Upper Sindh.	1500-1700 AD 1591-1700 AD Whole Sindh. 1700-1736 AD and Lower Sindh.	1587-1591 AD
24.	Kalhoras.	1700-1783 AD	1700-1783 AD.
25.	Talpurs.	1783-1857 AD	1783-1843 AD.
26.	British.	1857-1947 AD	1843-1947 AD.

From this chart it is easy to assess, when the Fort could have been built and utilized.

- (a) The British saw it as we see it today. They had no use for it.
- (b) Talpurs repaired it, for what specific state use is not understandable, but, presumably, however, mainly as a hunting station. During the period of its repairs by them, there were three foreign powers to be encountered.
 - i) The Afghans, whose ruler, Shah Shuja, then in exile had occupied Shikarpur and controlled most of the present Jacobabad and Shikarpur districts. Powerless as he had been, he had no means to recover tribute from Mirs, who had kept it in arrears for years. The fort could not have been kept in repairs to be used against Sbah Shuja.
 - ii) As a reaction to the rising power of Sikhs in the Punjab, the contemporary Mirs did virtually nothing

to protect their northern borders. It is true that during the rule of Mir Karam Ali and Mir Murad Ali, Sikhs were no real threat to Sindh.

- (iii) The British, under treaty with Rao of Kutch in 1817 AD, were then present in Kutch and had treaties with Rajasthan rulers between 1815-1817 AD, were then present in Kutch and had treaties with Rajasthan rulers between 1815-1818 AD. They had defeated Marhattas and deposed Peshwa in 1817 AD, and were now present on the southern and eastern borders of Sindh. It may be that Mirs got panicky about the British power and decided to repair this Fort as a retreat. They also built some mud forts in the desert at Mithi, Islamkot and repaired others at Imamgarh and Umerkot etc., without ever thinking how defenseless these structures were before the British guns. The decision to repair Ranikot to take shelter with their families in this vast Fort may have been part of the same strategy. They do not seem to have thought of supply lines, availability of water and fodder and keeping communications open. Moreover probably they never thought that British would come by the river Indus and the sea. The Fort was repaired, but the main gates re-done were washed away during subsequent torrents.

- (c) Kalhora's history is pretty well recorded. The Fort area was nominally under the control of Mughal governors of Thatta up to 1736 AD, when it was transferred to Noor Muhammad Kalhora. Kalhoras were more interested in the Sindh plains and irrigation works and could not have built this Fort.

- (d) The Mughal Governors, like the Arghoons and Tarkhans, controlled only the large towns and cities and their control over the rural areas was limited to the extent of recovery of taxes, whenever they could do so by use of force. They could not have built the fort. Besides, their history is also well recorded and carries no mention of the Fort.

- (e) The Fort either could not have been built by Sammas nor kept in repairs of under occupation, as Shah Beg Arghoon moved from Sehwan to Thatta, via the road through the hills, only 6 miles to the west of its western gate, and arriving suddenly, he sacked Thatta. Sammas had never suspected his arrival by that route. If the Fort was in use, the enemy could have been stopped.
- (f) Long duration of Soomras rule was periodically intercepted by their vassalship to Delhi and loss of Bukkur and Sehwan many times. Besides, their center of activity was the Lower Sindh. So they could not have built the Fort.
- (g) Same observation could be applied to Habaris and the governors of Abbasids and Umayyads.
- (h) The Brahman and Rai Dynasties show the continuation of the previously existing administrative and cultural set-up. The fort was not in use under them, as Muhammad Bin Qasim attacked Sehwan by the route through the hills lying only 6 miles west of it. He reached Sehwan unnoticed and uninterrupted.
- (i) Sindh dynasties and principalities between 356-499 AD were too powerless to have spent money or energy on building it.
- (j) Sassanians controlled Sindh for too short a time. Most of the time they controlled the western Baluchistan. They had no use for such a fort on its eastern frontiers, when they had continuous troubles with Byzantine Roman Empire on the western front. (Refer Map number 12).
- (k) Kushans controlled the northern Sindh and Parthians the lower Sindh. So obviously Kushans could not have built it. Parthians did control Kutch, Kathiawar, northern Gujarat and Malwa. They had common borders with Kushans in upper Sindh. They did not have to build a fort in the hills, to face attack from the Indus valley to the north. Besides they ruled only for 33 years. (Refer Map number 13).
- (l) Starting at the top of the table, the Achaemenians ruled Sindh from 519/400 BC. Their Empire is shown in the map number 4. This was the world's first great empire. There was no fear of any attack from the east or south as the South-Asia was being ruled by small principalities. They had trouble with Greece from 490 BC onwards.

Fortifications on that front were needed and were provided, but none of the size of Ranikot. So they could not have built such a Fort in Sindh. They had attempted to open up trade between the north-western South-Asia and Persian Gulf, but via the river Indus, which during those days was flowing a good distance of 36 miles to the east of the Fort (as shown in Map Number 1).

- (m) Alexander's history of conquest of the area included in present Pakistan is well recorded. He pursued Sambus in the hills, but no such fort is reported. On his way back, Alexander passed through Patala and Ladies Harbor (Barbarican or Banbhore?) some 40 and 50 miles east and south respectively of the present site of the Fort. He therefore had nothing to do with the construction of the Fort. (Refer maps number 5 and 6 for his Empire and Sindh principalities)
- (n) Mauryans occupied Sindh in 322 BC. They pushed their frontier 500 miles westwards in Baluchistan and Afghanistan in 301 BC, when Seleucus ceded these parts to Chandragupta – Seleucids were too busy on their western front with other Hellenic Kings, and had friendly relations with Mauryans. Chandragupta Maurya was married to Seleucus' daughter. Under these circumstances a Fort 500-1000 miles from the western frontier was meaningless. It could also not have protected the trade routes to their capital Pataliputra, as Grand Trunk road was the leading route then. (Refer Map number 7).
- (o) Bactrian Greeks who freed themselves from Seleucids in 250 BC succeeded the Mauryans in 187 BC, in the South-Asia, but very soon Bactria became independent, under another Bactrian Greek line and the two cousin dynasties did not have friendly ties. Soon afterwards, the Parthians also replaced Seleucids in Western Empire. With two adversaries to the north and west (as shown in map No.8), the Indo-Greeks, who had under their control the whole of North-Western South-Asia up to central Ganges-Jamuna Doab, did need to protect their frontiers including the area where Ranikot presently stands, and against Parthians in the west.

In the 6th century BC, evolved the first empire of the world the Achaemenian. This empire decayed and finally collapsed in 330 BC, giving place to Alexander's empire.

On Alexander's death in 323 BC, his Empire also broke up, firstly in a number of kingdoms, and finally in 301 BC the contestants were reduced to three: the Ptolemy in Egypt, Chandragupta Maurya in the South-Asia and Seleucids in the areas in between i.e., Persia, Mesopotamia, Greece, Anatolia, Syria etc.

An important route.

Map number 1 shows a route passing through the Khirthar hills to the west of the Fort. This route belongs to early Neolithic period. Mujamdar, during his explorations in Sindh, located a large number of sites along this route, some of which are Jhangri, Darwat, Bachani, Othman Buthi, Ahmed Shah, Arabjo Thano, shahjo, Kohtras Buthi, Khajur, Karchat, Pokran, Dhal, Cauro, Bandhni, Jhangara, some sites in Manchar Lake, Shah Hasan, Lahri, Lakhiyo and etc. This route was in use before even Amrian times (3500 BC). It connects the south-west and makran with northern Sindh, Mula and Bolan Passes and thence to Afghanistan and Central Asia. It was used by British troops during the First Afghan War in 1839 AD. Charles Masson in his first, second and fourth journeys to Baluchistan and Afghanistan used it, between Karachi and Kandhar. Beyond Manchar he passed through Chini, Johi, Virji, Hamal, Ghaibi Dero, Jhal Mangsi, Gandava, Kalat, Mastung, Quetta and Chaman to Kandhar. A route from Gandava to Dadar and Bolan Pass goes to Quetta. These routes existed before 3500 BC, as is confirmed by archaeological evidence.

No permanent route could then be established in the Indus plains below Panjnad as in this area river flowed on the ridge above the plains and flood the surroundings in the width of about 20 miles on either side. Only after the British constructed Flood protective embankment, permanent roads in Sindh plains could be built. The river Indus also kept changing its courses frequently, its flood water thus extending beyond this 20 miles range. The hilly road therefore became permanent highway. During the period of 150 BC – 100 AD, Barbarican (Banbhore) on the Indus developed into Asia's most important port. This highway was connected to Barbarican via present towns of Jhingri, Jhimpir, Jungshahi, Guio, and Gharo. (Refer map number 2). Since the river Indus connected to Kenjhar Lake, boats from Jhimpir could go direct to Barbarican, a distance of about 45 miles.

Asia's most important port Barbarican (Banbhore).

As a consequence of Skylax's (517-514 BC) voyage from Peshawar to the mouth of Indus and thence to the head of the Red Sea (map No.4), Nearchus (525-524 BC) voyage from Patala to the Euphrates (map No.5), Ptolemy-1 Soter's (317-285 BC) connecting the Nile with Red Sea by reopening Necho-II Pharaoh's canal and exploration of Red Sea by navigator Philip in his days, building of ports of Arsinoe and Berenice by Ptolemy-II Philadelphus (285-246 BC) and Eudoxus' voyage from Egypt to the South-Asia under Ptolemy-III Euergetes-II (246-177 BC), the trade of Hellenistic Empire, as well as that of the rising Roman Empire with the South-Asia opened up. As the ships had to sail along the coast, the nearest port of the South-Asia, namely Barbarican (Banbhore), developed into the most important art trade route of all Asia, shipping goods coming from the Central Asia, China (via Sinkiang), and the North-Western parts of South-Asia. Even the goods of Gangetic valley were brought to Indus Rivers and shipped to Barbarican. Spices from Malabar Coast too were frequently brought to Barbarican, which did have lot of settlers from different countries, and thus came to be called city of foreigners as the name implies. During this period Khotan in Sinkiang had become a very important trading center, mostly in Chinese silk. From Khotan, goods were taken to Bactria (Balkh), thence to Alexandropolis (Kandhar) and there from the land route to Barbarican. (Refer Map No.13 for the details of trade routes).

With rise of Roman Empire and downfall of the latter Seleucids and Ptolemys of Egypt, the Roman Empire touched Caspian sea as well as Red Sea (See maps No.8, 10 and 11). Roman Empire turned into the largest, richest and most powerful empire of the ancient world, only to be matched and excelled by British Empire in the 19th century. Romans wanted all kinds of luxury goods from the East, and Barbarican shipped the Chinese and Tibetan hides and furs, muslins, perfumes, unguents, pearls, beryl stone, iron, raw and dyed skins of Chinese origin, rough skins with furs left on, woolen cloth, lions, leopards, tigers, Tibetan hounds, one-horned Rhinoceros, musk or perfume of deer from Gilgit, Tibet and north-western China, ivory, reptiles, crocodiles, oyster pearls, silk yarn, lac dye, spices, aromatics namely Chinnamon, malabathrum oil, red and black pepper, oil of spikenard and etc., of South India, ostus (of Kashmir), Myrrh, gums, rhubarb, sugar, indigo, cotton, linen, sheesham (from the Punjab area), deodar, dry fruits (from Afghanistan), cereals like rice and sorghum, lapis lazuli of Afghanistan and turquoise of Hindu Kush. In turn Barbarican imported Yavana (Greek or European) women corals of various colors specially red, figured linen of Egypt, wine, frankincense, decorated silver vessels, gem stone, opaque glass, bullion, mostly in form of coins etc.

A great deal of these goods passed along the trade route passing to the west of Ranikot Fort area, and the Fort must have protected this route.

Strategy of the Fort.

At present, the river Indus is about 18 miles away from the Fort. Between 150 BC and 100 AD, it flowed some 18-20 miles east of the present course, i.e., about 36-38 miles east of the Fort, as shown in map No.1. Invasion via the river Indus was not possible as Bactrian Greeks, Parthians and Scythians controlled the north-western South-Asia, from Peshawar, down to Broach in Gujarat and they did not have any contestant in the South-Asia. Should such invasion take place, the invading army could expect to get water supply only for about first 15-16 miles, beyond which limit they would not get a drop of water. This would make cavalry movement as well as siege to the Fort an impossible task, as horses would simply die of thirst. The Fort therefore had to be attacked from the western route. Such attacks could not be ruled out. The given route passes through a narrow gorge of hills. The passage at places is as narrow as 50 feet and most of the distance lies within the bow-and arrow range. The hills on both the sides of the road are not too high. Water is available at limited spots, though the ground water stream exists along the whole length of the road. The invading army entering from Manchar Lake could be stopped within a few miles before it covers 30 miles to the western side of the Fort. The Fort is approachable from this route by two narrow and most treacherous paths, 8 and 16 miles away from it. If invading army crosses the road passes in front of the Fort and reaches Darwat, it could be trapped in that pass which is only 300 feet wide. Thus invading army from the hill side hardly had any chances of success.

It is pity that with all these advantages offered by the fort, its gates were being washed away once a century, reducing so obviously its usefulness.

From the study of the two tables given above and the chronology of dynasties, it can be seen that:

1. While Bactrian Greeks, conquered the Western parts of the South-Asia in 184 BC, they lost Bactria to another dynasty of their compatriots and therefore these Indian Bactrians or Indo-Greeks were under continuous pressure from the north. As their capital was near Taxila, they had to protect Khyber Pass rather than build here a Fort in Khirthar hills.
2. By about 145 BC, as shown in Map 8, the Seleucids lost Eastern part of their Empire to Parthians, themselves retiring to Iraq, and Syria. The Parthian Empire included most of the western Baluchistan. The Indo-

Greeks under such circumstances may have been compelled to fortify their western frontiers.

3. By 90-80 BC after death of Appolodotus, Scythians moved to conquer Sindh. Three sons of Appolodotus namely Zoilus, Dionysius and Appollophanes and their cousin are said to have perished fighting invaders in Makran hills. (Refer Map No.9). But the Scythians came via Kandhar through the Bolan Pass, reducing Sindh first and advancing to the Punjab later. Since during the period Makran too was under Parthian control, these hills in which the fight is said to have taken place may as well have been those of the Khirthar range in the vicinity of the Fort, rather than the Makran hills which stood out of the way from the Scythian line of March.
4. By 44 BC (Refer Map No.10), the Parthians occupied the whole of Baluchistan, the Punjab and N.W.F.P. Only Sindh, Gujarat and Kutch remained under Scythian (Saka) control. If Indo-Bactrian Greeks had not built the Fort, the Scythians by this time may have been compelled, in their turn, to undertake the construction.
5. By 14 AD the Scythians (Sakas) were losing their power against the Parthians, who by 46 AD occupied Sindh. Thus Sakas ruled Sindh for another 30 years. The Parthians could not have built the Fort during their short rule of some 30 years during which their position even otherwise was precarious under pressure of the Kushans.
6. By 78 AD, Kushans occupied most of the North-Western parts of South-Asia. Only the lower Sindh remained under Parthian control. The Fort could not have been built during this period too. (Refer map No. 11, 138 AD).
7. Sassanians occupied Sindh from 283-356 AD. (Ref. Map No.12). They had strong enemy in the Roman Empire on the western Front, and none to contest on the eastern front. They ruled Sindh nominally for a period of about 72 years and had not need to build a Fort.
8. Thus it could be concluded that the Fort was built either by the Indo-Bactrian Greeks between 145-90 BC, or by Scythians between 74 BC to about the beginning of the Christian era. This period is also the period of large scale trade activity from Barbarican. The Fort must have

protected the route through the hills, the route which was the route of invasion (Refer Map No.2) as well as the established trade route.