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ABSTRACT.

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NAZIMUDDIN AHMED, M.A.

Institute of Archaeology

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ABSTRACT.

This thesis aims at a critical examination of the information provided by several decades of archaeological research at Taxila in West Pakistan. The antiquity of Taxila and its fame as a centre of commerce and learning are widely attested by numerous literary sources. Chapter I assembles these sources and attempts to arrange them chronologically.

Chapter II discusses the geographical position of Taxila and particularly its relationship to the important Trade-routes of Western Asia, Central Asia and Eastern India. The perspective thus provided is necessary for an appreciation of the various cultural contacts to be studied.

Chapter III outlines the main topographical features of the valley and its monuments as they are known to day. It also briefly touches upon the history of exploration at the site. Finally there is a discussion of the vital problem of interpreting the various periods of construction and the stratigraphy revealed by Sir John Marshall's excavations.

Chapter IV deals in outline with the early history of North Western India and its relationship with Taxila.

The main body of the thesis is contained in Chapter V. Here is undertaken a careful comparative study of the main categories of antiquities revealed by excavations. In particular the whole topic of Western contacts and of importations from the Mediterranean is investigated. From this, certain very challenging facts emerge.

In particular it is found that there are very few antiquities of either Hellenic or Hellenistic date, and that by far the largest number are derived from Roman sources of the first and second centuries A.D. The principal classes of objects examined are : Pottery, Terracotta Figurines, Stone-objects, Metal objects, Gems and other minor antiquities.

In Chapter VI is given a brief description of the Dharmarājikā Stupa and Monastery and Jaṇḍiāl Temple, with particular reference to dating them. From this, certain interesting new conclusions are reached, particularly regarding the dating of the Jaṇḍiāl Temple.

Finally, in the conclusion it is found necessary in the light of the present study to modify, in several respects, the accepted dating for main structural phases of both the Bhir Mound and Sirkap.

The thesis is illustrated with numerous photographs, maps and plan drawings.

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Map of Western Asia showing Ancient Routes connecting Taxila and Alexander's Routes.

Plan, of Taxila showing various sites and monuments.

ABBREVIATIONS

A. I. B.	Ancient India, Bulletin of the Archaeological Survey of India. Nos. 1-12.
Ait. Br.	Aitereya Brāhmana.
Ant.	Antiquary.
Ar. Ant.	Ariana Antiqua.
A.S.I.A.R.	Archaeological Survey of India, Annual Reports.
A.S.R.	Archaeological Survey Reports.
B. Mu.	British Museum.
B.S.O.A.S.	Bulletin of the School of Oriental and African Studies.
C.A.H.	Cambridge Ancient History.
C.I.I.	Corpus Inscriptionum Indicarum.
C.H.I.	Cambridge History of India.
C.S.R.	Cunningham's Survey Reports.
Dip.	Dipavamsa.
Div.	Divyavadana
E.H.I.	Early History of India (Smith, V. A.)
Ep. Ind.	Epigraphia Indica.
G.J.	Geographical Journal.
I.H.Q.	Indian Historical Quaterly.
Ind. Ant.	Indian Antiquary
Jāt.	Jātaka.
J.A.	Journal Asiatique.
J.A.O.S.	Jornal of the American Oriental Society.
J.A.S.C.S.A.	Journal of the American School of Classical Studies at Athens.
J.B.O.R.S.	Journal of the Bihar and Orissa Research Society
J.B.R.S.	Journal of the Bihar Research Society
J.D.L.	Journal of the Department of the Letters (Calcutta University).
J.H.S.	Journal of the Hellenistic Studies.

CHAPTER I

J.I.S.O.A.	Journal of the Indian Society of Oriental Art.
Jl.	Jandiāl.
J.U.P.H.S.	Journal of the U.P. Historical Society.
J.N.S.I.	Journal of the Numismatic Society of India.
J.R.A.I.	Journal of the Royal Anthropological Institute.
J.R.A.S.	Journal of the Royal Asiatic Society.
J.R.A.S.B.	" " " " " of Bengal.
J.R.I.B.A.	Journal of the Royal Institute of British Architects.
J.R.G.S.	Journal of the Royal Geographical Society
M.A.S.I.	Memoir of the Archaeological Survey of India.
N.C.	Numismatic Chronicle.
N. Cir.	Numismatic Circular.
Nat. Hist.	Natural History, Pliny.
N.S.	Numismatic Supplement.
P.T.S.	Pali Text Society.
Polib.	Polibius, W.R. Paton's Translation.
Sat. Br.	Satapatha Brāhmana.
S.B.E.	The Sacred Book of East.
Sk.	Sirkap.

CHAPTER I

Ancient Literary References.

Ancient Indian, Chinese, Greek and Roman literary sources have all combined to invest the famous city of Taxila with inexhaustible mythical and semi-historical associations. All these references indicate clearly that the city, during the early years of the Christian era and even before, enjoyed great fame and prestige, both in the East as well as in the West.

INDIAN :

In the passage of the Rāmāyaṇa commonly quoted, the foundation of Takshaśilā or Taxila is ascribed to Rām Chandra's brother, Bhārata, in the name of his son, Taksha, whom he made king of that territory.[1] A highly glowing picture of the beauties of his capital is painted which deserve to be quoted here, as representative of the romantic myth of Taxila which is widely portrayed in both Brāhmanical and Buddhist literature. "When they were all slain, (Gandhārvas) Bhārata, the son of Kekayi, established them in two splendid and prosperous cities - Taksha in Takshaśilā and Pushkala in Pushkalāvatī - in the charming land of the Gandhārvas, in the region of Gandhāra. The cities were covered with floods of treasures and jewels and adorned with groves. They vied with one another in rivalry at the plentitude of their (respective) merits. Both were well known for their attractions, and through their fair dealing in commerce, filled with gardens and carriages, with well-ordered rows of shops. Both were lovely, the best of cities, adorned with plenty, surrounded by fine and beautiful houses and many palaces, beautified with large and lovely temples, and with Tāla,[2] Tamāla,[3] Tilaka[4] and Vakula[5] trees."[6] It is most interest-

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1. An exact echo of the same story is found in the Raghuvaṁśa., Ch.15. śloka 89 and Vayupurana Ch. 88, śloka 190.
2. Fan- Palm or Palmyra tree.
3. Xanthocymus Pictorius.
4. The Sesamum plant.
5. Mimusops Elengi.
6. The Rāmāyaṇa, Valmiki, Uttarparva (vii), 101.

ing that in this passage Takshaśilā should be associated with Puṣkalāvatī,[1] the modern Charsadda, the extensive ruins of which are such a prominent feature of the Peshawar plain.

The province of Gandhāra, which included Takshaśilā, is frequently mentioned in the hymns of the Rigvedas, in the Epics, in the Puranas as well as in the Buddhist books, and consequently it is necessary to ascertain its probable ancient geographical boundaries. Evidently Gandhāra was situated on the North-West Frontier of India, but there is great difference of opinion among scholars as regards its exact boundaries. It is generally believed that the region comprised the modern districts of Peshawar in the N.W.F. Province and Rawalpindi in the Punjab; but in the old Persian inscriptions it appears to include also the district of Kabul in Afganistan.[2] Rhys Davids in his 'Buddhist India'[3] holds that Gandhāra or modern Kandahār was the district of East Afganistan, including probably the North-Western Punjāb. However, Mc. Crindle[4] does not find any proved etymological connection between the names, Kandahār and Gandhāra. Dr. S. K. Aiyangar[5] maintains that Gandhāra was equivalent to East Afganistan, extending from the Afghan mountains to the district somewhat to the east of the Indus. While Dr. D. R. Bhandarkar[6] in his Carmichael lectures declared that it comprised the Western Punjāb and Eastern Afghanistan. N. L. Dey holds that it consisted of the modern districts of Peshawar and Boti-Mardan or roughly the Eusafzai Country, which includes the Swat Valley. General Cunningham[8], mainly depending on the accounts of Fa-Hien and

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1. Puskhalāvatī's antiquity admits of no doubt. It was the capital of an Indian prince named Hasti (Gk. Astes) at the time of Alexander's invasion of India. It is called Peukelaotis by Arrian and other Greek writers. The site of Puskhalāvati adjoins the extensive series of sites known as Hastnagar.
2. Rapson, E. J., Ancient India, P. 81. (Camb. 1916)
3. op cit p. 28. (Rhys Davids)
4. Mc. Crindle, Ancient Ind. as described by Ptolemy, P. 116 (Lond 1885)
5. op cit Anc. Ind. P.7, (Lond. Lunac 1911) (Aiyangar, S. K.)
6. op cit, P.54, (1918) (Bhandarkar, D. R.)
7. Dey, N. L., ~~op cit~~, Geographical Dictionary, 823.
8. Cunningham, A., Ancient Geography, P. 48.

Yuan Chwang, gives the following boundaries of Gandhāra: Laghman and Jalālābād in the West, the hills of Swat and Buner on the North, the Indus on the East and the hills of Kalabag on the South. Strabo's[1] Gandaritis country lay between the Khoaspes (Kunar) and the Indus and along the river Kophes (Kabul) and this is the clearest ancient definition we have. Curiously enough, the name is not mentioned by any of the historians of Alexander. But nevertheless, it was known to the Greeks as early as the time of Hekataeus, who calls Kaspapyros a Gandaric city. Herodotus mentions the Gandarioi[2] and describes the people as being clad in cotton garments; and bearing bows of reed and arrows tipped with iron. Rennell placed the province to the West of Bactria, in the territory afterwards called Margiana, but this is obviously a complete misunderstanding. While Wilson[3] took it to be the region south of the Hindukush, from about modern Kandahār to the Indus and extending not only into the Punjab but as far as Kashmir.[4]

It is evident from the above observations, as well as from the various references to Gandhāra in ancient Indian literature, that its boundaries varied in different periods; at one time, perhaps, it did include the Afghan district around Kandahār, commanding the important Gomal route, but subsequently it was clearly confined to the mountain regions on the Indian frontier.

In the Rigveda, the long wool of the sheep reared by the Gandhāris is referred to by Lomaśa, the queen of king Bhāvya or Bhavayavya, who ruled on the banks of the Sindhu (Indus).[5] She says to her husband, "I am covered with down like a ewe of the Gandhārins".[6] Wilson considering the difference of metre of this verse from the rest of the hymn, together with the fact that it is brought in very clumsily, deduces that probably it is a fragment of some old popular song.[7]

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1. Mc. Crindle, Ptolemy, P. 115.
2. Herodotus, Bk. XII, c, xci; Rapson, Anc. Ind. P.87. (Camb.1916)
3. Wilson, Ar. Antiq. P. 131.
4. Mc. Crindle, Anc. Ind. as described by Ptolemy P. 115-6 (Lond.1885) B.C. Law, Tribes in Anc. India, P.16 (1st ed. Poona, 1943)
5. Rigveda, H.H. Wilson's Trans. II P.17-18 (Lond.1854). We find references to the production of valuable blankets or woolen shawls (kambala) in the Vessantara Jātaka (Foüsboll, Jat. Vol.VI, P.500-1; Prof. E. B. Cowell, Jāt. No.547, Vol.6. P.349 Camb. univ. Press 1907) and also in the Suttanipata Commentary (II, 487) Swat blankets are still famous.
6. Eg., Wilson's Trans. P. 18, II. 7. Ibid. F.N. P.19.

This would still, however, indicate the existence of Gandhāra and its inhabitants in Vedic times.

The Aitareya Brāhmana[1] mentions Nagnajit, a king of Gandhāra among the Vedic teachers, who propagated the Soma-cult. The name of the same King, Svarjit Nagnajita or Nagnajit of Gandhāra is referred to also in the Satapatha Brāhmana.[2] In the period of the Sutras, we find the people of Gandhāra mentioned in the Srauta-Sutras of Baudhayana,[3] Apastamba,[4] and Hiranyakeśi,[5] along with other peoples of both the East and the West.

The Mahābhārata contains numerous legends about Gandhāra. In the Adiparvan, we find that Dhritarāṣṭra, king of the Kurus married the daughter of Suvala, the king of Gandhāra and begot 100 sons by her.[6] A princess of Gandhāra was one of the wives of Ajamidha, the originator of the Kuru family. A reference in the Udyogaparvan,[7] is made of king Yayāti's sending his son Yadu into exile in Gandhāra due to his disrespect for his Kshatriya superiors. In the Dronaparvan,[8] it is mentioned that Karna brought Gandhāra under the sway of Duryodhana; while in the Aśvamedha-parvan,[9] it is stated that Arjuna went to the Punjab (Pañcanadi), where he fought a battle with the son of Śakuni, the king of Gandhāra. In the long drawn out battle of Kurukshetra, the Gandharis, led by their king Śakuni formed part of a powerful division of the Kuru army. It would be wearisome to recount in details all the references from the Mahābhārata, but it appears evident that great reliance was placed on their gallantry, and especially on their

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1. Ait. Br. VII, 34.
2. Sat. Br. VIII, 1.4.10(S.B.E.) F. Max Müller, Vol.XLIII (Oxford, Clarendon Press, 1897) P.21.
3. op cit, XXI, 13.
4. op cit, XXII, 6. 18.
5. op cit, XVII, 6.
6. Adiparvan, 119.10.5; 64.153; 63.58.
7. Udyogaparvan, Trans. P.C. Roy, Sec. CXLVIII, P. 434-436 (Calcutta. 1886.)
8. Dronaparvan, Ch. 4. Sloka 6.
9. Aśvamedhaparvan, Ch. 84. Sloka, 3.

fast horses.[1] It appears that the Gandhāris, not unlike their neighbours, the Kambhojas, reared a large number of thorough-bred horses in their country and that their troops largely fought on horseback. All these references clearly indicate that the Gandhāris and their princes were prominent throughout the great battle of Kurukshetra.[2] The Mahābhārata[3] also tells us that king Janamejaya of Hāstināpur conquered Takshaśilā and performed the great snake-sacrifice here. This elaborate and artificial piece of mythology however, does no more than mentions the city.

It is only natural that Gandhāra, also, finds mention in the Puranas. Vayupurana mentions Takshaśilā as the capital of Takshaka, son of Bharata.[4] According to the Matsya,[5] Vayu,[6] and Vishnu[7], a certain Gandhāra was born in the family of Druhya, one of the sons of Yayāti, and the kingdom of Gandhāra was named after him. It is said in the Bhagvata Purana[8] and the Brahma Purana[9] that Gandhāra was fourth in the line of descend from Druhya.

Similarly the Buddhist legendary accounts abound in references to the Gandhāra country, especially in the Gandhāra Jātaka,[10] Śasana-vaṁsa[11] and the Divyavadana.[12] The early capital cities of Gandhāra were Puskarāvatī and Takshaśilā or Takkaśila, the former being

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1. Horse dealers figure prominently among the Gandhāran traders and we learn from the Vayupurana that Gandhāran horses were considered the best of all - Ch. 99.10. Both Thal and Waziristan were until recently famous for their distinctive breed of horses.
2. Dronaparvan, Ch. 20.11; Ch.29.2.
3. Adiparvan. III. 22.
4. Vayupurana, Ch. 88. 190.
5. Matsya, 48.6.
6. Vayu, 99, 9-10.
7. Vishnu, 4th Anka, Ch. 17.
8. Bhagavata, 9th Skandha, Ch. 23.
9. Brahma, Ch. 13.
10. Gandhāra Jat. No.406, Cowell, Vol.III P.221 (1897)
11. Śasana-vaṁsa, H. Bode, (P.T.S.) P.12. (London. 1897)
12. Divy. Cowell and Neil, P.60.1.

situated to the west and the later to the east of Indus. It seems, therefore, that at the time of the formation of the tradition on which these texts are based, Gandhāra territory lay on both sides of the Indus but that it was later confined to the western side.[1] Yuan Chwang knew Purushapura (Peshawar) as the capital; and yet another city namely, Kāpiśa, was a Gandhāran capital during the days of Greek rule.[2]

In early Buddhist literature, especially in the Jātakas, Taxila is frequently mentioned as a great seat of learning.[3] This picture which is consistently painted in the Jātakas can only be accepted as a late tradition,[4] but even so it is extremely interesting. The city was the capital of Gandhāra and contained the celebrated university of Northern India.[5] In the Tittira Jātaka, we are told that princes of

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1. Mc. Crindle, Anc. Ind. as described by Ptolemy, P115 (Lond.1885.)
2. Rapson, E. J. Anc. Ind. P.133. 141-2 (Camb. 1916)
3. Nandi- Visala Jat. in Rhys Davids 'Buddhist Birth stories' Vol. I, P. 266 (Lond. 1880); Sarambha Jat. No.88, E. B. ℄. Cowell, (Camb. 1895) Vol. I, P. 217; Vol. II P.2. No. 151. Rajovada Jat.(1895)
4. Taxila is frequently mentioned in the commentaries but never in the Suttas and there is no reason to think that it was known in earlier times. - E. J. Thomas. The Life of Buddha as legend and History. P.15 (ed. C. K. Ogden M.A. 1931, Kegan Paul.)
5. Rajovada Jāt. op cit. Although in the Jātakas, Taxila is frequently mentioned as a famous university centre, we have no evidence of the existence of any such systematic educational organization in ancient India, either patronized by the state or controlled by a corporation with endowments and a set of buildings, where the conduct of the teachers and the pupils was governed in accordance with definite rules and regulations. In India the relation between students and teachers was personal and not institutional. In all these matters the Indian educational tradition differs from the European. Buddhism had its Saṅghās and monasteries. These did develop into educational institutions in course of time. Although, the subjects taught remained preeminently religious, the curriculum also included more general studies such as surgery, medicine, philosophy and similar other subjects.

- Altekar, 'Education in Ancient India.'
P. 79 - 80, (1934), Marshall, Taxila P.43

various kingdoms went to Taxila for their education.[1] It is interesting to note that according the Chittasambhuta Jātaka[2], the privilege of study in this university-town was exclusively confined to the upper classes, the Brāhmans and Kshatriyas. It is related that two Caṇḍāla youths disguised as Brāhmans were studying under a teacher, but were expelled when found out. We are told in the Dhammapadaṭṭha Kathā that Pasenadi, the king of Kosala was educated at Taxila.[3] Among the wide range of subjects taught there, were grammar, Logic, Philosophy, Mathematics, Surgery and Medicine; the first three Vedas and eighteen Vijjas, which included the art of archery and swordsmanship.[4] The first three Vedas are of course, the Rigveda, Sāmveda and Yajurveda. It is interesting to note that the same source informs us that lessons concerning magic, charms and spells and the interpretation of the cries of animals were, also, given.[5]

It is generally agreed that Pāṇini, the famous grammarian received his education at Taxila and, also, numerous other celebrated scholars. It was here that Jivaka,[6] the illustrious royal physician of Bimbisara learnt medicine and surgery from the teacher, Atreya, and in all likelihood, Chanakya,[7] the prime-minister of Chandragupta was also educated at Taxila. Other notable Buddhist personalities who made Taxila famous throughout India, were Dhammapala, Yasadatta, and strangly enough, Angulimala.[8]

The Jātakas do not provide a very detailed picture of student life at Taxila.[9] However, we learn from the Aṭṭhāmanta and Pañcāvudha Jatakas that the teachers were paid one thousand pieces of money per pupil at the completion of their studies. These Buddhist sources give us the impression that in those days there were two classes of pupils: 1) those who paid for their education 2) and those who received lessons from their teacher at night without payment, subject to their serving

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1. Tittira Jāt. No. 117, Cowell, Vol. I P.260.
2. Chittasambhuta Jāt. No. 498, Cowell, Vol.IV, P.245 (1901)
3. op cit, (P.T.S.) P.211.
4. Susima Jāt. Fausboll, Vol. II, P.47; Cowell, II, P.32.
5. Anabhirati Jāt. Cowell, Vol.II, No.185, P.68-9 (1895); Vol.III, No. 416, P.249 (1897)
6. Mahavagga, (vin. pit. ed.) Oldenberg, Vol. I, Ch. VIII, (Lond. 1879).
7. Turnour's Mahavamsa, Intro. and Hemchandra's 'Sthaviravalicharita', VIII, P.231, Jacobis ed.
8. Mrs. Rhys Davids 'Psalms of the Brethren' P.149, 201, 319 (Lond.1913)
9. Jāt. Cowell, Vol. I, P.137, 148 (1895).

the teacher during the day time, as a kind of sizar. The paying pupils used to live in the house of their teacher like his eldest son. Corporal punishment for offences was not unknown and instances of flogging are not lacking.

The Buddhist Jātakas agree with the Rāmāyaṇa passage already quoted in making Takshaśilā the capital of Gandhāra. It was 2000 leagues from Beneras.[2] The Kumbhakara Jātaka[3] relates that king Naggaji or Nagnajit occupied the throne of Gandhāra with Takshaśilā as his capital at the same time as king Nimi was ruling at Videha, King Dummukha at Pañchala and king Bhima at Vidarbha.

It is stated in the Dipavaṁsa that a kshatriya prince named Dipaṅkara and his sons and grandsons governed their great kingdom from Takshaśilā.[4] In the Dutiyapalāyi Jātaka, we find that king Gandhāra of Takshaśilā attacked and besieged Beneras with his four-fold army and boasted that nobody could defeat him. The king of Beneras replied that he would destroy his army "like mad elephants' destroying nalavana (Bamboo-grove)." Hearing this, king Gandhāra fled forthwith terrified to his kingdom.[5] On the other hand, the Palayi Jātaka tells us that Brahmadatta, the king of Beneras invaded Takshaśilā with his powerful army, but was so struck by the splendour of the city-gate, which he took to be the palace, that he did not dare to attack so mighty a monarch and returned baffled to his own country.

It is interesting to note that the Jātakas testify to the evidence of trade relations between the kingdom of Gandhāra and the Videha country.[7] The Mahā-Niddesa[8] relates that peoples of distant countries used to flock to Takshaśilā to earn money through trade and commerce.

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1. Law, B.C. Historical Gleanings, P.2.
2. Telapatta Jāt. No.96, P.233, Cowell, Vol.I; Susima Jāt. Vol.I No. 163, P.32. (1895, Camb.
3. Kumbhakara Jāt. Cowell Vol.III, No.408, P.228-32 (1897, Camb.)
4. Dipav. ed. Oldenberg, III, 31.
5. Dutiyapalayi Jāt. Fausboll, Vol.II, P.219-21; Cowell No.230, P.153, Vol. II (1895)
6. Jāt. Fausboll, Vol.II, P. 217-8, (Lond. 1883); Cowell vol.II, No.229, P.152.
7. Cowell, Vol.3, Gandhāra Jāt. No.406. P.221-24. Vol. I, P. 326.
8. Mahā Niddesa, (P.T.S.) Vol.I, P154; Dhammapadatthakatha (P.T.S.) Vol. I, P.526.

In his comments on the Dhatuvibhanga Sutta, Buddhaghosa gives a long account of Pukkusati, the king of Takshaśilā who was the contemporary of Bimbisara.[1] Although the two kings never met each other, a deep bond of friendship existed between them through the medium of traders, who travelled between the two countries. Once Pukkusati is said to have sent an embassy to Bimbisara with a gift of eight priceless garments in lacquered casket[2] and a letter, as token of friendship.

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1. Majjhima Comm. Papañca Sudani, Vol.II, 979 (Aluvihara series Colombo); Dict. of Pali Proper Names, P.215(London, 1938)
2. Lac is extracted from the deposit of the lac-insect, native to and almost confined to India, Pegu, Siam and Assam. The insect yields two products: Lac-dye, taken from the bodies of the females and lac-resin (shellac) prepared in thin pieces from the swarms of larvae as they adhere to various trees. The insect which produces the red-dye commonly grows in one particular species of indigenous Indian plant (Butea Frondosa). The art of employing lac for various purposes of both dying and coating articles of wood etc. appears to have been well known in India from a very remote antiquity. Its use for artistic or various other purposes is repeatedly mentioned in early Brahmanical and Buddhist literatures.

The Mahabhārata (Jatu-Griha Parva) tells us in great details how Śakuni, Duryodhana, Dussasana and Karna with the sanction of Dritarashtra formed a plot to destroy Kunti and her sons (Pandavas) by erecting a highly inflamable house of Lac (Jatu-Griha) and locking them inside it. This plot was frustrated and the smouldering flames consumed the architect, Purochana and a nishada woman with her five children, while Kunti and her children escaped through an underground passage. Lac as a dye and covering material is also mentioned in the Atharva Veda, Unadi(Ujjvaladatta) III, 62; Arthasastra, 243; Jātaka V, 215; VI, 269; Panini, IV.3.138. Panini mentions it in the form Jatusa or made or covered with lac.

Both lac-dye and lac-resin were exported to the West in ancient times. Ktesias mentions that in his time the Persian king sent fine fabrics dyed with a colour obtained by the Indians, from red-beetles, to the Roman Empire. Yet when, according to Vopiscus, the Persian king presented to Aurelian a short, woolen'purple' Pallium (clearly a shawl dyed with lac), obtained from the inner regions of India, this was such an extraordinary occurence that not only Aurelian himself, but also Probus and Diocletian made unsuccessful efforts to obtain a similar 'purple'. The Romans appear to have sometimes obtained the dye separately, for Vopiscus mentions 'Indian Sandyx', which is known to be a kind of vermilion-red, though this may also have been one of the red-woods.

Warmington, E. H. The Commerce between the Roman Empire and India, (Camb. 1928) P.178; Mc. Crindle, Anc. Ind. as described by Ktesias, the Knidian(Bombay, 1882) Ct.22-3; Pliny, XXXVII, 36-7, 39,40 Cp.XII, 98. Schoff, Periplus, 6.P.24 (London, 1912)

The Begram treasure, recovered by Hackin included pieces of bowls and cups of Korean lacquer work, but they are a product of varnishing like all Chinese lacquer. He is inclined to date all his pieces to the first Cent. A.D.

Pukkusati of Takshaśilā is, also, said to have waged a victorious war against king Pradyota of Avanti.[1]

It appears from the Divyavadana[2] that Takshaśilā was included in the empire of Bindusara, and that Aśoka while still a prince was sent there to quell a rebellion. The same authority mentions another rebellion which subsequently broke out at Takshaśilā during the reign of Aśoka which his son, Kunala was sent to suppress in exactly the same way. It seems from Aśoka's minor Rock EdictII that Takshaśilā was the headquater of the provincial government of Gandhāra and was at the time of the inscription administered by 'Kumara' or 'Āryaputra', that is to say, by royal princes,[3] though not necessarily of the direct descent. According to the Aśoka chronology worked out by Mookerji,[4] the date of this edict is 259 B.C., when, according to this author, Aśoka would be 45 years old. The only known son who was old enough to act as his viceroy at that time was Mahendra, but he became a monk as early as 264 B.C., according to the Mahavaṁsa, after having officiated as viceroy in the place of Tissa, for a very short time. The other known son of Aśoka was Kunala who, we know was appointed as his viceroy and posted to Taxila, according to the Divyavadana passage already referred to.

- J. Hackin, 'Nouvelles recherches archéologiques à ' Begram, 1939-40(Paris, 1954) P. 151-55, 295-97 and Mem,186, 219, 216, 229, 218, 215 etc.

1. Majjhima Nikaya, R.Chalmers. (P.T.S.) Vol.III, P.237-47(Lond.1896); Jāt. Fausboll Vol.IV, P.180; Dhammapadaṭṭhakatha II, 35.

2. Div. P.371.

3. Aśoka's empire was divided, for administrative purposes, into a number of provinces of which the more remote ones were placed under viceroys. The viceroyalties were generally reserved for the Princes, called 'Kumaras' or 'Āryaputras' in the Edicts. The Edicts refer to four Princely Viceroys, viz., these governing the provinces with headquaters at Taxila, Ujjain, Tosali, and Suvarnagiri (Kalinga Edict I; Kalinga Edict II, Dhauli Version); Minor Rock Edict I (Brahmagiri Version). Gandhāra is mentioned by Fa-hien as another Viceroyalty under prince Dharmavivardhana. Since Dharmavivardhana, according to the Divyavadana was another name of Kunala, who was sent by Aśoka towards the end of his reign as his viceroy to Taxila to supress a rebellion, we may conclude, although it is not specifically stated in the inscription, that the province of Gandhāra had its headquaters at Taxila.

4. Mookerji, Radhakumud, Aśoka, P.51 123.

But the date of his birth is given by Mookerji as 263 B.C. and of his appointment as viceroy of Taxila as 235 B.C. It is, however, possible that Aśoka had other sons, who in 257 B.C. were eligible for the Viceroyalty, taking the minimum viceregal age to be 18, at which age Aśoka himself, acted as his father's viceroy in Ujjain. But we have no further information.

It is interesting to note, the same Edict indicates[1] that the Viceroyalties of Ujjain and Taxila needed more frequent inspection by the high officials of State, than the newly conquered province of Kalinga, as far as their criminal administration was concerned. This was perhaps due to their far distant situation from the imperial headquaters. The relevant portion of the Edict records:[2]

"And for the following purpose I shall send out every five years (a Mahāmātra) who will be neither harsh nor fierce (but) of gentle actions(viz., in order to ascertain) whether (the judicial officers) paying attention to this object ... are acting thus, as my instruction (implies).

But from Ujjayinī, also, the prince(Governor)will send out for the same purpose ... a person of the same discription, and he will not allow (more than) three years to pass (without such a deputation).

In the same way (an officer will be deputed)from Takshaśilā also.

When ... these Mahāmātras will set out on tour, then, without neglecting their own duties, they will ascertain this as well, (viz.) whether (the judicial officers) are carrying out this also thus, as the instruction of the king (implies)."

Jain traditions make the most extravagant claims concerning the antiquity of Taxila. They relate that in the remote past, Rishabha, the first of their Tirthaṅkaras, visited Takshaśila and his foot-prints were consecrated there by Bahubali. Bahubali is said, also, to have, erected a throne and a wheel of the law (Dharmachakra), which were several miles in height and circumference.[3] The Jain sources, in fact,

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1. Kalinga Rock Edict (Dhauli), Mookerji, P.123.
2. 'Inscriptions of Aśoka', C.I.I. Vol.I, Hultzsch Ph.D.(Oxford,1925) P.96. New Ed.
3. Avaśyakaniryukti of Haribhadra Suri, leaf No.150; Trishashthisalaka-Purusha-charita of Hemchandra Suri (Gaikwad Orient Series. Baroda, 1931). Vol. I., P. 183-6.

with regard to the antiquity and magnificance of Taxila, merely echo the Buddhist traditions. Much of all this may be written of as pure romance. However, the Greek sources are not wanting in something of the same sort of appreciation of the magnificance and size of the city. It is clear enough that, compared with the contemporary cities of the Ganges valley, Taxila was both large and well laid out.

WESTERN:

It is a quite clear that classical authors are unanimous in their accounts of the city's opulance and extensive size. They also dwell on the fertility of the soil and the agreeableness of the climate. The first Greek record which gives an account of India's trans-Indus region is, perhaps, that of Scylax of Caryanda, a mercenary Greek sea-Captain whom Darius (522-486 B.C.), the Persian King employed to explore the course of the Indus.[1] Scylax in about 516 B.C. started from a city named 'Caspapyrus' (Kāśyapapura), a frontier city of Gandhāra, sailed down the Indus to its mouth, and thence following the coast of Southern Arabia, entered the Red-Sea and eventually reached Arsinoe, modern Suez.[2] Undoubtedly this voyage, which took about two and a half years, first brought India into direct touch with Greece and the Western World. But the Greeks were already acquinted with a race, known as Hindus or Indians, that is to say, the people of the Indus. Likewise it is probable that the Indians spoke of the Greeks as 'Yavanas' or 'Ionians'. However, the account of Scylax unfortunately, gives us no real information about the country. Even after it, Greek travellers and merchantman continued to repeat legendary stories about India, probably derived from the Persians, who had better opportunities of close contact with the peoples of India's north-western borderland.

Hecataeus of Miletus gives us a vague picture of the Indian world in his 'Periodos Gēs', drawn mostly from Scylax and other Persian travellers, about 500 B.C. Beyond making mention of the name of a people called Gandharis on the upper Indus and the name of a city in that region called, 'Kaspapyroi', the name already reported by Scylax, his accounts contain little of interest.

Herodotus, writing about the middle of the 5th Century B.C.

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1. Herod., IV, 44.
2. H. G. Rawlinson, Intercourse between India and other Western World' P. 17, (Camb., 1916)

similarly drew upon earlier classical authors, especially Hecataeus, who relates many fabulous stories, as to gold-digging ants and other Mythical Monsters. He states that cannibalism was prevalent in India. However, his writings do contain some interesting facts. He says that, "The Indians are by far the greatest multitude of the peoples of men whom we know"[1] and he describes India as being bounded on the east by the limitless desert of sand and populated with various tribes, speaking different languages and in different degrees of civilization. He, also, speaks of a warlike hill-tribe, dwelling near the city of Kaspapyros and the country of the Pactyes, from whom the Persian kings drew their levies. This is accepted as a reference to the Pashtu (Pakhtun) peoples, who survive in the Pathans of Afghanistan and the N. W. frontiers of India.

Ktesias of Knidus, a generation later than Herodotus, although he may have had splendid opportunities of gaining knowledge concerning India, since he resided at the Persian Court as physician to king Artaxerxes Mnemon[2] for 17 years, makes no contribution to our knowledge at all. His account is full of absurdities and one modern author goes so far as to describe him as a deliberate liar.[3] Bevan comments that "Modern writers urge that some of his monstrosities - his dog-faced men, his Pigmies and so on, - can be paralleled by statements in old Indian books. This shows that Ktesias was not above saving himself the trouble of fresh invention when statements sufficiently sensational were furnished him by others."[4] It is strange that his prolonged residence in Persia only enabled him to collect a few facts about Indian products, its dyes and fabrics, its monkeys and parrots.

Such passages of Greek authors regarding India, prior to Alexander's invasion show that their knowledge never advanced beyond an early romantic tradition, based on more or less legendary accounts handed down in a stereotyped form. In fact, this stereotyped literary tradition was passed on form writer to writer with practically no fresh addition or attempt at verification, and curiously enough, is found still alive at the end of the middle ages. The Greeks not only had their own gallery of mythological monsters, satyrs and Centaurs, Sirens and

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1. Herod. III 94. 2. Diod II, 32.4; Plut. Artax. 21.
3. Bevan, C. H. I. Vol. I P. 397. 4. Ibid.

and harpies, but they, also, invented monstrous races and animals with which they peopled the East, above all India, As pointed out by Wittkower, these became stock features of the Occidental mentality. And their power of survival was such that they did not die altogether in the age of geographical discoveries, but lived in pseudo-scientific dress, right into the 17th and 18th Centuries.[1] Undoubtedly, these mythological accounts played their part in preparing the ground for Alexander's expedition into India. Trade, too, must have played its part. The riches of India were already legendary. That such ideas were in Alexander's mind when he invaded Inia, is suggested by the terms of his last speech to his soldiers on the banks of Hyphasis (Beas).

This distorted Greek conception of India was however, subsequently modified considerably by the writings of Alexander's companions, who, of course, actually saw something of the country. In fact, India to the east of Indus was first really made know to Europe by the historians of Alexander's expedition and the men of science, who accompanied him in 327 B.C. Their narratives, although the originals have not survived, are preserved in Strabo, Pliny and Arrian in fragments. Although only scattered passages of their works have survived, it is clear that from that time onwards, India ceased to be merely legendary and became part of the known world. Of the authors who were among the actual companions of Alexander, three are prominent. First is Nearchus, a Cretan by birth, who became a citizen of Macedonia and was a close friend of Alexander. Alexander placed him in command of the fleet, which he sent to explore the coast between India and the Persian Gulf. His book obviously contained much new and important information about India. He seems to have been an honest reporter, who made some attempt to verify the stories told to him. The second is Onesicritus, from the Greek island of Aegina. Alexander made him the pilot of the royal vessel on the voyage down the Indus, because of his practical knowledge of seamanship. Strabo, however, considers him to be untruthful. The third, is Aristobulus, a native of Kassandreia, a town on the isthmus which connects the peninsula of Pallene with the mainland. He accompanied Alexander throughout his

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1. Rudolf Wittkower, "Marvels of the East, A study in the history of

expedition and wrote a history of his wars, which although lost is largely preserved in Arrian's Anabasis and Plutarch's Life of Alexander.

ALEXANDER'S CAMPAIGNS :

Alexander set out on his memorable expedition to conquer Persia with specially organized army in 334 B.C. By a succession of victorious battles the fate of the vast Persian Empire was sealed and Darius III, was forced to flee for his life before the victor. In 330 B.C. Alexander captured the imperial capital of Persepolis and burnt it. In the winter of the same year, he entered Sistan and founded an important outpost city which he named Alexandria of the Arachosians (Kandhahar). He proceeded up the easy low level road leading into the Kabul valley in the following year and established another outpost, known as Alexandria-under- Caucasus, near the modern Charikar,[1] situated about 30 miles north of Kabul. Using this newly founded military post as a base, he undertook his strenuous flanking campaign to reduce Bactria and Sogdiana (Balkh and Bukhara). This accomplished,

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Monsters." P. 159-197, Journal of the Warburg and Courtland Institutes, Vol. V, 1942, London.

1. The identification of Alexandria-under- the Caucasus or the Parepamisadai has long been a subject of lively controversy. Sir A. Burnes and Lassen fixed it at Bamian, but this identification is impossible for Bamian lies across the Hindukush amidst mountains, whereas the classical texts specifically places Alexandria-under-the Caucasus in a valley at the foot of Hindukush. A more probable site has been suggested in the rich and beautiful valley of the Koh-i-Daman which as the name implies, extend up to the very foot of the great mountain rampart. Towards the northern edge of this fertile valley lies the village of Charikar, from where all the roads that lead into Bactria diverge. One of the suburbs of modern Charikar, ~~from where all the roads that lead into Bactria~~ is still called 'Opaine' or 'Houpian'. This identification is further strengthened by the description of Stephanos of Byzantium who mentions a city called 'Opiane' near India. This identification has been accepted by Wilson, Saint-Martin and General Cunningham.
- Dr. H. Wilson, Ar. Antiq. P.179-182;
- Cunningham's Anc. Geog. of India, P. 19-26;
- Bunbury's Hist. of Anc. Geog. I, 490-492;
- Mc. Crindle, J. W. Ancient India, its invasion by Alexander the Great as described by Arrian, Q. Curtius, Diodoros, Plutarch and Justin. (Westminster, MDCCCXCIII-)

on the melting of snow in May 327 B.C. he returned to Afghanistan, probably by the lofty Khowak Pass, which is 1300 feet high. He then followed the old Indian road, running along the north bank of the Kabul river and established another strong post near modern Jalālābād, which he named Nicaea.

It is usually held that Alexander crossed Hindukush either by the Khoshan Pass or by the Panjshir, which is longer but in some respect easier,[1] and undertook a vigorous campaign in Bactria and Sogdiana. Recrossing Hindukush, he passed the next winter at Alexandria-under-the Caucasus and then advanced as far as modern Jalālābād. He then turned northward, following the Kunar river, for perhaps three stages and crossing the frontier mountains, entered Bajaur. The exact route of his entry into India is not known, owing to the fact that this area has never been surveyed in detail. It is, however, known that he divided his army into two columns. One marched to the Peshawar valley under Hyphaestion by the most direct route, the old road which runs parallel to the modern Khyber and to the north of it. Alexander, himself, led the rest of his troops through Bajaur, which brought him into contact with the Aspasions, Gauraians and the Assakenians.[2] From Bajaur, he apparently descended into the valley of the Dir river and was almost immediately engaged in fierce fighting with the wild tribes of the region. T

The river Guraios of the Greek account is identified with the Panjkora and beyond it lay the country of the Assakenoi. The Panjkora, flowing down from the mountains of Dir, joins the Swat river, where it passes through difficult gorges towards the Peshawar plains. Alexander probably led his troops from the Panjkora through Talash and across the easy saddle of Katgola into the open Swat valley, at the stratagically important crossing at Chakdara.[3] He appears to have captured several fortified towns situated in the main Swat valley, the most important of which were Messaga, probably in lower Swat; Bazira (Birkot) and Ora. He then crossed the low Malakand Pass from the Swat valley into the Peshwar plain. In course of this part of his Indian

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1. Holdich, The Gates of India, P. 87-88.
2. Sir Aurel Stein, Alexander's Track to the Indus, P.43.
3. Stein op cit.

campaign, he had to storm a number of almost inaccessible mountain strongholds, his chief exploit being the reduction of the great mountain fortress, known to the Greeks as Aornos.[1] The fortress occupied the summit of a 7000 feet high 'rock' with almost precipitous sides, which was supposed to be impregnable. But the Greeks managed to fill in a defile protecting the summit and succeeded in storming the heights. The beseized garrison made an abortive attempt to escape under cover of darkness, but were detected and put to the sword. The Greek's next met a fair tribe, whom they considered strangely similar to themselves near a place called Nysa, where the ivy and the vine grew in abundance. They took them to be followers of Dionysus and fraternised with them.

Alexander's contact with Ambhi, king of Taxila:

While in the Kabul valley, Alexander had already been in communication with Ambhi, the King of Taxila, who seized the chance of overcoming his powerful neighbour, the Paurava monarch, ruling the territory between the Jhelum and the Chenab, by an alliance with the invader. Alexander crossed the Indus near Ohind in February, 326 B.C. It was

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1. So far all attempts to locate this impregnable Rock-fortress have failed owing to the obscure nature of the descriptions furnished by Greek authors. Colonel Abbott in 1854 identified its site with Mount Mahaban, a hill which abuts precipitously on the western bank of the Indus, about 8 miles west from the site of 'Embolima'. Cunningham in his Ancient Geography of India repudiates this theory and suggests that it was situated on the Ranigat hills immediately above the small hamlet of Negrau and about 16 miles north by west from Ohind. A grave objection to this theory is the distance of Ranigat from the Indus. The foot of the Rock is said by classical writers to have been washed by the Indus, but Ranigat is no less than 16 miles away from it. The elevation also varies considerably. Sir A. Stein in the Report of Archaeological Survey Work in the North-West Frontier (1904-5) as well as in 'On Alexander's Track to the Indus' rejects all previous identifications. He locates the site of Aornos on the Rock-girt site on the Pir-Sar Range, adjoining Mount Una, which has an elevation of 7,914 feet at the northern end of the spur and situated on the banks of Indus. (P.113-59).

For further discussions, Smith's, E. H. I. 3nd ed. Appendix D; Holdich, The Gates of India, P.121;

Mc. Crindle, Ancient India, P.335-38, (Westminster, 1885)

undoubtedly a momentous day[1] for him, for he had arrived at the threshhold of a new world and he celebrated the event by games, sacrifices and feasting, for which purpose Taxiles sent 3000 oxen and 10,000 sheep. Soon after this the army entered Taxila. However, no topographical details are given. The accounts are filled with the wonder at the strangeness of the country, which was, evidently, to the Greeks, a different world. Among other customs, the marriage arrangements are described in detail. Unfortunately girls who had failed to secure a husband due to their poverty, were exposed for sale. Other strange customs which surprised the Greeks were the burning of the dead or the exposure of the corpses to be devoured by vultures. The practice of polygamy also attracted attention. It is, also, recorded that widows burnt themselves on the funeral pyre of their deceased husband , of their own accord and those, who refused to do so, were held in disgrace[2]. These details were handed down by Aristobulus, one of Alexander's companions. Another curious sight which greatly impressed the Greeks was that of 15 naked ascetics on the outskirts of the city who practiced severe penances. Alexander sent Onesicritus to enquire into their belief, but they informed him that to try to explain Hindu philosophy through an interpreter was like making water flow through mud. ~~One~~ One of them, named Kalanos by the Greeks, was persuaded to accompany Alexander on his retreat to Babylon, where he burnt himself on a pyre.

Of the later Greek authors, Strabo (63 B.C.) in his geography speaks of Taxila as a flourishing state, in glowing terms. He informs us that, "Between the Indus and the Hydaspes lies Taxila, a city which is large and has most excellent laws; and the country that lies around it is spacious and very fertile, immediately bordering on the plains ... Some say that this country is larger than Aegypt. Above this country in the mountains, lies the country of Abisarus."[3]

Pliny (75 A.D.) in his Natural History, although he does not give

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1. This date is interesting. Storms are common in the foothills at the beginning of February. Alexander crossed the Indus after this period and before the snow-water floods came down in March. He did it just in time.
2. Strabo, Geog. XV. 1.62.
3. Strabo, Geog. XV, 28, Trans. H. L. Jones, P.47, VII.

a detailed account of the country, mentions that Taxila, which he calls a famous city, was situated at a distance of 60 miles from Peucolatis, on a low but level plain.[1] He tells us that the, "mountain tribes above these, under the Hindukush range, are Sarmaeadae, and Sondrae; and across the Indus and following it downstream, we come to the Samarabae, Sambracani, Bisambritae, Orsi and Andiseni and the Taxilae with their famous city. Thence the region slopes down to level ground, the whole having the name of Amenda; and there are four tribes the Peucolitae, Aasagalitae, Ceretae and Assoi; indeed most authorities do not put the western frontiers at the river Indus but include four satrapis, the Gedrosi, Arachotae, Arii and Paropamisadae, with the river Kabul as the final boundary - the whole of which region others consider to belong to the Arii".[2] This would seem to suggest that the Taxila country extended southwards, that is to say, into the Salt-Range. His

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1. Pliny, Nat. Hist. Bk. VI.XXI. 61-64, Trans. H. Rackham. P.77-79 & 397
2. Conditions on the north-western boders of India with its unsettled frontier between Afghanistan and India, probably always have been much the same as is suggested by Pliny's description. This broken semi-arid country, inhabited by turbulent hillmen was probably incapsuled rather than assimilated in the great empires which reached down from the Iranian Plateau into Hindustan. In Spates words, "Often, indeed the western Punjab and the Afghan basins were part of the same 'saddle state,' loosely straddling the hills ... power was sometimes based on the Kandahar-Ghazni-Kabul line, sometimes on the Punjab"(Spate, India and Pakistan P.149.) Indeed often the boundary has been the 'Dasan-i-Koh' or the skirt of the hills, the sharp break of slope of the Afghan hills at the detrital pediment. The western boundary of this region to-day is an arbitrary one, the Durand Line, the political boundary between Afghanistan and India (until 1947). Here Spate treats the Kandahar-Ghazni-Kabul line as a boundary, but as is evident from Alexander's route, it is a highway, part of the ancient low-level route from Herat to India as a via Kandahar and Kabul. But the ancient sites on the Gomal and the enormous number of ancient sites in Baluchistan make it plain that roads running south of Seistan (Sakasthana) were, also important and cannot be neglected. The fact that Alexander returned to Babylon by the southern route speaks for itself. It is clear that he sadly underestimated its difficulties and the deduction may be made that it had fallen out of use, for his intelligence service was obviously very faulty.

later references to the Peucolitae make it clear that he is generalizing all these geographical details.

Arrian, who wrote in the middle of second Century A.D. was at once a philosopher, a statesman and a military commander and is ackowledged universally to be by far the best of Alexander's historians. Although he lived nearly 500 years after the great expedition, he obviously had reviewed all the available materials and probably had access to first-hand traveller's accounts to supplement his knowledge of geography. When describing Alexander's trans-Indus campaign he relates, "Then leaving the Indus he marched to Taxila, a great and properous city. It is indeed the largest of all which lie between the river Indus and the Hydaspes. He was received there by Taxiles, the governor of the city, and the Indians of this district, in as friendly manner , and Alexander offered the customary sacrifices and held an athletic and cavalry contest. He appointed Philip, son of Machates satrap of the Indians of this territory and left behind a garrison and any invalidated soldiers he had."[1]

Similarly, Plutarch in his 'Lives'[2] praises Taxila's prosperity and the fertility of the soil, very much in the same way. He writes, "Taxiles, we are told had a realm in India as large as Egypt, with good pasturage, too, and in the highest degree productive of beautiful fruits, He was also a wise man in his way". He then goes on to relate the friendly exchange of gifts between the two monarchs, "So after receiving many gifts and giving many more, at last he lavished upon him a thousand talents in coined money. This conduct greatly vexed Alexander's friends."[3]

Taxila finds mention in the writings of still late Greek authors, but in them the romantic tradition of the heroic exploits of Alexander in Eastern lands, becomes increasingly manifest. Taxila was visited by Appollonius of Tyana with his companion, the Assyrian Damis, it is usually said in the year 44 A.D. His account of the journey has been handed down to us by Philostratus[4] (3rd Cent. A.D.). Although

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1. Arrian, Anab of Alex. V.7, 3-8.2. Trans. E.Iliff, Robson P.27Vol.II.
2. Lives. Alex. LIX. 1-4. Trans. Bernadotte Perrin VII P.391-2.
3. Lives, Alex. LIX. 1-4, Ibid.
4. Philos. Vit. II, 66 (ed.Dubner); Philos. in honour of Appollonius of Tyana, Trans. J.S.Phillimore(Oxf.1912)Vol.I P.cv - cxxvi.

his account is manifestly exaggerated and full of distorted facts, it furnishes us with some information that is interesting and valuable. Marshall's comment on his narrative is worth quoting here. He observes that, "... so far as Taxila is concerned his observation on the city and its buildings correspond with the facts disclosed by my excavations, and that, whatever the source of his information - and there is no reason to doubt that it was the diary of Apollnius' Companion Damis - Apollonius must have visited the city about the middle of the first Century A.D." He continues, "The pity is that Philostratus could not be content with giving his readers an unvarnished account of the content of Damis' notewerthybook. Instead of that he has padded out his narrative with stock extracts from older Greek writers on India, mostly belonging to the Alexander circle, and then proceeded to adorn and distort it still further by casting it into an artificial literary mould of the conventional type favoured in the third Century A.D."[1] However, he compares Taxila with Nineveh and goes on to say that it was defended by walls round it in the manner of other Greek towns. It was divided by narrow streets, planned with great regularity. He also mentions the existence of a Temple of the Sun inside the city in which were the statues of Alexander and Porus and also of a Palace. The city, he informs, had a garden, one stadium in length with a tank in the middle of it which was filled with cool and refreshing streams; and outside the city there was another large and spacious temple surrounded with pillars.[2]

CHINESE :

About 400 A.D. Taxila was visited by the Chinese pilgrim Fa-hien, who calls it Chu-sha-shi-lo or the 'several head' and associates the origin of the name with Buddha's meritorious act of offering his head, in alms, at this place. However, his account of the journey gives us no further real information with regard to Taxila. Later, the famous Chinese pilgrim, Yuan Chwang passed through Taxila twice, once in 630 A.D. and again in 643 A.D. He describes it as a fertile country yielding rich harvests." This was (the Takshasila country) above 2000 li

1. Marshall, Taxila, I, P. 64.
2. Marshall identifies this temple with the Zoroastrian temple, but it is worth mentioning that the Dharmarajika Stupa was originally surrounded by a ring of minature stupas.There is no trace of a tank however.

in circuit, its capital being above 10 li in circuit. The chiefs were in a state of open fend, the royal family being extinguished; the country had formerly been subject to Kapiśa but now it was a depedency of Kashmir; it had fertile soil and bore good crops, with flowing streams and luxurious vegetation; the climate was genial; and the people, who were courageous, were adherents of Buddhism. Although the monastries were numerous, many of them were desolate, and the Brethren who were very few, were all Mahāyānists."[1] From the above description it is evident that when Yuan Chwang visited Taxila, it had already lost much of its former glory and was virtually decadent, occupying only a very secondary status under Kashmiri suzerainty. Curiously enough, both these Chinese pilgrims treat Takshaśilā as a district separate from Gandhāra. In earlier Buddhist texts it appears as a part of that country.

Yuan Chwang further informs us that "Above 70 li to the north-west of the capital was the tank[2] of the I-le-po-ta-le (Elapattra), Dragon-king, above 100 paces in circuit, its limpid water beautiful with various coloured lotuses"[3]. He then relates the story how this Dragon-king, while a 'Bhikshu' in the time of Kāśyapa Buddha, destroyed an I-le-po-ta-le tree and as a consequence was reborn as a Dragon-king; later when he presented himself to the Buddha, he was informed that at the advent of Maitreya he would be released from his Dragon existence. Elapattra then undertook to lead a life of gentleness and forbearance, not harming any creature.[4]

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1. T. Watters, on Yuan Chwang, Vol.I P.240, R.A.S. Orient. Trans. Fund, New Series. Vol.XIV, 1904.
2. Cunningham identifies it with the tank of Panja-Shahib at Hasan Abdal, which however, is due west of Taxila. A.S.I. Vol.II, P.135 & 139.
3. Watters op cit.
4. It is interesting to mention here that a relief on the inner face of the Prasenjit Pillar (South Gate) at Bharhut depicts the figure of Elapattra Naga. An inscription behind the principal figure reads: "Erapatra, the Naga Raja worships (the unseen figure of) Buddha". The relief depicts on the left a 'siris' tree rising from the midst of a square altar, before which is kneeling a Naga Raja in complete human form with a five-headed snake canopy over his head. Behind the Raja to the right are the half figures of a Naga and two Nagāis, also in human form and with snake-heads over their heads - The Stupa of Bharhut, Alexander Cunningham P.27, PLXIV, (London, 1879)

From the Dragon-tank Yuan Chwang proceeded "south-east for above 30 li to a place between two ranges of hills where there was an Aśoka tope, above 100 feet high. This marked the spot at which, according to the Buddha's prediction, one of the four great natural Treasures of Valuables will be in existence"[1] The pilgrim also records that "above 12 li to the north of Takśhaśilā was an Aśoka tope which on first days, sent forth a brilliant light etc."[2] At this site, he tells us that, Pusa, as king Chandraprabha, cut off his own head as an act of charity, as he has done in a thousand similar births. Near this Head-giving tope was an old ruined monastery occupied by a few Brethren. It was in this monastery that the Sautrantika Doctor in Buddhism, Kou-mo-lo-to (Kumāralabdha) once composed an expository treatise. Yuan Chwang also, says that on the north side of the south hill to the south-east of the capital was a tope above 100' feet high, erected by king Aśoka on the spot where his son, Prince Ku-lang-na (Ku-na-lang) or Kunala had his eyes torn out by the guile of his step mother.[3]

Yuan Chwang's use of the term Aśoka Stupa obviously refers to a certain type of Stupa. This was, presumably, the old hemispherical type on a circular drum. He seems to draw a distinction between this and the later Gandhāran type on a square terraced base. But neither at Taxila nor in the Kabul valley are his descriptions, of much help in identifying sites.

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1. The 4 great Treasures alluded to here are the Elapattra in Gandhāra, Pāṇḍuka in Mithila, Piṅgala in Kalinga and Śankha in the Kasi country - Watters op cit P.245-6.
2. Watters, op cit P.245-6.
3. Obviously quoting Divy. P.61.

C H A P T E R II

Geographical

Taxila due to its frontier position, situated near the north-western gate of India, was destined to have an extremely troublous history, extending for nearly a thousand years. During this long period, approximately from the 5th Century B.C. to the 5th Century A.D., the city's fortunes varied greatly. Eventually, owing to successive waves of inroads from the West, it declined. But Taxila, due to its situation near the frontier, was a natural halting place for travellers and traders from distant lands, as is amply attested by the older Buddhist and Graeco-Roman literature. It is not to be wondered at that the population of the city assumed a somewhat cosmopolitan character. In fact, it owed its prosperity to its being situated on the great overland trade-routes from Central Asia, Western Asia and India, along which a substantial volume of commercial traffic flowed, and it declined when the trade fell away. It must also have been an active centre of political contacts.

The importance of the old trade-route, which connected Taxila with the outer world, is evident and, therefore, a short survey of ancient Asiatic routes is here necessary.

We have evidence of India's commercial intercourse with the western world, prior to, and independent of any recorded political contacts from a very early date. That there are overland routes through the numerous mountain passes and river valleys of Hindukush and the adjoining regions to the north-west, and, also, through the difficult high-level routes across the Himalayan Mountain Wall to the north, is well known. These routes have remained practically unchanged, until recently. However, when India's contacts with the Oxus basin and the cities of the Iranian plateau are considered, it is clear that a choice of possible routes was always available, and that the actual trade-routes followed, changed from time to time. At all times, variations in rainfall must have radically influenced this choice of routes. Plentiful ancient sites make it clear that the great south Persian trade route, through Baluchistan flourished in

very early times. Yet inspite of this, Alexander met with great difficulties on this very route. Indeed, his return journey has all the characteristics of an exploration in virtually unknown territory.[1]

To understand the real significance of the north-western routes to India a short survey of the general geographical features of that region and the adjacent territories which lie beyond it, is necessary. The mountainous tracts of the N. W. Frontier and Baluchistan are in fact, an extension of the Iranian plateau, and so geographically form a single unit which, although is not as lofty as Tibet or Tien Shan, yet constitutes a major feature of the geography of Asia. The Iranian plateau sloped down abruptly on all sides to low lands or to the sea, except in the north west, where it rises on to the Armenian highlands and in the north-east at Herat, where it meets the complicated western ridges of Hindukush and Koh-i-Baba. To the south and south west of Iran lie the Arabian sea and the Persian Gulf and the low-lying tract of country, watered by the rivers, Tigris and Euphrates. On the north, bordering the Central Asian desertland, lie the Oxus valley and the lowlands of Turkistan. From the point of view of known ancient history, the Indus valley, lying to the east of the Iranian cultural field was continually open to influence from it, from a very ~~very~~ early time.[2]

A great triangular complex of mountain ridges splays out eastwards and southwards from the north-east corner of Iran. These, with their intervening valleys constitute Afghanistan, west of the Kabul valley. The Panjshir rising in the highlands of Central Afghanistan

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1. Arrian, Anab. VI, XXIII - XXVI. IIIf Robson's Trans. Vol.II P. 175-187.

2. Apart from the Harappan civilization, the intrusion of the Kulli 'Scarlet-Ware' into Iran is of the greatest importance. The 'Scarlet Ware' of the Kulli-Mehi polychrome group of pottery found in Baluchistan is clearly related to the 'Scarlet-Ware' from Susa D, Tepe Ali Abad and Tepe Khazineh near Tepe Musyan and from the Diyala region sites of Khafajah, Tell Asmar and Tell Agrab in Mesopotamia. This is a matter of identity and not merely of resemblance. This interesting polychrome 'Scarlet Ware' has been dated to Early Dynastic III, corresponding to about 2850 B.C. P. Delougaz, 'Pottery from the Diyala Region', P.65.

Stuart Piggott, Prehistoric India P. 115-6 and Fig. 12. Sir Aurel Stein, 'An Archaeological tour in Gedrosia in the Memoirs of the A. S. I No. 43, (1931 Calcutta) P.120, 122.

descend eastward to the Indus, while the Helmund flows south-westward into the depressed basin of Seistan, which is not only an area of central drainage, but a low rainfall area, surrounded by desert.

At the outset, it must be remembered that the physical features of north-western India, demarcate two distinct lines of communications, which may be distinguished as the Northern Routes and the Southern Routes. The Northern Routes enter India through the several high-altitude Hindukush passes, leading down to the Khyber and the Kurram, after traversing the valleys of the Panjshir and the Ghorband. The Southern Routes lie five hundred miles away to the West and South-West. There, the Afghan hills abruptly terminate and provide an easy approach round and across their low ridges, the 'Daman-i-Koh' of the Muslim writers, from Herat to Kandahar. The existence of ancient sites make it clear that this low-land route continued via the Gomal to Dera Ismail Khan, Bahawalpur and Multan. South of these two groups of routes from the north, lies the Bolan pass, linking the Quetta plain and the rich sites of Seistan with the lower Indus valley. Attention must also be paid to the Mulla pass, leading likewise from Baluchistan and Kalat to the cities of the lower Indus. It should also be noted however, that the lower Indus valley is divided from Peninsular India by the Indian desert, which deflects all practicable routes north-eastward, towards the Ganges. These routes via the Bolan and Mulla passes, converging westward on Seistan link up with the great Iranian southern road, connecting Kashan with Isfahan and Shiraz. Alexander's homeward route passed through the barren regions of Makran and inspite of the difficulties[1] he met on this route, it is recorded that it was in regular use by Arab traders in the Middle Ages. Huntingdon's[2] theory of Central Asian climatic Cycles is not acceptable, but that there have been changes in climate in historic times in the direction of desiccation is clear.

These Southern Routes are accessible from the north, that is to say, from Central Asia, once the low-level, Sarakhs-Herat Gate is

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1. Terrible suffering which attended Alexander's march through this forbidding region (Gedrosia) is recorded in details in Arrian's Anabasis, VI, XXIII - XXVI.
2. Huntingdon's 'Pulse of Asia' (Newyork 1907)

passed . Seistan (Sk. Sakasthāna), known to the Arab geographers as Sijistān, preserves in its name, a memory of the history of the Saka invasion of India. The routes to both Kandahar and Quetta are open, though now waterless. On the otherhand, Kandahār is connected with the Quetta valley only by the Sakisarwa pass, a narrow defile, which until recently, in places, was only open to camels in single file.

KHYBER :

It is necessary to keep clearly in mind that the ancient road from the Kabul valley to Peshawar, which was followed by Alexander, ran from Charikar (Opiane) to modern Jalālābād, the ancient Darunta across its feeder valleys of the Alinagar and Alisang rivers, following the north bank of the Kabul river. From Jalālābād it continued through Bajaur, following the Kunar river for some stages.[1] This road was in use upto the Mughal period. However the route through the Khyber, also, appears to be of some antiquity as the existence of Gandhāra remains[2] indicate, as well as the fact that Alexander, also, sent a detachment under Hyphaestion through the Khyber Hills.

The modern city of Peshawar is the counterpart of the ancient Pushkalāvatī, now occupied by the extensive ruins of Charsadda, about 16 miles north of Peshawar. Tradition ascribes the foundation of Peshawar (Purushapura) to Kanishka. During the first Century A.D. it became the winter capital of Kushān rulers and for this reason the need for a road connecting Kāpiśa, the summer capital of the Kushāns, with Peshawar became imperative. This later road crossed the Khyber pass, possibly through modern Dakka, Jamrud Fort and Ali Masjid or possibly to the north of the modern road. Westward, beyond Jalālābād, it probably reached the Kabul valley by the Khurd Kabul pass. Its goal, overlooking the rich rice fields of the Kabul plains, is marked by the two well-known Minars.[3]

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1. Infra, P.16.
2. J.R.A.S.B.A., 1879-80, P.37 'Buddhist Architecture in the Jalālābād valley, by William Simpson, F.R.G.S.
3. Surkh Minar and the Minar Chakri. Fergusson thinks that they date probably from the 3rd or 4th century A.D. or even earlier. Evidently they are Buddhist monuments erected to mark some sacred spot, although tradition ascribes their authorship to Alexander the Great. According to Fergusson they are architecturally degenerate forms of Persepolitan Pillars. These two minars are also illustrated in a drawing by Mr.

The exact location of Kāpiśa is doubtful, but it is agreed that it lay some where in the Kabul valley. It is evident that it owed its importance in history to its favourable central situation. The commercial intercourse between India and Central Asia certainly passed through it. According to Yuan Chwang, all sort of commodities from various countries were available in this region.[1] The Chinese annyst seem to treat Ki-Pin as synonymous with Kāpiśa. Yuan Chwang says that the kings of this region were went to spend the winter in Gandhāra and the summer in Kia-Pi-Shi.[2] A century later Wu-K'ung repeats the same statement, substituting Ki-Pin for Kāpiśi.[3] Also Wu-K'ung places the convent of Śramanera in Gandhāra, while Yuan Chwang places it in Kāpiśi. As to its actual position and extent, Yuang Chwang says that Kāpiśi is bounded on the north by Snow Mountains and on the three remaining sides, by the Black Mountains.[4] Kien-to-lo (Gandhāra) is 300 li or so (about 50 miles) south-east of Hilo (Hadda). The report of the seasonal change of the capital is explained by his statement that Kāpiśi is bleak and windswept, while in Gandhāra, ice and snow are unknown and flowers and fruits, and even sugar-cane abound This would seem to indicate that Kāpiśi lay in the upper Kabul valley, between Charikar and Kabul city, but detailed examination of this area has failed to discover a site, in any way corresponding with the literary descriptions. Begram is a small site, indeed, it is little more than a fort guarding the still important ferry across the Ghorband It must be remembered that extensive remains may exits under modern Kabul city.[5]

Masson in H. H. Wilson's 'Ariana Antiqua'(Lond.1841) James Fergusson, History of Indian and Eastern Architecture, Vol.I, P.61 (Lond.1910)

1. Watters, T. 'on Yuan Chwang's Travels in India', Vol.I,P.123-4, (Oriental Trans. Fund. New Series, Lond. 1904) ed. by T. W. Rhys Davids and S.W. Bushell; Beveridge, A.S. 'The Bābur-nāma in Eng.'Vol.I, P.202. (Lunac, 1922) Babur tells us that in his time, not only articles from India but also from Khoresan, Rum and Iraq were available in this region.'

2. Watters, 'On Yuan Chwang' Vol.I, P. 124.

3. Beal, Samuel, "The Life of Hiuen Tsiang" by the Shaman Hwui Li". P. 54 (Lond. 1911)

4. Watters, op cit, Vol.I, P.122.

5. These opinions are based on a careful survey carried out by Hackin and Codrington in 1940, and Codrington again in 1954.

The modern road from Peshawar to Kabul run a few miles west of the little frontier fortress of Jamrud and continues westward under the shadow of the Ali Masjid hill fortress, across the low saddle which lies between Landi-Kotal and Dakka. The old road actually followed the river bed. Beyond Jalálábád, from Mughal times until recently, the road followed for some distance, the affluent of the Kabul river, called the Surkhab and crossing it, passed through the district of Ningrahár on to the pass of Peiwan. From Peiwan to the edge of the Kabul plain at Butkak, the road becomes involved among the intricacies of a mass of hills formed by the lower spurs thrown off from the north-western abutment of safed Koh. Through these hills there is more than one practicable route to Kabul. The main road, however, ran across the Jagdalak Pass to the Khurd Kabul and on to Kabul via Butkak. Later, a road across the Lataband Pass was constructed which obviated the Khurd Kabul. The latter remains the shorter foot or caravan route, however.

From the Kushán period onwards, the ancient road from Peshawar eastward, passed through Hoti-Mardan and then, turning south-east to the ferry at Chind, crossed the Indus and reached Taxila through Hasan Abdal. The modern road directing to Attock,[1] is dependent on the engineered bridge across the Attock gorge.

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1. The present Grand Trunk Road which was followed for the most part by the main line of the N.W. Railway crosses the Indus defile at Attock. Here the Indus suddenly contracts into a narrow rocky bed. It is joined, above this, by the Kabul river flowing from the west. The Mughal Attock fort stands on its left bank. About 3 miles below the fort, it is spanned by a new fine iron railway bridge, constructed in 1883. There is, also, a second railway bridge below the gorge at Khushalgarh leading to Kohat and Kurram. An old road runs due south from Peshawar to Kohat.

Hasan Abdal, which lies on the G.T. Road is only about ten miles north-west of Taxila. The place was celebrated for its natural beauty from very early times. A little to the north-west of the Hasan Abdal hills, crowned by the Ziarat of Baba Wali Kandahári, numerous springs of pure limpid water, gush out of the ground and form a clear stream which flows past the eastern side of Hasan Abdal, and falls through the 'Wah' garden, down to the Chibiat river. The presence of these springs made it possible to lay out beautiful gardens in the neighbourhood. The garden of 'Wah' was named from the cry of admiration, said to have been extorted, by its appearance, from the emperor Akbar. Hasan Abdal used to be one of the imperial halting place of the Mughal emperors on their way to Kashmir through Hazara. Although now it is nothing more than

KURRAM :

South of the Khyber and separated from it by the Safed Koh range and its subsidiary spurs and offshoots, is the Kurram pass, which links both Ghazni and Kabul with the ferry at Khushalgarh, where the Indus emerges from the defiles of the Salt-Range. It does not seem to have been used in historic times until the coming of the Mongol's, at least, there is an almost total absence of ancient archaelogical remains in the Kurram valley. Yuan Chwang passed through this region on his way southward to Varna and describes it as mountainous and thickly ~~forti-~~ forested.[1] The fact that the Kurram valley, now rich with peach-orchards, is bare of antiquities, is probably due to the extent and thickness of the ancient coniferous forests which clad its ridges and slopes. Some trace of this is to be found in Yuan Chwang's accounts as already mentioned. The Parachinar ridge is still thickly forested.

TOCHI:

The next important gateway to India is the Tochi valley which links the Ghazni plateau with Bannu, the site of the ancient city of Akra,[2] and so to the markets east of the ~~ancient city of~~ Salt-Range,

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a tangled wilderness with, "the ruins of buildings, parterres covered with grass and weeds, choked reservoirs, a jungle of trees, a scene of desolation in midst of vegetation "(Col. Cracroft), it seems a veritable Oasis in the midst of a forbidding and barren countryside and hills. The tank of 'Wali', known variously as the tank of Baba Wali or Panja Sahib, was held sacred by different communities in the past, even by the Buddhists in the 7th cent., as is attested by Yuan Chwang's identifying it with the Tank of the Serpent king, Elapattra (Walter's on Yuan Chwang, Vol.I, P.241 -2). Successive legends of Buddhist, Brāhmanical, Muslim and Sikh origin, cluster around this sacred fountain.

1. Julien, Memoirs, Vol.II, P.180 Beal 'Life of Hiuen Tsang' P.193.

2. The few surviving antiquities found at Akra, now preserved in the Lahore and South Kensington Museums, show that the site flourished from the 5th century to the Muslim conquest, was Brahmanical and not Buddhist, and had close contacts with contemporary Persia.
—— Prof. Cowdrington, Inaugural Lectures. P. 13.

crossing the Jhelum river at the ancient fort above Jhelum city. The Tochi river is an affluent of the Kurram, which it joins not far from their united junction with the Indus. It was through this route, according to local tradition[1] that Mahmud of Ghazni marched when Multan and Sind, rather than Peshawar and the Punjab, were his immediate objectives.

GOMAL I

The Gomal river valley afford another important ancient highway linking the markets of the Dera Ismail Khan district with the Afghan plateau. It divides Waziristan from the northern buttresses of the Sulaiman system of Baluchistan. It is one of the oldest of these trade routes and preserved its importance until the caravan trade recently declined. Annually, a succession of 'Khafilas' poured down this route from Afghanistan to India. The Afghan frontier post on the Gomal is called 'Domandi' and it is north of this place that the plain of Wana is situated, providing excellent pasturage.

All these routes until recently were well-trodden and provide in spring and early autumn, good pasturage, without, which even small bodies of men with women and children and cattle cannot move at all in such country. The spring in these parts is short, and the summer sun rapidly destroys the grass, leaving only scrub fodder. In autumn the frosts destroy grass and leaves alike. Travelling through such a region must always be difficult. However a slight increase in the present rainfall would probably make all these routes practicable from the melting of the snows in spring to early winter, for moderate traffic.

Except for the Kurram valley, Graeco-Buddhist stupas and monasteries abound throughout the frontier hills, from Swat to Waziristan, westward from Ghazni to Kabul and northwards to the Shibar Pass and Bamian. It is difficult to construct a picture of such an environment before deforestation did its dreadful work. But it is clear from the distribution of the Buddhist monuments that a net work of well-established routes existed.

It is wellknown that from Kandahar there is actually a choice of two routes to India; the first is directed upon the Gomal and the

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1. Holdich, India. P.79.

second upon the Tochi. But it is interesting that Alexander preferred the third available route to India via Kandahar-Ghazni and the Kabul valley. It is probable that he avoided the Gomal route because his objective was the Ganges valley. Besides, it is clear that Taxila, was the most important city in the trans-Indus basin and would naturally be his immediate objective. He, therefore, selected the shortest route available, through the Kabul valley. It is, however intelligable why he did not chose the Bolan route, for Kandahar is separated from the Quetta plateau and the Bolan, by the difficult Khojak ravine. The Kandahar-Ghazni-Kabul road is open, and the Ghorband is bridgeable between Charikar and Parwan. From Charikar the Indian Road follows the left bank of the united Ghorband-Panjshir straight to Jalālābād. At Begram there is a ferry and a little further down there is one of several low-water fords. Thus at the Charikar Bridgehead two main system of communications unite, the Road via the high passes of Hindu-kush, leading to the cities of the Oxus, and the roundabout low-level road via Herat, Farah, Kandahar, and Ghazni. The importance of this region naturally cannot be over-emphasized. Professor Codrington describes it in the following lines, "From Charikar, in the region of which Alexander built his cities, to Bamian, where a thousand caves cluster around the two great rock-cut Buddha, every inch of the way is historic. So voluminous is the documentation - Sanskrit, Greek, Latin, Persian and Arabic - that it is hard, indeed to confess that the real facts available for the foundation of a true understanding of the region and its history, are few and imperfect." [1]

It is, however, interesting to note that we have no record of direct east-west contact between famous Bamian and still more famous Herat,[2] although only the twin headwaters of the Hari-Rud and the open downs of Deh Zangi intervene.

It is, however, not so easy to account for Alexander's choice of the southward route to India via Kandahar once he had arrived at Herat. Probably, he only later found it necessary, for political reasons, to carry out his trans-Oxus campaigns with Kabul as his base. During

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1. Prof. K. de. B. Codrington, 'A Geographical Introduction to the History of Central Asia.' J.R.G.S. 8th May, 1944, P.31.
2. Strabo however, records that four routes met at Herat, one of which followed the Hari-Rud eastwards, presumably through Bamian. Strabo, Geogr.15.2.8. H.L.Jones Trans.Vol.VII. P.141 (Lond.MCMXXX).

Alexander's time, Taxila's wealth seems to have been legendary, and it is clear that Taxiles must have had accurate information about the Greek army's movements beyond his frontier. Evidently the Greeks used Oriental guides, just as Alexander used oriental officials, such as Sisikottas (Sisugupta), a local chieftain of the frontier hill-tribes, who subsequently was placed in charge of the Greek garrison at Aornos. Yet it is something of a mystery why he did not proceed directly to Bactria when in Herat. A series of ancient sites show that the Kabul-Kandahar route was well-established. At any rate, at Kabul, Alexander had come within Taxile's sphere of interest. It is possible that he was deterred at Herat by rumours of tribal opposition, or even more probably his intelligence service failed to obtain information as to the exact stages, immediately east of Herat along the line of march, south of the Oxus. The evidence suggests that it was the Bactrian Greeks who opened up the northern and southern passes of the Hindukush in their first expansion towards the Kabul valley and India. This move was probably provoked by increasing pressure from the unsettled tribes, north of the Oxus. Moreover, it must be remembered that Seleucus Nikator was also confronted with the same difficulties when he arrived at Herat and, that he, also, turned back.

It is evident, of course, that complex of parallel ridges and valleys, which lie between Pamir and Herat has played a significant part in the development of traffic between India and China. The direct lines of communication with Persia, all lay to the south of this and included the open sea-ways of the Persian Gulf. Alexander's geographers record their impression of the great height and complexity of the mountains to the north of Kabul. Arrian[1], quoting Aristobulus dramatizes the difficulties which the Greeks had to face in their passage of the great divide. He specifically tells us in his graphic description that the people on one side did not know the people on the other.

However, history proves that the apparently impenetrable barrier is actually pierced by passes which eventually provided, as Professor Codrington[2] observes, "well-trodden routes for the transportation of

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1. Arrian, Anab. III, 28, 5-7, E. Iliff Robson's Trans. Vol.I. P.319-20. (Lond.MCMXXIX)
2. Codrington, op cit J.R.G.S. 1944, P.31.

Buddhism and Indian art to China via the caravan-sarais and merchant-cities of Transoxiana and Taklamakan, which also served the Mesopotamian and Black sea routes." The advance of the Greek dynasties of Oxiana towards the Indus and their final retreat from the Oxus under barbarian Pressure must have played a critical part in opening up these routes to Indian trade. Their objective was the Chinese market.

NORTHERN ROUTES :

The existence of another extremely difficult road through the apparently impenetrable Karakoram range, to the north is known from the time of the Chinese pilgrim, Fa-hien. This connects India with the highland of Asia through Gilgit. It should be remembered that the ancient route, from Central Asia to India via Gilgit, continued through Kashmir, and not through Chitral as is supposed by some authors. There is no record of any ancient direct route from Gilgit to Chitral and the Peshawar valley. The Karakoram Pass, itself, leading from the vale of Kashmir to Kashgar, it is generally agreed, is not an ancient route. It continues to Kashmir through Leh over the Zoji-la, and eventually to the head of the Sind Valley. Due to the natural difficulties of the road and its great height, it can only be traversed during summer. We do not know of a single invader who followed this dangerous road to India.

The western extention of the Gobi desert, known as Chinese Turkestan, is now a windswept sandy desert. The desert has encroached up to the very foot hills of Kuen-lun. Indeed, the rivers have cut their way deep into the alluvium, far below the old surface of the cultivated land. In the centre of the desert, in the Lop area, there are lakes and reedy marshes. But near the foothills, where there are snow-fed streams the remains of flourishing cities, buried under wind-blown sand are plentiful. Each of the southern mountain streams was the centre of a chain of settlements, stretching out into the great basin. Stein's report on his Niya[1] site is typical of these settlements which were once rich with orchards and gardens. Amongst the most interesting relics unearthed from these cities are certain Brāhmī and Kharoṣṭhī writings, which testify to the existence of intercourse with northern

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1. Niya site, - Stein, 'Anc. Khotan'Ch.XI, P.316-344 andPls.36-45 (Oxf. 1907); Stein's 'Sand-Buried Ruins of Khotan'P.354-408Ch.23-26(Lond&C.MIII'

India, but only after the 1st century A.D. Fa-hien in about 400 A.D. travelled from western China to Chinese Turkestan, by way of Turfan and the Buddhist city of Lop. Khotan was then the most important city in the great desert basin and was a flourishing Buddhist centre. From Khotan, routes forked in several directions.

The road from Balkh to Kabul and Kabul to the Punjab was obviously a Buddhist one. Balkh, Haibak and Bamian all testify to that as does the neighbourhood of Kabul itself. To reach Kabul via Balkh, directly from Khotan, it was necessary to cross the Pamirs and Badakshan. Pamir was the real barrier between China and India. Kashmir lies on a short but difficult route, to the east of the main heights of Pamir via Taghdumbash, the Mintaka pass and Hunza. It appears from the itinerary of Fa-hien that he entered the valley of Kie-cha (Kashmir) after 25 days perilous march through these mountains. An alternative route, to the Mintaka pass, runs from the head of the Taghdumbash pamir, over the Killik pass to Hunza and Gilgit.

Fa-hien probably reached the basin of the Indus and his 'little ee country', usually identified with Darel, across the Burzil pass, and in all likelihood, followed the Gilgit river to a point under the shadow of Hindukush range, opposite the headwaters of Darel. This clearly is the main road to Gilgit. The pilgrim describes the road as difficult and broken by steep crags, and precipices. The mountain side, he says, was a veritable stone wall, rising upward for 10,000 feet. Below the track ran the river, he specifically identifies as Sintu-ho (Sindhu Indus). He crossed the river by a hanging rope-bridge and entered 'Wuchung', identified with Udyana, which may be Chilas or possibly upper Swat, where he rested during the rains. Leaving Udyana, Fa-hien went south to the country of Su-ho-to (lower Swat) and finally descending eastward, entered Gandhara in five days.

However, it must be noted that these northern passes from the Karakoram to the Baroghil, have always proved effective barriers to mass migration. Their cultural and commercial importance have, indeed,

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1. Holdich, 'The Gates of India' P.169. He suggests that the pilgrim used the Karakoram-Zoji-la route which is here accepted as modern.

been somewhat exaggerated.[1] Sir T. Holdich characteristically summarises the facts in these lines,[2] "These are the ways of the Pilgrims ... and the footsteps of the Buddhist pilgrims point no road for the tread of armies."

Owing to the vast central desert area, the chief lines of communications in Iran, from north to south and east to west, do not pass through the centre of the country but are perepheral. They follow the Elburz along its east-west line and cross the Zagros in a north-south direction. From very ancient times, the great Iranian east-west route ran from Babylonia through the Bulwan Pass in the Zagros to Kirmanshah, Hamadan (Ecbatana) and Rayy. This highway was called the 'Royal Road' during the Achaemenian period.[3] It is usually said that it extended east-ward through the Oasis-city of Merv as far as Bukhara and Samarkand, across the Oxus,[4] as well as through Herat to Bactria. Marquart, however, believes that it only extended to Balkh at the very end of the Sassanian period.[5]

It was this Merv road which was followed by king Darius III on his flight after the disastrous battle of Arbela. He was closely followed by the Macedonians, and murdered by Bassus, the satrap of Bactria, on the Iranian side of the divide, near Damghan.[6] This road via Merv has been always the chief highway, connecting the Iranian plateau with Central Asia.

A southern section of the above route bifurcated at Shahrud; the main road passed through Asterabad and Jurjan to Ash Ashkabad

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1. The common association of this area or of the Hindukush passes with the Aryan imigration is unsupported by any facts. Writers upon the Aryan problem treat the problem of mass-migration for too lightly. For one thing, it takes a long time.
2. Holdich, the Gates of India P.170.
3. Herod, V. 52. 4. Ktesias, 'Fragments of the Persika of Ktesias P.94.
5. Marquart, 'Eran-shahr', P.47; Codrington, J.R.G.S. 1944, P.82. Codrington's recent re-examination support this view.
6. Ghirshman, Iran, P.214 (Penguin Book 1954)

(Anau)[1] and then, crossing the Tejan river, reached Merv. A third branch passed south of the divide through Sabzawar, Nishapur and Tus and then, winding through the Mazdaran pass , reached Merv via Sarakhs. Nishapur[2] is now known to be ancient, but this road between the mountains and the desert must always have been a difficult one, owing to the bad water. Askhabad, the ancient Anau, lies on the natural spring line, which runs along the northern foot of the hills and provides good grazing, except in winter.

At Meshed, the southern branch of the west-east route, forked; to the south-east the road went to Herat via Turbat-i-jam, while to the north-east, a cross-road reached Sarakhs at the crossing of the river Tejan, via the Mazdaran Pass and eventually continued to Merv, where it joined the main northern branch. From here the road continues directly to Bukhara, Samarkand, Central Asia and China. The main low-land route from India joined it at Merv, but the Hindukush routes, not until Samarkand via Termez.

The southern route from Babylon passed through Susa, Ahwaz and then through the Persian gates, to Persepolis, the Bampur valley (Gedrosia), Makran and so to India. The northern and the southern routes of Iran were connected, along the western fringe of the Salt-Sands Desert (Dasht-i-Khabir and Dasht-i-Lut) by the road linking Tehran, Kandadan, Isfahan and Shiraz. All these ancient routes, in fact encircle the dreaded Central Salt-Desert. Alexander followed the route from Babylon to Susa and Persepolis, and then turned north along the road to Ecbatana and Rhagae (Rayy). He then passed through Zadracarta (near Asterabad) before turning south to Herat and Kandahar.

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1 & 2. In ancient times Nishapur linked north-east Iran with Anau, now in Russian Turkestan; and Seistan with the Indus valley. Pottery from Nishapur discloses strong affinity with the Anau I, II and III levels of Pumpelly. Several Anau finds display clearly a close resemblence with the Harappa culture, including some pottery types, a copper double-spiral headed pin, copper implements and Terracotta 'Knuckle-bones'. In Anau II, the camel and lapis lazuli do appear. It is known that the only known source of lapis lazuli is Afghanistan and its presence at Anau and the Indus cities point to trade connections with the common source.

- R. Pumpelly, Explorations in Turkestan
Vol. I, P.45 (1908).

ROUTES IN ROMAN TIME :

When Rome came in contact with the Hellenized Orient she took over what was already a well established eastern trade. It was primarily due to the energetic imperial organization of the emperor Augustus that Roman trade with the East further developed and prospered greatly. There were three[1] main trade-routes which carried the volume of merchandise to the East. The first ran by the southern shores of the Black sea, along the river valleys of the Caucasus, across the Caspian and up the Oxus. A second and still older road, led from Syria, down the Euphrates to the Parthian capital and so across Persia. The third available route was maritime, by the Red sea and the Indian ocean.[2] It is, also, likely that maritime trade, up the Persian Gulf, was important at times. Of the first route, very little is known and the second was under the disadvantage of leading directly through hostile Parthian territory. This road was long, difficult and infested by highway bandits. It was, also, liable to interruptions from the civil discord, that prevailed throughout the continent, beyond Roman frontiers. Apart from the cities and the settled areas surrounding them, Iran had always been largely tribal. The central desert basin has maintained its basic tribalism, often still on a migratory basis, until recent times. Professor Codrington points out that settled Iran, the Iran of the cities, which were the centres of administration and culture, was always in conflict with the tribes on her unsettled and unstable borders, always eager to maintain their tribal freedom. He writes, "Herzfeld suggests that 'Eranvej', the ancient home of the Aryans, straddled the Oxus and Jaxartes from Khwarazm to Samarkand. A late tradition fixes upon the Oxus as the dividing line between Turan and Iran ... But we know that Turan, the Central Asian cauldron repeatedly spilled over into the

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1. Of the 3 Routes, first is mentioned by Strabo, 509; the 2nd is in Isidore of Charax and Ptolemy; and the 3rd in the Periplus ; Charlesworth M. P., Trade-routes and comm. of the Roman Empire, P.58 and 253. (Camb. 1924)

2. It has been claimed that the Roman 'object d'art' found at Begram and Taxila were exported by sea, but many Roman antiquities including Arretine wares found near Tehran, now in the Tehran Museum, indicate that a considerable volume of commercial traffic was, also, carried overland.

Iranian field, though we do not know what these invasions actually amounted to ... In fact, the Iranian Tajik represents in the Kabul valley, as in other parts of Central Asia west of Tien Shan, the most ancient, sedentary population (Wilson's Travels Vol.2. P.366). At the same time it must be realized that the Kabul valley has repeatedly been included in the Indian kingdom ... It is, therefore, evident that the Tajik with his irrigation channels, his gardens and his orchards, persists inspite of the hammer-blows from the north, the tramp of armies, and the reactionary resilience of Indian culture to the south, from which, the barbarian triumphant in arms, could not protect his individuality or his name. Yet even on semi-Indianized ground in the Kabul valley, on the very fringe of the Iranian world, the Tajik has remained himself. Codrington goes on to say that the real origin of conflict between Iran and Turan is that, "Iran represents urban administration while Turan would maintain tribal freedom. For cities, though they grow wealthy by trade, can not live without bread ... Iran of the cities, each surrounded by the orchards and fields of the villages which gave it its sustenance, looked towards Mesopotamia. It was, indeed, to a large extent the successor of that ancient centre of town-minded civilization. But Assyrians had known the tribal Cimmerians and Scyths as well as Medes and Persians. When Darius created Iranian imperialism, Iran of the cities was faced by a frontier problem. Certain areas were then absorbed within the empire, and so urbanized, as part of the imperial administrative machine. But the periphery of unadministered tribal Iran, remined unknown or rather confused with the Scythian menance. In the greater barbarian Iran, ~~remained unknown or rather confused with the~~ the Tajik, skilled in irrigation and grafting, had his place from early times, within the Scythian lands, cheek by Jowl with Scythian manners and Economics."[1]

In view of these facts and the major fact that the House of Seleucus had already abdicated from this region, it was only natural that the Roman emperors should have made every effort to foster trade by the sea-route. Trading relations between India and Egypt, no doubt

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1. Prof. K. de. B. Codrington, in J.R.G.S. 1944. P.32.
Neither Parthia nor the Sassanids ever solved the problems of their northern, tribal frontiers, nor was the problems of Rome ever able to solve the problems of her Sarmatian frontier.

were some centuries old, but a fresh impetus was given to this trade by the active encouragement of the Ptolemies of Egypt. They paid great attention to the organisation of sea-borne traffic based upon the Red-sea ports of Berenice and Myos hormos. Even so, it appears that communication between Egypt and India depended largely upon Arab intermediaries. It is, also, possible that Abyssinia[1] played a part in these enterprises; its influence certainly survived until early Muslim times. Subsequently, when the strong rule of the Ptolemies declined, Rome began to extend her political influence over the countries of the East. The canals[2] gradually became silted up, the desert

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1. Ancient Egyptian exploration by sea seems to have reached Socotra (Sukhadhara Dvipa, the Island Abode of Bliss), for an Eygptian tale of the 13th dynasty speaks of 'Sacotra' as 'island of the Genius,' Pa-anch, ruled by snake-prince. The story is derived from a Papyrus of the Middle kingdom. It describes a merchant's venture to that island, in many ways resembling an episode in the Odyssey and the voyages of Sindbad in the 'Thousand and one Nights'. Later, from Alexander's time onwards very much the same story is repeated. There was 'in the Erythrean sea (red sea) an island of the blest. Here was placed a romantic Utopia, discription of which were woven into a fictitious tale of exploration. Eupemerus (C.300) tells how he visited Panchaia. Similarly the story of Iambulus, told by Diodotus, tells of an island found in the ocean towards the south. It must be admitted that every thing seems to point to Sacotra as the scene of this happy land, though it is hard to believe it was the origin of the Middle kingdom story.
- Cary. M. and Warmington E. H. The Ancient Explorers, P.58, 193, 201 (London 1929)

2. Canals : Several mouths of the Nile were all interconnected by cross-channels so that, as Strabo says, the whole delta was navigable and it was possible to go from Alexandria to Pelusium by canal. But the most important of all was the canal, which led from the easternmost branch of the Nile, through the Bitter Lakes to Arsinoe on the Red sea, near the site of the modern Suez. This was connected by a branch channel with Pelusium and was originally dug in very early times, being restored and improved by various Pharoahs and Lagids. Augustus put it in order again. Trajan appears to have constructed a new channel entering the Red Sea at Clysmon, which was called after its author 'Trajan's River'. This canal which carried a vast volume of traffic to Alexandria was 150' feet wide and capable of taking the largest merchant ships. Other channels also connected it with Memphis and the south.

- Charlesworth op cit, P.20. Strabo, Geog. 803. 22 and 788. 4, 801. 17, 804. 25 - 26.

roads beset by brigands and the sea by pirates, until the emperor Augustus, undertook vigorous measures to revive the dwindling traffic with East. In the first century A.D. trade once again flourished, as Strabo's greatly increased knowledge of the East shows. It is not surprising that he was assured at Myos Hormos that one hundred vessels then sailed to India in a year. This must have been greatly facilitated by the discovery of the periodicity of the monsoons by an otherwise unknown Sea-Captain, named Hippalus (middle of 1st Cent. A.D.).[1]

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1. Hippalus socalled discovery of Monsoons:

Mr. Kennedy in the J.R.A.S.1898 (P.248-287) expresses his opinion that Monsoons were understood much before the time of Hippalus. In early 7th cent. B.C. regular sea-trades were known to have existed between Babylon and India and even China, and it is inconceivable that while the Arabian and Dravidian crafts had frequented the ocean for many centuries prior to Hippalus, they should not have made use of the periodic changes of the Monsoons, which is by far the most notable feature of their climate. Such opinions presume a continuous trading journey without exchange of cargo at common meeting places. But primitive trade passed from tribe to tribe and port to port. At the time of the Hippalus, cargoes changed hand in Malacca, Malabar, Somaliland, south Arabia, Adulis and Berenice and consequently involved heavy payments in each of these meeting-points for the merchantmen. In fact, Hippalus must not be credited with a new discovery of the Monsoons unknown to the world, but for freeing the Roman empire from Arabian monopoly of the Eastern trade by tracing it to its source. As a parallel to this case we may refer to the Egyptian Punt expedition by Queen Hatshput's in 1500 B.C. (Breasted, Anc. Records II, 287) which achieved the same result of tracing the source of incense-terraces and freed the land from the heavy charges of 'many payments'. There is plenty of evidence from Buddhist and early Brāhmanical sources to show that there was a regular flourishing sea-trade between India and other countries.

- Professor T. W. Rhysdavis, in J. R. A. S., 1899, P.432;

Scoff, 'Periplus' P.228.

Unfortunately, the texts relied on are all late, but Kennedy's theories are a useful antidote to the blind acceptance of the Hippalus story commonly vouchsafed by historians of Greece and Rome.

This made possible the passage from Aden to India direct by sea-going ship, trusting to the Monsoon winds instead of making the long voyage by feeling their way cautiously along the coast. This meant a great deal to the Roman traders, primarily regarding the speed of transit, but also because it enabled them to make voyages direct to the ports on the Malabar coast to tap the spice trade[1] at its source. This southern trade in fact, seems to have been the real cause of the struggle between the two Indian rival dynasties, the Satas and the Śātavāhanas. It was possible to leave Egypt in July and reach the Indian ports by the end of September and after exchanging the outgoing cargo for the oriental luxury goods, so much in demand in Rome, to sail about the end of November, reaching Alexandria sometime about February. It is probable that the difficulties of water supply[2] in the Red-sea ports was the main factor in delaying the development of Egypt's eastern maritime trade. Aden, as an intermediary port was a physical necessity. However, both Ptolemy and the unknown author of

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1. It is interesting to notice how great a value was set by the Romans on the southern spice-trade, especially pepper. This was, of course, black pepper, not the American chile. It was one of the most important articles of commerce between India and Rome, supplying nearly three-quarters of the total bulk of the average west-bound cargo. The constant use of pepper in the most expensive Roman cookery is reflected by its price quoted by Pliny (XII. 14) as 15 denarii. When Alaric sacked the imperial city, he took away, as part of his booty over 3000 pounds of the precious condiment! (Gibbon, Decline and Fall of the Roman Empire III, 271 - 2) In an amusing passage Pliny((XII. 14, 27-29) Trans. H. Rackham, (London, MCMXLV) Vol.IV, P.21) bewails the bad taste of the Romans which brought pepper into so great favour. He says, "It is quite surprising that the use of pepper has come so much into fashion, seeing that in other substances which we use, it is sometimes their sweetness or sometimes their appearance that has attracted our notice; whereas, pepper has nothing in it that can plead as a recommendation to either fruit or berry, its only desirable quality being a certain pungency; and yet it is for this that we import it all the way from India! Who was the first to make trial of it as an article of food? And who, I wonder, was the man that was not content to prepare himself by hunger only for the satisfying of a greedy appetite?" He further regrets the extravagance of the Roman woman in recklessly squandering their money in forign luxury. He says that India, China and Arabia, every year drained the Roman empire of a hundred million sesterces (£1,000,000) of which nearly half went to India.(Pliny, Nat. Hist. BK XII, Rackham's ed. Vol.IV P.63; Charlesworth, op cit,P.69) This trade in luxury goods such as spices, precious stones, cosmetics, and perfumery proved eventually to be too expensive and brought about a serious economic crisis. It appears that this trade decreased gradually after the death of Nero (c.68 A.D.).

the 'Periplus' of the Erythrean sea[1] bear witness to the number of merchants engaged in the Indian trade.

In the first stage of the development of Indian trade, Berygaza (Broach) in the north played the central part. In the later stages, Muziris, on the Malabar coast, probably dominated. It is interesting to note that the regular overseas trade to these ports made a pilot service imperative there. The incoming vessels were piloted and towed up the river by the fishermen paid by the king.[2] The existence of this sort of pilot service indicates an advanced stage of commerce. Indian exports from these ports included, ivory,[3] silk, cotton, and the

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1. The Periplus of the Erythrean sea is a practical handbook written by a merchant for the aid of other merchants and contains such information as the nature of the people along the coast; harbours, tides, prevailing winds, where good anchorages are available, what sort of cargo to take, the imports and exports of various places etc.
2. Schoff 'Periplus', 44 P.40.
3. Ivory. Roman eastern trade in ivory mainly came from Africa and India and to a lesser degree from Ceylon. Before the 1st cent. A.D. Africa had been a natural source of the best ivory, while India only occupied a secondary place. At the beginning of the Roman empire the demand the demand for Indian ivory increased due to the depletion of supplies from Africa. As a result, exploration further southward into Africa was undertaken. In the 4th cent. A.D. the scarcity of African elephants was a source of complaint. It is probable that when the African elephant-hunting of Ptolemic lines declined the demand for Indian Ivory increased. No serious attempt seems to have been made by the Romans to further exploit, by exploration, the African sources until the end of the first cent. A.D. Renewed exploration in and around Africa resulted in a renewal of African supplies and Africa, consequently again took precedence over the more distant India. Indian elephants however, never produced such large quantities of ivory as Africa.

Elephant-hunting was organised by the Romans also for the purpose of using them in battle. Ptolemy II (Philadelphus, 285-246 B.C.) actively took up the matter of obtaining elephants and ivory form the districts south of Egypt, by voyages down the sea. To this end he founded new trading posts along the Red sea, from Suez to Bab Bemas, and constructed good roads connecting these stations. He sent out Salyrus, an officer of his army to explore the shores of the 'Trogodyte on the African coast with avowed object of setting up suitable stations from which to conduct elephant hunting. Ptolemy Philadelphus had great difficulty in inducing the elephant eaters of Africa to refrain from eating buttock-steaks off living elephants in order that he might capture these animals alive and undamaged. The captured elephants were brought by sea to Berenice, where they were driven across the desert-hills to Captos or Ombi. Here they were taken over by an official called the 'Superintendent of the Supply of Elephants'. There was a temporary elephant depot in the Thebaid and the chief stable was at Memphis. Ptolemy III Euergetes I (246-221 B.C.) organised elephant-

coarser sorts of cloth, rice, pepper and spices, which were in great demand. In exchange for these articles, the merchants brought tin and lead from the west together with wine, coral and glass. The mention of coral is of special interest, for this cargo must have been picked up en route in the Red sea ports.

The discovery of several thousand Roman gold coins[1] in South India

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hunting on a military basis. The soldiers detached for the purpose were called 'Kynegoi' or 'Huntsmen' and we hear of the quarter-master of one such corps with the title 'Grammateus of the Huntsman'.- Strabo tells us that, one Philo, was sent to Ethiopia and after him Peitholaus, Lechas, Pythangelus, Leon and Charimortus were all entrusted with the same job. They all set up hunting stations and erected pillars and altars on the Somali coast showing the furthest points reached by them. From an inscription we know that Lichas was sent out twice, the 2nd time by Ptolemy IV. There is a very interesting inscription in the B.M. which tells how after 209 B.C., under the 4th Ptolemy, Alexander, second in command of an elephant hunting expedition, conducted by Charimortus and a subordinate named Aponsis and his soldiers gave thanks to Ares, Victory-Bringer and Good-Hunting Giver.

African elephants are Zoologically quite a different animal from the Indian and attempts to train the African elephants like the Indian species have not been met with any great success. Similarly, the attempts of the Ptolemies to use African elephants in war against Indian proved a failure, The African elephants would not stand against the Indian elephants in battle. After the battle of Raphia, elephant hunting in Africa, although was not immediately abandoned, but it appears to have been given up gradually in the later days of Ptolemies. The alleged inferiority of the African elephants in size to that of the Indian is, of course, not borne out by facts.

- E.H. Warmington, The Commerce between the Roman Empire and India, P. 163, (Camb. 1928); Cary and Warmington, op cit, P. 68 -69; 175, 176; Strabo, XVI, 774; Edwyn Bevan, The Hist. of Egypt under the Ptolemic dynasty, P. 175.

1. V. Smith, E. H. I. P. 461, 270 (Fourth ed. Oxford, 1924) Anc.India, Bulletin No. 2, Appendix 1. P.116. However, it is to be noted that these Roman coins in south India occur mainly as hoards and their distribution is not really very illuminating.

shows the highly flourishing conditions of trade between India and the Roman world. This is natural enough as the standard of Roman gold currency was of high repute and consequently it was most suitable for international trade. It is a notable fact that these coins are rare in the north. The likely reason partly is, as Schoff points out, "the policy of the Roman empire during the two centuries following the Christian era, was to encourage direct sea-trade with India, cutting out all overland routes through Parthia and thus avoiding the annoyance of fiscal dependence on that constant enemy of Rome."[1] Thus it is fairly evident that the trade between the Roman empire and India was chiefly by sea during this period.[2]

The excavations at Arikamedu, near Pondichery, have yielded a mass of Roman pottery, including the signed Arretine ware. Roman coins, found in various parts of India, cover a long period of five centuries, from the first century B.C. to the fourth century A.D.[3] But more than half of these coins date from the time of Augustus and Tiberius,[4] approximately the period of the imported Arretine ware. The discovery of these Roman coins, Arretine ware and Amphorae in south India is perfectly in accordance with the accounts of the classical geographers.

Gujarat was then, we know, in the hands of a Scythian dynasty; the Kshatrapas, probably connected with the Kushāns. They controlled the ancient port of Broach and were in conflict with their enemy, the

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1. Schoff, 'Parthian Stations', P.19

2. As already noticed earlier, it has been generally assumed that the trade of this period was pre-eminently conveyed by the sea-routes and that the Roman Bronzes from Taxila and Begram point also to an Alexandrian origin. But the land-route cannot be overlooked, the Parthians controlled this trade and successfully resisted Roman interference. The Trogus passage in Justin, moreover makes it plain that the Kushāns controlled the Oxus valley for a period and thus held the Merv-route to India in their hands (Justin, XXXIV, I. 4, Trogus Pompeius calls kings of the Tocharī). Supporters of the sea-route continue to quote Schoff and neglect the fact that Roman objects are common in north Persia. Both routes were used. The Parthians objected to Roman traders, operating in their cities, but were eager enough for the trade itself.

3. Anc. Ind. Bulletin No.2. P. 116-21.

4. Nilakanta Shastri, K. A. Foreign Notices of South India P.6 (Madras, 1939).

Andhras, over the control of the ports of Salsette, the site of modern Bombay. Broach early developed into the largest port and trading centre on the western sea-board of India, as is specifically stated in the Periplus. Due to its growing commercial importance, the region around it became the bone of contention between the Sakas and the Satavahanas.[1] Broach was eclipsed, about the middle of the first century A.D., by its southern rivals, as they became directly accessible to western shipping, because of the increasing use of the periodicity of the Monsoon winds. The trade gradually moved southwards, shifting from Kalyan and Supara to Muziris and Nelkynda. These ports, according to Schoff,[2] belonged to the kingdom of the Cheras and Pandyas respectively. The former has been identified with modern Cranganore on the Malabar coast and the latter with Kottoyam in Kochin back-waters.[3]

A temple of Augustus[4] in Muziris, mentioned by the Periplus, indicates the existence of a Roman settlement in this region. The Arikamedu excavations are a confirmation of this report. We can see that the intercourse took place primarily on the south coast and with the Tamils. In the tombs of the Nilgiri hills,[5] lamps and vases along with Roman coins have been discovered which undoubtedly points to a thriving trade. The Tamil epic poems,[6] also, speaks of the 'cool and fragrant' wine brought by the yavanas in their good ships.' In further corroboration to these contacts, the existence of a skilful and complicated system of surface drainage irrigation, using trimmed ashlar for its dams and sluices in southern India, suggests an imported technique from close parallels in South Arabia.[7]

As already noticed earlier, under Augustus, commercial contacts with the East were greatly extended and he found the need for map-makers, explorers and geographers. A most interesting document of this kind is provided by merchants guide of Isidore of Charax. This was a

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1. Rawlinson, H. G., Intercourse between India and the western world, P. 112 (Camb. 1916)
2. Schoff, quoting the Periplus, P. 44.
3. Mc. Crindle, Ptolemy, P.51-52; Rawlinson, op cit, P.120.
4. Cary and Warmington, op cit. P.78.
5. V. Smith, E. H. I. P.463 (4th ed. 1924)
6. Pillai, V. K., The Tamils 1800 years ago, c. III (Madras, 1904); Mookerji, R. K., Hist. of Indian Shipping P.155-6.
7. Prof. K. de. B. Codrington, Inaugural Lecture, P.17.

brief itinerary, recording the stations between Zeugma and Bactria upon the traditional silk-route. Wars and expeditions as well as the enterprise of private merchants, had considerably increased western knowledge of central Asia, which resulted in renewed efforts, by the Romans, to discover and control a northern land-route, beyond the control of Parthia. The object of these efforts was probably the Silk-Trade with China, on which Parthia must have enjoyed considerable transit dues.

Zeugma, an important crossing of the Euphrates, was the starting point for overland journeys through Mesopotamia to the Persian Gulf.[1] The route given by Isidore, as followed by traders, went across to Anthemusias, after making a semi-circular bend. It then ran nearly parallel to the course of the Bilechas, through Ichnae to Nicephorium, where it joined the river again. Keeping to the left bank, it went on to Phaliga(circesium) where another route came in from across the desert and from distant Palmyra. After this, the road followed the Euphrates to the thriving Greek town of Seleucia, which is not far from the Parthian capital at Ctesiphon. Ctesiphon survived into late Sassanian times as a centre of government and trade. From here the Parthian road climbed the steep ascent up the Zagros mountains, leading to the Iranian plateau and on by the modern Kermanshah route, past the great rock of Behistun, to the wealthy city of Ecbatana. Then the road traversed the plains of Media Rhagina, across the famous pass of the Caspian Gates and past the Greek city of Apamea and through the lonely wastes of Hyrcania, on to another great Parthian city at Hecatompylos. The road then continued due east to Antiochia Margiana (Merv). As has been said, from Merv one road went south to Herat and Kandahar and one to Samarkand and the Norther Chinese Road.

over the Pamir to Tashkurgan in Sarikol, was a fortified town upon a Tashkurgan and Yarkand.

over the Pamir to Tashkurgan in Sarikol, was a fortified town upon a desolate crag overhanging the upper Yarkand river. It was an important trading station. Charlesworth says that it, "stood at what is the very heart and centre of all commerce for the old world and the most ancient meeting-place on the whole earth." He continues that, "At this lonely

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1. Antiochus III (223-216) expedition against the Gerrhans can only mean that he wanted to command the Persian Gulf sea-routes. E. R. Bevan, The House of Seleucus, Vol.I, P.305, 313 (Lond., 1902).

point three civilisations, those of China, of India and of the Hellenised Orient, met and gave in exchange their products, their wares and their paintings and art"[1]. It was at Tashkurgan that the Chinese merchants met the agents of the westerners and laid on the river bank the raw-silk,[2] silk-yarn and silken garments which they exchanged for the precious stones, amber and coral, which the Romans brought.[3] It is evident that this meeting place of commercial interests proved a barrier to western knowledge, because the merchants from the eastern road were unwilling to disclose their organization.

It must be noted that this magnification of the importance of Tashkurgan as the 'Stone Tower' of the classical sources, is not borne out by Chinese historians and geographers. Chinese tradition makes it plain that the Northern Route, running north of Tien Shan was, on the whole, the important route, closely followed by the Southern Route, running south of Tien Shan. The Pamir routes, only became important after the 2nd century, when Stein's sand-buried cities were called into existence, to provide stages for a route, south of the Great Desert. The two routes, which so to speak, ringed the Great Desert, formed a common exit out of the basin through the Terek Pass, but other passes were also in use as Yuan Chwang's and Fa-hien's itineries show. It is evident that the Northern route, facing the open Steppe, was also open to nomad attacks. On the other hand, it follows the spring line and is well-watered. The fruit gardens of the oasis which form its stages are famous. Westward bound from China, all these routes are served by the Jade Gate.

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1. Charlesworth, The Commerce etc. P. 103. This account As given by him, depends, on his identification of Tashkurgan, but the site is not precisely known.

2. Bales of ancient silk have been discovered at Lop-Nor. However, it must be pointed out that virtually all the known antiquities of Tashkurgan belongs to a later period. - Stein "Ruins of Desert Cathay" Silk documents of Lop-Nor vol. I, P.394; at Miran Vol.I, P.458-459; Silk bales, vol.I, P.381; Vol.II, P.125-26 (Lond. 1912)

3. The discoveries made by Sir Aurel Stein at Miran, in the Tarim valley are perhaps most astounding, which amply illustrates the result of such a mingling of various cultures. In this deserted fort, which lay upon the ancient Silk-Route, frescoes and paintings were dug out, revealing a strange mixture of Indian and Greek art. However, Stein in calling this route, to the south of the great desert basin, neglects the two

The central Asian Trade-Routes were first comprehensively described by Marinus of Tyre, about two generations later after the period of the Periplus. His account is preseved by Ptolemy and is said to be based on the notes of a Macedonian silk-merchant, named Maës, whose Roman name was Titianus.[1] He actually did not perform the whole journey himself, but only repeats what he learned of Turkestan from his 'agents' or trading associates. The first part of his route had already been described minutely by Isidore of Charax Spasini, before Marinus, as we have already noticed. It began at Zeugma, crossed Mesopotamia, Assyria and Media to Ecbatana and the Caspian Gates, and continued through Parthia and Hyrcania to Merv; thence it is said to have gone through Aria into Bactria and on into the mountainous country of CBeDi and the territory of Sacae to the 'Stone Tower.' Commentators have almost unanimously accepted the modern Tashkurgan as the 'Stone Tower'[2] but at this period, it can hardly have been in Sacae territory. The culmination of Maës route, in the Lop basin, is very obscure. In many case, this route is probably not normal, for at this time the Kushāns were still in full force in the middle Oxus valley.

As has been already pointed out, Taxila was the meeting place of Indian and foreign traders. There are references in the Buddhist literature, mostly later than earlier, which record that traders from Benares, Śrāvasti and Soreyya used to come to Taxila.[3] Of the highways of Eastern India which served Taxila in ancient times, the main road went to Kasi and Mithila. The Jātakastell us that the road from Taxila to Benares passed through thick forests and travellers were in perpetual fear of wild animals and highway robbers.[4] The Rāmāyana

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northern routes running on either side of Tien Shan, which are given greater prominence in Chinese source. Miran is probably 3rd cent. A.D. - Stein, 'Ruins of Desert Cathay' P. 443-496. Pls.IV, 143, V, 146, 147, 148 Vol.I (London, 1912)

1. Schoff, Periplus, P. 268-270.
2. Stein, 'Ancient Khotan' P.54 (Oxford, 1907)
3. Gandhāra Jāt. and Susima Jāt. op cit. Here one is faced with a prime difficulty. These references, mainly from the Jātaka commentary, were used by Rhys Davids in his pioneer 'Buddhist India', but it must be remembered that they are late in date.
4. Pañcavada Jāt. No.55, Vol.I Cowell, P.137-139 (1895) and Telapatta Jāt. No.96, Vol.I, Cowell P.253; Susima Jāt. Gandhāra Jāt. etc.

and the Vinaya of the Mulasarvastivadins[1] preserve a detailed account of the road between Taxila and Mathura. We know from the Vinaya that Jivaka Kumaravrityа went from Taxila to Mathura via Bhadrankar, Udumbara and Rohitak. Przyluski[2] has identified Bhadrankar with Sakala (Sialkot), Udumbara is in the Pathankot area and Rohitak is modern Rohtak. The 5th Century Chinese traveller Che-Heng (404 A.D.) mentions Agrotak on this road, which may be identified with Agroha in the district of Rohtak.[3] Vinaya[4] tells us that the road from Mathura to Rājagriha passed through Veranjā, Soreyya, Sankisha, Kanyakubja and eventually reached Benares across the Ganges.

Benares had also commercial contacts with Ujjain and Chedi through Kosambi.[5] From here another road went east to Rājagriha and a second, north to Śrāvasti.[6] The Śrāvasti road passed through Kitagiri. From Veranja, where Buddha is said to have preached,[7] to Benares, there were two routes; the tortuous Sorayya road, and the road which crossed the Ganges at Prayaga,[8] reached Benares direct. From Benares the road

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1. Quoted in Dr. Motichandra's Sārthavāha P.15 (Patna, 1953)
2. Przyluski, J., J. Asiatique, 1926, P.3-7.
3. Ibid.
4. op cit.
5. Jāt. No.343 Vol.II, No. 498, Vol.IV, Cowell.
   However it must be noted here that the knowledge of the South at that period is doubtful. Thomas specifically clarifies that, "There is no real knowledge of any part of the Deccan. The Assakas of the list of 16, are said to have been settled on the Godavāri, and a single reference to this river is found in the introductory verses to the Pārāyana section of the Suttanipāta(977). The Pārāyana is indeed old, but it is introduced by a legend expressly called Vatthugāthā, 'Verses of the Story'. There is no reason for thinking that this legend, in its present form, is of the same age as the Pārāyana".
   - Thomas, E.J., 'The Life of Buddha as Legend and History.' P. 14 (London, 1927)
6. Dr. Motichandra, op cit, P. 16-17.
7. Dict. of Pali Proper Names, 'Veranja', G. P. Malala-sekera (London, 1937).
8. At the Sangam at Prayaga, where modern Allahabad is situated there is the important ancient site of Jhunsi.

reached Vaiśāli through Uddachela (Sonpur, Bihar), where it united with the Śrāvasti-Rājagṛiha road.[1] There was also a road between Benares and Uruvela (Gaya) which ran south of the Ganges. It is clear that a well-trodden main road connected Pataliputra with Vaiśāli through Sonpur, on the north bank of the Ganges, where there is an excavated site, near the railway station which has produced many interesting antiquities, now in the Patna Museum. An ancient ferry across the Gandak at Chitauni Ghat, connected Vaiśāli with Kosala; and the road to Śrāvasti through modern Gorakhpur. Immediately to the north lies the Buddhist holy land with the rich sites of Lumbini and Taliḥawa, in the vicinity of which Kapilavastu must have been situated.

The second road from the Uttarapatha ran direct to Śrāvasti, the capital of Kosala, probably through Ahichchatra. As has been said, Śrāvasti was connected with Vaiśāli by the Gorakhpur - Chitauni Ghat road. At Vaiśāli, this northern route and the southern roads from Benares, converged and the main route went on to Champa.[2] There was, also, another road from Śrāvasti to Kosambi via Saket which, it is said, was infested with robbers and demanded a regular provision of state guards for the security of travellers. From Śrāvasti, the northern road passed through Vaiśāli, Bhaddia (Mungir) and Champa, entered Bengal through Rajangal (Rankjol) and eventually terminated at Tamralipti.[3]

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1. Dict. of P. P. Names 'Uddaccela'
2. Motichandra, Sārthavāha P. 12-23.
3. Mokama Ghat probably played an important part in this line of communications.

C H A P T E R III

The spade of the archaeologists has laid bare to-day the extensive ruins of Takshaśilā, more familiarly known by its Greco-Roman abbreviated name, Taxila. The ruins, hitherto known locally as 'Shah-Dheri, nestle under the shadow of the imposing Murree Hills in a fertile valley, watered by the river Haro and its tributary hill-torrents, where the districts of Hazara and Rawalpindi of the former N. W. F. P. and the Punjab respectively meet. More precisely, it is situated close to the junction of the same name, where the main line of the N. W. Railway is joined by a branch line from Havelian in the Haripur valley, approximately 20 miles north-west of Rawalpindi town.

ORIGIN OF THE NAME :

The origin of the name is debatable. Sir A. Cunningham[1] with his usual ingenuity and vast learning has discussed the problem at length in an illuminating manner. The correct name of the city is Takshaśilā in sanskrit which means, 'the city of hewn rock' (Taksha = hewn; śilā = rock). Some scholars have tried to associate the name with the 'Takka', who are said to have been an early Indo-Iranian people, who occupied the tract of country between the Indus and the Jhelum rivers. According to Cunningham, they were the aboriginals of the Sind-Sagar-Doab, who must have been ejected from their homeland by other tribes before Alexander's invasion of India.[2] Their ancestory has been traced far back into the legendary accounts of Hindu Mythology. Cunningham, while discussing this interesting point says that, "According to Colonel Tod, the Tak tribe, were descended from Takshaka, the founder of the Nagavansa or serpent race, who according to Hindu belief had the power of assuming the human form at pleasure. It seems probable that the Nagas, who throughout the Vedas appear as the enemies of the primitive Aryans were really

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1. A.S.I. Reports Vol. II, P.114; P.6.
2. Ibid P.11.

a race of dragon-worshippers, akin to the Scytho-Median 'Zohak'. That the Takkas or Takshakas were also dragon-worshippers, we have a convincing proof in the fact that the king of Taxila kept two large serpents at so late a period as the time of Alexander. We know, also, that the famous spring at Hasan Abdal was called the fount of Hlapatra, the dragon-brother of Takshaka. Admitting, therefore that these ophiolatrous Takkas were actually the same as the Takshakas of the Hindus, we may extract a meaning from the Puranic story of the death of Parikshita by the bite of the serpent Takshaka. PariKshita was the grandson of Arjuna Pandava and is said to have succeeded Yudhisthira on the throne of Indraprastha, ancient Delhi. His death by the bite of Takshaka may, therefore, be interpreted as showing a conflict between the Pandavas of ancient Delhi and the Takkas of the Punjab, in which the latter were victorious. This event may be dated about 1400 B.C."[1] As we have already noticed earlier Takshaka is mentioned in the Mahābhārata and the Purānas, as one of the many sons of Kasyapa by his serpent wife Kadru, whose descendants are named Takkakas.

It was left to the famous Chinese pilgrim, Fa-hien to transcribe the name into 'Chinese as 'Chu-Cha-Shi-lo' or 'the severed head'.[2] By way of explaining the origin of such a curious name, Fa-hien adds, obviously quoting a passage from the Divyavadana,[3] that the Buddha in a former birth was the king of Bhadrasilā by the name of Chandraprabha, who allowed himself to be decapitated by the Brāhmana begger, Rudraksha as a meritorious act of alms-giving. From this the town was called, Takshasilā (from Taksha śira, 'the severed head'). It is needless to go into details with regard to other possible sources of the name, such as Cunningham's explanation of 'Chach-Hazara'

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1. Cunningham, op cit, P.9. The use of the term 'dragon' is perhaps a little unfortunate. It is derived from Yuan Chwang.

2. Similarly 'Chutya-śira' and 'Taksha-śira', little corrupted from the Chinese and Sanskrit Takshasilā may, convey the same meaning, connected with the 'Head-Gift' legend.

3. Dr. R. Mitra's Sanskrit Buddhist Literature of Nepal. P.310.

(thousandheads) or 'Margala' (decollated or beheaded) associated with the Bodhisattva's offering his thousand heads; or 'Babar-Khann' connected with the Tiger to whom they were offered, as these are obviously only far-fetched and manifestly concocted.

TOPOGRAPHY :

The classical author's lavish eulogies of Taxila's fertile soil however, are adequately borne out by the facts. At present this part of the country, particularly the valley in which are situated the ruins of the ancient city, is no less reputed for its luxurious fruit-orchards and crop-yields, as for its impressive landscape and invigorating climate. The valley extends over three miles from north to south and two miles across, but opens out to about eleven miles in length and about five miles in breadth at its mouth. It is girdled by a number of spurs and outlying ridges of the snow-capped (in winter) Kashmir Hills. On the north and south, it is bounded by two spurs of the Murree Hills, Sarda and Margala, a third the Hāthiāl ridge, intervenes between the two. This ridge, composed of a hard limestone formation, divides the valley into two unequal halves, as it falls away into the plain. The northern half today is still relatively fertile, being well-irrigated by a number of artificial canals, drawn from the river Haro and its tributaries, while the southern half is comparatively sterile, since it is intersected by a number of deep ravines and broken by bare stony knolls, the product of advanced denudation. The Tamra or Tabra Nala skirts the western foot of Hāthiāl. The Lundi Nala, another tributary, flowing through the northern part of the valley, unites with the Tabra Nala before reaching the Haro.

The Tamra Nala has been identified by different scholars with the stream variously called by the Greek classical authors, the 'Tibero-nabo', 'Tibero-boam' or 'Tiberio-potamos'. There is an interesting account of it to be found in the Pseudo-kalliathenes

which has been held to confirm this identification. Sylvain Lévi, while commenting on the Text in a paper in the Journal of the Société Asiatique [1] says, "The Pseudo-Kallisthenes dwells complacently on the sojourn of Alexander at Taxila and his conversation with the Brāhmanas. The Brāhmanas (III. XII. 9. 10) blame the conduct of Kalanos, who, in violation of the duties of his caste went to live with the Macedonians. 'It has not pleased him', say they, 'to drink the water of wisdom at the river Tibero-boam'. And further on (III, XIII. 12) they ask 'How could Alexander be the master of all the world when he has not yet gone beyond the river Teberoboam?' Julius Valerius gives, in the first case Tiberunco fluvio; in the second, Tybero-boam. The various readings of the Greek manuscripts, indicated by C. Müller in his edition (Didot. 1846), give Boroam, Baroam, Tiberio-potamos, and lastly (M.S.A.) Tibernabon. The site fixed by Cunningham for the city of Taxila is distinctly traversed by a river called Tabra Nala, which divides into two, the ancient city, and washes the foot of the citadel. The case of confounding the 'ϱ' with 'λ' in the manuscripts permits the correction of Tibernabon into Tibernalon. The name is, moreover, Tabra, 'nala' being a designation common to small affluents. The resemblence of the two words Tabrannala and Tibernalon is at once apparent; the persistence of geographical names has nothing surprising in it, especially in India. The city of Takshaśilā ought then to be placed definitely on the banks of Tabrannala (a small affluent of the Haro, which bends its course to the Indus, into which it falls twelve miles below Attock) in the position proposed by General Cunningham", [2] The exploration and partial excavation of the valley in recent years by different archaeologists has brought to light the existence of three successive but adjacent city sites. These are the Bhir Mound and the separate walled cities of Sirkap and Sirsukh, the latter unfortunately only partially excavated. They are surrounded by

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1. Sylvain Lévi, op cit, vol. 15. P.236-237.
2. Sylvain Lévi, op cit, 15th Vol. of 8th series of the Journal. P.236, 237, Trans. Anc. Ind. Mc. Crindle, P.343.

literally hundreds of other derelict remains, mostly Buddhist, in the form of scattered stupas, monasteries and dwelling houses, most of which are distinguished by modern names. These ruins, occupying the whole valley from end to end,' amply bear testimony to the size and splendour of the old city. (see Plan .....)

Towards the western end of the valley, the remains of the three separate city-sites, are situated within a distance of ¾ miles from each other. The most ancient of these, is locally known as the Bhir Mound. It stands on a small plateau between the Tamra Nala and the Railway junction and rises to a general elevation of about 40 feet above the surrounding fields, and about 70 feet above the bed of the stream. Here regular and well-defined defences are discernible on the ~~east they~~ western and southern fringes. To the north and east they follow an irregular line, running close to the Tamra Nala, but are often extremely difficult to trace, owing to erosion. The internal layout of the city, as far as it has been exposed to view, is manifestly irregular and haphazard, quite unlike Sirkap. The alleyways of the Bhir Mound are narrow and tortuous. The houses are, for the most part, built of mud-brick and mud, supplemented by timbering, which has perished. According to Marshall, this defended settlement was thrice destroyed and rebuilt before it was finally abandoned in favour of the newly founded city of Sirkap. He supposes that Sirkap supplanted the Bhir Mound site during the time of the Bactrian Greeks. However, the two sites share common pottery types, as will be shown, and the transfer must, therefore, have been gradual. On the other hand, Sirkap is evidently a planned city and as such it is essentially different from the Bhir Mound.

In the Bhir Mound, four successive phases of settlements have been recognised by Sir John Marshall. The earliest of the 4th, he refers to the 5th or 6th century B.C. or even earlier; the 3rd to the 4th century B.C., the 2nd to the Mauryan period and the uppermost, to the Bactrian Greek period. His classification and sequence of dates are primarily based upon the evolution of masonry

types, which he identifies in the successive phases of the sites' obviously long history. The merits and significance of the dates will be dicussed later.

Marshall thinks that the city of Sirkap was built by the Bactian Greeks in the 2nd century B.C. It is situated on the westernmost spur of the Hāthiāl ridge and apparently included within its perimeter a suburb, locally known today as Kacha-Kot,[1] from the fact that it is fortified by earthern ramparts.[2] Kacha-Kot is enclosed within a bend of Tamra Nala, below its junction with the Gau Nala. The fortifications of Sirkap, leaving aside the suburb of Kacha-Kot are about 3½ miles in circumference. They are constructed of massive rubble masonry laid in courses, with rectangular bastions at irregular intervals. Ghosh's[3] excavations on the south-east corner, however, has revealed the existence of a large pentagonal bastion. The perimeter wall encloses, on the south-west a flat-topped isolated hill, which actually is the last eminence of the Hāthiāl ridge. Because of its conspicuous position, this is held to have been the 'Bala Hissar' or 'Acropolis' of the city. Marshall suggests that the Greeks seized upon this topographical feature, which he holds to be typical of Greek city-planning. In sharp contrast to the irregular layout of the Bhir Mound, the city of Sirkap was laid out in a systematic fashion, the streets intersecting one another at right angles and, thereby, dividing the whole city into regular rectangular blocks. The alignment of the buildings is described by Marshall as, planned

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1. 'Kacha' means, unbaked and is used for unfired bricks; and 'Kot' means fortress.

2. Since the excavation of Mr. A. Ghosh in 1944, has revealed traces of an eroded burnt-brick and stone core in the rampart-walls, the justification of the name, Kacha-Kot, looses its significance. - Ancient India Bulletin, No. 4. P. 42 F.N.

3. Ghosh op cit, P. 48 and Fig. 2.

on the "typically Greek chess-board pattern".[1]

There are, however, certain areas where this general mathematical layout is found to vary. Sirkap, according to Marshall, has yielded seven successive phases of occupation and although during its long history it was destroyed and rebuilt more than once, this general chess-board lay out remained unaffected throughout, except for these minor abberations.

He holds that the site of the city was transferred from Sirkap to Sirsukh, during the early Kushān regime. Sirsukh lies in the open plain, away from the hills[2]. It is situated on the further side of the Lundi Nala and at a distance of about a mile north-east of Sirkap. In plan this city is an irregular rectangle, measuring 1500 yds. from north to south and 1100 yds. from east to the west and

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1. The chess-board pattern is rather a Hellenistic than a Hellenic development. See Appendix.

2. Many points of interest arise, if a comparison is made between the city sites of Taxila and other contemporary cities on the Ganges valley. Ancient Rājagriha or Rajgir in Bihar is situated in a concave valley, enclosed on all sides by five hills. The city is said to have been built by Sronika (Bimbisara), the father of Ajatasatru, the contemporary of the Buddha; and therefore in accordance with the Buddhist chronology, its foundation is supposed to be earlier than 560 B.C. Yuan Chwang describes it as having a total circuit of 150 li in circuit. The valley in which the city lies is extended from East to West and narrow from north to south. The surrounding hills themselves formed the natural defence of the city; which were further strengthened with artificial fortifications, where the valley is open to the plain. The earthen core of the rampart is encased with massive undressed stones, between 3 and 4 feet in length, carefully fitted and bounded together; while the interstices between the stones are filled in carefully with chips of stone. No mortar or cement appears to have been used anywhere. The thickness of the outer wall varies between 17' 6" and 14'. Solid rectangular bastions, at irregular intervals further strengthened the defences of the city. There are remains of which seem to have been watch-towers at various points on the hills. The walls and their rectangular bastions have a slight batter on the outside.

The city within the walls shows no sign of the regular planning of Sirkap. Indeed, its somewhat haphazard irregularity may be compared with the Bhir Mound. Since the defences covers so large an area it is evident that the city contained many gardens and open spaces.

defended by massive stone-walls, faced with diaper masonry, strengthened by semicircular bastions at regular intervals. To the south and west a considerable area outside the city-wall is enclosed by the bend of the Lundi Nala, which in turn is further defended by a crescent-shaped line of mounds, now locally known as 'Tregighar', which perhaps was a suburb of the main city and stands in the same relation to Sirsukh, as Kacha-Kot does to Sirkap. Excavations at this site have been only of a superficial nature. The work done was mainly confined to clearing a small part of the fortification. This was due to practical difficulties, including the existence of three modern hamlets, as well as graves and 'Ziarats' covering the remains.

Apart from the three city-sites the entire surrounding country is littered with countless ruins of isolated monuments, mostly Buddhist. These are especially concentrated in the southern half of the valley on either side of the Tamra Nala. Supposedly the oldest of them, and certainly the most imposing, from the point of view of its lofty height, is the great Dharma Rājikā Stupa, which still dominates everything in its immediate vicinity. According to tradition it is said to have been erected by the emperor Aśoka to house the actual relics of the Buddha.[1] Its modern name 'Chir Tope', the 'Cleft-Tumulus' is obviously derived from the great cleft which was driven through its centre by treasure-hunters.

A large number of scattered ruins are, also, located on the low flat-topped knolls, which the flood erosion has left standing in the bed of the valley, both north and south of Hāthiāl. Other remains are perched on the projecting terraces of the hillside where they can be seen crowning the crest of hills, as well as in the cool and shady glens between the flanking, high rocky spurs. One of the biggest and most impressive of the 'Saṅghārāmas' at Taxila is situated

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In this it is reminiscent of what is known of Kosambi. However, further exploration undoubtedly would reveal valuable details in the general picture. - For excavation at Rājagriha see A.S.R. of 1905-6, P. 87; Cunningham, Anc. Geog. P.535. Beal Budd. Rec. II. P.150.

1. E. I. I. II. P.75. Sten Konow.

at'Kalawan'. This name is derived from three small caves in the northern slopes of the Margala spur across the valley, which has been identified by Marshall with the ancient 'Chadadila' from an inscription found on the site.

About a mile and half east of Kalawan, a group of ruined stupas and monasteries together with a hill-fortress of considerable size and great interest, lie along the lower slope of the same spur, partially hidden in the secluded Giri glen. This is approachable through a rocky defile running between the two modern villages of Khurram Gujar and Khurram Pracha. These ruins, indeed, occupy a singularly attractive terraced hill side by the side of a perennial stream with excellent water, which cascades down immediately below the remains. The ruined condition of the fortress is largely, due to the natural erosion of the hillside. This whole area is shut off from the city-site of Sirkap and was, presumably constructed as a place of refuge in times of trouble.

The lofty stupa and monastery on the northern ridge of Bathial, partially covering the ancient city-wall and a smaller ruined stupa, erroneously identified by Cunningham as a military tower connected with the city's defences, appears to be actually the famous stupa of Kunala, mentioned by Yuan Chwang. As the masonry shows, the monastery was obviously constructed when the rampart wall of the city (Sirkap) had already fallen into decay, resulting from the transfer of the older city of Sirkap to Sir Sukh.

Another subsidiary, though no less interesting stupa is perched immediately above the hill at Ghai, close to the south-east corner of the defence wall. Of other settlements of this kind, which sprang up after the decay of the city of Sirkap, mention may be made of the remarkably well-preserved monasteries of Mohra Moradu, Pippla and Jaulian, situated at a distance of 2 to 3 miles north-east of the Kunala stupa. All three of these settlements with their fine stucco sculptures are of later date. They stand within easy distance of

Sirkap and probably were all erected after that city's foundation.

No less interesting is the picturesque monastery of Bhamala, situated on the far side of the modern hamlet of Khanpur, about 9 miles from Sirsukh. It is situated in hilly surrounding with the river Haro flowing at its feet. These later establishments, far removed from the din and bustle of city-life are an interesting feature of the evolution of Stupa settlements in this part of the country. Obviously they are located, away from the city or in other words, beyond begging distance of the city on which the earlier fraternity primarily depended for their subsistence. It is probable that this only happened when the profession of begging had fallen out of fashion and the monastery themselves had become self-sufficient and consequently the proximity of the city was no longer a daily necessity.[1] Yet they must have remained centres of cult and teaching. All the ancient monastic establishments such as Bhaja, Bedsa and the early Ajanta caves are obviously sited in isolated positions. Their original purpose must be discussed in terms of the rainy season meetings of the local Sanghas. In the Vinaya, it is recorded that an itinerant monk must seek permission to pass the night in a village from the resident monk. It would seem that Buddhist activities were not originally, anywhere, confined to Viharas. Indeed, the square courtyard Viharas of Kushana and later times do not seem to have existed to begin with.

It is interesting that such establishments, which exist in large numbers, scattered among the spurs of the surrounding hills, are in relatively better preservation than those on the plain, which is, perhaps, due to the fact that the monuments on the plains being easily approachable, have long been the target of depredation by the neighbouring villagers in search of building-materials, as well as

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1. The many monasteries of Swat are of the same kind, seemingly independent of city life. The inscriptions at Karli and Kanheri show that these foundations enjoyed an independent income from landed property and indeed, were endowed with sources of money. - E. Berger, M.A.S.I. 1959.

earth to put on their fields. Coupled with the destructive agency of man, nature has also greatly contributed to the ruination of all these sites in the form of seasonal floods, which in places have either washed away the ruins altogether or buried them deep in detritus. The existence of wells at some of these ruined sites is of great ~~importance~~ interest. The paucity of remains on the plains must be viewed in the light of the fact that ruins, which were seen and described by Cunningham between the years 1863-64 and 1872-73 [1] were either completely obliterated or barely traceable at the time of Marshall's excavations in 1913. A multitude of other such monuments must have perished before Cunningham's visit. Nowadays, the plan of only about half a dozen such sites can be traced above the ground throughout the entire valley between Sarda and Hāthiāl. Among these are the small stupa and monastery at Lalchak, beyond the north-east corner of Sirsukh; the lofty stupa at Badalpur, about 9 miles east of Lalchak; the so-called Ionic temple at Jaṇḍiāl, situated close to the northern gateway of Sirkap, and a couple of small stupas in an extremely dilapidated condition, further to the north of Jaṇḍiāl.

Of these surviving monuments, the temple at Jaṇḍiāl is supposed by Marshall to be of Zoroastrian origin and in its construction, presents outstanding features which will be discussed later. One more monument of considerable interest, which deserves special attention is the Bhattar Stupa. Conspicuous for its imposing height and picturesque rocky setting, it occupies the last low spur of the Sarda to the north, beyond the Haro, and is obviously of late date. Apart from the monuments already mentioned there are traces of countless others which can only be outlined with difficulty, some of which are indicated in the accompanying plan ( )

Among the number of monuments now almost completely destroyed, but recorded by General Cunningham during his explorations, Nos. 13, 14 and 30 of his report deserve, at least, a passing mention for their striking peculiarities in design and character. Nos. 13 and 14 appear to be stupas. They are of no great size, but the former y

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1.A.S.R. III; PL. LVII, P. 124-5.

yielded an inscribed vase and the latter, an inscribed copper-plate grant, both written in Kharoṣṭhī. On palaeographic grounds both these inscriptions have been assigned to the first century B.C.[1] and consequently appear to be the earliest known Kharoṣṭhī records unearthed from Taxila, leaving aside the coin legends. The vase inscription, records that the stupa was erected at Takshaśilā to the glory of all Buddhas, and the copper plate records that the stupa No.14 was constructed by one 'meridarkh' and his wife as an offering in honour of his father and mother. The stupa No. 30 is quite unique in character and was evidently one of the most important shrines which stood on the left bank of the Tamra Nala, north of the village of Mohrā Moliārāñ. It was adorned with Ionic columns not unlike those on the neighbouring temple of Jandiāl, which Marshall thinks is contemporary in date

HISTORY OF EXPLORATION :

Like numerous other ancient sites in the sub-continent, the remains of this historic city were subjected to relentless spoliation in comparatively recent years by amateur archaeologists, or treasure-hunters from the neighbouring villages, who carried ~~the dealers of~~ on unchecked a brisk traffic in antiquities with dealers of Rawalpindi. Among the former class of unskilled amateur archaeologists special mention may be made of Major Pearse and Major Crocroft, both once Deputy Commissioners of Rawalpindi, who have left us no account of their interesting, but haphazard, digging. However, Mr. Delmerick, who was Assistant Commissioner of Rawalpindi, has given us a highly interesting, though scrappy account of his explorations which is published in the Journal of the Asiatic Society of Bengal.[2]

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1. No series of Kharoṣṭhī alphabets have been drawn up and until this is done such statements can only be accepted as personal opinions.

2. J.A.S.B. 1870 (Vol.39) P. 89. Apart from the fact that his views coincide with those of Cunningham in identifying Shah Dheri with Taxila he writes, "In 1859, a plate or plates of copper covered with Bactro-Pali inscriptions were found by Nur, Khādim or servant in the Masjid of Ghila, ~~and~~ adjoining Shah-ki-Dheri. Nur presented this plate to the

It is clear that the worse of offender was the villager Nur, who appears to have radically injured many of the sites of Taxila

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late Mr. A. A. Roberts, then Commissioner and Superintendent of the Rawalpindi Division. Again in 1861, the same Nur found ~~found~~ a stone trough and a gold-leaf, bearing a short Bacto-Pali inscription, all of which are fully noticed and discussed in the J.A.S.B. No.2 of 1862. In 1863, Nur discovered a bar of pure gold, worth about 400 rupees, which although in itself quite unimportant archaeologically, indicates the great extent and wealth of the city ..." The copper plate discovered in 1839 was sent to Calcutta by Mr. Roberts and was described by him as having been found at Hasan Abdal, which was, however, actually not the place of discovery. By way of explaining the discrepancy of its provenance, he writes that Hasan Abdal being on the G. T. Road and the nearest town to Taxila known to Europeans, "or more probably because Nur brought this curiosity to Mr. Robert while he was encamped at Hasan Abdal, its provenance was transferred to Hasan Abdal." Mr Delmerick held that the copper plate was actually found in a place called Topi, where a small Tope once existed. "It is situated midway between the village of Mohrā Moradu and Mohrā Maliār and is on the boundary of the lands belonging to the village of Gangu-Jumma. It is about two miles to the north-east of the ruins of Kot Atial (Hāthiāl)" Professor J. Dowson of the Royal Military College Sandhurst, in a letter (Published in J.A.S.B. No.4 of 1863) addressed to E. Thomas, translates the inscription on the plate as follows, "In the year 78 of the great king Moga, on the 5th day of the month Panemus, on the notable occasion the satrap of Chhahara and Chukhsa by name, Liako Kusuloko, deposits a relic of the holy Śakyamuni in the 'Sepatiko' which he had established in the country called Chhema, north-east of the city of Takshaśilā in honour of the great collective body of worshippers and all Buddhas, for the honouring of his father and mother for the long life, strength and prosperity of the satrap's son and wife, for the honouring of all his brothers and relatives and for making known his great liberality fame and success." The great king Moga of the inscription has been identified by Cunningham and Professor Dowson as Maa, or Maues. (See also Sten Konow in C.I.I. Vol.II P.XXIX and Marshall, op cit P. 45 (~~Govt. of India, Cal. 1929~~) for identification).

Delmerick continues, "Cunningham believes 'Chhahara' and 'Chukhsa' to be Chach and Hazara. I am of opinion that Liako Kusuluko (which he thinks to be the title of Kusula Kadphises) was the satrap or governor of the Ilaqah or district of Hareh of which Chahar and Chukshai were the chief towns (15 miles north-west of the spot of discovery of the inscription, in the Ilaqah of Hareh, there are two villages with a couple of miles of each other still known by the name of Chahar and Chukshais or Shai)". - Delmerick in J.A.S.B., 1870, Vol. 39, P.89.

area during the fifties and sixties of the last century, by continuously opening up stupas and rifling their relics. It was he who found an inscribed gold-plate from one of the stupas at Sahrbahana,[1] written in 'Ariano-Pali characters, the reading and translation of which yet remain uncertain. Mr also found the famous copper-plate of Mr. Roberts already alluded to,[2] from one of the sites of Taxila, the exact location of which must remain uncertain owing to his and his wife's confused and contradictory statements.

This sort of wanton spoliation went on until 1863, when General Cunningham visited the place and, on the basis of topographical indications furnished by the classical writers, identified the site, for the first time as being the ancient Takshasilā. His tentative identification was later confirmed by the discovery of an inscribed stone-vase, exhumed by a villager from one of the Stupas near Shahpur, which records the erection of that Stupa specifically at Takshasilā. Subsequently, Cunningham carried out explorations during the cold-seasons of 1863-4 and 1872-73, which although were manifestly of a superficial nature, yielded important results. He excavated small trenches and trial-pits at the north-east corner of Sirkap, and opened some isolated mounds at Bāthiāl, Jaṇḍiāl, Mohrā Maliār and Sari-ki-pind. He, also, examined a couple of very interesting temples near Mohrā Maliār village, already mentioned.[3] He published the results of his explorations in his series of Archaeological survey Reports, 1863-64 and 1872-73. Since the time of Cunningham's operations many historic sites have been either completely effaced or reduced to shapeless mounds. Eventually the whole area was declared 'Protected' by the Government of India under the provisions of the Ancient Monuments' Preservation Act of 1904'. The appointment of Sir John Marshall in 1902-3, marked a new era. He first went to Taxila in the spring of 1913. Marshall's extensive and systematic digging continued almost every autumn and spring until 1934. During his field-work, he unearthed a wealth of

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1. C.S.R. Vol. II, P.130and Mr. Westropp in J.A.S.B. 1862. P.175.
2. C.S.R. Vol. II, P.133-4; copper plate of Moa, Moga (Manes).
3. No. 30 and 36½ of Cunningham's report. C.S.R. II.

material which he characteristically describes as, "the only really representative collection of such objects belonging to the historic period that exists".[1] Indeed, the spectacular remains which he laid bare, with their associated objects have in many respects revolutionised our knowledge of the early history of India. Yet no serious comparative work has yet been done upon them.

During the course of his twenty two years work at Taxila, he brought to light, apart from innumerable structural remains, an immense collection of remarkable implements, tools, weapons, domestic utensils, ornaments, toilet-objects, silverware, gold and silver jewellery and other small miscellaneous objects of daily household use, representing the material culture of the early historic period. The bulk of these finds, adequately classified, has been recently published in his three admirable volumes. The infinite patience and diligent labour with which he has handled and coordinated this great mass of materials, aided, of course, by his intimate knowledge of the site, is at once apparent in this magnificent publication, and must always evoke our admiration and gratitude. However, it should always be borne in mind that his efforts were mainly concentrated on the remains in and near the city site of Sirkap. This, he considers to be Greek in origin, while he ascribes the Bhir Mound to the Achaemenid and Mauryan periods.

His general excavations at Sirkap provided him with an excellent outline of the city, its streets, houses and stupas. But he, also, carried out deep-digging through the later settlements on a smaller scale. The objects unearthered from these deep trenches will be treated comparatively. Sir John Marshall, believed that his deep trenches had brought to light evidence of the existence of an underlying older city, which he accepted as Greek. He writes with candour in his preface, "At that time when I was a young man, fresh from archaeological excavations in Greece and filled with enthusiasm for anything Greek; and in that far off corner of the Punjab, it seemed as

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1. Sir John Marshall, Taxila Vol.I, preface XVII, Cambridge 1951.

if I had lighted of sudden, on a bit of Greece itself. Doubtless, the illusion was prompted in a large measure by Taxila's historic association with Greece ... I felt then, as I have never ceased to feel since, that there was something appealingly Greek in the country-side itself; in the groves of wild olive, on the rocky slopes, in the distant pine-clad hills below Murree, and in the chill, invigorating air that blows from the snow-fields beyond the Indus." [1] He adds, "Naturally it was a disappointment to me to find the Greek city buried so deep as to preclude for the present its more thorough exploration," [2] It is no wonder, therefore, that in analysing the Taxila-materials, Marshall shows a tendency to find Greek affinities or the influence of "Hellenistic" art on the art of North Western India to an exaggerated degree. However, in archaeology it is always important to distinguish between mere likeness and absolute identity of form or type. So, while appreciating Marshall's unique contribution and his untiring energy, the question must be asked: Have we here, in any instance, identity with the Greek, as it is clear that we certainly have, in the later phases, identity with the Roman ? [3]

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1. Ibid, Preface XV.
2. Ibid, XVI.
3. The "Hellenistic" period of Indian history is archaeologically represented in three distinct classes of objects, First, the Indo-Greek coins and a certain number of early intaglios and seals, which clearly show a process of indianization. Second, the numerous moulded terracotta figurines including Western types found in the sites of the Peshawar valley as well as from many sites in the Ganges valley. These include double-moulded figurines, a technique foreign to India. Third imported objects include many Bronzes of Roman or Alexandrian provenance and other objects are found in the city sites or the western and northern India and at Begram, in the upper Kabul valley. These show close contact with the Roman world in the first and second centuries A.D. Simultaneously the so-called Graeco-Buddhist art of Gandhāra came into existence under the influence of this mass importation, reflecting the taste of the ruling classes of the merchant cities. These imported objects include Roman bronzes of the first century A.D. and Syrian glass which, according to Prof. Codrington "cannot be earlier than the second century A.D. At any rate their importation cannot be associated with the extention of Parthian power into India in the 2nd and 1st cent. B.C., for none of these Roman objects are earlier than the 2nd half of the 1st cent. A.D." - J.R.G.S. 1944, P.81-82. Reference will be made later, to earlier Roman imports, to the ports of Southern India.

It must be realized that, apart from his handling of coin finds, his entire chronology at Sirkap and other neighbouring sites, is based on the alleged existence of certain masonry types, which he supposes to have evolved gradually throughout subsequent periods.[1] Marshall correlates these masonry types with the objects he recovered from successive strata. Such a proceeding must be doubtful, and contradictory evidence abounds. Marshall frankly admits this when he says, "These observations, however, do not in every case hold good. Here and there walls can be picked out in the 4th 5th and 6th strata which are indistinguishable from others in the 2nd or 3rd strata; and the city-wall itself might equally well be referred to the 4th as to the 6th period. It would, therefore be impossible on the strength of its materials or the method employed in laying them, to affirm of any given specimen of rubble masonry that it belonged to this or that particular period."[2] Any chronology based on such evidence must obviously be regarded as tentative.

He assumes the occurrence of a devastating earthquake which he considers, took place between 20 and 30 A.D., not long after the arrival of the Parthians.[3] This he holds, practically razed the city

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1. Marshall classifies the various remains into four consecutive types of masonry: the first and earliest type he calls 'Rubble-Diaper' in which the interstices between the rough boulders are filled in at random with rough chips of stones; the 2nd type is his 'Small-Diaper' in which the interstices are neatly filled with dressed, stone fragments; the 3rd is his 'Large-Diaper' in which boulders of large dimensions are used, and the last type he calls, "Semi-Ashlar" in which the large stones are dressed and roughly squared. He assigns the first type to the Scytho-Parthian period and before; the 2nd, to the first century A.D.; the 3rd, to the second century A.D. and the 4th to later part of second century onwards up to 5th century A.D. - Marshall Taxila, Vol. I, P. 119, 137, 138, 248, 260 etc.

2. Ibid. P. 119.

3. Ibid. P. 63, 118, 137, 257.

of Sirkap to the ground, and caused widespread havoc throughout the country side. In this way he explains the unusual confusion in the stratigraphy of the site, immediately following the decade mentioned. There is no doubt that this assumption of Marshall influences his treatment of the whole chronology of the site. However, it must be candidly admitted that the evidence he quotes with regard to this cataclysm is not altogether convincing.

It must be admitted that very little is known of the real significance of the walled city of Sirkap in relation to Kacha-Kot with its extensive mud ramparts. It is not al all clear that Marshall made any attempt to investigate the archaeological remains of Kacha-Kot. It seems likely that he did not. The very fact that no structural remains were found within the Kacha-Kot enclosure precludes the possibility of its ever having been a homogeneous part of the city of Sirkap.

Cunningham thought that the city had eight gateways,[1] that is to say, two in each of the northern, eastern and western walls and one in the southern[2] wall, and one in the inner line of fortifications, directly opposite to the main northern gate.[3] He says "There are two large gaps in each of these walls, all of which are said to be the sites of the ancient gates. One of these in the north face is undoubted, as it lies due north of the two gateways of the Hāthiāl citadel[4] and due south of the three ruined mounds in the Bahrakhana, a second in the east face is equally undoubted, as part of the walls of the gateway still remains with portions of a paved roadway leading directly upto it. A third opening in the west face, immediately opposing the last, is almost equally certain."[5]

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1. Marshall misunderstands as seven 'Taxila', P.114.
2. A gate actually was discovered later in the southern defence wall by Ghosh. Ancient India, Bulletin, No.4. P.42 and Pl. XXII) which he calls 'Minor Water Gate'.
3. A.S.R. Vol.II. P.119.
4. Cunningham mentions two gateways on the south, 'the one being due north of the other. op cit. P.118.
5. Cunningham op cit P.119.

Marshall tells us that he was unable to find remains of any other gates, except the one on the north, at the end of the 'High Street', which runs north and south through the heart of the lower city. He, However, admits the possibility of the existence of a water-gate in the east wall, leading directly down to the Tamra Nala, a part of which was noticed by Cunningham, along with the roadway leading upto it. If it ever existed, and local tradition is clear on this point, it must have been destroyed by floods. He also admits of the possible existence of a third gate more or less opposite to the eastern one on the western wall.[1]

Cunningham believed that the whole area comprised within the Hāthiāl ridges was fortified as an inner stronghold in case of siege. For this purpose he supposed that an inner line of fortification was carried along the north side of the 'acropolis' and then along the northern slope of the Hāthiāl ridge.[2] Marshall although failed to trace the existence of such a supposed inner line of fortifications, admits that there is no reason why further excavation should not bring them to light.[3] As suspected earlier by Cunningham, the 'acropolis' was actually found to be separated from the rest of the city by an inner line of stone defence walls, along the northern base of the hill, during the 1945 excavation, conducted by Mr. Ghosh.[4]

As has already been noticed earlier, Marshall distinguishes seven successive strata of remains in Sirkap.[5] Of these the earliest,

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1. Marshall op cit P. 114-5.
2. Cunningham, op cit P. 118-9; PL. LVII.
3. Marshall, op cit P.118.
4. Ghosh, Anc. Ind. No. 4, P.42-43 and PL XXII. The excavation, however, failed to trace the point of junction of this inner wall with the western city walls, as the area was found to be cut up by deep gulleys, draining into the Tamra Nala. He holds that modern quarrying makes it uncertain whether the wall ever extended up to the main eastern city wall, and consequently is inclined to think that it only fenced off the south-western corner of the city from the rest. - P.44.
5. Marshall Taxila, P.118.

(VII) is represented by only scattered remnants of buildings "dated from the 'Pre-Greek times', when Sirkap no doubt formed a suburb of the densely populated city on the Bhir Mound." The sixth and the fifth strata, he holds, are contemporary with the Bactrian Greeks; while the fourth, third and second strata, all date from the Śaka period. The first stratum (top), Marshall thinks, represents the period following the Kushān conquest. He, also, thinks that the stone wall of the Sirkap city was originally constructed by the Bactrian Greeks or in other words, is contemporary with the sixth stratum and that it included, in its norther suburbs, the area of Kacha-Kot.[1] In his earlier report,[2] he took the view that the Greek city embraced Kacha-Kot as well as Sirkap, and was surrounded by nothing stronger than a mud wall. The stone-wall was only built about the middle of the first century B.C. (Śaka period) when the perimeter of the city had proved too extensive for adequate defence and there was a need for stronger defences than a mud-wall. If this is so, it means, of course, a contraction of the original city.[3] However, in his final monograph, he withdraws this general statement and says that the layout of the entire city of Sirkap including the citadel, his 'acropolis', on the Hāthiāl heights has typical Greek features. As against Marshall's view, Cunningham regarded Kacha-Kot as an extention of Sirkap, constructed to house the cattle of the householders in times of trouble.[4]

In 1944 Mr. Ghosh, the present Director General of Archaeology in India, laid out a long trench, connecting the city-wall and the eastern wall of the 'Palace', which lies at the southern extremity of Marshall's excavation. This revealed only four successive layers of occupation instead of Marshall's seven. He found that the foundation of the 'Palace' and the stone wall were contemporary, and belonged to

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1. Ibid P.4 and 117.
2. A.S.R. 1923-24, P.65 and Taxila, P. 116-117.
3. Marshall, Taxila, P.116.
4. Cunningham, op cit, P. 120.

the Scythian period, dated by him to 50 B.C.,[1] which exactly corresponds with Marshall's earlier view. Mr Ghosh says, "It (the city-wall) belonged to the period of the earliest structural activity on the site and, like other walls of the earliest phase of occupation, was separated from the natural soil only by a thin depsit of culture debris, never more than 1 foot thick except where the natural soil had been disturbed by pre-structural pits. This shows that (1) the land on which the walled city was laid out had here been submitted to very slight previous occupation and (2) the city-wall and the earliest structures in the trench, including the earliest phase of the eastern and southern walls of the Palace, were approximately contemporary."[2] Mr. Ghosh on the basis of the complete absence of Marshall's 5th and 6th strata and the underlying fragmentary remnants of pre-fortification drains and walls, contends that the innovation of the stone wall, replacing the earthern one, involves not a 'contraction' of the former city, but a shifting of the main body of the city, further south to include for the first time the ridges of Bāthiāl as 'upper(or 'priviledged' city or 'acropolis'. This enlargement, he dates sometime about 50 B.C., in the early Scythian

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1. Ghosh's chronology is, of course, not altogether conclusive. It is primarily based on a couple of coin-finds belonging to Azes I; one from a pit and the other in a stratum underlying a wall of Phase II which is, assumed to be more or less contemporary with'PhaseI'. He says,"The two earliest datable coins found in the present excavation are those of Azes, found respectively in a pit (no.6) and in a stratum underlying a wall (w.2) of Phase II and therefore more or lesss contemporary with Phase I and the city wall. The initial date of Azes is usually accepted as 57 B.C. and it would be in consonance with his importance if the defence was erected during his reign" (Ancient India, No.4, P.45) This is obviously a highly debatable date, based on the slender evidence of only two coins. This passage, also, provides an instance of the possibility of confusion when stratigraphy is described in terms of 'Phases'. Incidentally, it must be noted that Ghosh numbers his phases serially from ~~stratum~~ the bottom upwards. In other words, his bottom stratum is 'first' and the top stratum, the fourth 'Phase' of the occupation.

2. Ghosh, A. op cit, P.44. The term "Culture-debris" is inconvincing. Many of the single-period habitation sites in the suburban fringe of the Ganges cities show less than a foot of "Culture-debris" but this includes pottery of the finest quality1 - c.f. Rājghat.

period. In other words Ghosh recognizes two distinct successive Sirkaps: the earlier one is the Indo-Greek city of the second century B.C., fortified with mud walls and stretching out to Kacha-Kot towards the river plain, and the other the Scythian city of the first century B.C., lying further south, enclosing within its stone-wall perimeter, the high ground of Hāthiāl. Consequently, the northern part of the southern city overlays the southern part of the earlier Greek Sirkap, represented by Ghosh's sterile 1 foot thick turf layer, immediately overlying the virgin soil and Marshall's 5th and 6th strata under the northern stone defence walls.

It appears obvious that in the absence of more specific evidence, it is impossible to arrive at a reliable conclusion as to the date of the stone-wall of the city and its relation with Kacha-Kot. However, it seems not unlikely that originally the southern part of the city, although enclosed within the stonewall, was not occupied or, at least, was only thinly occupied. Ghosh holds that the early habitation area lay to the north and that at a later period, and perhaps only gradually, the city extended southwards. But this is only a partial explanation of the variation in stratigraphy and date of the two parts of the city. It is, also, not unlikely that while the northern part was fully occupied, the southern part of the city was cultivated as gardens and orchard-ground. That, such ancient cities of India as Rājagriha, Kosambi and Śravasti were of this kind is clear enough. Modern Balkh shows the same layout. At Kosambi certainly isolated well-to-do houses, in prosperous gardens, were a feature of the city. But these Ganges cities are on an altogether larger scale than Sirkap. In other words, it was only in later days that those gardens were destroyed by building, the laying out of planned streets and the erection of numerous other masonry structures. These undoutedly indicate that, increase of population had forced the city to expand. At any rate, the matter must remain conjectural and any conclusion, regarded as provisional, until concrete evidence is yielded by further excavations.

Finally, with all due regard and admiration for Marshall's scholarship and faithful recording of his vast mass of materials,

bewildering in its variety, his theory of the shifting of the site of ancient Taxila from the Bhir Mound to the newly founded city at Sirkap at the beginning of the second century B.C. by the Bactrian Greeks, and subsequently, towards the close of the first century A.D. the creation of a new city by the militant Kushan's at Sirsukh, must be submitted to analysis. The facts do not allow us to presume that the move from the Bhir-Mound to Sirkap and, thereafter, from Sirkap to Sir Sukh, was complete and wholesale at definite periods. On the contrary there is ample evidence, in both instances, to show that, even after the founding of the new city, the earlier site was not entirely abandoned, but continued in use, side by side, with the new site, although in the case of the Bhir Mound, perhaps in a secondary position. The fact is, indeed, admitted by Marshall when he observes, " ... even after the victorious Kushans had built their new city in Sir Sukh , Sirkap must still have continued for some time in partial occupation, just as the Bhir Mound had been partially occupied for some time after the removal of the city to Sirkap."[1]

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1. Marshall op cit. P. 113.

APPENDIX

Greek Planning of Cities

Reference has already been made to the Greek 'chess-board' planning, i.e. the crossing of parallel and generally equidistant streets at right angles to one another, with resultant square insulae or house-blocks. As expressing order and control, as opposed to chance and disorder, the adoptation of the chess-board principle of planning in the mature phase of classical antiquity was of great significance. Indeed, Haverfield finds in it "the distinction between civilization and barbarism".[1] Systematic planning on a large-scale was however, more a characteristic of the Hellenistic age than the Hellenic, but its beginning goes back much earlier. We do not know whether the Greeks were, to any extent, influenced by the rectangular planning practiced in early Egypt. Undoubtedly, however, it is reasonable to surmise that the Greeks had sufficient inventiveness to conceive of this elementary method of planning their cities and were possessed of sufficient building skill to put it into practice.

Miletus in Asia Minor, 'the mother of many colonies' was rebuilt after its destruction by the Persians in 494 B.C., and this was probably the first time the Greeks applied this principle. It was a large city, built on a peninsula of irregular shape and contour, the whole of which was given a rectangular plan surrounding a large central area, left open for the Agora and chief public buildings, which so formed in fact, the nucleus of the planning. The somewhat 'legendary fame of Hippodamus, the architect of Miletus, rests on the construction of not one single city but several in Itlay and Sicily. He is credited with the introduction of broad main streets, containing lesser streets, all crossing each other at right angles, in sharp contrast to the crooked, narrow tortuous lanes, with irregular crossing prevalent

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1. E.J. Haverfield, Ancient Town Planning (Clarendon Press, 1913)

generally throughout Greece. This is confirmed by Aristotle, who tells us that under the influence of Hippodamus the main crossing became a natural determining point for the Agora area and its related splendours of civil and religious architicture. As the first recorded architect of antiquity, who developed city-planning systematically, Hippodamus of Miletus is aptly called the 'father of town-planning.' Although his fame may , to a certain degree, seems to be fabulous, he undoubtedly stands for the principle of systematic, pre-determined planning on the chess-board pattern.

The sites on which the early Greek cities grew varied in character, being mainly determined by such factors as the possibility of defence, commercial advantages and water-supply. The form which these Greek city-states assumed actually varied a good deal. Some grew around the defences of an 'acropolis', which in many cases retained its traditional sanctity and possibly something of its political importance. But the real part of the Hellenic city was the Agora, which was the nuclear centre of political and commercial life. But an acropolis or castle was never essential to a Greek city, particularly when the whole city was enclosed by a strong wall, as was usual from the 6th century B.C. onwards. Other cities grew entirely on top of flattish hills or plateaus from which they could eventually spead out to lower ground.[1] Coastal towns might be confined to peninsulas, or spread themselves fanwise round a central harbour. The early greek cities followed no set pattern in shape or structure, which is partly due to the uneven ground on which they were built. Athens has no regular planning. Even when Themistocles carried out his improvements, the streets were left narrow, tortuous and unpaved. Drainage and sanitation were commonly neglected.

Even after the recognition of the advantage of the Hippodamian planning, in general, the older Greek cities retained much of their

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1. Incidentlally it may be noted that Marshall's Greek city of Sirkap shows no signs of the process of expansion on the lower ground. If it expanded at all, it did so along the heights.

archaic character, still clustering irregularly around the Agora, the public buildings and temples being informally distributed throughout the area. However, the Hippodamian planning was increasingly used in new or rebuilt cities. In this interesting process of the adoption of planning, Miletus and Priene, perhaps illustrate the principle best. Of the newly founded eastern cities of the Seleucids, Dura-Europos on the Euphratis is by far the best example. In the numerous lesser foundations of the period, we find something which might almost be called mass-production of the 'Polis' with a certain standardization of form, markedly contrasting with the intense individuality of the early Greek cities. Among the great capitals of the Hellenistic monarchs, Pergamum provides rich material for study; in others, including Alexandria, our knowledge is only fragmentary, though literary descriptions abound.

Probably of 6th century B.C. origin, Priene on the Ionian Coast, was completely rebuilt about 300 B.C. Its city-planning, compared to Miletus, is simple and compact, although the outline was irregular. The whole site, including the citadel area which embraced a dominating hill-top to the north for strategic reasons, was enclosed by a strong wall with towers at inervals. This was provided with three gateways. The rectangular plan was applied boldly and without compromise to the steep slopes, on which the city stands. The long east to west streets were comparatively level, but the steep climbing cross-streets tended to be reduced to stairways. The Agora was most emphatically the centre of the whole scheme. Essentially it was a great widenning of the main east to west street with continuous colonnades on three sides, and on the fourth, a Stoa, the east end of which masked the Assembly Hall and the Prytaneion.

Dura Europos in Mesopotamia was one of the military colonies founded by Seleucus I of Syria which became eventually a flourishing commercial city. Most of the remains found on the site belong to the later period of Parthian and Roman domination, but the original plan persisted. Situated on a plateau, overlokking the Euphrates,

it controlled the traffic from upper to lower 'Mesopotamia. The strong fortification wall, built originally of unbaked brick on a stone socle, followed the line of the river and its ravines on three sides, but ran in a straight line on the fouth side, which was further strengthened by towers at intervals. An imposing gateway pierced the western wall and gave access to the main street of the town. The citadel overlooked the river and was dominated by a Palatial House, intended either for the commander of the garrison or the governor of the region. The main part of the town was laid out on a strictly chess-board pattern. The streets were 18, 24 or, in the case of the main street, 36 feet wide, varying according to their importance; the resultant blocks being approximately 200 feet by 100 feet. Eight blocks in the centre of the city, adjoining the broad main road, were reserved for the Agora.

Alexandria, founded by Alexander himself and developed subsequently by the Ptolemies, became the biggest city of ancient times, being only later surpassed by Rome. Its population, in the time of Augustus, possibly reached a million.[1] Ancient writers were much struck by its huge size and spacious planning, by the magnificense of its great buildings, and the beauty of their adornment. Archaeological materials unearthed so far, however, are scanty, especially for the earlier period and Professor Wycherley says, the detailed plans which have been drawn are to be regarded with some suspicion.[2] The situation of the city on the coastal flats of the Nile-delta, including the island strip of Pharos and the inland lake of Mareotis, offered remarkable facilities for a maritime trading-city, serving both east and west. Its develoment, we know was placed in the hands of Dinocrates, an architect-engineer, who evidently was an imaginative town-planner. Strabo's detailed description of the city is amply borne out by the recent investigations of German archaeologists

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1. R. E. Wycherley, 'The Town-Planning Review', Vol. XXII, No.3, Oct., 1951, P.193.
2. Ibid. P. 194.

He says, "The city, as a whole is intersected by streets practicable for horse-riding and chariot-driving and by two, that are very broad, extending to more than a plethrum in breadth (over 100 feet!) which cut one another into two sections and at right angles".[1] It appears from the German excavations that the original city was enclosed by a defence wall, and was laid out on a strictly chess-board plan. The forum, the royal area, and principal buildings - temples, theatre, gymnasium and the famous library were placed near the water-front, which secured a magnificent outlook over the finest harbour in the world. The great library of Alexandria, founded in the era of the two Ptolemies, held the best collection of manuscripts of the period and the Pharos light-house tower, reputed to be about 400 feet high, built at the eastern end of the island, was one of the seven wonders of the ancient world.

Paragamum, on the Ionian Coast, almost directly north of Priene, was magnificently built in the concave hollow of a hill, about 20 miles inland from the sea. The layout of the city was determined by the topography of the site, giving it a somewhat fan-shapped formation, with the great theatre as a central feature. Though founded earlier, the city gained eminence during the 3rd, and early part of the 2nd century B.C. (Attalid dynasty). Due to the difficult nature of the ground, the city was developed ingeniously on an elaborate system of terraces. However, here, the Hippodamian planning was absent. Shops opened on the streets at various points and several handsome houses built round the Peristyle courts, have been found. The main street ascended irregularly towards the upper city or citadel, where a number of magnificent monuments formed a crescent along the western brow of of the hill, "focussed on the theatre and its terrace below and backed by a secondary crescent of buildings which included the Palaces and the arsenals". However, in many respects it presented a contrast

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1. Strabo, XVII. 1. 8. 793; H. L. Jones Loeb Translation.
2. Wycherley op cit P. 196.

with the planning of Alexandria. Evidently, some Hellenistic cities yet preserved their intensely individual character, which proves that the Hippodamian chess-board planning was very far from being universal, even in Hellenistic times. We do not find the broad and handsome main streets of Alexandria at Pergamum. The winding roads were hardly more than a somewhat inadequate piece of ground left between great buildings. Some of these winding streets were paved, primarily to prevent its steeply sloping surface from being washed away by rain water. Paving was commoner in Hellenistic times than earlier, but still was not general in streets and open places. Drainage was still a somewhat haphazard affair. Similarly, the prosperous mercantile city, which grew up around the ancient shrine of Apollo, on the island of Delos, consisted of narrow tortuous streets and alleys and irregular house-blocks, like the older cities of Greece. Individual houses, too were very varied and irregular in outline, even when they contained in the middle, an elegant rectangular peristyle court. Large and small houses, rich and poor, were huddled together. Small shops build into the houses, opened directly on to the streets.

Of the late phase of classical city building, Pompeii offers us a good example. Pompeii and Herculanium, the two adjacent twin Graeco-Roman cities in Southern Italy, stand in a midway position between Greek and later Roman planning. When Pompeii emerged in the 6th century B.C. the Greeks appear to have been dominant, as the surviving Doric temple shows. Although the chronological development of the city is complicated and full of doubt, until the triumph of Sulla in 80 B.C., the Greekish quality of the city, seems to have been sustained up to the end. The plan of the city, its houses, public buildings and temples, date from the latter part of the 3rd to the early part of 1st century B.C. Much reconstructions, particularly in the forum area took place during the early years of the Empire. Situated close to the coastline on the shores of the Bay of Naples, and dominated by Vesuvius, the eruption of which completely engulfed the city in 79 A.D., it combined an outstanding

natural beauty with many practical advantages. The outpouring of lava during the great eruption has preserved for the modern world a most complete example of what was, in its main characteristics, a late Hellenistic city. Pompeii was roughly oval in shape, largely enclosed by a double wall, strengthened at intervals by bastions and provided with eight gates, which were named after the surrounding places, to which the roads led, i.e. Capua, Sarno, Stabia etc. The marine-gate, like the forum itself was located close to the water front. The amphitheatre stood at the easternmost point of the town, which was laid out on a rectilinear plan, which as August Man[1] observes, is a free interpretation of the chess-board plan, determined largely by Mercurio Street (N-W to S-E), one end of which enters the forum and is used as a baseline. 'Nola Street' crosses it almost at right angles. The shape of the older, elongated insulae on the western and northern sides of the town, bears out the chess-board principle and suggests that further house-blocks with a similar alignment may be revealed as the northern excavations proceed.[2] The dviation from this plan, represented by 'Stabian Street' and its adjacent insulae, which are even more exactly planned, is explicable by the fact that it was a later development. It appears that Stabian, Nola and Abbondanza, which were probably the busiest streets, were about 28 feet wide, while Mercurio Street was 32 feet wide. The lesser roads vary from 18 to 12 feet in width and merely formed a means of access to the houses. All were well-paved and provided with raised sidewalks; but only the wider streets admitted of two-way traffic. Indeed, Hiorne rightly comments, "Miraculously preserved, orderly, coherent, attractively sited and developed, it (Pompeii) furnishes to the modern world the most potent and comprehensive example of urban living in the mature phase of antquity.[3]

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1. August Mau, Pompeii, its life and Art, Trans. by Francis W. Kelsey, NewYork, 1899.
2. Hiorne, op cit, P. 49.
3. Ibid, P. 75.

One more important group of 'Caravan cities' remains to be briefly examined. These are Petra, Palmyra and Gerasa. In someways they look eastward rather than towards the Mediterranean. They a attained their greatest splendour in Roman Imperial times. But in architectural style they are essentially late Hellenistic.[1] They owed their phenomenal prosperity to their postion on the caravan r routes of the middle east, not unlike Taxila. The first and second century A.D., was the period of their spectacular growth; in the middle of 3rd century, Palmyra under Zanobia became the centre of a great empire, which defied Rome for a while. The city-plan of Palmyra was magnificent, with its great temples, its long colonnaded main street, which changed direction at points and was marked by handsome and ingeniously constructed arches. It's equally splendid 'city of the Dead' (Necropolis) lay outside the fortified wall. The cardinal feature of the Gerasa city-planning was provided by the long colonnaded avenue running north to south, which has been aptly described as the 'Spine of the city', and the two colonnaded cross-streets. On the south was a kind of acropolis, with a temple of Zeus and a Theatre. A little distant from the south gate, the main avenue opened into an oval-shaped Agora or 'caravansarai'. An outstanding element of the plan of Gerasa and Palmyra is the colonnaded street. Early Greek architects thought of the streets simply as a means of access to houses and to the public places and buildings. A street might be ennobled by adjacent Stoas, shrines, and so forth, but it was hardly allowed an independant existence of its own. Similarly, the early Agora was simply an open space, incidentally fringed by important buildings. The idea that a street, simply as a street, could be made an imposing architectureal unit came comparatively late, and was magnificantly realized at Gerasa and Palmyra.[2]

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1. Wycherley, op cit, P. 202.
2. R. E. Wycherley, The Town-Planning Review, No. 3. Oct. 1951, P. 205.

CHAPTER IV

History

Apart from references in ancient sources concerning the wealth and magnificance of Taxila already alluded to, the available information regarding its history is singularly scanty and obscure. Accounts of the site's history, especially of its earlier phases, therefore, have been drawn laboriously by scholars from the writings of Greek and Chinese authors, or pieced together with the help of coins and the few surviving inscriptions.

It appears that the political contacts of the north-western region of India with the outside world, began early in the 6th century B.C. when Cyrus (558-530 B.C.), the founder of the Achaemenid empire of Persia, is said to have conquered Gandhāra. It is necessary to mention, at the outset, that information regarding the political domination of the north-west India by the Achaemenids of Persia is mainly drawn from two sources: The inscriptions of king Darius I (522-486 B.C.) and the writings of the Greek historians, notably Herodotus and Ktesias. The facts given by Herodotus are, to a certain extent, borne out by the inscriptions. Herodotus says that "Cyrus in person subjugated the upper regions of Asia, conquering every nation without passing one by".[1] This statement, however, is so general in character that the conclusion that north-west India was politically subject to the Persians, before Darius I, is hardly justifiable. In fact, most of Herdotus' allusions to India, are later and refer to the times of Darius and Xerxes. Similarly, Xenophon's general statements in his 'Cyropaedia'[2] that, "Cyprus brought into subjection all the nations from Syria to the Erythrean Sea", can hardly be taken to indicate the actual exercise of sovereignty by Cyrus over the Indus country. It is, however, commonly

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1. Herod. I. 177;
2. Xenophon op cit, I, 1.4; VIII, 6, 20-21.

hold that Cyrus brought the major part of Eastern Iran, including Bactria under his sway [1] and destroyed the famous city of Kāpiśa, near the junction of the Ghorband and Panjshir rivers, north-east of Kabul.[2] For this, however, there is no archaeological evidence from the region named. The inscriptions state that his conquests included the satrapies of Drangiana, Sattagydia and Gandaritis which undoubtedly verged upon the Indian borderland. This region, west of the river Indus, probably was the furthest limit of his eastern expansion. Cyrus seems to have conquered the tribes of the Paropanisus and Gandhāra but the actual conquest of the north-west India was left to his illustrious successor, Darius (522-486 B.C.). The Behistun inscription of Darius, dated about 516 B.C., does not mention "The Indians" among the subject nations, while they are so listed in the inscriptions on the Palace of Darius at Persepolis and his tomb at Naksh-i-Rustam. This indicates that the Indian province was added to the Persian empire about 516 B.C. or thereabout.[3] It is clear that during his time, the Indian province was distinct from Aria (Herat), Arachosia (Kandahār) and Gandhāra. It is reasonable to suppose, therefore, that it consisted of the lower Indus valley, perhaps from Kalabagh to the sea.[4] We learn from the accounts of Herodotus [5] that Darius, prior to his actual invasion of India had sent a naval expedition to explore the course of the Indus, under the command of a Greek sea-captain named, Scylax of Caryanda, which paved the way for an extension of Persian rule, by furnishing the king with valuable informations concerning the country, on either side of the river.

We are told [6] 'that the Indian province of Darius constituted the twentieth and the richest satrapy of the Persian empire, paying a

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1. Jackson, A. V. Williams, C. H. I. 1922, P.329.
2. Majumdar, R. C., Roychaudhuri, H. C. and Kalikinkar Dutt, 'An Advanced History of India', (London, 1946), P.64.
3. Codrington, K. de. H. Anc. Ind. P.10.
4. Ibid.
5. Herod, IV. 44.
6. Herod, 94.

yearly tribute of 360 Euboic talents of gold-dust, equivalent to more than a million sterling. Although it is very difficult to define precisely the extent of this "Indian province" of Darius, the information furnished by Herodotus indicates that it must have comprised the territories on both sides of the Indus, from Gandhāra to its mouth. It was separated from the rest of India, on the east, by a vast expanse of sandy desert, the present Thār Desert. On these accounts, Rapson concludes that the Indian province of the Persian empire included the western Punjab generally and the whole of Sind.[1] Indirect evidence of the continuance of some sort of Persian domination in India during the region of Xerxes and even afterwards, is provided by the presence of Indian contingents in the Greek wars,[2] especially at the very close of Achaemenid rule, when the Indians stood by the Bactrians and Sogdians in the battle at Arbela in the last desperate attempt to withstand the Macedonian advance.

However, archaeological evidence of the extent of Persian rule in India is virtually non-existent. The royal Persian mint issued two kinds of coins to which the Greeks gave the names "Dareikos" and "Siglos".[3] Twenty Sigloi were equal in value to one Daric; while the coins resembling the daric, but double its weight, are known as double-daric. The gold daric which was the standard coin of Persia, evidently derived its name from Darius I. The type bears on the obverse the figure of the great king armed with bow and spear, and on the reverse, an oblong incuse. The Sigloi on the other hand were of silver and were based on the old Shekel. The weight of the former was 130 grains and that of the latter, about 86·45 grains. Now, it is natural to suppose that these standard coins should have been distributed throughout the Achaemenid territories. Indeed, a large number of them were offered for sale in the Indian markets

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1. E. J. Rapson, Anc. Ind. (Cambridge, 1916) P. 85.
2. Herod, VII, 65.
3. C. T. Seltman, Greek Coins, (2nd ed.) P. 63.

during the 19th and 20th centuries, which led scholars to believe that they were in actual circulation in India, during Achaemenid times. Rapson,[1] quoting Babelon,[2] and also R. D. Banerji,[3] held that the double-darics were minted in India. Similarly, Macdonald[4] was of the opinion that Sigloi were fairly often disinterred in India itself. But it must be confessed, however, as the result of later researches has shown, that there is not a single daric of definite Indian provenance, and only one siglos from the Bhir Mound large hoard at Taxila.[5] The darics and double-darics which are said to have been procured in India must have been derived from other areas. Macdonald observes, "Before the construction of the Persian railways in Central Asia the waifs and strays of commerce, like gold and silver coins from Bukhara and Khorasan, naturally drifted over the mountain passes of Afghanistan into the Punjab as the nearest profitable market. Once they had arrived there, however, the dealers into whose hands they came were free to assign to them the 'provenance' that seemed most likely to enhance their price, a circumstancethat renders it difficult to 'appraise the value of the scanty evidence available".[6] In another place the same author says, "Nearly all of these specimens (double-daric) in the British Museum, were acquired at Rawalpindi, but the real source seems to have been the rich find or series of finds made about 1877 and 1878 in Bukhara ... The precise locality appears to have been Kabadian, a town on the Kapinahan, in the ancient Sogdiana."[7]

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1. E. J. Rapson, Indian Coins, P. 3.
2. H. Babelon, Les Perses Achéménides, XI-XX, 16 ° 3.
3. R. D. Banerji, Prāchina Mudrā (Bengali) P.22.
4. C. H. I. Vol.I, P. 343.
5. Taxila, Vol.II, P. 795; Vol. III Pl.235 No.1.
6. C.H.I. Vol. I, P. 342.
7. Ibid, P.390. Dalton's inclusion of a number of objects from the same area in his 'Treasures of the Oxus' seems to have confused a number of scholars. All these objects must be discussed with the rich collections in the Hermitage, which however, are mainly post-Achaemenid.

It is interesting to note that some specimens of Persian Siglei bear certain counter-marks, resembling the symbols on the punch-marked coins of India. This led Rapson [1] to postulate that some of the Persian Siglei should be referred to India. This hypothesis is not acceptable as was clearly shown by Babelon. [2] He draws a parallel with the ancient coins of certain other countries, such as Lycia, Pamphylia, Silicia and Cyprus, which also bear similar counter-marks. The 'resemblance to the Indian punch-marks remain noteworthy, but as Macdonald points out, the proof of absolute identity is lacking. [3]

Thus it is quite evident that we have no daric or double-daric and only one Siglos of Indian provenance. Macdonald has tried to explain this paucity of Persian coinage in India by advancing an attractive, though hardly probable, theory. He holds that when the Achaemenids ruled a part of India, gold was abundant there while the relative value-ratio of silver was extraordinarily low. Following Cunningham, he argued that the ratio between gold and silver was 1:8 in India. It is well-known that the ratio adopted by the imperial Persian mint, as reported by Herodotus, was 1:13.(afterwards corrected by scholars to 1:13⅓) So naturally the gold darics, which entered India would constitute an artifically inflated currency and tend to be exported at the earliest possible opportunity. There was certainly little temptation to hoard them, when they could be exchanged, elsewhere, at a very substantial profit. This is, as he observes "what might be expected from the working of economic law. The relative cheapness of gold would act like a loadstone. Silver coins from the west would flow into the country freely and would remain

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1. Rapson, J.R.A.S. 1895, P. 865.

2. Babelon, op cit, Preface.

3. Macdonald, C. H. I. Vol. I, P. 344 Mr. Barclay Head's treatment of these non-Indian punch-marks still remains the best account available. For further discussion on this subject see: J.H. Hill in Journal of the Hellenistic studies, 1919, P.125ff; J. C. Milne, Numismatic Chronicle, 1916; and Bratindra Nath Mukerjee in Indian Historical Quaterly, March, 1957, P. 66-67.

in active circulation." [1] As a matter of fact the theory of the abundance of gold in Achaemenid India, as reported by Herodotus, is not undisputed. [2] In any case, the negative evidence of the paucity of the silver coinage must be taken into consideration. Had this theory been valid, we should have found plenty of silver sigloi in India. But as we have already seen, only one siglos has been found. It must be admitted that Persian coins were not current in India. Moreover, extensive enquiry by a number of scholars in Kabul and Kandahar has failed to produce a single Persian coin from these areas. [3]

It is possible to hold that 1) there was already an established coinage in India; [4] 2) the Persian royal authorities were disinclined to impose their coinage on conquered peoples, [5] who were unfamiliar with it and 3) the abundance of gold-dust in India was efficient substitute for gold darics. In any case, what trade there was between India and the Persian empire would seem to have been carried on in gold dust as well as perhaps in kind. Silver thoughout the ages, has been rare in India. It is rather curious that both the Indian Achaemenid inscriptions and the statements of Herodotus only mention

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1. C.H.I. Vol. I, P.343.

2. Some scholars like W.W.Tarn (Greeks in Bactria and India, 2nd ed. P.106, 108) think that India was not a great gold producing country. Arrian (V.4.4) speaks that Alexander's party did not find any gold worth mentioning in India. Also Darius' own inscription (S. Sen. 'Old Persian Inscriptions' P. 119) records of the importation of only teak-wood and ivory from the Indian provinces, and gold from other quarters which may indicate the contrary evidence. However, admittedly, this is all indirect evidence, which, indeed, does not repudiate the assertion of Herodotus, though it is obviously a little exaggerated. - see also Marshall, Taxila, Vol.I, P.14. F.N.1. for further discussion on the subject.

3. Codrington; Hackins (1940-42 and 1953).

4. B. N. Mukerjee op cit, F.N. 25.

5. Herod, III, 90 ff.

exports, which included animals. There is not a single reference anywhere in the contemporary sources which mentions Indian imports.[1] This is corroborated by the significant absence of Persian antiquities in India. In the same way, the influence of Persian coinage on the indigenous punch-marked coins of India yet remains a matter of lively controversy.[2]

The earliest structural remains, together with their associated objects are held by Marshall to lie in the lowest stratum (IVth) of the Bhir Mound, which he dates to the close of the 6th century B.C. This date must remain hypothetical. It can indeed, neither be established with certainty nor repudiated, for two reasons: 1) the poverty of the finds in the bottom strata of the Bhir Mound and 2) the absence of reliable corpus of pre-Mauryan antiquities in India. However, the one fairly definite datum line of the chronology of the Bhir Mound is the large coin-hoard of c. 200 B.C. disinterred from stratum II. Consequently it may be reasonably conjectured that the earlier two strata should be dated prior to that. But when Marshall says that "Taxila owed its foundation to the Persian conquerer",[3] he goes beyond his evidence.

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1. For an account of Indian exports to Persia, see Rawlinson's Intercourse between etc. Ch. II, P.16 ff; Ghirshman. L' Iran des Origines à l'Islam, (Eng. Trans.) P.181-8 etc. The Achaemenid inscriptions mention the ivory and Teakwood of the Indian provinces, while the Achaemenid reliefs are said to depict the Indian Ass and gold bars etc.

2. For opposing views see Allan, B.M. Cal. of Indian Coins' P.XV-XVII and CLXII; Marshall, Taxila Vol. I, P.14 & F.N.4; J. A. Decourdemanche, Journal Asiatique, 1912, P. 117-132; B. D. Banerji, op cit, P.23, as opposed to Dr. D.R. Bhandarkar, 'Commercial Lectures', 1921, P.118-22; Dr. J. N. Banerjea, I.H.Q. XXV, P.163-75; B. N. Mukherjee I.H.Q. March, 1957, P. 76 F.N.25. In this connection it is interesting to note that many sigloi, which were brought to India, bear Brāhmī and Kharosthī letters, punched on them. It has been suggested that these were done by the local authorities of the district or by the guilds of merchants and money changers to obviate the necessity of weighing. This suggestion may be discounted by pointing out that the coins were issued by the powerful and resourceful mints of the Achaemenids and their accuracy of weight could not have been, possibly questioned. These counter-stamped coins provide a most difficult problem, for there is no evidence of the use of Brāhmī or Kharosthī before the Mauryan period.

3. Marshall, op cit, P.12.

However, an important piece of evidence of Persian influence on the north-western region of India is furnished by the discovery of an Aramaic inscription, engraved on a white marble, octagonal-pillar, from the wall of a house at Sirkap. This mutilated fragment is inscribed in honour of certain high official, named [illegible], who owed his advancement to the patronage of the viceroy or governor, Priyadarśi.[1] Marshall observes that, "we know one person, and one only, who uses the 'Priyadarśi' virtually as his name. That person is Aśoka; and it is natural, therefore to identify the Priyadarśi of this record with the Maurya Prince who, at the time this inscription was set up, would have been ruling Taxila as viceroy, on behalf of his father Bindusāra. If this identification is correct, we must conclude that ~~that~~ the inscription dates, from a short time previous to 274 B.C., when Aśoka ascended the throne of Magadha, and we must also conclude that Aramaic continued to serve as an official language at Taxila long after that city had ceased to be part of the Persian empire.[2] The discovery of this Inscription is of special interest with regard to the origin of the Kharoṣṭhī alphabet, since it would seem to confirm Bühler's opinion, voiced as early as 1895, that Kharoṣṭhī was derived at Taxila, from Aramaic. It is well-known that Achaemenids adopted Aramaic as a medium for official communication throughout the empire. In fact, it was used in Babylonia and Assyria, side by side, with the cuneiform script in the 7th century B.C. Aramaic may well have been introduced into the north-western region of India by the Achaemenids, shortly after their conquest of the country. But since the Aramaic alphabet was found to be inadequate to express all the sounds of the local Prākrit, various additions and modifications were effected which eventually led to the gradual evolution of the Kharoṣṭhī script.[3] However, Kharoṣṭhī is found fully developed in Aśoka's inscriptions.

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1. Ibid, P.13; 164-5.
2. Ibid, P.13.
3. Marshall, op cit, P.13, 164-66; Sten Konow, C.I.I., Vol. II, P.XIII.

Other indirect indications of Persian influence may be observed in some of the local customs of Taxila as recorded by the Greek writers,[1] who accompanied Alexander the Great. The exposure of the dead to birds of prey, a custom manifestly of Iranian origin is commonly quoted. From it we may perhaps infer that the practice might have been introduced at Taxila by Persian settlers in the 5th and 4th centuries B.C.

It is difficult to ascertain how long the Achaemenids retained possession of the north-western region of India. Darius III certainly used Indian troops at the battle of Arbela[2] in 330 B.C. But the fact that the historians of Alexander do not mention any Persian officials south of the Hindukush in Gandhāra, the Indus valley or Taxila, would seem to indicate that these areas were at that time completely independent. From this it may be presumed that the Achaemenids lost possession of their eastern provinces, sometime previous to Alexander's invasion, probably during the reign of Artaxerxes II (404-359 B.C.) and that the Indian troops which fought at Arbela had been recuited as mercenaries, rather than as official levies.[3] At this time, the hill country north of the Kabul river, drained by the Kunar and the Swat rivers, was occupied by a people, known by the name of Aśvakas.[4] Somewhere in this mountain region stood the city of Nysa, alleged to have been founded by Greek colonists. It seems that the territory of Gandhāra was divided into two by the Indus. West of the river lay the kingdom of Puṣkalāvatī, in the modern district of Peshawar and to its east lay the kingdom of Taxila. The mountain territory, immediately above Taxila was Urasa (Hazara District) and Abhisāra (Punch and Rhoshera).[5] To the south-east of Taxila, beyond the Jhelum, lay the kingdom of Pūru (Greek Porus) or Paurava, with whom Ambhi (Greek Omphis), the King of Taxila was already at war. On the confines

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1. Strabo, XV.1. 61-66, 714 = Aristobulus, Onesicritus and Nearchus Frag.; C.H.I. Vol.I P.415-6; Herzfeld, Iran in the Ancient East, P.217.
2. C.H.I. Vol.I, P.341.
3. Marshall, op cit, P.17.
4. B. C. Law, Tribes in Anc. Ind. P. 180-3 (1943)
5. C.H.I. P.349.

of the territory of Puru, were the principalities of the Glaukanikoi and Kathaios and the kingdom of Sambhūti.[1] The Sibis and the Mālavas with their associates, the Kshudrakas, occupied the southern part of the Jhang district and the contiguous parts of the lower Ravi valley.[2] These tribes were autonomous and some of them are expressly mentioned as having a democratic government.[3] Upper Sind was parcelled out among a number of peoples, of whom the most important was Mousikanos, with the capital probably at Alor. Somewhere in the Indus delta was situated the city of Pattala, which like Sparta in Greece, was governed by two kings and a Senate of Elders.[4]

In this distracted condition, the north western region of India naturally could hardly offer any effective resistence to Alexander, when he invaded India in the spring of 326 B.C. Primarily, he came to assert his claim to the lost territories of the eastern Achaemenid empire. Perdiccas and Hephaestion, two of his veteran generals with three brigades of infantry, half of the horse-guards and the mercenary cavalry, proceeded down the Kophen to Peukelaotis (Pushkalāvati) and the Indus. The great flanking movement to the north, was accomplished and early in the next year, the Indus was crossed at Ohind. We have already seen how at the Ohind crossing, an embassy from the ruling king of Taxila, waited on Alexander, tendering submission of his kingdom, and offering supplies of men, elephants, provisions and talents of silver. It appears from the authority of Aristobulus, quoted by Strabo[5] that Alexander entered Taxila in March 326 B.C. By July, he must have crossed the Hydaspes, and a month later, the Akesines (Chenab). Afterwards, in quick succession, followed the passage of the Hydraotes (Ravi), the campaign against the Kathaioi and the storming of Sagala. In September, with the Hyphasis (Beās)

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1. Majumdar, Roychaudhuri and Dutt, op cit, P.63.
2 & 3. Ibid. P.63.
4. The Hist. and Culture of the Indian People, The Age of Imperial Unity, P. 51, Vol.II (Bharatiya Vidya Bhavan)
5. Strabo, XV. 17. C.691, Jones Trans. Vol. VII, P.25.

yet uncrossed, the war-worn army of Alexander refused to advance anyfurther. "Alexander's Oratory failed: Koinos alone was heard, And the retreat began."[1] To mark the utmost limit of his advance, he erected twelve towering altars on the riverbank and retraced his steps to the Jhelum. He sent part of his troops down the river in a flotilla of boats under the command of Nearchus. The rest fought their way through the territories of warlike tribes of the lower valleys of the Chenab and Ravi. Alexander next reduced the principalities of Sind and sailed down to the open sea (325 B.C.). One part of his army, led by Alexander himself, trudged through the deserts of Beluchistan and after terrible sufferings, reached Babylon, where the great leader died in 323 B.C. The story of his retreat is dramatically described by E. R. Bevan: "Sometime apparently in September 325, India saw the Yavana columns move out of Pattala on the homeward road. It was some three years and half since the brilliant figure of the warrior king had issued from the highland of Kandahar, to enter the confines of the Indian world: for the last year and a half he had flashed a more than human wonder, before the eyes of the peoples of the Punjab and Sind; now his meteoric appearance in India was coming to its end, and obscurity falls once more on Indian history."[2]

The history of the following period is obscure throughout and must be studied with due consideration to the following factors, interacting upon each other: the rise of the Seleucid empire in the west; the rise of the Mauryan empire to the east; the emergence of the petty Greek or Bactro-Greek states of the Peropanisus; the rise of the new Parthian power, and the steady infilteration of migratory hordes south-wards from central Asia. However, it appears that A Alexander appointed Philip, son of Machates, as governor of Taxila, with a garrison, before his departure from India. He is called,

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1. Codrington, Ancient India, P. 11. (London, 1926).
2. Bevan, C. H. I., Vol., P. 380.

'Satrap' by both Arrian and Plutarch, but it is not precisely known with what powers he was invested, since we are told, also, that 'Taxiles' (Omphis) was confirmed in his kingdom.[1]

However, the fate of the Greek garrisons, left by Alexander in the Punjab, was destined to be short-lived. Philip was mudered by his own mercenaries in 324 B.C., and Taxiles received instructions from Alexander to carry on the government jointly with Eudamus, a Thracian officer, until a suitable successor could be appointed. This appointment was never made, because in the following year Alexander died and the whole political outlook changed. Evidently, Antipater, and his colleagues, confirmed Taxiles in his kingdom, but in fact the confirmation can have meant very little. The specific instructions given to Eudamus and his Greek garrison are not known, but probably he himself remained in the capacity of a 'resident' at the Indian court and as the leader of the Greek settlements.[2] At any rate, in 317 B.C. Eudamus hastily left India with whatever forces he could collect and moved westward to join Eumenes in his struggle for a share of Alexander's empire, against Antigonus. Almost at the same time Peithon, son of Agenor, withdrew from his satrapy west of the Indus and also joined the struggle, but on the side of Antigonus. It is usually held that the remnants of the Greek forces were driven out or destroyed by Chandragupta Maurya (321-297).

The death of Alexander unchained the ambitions of his successors. Seleucus regained Babylon in 312 B.C. and, as Alexander's successor in the east, he proceeded to assert his rights, as well, as he could. Evidently, his attempt to reconquer the north-western part of India failed, since he ceded four satrapies[3] to the Mauryan emperor.

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1. Diod. XVIII. 39, Russel M. Geer's Trans. Vol. IX, P.123, (London, MCMXLVII)

2. Marshall, op cit, P. 18.

3. By the terms of the treaty, Seleucus acknowledged Chandragupta's sovereignty over the Punjab, ceded Gandhāra and those parts of Arachosia and Gedrosia which lay along the Indus.
- Bevan, The House of Seleucus, VOL. I, P.296 and F.N.1.

when, however, he laid claim on Bactria, he had to fight for it, as Stratanor had already declared himself independent.

In India the foundations of the Maurya empire were laid by the youthful Chandragupta. The capital of the Maurya empire was Pataliputra in Bihar, and obviously the administration of Punjab and the newly acquired territory, across the Indus, could not be efficiently controlled from such a remote distance. Consequently, an important viceroyalty in the north-west, with Taxila as the seat of government, had to be created. It was here that Aśoka afterwards ruled as viceroy on behalf of his father, Bindusara, and in the succeeding generation, Kunala ruled there on behalf of Aśoka himself.

From the detailed account given in the Arthaśāstra of Kautilya,[1] the minister of Chandragupta, it would seem that the Mauryan administration was highly centralised. A very similar picture is also found in the fragmentary writings of the Greek Megasthenes, who was the ambassador of Seleucus I at the Maurya court, about 300 B.C. It would seem that a despotic government, armed with drastic laws and regulations, exercised the most rigid control over the lives and liberties of its subjects.[2] Inspite of Aśoka's enlightened rule, the Mauryan state showed centrifugal tendencies. Rebellions broke out in different parts of the empire. During the reign of Bindusara (c. 297-274 B.C.) we hear of one such rebellion at Taxila and another in the days of Aśoka (c. 274-237)[3]

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1. Arthaśāstra, Bk. V. Ch. 2. The dating of the work remains highly controvertial.

2. Justin (Bk. XV, 4) says of Chandragupta that after freeing the Punjab from the Greeks, he forfeited, by his tyranny, all title to the name of liberator, for he oppressed, with servitude, the very people whom he had emancipated from foreign thraldom." This tyranny may be partly responsible for legends of extensive emigration from Taxila to Khotan, which is said to have taken place in the days of Aśoka. But this emigration actually took place much later.

3. Divyāvadāna, XXVI, P. 371-2.

Very little, however, is known of Bindusāra, the son and successor of Chandragupta except that he maintained the friendly relations with the Hellenistic powers in the west, which had been initiated by Chandragupta and Seleucus. The very fact that the Greeks knew him by his appellation, 'Amitrochates' (Sanskrit, Amitraghāta = slayer of foes) indicates that he was conqueror. The term, however, belongs to the vocabulary of 'Praśasti' and may be a courtly eulogy.

Aśoka's succession to his father's throne in C. 273 B.C. is undoubtedly a landmark in the history of India. For the first 11/12 years of his reign, he was probably a Brāhmanical by faith, but after his conquest of Kalinga (C. 262 B.C.) he was overcome with remorse for the suffering which he had inflicted on the conquered people, and turned to Buddhism for solace. Two years afterwards he became a lay-member of the Buddhist Order. Besides his efforts to spread the gospel of the Buddha throughout his vast empire, he issued a series of Edicts, engraved on the face of conspicuous rocks or on free-standing pillars of stone, proclaiming the general principles of religion and ethics, which he judged useful to mankind. We may still see one such Edict engraved on the granite rocks at Mānsehrā by the side of the old road from Taxila to Kashmir,[1] and another at Shahbazgarhi in the Frontier Province. It is due chiefly to his untiring missionary activities that Buddhism became the dominant religion in India. But it certainly never supplanted Brāhmanism. There is no Buddhist period of Indian history.

According to the Tibetan tradition Aśoka died at Taxila and was succeeded by his son Kunala (c. 237-229 B.C.), thereafter the succession is uncertain. The Rājatarangini tells us that another son of Aśoka, Jaloka by name, had taken possession of Kashmir and championed the cause of Śaivism against Buddhism.[2] It seems that Samprati, son of Kunala ruled the western provinces at Ujjain and supported

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1. Marshall (op cit, P.27) calls this the Royal road, but this is conjectural.
2. Rājatarangini, I. 107-8.

Jainism,[1] and Dadaratha, another grandson (or great grandson) of Kunala was king of Magadha not long after Aśoka.[2] In any case, Śuṅga Puṣyamitra, the general of the last Mauryan King, Brihadratha appears to have dethroned and assassinated his master in 184 B.C.[3] Puṣyamitra's rule at Pataliputra lasted for nearly 36 years,[4] according to the Puranas. His reign appears to have been one of constant wars, but the term "Śuṅga" remains very vague.

The disintegration of the powerful Maurya empire, left the north-western frontier of India, once more vulnerable to outside invasion. Indeed, Marshall has very graphically described the political situation of this region in the following passage. He says, "The rule of the Mauryas, which had thus lasted for three generations, proved to be no more than an interlude in the long story of Taxila's subjection to conquerors from the west. In Chandragupta's boyhood the north-west had been overrun by Greeks from far-off Macedonia; now that the break up of the Maurya empire left the frontiers once more exposed to invasion, it was the Greeks of near-by Bactria, settled by Alexander on the further side of the Hindukush, who were again to conquer Taxila and hold her in their grip for another hundred years; and after the Greeks there was to follow a succession of the invaders - first the Śakas, then the Parthians, after them the Kushāṇas, and lastly the white Huns. So that for six long centuries - virtually for the rest of her history as a great city - Taxila was never again to be free from the yoke of western conquerors."[5]

When Aśoka was reigning in India, two important events took place in the confused politics of western Asia, which eventually

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1. Marshall , op cit, P. 25.
2. The inscriptions in the Barabar Caves show him to have been a supporter of the Ajivikas. C.I.I. vol.I. P.181. Hultzsch.
3. C. H. I. Vol. I, P. 512.
4. Ibid, P.513.
5. Marshall, op cit, P.26.

~~as~~ brought about far-reaching consequences. By the middle of the 3rd century B.C., Diodotus, a satrap of Bactria, and a Parthian adventurer, named Arsaces, threw off their allegience to the Seleucid monarch, Antiochus II Theos (261-246 B.C.) and founded the independent kingdoms of Bactria and Parthia. From Justin's account[1] it appears that Bactria rebelled earlier than Parthia, probably before 250 B.C.[2] The chronology of the early Parthian history is controversial, but it is generally believed that Parthia revolted in the year 250 and that the Parthian era started in 248-247 B.C.[3] But the Seleucid monarch could hardly acquiesce, without protest, in the defection of its revolted provinces and accordingly about the year 209 B.C. Antiochus III, the great, attempted to reduce both Parthia and Bactria to obedience. The expedition, however, ended in an acknowledgement of the independence of both Kingdoms.[4] It is interesting to know that Antiochus is said to have listened to the advice of Euthydemus, the Bactrian king, that it would be impolitic in the cause of Hellenic civilization generally to weaken the power of Bactria, which formed a buffer state against the perpetual menance of Scythian irruptions from the north.[5]

The kingdom of Bactria was shortlived. The house of the founder, Diodotus, was deposed by Euthydemus, sometime about 230 B.C., and the later history is occupied with constant internecine struggle between the descendants of Euthydemus and the rival family of Eucratides. Incidentally, it should be noticed here that one notable character of the small Bactrian Greek kingdom was their contribution to the development of Greek coinage. Their coins are purely Greek inc character, the divinities represented on them are Greek and the portrait of the kings on them are among the finest examples of the later Greek

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1. Justin, XLi, 4.
2. A. K. Narain, The Indo-Greeks, (Oxford, 1957) P. 13.
3. G. Smith, Assyrian Discoveries, (London, 1875) P.389; Tarn, C.A.H. IX, P. 576. (1932).
4. E. J. Rapson, Anc. Ind. (Cambridge, 1916). P. 120.
5. Ibid. P. 120.

art of portraiture. From Polibius' account[1] we learn that Antiochus III visited Taxila, ostensibly to renew the friendship with the then ruling chief, Subhagasena. But the visit could hardly have been anything less than an invasion, as is evident from the fact that the Greek king imposed an indemnity on Subhagasena, though he soon withdrew to the west somewhat hurriedly.

However this may be, it is quite plain that the first Bactrian king to carry his arms into Gandhāra and across the Indus into the heart of the Punjab was Demetrius, son of Euthydemus, sometime about 189 B.C. Demetrius, being a Seleucid on his mother's side, may have felt some sort of hereditary claim on the throne of the Mauryas, inasmuch as the Seleucid and Maurya lines were connected by the marriage of Seleucus' daughter (or niece) either to Chandragupta or to his son Bindusara. Whatever may have been his designs on India proper, Demetrius must have made Taxila his immediate objective after crossing the Indus, as apart from its being on the highway to Hindustan, it was also a powerful and important city and the administrative headquarters of the north-west.[2]

It is only possible to trace, in very general outline, the history of the so-called "Greek" domination in India. Virtually all the evidence which we possess has been laboriously gleaned by scholars from the study of the Indo-Bactrian coinage, and their interpretation of this evidence is often not clear. As already observed, these Greek princes seem to belong chiefly to the two rival royal houses, the house of Euthydemus and the house of Eucratides. They began their struggle in Bactria and continued it in India. Therefore it is often difficult to attribute with certainty, the princes whose coins we possess, to either of these groups. It is equally not unlikely that in addition to these two houses there may have been other principalities, which Greek adventurers had carved out for themselves. However,

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1. Polib. XI. 39. W.R. Paton's Trans. Vol. IV, P. 303 (Lond. MCMXXV)

2. Only excavations will elucidate the function of Charsadda on the extensive sites of Bast Nagar.

one notable feature of the transference of Bactrian rule from Bactria to India is indicated unmistakably by a change in the style of coinage. In Bactria, the coins remain purely Greek in character and they are struck strictly in accordance with the established Greek standards of weight. But in India the coins became bilingual, being struck with Greek legends on the obverse, with an Indian translation, in Indian characters on the reverse. These later coins follow the Persian standard of w weight.[1]

The Indian conquest of Demetrius was greatly extended by later rulers of the same line, notably by Appollodotus and Menandar. Whatever may have been the exact relation between these two princes, it is virtually certain that they were intimately connected.[2] They use common coin types, especially the figure of the Greek Goddess Athene hurling the thunderbolt, which is also characteristic of the other members of the family of Euthydemus, such as Stato.

Meanwhile, Eucratides had already defeated Demetrius and wrested from the Euthydemids, Bactria, Sogdiana, Aria, Seistan and Arachosia, and proceeded to push his conquests into the Kabul valley. He initiated for the first time, the "Zeus enthroned" coin type,[3] which afterwards became the characteristic type of Kapiśa city. He is, also, the first Indo-Greek to use the 'Nike with wreath and palm' type on his coins, which became intimately associated with the Gandhāra region, and was copied by Menandar, Epandar, Antmachus II, Stato I and others.[4] But it is not certain whether he actually crossed the Indus and conquered Taxila.

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1. Rapson, Ancient India, P. 126. The actual study of current weights from Indian sites is now possible and should classify these general terms, but the subject is a difficult one. - Unpublished material, Dr. Dani and Codrington.

2. Other authorities hold Apollodotus to be a son of Eucratides, - Cunningham, Num. Chron. (1869) P. 241-3.

3. Tarn, W. W. The Greeks in Bactria and India, P. 212 (Camb. 1938)

4. Marshall, op cit. P. 31.

However, it seems that Apollodotus was probably killed about 163 B.C. during the wars with Eucratides, and the territories on the east and west banks of the Jhelum were united under Menander, with his capital at Śākala (Sialkot ?) instead of Taxila. Menander survives in ancient Indian literature and must be identified with the 'Milinda' of the Milindapañha, "The questions of Milinda". This is a Pali treatise on the fundamental principles of Buddhist philosophy.[1] In this Pali work, he is portrayed as a convert to Buddhism and a disciple of a certain teacher named Nāgasena. Marshall observes that this story of his conversion to Buddhism is probably apocryphal and that he certainly did not become a member of the Order. This does not however, preclude his being a lay-member of the fraternity. As such, in all probability, he supported the Buddhist church officially with obvious political considerations in mind. The violent Brāhmanical reaction against Buddhism, championed by its chief enemy, Pushyamitra, resulted in the wholesale slaughter of the Buddhist fraternity, including those of Śakala, which was later to become Menander's own capital. The tradition of rivalry between the Buddhists and Brāhmanas is likely enough. "By identifying himself, therfore, with the cause of Buddhism, Menander was making sure of the support of what was at that time probably the strongest religious body in the Punjab and nort-west, and numerically, perhaps, not inferior to the Brāhmans of Hindustan and central India - a fact which must have contributed in no small measure to his victories over Pushyamitra."[2] So apparently, under Menander, Indo-Greeks and Buddhists found a common enemy in the Brāhmanical Śunga king and it was this common enmity that formed the basis of a political alliance. However, that may be, the distribution of his coins show, the Indo-Greek power at its height. He is held to have ruled from the Kabul valley in the west to the Mathura in the east, and from the Swat valley in the north

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1. C. H. I. Vol. P. 549.
2. Marshall, Taxila, P. 33.

to northern Arachosia in the south.[1] His occupation of Gandhāra, with its two great centres, Puṣkalāvatī and Taxila, is amply demonstrated by numerous finds of his coins. The Taxila excavations have yielded 54 coins of Menander as against 4 of Eucratides and 15 of Antialcidas.[2] Similarly his coins are again prominent in the Sheikhano Dheri hoard found near Charsadda.[3] His specimens are also common in Charsadda,[4] Shah-kadar, Rajjar, Mardan, Swabi, Peshawar and Rawalpindi.[5]

Menandar died probably about 130 B.C. and was succeeded by Strato I, with her mother Agathocleia acting as regent during his minority. Meanwhile, Eucratides, was possibly killed by one of his sons, whom he had made joint-king,[6] on his way back to Bactria, about 155 B.C. Tarn's opinion[7] that he was assassinated by a son of Demetrius I appears to be misleading and has been rejected by many scholars.[8] Eucratides had two sons: Plato, the supposed parricide, and Heliocles. Heliocles, seems to have wrested from Strato, the trans-Indus territories, including Taxila, sometime about 145 B.C. and the defeated king was driven eastward across the Jhelum. The extent of Heliocles' conquest is clearly indicated by his coins. He seems to have continued to hold the Paropamisadae, Arachosia and Gandhāra, having added Taxila and the Sind-Sāgar-Doab to the conquests of Eucratides.[9] Marshall, considering the comparative rarity of his coins, infers that his reign was a short one and came to an end about

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1. Narain, op cit, P.97.
2. Marshall, Taxila, Vol II, P.766.
3. N. C. 1940. P. 123-6.
4. A. S. R. 1902-3, P. 158.
5. Naughton, N. C. 1943, P. 57-58.
6. Justin, XLi, 6.
7. Tarn, op cit P. 299-22 (Camb. 1938)
8. Burn, J.R.A.S. 1941, P. 63; Jenkins, N. C. 1951, P. 15, Narain, op cit, P. 70.
9. Marshall, Taxila, P. 55.

135 B.C.[1], but considering the evidence of the Qundus hoard,[2] Dr. Narain infers that the coins of Heliocles I, are not really as rare as Marshall thinks; and we may assign him a rule of ten to fifteen years[3], which suggest that he died in c. 140 B.C.

However the order of succession at Taxila is very uncertain. It has been usually held that Heliocles was followed by Antialcidas and the latter, in turn by Arebebius, after whom the Greeks were driven out of the western Punjab by the Śakas. Another king, Lysias has been considered to be a contemporary of Antialcidas, reigning elsewhere than at Taxila, although for some unknown reason, he used the same mint. Apart from the other regular copper issues of Lysias, there has also been found a unique copper coin, struck in the joint names of Lysias and Antialcidas.[4] On this numismatic evidence Tarn, infers that it was a mark of rapprochment between the two rival houses of Demetrius and Eucratides, and the end of their long-standing feud. He treats Lysias as the descendant of Demetrius. But Marshall, on the evidence of Lysias' uniformly youthful appearance on all his coins, conjectures that his reign was a short one; and that possibly he started as a sub-king in Arachosia under Heliocles and followed that king later at Taxila, where he ruled between 135 and 125 B.C. The joint-coin mentioned above may be held to suggest that Antialcidas succeeded Lysias.[5]

It is interesting to note that Antialcidas is the only Indo-Greek king, whose name has been found inscribed on an Indian monument. It occure on a stone memorial pillar at Besnagar in Gwalior

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1. Ibid, P. 35.
2. Bivary, Spink's Numismatic Circular, May, 1954.
3. Narain, op cit, P. 106.
4. Allan, B. M. Cat. of Ind. Coins. Pl.XXXI, No. 2.
5. Marshall, P. 36-7. Numismatists use the geographical terms Paropamisadai and Arachosia only loosely.

state which is still standing where it was originally erected.[1] This records, in early Brāhmī script, that it was set up in honour of Vāsudeva (Vishnu) by a Greek named Heliodorus, son of Dion, a Bhāgavat, who had come to Vidiśā from Taxila as ambassador of the great king, Antialcidas to king Kāsīputra Bhāgabhadra, then in the 14th year of his reign.

It is usually held, on the evidence of the coins, that after the reign of Archebius, the territory of Taxila passed into the hands of the Śakas. "The evidence of the Takhaçilā copper plate indicates that Takshaçilā was conquered by the first Çaka king, Maues, who was reigning there in the year 78 of an unspecified era."[2]

The Śakas, known to the Chinese as Sai or Sai-Wang are expressly stated by Herodotus to have been Scythians. They were originally a nomad people, inhabiting the interior of central Asia. The settlements of the Śakas which affected the history of India at this period are two in number, and as Rapson observes, "These ... are specimens merely of the innumerable swarms of nomads which had been finding their way during untold centuries from that great hive of humanity, China to Western Asia and to Europe."[3] One of these sections occupied the country between the Jaxartes[4] and for a considerable period remained a perpetual menace to both Parthia and Bactria, while the other section inhabited the province of Drangiana, between Persia and India. Subsequently this area bore the name of 'Śakasthāna', 'the Abode of the Śakas' (modern Seistan). It seems that about the middle of the 2nd century B.C. both of these sections were stirred into activity by the impact of further swarms of unsettled nomads

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1. The inscription is published in J.R.A.S. 1909, P. 1055; Vogel in A.S.I. 1908-9, P. 126; C.I.I. I. P. 521, 558, 625; H. Roychaudhuri, J.A.S.B. XVIII, 1923, P. 269-71; V. Bhattacharya, I. H. Q. VIII, 1932, P. 610 etc.
2. C. H. I. P. 559.
3. Rapson, op cit, P. 137.
4. Sten Konow, C.I.I.II P.XIX; Rapson, op cit, P. 137.

known to the Chinese as the Yueh-Chi. The result of this impact was twofold; on the one hand the Greek kingdom of Bactria was engulfed in a flood of barbarian invasions and, on the other hand, the Parthian kings were occupied by a desperate struggle to stem the overflowing tide which already had extended to Seistan. The creation of a Śaka enclave in the province of Seistan must have been of great consequence for the history of India. This settlement must have been initially more or less dependent on the kingdom of Parthia. It was only during the early years of Mithridates II's reign (123-88 B.C.) that the Śakas were expelled successfully from Parthia and Seistan, after a desperate struggle by the Suren of Eastern Iran. As a reward for his success the Suren received Seistan as a personal fief.[1] After this defeat,[2] the Śakas turned eastward from the Helmand and made their way through Baluchistan, probably to the Indus delta country in lower Sind which became, for a while, their main base for further expansion in India.[3] Their choice of the southern route to India through Baluchistan is also corroborated by the fact that the coins of Maues, the earliest known of these Śaka princes, are found only in the Punjab and not in the Kabul valley, which still continued to be held by Indo-Greek princes of the Eucratides family.[4] Access into the Kabul valley from Bactria, over the passes of Hindukush would therefore, seem, at this period, to have been effectively barred, but the evidence is tenuous.

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1. E. Herzfeld, Śakastan, Archaeologische Mitteilungen aus Iran, Band, IV, (Berlin 1932) P. 70-80.

2. Rapson however holds that Śaka invasion must be ascribed to a period after the reign of Mithridates II which appears to be less likely. It seems more probable that the invasion of Sind by the Śakas was directly, the outcome of pressure, exerted by Parthia, on Seistan during the reign of Mithridates II the Great.
- Rapson, C. H. I. Vol. I, P.568.

3. This assertion is solely dependent on the well-known passage from the Periplus. See Schoff, op cit, No. 41 and P. 10, 165-7, 175, 176, 197-200 etc.

4. Rapson, op cit, P. 140.

The Śaka intrusion in India was in fact, directed along two lines of advance. One stream occupied Cutch and Kathiāwār (Surāstra) including the coastal region beyond, with the valuable port of Broach, from where they penetrated up the Nerbudda valley to Ujjain.[1] The other branch pushed to the north-east, up the Indus to the western Punjab and Taxila, and eventually moved eastward to Mathurā on the Jumna, where foreign princes with the title of satrap, ruled for more than a century.[2]

It is important to trace the extent of Indo-Greek influence on their coinage. Maues issued coins which are obvious imitations of Demetrius' specimens and the Śaka chief Liako Kusulaka at Taxila directly imitated the issue of Eucratides. It seems that everywhere the Śaka invaders retained the form of coinage used by the previous Indo-Bactrian princes whom they dislodged. These coins are distinguished by a Greek legend on the obverse and Prakrit translation of it, in Kharosthī characters, on the reverse.[3] In an important Copper-plate inscription from Taxila, Maues is mentioned as the reigning monarch in the year 78 of an unspecified era, and apparently the same era is used in two other records of the period. One comes from Mānsehrā,[4] near Abbottabad on the road to Kashmir and the other from Fatehjang,[5] in the Attock district; both bear the same date of 68, that is, ten years, before the Taxila copper-plate.[6] But the initial Śaka era in

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1. Marshall, Taxila, P. 44.
2. V. A. Smith, E. H. I. P. 241 (Oxford, 1924, 4th ed.)
3. Rapson, op cit, P. 140.
4. C. I. I. Vol. II, P. 18-20 and PL. IV, No. 2.
5. C. I. I. Vol. II, P. 21-2 & PL. IV, No. 1.
6. However, it is supposed that in two other earlier records, evidence of the same Śaka era is found. On a less justifiable grounds, the Mairā inscription (Jhelum District), is usually considered to be the earliest document of the Śakas, giving the date of 58. The reading of the numerals in this inscription is not at all satisfactory. The other is the Sui Vihar inscription near Multan. This record is badly preserved and Sten Konow himself admits his inability to determine its age on palaeographic basis. Shahbaur inscription of Damijada, found in the Hazara country, evdently better preserved than the Mairā

which apparently these three inscriptions are dated, is not known precisely. Rapson,[1] supposes that it starts from the beginning of the reign of Mithridates I (171 B.C.) and ascribes it to a Parthian origin. Accordingly, he works out the date of the Taxila copper-plate inscription as being 93 B.C. (171-78 = 93 B.C.). A more likely view is advanced by Tarn[2] which makes it, of Śaka and not of Parthian origin and holds that it, in fact, commemorated the settlement of Śaka immigrants in Seistan by Mithridates I, about the year 155 B.C. According to Tarn's calculation, the date of the Taxila plate would be 77 B.C. and that of the Mānsehrā and Fatehjang records c. 87 B.C. Accepting Tarn's calculated date, Marshall argues that the settlement of the new Śaka kingdom in Sind must have taken some two or three years to accomplish. So we may reasonably arrive at 90 B.C. as the approximate date when the last of the Indo-Bactrian kings of Taxila was overthrown by Maues.[3] In most of his coins, he assumes the proud title of 'great king of kings' which, no doubt, was copied from Mithridates II, who was the first of the Parthian kings to assume that title. The history of this title is interesting. Originally it denoted the supreme lord who claimed the allegiance of a number of subordinate kings. It was the title of the Achaemenid monarchs as

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or Sui Vihar inscriptions, which gives a date of 60 and clearly mentions the word Śaka, probably have a better claim to be considered as the earliest Śaka record in India. - C. I. I. Vol. II, P. 11 & 13; Narain op cit, P.143; Lohuizen - De - Leeuw, J. E. Van, "The Scythian Period - an Approach to the Epigraphy and Palaeography of Northern India from the first cent. B.C. to the 3rd cent. A.D." (Leiden, 1949.) P. 12, 23, 47.

1. Rapson, Ancient India, P. 142 and C. H. I. Vol. I, P. 570. Here he works out, 72 B.C. by taking the initial era as c. 150 B.C. corresponding to the incorporation of Seistan in the Parthian empire by Mithridates I.

2. Tarn, op cit, P. 496.

3. Taxila, P. 45.

the inscriptions of Darius show. But it was first introduced into India by the Śaka and Pahlava invaders and continued to be used by their successors, the Kushāṇas.[1] In its present form 'Shāhan-Shāh' it is still used as the title of the Shāhs of Iran.

However that may be, Maues appears to have extended his conquests, after establishing himself at Taxila, to virtually the whole of the trans-Indus territory[2] and he may, also, have annexed Kāpiśa. His annexation of Kāpiśa, as well as the Gandhāra region is indicated "not only by those coins of his which show the 'Zeus enthroned' type of Kāpiśa, copied from antecedent coins of Eucratides, Antialcidas, and Telephus, but by the fact that some of his coins actually bear the same peculiar moneyer's monogram as those of Telephus."[3]

The inscription of the unspecified era of 78, referred to above, mentions a satrap of Chukhsa, Liako Kusulaka by name and his son Pāṭika. Marshall identifies the 'Chukhsa' with modern Chach, a broad alluvial plain in the north of Attock district on the banks of the Indus, comprising the Peshāwar valley on its west and most of the Hazara, Attock and Mianwali districts on the east. Liako Kusulaka struck his own coins, copied from the issues of Eucratides, but his son Pāṭika does not seem to have struck coins at all. This copper-plate was originally found by the Commissioner of Rawalpindi, Mr. Roberts and was first published in the Bengal Asiatic Society's Journal,[4] which contains other interesting details. The inscription as first read by Professor Dowson specifically states that in the 78th year of the great king, the great, the great Moga, the satrap of 'Chhaḥara' and 'Chukhsa' named Liako Kusuluko deposits a relic of the holy Śakyamuni in the 'Sapaṭiko' established in the country called

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1. Rapson, Anc. Ind. P. 139.
2. C. H. I. Vol. I, P. 570-1.
3. Marshall, Taxila, P. 47.
4. op cit, 1863, P. 421.

'Chhema' north-east of the city of Takshaśila, in honour of the collective body of worshippers. Of the two places mentioned in the inscription as lying in Liako's satrapy 'Chukhsa' is identified by Cunningham [1] with SirSukh, which obviously is not correct. However, the fact that Liako Kushlaiu minted his own coins [2] indicates that these satraps enjoyed the same administrative power and political status as the sub-kings of the Indo-Greek period.

Azes I, evidently succeeded Maues at Taxila, though there may have been a short gap between them [3] and they were evidently not related, for they belonged to the two distinct families, the Śakas and the Pahlavas. [4] The exact date of Maues' death is uncertain, but the generally accepted date of his death and the succession of Azes I to the throne, is 58 B.C.; and the era of Azes is generally accepted as identical with the Vikrama era of 58 B.C. The foundation of this era is traditionally ascribed to King Vikramaditya of Ujjain to commemorate his victory over the Śakas. Marshall however, on good grounds [5] does not consider this date to be in any way associated with either the death of Maues or the accession of Azes I. He holds that Vonones assumed the imperial title after Maues death, probably about 53 B.C. and, at least for a short while, exercised imperial powers at Taxila, with Śpalahores and Śpalagadames as his acting legates. Their coins are found in the early Śaka levels of Sirkap. So Maues' death could have happened any time prior to that date (53 B.C.). So far as the date of Azes I's accession to the throne is concerned he thinks that Azes I asserted his independence round about 45 B.C. and assumed the imperial title of 'great king of kings', not later than 40 B.C. This scheme of dating is also supported by Dr. Tarn, [6] According to Marshall's theory, Śpalahores and Śpala-

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1. C. S. N. II. P. 133-4 & F.N.
2. C. H. I. Pl. VIII. 42.
3. Marshall, Taxila, P. 48-51.
4. C. H. I., P. 573.
5. Marshall, Taxila, P.48-53.
6. Tarn, op cit, P. 539-41.

gadames were probably dead by c. 49 B.C., and a year or two after this date, their successor, Spalirises was issuing coins in the joint names of himself and his son Azes I as 'great king', thereby indicating the end of Vonones' overlordship. The strange coincidence of the era of Azes' and the 'Vikrama era', falling on the same date of 58 B.C. is explained by him thus, "The most likely explanation ... is that Azes' conquest of the eastern Punjab brought him into contact with Mathura and parts of India where the Vikrama era was already in use, and that he found it convenient to introduce that era generally throughout his dominions, where it would naturally come to be known by his name. This would account for his name alone being attached to the era without the addition of his imperial title."[1] This hypothesis is not free from difficulties, for it is unlikely that a Śaka prince adopted an era which ostensibly signalizes the defeat of the Śakas by an Indian King.

Whatever may be the actual truth, it appears quite certain that Azes I was intimately associated with the family of Vonones in the government of Arachosia, and was in fact, perhaps as much a Parthain as a Śaka. Though little is known about him, there can be no doubt that his reign was a long and prosperous one, and that he was probably, to a large extent responsible for extending and consolidating the Śaka power throughout the north-west India, as far as the banks of the Jamuna.

The history of his later successors, Azilises and Azes II are known only by their coinage and no information as to their reigns is available. Marshall holds that the actual years in which these two kings succeeded to the throne, can at best be conjectured as being, round about 10 B.C. and A.D. 5, respectively.[2] They continued to rule in the Punjab with their local satraps at Taxila and Mathura,[3] who

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1. Marshall, Taxila P. 53.
2. Marshall, Taxila, P.53.
3. Liaka-Kusulaka, Patika, Kujuvala, and Śodāsa.

were also of the Śaka race and connected with one another by close family ties.

It is clear that the Śaka-Pahlavas gradually had overpowered all the Indo-Bactrian states to the south of Hindukush, including Arachosia the Paropamisadae, the kingdom of Taxila and the kingdom of Śākala before the beginning of the Christian era. Still further east they had also established themselves at Mathura and thus evidently, they everywhere supplanted the Indo-Bactrians. In their turn, they were themselves overthrown by a new Parthian offensive during the first half of the first century A.D. The dates of the famous Parthian monarch Gondopharnes, who overthrew Azes II, can be ascertained within a narrow margin of error. He came to the throne in A.D. 19 and was still reigning in A.D. 45.[1] These dates are established by Takht-i-Bāhi[2] inscription which was written in the 26th year of his reign and in the year 103 of an era, which, though not named, is generally accepted to be the Vikrama-Azes era of 58 B.C. He is supposed, in his early career, to have been associated as a sub-king in Arachosia, with Orthagnes, the Suren of Seistan. Later on, he became more or less independent in the Suren's dominions and eventually overthrew Azes II and assumed the supreme title of 'king of kings'. In the subordinate position, Gondopharnes was associated, according to the Christian legend of St. Thomas, for some-time with Guda or Gudana, who may perhaps have been his brother. The coins on which Orthagnes still appears as chief ruler with only Gudana as his subordinate, may be assigned to the period when Gondopharnes had already succeeded Azes II in north-west India. The fame of Gondopharnes certainly spread to the western world as is indicated by his story, as told in the 'Apocryphal Acts of Judas Thomas, the Apostle'. It contains an account of the ministry of St. Thomas in India which is repeated in the Syriac, Greek and Latin Versions.[3] The value of this Christian

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1. C. H. I. Vol. I, P. 577.
2. Takht-i- Bāhi inscription, C. I. I. Vol. II. P. 57-62.
3. C.H.I. Vol.I, P.578-9; Wright, Apocrythal Acts of the Apostles, II, P. 146-7.

legend may be doubted as a basis for history, but the story does indicate the spread of the reputation of this king to the west.

Gondopharnes was almost certainly a Pahlava, as the various forms in which his name appears on the coins, indicate. These are all attempts to render local pronunciation of the Persian, Vindapharna, 'the winner of Glory.' He associated on his coins not only with his nephew Abdagases (who never ruled independently, but only as viceroy) but also with his governors, Sapedana and Satavastra and His 'Strategoi' (corresponding to the Sanskrit 'Senapati, commander-in-chief or Military Governor), Aśpavarman, son of Indravarman, and Sasa, son of Aśpavarman's brother. It is interesting to notice that the titles assumed by Sapedana and Satavastra as 'great king, king of kings' show that even during the lifetime of Gondopharnes, 'the great king, supreme king of kings', the allegiance of his governors had become nominal. The fact that on the coins of Gondopharnes and his successor, Pacores, we find the name of Sasas, who no doubt succeeded Aśpavarman as Commander-in-Chief, affords valuable evidence for the order of succession of the 'Great Kings' to whom they owed allegiance. Two generations of these military chiefs, Aśpavarman and his nephew Sasas, held office during the reigns of Azes II, Gondopharnes and Pacores which according to Rapson [1] cover a period from 19 A.D. to 45 A.D. Of Satavastra, we practically know nothing except his name from the coins, but Sapedanes may possibly be identified with the prince whom the 'Periplus' calls Sandanes, whose dominion, therefore, may have included the region of Barygaza and Surashtra. [2] Another name of a military satrap is found in the inscription on the silver 'askos' from Taxila. He is Zeionises, [3] son of the satrap Manigula. He is referred to in the inscription as satrap of Chukhsa i.e., the same satrapy which once was governed by Liako Kusulaka during the reign of Maues. [4] Marshall, from the "elephant and bull" coin types of Zeionisis thinks that he must have been associated with the adminis-

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1. C.H.I. Vol. I, P.577.
2. Schoff, Periplus, para 52 and P. 197-200.
3. Written actually as 'Jihonika.'
4. Marshall, Taxila, P.61.

tration of Taxila and Pushkalāvatī, as the symbols are commonly held to indicate. He, also, further infers from the inscription on the 'askos' that, although there is nothing to show that he was a feudatory of Gondopharnes, the two were doubtless contemporary.[1]

During the reign of Gondopharnes, it is said that Apollonius of Tyana visited Taxila. His visit, an account of which is given by Philostratus, is usually dated 44 A.D. The credibility of this story is doubtful. One of the reasons cited by scholars as a proof of Philostratus' untrustworhiness is that he mentions the name of the ruling king at Taxila, at the time of Apollonius' visit, as being Phraotes, not Gondopharnes. However, Marshall emphatically holds that Apollonius' visit to Taxila as recorded by Philostratus is acceptable and finds corroboration of his observations in the city and its buildings.[2]

The exact relationship of Gondopharnes to Phraotes, apparently a Parthian, if he existed at all, is unknown. Some scholars,[3] however, considers him to have been not only independent of the Parthian emperor Vardanes (c. A.D. 39-47), but to have been, himself, powerful enough to exercise suzerain rights over the satrap of the Sindhu valley. It is thought that for some time he was the semi-independent governor of Gandhāra under Gondopharnes.

Gondopharnes was succeded by Pacores about 30 A.D.,[4] but judging from the paucity of his coins it appears that his reign was a very short one.

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1. Ibid, P. 61; Dr. Lohuizen however, believes that the Kshatrapa Jihonika was the nephew and heir of Wima Kadphises. - Scythian period, P. 379.

The hoard in which the 'askos' was found occured in Sirkap stratum II and therefore, must be associated with the later Kushāṇas. But the survival of such objects of value in a hoard does no allow of any definite dating of the individual objects concerned.

2. Marshall, Taxila, P. 61.

3. R.C. Majumdar, The Hist and Culture of the Indian People, The Age of Imperial Unity, (Bombay, 1951) P. 132.

4. Marshall, Taxila, P. 64.

From the evidence of the 'Periplus', it seems that Parthian rule continued in the lower Sind Valley, at least as late as the middle of the first century A.D. The Periplus says, "Before it (Barbaricum, on the principal mouth of Indus) there lies a small island. Behind it is the metropolis of Scythia, Min-nagara; it is subject to Parthian princes who are constantly driving each other out."[1] It is quite evident that after the death of Gondopharnes the Parthian empire rapidly disintegrated, chiefly due to mutual hostility among the subordinate princes, as attested by the Periplus. This state of political weakness paved the way for the Kushan conquest. However, it must be remembered that the success of the Kushan Kings in India did not completely uproot the numerous Śaka principalities under subordinate chiefs. Even when Ptolemy wrote his 'Geography' in the second century A.D. the principal Indo-Scythian possessions, apparently under the sovereign rule of the Kushans, covered large parts of Western India, including the lower Indus region and Kāthiāwār. In fact these Śaka Satraps (Kshatrapa) of western India, owing allegiance to the Kushāns, continued to rule in these regions for a long time, even after the decline of the Kushan imperial power in India.[2]

The Kushans, who came to play a dominant part in Indian politics, were originally a branch of the Yueh-Chi people whose early history is found in several passages in Chinese historical works.[3] The Yueh-Chi originally had their home in the land between the Tun-huang country and K'i-lien or Tien-Shan range in Chinese Turkestan, or according to some authors,[4] in the province of Kan-su. There they were defeated and expelled about 165 B.C., according to most authorities, by a neighbouring tribe called Hiung-nu, who killed the leader of the Yueh- Chi horde and made a drinking vessel out of his

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1. Schoff, Periplus, Para. 38.

2. Their coinage is plentiful and the fact that they maintained the earlier Indo-Greek types must have made them influential in the commerce of the day.

3. J. A. 1908, P. 26; Journal of the Department of Letters (Cal. University), Vol. I, P. 71.

4. H. C. I. People. Imperial Unity, P. 136 (Vol.II).

skull. The widow of the slain chief seems to have guided the tribe in the course of its westward migration. While on the march, a small section of the people went south to settle on the Tebetan frontier and afterwards came to be know as the'Little Yueh-Chi'; while the main body of the tribe, the Ta-yueh-Chi or 'Great Yueh-Chi' eventually came into conflict with the Saï or Sek (Śaka) on the bank of the Jaxartes or Syr Darya, and defeated them. The object of the conflict was the grazing grounds of this area. For a time they settled on the plains of the middle Oxus, but were soon forced to move under the increasing pressure of the Śakas. Eventually, they withstood the Śakas and settled in the country called Ta-hia, usually identified with Bactria. Thus once again Bactria became a nursery of a great power, which was destined to dominate the whole north-western region of India. The Kushāns speedily became masters of the adjacent territories, lying to the south of Hindukush. This initial conquest of the regions, south of the Hindukush, was made, as the Chinese authorities definitely state, by the first Kushān monarch, usually identified with Kujūla Kadphises. The first step in creating an Indian empire was the conquest of the last remaining stronghold of Greek rule in the Kabul valley. The coins[1] show clearly the process by which this region, probably in the last quarter of the first century, passed from Hermaeus, the last ruling member of the line of Eucratides, to his conqueror, the Kushān Kujūla Kadphises. The conquest of India proper, most probably was the work of his successor, usually known as Wima Kadphises, and after him the Kushān empire reached its Zenith in India proper, in the reign of Kanishka. The chronology of this period is one of the most perplexing problems in the whole of Indian history and has long been a subject of lively controversy. It can scarcely be said to have been settled even now.

The later Han Annals (25 A.D.-125 A.D.) tell us that Kujūla Kadphises (K'iou-tsieou-K'io), the founder of the Kushān dynasty,

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1.Rapson, Ancient India, P. 146; C. H. I.,P.584.

attacked and conquered the four other Yueh-Chi chieftains, and made himself king.[1] He then invaded Parthia (Ngan-Si) and became master of (Kao-fo) Kabul and Kipin. He died at an age of more than eighty years and was succeeded by Wema Kadphises (Yen-Kao-tchen), who conquered India proper (T'ien Tchou) and appointed a regent to rule it, which suggests that his capital lay beyond the borders of India proper. It is usually held that it was Wema Kadphises and not his father Kujûla who annexed Taxila and the rest of the Punjab. On the evidence of the silver-scroll inscription of the year 136 of an era, which Marshall thinks to be that of Azes'[2] (from a rather doubtful interpretation of AyasaAzes) it is inferred that Kujûla was succeeded by Wema Kadphises in A.D. 78. But a number of other eminent scholars, regard Kanishka as the founder of the Śaka era and reckon A.D. 78 as the last year of Wema's and the first year of Kanishka's reign. The date of Kanishka's accession to the throne is assumed to be between 78 A.D. and 144 A.D., but it has not been possible to fix a really satisfactory date. The Hou-Han-Shu annals, which cover the period from A.D. 25 to 125, and show an intimate knowledge of affairs in neighbouring countries to the west, include a precise account of the reigns of Kujûla and Wema Kadphises, but strangely enough, do not mention the more famous Kanishka. This has led distinguished scholars such as Sylvain Lévi and Fleet to push back the date of Kanishka to 58 B.C. But since the discovery of the coin finds at Taxila by Marshall, it has virtually been agreed that Kanishka followed the two Kadphises. In a recent article,[3] Dr. Ghirshman has vigorously defended his earlier view that the era of Kanishka commenced in 144 A.D., quoting new archaeological evidence to show that the empire of Vâsudeva I was ravaged by the Sâsânian king Shapur I. But as

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1. Chavannes: Les pays d' Occident d' après le Heou Han Chou, P.45.
2. Marshall, Taxila, P. 69.
3. Ghirshman: 'Le Problème de la chronologie des Kouchan's, Cahiers d' Histoire mondiale, III (1957), P.689-722.

Professor A. L. Basham has shown, Ghirshman has failed to establish either that the Kushān site of Begram was destroyed in the reign of Vasudeva I or that Shahpur was responsible for its destruction. He says in concluding his review of Ghirshman's theories that, "Nevertheless we must concede that Dr. Ghirshman has produced weighty arguments in favour of his chronology (144 A.D.). As the problem stands at the moment, it seems that from the point of view of India the evidence still favours 78 as the date of Kanishka's accession but from central Asia it appears to support 144". [1]

From the Chinese annals we learn that Chinese conquests between A.D. 73-102 under the illustrious general Pan Chao, who led his armies from victory to victory, reached as far as the confines of the Roman empire [2] and so brought about the greatest westward extension ever attained by the power of China. Alarmed at these Chinese victories a Kushān king, presumably Vema Kadphises, boldly determined to check the advance. He sent an envoy to the Chinese emperor, demanding the hand of a Chinese princess, which was considered by the Chinese general Pan-Chao to be an affront to the emperor. This improper mission of the Kushān king never reached its destination, as it was intercepted by Pan-Chao. Consequently, the Kushān king equipped a formidable force of 70,000 cavalry under the command of his viceroy Si or Sie, which he sent across the Tsung-ling range or Tāgdumbāsh Pamir, to attack the Chinese. Pan-Chao devastated the whole country and left the invading host to suffer terribly during their retreat through the mountains with no supplies. The whole Kushān army seems to have been destroyed. The submission of the Kushān king is indicated by the report that during the reign of the emperor Ho-ti(89-105 A.D.), [3] tribute was exacted from the Indians. However,

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1. Prof A. L. Basham, The Succession of the Line of Kanishka, P.87-88, in B.S.O.A.S. 1957; and also B.S.O.A.S. 1953 generally. However, it is worth noting that apart from the archaeological evidence adduced by Ghirshman, a study of the Kushan sculpture of the Mathura school supports a later date, rather than an earlier date. - Codrington, "Ancient India", P. 42-47 (Lond. 1926).
2. Smith, E.H.I. (4th ed. 1924) P.268.
3. Codrington, Ancient India, P. 41.

it should be noted that it is common enough for the Chinese annals to describe trade-missions, as payment of tribute.

Vema Kadphises was succeeded by Kanishka, who alone among the Kushān kings, has left a name cherished by tradition and famous far beyond the confines of India. His name lives in the legends of Tibet, China and Mongolia, and is no less famous among the Buddhists of those lands, than that of Aśoka himself. But apart from his widespread fame, the evidence for his precise chronological position is strangely scanty. However, it appears that he controlled all the western half of Northern India, at least as far as Benares, and his dominions in Central Asia were certainly very extensive.[1] Numerous remains testify to the importance and popularity of Buddhism at this period, and it was clearly during this period that Buddhism began to spread to Central Asia and the Far East.

Kanishka's reign may have lasted for some decades, as the non-Indian sources suggest. Marshall believes that he ruled in India for 23 years, from A.D. 128-131[2] and was succeeded by Vāsishka, Huvishka, Kanishka II, and Vasudeva, although the order of succession is not altogether clear. Ghirshman holds that about the middle of the 3rd century, Vasudeva, the last noteworthy successor of Kanishka was defeated by Shapur I of the new Sāsānian dynasty of Persia, and from then on, the north-west once again came under Persian influence. Marshall, on the evidence of the testimony of Ammianus and an inscription at Persepolis found by Herzfeld, infers, however, that it was Vasudeva II who was finally overthrown by the Sāsānid king Shapur II about the middle of the 4th century (A.D. 356).[3] He says that, "Mention is made of this war by the Roman writer Ammianus, who tells us that between A.D.350 and 358 Shahpur II was engaged on his far eastern frontier, fighting the Cusani and Chionitae. The former are evidently the Kushāns ... that Shapur II crossed the Hindukush

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1. Basham, The wonder that was India, P. 60-61 (Lond. 1954). Kushān pottery types occur in the sites of the middle Oxus.
2. Marshall, Taxila, Vol. I, P.71.
3. Marshall, Taxila, P.73.

and attacked the heart of the Kushān realm to the south of it, is clear from an inscription found by Herzfeld at Persepolis, which shows that in A.D. 356 Shapur had made Kabul his base of operations against Gandhāra and the Punjāb" [1] From the relative abundance of Vasudeva's coins at the Buddhist sites of Taxila, [2] as well as at other sites in the north-west and in India proper, it seems plain that Buddhism was as flourishing under Vasudeva as it had been under Kanishka. However, it may be, the eventual result of Sasanian domination in north-west India, is indicated by an influx of Sasanian copper money which persisted for some time. It does appear that the period immediately followed by Shapur's conquests was marked by the control of local currency in the Punjab by Persian traders.

It seems quite probable from the Annals of the Wei dynasty, [3] which covers the period from A.D. 386-556, that Taxila was again overrun by Kushans from Bactria under their chief Kidara [4] Kushans of whose political history, next to nothing is known. They seem to have held north-west India upto the middle of the 5th century A.D., until they were in turn overthrown, probably by the White Huns about 460 A.D.

The White Huns or Ephthalites, as they are commonly known [5] are usually made responsible for the wide-spread destruction of the monuments in Gandhāra and Punjab, as well as the extinction of the later house of the Kushāns. The approximate date of this supposed White Hun invasion, [6] i.e., middle of the 5th century, is derived

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1. Ibid. P.73. However, the Kabul valley is more easily accessible from Iran by the low-level Kandahār route, the route that Alexander chose.

2. Marshall, Taxila, P. 71. 831 coins of Vasudeva were found in the Taxila sites, through 785 of these actually came from minor Buddhist sites, outside the cities.

3. M. F. C. Martin, Coins of Kidāra and the Little Kushāns in J.R.A.S.B. Letters, Vol. III (1937) NO.2. P. 24-5.

4. Marshall, Taxila, P.74.

5. The various names by which they were known in the antiquity are discussed by Cunningham in N.C.1894, Pt.III, P.243; A. Stein, 'White Huns & Kindred Tribes in Ind.Ant.1905; J.J.Modi, 'The early hist. of the Huns' in J.B.B.A.S. 1915-17, P.567.

6. It appears from the Bhitari Stone Pillar inscriptions of Skandagupta

from the Chinese pilgrim Sung-Yun, who writing in 520 A.D. says that two generations had elapsed since Gandhāra had been devastated by the Ephthalites (Ye-tha).[1] Marshall seeks evidence for the corroboration of this statement in certain finds made in some of the burnt-out monasteries of Taxila, underlying a number of silver Ephthalite coins of the period preceeding Toramana (who is known to have been ruling in Malwa in A.D. 500) but not including any coins of Toramana himself or of his son, Mihirgula.[2] Yuan Chwang writing about the middle of the 7th century, however attributes the destruction of the Buddhist monasteries to Mihirgula, the 'Attila of India', around whose name numerous legends of ruthless savagery and persecution had already gathered. The coins which are identified by Marshall as being Ephthalite origin, bear several names in later Brāhmi, variously read as 'Jabula', 'Jaruska' 'Jatuṭha' and 'Jaruba'. He thinks that these various names are mere Brāhmī variants of the name of the Zabuli tribe of the white Huns.[3] At Taxila, Marshall makes the white Huns the authors of the general destruction of the monasteries and stupas and stresses the occurance of the skeletons of the slaughtered lying amid the debris. Apparently Taxila never recovered from this shock. When Yuan Chwang visited it in 630 A.D. he found most of its monasteries in a ruined and desolate condition, and the territory itself subject to Kashmir. The local leaders were occupied in fighting among themselves for power. He also, records that at some earlier time Taxila had been a dependency of Kāpiśa, but he does not tell us what dynasty was then ruling at Kāpiśa. When the powerful kingdom of Kashmir declined, Taxila again appears to have changed her master. This time she was probably absorbed into the kingdoms of the Turki Shahis of Kabul, and still later into the kingdoms of the

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that actually there were two waves of white Hun invasions of India, once during Kumara Gupta's reign and second time during Skanda Gupta's time. Corp. Ins. Ind. Vol.III, P.53; Dines Chandra Sircar, "Select inscriptions bearing on Indian Hist. & Civilisation, Vol. I, P.315 P.N.I. (University of Cal. 1942).

1 & 2. Marshall, Taxila, P. 76.

3. Marshall, op cit, P.77.

Hindu Shahis, who succeeded them. The Turki Shahis were of Western Shahis were of Western Turk origin, though they are said to have claimed descent from Kanishka.[1] They had their first capital at Kabul but after their defeat by the Arab Ya'kūb Lāis in 870 A.D., they transferred their capital to Ohind (Udabhāṇḍapura) at the main crossing of the Indus. It was at Ohind that they were supplanted, a few years later, by the Hindu Shahis. It is rather interesting that the Hindu Shahis who although, are said never to have been in actual possession of Kabul, still continued to be known as the Shahis of Kabul. The last of their line, Trilochanapāla was finally defeated by Mahmud of Ghazni in 1013 A.D.

Finally, it must be confessed that the geography of the coin finds on which this complicated historical analysis is based is far from clear. As an examination of the Bhir Mound and Sirkap shows, there is little real archaeological evidence available. The various theories of dynastic succession over such a wide area must, therefore remain inconclusive. The source of alleged coin finds from the Kandahār, requires re-examination. Modern enquiry in these regions does not encourage confidence in the story as it is told from the coins, supposed to have been found there.

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1. Their coins are astonishingly plentiful at Bamian.

CHAPTER V

(Analysis of finds)

Pottery

Of the variety of objects unearthed from a stratified site by excavation, the pottery is held to be the most reliable index to chronology. By virtue of its being inexpensive and in daily use, pottery-types tend to change and do not normally persist for a long time, unlike other objects of a more durable nature, such as metal. Consequently, a careful study of the stratified pottery is of great assistance in ascertaining the chronology of the site. It also throws an interesting light upon the taste and everyday conditions of life of the period concerned.

The enormous quantity of pottery unearthed from Taxila has been studied by Marshall and on the basis of shape, fabric, design and the technique of manufacture, he has classified the finds under thirty eight heads.[1] It is clear that vast quantities of potsherds were examined by him and that his conclusions are based upon exhaustive work. But it should be remembered that only a fraction of the total has been published, while the bulk was reburied in pits dug in the Museum grounds. Futther small-scale excavations are therefore desirable in order to test Marshall's views.

The entire range of pottery at Taxila, with few exceptions,[2] is wheel-turned. The normal ingradients are sand, lime, grit and wheat-husks. The nature of the clay of the pot, in general, is determined by the size of the vessel-to be fashioned. As usual, the coarser kinds of clay, mixed with shale, broken sherds or brick and sand are used for large and thick-walled vessels, while finely levigated clay is used for the smaller ones. A high percentage of sand and 'bajri' or 'makkar' were mixed in certain of the wares in order to increase

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1. Marshall, Taxila, Ch. 23, Vol. II.
2. Type 76 of Ghosh and a few freaks are hand-made. - Anc. Ind. Bulletin No.4.

their porosity, which helped to keep the contents cooler by the consequent increased evaporation. As a rule, the pots were fired in oxidising conditions, and vary from a dull-red or greyish red to pink or light red in colour. The variation in colour is fairly consistent, which suggests that the kiln conditions were well under control.

At the outset it would be pertinent to note a few of Marshall's opening remarks about the indigenous wares of Taxila, which although hold good, in general, provide plenty of exceptions, as we shall see from the following analysis. He says, "Indian pottery of the historic period - that is, from the 6th cent. B.C. onwards - is of little artistic merit. Its purpose was essentially utilitarian, and on the rare occasions, when the Indian potter endeavoured to make his handiwork into a thing of beauty, the results were not of a very high order ... The best of the coloured designs are certainly not upto the standard of the best prehistoric ones; the shapes - apart from those inspired by Hellenistic and Parthian prototypes - show no improvement; and the finest kinds of clay are not so well levigated." He continues, "In the shapes of the indigenous vessels there is singularly little evidence of inventiveness. Spouts, and standard bases are rare, and apart from the small embryonic lugs, found on cooking pots, etc. handles would probably not have been used at all, but for the example set by the Greek potter.[1]" The inaccuracy of this criticism is, however, manifest, if we take into account the 'Northern Black Polished Wares', Local Red and Black Painted Wares, and various other indigenous vessels of distinctive shape and character, all of which are accurately thrown and finely finished.

Before actually taking up the analysis of the finds, it will be necessary to note certain points of general interest. The overlap between the upper strata of the Bhir Mound and the lower strata of Sirkap is immediately apparent, when a comparison of the objects

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1. Marshall, Taxila, Vol. II, P. ~~402-5~~. 398-9.

found is made. This is particularly, so in the case of the socalled 'Greek Black Ware, 'Embossed and Stamped Wares', local Red and Black Painted Wares, pear-shaped vases, terracotta figurines and gadrooned and collared beads, as well as the local Taxila coins. There are, also, certain stone objects, iron, copper and Bronze objects and some jewellery which point to the same conclusion. It will be apparent from the stratigraphical table,[1] given by Marshall that there is a continuity throughout strata II and I of the Bhir Mound to strata VII, VI and V of Sirkap. The most conspicuous objects are those which have been called 'Hellenistic' by Marshall. Whatever date may be assigned to them, it is clear that there is no break in the continuity of those strata in the two sites. Therefore, Marshall's general conclusion would seem to be hardly justifiable. As will be seen when dealing with other group of objects, the use of the vague term 'Hellenistic' has led to much confusion.

On the other hand, when one compares these objects with those found in strata IV and III of the Bhir Mound, the difference is manifest. There is not only a singular dearth of materials, but also a discernible absence of the socalled 'Hellenistic' objects, except those which Marshall treats as 'strays' in stratum III, and a few others. Among Marshall's socalled Hellenistic pots most of the unillustrated examples, and one he illustrates, are now known to be of the famous 'N. B. P.' ware. It is clear that the technique of manifacture, fabric, form and decoration of this ware are distinct from any known Hellenistic Black Pottery. There is, therefore, good reason to believe that strata I and II of the Bhir Mound are distinct from strata IV and III. Unfortunately Marshall has not recognized this significant change, probably because he was prejudiced by the find of two coins of Alexander the Great in the 'large hoard', which he has endeavoured to keep

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1. Marshall, Taxila, Vol. II, P. 402-3.

in stratum III,[1] with questionable justification, for in earlier publications he placed it in the second stratum.[2]

However, he does distinguish a definite break between strata III and IV.[3] A just view of the dating of the two phases (i.e., IV, III and II, I) of the Bhir Mound can only be arrived at, if all the associated objects are taken into account. As Louis Le Breton puts it, a study "should cover all the avaiable local documentation, however, uneven its quality, so as to include as much material as possible in a cultural sequence - albeit approximate and provisional - where sub-divisions will be brought down to the smallest scope, convenient for comparison and compatible with facts."[4] The almost total absence of the so-called 'Hellenistic' objects in stratum IV and to a lesser degree in stratum III, and their presence and continuity from stratum II, through I into the bottom strata of Sirkap must be significant. It would seem t that the later phase of the Bhir Mound (i.e. strata II and I) can not be dated earlier than the period when the Bactrian Greeks began to exert their influence in Taxila, after the end of the Mauryan rule. This is further supported by the fact that in the later phase the local Taxila coins appear in large numbers. So the earlier phase of the Bhir Mound is likely to prove to be Mauryan or possibly pre-Mauryan, with a possible break between the IVth and the IIIrd strata. It is in this phase that the local bar coins and the early 'round and concave' coins are mostly found. However, the term pre-Mauryan is still almost meaningless in Indian archaeology. It is apparent that Marshall's use of the term 'Greek' as well as his use of 'hellenistic' has led to a considerable confusion.

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1. Marshall, Taxila, P. 105-6 and 110.
2. Ibid, A.R.A.S.I. 1924-25 P. 47-48.
3. Marshall, Taxila, P. 87.
4. Louis Le Breton, 'The early periods at Susa, Mesopotamian relations in 'Iraq', Vol. XIX, Part 2, 1957, P. 80.

One other group of objects must here be mentioned. The finely carved ring-stones,[1] are likely to prove important as stratified objects. These interesting objects are probably gold-smith's forms for the manufacture of gold-leaf, lac-filled ear-discs. They have occured at a number of sites and are usually held to be Mauryan. They have recently been found at Mr. Misra's Patna excavations, where they are well stratified. His publication must be awaited before any definite date can be given to them. At Taxila three of these objects occur in strata II and III of the Bhir Mound and one which Marshall rightly holds to be a survival, in Sirkap stratum II.

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1. Marshall, Taxila, P. 303-4; PL. 147, Nos. 129-132.

So-called Greek Black Ware.

Most of the specimens of this distinctive ware came from the Bhir Mound and are dated by Marshall as early as the 4th century B.C.[1] Two fragments (unillustrated) came from Sirkap, from a depth of 18' and 17' or respectively, or, in other words, from the VIth stratum;[2] and another from Mathial near the surface. In describing these wares Marshall says, "In all these fragments the paste is grey, finely levigated in the smaller vessels, coarser and mixed with a large proportion of sand in the larger. In all cases, it is covered with a fine slip, grey in some specimens, burnt red in others; and the slip again is covered with black paint and in most cases they are varnished, <u>The ware is pure Greek.</u> Whether it was imported or made at Taxila is uncertain. Fragments of this ware have been found as far afield as Sārnāth near Benares. The black paint seems to have been composed of oxide of iron and manganese. The colourless varnish subsequently applied was made of salt-petre and soda."[3] This analysis of Marshall is not acceptable. His use of 'paint' and 'varnish' for this ware was challenged by Professor Codrington[4] with reference to the excavations at Bhita. The ware is clearly dressed before firing and the result may be correctly described as a glaze. Recent, but still unpublished spectographic analysis[5] has proved that it contains traces of lead, an important and significant fact which distinguishes it from any Greek or other western Greek ware of this kind. In drawing attention to the technical inaccuracy of Marshall's description of the black ware from Bhita, Codrington pointed that the terms 'varnished','painted' and'polished' were unsatisfactory. The ware is glazed and since

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1. Marshall, Taxila, P. 432.
2. For average depth of Marshall's strata at the Bhir Mound with their relative chronology see 'Taxila', P. 87.
3. Ibid, P. 432.
4. Codrington, Man, 1929, No. 101 P. 136-7.
5. Dr. F. R. Allchin and R. D. G. Faudree's analysis.

many fragments show droplets and even finger-prints, it is clearly a dressed ware,[1] that is to say, the body has been covered by a dressing which was sufficently moist and viscid to retain finger impressions. Wheeler's term 'Northern Black Polished ware' is, also, unsatisfactory. Fragments of this ware have been found in the south at Nāsik and at sites on the Godāvary, as well as at Brāhmagiri, though the ware undoubtedly is dominant in the great Ganges sites, such as Rājghat, Kosambi and Rājgir.[2] While a comparative study of the finds from the Ganges cities makes it plain that the ware exists in other colours than black. For instance, black is found on red and pink, and, also, greys and browns. All varieties employ the same range of forms, the tray-bowl dominating. Silver lustre and even rare and very remarkable example of gold lustre, also occur. The normal black varieties, which is by far the commonest, usually show a grey body, though buff or reddish-buff bodies, also, occur. Marshall says that "a fine slip, grey in some specimens, burnt red in others" is used. This would apparently be true, but a more detailed analysis of N. B. P. as a whole is obviously needed. The clay is always finely levigated and the coarse, "Doulton" like surface of some examples is clearly due to fault in firing. It is not certain whether we have here to do with a biscuit ware, but the possibility of this should be borne in mind. In any case the kiln used was smoke-free and the firing was obviously well under control.

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1. The term 'dressed-ware' was used by Codrington in teaching in India in 1932. It has been adopted by the Indian Archaeological Department.

2. For the representative types in the N. B. P. Wares from various sites see, Fig. 2, Ancient India Bulletin No.9, P. 120 (1953) and 'Ancient India, Bulletin, No. 1, Fig. 10-11 P. 55-57.

The use of lead compounds for glazing pottery appears to be ancient. This technique has the advantage of providing a glaze, fusing at a relatively low temperature which can be used in conjunction with most types of potter's clay. It, also, can easily be stained with metallic-oxide, especially with copper, giving a rich blue-green colour.

However, the origin of lead glaze is not clear, although it is often attributed to Egypt. Burton says, "The fact that glazes containing lead-oxide would adhere to ordinary pottery when alkaline glazes would not, was discovered at a very early period, for lead-glaze were extensively used in Egypt and the nearer East in Ptolemic times and it is significant that though the Romans made singularly little use of glaze of any kind, the pottery that succeeded theirs, either in western Europe or in the Byzantine Empire, was generally covered with glazes rich in lead." [1] Petrie says, " ... lead is essential with iron for the Ptolemic apple-green." [2] R. L. Hobson observes, "Lead-glaze has been freely used on late Roman pottery." [3] O. M. Dalton states, "Pottery with a lead-glaze is thought to have been first made in the first century B.C. when it appears on various sites at Alexandria, Tarsus in Asia Minor and the Allier district of Gaul." [4] H. B. Walters says, "In the first century B.C. a new development may be observed in the introduction of a metallic, probably leaden, glaze used for coating clay objects in place of a slip or alkaline glaze." [5] H. S. Harrison comments that "The first really satisfactory surface glass for use in pottery was what is called a lead

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1. Ency. Brit. (3rd ed.) V, Article 'Ceramics', 706.
2. F. Petrie, Anc. Egypt, (1923, Review) P. 23.
3. Hobson, R. L. Guide to the Islamic Pottery of the Near East, Br. Museum (1932) P. XV.
4. Dalton, O. M. Byzantine Art and Archaeology, (1911) 608.
5. Walters, H. B., Cat. of Roman Pottery in the B. M. (1908) P. XI.

glaze, known in Mesopotamia at any rate as early as 600 B.C. [1]

15 specimens of pottery and faience from Egypt, containing lead as a glazing component, were analysed by Lucas. One was a ram-headed bird amulet of XXIInd Dynasty date; another, a small statuette of a dwarf Ptah-Sker of the period XXIInd to XXVth Dynasties; and third, an inscribed vase of the Saite period. Two were green and one bluish green. Another piece having a small percentage of lead was dated to the 3rd century B.C. [2]

Whatever may be its origin, the technique appears to have been extensively used in the Near East during the first century B.C. [3] These coloured lead-glazed wares were often produced in large numbers with relief decoration, fashioned from a mould after the manner of the Arretine. Some of the known Centres of manufacture of such lead-glaze wares are Tarsus, Notion near Ephesus and Tschandarlè near Pergamum, all in Asia Minor. These wares were manufactured from well-levigated buff clay, burnt to a biscuit condition before the application of the glaze. [4] It was then subjected to a second firing. The manufacture of lead-glaze pottery must have proved to be expensive in relation to the Roman Red-gloss Pottery [5] for it failed to achieve the wide distribution of the latter. It also, seems likely that the rapid growth of the glass industry, which flourished in Palestine, Syria and other regions, at the same time and which was not only less laborious,

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1. Harrison, H. S. Pots and Pans P. 52-3.
2. A. Lucas, 'Glazed wares in Egypt, India and Mesopotamia' in the Journal of the Egyptian Archaeology, Vol.22 (1930) P.149-50. The test conducted by him was of a simple kind with Potassium iodide, with which soluble lead compounds give a canary-yellow precipitate of lead iodide, the glaze being first treated with a drop of hydrofluoric acid.
3. R. J. Charleston, Roman Pottery, P. 24.
4. Ibid. P. 24.
5. Charleston uses this easily intelligible term in his classification.

but provided an inexpensive and attractive product, eventually accelerated the decline of lead-glaze wares.[1]

Both the Roman Red-gloss pottery and the lead-glaze wares adopt metal-work forms and often the moulded decoration is similar to the repoussé work on metal vessels. Floral scrolls and flower wreath dominate the decorative motives of these moulded vessels, but representative figure-subjects are, also, by no means rare. Finds from Tarsus indicate that wares of this kind were being manufactured there at least during the later half of the first century B.C.[2] The lead-glaze appears to have spread in to Italy early, being used on lamps and figurines, and also on cups, vases and other vessels with relief decorations.[3] It was introduced into France in the middle of the first century A.D, the Allier district being the main centre of manufacture.

Historically it is clear that the family of alkaline glazes are the oldest and most universally used type of glaze. The introduction of lead-glaze in the history of pottery manufacture marks a striking departure from the old style. It should be noted that lead-glazes in many instances show a tendency to disintegrate, as ancient glass does and consequently become soft and flaky. They loose their original colours and become opaque white or silvery or iridescent, as several specimens from Tarsus show.

Moulded decoration is almost invariable in these wares as is clearly evident from the Tarsus examples. Many of the designs have luxurious, naturalistic plant ornamentation in the taste of the Augustan age; but they also often have stylized motives. A

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1. T. Frank, An Economic Survey of Ancient Rome, IV, P. 189-190; V, P. 194 ff.
2. Excavations at Gözlu Kule, Tarsus, Ed. Hetty Goldman, Vol. I, Text, P. 196. PL. 151-154.
3. Roman Pottery, P. 26.

few Tarsus specimens have figural decoration such as galloping horsemen, the Erotes [1] and dancing Bacchic figures [2] in the Arretine manner.

The shape and decoration of these moulded wares closely resemble metal prototypes, indicating that they were accepted as a cheap substitute for silver as the Arretine wares of Italy were. This is intelligible, for silver vessels were in common use at the tables of wealthy Romans. Metal prototypes are evident from many of the shapes of classical pottery, which undeniably proves a prolonged and continuous tradition of imitation. Imitation is far more conspicuous in the moulded wares, which sought to copy the chasing and repoussé work of the gold and silversmith. The process of manufacture of these moulded glazed wares has been traced, through its various stages by Frances Follin Jones [3] from the finds at Tarsus, which include the actual moulds [4] used. She observes that the clay was worked into the mould by hand to be certain that it was pushed into all the recesses of the design, not unlike the process of turning out Megarian bowls. "To this thin mask", he adds, "more clay was added to make the main body of the walls. The mould was then placed on the potters wheel, and the inner surface, which shows the wheel marks was smoothered and the rim of the vase built up. There is often a distinct cleavage between the part pushed and patted into mould and the part smoothered under rotation . . . After the vase had dried and shrunk from the walls of the mould, it was removed and given extra parts, such as handles and any other necessary touches. The vase was then fired. Firing midway in manufacture was in itself a departure from the customary ancient practice of a single firing which followed the glazing." [5]

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1. Tarsus, No. 664.
2. Ibid, Nos. 633; P. 193.
3. op cit, P. 193.
4. Ibid, Nos. 665, 640.
5. op cit, P. 193-4.

Marshall's Nos. 226 a, b (Pls. I & II) are two fragments of a large bowl and came from the Bhir Mound stratum I. One is decorated with a conventional fluted leaf or gadrooned pattern with a bead and reel rim (226 a) and the other (226 b) is the lower half of one of the handles of the same pot. It is composed of three stems in one and is decorated at the base with a head of Heracles or perhaps, of Alexander the Great in the guise of Heracles, wearing the lions skin.[1] The clay is blackish grey, mixed freely with sand; the slip is brownish red and is covered by grey-black dressing which Marshall describes as 'without varnish'.

His No. 227 is from the Bhir Mound stratum II and he considers it to be a fragment from the neck of the same vase. The paste and technique are certainly in all respects similar.[2] It is decorated with a stamped rosette in relief.

Marshall's No. 228 (PL. III) came from the Bhir Mound stratum IV and is described by him as the fragment of a bowl with flared mouth, decorated with conventionalized 'lotus pattern'in high relief. He says that it is covered with thin black paste, well burnt as well as being painted and highly varnished. The gadrooning is c concave on the inner side. He treats this as a 'stray' from later strata, because it does not fit in with his classification. This is actually a N. B. P. specimen, with certain unique features.

Gadrooning of this kind is found on pots from various sites, though this N. B. P. fragment is unique. Its existence is of the greatest importance, for all these gadrooned and moulded forms must be attributed to western influence. As has been pointed out, two fragments of N. B. P. were found in the sixth stratum of Sirkap and another fragment at Mãthiál.

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1. Marshall, Taxila, P. 433.
2. Ibid, P. 433.

Except No. 226 a, b, and 227 of Marshall's series,[1] which are in fact fragments of the same vessel, and are not N. B. P., all other fragments of N. B. P., came from depths of 15', 11'6" and 7'[2] on the Bhir Mound or in other words mostly from Marshall's strata IV and III. But Nos. 226 a, b, both came from stratum I and No. 227 from stratum II. These fragments are quite distinct from the rest of the series illustrated by Marshall as 'Black Greek Ware', though he fails to make the distinction. Incidentally, it should be noted that he has illustrated only four specimens of his series. The major part of these important finds are not illustrated, which is most unfortunate. However, about twentyone fragments of N. B. P. were found in all at Taxila.[3] Classifying all these pieces under 'Greek Black ware', Marshall in fact defines their date as Post-Achaemenid, 4th to 1st century B.C.[4] The lower dating of the N. B. P. Ware is still debatable. It is however, worth mentioning here that in Mr. Patel's recent excavation (still unpublished) of the Ajivikarama at Rājgir no N. B. P. ware was found in situ. Yet the site is considered to be contemporary

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1. His class XXXII; Pl. 130.
2. Ibid, P. 433.
3. "There two fragments only were found in the second city (Sirkap) . . . one sherd at a depth of 18' below surface and therefore presumably of early date, the other sherd in a more doubtful context in a shallower [Site on the Hathial Ridge. The remaining sherds from] Taxila, about eighteen in number, all came from the preceeding city on the Bhir Mound. Here it is noteworthy that the larger number came from between 7 feet and 13 feet below the surface, only two fragments being higher than a depth of 7 feet (one at 4 feet 10 inches & one at 6 feet 2 inches.)"

- Krishna Deva and R. E. M. Wheeler in Ancient India, (Bulletin) No. 1. P. 55 and 56.

4. Marshall, Taxila, P. 432.

with the Buddha. N. B. P. was, however, plentiful on the surface.

Marshall's treatment of this ware as "Greek Black Ware" does not tally with the fact that the bulk of these unillustrated fragments came from considerably, below the two coin-Hoards. They are definitely of "pre-Greek" origin, using the term in Marshall's sense. His terminology, therefore, does not fit his stratification.

Another fact, which is equally important in this connection, is that an examination of the distribution of N. B. P. shows that it undoubtedly originated in the cities of the Central Ganges plain.[1] Here its distribution is universal and plentiful. It was, also, popular in Rajputana, western, central and eastern India, where it occurs in smaller quantities. Its unquestionable popularity is attested by the fact that occasionally broken pots are found rivetted with copper pins to prolong their use. This was only done in places, far removed from the centre of manufacture, where the ware was especially valued.[2] The map published by Y. D. Sharma[3] shows that its distribution extends from Taxila in the north to as far south as Amaravati in the Krishna district. Eastward, it occurs at Tamluk in Midnapur district, at Bangarh in Dinajpur district and at Gaur in Malda district. In the west it has been obtained from Nāsik. It has, also occured, as surface finds at Brāhmagiri and at a number of sites on the lower Godāvari. But as has been already mentioned, this ware only occurs abundantly in situ, in the sites of the middle Ganges basin.

However, the point which makes the study of our N. B. P. fragments from Taxila, as elsewhere in the Ganges plain, most interesting is the trace of lead in the glaze. Lead-glaze of any

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1. See notes by Krishna Deva and M. E. M. W. in Anc. Ind. No. 1. P. 55-58 and also the map on P. 57 showing its distribution.
2. A. Ind. No. 9. P. 119.
3. Ibid.

kind, prior to the first century B.C. is clearly very rare but the occurrence of a trace of lead in this ware, whose origin must go back at least to the Mauryan period, is not unique. The Black-Polished Ware from the Urn-burials in the Wynaad, in south India, which is known to overlap the N. B. P. also, shows a trace of lead, as is shown by Dr. H. J. Plenderleith's chemical analysis.[1] Although the N. B. P. Ware itself is of a finer kind than anything found in the south and the N. B. P. pots are wheel-thrown, whereas the bases of the Cairn and Urn pots are usually handeshaped, the very existence of a trace of lead as a glazing ingradient in both wares is of the greatest significance.

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1. Dr. H. J. Plenderleith, in 'Man' Oct. 1930, No. 138; see also Codrington in 'Man' Oct. 1930, No. 139 on the same subject.

EMBOSSED & STAMPED WARES

(Nos.234-55, Pls.IV, V)

Of Marshall's Hellenistic series of embossed and stamped wares nos. 234, 235 and 236 come from the Bhir Mound stratum III; while others of his illustrated specimens came from :

No. 237 = Bhir Mound I
No. 238 = Bhir Mound II
No. 239 = Sirkap V
No. 240 = Sirkap VI or V

Comparable specimens of this class of pottery from Mr. Ghosh's excavations at Sirkap also, consistently show a heavy concentration of this ware in his Phase I and II, or in other words, the bottom two strata of Sirkap, with the virtual exclusion of his top two phases.[1] Therefore, these Hellenistic stamped and embossed wares, clearly, overlap into the lower strata of Sirkap.

In describing these wares, Marshall notes[2] that they appear to be second cousin to the well-known Megarian, Arretine and Campanian Wares, which owe their origin to the common Hellenistic parentage and were extensively imitated in Asia Minor, Africa, Gaul, Belgium, Germany, England etc. An important centre of their manufacture was Pargamum. This is certainly true of the Arretine types and also, of the rouletted wares, but a distinction must be drawn between these and the so-called Megarian bowls. The dating of the Arretine and rouletted types, imported as well as reproduced in India, is clear from Casal's excavation and Wheeler's account

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1. Anc. Ind. No. 4, Fig. 16-18, P. 69-71.
2. Marshall, Taxila, P. 434. F.N.
3. J. M. Casal, 'Fouilles de Virampatnam-Arikamedu (Paris Imprimerie Nationale 1949) Excavation was done in 1947-8.

of Arikamedu, [1] a Roman trading station on the east coast of India.

Marshall prefers to include our embossed and stamped wares with the other widely known relief wares of Hellenistic pertentage, as we have noticed above. But it is worth remembering that although our Taxila specimens admittedly bear certain decorative characteristics common to all such wares, they show certain differences in the technique of manufacture as well as persistence for a greater length of time, as will be pointed out.

In order to avoid confusion, it is convenient at this point to define pricisely the extent of the "Hellenistic" period and a few notable characteristics of the wares concerned. It is generally held that the beginning of the period roughly corresponds with the death of Alexander the Great (323 B.C.) and ends with the gradual subjection of Greece itself and the kingdoms which emerged from the disintegration of Alexander's empire, to Rome i.e. roughly the first century B.C. This period is marked by the diffusion of Hellenism throughout the whole of the eastern Mediterranean world. Alexander's conquests carried Greek civilization into Asia-Minor, Syria and Egypt. But his successors were only able to establish Hellenism in certain parts of this wide area. Hitherto, it had scarcely extended beyond the border of the Greek colonies, fringing the sea-coast. The inevitable outcome of this unprecedented expansion of the Greek world was the relegation of Athens to insignificance and the elevation of Pergamum, Antioch and Alexandria to political, economic and intellectual importance. In these centuries, close intercourse between the Greek-speaking countries led to the development of a common style of pottery

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1. Wheeler, Anc. Ind. No. 2. P. 17-124.

manufacture, which although manifesting regional differences of a secondary nature, was essentially homogeneous in character.[1] We may thus treat Hellenistic pottery as a distinct class by itself; the term has real meaning, though the wares, themselves have not been studied satisfactorily and their chronology is still obscure ~~sufficently~~.

One notable feature in the later development of the decorative designs of this pottery, which distinguishes it from earlier wares, is the virtual abandonment of scenes with human figures (except the Eros figure). The repertory of the ornament now comprised mainly leaf and floral elements with animal and geometrical designs occupying a subordinate position. Of these the most popular design, which, indeed, characterises the Hellenistic style, is branches of foliage, garlands of ivy, vine-brnches with pendant grapes and tendrils and rosette-palmette combinations.[2]

It is only in the Hellenistic period that moulded relief pottery became an article of common use. Of this moulded ware the most prevalent class, which appeared early, consists of a type of moulded bowl, covered with a black to red-brown or red glaze, either matt or with a slight lustre. This ware is commonly known as Megarian. Bowls are its dominant shape. They bear a varied decoration, making extensive use of vegetable motives, palmettes, rosettes, garlands etc. The ~~deco~~ration, also includes animal motives human figures, and images of deities. Also included is a particularly interesting group of vases, decorated with scenes from the Epic poetry or Tragedy.[3] The technique of the manufacture of this ware is described in details by Courby.[4] Soft clay was

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1. Charles Dugas, Greek Pottery, (london, 1926) P. 124, It must be confessed however that more work is urgently needed in this field.
2. Dugas, op cit, Pl 125.
3. Ibid, P. P. 130-31.
4. F. Courby, Les Vases Grecs a Reliefs (paris 1922) P. 327 and 370.

pressed into the bowl-shaped moulds and then centred on the wheel and spun, so that the interior of the bowl and its rim were wheel-run, while its lower outer surface is moulded. The negative impressions in the mould itself were produced either by shaping the mould on another vessel of metal or terracotta, or more commonly by pressing into the still soft clay stamps bearing the individual figures or motive which make up the design.[1] Thompson in 'Hesperia'[2] illustrates one such rosette-stamp from the Agora Collection, very similar to some of the medallions on our specimens from Taxila.

Small details were impressed on the mould by means of small, hollow punches. Tendrils, vine scrolls, and such complicated designs as the guilloche were also incised free-hand in the mould with modelling tools. A few specimens from the Athenian Agora, illustrated by Thomson,[3] decorated with tendrils and grape-vines, comparable to Marshall's Nos. 234, 235 and 237 (Pls. IV & V), are covered with a rich, deep black glaze. Indeed, in some cases the artists were remarkably successful in attaining the metallic effect that they were obviously seeking.[4] Thompson is inclined to place the introduction of Megarian wares at Athens to the first quarter of the 3rd century B.C. Courby[5] places it at the beginning of the 3rd century B.C., and says that it lasted until the beginning of the first century B.C. At Tarsus, Frances Follin Jones[6] dates his Megarian bowl as Thompson does. For parallels of our moulded vine and ivy scroll designs, Marshall's Nos. 234, and 237 (Pls. IV & V) may be compared with the Megarian bowls from Tarsus Nos. 147, 141 and 155.[7]

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1. 'Hesperia', Journal of the American school of classical studies at Athens, Vol. III, No. 4, (1934) P. 452.
2. op cit, Fig. 12c, SS. 88 P. 453.
3. Homer, A. Thompson, Hesperia etc. Nos. A.74, P. 328 and c 16 and c 17 P. 351. The use of barbotine modelling on the mould is also found.
4. Ibid, P. 457.
5. op cit. P. 333, 360 ff.
6. Tarsus, P. 165.
7. Ibid, Pl. 128, 129.

It is advisable to note certain of Charleston's observations at length.[1] In skillfully summerizing the main features of this distinctive ware, he says, "Ever since at least the end of the 3rd century B.C., the Hellenized countries of the Eastern Mediterranean and the Aegean had been familiar with the moulded bowls. By a process which is instructive, when we consider the organization of the later pottery-industry in Roman times, the manufacture of these moulded bowls appears to have spread - after being popularized in one or two great centres such as Alexandria - virtually all over the Hellenized world. Thus, moulds for making them have been found at Antioch and at Delos, and it is virtually certain that they were also made in such scattered localities as Olbia or Panticapaeum in south Russia, at Sparta in the Peloponnese, in Syria and Alexandria. Fragments are found on almost all Hellenistic sites and the probability is that they were also manufactured in a great many local potteries." He then says, "The Megarian bowls although displaying a great variety in the qualities of clay and the disposition of the ornaments used, have certain characteristics, in common which are relevant to their study as the fore-runners of Roman relief decorated pottery. They were made by pressing clay into a mould which had itself been decorated by means of separate stamps and occasionally of rouletted designs such as an ovolo border. Sometimes the ornamentation of the base of a bowl included the name of the potter, stamped in relief. When shaped, the bowls were fired, either in a reducing atmosphere to produce the black surface which, in early phases of Hellenistic pottery seems to have represented the most acceptable approximation to metal work, or in an oxidizing atmosphere to produce red, a colour which after tentative or perhaps accidental origins, finally triumphed over black in the course of the second and first century B.C. The

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1. Roman Pottery, P. 9-10.

ornamentation of these bowls, which commonly have a calyx of gadrooned or of 'leaf-founds rising from the base, is clearly derived from metal work." It is evident from the above account that red-gloss pottery, which had replaced black and the use of impressed moulds, was widely spread in the Eastern Mediterranean at least as early as the second century B.C. It has, indeed been correctly suggested by the same author [1] that the famous Arretine Wares owed their origin to these Megarian techniques. Incidentally, it is very interesting to note that the Arretine enjoyed a somewhat 'mashroom-growth' and likewise faded away very quickly. Almost everywhere, it was superseded by local wares, distinctly cruder and of less significance artistically. The manufacture of the red-Arretine scarcely extended beyond the period between 30 B.C. to A.D. 30, but the debased wares of the type continued in the provinces for sometime.

Marshall assigns the embossed and stamped wares of Taxila to the same date as that of his 'Greek Black Ware',[2] which as we have already seen is certainly not true. These wares, although they occor in strata III, II and I of the Bhir Mound, are heavily concentrated in the lowest tqo strata of Sirkap. Whereas Marshall's so-called Greek Black wares do not occur at Sirkap at all and the N. B. P. is concentrated in the lower strata of the Bhir Mound.

The technique of manufacture of the embossed and stamped wares from Taxila and other Indian sites although has certain affinities with the Greek Megarian wares, such as the use of moulds and stamps, differs in one essential element, that is to say the glaze. A lustrous glazed surface, characterises the finer Megarian wares, but our Taxila wares have no such fine finish.

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1. op cit, P. 11.
2. Marshall, Taxila, P. 401.

Indeed some specimens must be classified as slip wares. Another notable feature which distinguishes the Taxila specimens, is that their persistence, in time, appears to be far greater than the fine Megarian wares as the Ahichchatra examples show. Indeed, modern opinion is willing to accept a similar persistence of these wares elsewhere.

For comparable wares decorated with similar embossed and stamped designs, from other ancient Indian sites reference may be made to PlXXXI and XXXII in 'Ancient India' Bulletin[1] No. 10 and 11, showing specimens from Hastinapur, where stratum IV yields a fairly large number, dated between 200 B.C. to 200 A.D. A comparable Ahichchatra[2] series occurs in stratum IV, dated between A.D. 100 to 350. In Begram these wares are usually confined to stratum III[3] dated after 250 A.D.

Among the vessels of this class from Taxila the decorative features on Nos. 234, 235 and 237 (Pls. IV & V) are of special interest. No. 234 is a fragmentary water-bottle of pale pink clay. It was manufactured from a double-mould and is decorated with a central medallion, encircled by a vine-scroll and, according to Marshall, a rouletted border on the outside.

No. 235 is also a fragmentary water-bottle (?) of light red clay, decorated with a series of running spirals between dotted borders, which Marshall also calls rouletted. The lower border may be rouletted, but the fragment requires re-examination. The narrow chevron outer border, described by Marshall as rouletted is not at all clear.

No. 237 is a shallow bowl with a flared mouth, decorated

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1. op cit, No. 10. 11.
2. Anc. Ind. No.1 Fig. 7 P. 52. Nos. 5-10 & 12. It must be remembered that these dates are conjectural.
3. Ghirshman, Begram, Pl.XLIX.

below the neck on the outside, only with a typical Hellenistic ivy-scroll; it has a beautifully executed medallion on the bottom. A fine silver drinking cup, dradged up from the river Maas in the south of Holland is decorated with somewhat similar ivy and vine designs. Prof. Anne Volgraff Roes notes [1] that from Hellenistic times onwards, silver and gold vessels began to replace red-figured pottery vases as objects of luxury in Greek households, resulting in a rapid decline of vase painting. It is amply evident from numerous Hellenistic pottery vessels that the potters were imitating the metal vases, which were the fashion of the day. Hellenistic silver vases were in great demand by the Romans of the late republican period. Well-to-do families still possessed considerable quantities of beautifully worked silver vessels when Pompeii and Herculanium were destroyed in 79 A.D. The lower half of the Maas Goblet, which is of the Greek 'Kantharas' type, is adorned with branches of ivy and vine plants, [2] specially associated with the cult of Dionysus.

It is especially important to note that similar decorative designs, also, occur at Begram. [3] Hackin makes a comparative study of this particular design on the objects illustrated in his Figures 412-414. Fig. 412 is a medallion with a vine-scroll very similar to the Taxila specimen No. 234. His No. 413 is a silver goblet from Naples beautifully decorated with a vine-leaf design; and his No. 414, a marble amphora from the Vatican with a similar design. [4]

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1. The Illustrated London News. October 13, 1951, P. 571.
2. op cit, Fig. 1-5, specially 3 & 5.
3. Nouvelles Recherches Archeologiques À Begram, - J. Hackin, 1939-40.
4. Marshall's Class XXX.

LOCAL RED-AND-BLACK PAINTED WARE

The excellent specimens of this ware are either burnt red throughout or are red only on the outer surface with a grey core. The clay is normally more finely levigated than the ordinary unpainted pottery and the decoration, in black on a red ground, is done very carefully. The slip or wash of ochre on which the designs are painted before firing does not substantially differ from similar unpainted pots. Marshall describes it thus, "In these specimens, the clay was finely levigated and burnt brittle; after firing, the red-oxide slip was burnished with a polisher, probably on the wheel. Burnishing could be done either with a pebble, tooth or any other smooth object; or even with a woolen cloth on the wheel, as it is often done today." [1] The shapes of this distinctive wares are as varied as the designs on them. The forms include a wide range of small vessels, amphoras, handled-jugs, jars, beakers, bowls, pans, spouted 'gharas' and 'handis'.

The various painted designs consist of parallel bands, chequered triangles, network patterns, vandykes, dog-tooth ornaments, chevron, loops, swags, latticed triangles, quatrefoil crosses, trees and birds. Pots of this type from the Bhallar and Dharmarajika stupas usually have designs of parallel bands, loops, zigzags, wavy lines, scrolls, network bands, as well as foliage. The technique of the painted designs as described by Marshall consisted in applying a black manganese paint after burnishing, the pots being subjecting to a second firing. [2]

As we shall see presently, these painted wares have been found at all periods represented at Taxila. Indeed, a few occur in

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1. Taxila, P. 430-31.
2. Ibid. P. 431.

the earlier strata of the Bhir Mound (IV & III). But among the total number of nine, illustrated by Marshall,[1] only two i.e. Nos. 216 and 217 came respectively from stratum II and stratum IV or III of the Bhir Mound; six from Sirkap; (Nos. 217 a = st. IV; 218 = st. IV; 219 = st. III; 220 = st. II; 222 = st. IV; and 223 = st.III) one from Mahal (No. 221) and one from the Bhallar Stupa (No. 224).

Ghosh's illustrated specimens[2] are mostly from the lowest two strata i.e. his phase I and II, only a few occuring in phase III. It is interesting to find that Marshall's so-called amphora No. 221 came from 3' 4" below surface of the Mahal site, while Ghosh's comparable pot No. XXI is from his Sirkap phase IV, that is to say, from the latest stratum. Marshall's No. 222 which bears festoon and tassel design, identical to Ghosh's No. XXI, came from Sirkap stratum IV, and consequently he dates it to the early Saka period. Here it is worth noting that only one fragment of a typical amphora has been found from Taxila (No. 15, Sk. II Fig. 1) Marshall describes his No. 221 and No. 222 as amphoras, but according Dugas's classification it would be better to call them 'Kraters'.

Ghosh's Sirkap specimens may be classified as follows :

XXII	=	Phase III	XXXI	=	Phase III
XXIII	=	Between Phase I & II	XXXII	=	Phase I
XXIV	=	" " I & II			
XXV	=	" " I & II			
XXVI	=	Phase I			
XXVII	=	Between Phase I & II			
XXVIII	=	Prestructural			
XXIX	=	Between Phase I & II			
XXX	=	" " II & III			

1. Ibid. PL. 127.
2. A. I. B. No. 4. Fig. 15.

The above mentioned specimens suffice to show that, though this type of ware appears only in the latest two strata of the Bhir Mound, it occurs in large numbers in all the strata of Sirkap, but specially in the lowest two strata. It is at least plain that this ware overlaps in the Bhir Mound and Sirkap.

BOWLS & DISHES (Fig. 1)

Among the types of bowls found throughout the occupation of Sirkap, which have close parallels in other widely distributed sites in India, the bowl with flat base and straight flared sides is a good example. The shape resembles a truncated reversed cone and has several varidnts. The specimens illustrated by Marshall [1] are supplemented by a good number of variants illustrated by Ghosh. [2] This popular type of bowl in Sirkap is of a dull red or light red ware of medium fabric, and is occasionally treated with red slip inside and out. Often the corrugations produced by the wheel are left unsmoothed. This type can be traced in the contemporary strata of other Indian sites such as Ahichchatra, Hastinapur and Maholi, as well as outside India, in Begram.

Marshall 's specimens Nos. 99-101 came from the Dharmarajika, Court A, 10' below surface; Sirkap stratum II; and Sirkap stratum IV respectively. These are comparable with the bowl type from Ahichchatra, illustrated in the Ancient India. [3] This specimen,

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1. op cit, Class XV, Type 'b' Nos. 99-101, Vol. II, P. 417.
2. A. I. B. No. 4, Nos. 10, 10a - 10i. Fig.4.
3. op cit, No. 1, P. 44.

No. 23 of Figure 2, which came from stratum Iv is ascribed to a date between 100 B.C. to 100 A.D. Similarly, exact analogues are found in Maholi.[1] In describing this type of bowl Waddington says,"it has been found at many other sites and all the indications point to its being Kushāna and its abundance at Maholi, affords positive proof."[2] At Hāstināpur (Fig. 1) it occurs in the Kushān level IV.[3] It is even found in the far south, approximately coinciding with the above date. At Arikamedu,[4] it occurs freely in all the pre-Arretine, Arretine and Post-Arretine layers. Close parallels of this type with its variants have been also found from Begram strata I and II.[5]

But it is interesting to notice that a series of bowls having apparent affinity with the above, illustrated by Ghosh and Marshall, appear to have no analogues in any other ancient Indian site, or at Begram. This second popular type of bowl is fairly consistent at Sirkap. These types may be classified as follows :

TYPE 1.

This type of bowl has a flared rim, bluntly carinated shoulder and a small flat base. The ware is light red, of fine or medium fabric and is normally without slip but sometimes has a pink to dark-red slip internally and externally. A few examples of this type and its variants (excep Ii -k) are decorated with black paint on the interior of the rim. With the exception of Ghosh's 1d which is confined to Phase I, the lowest level, all the variants occur freely in all periods of the occupation of Sirkap.[6] Marshall's

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1. Journal of the U.P. Hist. Society No.15, 1952 Part II-Pl.1, P.136 - Hilary Waddington.
2. Ibid, P. 135
3. A.I.B.No. 10 & 1i, P. 64; Fig. 20, From 1-1f; II & IIa.
4. A.I.B.No.2, P. 60; 58; Type 12, Fig. 18.
5. Bégram Recherches Archéologiques et Historiques sur les Kouchuns,- R. Ghirshman, 1946. BG. II Pl.XLIII, No.70 & BG I Pl.XXX, No. 17.
6. A.I.B. No. 4, P. 50-51, Fig. 3.

No. 218 (Fig. 1) from Sirkap, stratum IV is of this type.

TYPE 2.

It is analogous to the above, but has a broader and more markedly flared rim. Though this type is less common than type 1, it also occurs throughout the occupations of Sirkap. Some of its variants as 2a bear painted decoration of designs identical with Type 1.

TYPE 3.

It is a bluntly carinated bowl distinguished by a flat rim, grooved neck and pedestal base. Except for its base it is akin to Ghosh's 1b of type 1 in shape. It is a highly specialized type and occurs sporadically throughout the occupation of the site. Some specimens of this type and its variants bear identical decoration with types 1 and 2. This last type shows the 'excavated foot' which occurs fairly widely in India, for instance at Ahichchatra,[1] Ruar,[2] Ruper,[3] Arikamedu, including the beautiful southern specimen of a goblet from Brahmagiri[4] It seems that these vessels with an excavated or pedestal foot are the result of foreign influence. They only begin to appear in Marshall's late Hellenistic period and obviously flourished in the Parthian and Kushan periods; the Bhir Mound yields no specimens. The distribution virtually of this type of excavated-foot vessels in period of time appears to hold good in the other Indian sites mentioned above. Examples of this type of pottery from Taxila such as No. 90, 91, 89, 134, 131, and 204a,[5]

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1. Ahichchatra, op cit, Type 47, p. 47, Fig. 3.
2. A.I.B. No. 9, Fig. 6, Nos. 22, 23, & 24, P. 128.
3. A.I.B. No. 9, Fig. 4, P. 125 No. 2, Stra. IV, 200 B.C. - 600 A.D.
4. A.I.B. No. 4. Fig. 14, P. 218 No. P12.
5. Taxila, No. 90 = Sk. III; No. 91 = Sk. II; No. 89 = Sk. IV; No. 134 = Sk. II; No. 131 = Sk. II; 204a = Sk. II, Pls. 124, 125 and 127.

all came from Sirkap, especially from the stratum II.

However, one thing which is noticeable about all the bowl types described above is their significant absence in any of the strata of the Bhir Mound. It indicates their late appearance, sometime round about first century B.C. They gained wide popularity throughout Sirkap's span of life. Again it is evident from other Indian sites that they faded out after the Kushān period. The above remark particularly holds good in Marhall's type 'b' discussed above. Mr. Ghosh's Type 1, 2, & 3, analogueus to Marshall's No. 218, have a limited distribution confined to Taxila only. They also appear to be late, dating round about the first century B.C. and certainly fade out in the Kushān period.

SHALLOW DISHES: (Nos. 95 - 96, Fig.2)

Of the other types of shallow 'bowls' (more appropriately 'Dishes') of Marshall's series, No. 95 and its variant No. 96, came from Sirkap IV and the Bhir Mound III respectively, and appear to be the mostly widely distributed type of ware in all ancient Indian sites. It resembles, in form, the present-day 'Thali'.

No. 95 is a shallow 'bowl' with rounded sides, incurved mouth and is provided with a slight rim. It is of light red clay well burnt and smeared with dark red wash.

No. 96 is similar to the above, but has a rounded base and vertical sides.

This type of shallow bowl has a particularly long history and must have been a very popular type of pot, both in the North as well as in the South of India. It is a dominant type among the N.B.P.

wares,[1] as well as in the Painted Grey Wares,[2] dated by B. B. Lal between 1000 - 800 B.C. In the south it is particularly associated with the 'rouletted ware' (1st-2nd cent. A.D.) and the Āndhra ware (c. 50-300 A.D.).[3] Closely analogous 'bowls' of Ghosh's[4] Nos. 11, 20, 21 and 23 occur in Ahichchatra (Nos.2 and 7 of Figure1)[5] in Arikamedu[6] they are especially numerous in the rouletted wares. Some of them have similar parallel grooving on the outside like Ghosh's specimen No. 11a, the inside of the base being decorated with rows of concentric circles.[7] Some comparable Brūhmagiri specimens in the 'Āndhra Ware' have also rouletted designs.[8]

However the among this group of shallow 'bowls', Marshall's No. 109[9] is quite distinct from others. It is a circular flat dish with concave sides and small everted lip. The dish has a raised boss in the centre similar, to the Greek 'Phiale Mesomphalē' and the Roman 'patera clipeata'. It came from stratum II of Sirkap and is of fine red clay with dark red wash. It also occurs in stone, silver and copper forms from Taxila. Evidently these were of extraneous origin and are rare in other sites of India.

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1. A.I.B. No.1. Fig. 10. P.56. Here the author has shown 3 specimens from Ahichchatra, Nos. I, II & III and two from Taxila Nos. XV & XVI.

2. From Hāstināpur excavation, see A.I.B. Nos. 10 & 11, Fig. 8, PL XXVI, XXVII, P.39. dated in Period II bet. 800 B.C. - 1000 B.C.

3. A.I.B. No. 9. P. 164, Fig. 14, Nos. 2c and 3.

4. op cit, Fig. 4 and 5 P. 53, 54.

5. A.I.B. No. 1. see also specimens in the N.B.P. & P.G.W. Fig.10 & 12

6. A.I.B. No.2. Fig. 12. P. 47.

7. op cit, Fig. 14, Nos. 1, 2 and 3 and their variants.

8. A.I.B. No. 4. Fig. 27, No. T.129; PL CXI and Fig. 28 Nos. T 141 142, 143.

9. Taxila, PL. 124.

PEAR-SHAPED OR ELLIPTICAL VESSELS: (Fig.2)

These typical pots, classed by Marshall under his Class IV (Nos. 26-29) and VI (Nos. 32-4) are usually of coarse red-clay and occur fairly widely in both the sites, being especially concentrated in the top strata of the Bhir Mound and bottom strata of Sirkap. Nos. 26, 27, and 32 of Marshall's series came from the Bhir Mound [1] stratum II and the rest from Sirkap or other sites as follows:

No. 28 = Stratum VI, Sirkap
No. 29 = " III or II, Sirkap
No. 33 = " II, Sirkap
No. 34 = Jaṇḍiāl

These are further supplemented by Ghosh's illustrated type 48 of Fig 10, [2] which is idintical with Marshall's No.32. In Rupar, identical prototypes of Marshall's Nos. 32, 33 and 34 have been found associated with N.B.P. Wares; [3] while precisely the same type occurs also at Ahichchatra [4] in stratum VIII, dated between B.C. 300 to 200; and stratum IV, dated between A.D. 100-350. In Rājgir, these Pear-shaped vessels are particularly common in period IV, dated to the first century A.D. [5] This clearly indicates its persistence over a long period of time as well as a wide distribution in other early Indian sites. Curiously enough, Pear-shaped vases of precisely similar types, also, occur at Hāstināpur, Period III, which is associated with the N.B.P. Wares. [6]

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1. op cit, Pl. 123 and P. 409-10.
2. Anc. Ind. Bulletin, No.4, P.61.
3. Ibid, No. 9. Fig. 5. P. 127, specimens, 16 & 19.
4. Ibid, No.1, For specimens in stratum VIII see 10a Fig.1. P.42; and in stratum IV, Fig.2. Nos.37-39.
5. Rājgir specimens Nos. 17 and 21 Fig. 5 P.76, Anc. Ind. Bulletin, No.7. (1950).
6. Anc. Ind. Bulletin, No. 10 & 11, P.60, specimens XXXIa-h, especially a and b of Fig. 18.

PILGRIM -BOTTLES

(Marshall's Class VIII: Nos. 43-7 and 225,234 & 243)

Vessels of this shape and character, admittedly an extraneous form to India, occur in all the strata of the two sites sporadically, which is to be expected in view of its wide currency over a considerable period of time. These bottles seem to have been commonly used by travellers and pilgrims, travelling long distances. The class includes two types: one smaller or medium sized, intended to be carried on the person with the help of a suspended cord over the shoulder and the other larger in size, probably intended to be strapped on the back of pack animals. Both in Mesopotamia and Egypt the ancestry of the pilgrim-bottle goes back to the pre-historic period.[1] In the Mediterranean countries they are common from the 1st century B.C. to the 1st century A.D.

Type a: small water-bottles: Of these No.43 and 44 came from stratum II of the Bhir Mound and stratum II of Sirkap respectively, and No.45, from 13' below surface of Jaṇḍiāl.

Type b: Large bottles: No. 46 is from stratum II of the Bhir Mound and No. 47 came from stratum II of Sirkap. Of other decorated specimens, No.225 is from Sirkap stratum II and is classified by Marshall under 'Brown and Buff Painted Ware'.[2] No. 234, as already noticed earlier, is a fragment of a moulded bottle delicately decorated with a grape and vine-leaf design (PL.IV). It came from the Bhir Mound stratum III. No.243 is a beautiful example of moulded ware, which came from Sirkap stratum IV. But the

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1. Debevoise, Parthian Pottery from Seleucia on the Tigris, P.19, Nos. 298-206; and Egyptian Pilgrim bottles, Watzinger, 'Sieglin-Schreiber Expedition, II Pt. 3, PL. XXVIII, No.8.
2. Marshall, Taxila, Class XXXI P. 432.

But the decoration on the only specimen, illustrated by Ghosh [1] is unique. It is a small moulded and stamped bottle, executed in two pieces and fitted separately with a mouth and suspension-lugs. It is elaborately decorated in relief with cowrie shells, birds, beaded arcading and triangular pendants. It is of a light red ware with red slip outside, and belongs to his Phase I, that is to say, to the lowest stratum of Sirkap.

This interesting object, curiously enough does not occur, elsewhere, in India. But exact parallels of Marshall's Type 'b', the large-bottles, intended to be strapped on pack animals, have been found in Begram, [2] strata II and III. Ghirshman's comparable specimens No. 1 in PL.XIV and Nos. 314 and 358 in PL.XXXVIII are all from the second stratum; while his specimen No. 9 in PL.LII came from the third stratum.

SPOUTED POTS (Fig. 3)

Marshall divides this class of pots into three types: a, b and c. Type 'a' are spouted vessels with open mouths or necks without handles of which Nos. 64a, 64b, and 65 are examples. Type 'b' is similar to his type 'a' but has a tall, narrow neck, pierced for the admission of air. Nos 66-69 are good examples. This type is commonly known as a "sprinkler" and is found in other Indian sites, as we shall see. His Type 'c' is of particular interest in having the shape of a modern 'kuza', which he describes as being furnished with "loop, knob, animal-headed or long-handles"

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1. Anc. Ind. Bulletin, No.4. Fig. 17, P. 70, No.XLIX.
2. Ghirshman, Begram, (1946).

(His Nos. 70-75). Vessels with several spouts also occur. Their prototype in metal is, also, found at Taxila.[1] These pots are still in common use among Muslims of the Punjab and elsewhere in India and Pakistan, and the type is usually associated with the ceremonial ablution before prayer. The specimens unearthed at Taxila must, however be dated to before the advent of the Muslims. These pots occur in almost all strata of the two sites, though perhaps, they appear to be concentrated in stratum II of both the Bhir Mound and Sirkap. Their distribution is as follows :

Type 'a'	No. 64a	= Sirkap, Stratum II
	" 64b	= Jaṇḍiāl
	" 65	= Dharmarājikā
Type 'b'	" 66	= Bhir Mound, Stratum II
	" 67	= Dharmarājikā
	" 68	= Jaṇḍiāl
	" 69	= Dharmarājikā
Type 'c'	" 70	= Bhir Mound, II
	" 71	= " " "
	" 72	= Sirkap, II
	" 73	= " "
	" 74	= " III
	" 75	= Bhir Mound, IV

1. Marshall, Taxila, Pl. 174, Nos. 259, 260.

VESSELS WITH NAIL-HEADED DECORATION

Nos. 72 & 66 (Fig. 3)

Vessel No. 72, however claims our special attention. It has a short bottle-neck, globular body, flat rim, loop handle, single spout and a flat base. Besides, it has three clay 'nail-heads' in imitation, obviously of metal-work, at the top of the handle and a fouth at the base. Mr. Ghosh, also, illustrates an identical specimen [1] from Sirkap, which has the same 'nail-head' decoration.

Exact parallels of this type of 'kuza' have been unearthed from Ruar in India. [2] The same site, also, has yielded identical narrow, tall-necked sprinklers, pierced at the top for the admission of air, [3] as our Bhir Mound specimen Noe 66 of Marshall. Incidentally, the above mentioned two pots from Ruar have been dated to the early centuries of the Christian era. The prototype of our No. 66 is, also, common in Hastināpur, Period IV, dated between B.C. 200 to 200 A.D. [4] In Begram, No. 72 of Marshall's series, it occurs in the third stratum [5] which, also, has a clay 'nail-head' decoration.

The prototype of No. 72 in Marshall's decorated series from Taxila is his No. 251, which came from Jandiāl (1'-6" below surface). It has a floral band stamped round the shoulder and is described by him as, 'probably medieval'.

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1. Anc. Ind. Bulletin, No.4. Fig. 12, specimensNo. 60, P.63.
2. Ibid. No.9. Fig. 6. specimens 18 & 19, P.128.
3. Marshall's Type 'b'.
4. Anc. Ind. Bulletin No. 10 & 11 P.64. Fig. 20, Nos. XVa, XV, XVb; Also see the table on P. 24.
5. Ghirshman, Begram, PL. LI, No. BG. 487.

BOWL WITH LAMPS ON RIM

(Fig. 4 & PLXIII) No. 126, 154 = Sirkap, III, V, No. 126 (Fig.4)

This is a perforated bowl of red clay with three triangular holes in the sides.[1] It has a hollow, rolled rim with marks on the top of three attachments for lamps which are missing. Its parallel from Hāstināpur,[2] came from 'Period IV, dated between 200 B.C. to 200 A.D. Specimens from Rupar,[3] are dated to the early Christian era.

In illustrating his specimens from Hāstināpur, Mr. B. B. Lal, the excavator, describes his No.2 as "Bowl of dull-red ware with a flared featureless rim. It is distinguished by two shallow, cup like things on the rim. Of medium fabric it is treated with a wash. From an early level of Period IV".[4]

His No. 3 is even more interesting. It is a basin of red-ware with a nail-head rim and a flat base. This rim-top is decorated with a modelled bird and a shallow cup like depression. Of medium fabric, it is treated with a slip both externally and internally. It came from mid-level of Period IV.

These interesting bowls with attached lamps on the rim and occasionally with+birds may have been associated with some form of household ritual and recall the terracotta votive-tanks unearthed from Ahichchatra[5] and Taxila (PL. XII)[6] Ghosh in illustrating the

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1. Marshall, op cit, PL. 125, No. 126.
2. Anc. Ind. Bulletin, No. 10 & 11, Fig. 23, Nos. 2, 3, P. 69.
3. Ibid, No. 9, Fig. 6. No. 30. P. 128.
4. op cit, P. 70.
5. op cit, Pl., XXXVIII & XXXIV.
6. Marshall, Taxila, P. 465-468 and Appendix on P. 473-5.

Ahichchatra specimens compares them with similar objects from Seleucia,[1] where they occur in Level I and II, which are Parthian in date, but cannot be precisely dated owing to the peculiarities of the coin-finds of that site. Of the 15 Taxila specimens, including fragments, from both the sites, the majority of them occur in 'Sirkap stratum II.[2] However, as a warning against the assumption that these interesting objects with shallow cup-like depressions, presumably lamps, were a Parthian invention, we must remember that this motive was known long before that time in Athens. As an instance we may refer to a beautiful specimen illustrated by Homar,A. Thompson in "Hesperia", which was unearthed from the Athenian Agora (Fig. 4) by the American Excavation team and dated to the Hellenistic period (4th & 3rd centuries B.C.)[3] It is a large shallow bowl which he classifies as 'Kernos' with a high standard base. The thick rim is flat on top of which are set nine wheel-made cups at regular intervals around the whole rim. It has loop handles on either side of the rim. The bowl is of buff clay coated with rich glossy black glaze. The use of the bowl with lamps may be associated with the well-established and ancient custom of 'ārti' in India, specially in the South. Birds, usually doves, on the edge of a crater is a well-established Roman art-motive.

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1. Anc. Ind. Bulletin, No.4. P. 125; Ingen, op cit.

2. Marshall, Taxila, Nos. 153-63, PL.136: Nos. 153 = Bh II, 154 = Sk. V, 155 = Sk. II, 156 = Sk. II, 157 = Sk. II, 158 = Sk. II, 159 = Sk. II, 160 = Sk. II, 161 = Sk. III, 162 = Sk. II, 163 = Sk. V.

3. 'Hesperia', Vol. III No. 4. (1934), illustration on Page 340, Fig. 20, No. B. 27; P. 313 for the date.

GOBLETS : (Fig. 2)

Of the three types (a,b, c,) of Marshall's illustrated specimens, class XIV (types 'b' & 'c') occur only in the later strata of Sirkap (II & III) and none in the Bhir Mound.

Type b :

Goblets with deep-flared mouth, often constricted at the neck with a flat base.

Nos. 86, 87. [1]

These specimens from the Sirkap, stratum II, have three grooved bands round the neck, and a flat base. The ware is of buff-red clay mixed with lime with a dark red wash outside. The limy granules on the ware, are 'kankar'.

Type c :

This is similar to 'b' but with a circular base on a stem of the wine-glass kind.

No. 88 is from Sirkap II

No. 89 " " " IV having a widely flared mouth. The neck is also wide and the standard foot, short. The ware is of thin, brittle red clay, well levigated. It is covered with a dark red wash and is decorated with an incised 'swastika' outside.

No. 90 is from Sirkap III

No. 91 is from Sirkap II . This is a goblet with constricted neck and horizontal ribbing on

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1. Marshall, Taxila, Pl. 124.

the body, obviously copied from a metal prototype. The ware is a good red clay with dark red wash. Only one specimen of this kind was found. This must be compared with its silver prototype (His PL. 187 No. 5b) which is also from Sirkap stratum II or III but from a hoard. [1]

Among these three types, 'c' is the commonest in Sirkap. Mr. Ghosh illustrates [2] a large number of these goblets, and indeed, rightly remarks that 'It is one of the characteristic types of the site (Sirkap) and together with its variants, occurs abundantly throughout its occupation.' [3] This type is particularly numerous at Begram, stratum II, but it occurs sparcely in stratum III. [4]

HANDLED JUG WITH PINCHED LIP (Fig.5)

Among Marshall's three types (a, b, c) two specimens of his type 'b' are of special interest.

No. 79 is from the Bhir Mound II. It is a single-handled jug of grey brown clay with elliptical body, flat base and everted neck. The lip is pinched up into a trefoil form.

No. 80 is from Sirkap II. The jug is same as above but of buff red clay with 'nail-head' ornament on the top and the bottom of the handle. [5]

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1. Ibid, P. 610.
2. Anc. Ind. Bulletin, No.4, Fig. 12 No. 53, a, b, c, P.63.
3. op cit, P. 62.
4. Ghirshman, Begram, PL. XL. BG. 117, 150, 207, 107, and 95-112 of PL. XLIV.
5. Marshall, Taxila, PL. 123.

The only specimen illustrated by Ghosh [1] has also two knobs at the top of the handle, representing the 'nail-head' already described. But unfortunately he does not state from which stratum of Sirkap it came. Vessels of identical shape and character have been unearthed from Begram stratum II. [2] In Ahichchatra, [3] this type of vessel occurs in stratum III, dated between 350 A.D. to 750 A.D. It has a similar pinched-up mouth, loop handle which is, however, twisted, unlike the Sirkap specimen. It is decorated with the'nail-head' decoration on top of the handle. It has, however, a black polished surface, in contrast to our Sirkap specimen. It should be noted that the 'nail-head' decoration on spouted pots occurs in the Bhir Mound stratum II and Sirkap stratum II. At Ruar, it is dated to the first century A.D. This dating would seem to be doubtful. At any rate the occurence of these vessels on the top strata of both the Bhir Mound and Sirkap offers no grounds for a clear chronology.

AMPHORA (Nos. 14 & 15, Fig.1)

Both specimens of large amphora, illustrated by Marshall came from Sirkap, stratum II. No.15 appears to be a typical Roman type and in all probability dates from the first half of the first century A.D. It is of red coarse clay with heavy admixture of sand and has a cream coloured slip. It has a high shouldered double handle. Close analogues of this type has been found in Roman sites in England. [4] The only other Indian site, which is known to have yielded such amphora of the Mediterranean type, is Arikamedu,

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1. Ghosh, op cit, Type 61 Fig. 12, P. 65.
2. op cit, PL.3 & PL. XL, BG. 313 and 357.
3. op cit, No. 52, Fig. 4. P. 48.
4. Collingwood, 'The Archaeology of Roman Britain', Fig. 59, No.92.

on the east coast of India.[1] Wheeler comments that this type of straight, high shouldered handle is characteristic of the first half of the 1st century A.D.[2]

1. Anc. Ind. Bulletin, No.2, Fig. 9, Nos. 55 and 60; Fig. 10, P.4 - R. E. M. W. and A. Ghosh, etc.
2. Ibid, P. 43.

TERRACOTTA OBJECTS

The proper dating of Indian terracottas has always been a confused puzzle. This confusion is fortunately, however, slowly being classified by means of ever increasing evidence from newly excavated sites. In the 1920's certain crude figurines were considered by eminent scholars as belonging to the "Vedic" or "pre-Mauryan" periods. In 1937, these same objects have been positively dated to the early historic period. This raises the question as to whether a pinched out, crudely modelled figure should be placed in a "primitive" category, and as such dated earlier than more highly formed and refined examples. The Coomaraswamy school[1] adopted this attitude, while Professor Codrington[2] and Colonel Gordon[3] proved that these figurines were not pre-historic. These conflicting views are illustrated by Figures 1-5 of Marshall's 'Taxila' Vol. III, PL. 132. Four of his first five figures, came

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1. Dr. Coomaraswamy, in the Bulletin of the Museum of Fine Arts, Boston, No. 152 (Dec. 1927) under the title 'Early Indian Terracottas' and subsequently in 'IpeK', the year book for Prehistoric and Ethnographic Art, Leipzig, title 'Archaic Indian Terracottas'. His view was upheld by C. C. Gupta in 'The problem of Ancient Indian Terracottas' published in the I. H. Q., March 1936; and also by V. S. Agrawala in 'Mathura Terracottas', published in the Journal of the U. P. Historical Society, July 1936, P. 6-38.

2 & 3. Professor Codrington, 'Some Indian Terracotta Figurines' in the Indian Antiquary, Aug. 1931. He challenged the opinion of Dr. Coomaraswamy and subsequently Colonel D. H. Gordon in a series of articles refuted convincingly their supposed antiquity : Gordon, "Early Indian Terracottas' in the J. I. S. O. A. Vol. XI, 1943; 'The Mother Goddess of Gandhara' in Antiquity, 1937 Vol.XI; "Some Terracottas from Sari Dheri" in J. R. Anthropological Institute, 1932, Vol. LXII; "The Age of Frontier Terracottas' in 'Iraq' Vol. V Part 2, 1938.

from the Bhir Mound: No.1, from stratum III, Nos. 3-5 from stratum II. No. 2 came from the lowest stratum (VII) of Sirkap. Marshall variously calls them, 'Nude-Mother' or'Earth-Goddess type' and 'Primitive idol-type'. He says, "No.2 comes from the lowest settlement of Sirkap, which may be as old or older than anything on the Bhir Mound . . . Some of them - particularly Nos. 1, 2 and 3 - may be, and probably are relics of a remote past, which like the neolithic celts . . were still regarded as objects of veneration, or curiousity in the fourth and third centuries B.C." [1] Elsewhere while describing his figurine No.1, he says, "the idol is probably of prehistoric date, having found its way by chance into the later ruins of the Bhir Mound, but it is also possible that this and the four following figuines came from ritual tanks . . ." [2] Certainly Figures 1 to 5 are very crudely made and should be described as such, without indulging in hazardous comments upon their primitive origin. They have one thing in common, their crude technique. Each of them is made from a small roll of wet plastic clay, which was then pinched up and finally finished with simple punched and incised decoration. This helps to explain what Colonel Gordon means by the 'unavoidable resemblance that one crude representation in terracotta is bound to share with another.' [3] Coomaraswamy classified such objects as Marshall's Nos. 1-5 as "Vedic" and "Pre-Mauryan", assuming that what is technically primitive and archaic is also ancient. Gordon observes, "where there is a degree of archaism, figurines have been readily presumed to be of 'Prehistoric' or of 'Indus Valley date' and a catalogue of technical points in construction drawn up to show the similarity of the group under discussion to another of proven early date. This unfortunately

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1. Marshall, Taxila, P. 440.
2. Ibid. P. 442.
3. J.I.S.O.A. Vol. XI. (1943) P.145.

proves nothing."[1] Vasudeva Agrawala, enthusiastically backed up this system of dating by setting a date for the figures as somewhere in the second Millennium B.C. to about 400 B.C.[2] To make the problem even more confused a good deal of literary antiquarianism has prevailed in India. "A discovery to provoke interest must be capable of being traced to a reference in the Puranas, the Mahābhārata or the Jātakas, or failing that, to some recognisable element in Hindu, Buddhist or Jain iconography."[3] However, within eleven years, students of Indian archaeology have done enough research to completely modify these views. Gordon in a series of illuminating articles, especially in his 'Early Indian Terracottas' has conclusively proved, by taking the figures Coomaraswamy had dated to the 2nd Millennium B.C. and comparing them side by side with accurately reported objects, that actually belong to the early historic period. The crude Sar Dheri type, he was able to date from 200 B.C. at the very earliest to 100 A.D.[4] Archaeologically, the Vedic period remains unknown. Stella Kramrisch, perhaps goes too far in classifying these terracottas as "Ageless types". She observes :[5] "The primitive types, however, are as frequent at Mohenjodaro in the 3rd millennium B.C. as they are in the Ganges Valley, etc. from the Sunga to the Gupta period, i.e., roughly before and during the first half of the first millennium A.D. and their number is no less today, made as they are by the potters and women in the villages of Bengal, Bihar etc. . . It is a question not of sequence but of principle. The principle involved is that of ageless types and timed variations. The ageless types persists essentially changeless;

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1. Ibid. P. 144.
2. 'Mathura Terracottas' P. 10, 37 (1936)
3. Gordon, 'The Mother Goddess of Gandhāra'in'Antiquity', a quaterly review of Archaeology Vol. XI (1937). P.70. For an instance of such literary antiquarianism see Agrawala, op cit, P.14, 16, 22-24, 30-32, 34, 36.
4. Gordon, E.I.T. P. 147-8.
5. St. Kramrisch, J.I.S.O.A. Vol.VII, (1939,) 'Indian Terracottas' P.89, PL.VII, Fig. 1-10.

the time variations results from impresses which the passing moment leaves on them." Elsewhere she says, "The function of the timeless figure is not in itself determined. It becomes so by the relation established with the person who uses it . . . They are toys to the child and once they are consecrated, images to the worshipper." [1] This argument is an appeal to metaphysics, not to archaeology.

The pinched up archaic figures which form Gordon's 'Sar Dheri' type, named after the site where they were found in great abundance, appear at the Bhir Mound and Mohrā Morādu. It is interesting to note that the lowest two strata of the Bhir Mound produced no terracotta figures, the bulk being from the top two strata, "None were found in the lowest(4th) stratum of the Bhir Mound and of the very few from the third stratum, some are undoubtedly strays from the second." [2] Gordon's observation on this point, particularly with regard to his chronology, although drawn out without any regard to Marshall's actual stratification, is important. He says, [3] "The bulk of the terracottas found at Bhir Mound are from surface to 5 feet below surface, only two human figures being found between five and eight feet and none below this depth. A dating of 150 to 80 B.C. is here proposed for the first five feet, and 180 to 150 B.C. for the preceding three feet below which no human figure have been found." This dating system of Gordon gives a much later scale than Marshall's, and as we have seen in analysing the pottery, it accords well enough with our chronology. Marshall treats his first and second strata (from surface to 6' below) as Mauryan, beginning from 300 B.C.; while the third (9' to 10' and occasionally deeper) he dates to the fourth century B.C. His lowest stratum (from 14' to 16' below surface) is assigned to the 5th to 6th centuries B.C.

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1. Kramrisch, op cit, P. 92.
2. Marshall, Taxila, P. 440.
3. Gordon, E.I.T. P. 148.

Marshall's Nos. 2 & 3 (PL. 132) come from the VIIth stratum of Sirkap and IInd stratum of the Bhir Mound respectively, and as they share obvious similarities, may be classified under one group. No.2 is a standing terracotta female figure without the head, adorned with incised lines and applied rosettes; while his No. 3 is the lower portion of a female figure. Both have pointed legs ending at the ankles and the sex organs represented by incised lines and dots. These form one of Gordon's 'Sar-Dheri' types,[1] which he calls 'spade-shaped'. Of Gordon's other Sar-Dheri types represented ay Taxila, Marshall's No. 4 is a good specimen. It comes from the Bhir Mound stratum II and according to Gordon's scheme of dating may be dated within 150-80 B.C. The figure is of red terracotta with legs missing from the hips down. Incidentally it is interesting to note that many of these figurines have been found broken at the hips which led to the hypothesis that ~~that~~ there might have been some ritual breaking.[2] Enough remains, however of Marshall's No.4 to show its similarity to Gordon's Sar-Dheri type. The eyes are applied and incised; it is chinless and has no mouth. If the legs were present they would undoubtedly have tapered off.[3] The figure is naked, except for a impressed, dotted necklace and thin girdle. The arms are crudely modelled stumps and the nose, pinched out. The variations of all these Sar-Dheri types preserve a family likeness which is quite unmistakable. The area where this type occurs, besides Taxila and Sar-Dheri are, Hadda, Lalpura, and Kunar on the west and from Bajaur, on the north to the main road between Rawalpindi and Peshawar on the south, Taxila being the eastern limit.[4]

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1. Gordon, E. I. T. PL. IX. Nos. 1-3 & 5. PL X No.6.
2. E. I. T. P. 147.
3. Ibid. P. 146.
4. Ibid, P. 147. But comparisons should be made with certain Ganges valley figurines, when good publications are available.

MOTHER-GODDESS TYPE :

Figures of the so-called 'Mother-Goddess type' in India are numerous, but out of these, Gordon has classified three well represented types. He calls them, 'the Archaic', the 'Hellenistic' and the 'Indian' types.[1] The Hellenistic and Indian types are dated by him as, roughly covering a period from 180B.C. to A.D. 300. Of the Archaic type, a very interesting and most important statuette, in chloritised mica-schist, unearthed by Marshall from the Sirkap stratum III[2], is a good specimen. It is dated by him to the first century B.C. (Scythe-Parthian Period). The figure is naked except for a jewelled chain, crossing the chest diagonally from shoulder to opposite hip. This form of jewellery is known in Sanskrit as 'Channavira.' It appears on an Etruscan Ash-chest[3] in the Florence Museum, ad well as on the Roman mosaic fragment, excavated at Sabatha.[4] This Taxila figure wears two long plaits down the back and stands in a stiff, frontal attitude, closely conforming to the iconography of the 'archaic' terracottas. Others of this 'Archaic' type occur in ivory and bone such as Marshall's Nos. 43, 45, and 46 of PL. 203, coming respectively from Sirkap IV, II and the Mahal site.

Other interesting examples of this 'archaic' type are found in the votive tanks from Sirkap (PL. XII) These 'model shrines' or 'votive tanks' consists of a walled enclosure with lamps at the four corners, and birds on the three containing walls. There is a

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1. Gordon, 'The Mother Goddess of Gandhāra'. Antiquity, (1937) P.73.
2. Marshall, Taxila, PL. 211, No.4a.
3. Lawrence, D. H. 'Etruscan Places' (Lond. 1932) PL. opposite page 192 'Volterra-Ash-chest, showing Acteon and his dogs.
4. Photograph shown at the Inst. of Arch., Univ. of London, but still unpublished.
5. Petric, F., Now in Edward Museum, U. C. L. : Gordon.

shrine in the centre of the fourth wall, and steps leading up to the shrine, outside which stands the figure of the 'Mother-Goddess'.[1] In some examples of these votive-tanks, Gordon says that the Mother Goddess has the 'Cornucopia' and the mural crown. He thinks that this particular cult of the Mother goddess came into north-west India at the time of Antiochus the Great of Syria about 210-200 B.C. although he admits that the cult was not entirely foreign to the soil, "But it took on at this time a Syro-Persian complexion, which is observable in the votive terracottas and subsequently in the Hellenized Mother-Goddess with her cornucopia and mural crown."[2] He also believes that these Mother-Goddesses are, in fact, manifestations of the Persian 'Anaitis,' as the principal deity of Gandhāra. This identification must be read in connection with what is known of the cult of Śri, which clearly approximated in India to that of the 'Tyche' or 'Fortuna' of the Classical area. A Gandhāra female head wearing the mural crown was in the Haughton collection, but now can not be traced. It was in schist and was undoubtedly Gandhāran, and cannot be dated before the 2nd century A.D. These facts make the complexity of the problem evident. It must be stated, however, that in the Indian peninsula, the cult of the 'Mother Goddess' belongs to Southern India not to Northern India. The Northern conception of GAURI , young Goddess, is fart more 'Greek' than that of Durga or the southern Ammas.

Of the 'Hellenistic' Mother-Goddess type of Gordon, Marshall's No.6 (PL.VI) is an excellent specimen. It is a 4" high ex-voto relief of a standing female figure. The figure is nude and subtly modelled. It comes from the second stratum of Sirkap and is

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1. Marshall , Taxila, PL. 136, Nos. 155, 156, 159, 163, aa, bb, etc.
2. Gordon, 'The Mother Goddess of Gandhara' P.77. The Goddesses with the Mural Crown are city Goddesses. The cornucopia is not strictly associated with a Mother Goddess cult nor has Anaitis anything in common with the Greek or Syrian conceptions of the Mother.

therefore dated by Marshall to the late Saka-Parthain period. Figurines of this beautiful type are usually cast from extremely well worked double moulds, which may have been clitches from modelled originals. The use of such a double mould is admittedly a late feature. As in most cases of double moulding, the figurine is hollow. A hollow body allows for quicker and safer firing in the kiln, and has the advantage of being much lighter than a solid figure. The heads are almost always solid, the face being, in fact, a moulded mask fitted to the front of the head. A single face mould has been used on different heads and it is therefore, quite usual to find different shaped bodies on the same face.

Closely comparable specimens of Marshall's No.6, are found at Seleucia. Miss Van Ingen's illustrated specimen No.24c on PL.II of her splendid work 'Figurines from Seleucia on the Tigris' bears a striking resemblance.[1] Her figurine has the hands hanging at the sides at full length and both are naked and without ornaments of any kind. The hips of the Seleucia figure are not so well-developed, but the treatment of the stomach, breast and shoulder, are strikingly similar. The Seleucia figurine came from Level IA of the Trial Trench No.4, which is dated from 115-20 to approximately 200 A.D.[2] Other comparable but multilated specimens from Seleucia are 94a and 94c (Her. PL.VI),[3] which came from the fourth or third stratum respectively and dated from about 290 to about 143 B.C. and 70 to 115-20 A.D.

Nos. 17, 18, & 19.

All these three standing female figurines come from the second stratum of the Bhir Mound and share certain common features,

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1. Wilhelmina Van Ingen, op cit, Humanistic series XLV, 1939 (Univ. of Michigan Press)
2. Ibid, P. 6 & 62.
3. Ibid, P. 75.

though they undoubtedly differ in the decorative details. They are all female figures, wearing the head veil and a tight skirt, holding a bird in the left hand, probably a dove. The ornaments worn by these figurines are more clearly shown in No. 18 and 19 which Marshall thinks, show unmistakably "Egyptian" influence, [1] especially in their stiff attitude and the hair style. Their ornaments consists of a hip-girdle, necklace, bangles and flower-rosettes on the head; the hair is braided on either side of the head. The dove, calls to mind a familiar type of Aphrodite. No. 17 is Gordon's 'Hellenistic' Mother Goddess type. This figurine holds the dove in the left hand which is placed between the breasts. The skirt is drawn tight across the hips, leaving a shallow depression to indicate the separation of the legs. Marshall notes that the arms keep the Ionian attitude proper to the female sex. He, also, believes that "Possibly the type may go back to an Ionian tradition introduced into the Panjab during Achaemenid times." [2] A comparison of this figurine (17) with a number of Miss Ingen's figures from Seleucia will at once bring out obvious similarities. Closely comparable specimens are her Nos. 33, 37b, 38b and 40 on PL.II and III. They are all unfortunately headless, except No.40. Her 37b, which came from the Level II and is consequently dated from 70 to 115-20 A.D., shows the right hand at full length by the side, while the left is placed under the left breast. The separation of the legs is stressed. Ingen's No.40 preserves the head which in form and hair style is of a generalized classical type. It comes from the first stratum and is dated from 115-20 to 200 A.D. [3]

Nos. 9, 10, 15.

These figurines, obviously all of a female deity, are rendered

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1. Marshall, Taxila P.440. In modern India RATI, the Goddess of Love is often shown with a parrot. (PL. 132)
2. Ibid. P. 447.
3. Ingen, op cit, P. 6 & 64-65, PL II & III.

in relief on plaques, and except No.15, which comes from the second stratum of Sirkap, the others were all found in the second stratum of the Bhir Mound. All these standing figurines share in common undeniable Indian features. Their arms are at full length at their sides, holding out their full-flowing skirts or 'saris' on either side of the body. Apart from their elaborate hair style, underneath the heavy veils, the ornaments consist of circular ear-discs, bracelets and a necklace. These standing female deities, of which No.9 (PL.VII) is typical may be classified under Gordon's 'Indian Mother Goddess' type. We are familiar with the type of figurine No.9, which is commonly found engraved on the socalled 'Maurya Stone rings,[1] which we shall discuss later. At Hāstināpur these type of figurines,with flowing skirt, occur in Period III, dated by Lal between 600 B.C. to 200 B.C.[2] However, the closest parallel to these Taxila figures is found in the Ahichchatra figurine No.28, PL.XXXIII in the 'Ancient India' (No.4). This is a bust with two lateral horns and a similar central protuberance in the middle of the trefoil head dress. It comes from the stratum VII, dated between 200-100 B.C. and is classified by V.S. Agrawala[3] as sub-type (i) of his Type 4. A similar female torso with elaborate head dress from Hāstināpur is illustrated by Lal[4] which came from his Period IV (200 B.C.-200 A.D.). She wears large heavy circular ear-discs, and an elaborate necklace.

Nos. 12, 13. (PL. VIII)

Both these plaques came from the Bhir Mound; No. 13 being from the spoil earth and No. 12 from the second stratum. Marshall

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1. Infra P. ....
2. Anc. Ind. Bulletin, No.10 & 11, PL.XXXVI Nos. 1 & 2.
3. op cit, No. 4, P. 115.
4. op cit, No. 10 & 11 PL.XL, No. 15.

and that these from flat moulds are from c.120

describes them as a votive-relief with lower half of a standing female deity with full flowing skirts. Their right hand rests on the waist and the left holds the side of skirt. No.13 is broken above the neck and No.12, above the waist. Both are strikingly similar in the style of their drapery. The figures wear an upper garment, rendered in vertical folds, which terminate above the knee, and a flowing under-skirt which is drawn in below the knee. The end of the skirt is looped round the legs, short at the front and longer at the back, which gives the garment a realistic transperent appearance. A close parallel of this style of drapery, especially the looped termination of the skirt is found in two 'Mithuna Plaques' from Ahichchatra, illustrated by Agrawala, [1] dated to the Śuṅga period (Pls. IX & X). Another similar terracotta female figurine from Taxila, not illustrated or described by Marshall, but dealt with by Gordon [2] deserves mention here as it bears an unmistakable likeness to both figures Nos. 12 and 13. It came from the Mohrā Moradu site and is treated by Gordon as late Śuṅga. This is the figure of a girl, having the typical trefoil elaborate head ornament, profusely adorned with ear-rings, necklace and bracelets, the body being heavily draped. The figurine stands with the right hand on the hip as Nos. 12 & 13, the left hanging at the sides, holding part of the skirt. The head dress is described by Gordon as the typical 'Muttra head dress'. Indeed, it is true that the development of these 'Śuṅga' terracottas can best be traced at Taxila and Muttra. Indealing with these types of figurines, Gordon observes, "It can be said with some certainty that figures with applied decoration, good moulded faces and crude modelled bodies date from c. 200 B.C.

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1. Agrawala, op cit, No.4, 'Terracotta Figurines of Ahichchatra, District Bareilly, U.P.' PL.XXXI, No. 16 & 17. P.112; Also No.32, PL.XXXIV, a standing female figure with looped fold of lower skirt in identical attitude. Same date.

2. Gordon, E. J. T. PL.XI, No.3. P.155, 190.

and that those from flat moulds are from c.120

to c. 120 B.C., to C. 40 B.C. at Taxila, where they were superceded by figures of ultra-Hellenistic style produced by those arch-copyists and philo-Hellenes, the Parthians. At Mathura, Kosambi and other sites this style must have persisted longer, as only a few Hellenistic terracottas are found outside the Gandhāra area; we may be sure therefore that the Śunga technique endured in a modified way well into Kushan times." [1]

Agrawala [2] illustrates a Mathura terracotta of this typical 'Śunga' type which is very interesting. It shows how one of the image-makers affixed a typical Śunga head of the late moulded-plaque technique to a crude body and covered the join by an applied stamped collar of the same style as is found in more primitive terracottas. The use of 'Śunga' in dating these terracottas may be misunderstood in view of the general dating of Sirkap and the Bhir Mound. Here they are treated as pre-Kushan, though admittedly kindred types survive into Kushan period.

<u>Mother and Child Type.Nos.23-25. PL.XI.</u>

Marshall's three specimens of this widely spread type are virtually identical and have rightly been classified in one group as 'Draped female deity standing, with child on her left hip.' [3] No.23 and 24 came from the second stratum of the Bhir Mound, but No.25 is from the sixth stratum of Sirkap. Gordon is inclined to treat these Taxila figures of the Mother and Child on flat plaques, as late as Śunga, or more specifically as lying on the borderland

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1. Gordon, op cit, P. 190-1; 155. Here the necessity for a definition of "Helenistic" is evident.

2. Agrawala, Op cit, PL.V, Fig. 14.

3. Marshall, Taxila, P. 448.

between the 'Śuṅga' and the 'Kushān' style, and therfore not earlier than about 40 B.C. The group is characterised by ornate head-dresses and elaborately drawn drapery and ornaments. He observes, [1] "The bulk of Śuṅga type figures must be late rather than early, as the head dress of some of the Mathura types, with moulded figures from Sar Dheri which are unlikely to be earlier than 1st century A.D. and the large ornate head dress of turban style is found in Kushān sculpture, at which period also appear the mother and child sculpture, ~~at which period also appear the mother and child~~ sculptures which link with terracottas of Śuṅga type from Taxila."

Marshall's plaque No.23 represents the mother with the skirt of her 'sari' flowing out on either side, holding the child on her left hip. The upper part of the child's body is turned full to the front, the right hand on the mother's left breast. The head dress is very elaborate and there are heavy ear-pedants, a necklace and a tasselled ball fringe on her upper garment. The child, also has an elaborate head dress, ear-pendants and girdle. Gordon records two other plaques of this series from Taxila, not mentioned by Marshall. One came from the Bhir Mound at a depth from 2' to 4' below surface (margin of 1st and 2nd strata), which he does not illustrate. The other which he illustrates [2] is described as being identical with the first and came from close to the surface, near Mohṛā Moradu. In describing them he says, [3] "these are all from the same mould . . . and are of Muttra type with the same round flat nosed face. Of the same period are PL.XI, 5 and XII, 4 the former from Mohṛā Moradu and the later from 3' 4" B.S. at the Bhir Mound. The woman with the child is of a type that must be recognized as Śuṅga and rather late Śuṅga at that, as it has nothing in common

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1. Gordon, E.I.T. P.192. Terracottas of the Mother and child type are common at Patna and Rājghat, but publications are not yet, unfortunately, available.
2. Gordon, E.I.T. PL.XI, 3.
3. Ibid. P.155.

with the art obtaining at Bharhut or exemplified by the early Yakṣa figures." His Mohrā Moradu figure wears the typical Mathura head dress and on stylistic basis he dates it to the later half of the first century B.C. However, the entire costume of the mother and child is unmistakably Indian, when compared with the Seleucia mother-and-child series.

Three example of the woman-holding-a-child from Seleucia are illustrated by Miss Ingen[1] on PL.IV of her book (Nos.55-57). The mother in these plaques stand on a low, rectangular plinth, with the right leg flexed and the nude child straddling her left hip. The mother supports the child's back with her left arm and holds its knees with the right hand. These three figurines came from either the first or second stratum[2] and may be approximately dated between 70-200 A.D. Other figurines of the mother-and-child types, in a multilated condition, from Seleucia[3] show either the mother suckling the child with her left breast or cradling it in her arms. If the Seleucia parallels are to be given full weight the the possibility of a later date for the Indian examples must be borne in mind. The mother and child certainly was common as an art form in the first and second centuries A.D.

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1. Van Ingen, op cit.

2. Ibid, P.68.

3. The excavation at Seleucia was conducted by the University of Michigan with the coperation of the Toledo Museum of Art, in 1927-1932 and 1936-37. It was mainly confined, to trial trench digging and revealed four levels of occupations. The lowest Level IV is assigned to the Seleucid period, dated from about 290+143 B.C. The three upper levels are Parthian : Level III was occupied from about 143 B.C. to about 69-70 A.D., Level II from 69-70 to 115-20 A.D., and Level I, from 115-20 to approximately 200 A.D. - P.6.

Nos. 27-31, 35 and 36.

The find spots of this easily recognizable group of standing male figures are as follows :

No. 27	=	Bhir Mound	II
" 28	=	" "	II
" 29	=	" "	II
" 35	=	" "	II
" 30	=	Sirkap	III
" 31	=	"	IV

This group of obviously very important terracotta male figures, therefore mostly come from the second stratum of the Bhir Mound. Marshall describes his No. 27, 28 and 29 as standing male figures in full Indian dress, wearing the 'dhoti' and with or without a scarf over the shoulder,[1] inspite of the fact that, his No. 28 is apparently nude and he identifies Western influence in the dress[2] on No. 27 (PL.XIV). He describes Nos. 30 and 31 as standing male figure in Hellenistic (yavana) dress and dates them between the first century B.C. and the first century A.D.[3] In consideration of the stratum in which his Nos. 27, 28 and 29 were found and the details of the dress, Marshall accepts them as the product of Mauryan art. He says " . . . all the terracottas from the Bhir Mound are characteristically Indian and clearly indicate the direction from which the art and crafts of Taxila drew their inspiration under the rule of the Mauryas."[4]

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1. Marshall, Taxila, P. 448 and PL.133.
2. Ibid, P. 440.
3. Ibid, P.448
4. Marshall, Taxila, P. 440.

Unfortunately no terracottas have been found at any stratified site in a clear Mauryan context. Indeed, recent excavations at Patna and Rājghat make it probable that terracottas were rare in the lower levels of these sites. It is difficult to agree with Marshall's dating for these figurines.

Plaque No. 29 is a figure of a standing male, broken laterally above the knee. He wears a 'dhoti' held by a knot in front, and a richly embroidered shawl flung loosely over shoulders, leaving the upper body bare, except for the necklace and a typical high-turban, slightly inclined to left side of the head. The right hand is on the hip and the left hangs down by the side. An identical but complete figure, was found, in the stratum VII of Ahichchatra, dated between 200-100 B.C. [1] (PL.X, No. 48) Agrawala's figure supplies us with the missing details of the Taxila figure. It holds a lute in the left hand. The Ahichchatra figure also wears the same protuberant turban inclined to the left. Two other 'Mithuna Plaques' from the same site and from the same stratum (VII) show identical male figures. These two plaques (Nos. 12 and 14 PL.IX) display the same head-dress, rich drapery, ornaments and pose, and are approximately dated by Agrawala between 200-100 B.C. [2] Of the many other Ahichchatra figurines of this type, mention may also be made of the illustrated specimens Nos. 15, 16, 17, 11, 12 of his PL.XXXI. (see PL.IX. Nos.16, 17) At Hāstināpur they occur in Perios IV, dated between 200 B.C. to 200 A.D. Lal's illustrated plaques Nos. 6 and 11 of his PL.XXXIX are good specimens. [3] For other comparable specimens from Bulandibagh, we may refer to Kramrisch's illustrated specimen No. 10 of her Pl. VIII, where although she identifies it as Śuṅga, she actually describes it as "a delicate piece of Hellenistic Modelling. [4]

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1. Agrawala, Anc. Ind. Bulletin, No.4, P.106, PL.XXXV, No.48; P.118,110
2. Agrawala, op cit P. 110, 112 PL.XXXII.
3. B. B. Lal, Anc. Ind. Bulletin No. 10 & 11.
4. S. Kramrisch, J.I.S.O.A. Vol. VII, 1939, P.108 & PL.VIII No.10.

These types of figures with their readily recognizable characteristics occur plentifully at Muttra and Ahichchatra as elsewhere in Northern Indian sites. The term 'Śuṅga terracotta art' is however, not satisfactory for one thing,,the geographical distribution of these figurines, far exceeds the geographical boundary of the Śuṅgas. Gordon clearly shows in his paper that most of these socalled Śuṅga terracottas are late, indeed bordering on the early Kushān period, including this group. He says, [1] "All the foregoing tends to indicate, that a style of terracottas which has been lebelled Śuṅga, flourished from 120 B.C. to at least 40 B.C. and in places probably as late as 80 A.D. Śuṅga is not a sufficently comprehensive label to cover the whole period during which these terracottas were made." Our analysis of the stratification of Sirkap and the Bhir Mound points to the same conclusion.

Of the above mentioned 'Mithuna figures' from Ahichchatra, our Taxila specimen No.35, is a beautiful complete specimen. The male figure wears the same turban, dhoti, shawl, necklace and ear-rings, and is shown holding the shawl or scarf with the right hand. The female wears a head-dress with knotted hair and a long veil falling down on either side of the head, and, also, large ear-pendants and a necklace. Comparable specimens from Ahichchatra are Nos. 16, 17, 11, 13, 12 and 14 (PL.IX) [2] all from the same stratum and dated between 200-100 B.C. It is interesting that the mould from which our Taxila piece is fashioned, was also found (Marshall's No. 35a in his PL.133). Marshall further records that a similar plaque, but broken, was found in the second stratum of Sirkap, [3] which, however, he does not illustrate. This may be held to prove the correctness of the above observations. These

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1. Gordon, E.I.M. P. 191.
2. Agrawala, op cit, Pls. XXXI and XXXII.
3. Marshall, Taxila, P. 449.

so-called Śuṅga terracottas may well have continued into the Kushān period. Curiously enough Marshall dates the latter plaque to the second century B.C. which as already pointed out is hardly justifiable, since it belongs to Sirkap, stratum II.

Marshall 's terracotta figures Nos. 30 and 31, as already stated, came from the third and fouth strata of Sirkap, which are dated by him to the first century B.C. and first century A.D. respectively. Incidentally, these two figures share, apart from other decorative details, a certain roundness of treatment with No. 27 (PL.XIV) but all of them are headless. Marshall describes these two standing male figures as, wearing the 'himation' and 'chiton' and as being in the same attitude, i.e. with the right hand on the hip and the left leg forward. They must be compared with the Bulandibagh figure illustrated by Stella Kramrisch, to which we have already alluded to. Here the 3rd stratum of Sirkap is treated as being Kushān and the 4th as being Śaka.

Nos. 40, 41. Squatting Pot-bellied Dwarfs (Kum-bhāṇḍa)[1]

Both of these grotesque dwarf figurines with identical faces and in the same squatting posture, came from the second stratum of the Bhir Mound and are likened by Marshall to the dwarfs at Sāñchī, notably those on the Western Gateway.[2] The bulging eyes and coiled head-dress of these dwarfs with their large ear-ornaments resemble the early Kuvera types of numerous Gandhāra sites. Although they bear some resemblance to the dwarf-grotesque figures of the Western World they are portrayed in purely Indian fashion. An identical figurine to our No.40, is described and illustrated by

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1. Marshall's PL. 133.
2. Marshall, Taxila, P.450.
3. Gordon, E.A.I. P. 159; PL.XVIII, NO.5.

Gordon in his paper, which he reports as coming from 3' 5" B.S. or in other words, from the first stratum of the Bhir Mound. In dealing with this series of figurines, he says, [1] " . . . being of Hellenistic Parthian style it is impossible to date them earlier than early first century B.C. The Bhiknapahari figure is stylistically later, the well shaped body, with exposed male parts being paralleled by examples from Sar Dheri and Bhita; in the sculptures well-modelled bodies of this style are mostly of Kushān date. The cap head-dress is common to all these figures and in many instances including the one from Bhikanapahari, is of the Phrygian or 'Cap of Liberty Style', which is of Iranian origin and worn by Scythian and Parthian tribes." He then continues, "The obvious stumbling block encountered in the above attempt at elucidation is the dating of the Bhir Mound finds as now generally accepted, with the exception of Mr. Codrington and myself. The more one sees of the terracottas of the Gandhāra region, the more one becomes convinced that the Bhir Mound dates are incorrect. Whatever the dating may be for the lower levels, it is difficult to believe that the top five feet can be dated earlier than 160 B.C. and the site may well have been occupied until much later, as the crude figures from Sahri Bahlol, shown, in Pl.X,5 along side similar ones from the Bhir Mound, date from the first century A.D." [2] It is hoped that the analysis of the site now put forward will help to clarify these doubts.

"Hellenistic" heads : Nos. 46-50 (Pl.III)

All these terracotta heads come from different strata of

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1. Gordon, E. I. T. P.159; PL.XIII, No.5.

2. Gordon, op cit, P. 159.

Sirkap, being as follows :

No. 46 = Sirkap III
" 47 = Do III
" 48 = Do II
" 49 = Do IV
" 50 = From 5' below surface at the Dharmarājikā monastery Court A.

Apart from the artistic superiority and delicate modelling of all these heads, which justifies their treatment in one group, their unmistakable western features are at once apparent. Marshall even goes to the extent to saying that, "some of these were probably produced from imported (western) moulds".[1]

No.46 is perhaps the finest of all. It is a female head broken at the neck, wearing a wreath and head band, binding the neatly parted hair, with rosettes above the ears and a high coiffure. Marshall says that the style is "strikingly Hellenistic, like that of many terracotta heads from the mouhd of Akra near Bannu".[2]

No. 47 is slightly different from the above in having the hair dressed in wavy fashion, parted at the middle and held by a fillet, presumably of gold or silver. This has, also, similar rosettes above the ears.

No. 48 is similar to the above, except that the head has prominent ear-cones. Nos. 49 and 49a are virtually the same as No. 47.

No.50 is the head of a male figurine with a beautifully worked high somewhat conical head dress.

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1. Marshall, Taxila, P.441
2. Ibid, P.451. Akra was a rich site though it is now utterly destroyed. No evidence survives for Marshall's opinion.

It is known that the whole Gandhāra region from Jalālabad to Taxila, as well as the Ganges sites as far afield as Basarh,[1] and Patna have yielded excellent terracotta heads of this type, but often their exact find spot and date are debatable. They have a variety of head dresses, the commonest being a wreath of the conventional laureate type. Others have either small moulded or large applied rosettes on their head dress; or have a diadem with the waved hair, parted in the middle. Still others again, have the hair gathered up into two knobs or horns, on the top of the head. The rosetted types as a rule have the hair in a single thick braid falling down the centre of the back.[2]

Three terracotta heads (infact torsos) were excavated from Sar-Dheri, which belong to this series and are dated by Gordon between c. 50 B.C. to c. 50 A.D.[3] One particularly beautiful specimen is illustrated by him in his PL.XIV, No.3 of the same paper, which bears a striking resemblance to our Nos. 46 and 47. But, by far the more important examples of this type come from Seleucia. Of the numerous specimens of 'Hellenistic women's heads', illustrated by Miss Ingen,[4] her No. 926 of PL.LVIII, No.976 of PL.LIX, No. 984d of PL.LIX and No. 994 of PL.LX., clearly show a resemblance to our first five Taxila specimens. Ingen's No. 994, which may be taken as a typical example, shows her with the hair arranged in two rows of tight curls across the forehead. The hair is rolled across the head from ear to ear and at each end there is a rosette. It may be compared with our Taxila No.46 (PL.XI) Ingen's No. 984d is another good example which may be compared

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1. For Basarh specimen, Gordon, op cit, PL.XVIII, No.1 & P.164.
2. Gordon, op cit, P. 160.
3. Ibid, P. 163.
4. Ingen, op cit, PL.LVI - LXIII.

with the Taxila No.4 (PL.XI). It similarly shows the hair parted in the middle and held by a fillet or er diadem. These specimens from Seleucia all come from the first three strata only, that is to say, from the Parthian strata.[1] They are especially concentrated in strata III and II. In other words, they are found between 143 B.C. to A.D. 115-20.

However, even closer confrontations are the heads from Tarsus. Comparable Roman or 'Hellenistic' Roman groups of terracotta female heads from that site, illustrated by Goldman[2] are Nos. 381-385; 387-389 and 393 in his Plate 241, which are dated by him between mid-second century B.C. to later part of the first century A.D. This series of Tarsus heads is classified by him under "Heads with Diadem and veil" and "Heads with ivy wreath". They are all from either the 'Roman Fill' or 'Hellenistic-Roman Unit'.

Another terracotta head from Taxila which has close parallels in many Indian sites as well as at Seleucia is Marhall's No. 51. It was found in the second stratum of Sirkap, and is classified by him as 'Partho-Greek type'.[3] It is the head of a male figurines with typical conical cap of the Parthian style. Close parallels to it, some of them having identical headresses, are illustrated by Miss Ingen from Seleucia.[4] The Musician figure No. 538 (her PL. XXXVII) with identical head dress from Seleucia came from the first stratum and must be dated between 115-20 to 200 A.D.[5] While her No. 408, (PL.XXVIII); Nos. 411, 414, 417, (PL.XXIX), No. 994a, (PL. XXXV) and No.530, (PL.XXXVII) are all from the third stratum,[6] dated between 143 B.C. to 70 A.D.

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1. Ingen, op cit,P.237=No.926;P.245=No.976;P.248=No.994&P.246=984d.
2. Hetty Goldman, Excavations at Gozlu Kule, Tarsus, The Hellenistic Roman Period, Vol.I,Plates&Texts,P.356-7&31(Princeton,NewJersey,1950)
3. Marshall, Taxila,PL. 134, P.451.
4. Ingen op cit, P. 166.
5. Ibid, P. 139, 140, 165, 166 and 246.
6. Ibid,

These facts require a modification of the term 'Hellenistic' usually applied to all this group. The matter is of the greatest importance for a head of this type has been excavated at Patna by Dr. Patel in his recent excavation. The reading of his clear stratigraphy largely depends on the dating of the group. This analysis points to a date lying not earlier than the first century A.D.

STONE OBJECTS

Taxila and its country side is singularly poor in good material for the manufacture of stone-objects of daily use. Only two kinds of stone are locally available for that purpose, namely, the intractable lime-stone of the foothills round about Taxila; and, the coarse and spongy lime 'kankar' or 'kañjūr' as it is locally known, which is abundant in the alluvium of the plain. Neither of these two varieties, although freely used as building material, are suitable for manufacturing small highly finished articles; the limestone could not be worked well because of its almost flint like hardness and the Kañjūr, because of its rough and soft nature. The great variety of hard stones used in manufacturing utensils and other articles of daily use in Taxila suggest unmistakably that they were obtained from the nearby countryside. Some of them are obviously of distant origin, as far afield as Mathura. These stones are: blue-serpentine, Sang-i-abri, basalt, quartzite, pyroxene, hornblende, hornblende-gneiss, gneiss, granite, diorite, epidiorite, epidote-quartz, dolerite, black basanite, black and white syenite, Lydian or touchstone and chert. Other semi-precious stones used for personal and other small ornaments including beads are :crystal, agate, 'porcelain-agate',[1] chalcedony, cornelian, red and green jasper, agate-jasper, jade, jadeite, jade-nephrite, turquoise, lapis-lazuli, amethyst, garnet and beryl.

The articles found from Taxila include: pivot-stones, querns and mullers, pestles and mortars, grinding mills, household vessels of various kinds, lamps, toilet-trays and vases, burnishers, touch-

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1. This curious terminology, foreign to geology has been used by Marshall because of the remarkable resemblance of this stone to porcelain. It is found exclusively in Taxila in the form of round flat discs intended presumably for some inlay work. see- Marshall, Taxila, P.478, 505-6.

stones, palettes, spindle-whorls, potters', 'konoras' and 'thtwas', amulets and sacred ringstones, moulds, stones for incrustration and inlay work and other miscellaneous objects such as knife-handles and dice. In addition to these there are a number of finger rings, seals, gems and the like, manufactured from precious stones. Besides, a large number of most interesting sculptures have, also, been unearthed.

On the basis of a careful examination of the different varieties of stones occuring in the two sites, Marshall has made an interesting classification, having a direct bearing on the chronology of these stone-objects in particular, and the different phases of the sites in general. He finds four varieties of sandstones used in the Bhir Mound upto the beginning of the second century B.C.[1] They are 1) grey Taraki or Kambial sand stone; 2) a spotted red and white sandstone querried from Mathura near Agra, 3) a buff-coloured fine-grained hard sandstone, usually with small black spots, from Chunar near Beneras; and 4) a greyish quartz sandstone of very hard texture. Other softstones found in the Bhir Mound are, Steatite alabaster and slate, all of which are plentifully available in India and easily obtainable at Taxila.

Marshall thinks that the advent of the Bactrian Greeks in Taxila marked a descernible preference for Schist and Phyllite for the carving of stone reliefs and also, turning on the lathe for the manufacture of vessels, which indeed, became increasingly common. Together with these, he found objects made of soft stones in far greater quantity in Sirkap and other later-dated sites than in the Bhir Mound, as well as the introduction of several

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1. Marshall, Taxila, P. 479.

other varieties of new stones, uncommon in the earlier sites. These are: Schist, micaceous schist, horneblende-schist, phyllite, phyllite-slate, and idurated clay or mudstone. While stones used for sculptures are schist, micaceous schist, chlorite-schist, quartz-mica-schist, phyllite, steatite or soapstone of various kinds, Taraki grey-sandstone and red ferruginous clay-stone. He observes[1] "Of these, the commonest by far and the most important are the several kinds of schist and the dark grey phyllite, which is used for the vast majority of Gandhāra sculptures. The use of both schist and phyllite was intimately bound up with the history of sculpture at Taxila. The earliest specimens of schist are . . . referable to the latter part of the 2nd century or the beginning of the 1st century B.C. From that time onwards schist comes more and more into vogue, and during the Parthian domination, is used commonly for caskets, household vessels, lamps and sculptures. For the last mentioned, a chloritised micaceous schist was at first favoured in preference to other stones . . . but in the first century A.D. phyllite began to supercede schist . . . and from that time onwards nine-tenths or more of the carvings found on the N. W. F. and at Taxila are made of this stone." The chronology is based on Marshall's opinion that Gandhāran sculpture dates from the 2nd century B.C.

A glance at Marshall's stratigraphic chart of stone-objects[2] from the different strata of the two sites will clearly show that his Dishes, Saucers, Standard cups, Bowls and Trays,[3] the objects which have important significance in ascertaining the chronology of the two sites, occur only in the later stratum II of the Bhir Mound sparcely, such as his Nos. 36, 37, 42, 48, 50, 93 and 96.

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1. Ibid, P. 481.
2. Marshall, Taxila, P. 483-5.
3. His class VII, VIII, IX, X, and XIV respectively.

These objects again are found in the lower VI, V strata of Sirkap, such as his Nos. 38, 39, 63 and 104e. This bears out consistently the overlapping of the two sites, as noticed earlier. But admittedly the greater bulk of the stone-objects at Taxila occurs in the third and second strata of Sirkap, or Marshall's late Śaka-Parthian strata. As we shall see, most of them must be classified as products of Roman art, which infiltrated into Taxila, as imports by foreign intermediaries.

Among the numerous stone-objects, we shall first examine a class of distinct and very interesting series in the form of 'toilet-trays', mostly embellished with striking and beautiful designs. Marshall illustrates and describes 35 such 'toilet-trays'[1] mostly round in shape and usually divided into two or more compartments, ornamented with figures or scenes in relief. In describing the subjects engraved on these trays, he says, "Most of these subjects are clearly Hellenistic and there can be no doubt that this kind of toilet-tray was introduced with Hellenistic culture from the west, where specimens of them have been found, especially in Egypt."[2] It is rather strange that even when he draws a parallel between his specimens and that of Flinders Petries' similar Trays from Egypt, which are categorically classified under 'Roman Trays,'[3] he harps on his favourite, but misleading term, "Hellenistic art", which indeed is unfortunate. It is pertinent to stress the point here that the classical influence at Taxila is not the outcome of Alexander's campaigns in India or of the subsequent establishment of Greek kingdoms in Bactria and the Indus valley, but is primarily based on the achievement of the art of the Roman empire which, at

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1. Marshall's Nos. 62-97.
2. Ibid, P. 493.
3. See, Petrie 'Objects of Daily use, P.37-39 and PL.XXIV, Nos. 23-31, (Publication of the Egyptian Research Account and British School of Archaeology in Egypt, 1927.)

a later date became prominant in the East. Roman objects of art filtered into India and became known to local Indian craftsmen, which Roman merchants and other travellers could easily carry over long distances. The contemporary local imitations of these imported objects significantly show little understanding of the classical subject matter they embody. Apart from the Begram treasure with its bronze and Syrian glass, many of these objects were of a portable and unpretentious nature. Buchthal brings home this important, but often neglected point briefly in his brilliant paper.[1] He says, "The Romans never attempted to enter upon Alexander's heritage. Their legions stopped on the banks of the Euphratis, 600 miles from the frontiers of the Kushān empire. The chief aim of Roman policy in the East was the safety of the trade-routes. Roman art reached the monasteries of the N. W., not through hostile armies of occupation, but through peaceful traders and caravans."

Usually the lower half of these toilet trays, is blank and is hollowed, presumably to receive some kind of cosmetics. The upper half is embellished with some figural or ornamental device. Indeed these trays provide us in details, with a most interesting example of the reworking of Roman forms and art devices as transformed by the hands of Indian craftsmen. They illustrate a wide display of classical imagery in its various aspects, transformed and often misunderstood. Some of the characteristic Roman ornamental motives like the scallop-shell, common in Roman lamps, occur frequently on these trays. Incidentally, it is interesting to note that an actual specimen of a Roman lamp was found unstratified at Jandiāl[2] (Pl.XV) which, however, is dated by Marshall to the 'Early Medieval Period'. For the scallop-design (see Pl.XVI, No. 112) derived

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1. H. Buchthal 'The Western aspects of the Gandhara Sculpture' 1945. P.23.

2. Marshall, Taxila, No.115, Pl.142, P.504 Jl. Mound "D".

from Roman lamps, we may compare our Taxila specimens Nos. 67, 76, 85, 86, 88 , 91 and 93, with Walter's illustrated specimen of Roman lamps in the British Museum.[1] It may be interesting to note here that actually two ladles in the shape of a shell, from the first stratum of Sirkap were found. Of these two illustrated specimens of Marshall, No. 107 is of yellow steatite with eagle-headed loop handle; and No.108 is of grey steatite.[2] It is clear that this shell design became a very favourite form of decoration during the Roman period and found decorated on almost all conceivable materials. Pierre Gusman illustrates a relief on the tomb of Laberia Felicia,[3] where a lady is shown within a beautiful shell design. The same author also illustrates another relief on a sarcophagus,[4] which depicts the birth of Venus within a shell design. His another illustration on a silver patera[5] shows Venus within a shell. The rim of the patera is also beautifully embellished with numerous shells.

The stratification of 35 of the Taxila Toilet-Trays is as follows

Nos. 95, 96,	=	Bhir Mound	II
No. 63	=	Sirkap	V
Nos. 62,78,79, 82,83,84	=	Do	IV
" 67,75,85	=	Do	III
" 66,70,72	=	Do	I
" 66,65,68, 69,71,73,74,76, 77,80,81,86,87, 88,89,90,92,93, 94,97.	=	Sirkap	II

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1. Walters, Cat. of the Greek and Roman lamps in the B.M.(London,1914) P.XXVIII.
2. Marshall, op cit, PL.141.
3. Pierre Gusman, L' Art Decoratif De Rome, II (Paris) PL.100.
4. Ibid, III, PL.151.
5. Ibid, I, PL.26.

Marshall's No.62, [1] (PL.XVII), which he considers to be typical product of the 'Hellenistic age and superior to that of any of the other trays, turned up in the fourth stratum of Sirkap and is dated to the 2nd century B.C. [2] It is circular in shape and is of a fine grey schist with beaded border, encircled by a band of running spirals. He describes it as an "erotic scene: to the left, standing male figure, with hooded mantle over back: to the right, kneeling woman clad in 'himation or shawl, which her companion is pulling from her. Beneath them, a ripple line of small rocks with larger rock on extreme right, which the woman holds with her left hand. On back of tray, full blown lotus in low-relief. This is a familiar scene in Greek art, the two figures being usually a satyr and a nymph, " [3] Indeed this beautiful specimen has a certain distinctiveness, which the others of the series do not possess. It is not divided up into compartments and the figures stand out in high relief on plain background. Marshall in its praise adds, "The figures themselves are treated almost as if they were in the round, rather than in relief, and the modelling of their forms, albeit sketchy is more conscientious than in the later trays." [4]

We know that this scene is an oft-repeated popular version of the Roman formula of the myth of Apollo and Daphne. It may be compared with the Roman floor mosaic in the Rouen Museum reproduced by Buchthal, [5] which shows all the essential features of our Taxila specimen. The mosaic, represents Daphne kneeling on the ground, supporting herself with one arm on a rock, while apollo, standing by her side, grasps her other arm with his right hand. Buchthal

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1. Marshall, Taxila, PL. 144, P. 494.
2. Ibid, P.493.
3. Ibid, P.494.
4. Ibid. P. 493-4.
5. Buchthal, op cit, Fig. 13 & 14.

describes the Taxila piece as "immobilized version of the Roman formula of the Myth". The flowing drapery of the God in the mosaic is here transformed into a solid mass falling down the back. An exactly similar subject is also found engraved on a couple of intaglios illustrated by Soloman Reinach.[1] His No. 33[2] is an oval chalcedony, depicting a standing hero holding nude woman who is kneeling to the ground in a similar fashion. Solomon's No. 33[3] is an amethyst intaglio with similar scene except the flowing garment which shows a more naturalistic drawing.

It should also be noticed that the motif of the full-blown lotus, engraved in low relief on the back of these trays, which our Taxila specimen also bears is a common decorative device of most of the Roman toilet-trays from Egypt, illustrated and described by Petrie.

Nereid riding Sea-monster or Hippocomp : No. 74-77, 82, 85, 83, 86,88. (PL. XVII).

This group of trays, coming from strata IV, III and II of Sirkap forms a class by itself in sharing the representation of the common motive of a variety of fish-tailed Sea-monsters, ridden often by a female figure. These Sea-monsters are sometimes shown with horse's, lion's or griffin's head. A Nereid or some other mythological figure riding a fish-tailed hippocomp or Sea-monster was a very popular subject on Roman silver plates, dishes and other objects. This popular device is found on floor-mosaics of the late Roman and

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1. Solomon Reinach, Pierres Gravées, (Paris, 1895) PL.55.

Byzantine period.[1] We may compare some of our Taxila specimens, notably No. 76 (PL.XVII) with the Roman patera in the British Museum, illustrated by Walters.[2] This British Museum silver plate depicts the nude figure of Eros, riding astride a Sea-monster and goading the beast with his trident, very much as the comparable Taxila piece. The nude Taxila female figure on No.76 is shown riding a fish-tailed monster, but it holds a child in the outstretched left arm. A comparable dish from Benaki Museum, Athens, illustrated by Brett,[3] also has a similar decoration. A parallel of the same subject matter on a number of these Taxila trays is found in the female figure seated on a sea-monster, depicted on a provincial Hellenistic silver plate in the Leningrad Hermitage, reproduced by Smirnov.[4] The analogous motif of a Nereid riding on a Hippocamp also occurs in Dalton's 'Treasures of the Oxus'.[5] But a particularly interesting and very similar motive is found on a silver situla of Roman workmanship of the Augustan period, beautifully engraved, in elaborate design, round the exterior, representation of the four seasons; Spring, Summer, Autumn and Winter. Below the main design is a narrow frieze, which depicts four cupids, in two groups, riding the marine monsters. The first is on a sea-lion with a long coiled tail; the second, on a sea-horse, and between them, a scallop-shell. The other group is similar with an anchor between

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1. G. Combaz, L' Inde et l' orient classique, P. 253 (Paris 1937); D. M. Robinson, Excavations at Olynthus X, P. 168 (Baltimore, 1941)

2. Walters, Cat. of the Silver Plates in the B.M. Greek, Etruscan and Roman, PL.VIII, No.77 (1921).

3. G. Brett, Formal Ornament of Late Roman and Early Byzantine Silver,' in Papers of the British School at Rome' XV, PL.VII (1939)

4. Smirnov, Oriental Silverwork, No. 285, PL.CX, (St. Petersburg, 1909).

5. Dalton, O. M. op cit, PL.XXVI, No. 197, (2nd ed. 1926) Now in the B. M. Frank's bequest.

the Cupids and a steering oar on the right. The sea-monster's tails have triple pointed termination as usual. The sea is indicated by fishes, dolphins, and shells at intervals. This situla was found in 1842 at Tourdan near Vienne, Isère, France.[1] No.76 of Taxila with nude woman riding the marine monster may be more closely paralled with a similar scene on a Roman stucco decoration on the tomb of Valerii, illustrated by Pierre Gusman.[2] Here the marine monster has a horse-head and a coiled tail terminating in triple point. The attitude of the nude female's sitting, with exposed back and loosely flung slipping garment on the body, at once recalls the decoration of the Taxila specimen.

It is interesting to notice that this interesting motif with a definitely Indianized form of the 'Makara' is found in the decorative reliefs of Bharhut and Sāñchī and other early Indian sites, but does not appear to have exercised any degree of influence on the art of the country prior to the first century B.C. For more specimens of this kind from the Gandhāra region closely akin to the Taxila ones, we may quote the circular Toilet Dish found near Tokha Khan, Lower Swat Valley, dated to the 2nd 3rd century A.D., now in the British Museum,[3] and also the Frank's bequest specimen, depicting a man riding a marine monster also preserved in the British Museum. The latter is dated to the 1st-2nd century A.D. The same museum also, has another beautiful specimen with a man riding a sea-monster, bought in the N.W.F.P. in 1898.

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1. Walters, H. B., Cat. of Silver Plates in B. M. No.74 PL.X-XI, P. 18-19 and Fig. 23. (London, 1921)

2. P. Gusman, L' Art Decoratif De-Rome, PL.51, Vol. I, (Paris).

3. Given by Colonel F. S. Massey, 1930.

Pair of Male and Female, holding wine-cup : Nos. 67-70. PLXVIII).

This group of circular trays, except No. 70, which turned up in Marshall's stratum I of Sirkap, all came from his late Śaka-Parthian strata (III & II). They are divided into three or more sunk compartments and engraved with a pair of male and female figures, holding wine cups in their hands. The figures are carved in relief and the hair dress and garments are some what summarily treated, except No. 70, which shows a rather elaborate and realistic treatment of the drapery. These scenes recall the familiar couple, either standing on the balcony of a house or looking through windows, so often depicted in the Bharhut and Sāñchī reliefs. Such scenes showing a pair of male and female figures within a frame-work are also known from contemporary Roman funerary sculptures. Some of them suggesting the taking of farewell between lovers. As an example, we may compare a similar scene on the lid of a Roman sarcophagus now in the Museo-Capitolino, Rome, illustrated by Petrie.[1] An exact parallel of the 'bridal pairs' carved on a toilet pallet from Sir H. Dean's collection, 1937, now in the British Museum, has been dated to the high Kushān period (2nd cent. A.D.). This circular tray is divided into 9 panels including the rectangular central one, which depicts the bridal pair holding goblets.[2]

Nos. 65 Sirkap II, (PL.XVIII).

This tray of greenish grey steatite is of particular interest. The subject of the relief which fills the whole concave surface of

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1. F. Petrie, Objects of Daily use PL.XXXIV & P. 37.
2. The motive, which first appear on Greek vases survives at Ajanta and Ellora.

the tray, is a popular Roman Bacchanalian drinking revel scene. This invariably reminds us of the mythical story of the wedding of Ariadne and Bacchus. In the top register a man and woman are seated on a bench. The man clasps his female companion with his left arm and the other hand, holds a sceptre; while she offers him a cup of wine. A draped woman to the left of them plays on a lyre and a youth plays on the pan-pipes behind her. To his right, a standing male figure is seen with his right hand wrapped in his mantle and his left hand holding a staff. In the middle register, to the right, is depicted a large wine-vat, resting on acanthus leaves, in which two men, one on the back of the other, are treading the grapes, while a boy in the centre draws off the juice in a tall flagon. To the left of this is another, man carrying a wine-skin on his back and pouring its contents into a 'Krater', while his companion on the left of the vat is raising a bowl of wine to his lips. The bottom register is occupied by a couple of prostrate drunken figures. An undulating vine-design frames the top of the scene from side to side, a fitting element in a Bacchic scene. Marshall rightly dates this plaque to the first century A.D.[1] Incidentally, it must be noted here that his No. 76 already alluded to, representing a nude-female riding a sea-monster, bears a striking resemblance in its modelling with the nude female on the top register of No.65. Both came from stratum II of Sirkap. Even the sitting attitude of both the figures are identical, and one is tempted to ascribe both the plaques to the same hand. Among similar objects, decorated with western mythical scenes, we may refer here to an interesting circular marble toilet-tray from the Akra Mound, Bannu N.W.F.P., (Pakistan) and now preserved in the British Museum. This beautiful piece, partly mutilated, depicts two scenes: one is the bath scene of Diana and the other shows Actaeon attacked by hounds.[2]

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1. Marshall, Taxila, P. 494.
2. Purchased, 1893, B.M.

The plaque is dated to the first century A.D.

No. 63.

This circular tray of grey schist came from the fifth stratum of Sirkap and depicts figures with typical classical western features. A reclining female on the coach with a wine-cup in the left hand is attended by two female figures on either side. The draped female figure at the head of the coach is shown seated on a stool, holding a wine-cup in the left hand and the one behind the coach, stands with a laurel crown in her upraised right hand. The figures are clad in the familiar classical garment, the 'chiton' and 'himation', Marshall although admits the rendering of the figures to be stiff and rigid and 'barbarous' in treatment,[1] very unlike true Hellenistic works, assigns it to first century B.C. That is to say, he treats it as Hellenistic work when it began to degenerate under the rule of the Sakas. However, if we compare a similar stone-plaque from Rawalpindi presented to the British Museum by Sir C. Hercules Read LL.D. in 1819, showing a female or male figure reclining on a coach, another behind, holding a wreath on her upraised left hand and the third on right sitting on stool, the striking identity of the two pieces, is at once apparent. In fact, our Taxila plaque is an exact replica of the Rawalpindi piece, which is dated to the first century of the Christian era. Laurel Crown in upraised hand is particularly a popular motive during the Roman time. For close parallels we may refer to the Sardonyx Cameo representing the scene of Apotheosis of Germanicus, now in the Bibliothegre Nationale, Paris.[2] In the scene two flying winged victory figures on left, is shown offering laurel wreath to Germanicus. The same author also illustrates another cameo with similar design.[3] Here Augustus is

1. Marshall. P.494-5.

1. Bib. Nat. NO265;E. Babelon, Cat Des, 'Camées Antiques Et Modernes De la Bibliothéque Nationale(Paris,1897)PL.XXIX;Roemische Mitteilungen 50, 1935, PL.20.No.1.
2. Roemische Mitteilungen, 50, 1935, PL.18.

shown crowned with the Laurel. The female figure behind holds the laurel wreath in her uplifted hand, in a similar manner to our Taxila specimen. We find also a good parallel in a medallion, illustrated in the same book, showing emperor Constantine driving a chariot of six-horses and on either side, two winged victory figures are shown offering him a laurel crown each.[1] A scene on Roman mosaic with laurel crown on upraised hand is also illustrated by Spinazzola,[2] All these representation of this popular Roman motive indicate that the Taxila piece also is a product of the Roman art.

No.64: Sirkap II.

This is a broken half of a circular tray of yellowish brown steatite, depicting a man reclining on a bed, kissing a woman, who is seated on a stool in front of him. The man holds the face of the woman with both hand. The entire scene is surrounded by four concentric circles on the rim. On the back is a Kharoṣṭhī inscription giving the name of the owner. Marshall assigns this plaque to the first century A.D.[3] A circular terracotta plaque with an identical scene from Hadda, Afghanistan,[4] dated to the same period, is now preserved in the Barlington Museum. It indicates that the representation of this scene of dalliance was popular in the N.W.F.P and the regions immediately bordering it. The Hadda specimen, however, provides us with the missing details of our Taxila piece, for it shows a third draped figure sitting on a stool or couch behind the reclining male figure. The use of terracotta is particularly interesting.

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1. Ibid, PL.17, No.1.

2. Spinazzola, 'Le Arti Decorative in Pompei', PL.180. (Milan, Rome etc, MCMXXVIII).

3. Marshall op cit, P.494.

No. 66 : Sirkap I.

This is a circular tray of indurated light grey claystone crudely carved with a relief showing a man dancing with two women on either side of him. The drapery, treatment of the hair and the disproportion of the figures clearly betrays crude workmanship. Marshall considers this piece to belong to the Parthian period, although it came from his Kushān level I of Sirkap. A silver cover of a Roman mirror-case, now in the British Museum, illustrated by Walters,[1] repeats this three-figured scene. It represents the revel of Dionysus, Eros, and Silenus, but is comparable with this Taxila tray.

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1. Walters. Cat. of Silver Plates in the British Museum, No.70. PL.VIII.

Ringstones :[1] Nos. 129-132 (Pls. XVI, XIX, XX).

Only four specimens of these curious but exquisitely carved ringstones have been unearthed at Taxila. Except No.132, which came from the third stratum of Sirkap, all of them were found in the Bhir Mound strata II and III. Marshall considers his No.132 to be a survival from the earlier Maurya period. It is difficult to assign a rigid date for these objects or to specify their use. Identical ringstones, which are commonly associated with the cult of the 'Fertility Goddess' have an astonishing wide ddistribution in Indian archaeology. They occur in large numbers at historic sites such as Patna, Saheth-Maheth (Śravasti), Bhita, Kuper and elsewhere.

Marshall's four specimens are :

No. 129 (Pl.XIX) Bhir Mound.[2] This is a circular purplish brown ringstone, which he describes as being alabaster. It is carved on upper face with three concentric bands of cable-moulding, divided one from the other by a band which may be described as a 'cross-and-reel' pattern. Round the central hole are three standing nude female figure with both hands hanging down on either side. The figures alternate with foliated designs. Marshall says of this specimen, and his description is applicable equally to the other three specimens, "For Jewell-like workmanship and exquisite finish this and the following ringstones are as fine as any specimens of stone-carving in Ancient India."[3]

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1. Marshall's class XXIII.
2. Diam. 2.62 inches.
3. Marshall, op cit, P.504.

No. 130 (Pl.XIX) Bhir Mound II. It is similar to the above but is of quartzite sandstone. In this specimen however, the inner 'cross-and-reel' band is replaced by a row of elephants and to the side of the central hole, is a 'conventional mountain'with a hand on one side and on the other, a hand holding a bow.

No. 131 = Bhir Mound III. It is similar to No. 129 but is described to be of ferruginous claystone.

No.132 = Sirkap II. This is similar to 129 but is of slate stone and round the central hole are four nude 'Goddesses' instead of three, alternating with the honeysuckle motive which Marshall calls the 'Tree of Life and Fortune'. It may be, perhaps, pointed out that the honey-suckle motive of this reingstone can only be associated with the Greek anthemion.

Cunningham [1] found a similar ring-stone in hard, fine-grained soapstone at Sankisa (Pl.XVI) identical with one of the fragments he found at Shah-Dheri (Taxila), having the same figures and the same trees (Palm). In describing the inner circle of his Sankisa specimen, he noted that it was divided into 12 Panels, " three of which are occupied by figures of standing men (they are in fact nude female figures, identical to Taxila 'Fertility Goddess' figure); three more by Palm trees and the remaining six by a common Buddhist symbol," [2] meaning thereby the the 'triratna' (really the taurine symbol so commonly found on the 'punch-marked coins). Cunningham thought that they were intended to be for toilet-purpose or as a receptacle for quicklime for its use with the betel-leaf (pān). Coomaraswamy rightly notices that "figures of men standing and the

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1. Cunnigham A.S.I. Vol. 11, P.28, Pl.IX, No.3.
2. Cunningham op cit, P.28.

common Buddhist symbol as described by Cunningham are no other than the figures of the nude Earth-Goddess and taurine symbol."[1] As has been pointed out, these ringstones have also been found in Kosam, Mathura, Rājghat and Patna (PL.XX).[2] The same Goddess of Fertility in identically the same attitude is depicted on the little gold-leaf plaque from the burial mound at Lauriya-Nandangarh.[3] An actual figurine of the 'Goddess' in terracotta has been found at Taxila, as already noticed. (PL.VII).

By far the largest number of such stone-discs or ring stones were found at Kurtazigani, Patna,[4] all within a space of 3 feet in a torrent-bed, near the surface. Out of these 21 pieces, 5 bear the familiar figure of the 'Fertility Goddess', alternating with Palm trees, and various other animals such as elephants, winged lions, lions, horses antelopes, rams, geese, peacocks, and parrots,[5] arranged around a raised central boss with radiating gadrooned design beautifully rendered (Pls.XIX, XX). Nine other specimens, have the figure of animals and birds only around the central gadrooned boss. One of the rest of these pieces is embellished with only geometric designs. Five have only the multipetalled lotus design and the remaining one is plain, presumably an unfinished piece.

However, one uniform feature of these 21 specimens from Kurtazigani and also Cunningham's Sankisa piece, is the absence of a central hole, which characterizes the Taxila, Ruper, Bhita, and other Patna[6] specimens (PL.XX). Otherwise the workmanship and

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1. Coomaraswamy, Hist. of Indian and Indonesian Art, P. 20.
2. Marshall, op cit, P.503; Marshall, M.I.C. Vol.I, P.62-63.
3. C.H.I. Vol. I, PL.XI, Fig. 21.
4. S. A. Shere, Journal of the Bihar Research Society Vol.XXXVII P.178-190; Pl.V-IX, (1951).
5. Shere, op cit, PL.V.
6. J.I.S.O.A., 1935, Dec. Pl. Also reproduced by Shere.

the figure of the 'Goddess' are beyond doubt, identical. In Ruper, [1] it occurs in the Period III, dated c. 600 -200 B.C. in association with N.B.P. and Punch-marked silver cast coins with Taxila symbols. The Ruper specimen, apart from having the identical nude female figure, also has the honey-suckle motive, alternating with the 'Goddess'.

Marshall regards these stone-rings as definitely 'yonis' or female symbols of generation. He also treats the large plain ring-stones common in Mohenjodaro and Harappa as 'yonis'. He writes, "the idea being that those who pass through them are as it were, born again, while in the case of the smaller stones of the same form, the mere passing of the hand or finger through them is an act of special virtue or significance." [2] He also thinks that all these ringstones (irrespective of their being large or small, plain or engraved) had the same cultural, fetish or magical significance that the ringstones of a later date had." [3] This amounts to assuming that any stone found from the site with a perforation in the centre must be associated with the cult of Fertility Goddess. For this there is really no evidence. The large number of specimens from Murtaziganj and Sankisa, unquestionably similar in character to the Taxila ones, do not have any central hole and therefore the 'yonis' hypothesis falls to the ground.

Another notable point which must be remembered is studying these objects is that the figure of the nude female, considered to be the 'Fertility-Goddess' or 'Mother-Goddess' in her readily recognizable typical attitude occurs in all the specimens of Taxila

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1. Anc. Ind. Bulletin, No. 9. P. 123 Fig.4 No.8.
2. Marshall, M. I. C. Vol. I, P. 62.
3. Ibid, P. 63.

and other sites referred to above, except Murtaziganj, where she appears in only five specimens out of 21. The remaining pieces, although sharing in common the same decorative designs, do not p portray the 'Goddess', which precludes the possibility of their ever being 'treated as having the "same cultural, fetish or magical significance' associated with her, as suggested by Marshall. In other words here both Marshall's features i.e. the central hole representing the 'yoni' and the representation of the Mother Goddess, are absent.

Marshall considers these interesting objects from Taxila and elsewhere, as definitely belonging to the Maurya [1] period, although he found one in the second stratum of Sirkap and others in Bhita [2] in a Kushan and early Gupta contex. These, however, he treats as 'survivals'. It is interesting to note that in a large number of these ringstones the figure of the 'Mother Goddess' is engraved with consumate skill, inside the central hole, alternating with the same floral design (honey-suckle) as that of our Taxila specimens.

As regards the use of these objects, it seems likely that they were intended as jeweller's forms for the manufacture of ornamental ear-discs which are a common feature in the Bharhut relief figures, as well as in the Ajanta frescoes. Some of these Bharhut figures wearing these circular disc-ornaments sometimes have more than one in each ear; the ear-holes being extended by the weight of the ornament. The majority of them have lotus centres.

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1. Marshall, op cit, P. 503.
2. A.S.R. 1911-12, P. 75, No.40. and PL.XXIII, 40.

STOOL-QUERNS [1]

One other group of interesting objects, is a series of stool-querns, which occur in both Sirkap and the Bhir Mound. All of them are of sandstone, without exception and they are usually decorated with carving in relief. In some of the specimens from the second stratum of Sirkap the carving is elaborately done. These are of Mathura sandstone, at one end the slab projects beyond the legs, which have ornamental brackets. Among Marshall's 6 specimens, Nos. 16, 17 and 18, all came from the second stratum of Sirkap. No.16 is of red Mathura sandstone with projecting end, supported on 'makara brackets'. The sides and legs are decorated with a floral pattern in low relief. [2] No.17 is also of spotted red Mathura sandstone with a similar projection at one end; the other end being engraved with two pairs of fishes and a small lotus design in low relief, above it is engraved larger lotuses in squares. Below, within the rectangular frame is a couple of fishes on a conventional tree-design which springs from a vase with fishes in each bend of its sinuous stalk. The bracket supporting the projecting end is in the form of a mutilated female figure which is identified by Marshall as a 'yakshi' or 'Vṛikshadevi.' [3] No. 18 is of reddish sandstone with a similar projecting end, decorated with a simple swag-like border, and swastika and 'triratna'devices

These types of legged grinding stools or palettes are widely distributed in India. They have been found at a number of places such as, Nasik, Period II A, at Maheswar, Navda Toli (1952-3),

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1. The term 'stool-quern' is in general use, but these objects seem to have been used as palettes. They show no signs of use as 'saddle-querns'.
2. Marshall, op cit, P. 140.
3. Ibid, P.487.

Nevasa and Timberva in Gujrat. At Navda Toli, four legged querns were found and all, except one which came from the surface, were found in association with N.B.P. and Red-and-Black Pottery. Consequently, they have been dated by H. D. Sankalia and S. B. Deo to c. 400 B.C. to 100 B.C. [1] In Maheswar, nine specimens were found and their earliest occurrence is associated, by the authors, with the later phase of N.B.P. and the early cast coins. This period they have dated to c. 100 B.C. to 100 A.D. [2] Thus in central India, as demonstrated by the Maheswar and Navda Toli specimens, these legged grinding stools would seem to have been introduced at a fairly early date and to have persisted for a considerable time. This dating however, is challenged by Dr. F. R. Allchin on the basis of the Sirkap specimens, which indicate a later date. [3]

Eight Nevasa specimens, also, confirm the dating worked out by Sankalia. At Timberva [4] their association with N.B.P. is clear. However, the absence of Red Polished ware is significant, and points to an early existence. At Adichannalur, a four legged quern was found in association with the urn-burial complex, dated to c. 2nd century B.C. [5] At Tripuri [6] they have been assigned to the first century B.C. while at several other places, such as Kolhapur, Kondapur, Paithan and Bhita, they have been approximately dated to the Āndhra or Sātavāhana period.

We may compare these types of legged querns with Flinders Petrie's specimens [7] from ancient Egypt, dated as early as the IVth

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1. J.R.A.S. of Great Britain and Ireland, 1957 Parts 3 and 4 P.209-12.
2. Ibid P.210.
3. Dr. F. R. Allchin, Review in J.R.A.S. Pts. 3 & 4, 1956 P.245-6
4. R. N. Mehta, 'Excavations at Timberva, 1953 (Baroda, 1955) P.25.
5. A.S.I.A.R. 1902-3, P.117, 139.
6. M.G. Dikshit 'Tripuri' - 1952 (1955) P. 106-7.
7. F. Petrie, Tools and weapons Pl.IV. No. 105.

Dynasty. Marshall however, dates his series of footed querns not earlier than the first century A.D. and comments that, "these specimens were no doubt made by the stone-carvers of Mathura and brought thence to Taxila".[1] The first part of his statement is contradicted by the fact that an equal number of specimens occur in strata III and II of the Bhir Mound (unillustrated by Marshall but described). Three specimens from the Bhir Mound are: No.13, from stratum III; No. 14 from stratum I and No. 15 from stratum I. All of them are of Mathura sandstone, and decorated with various incised or low, relief designs, like the zig zag, parallel line, fish,'Dharmachakra' or human figures. Their survival in the second stratum of Sirkap clearly indicate that they persisted for some time, which in fact, is supported by the evidence from various Indian sites discussed above. Professor Sankalia writes, "That the saddle querns at Taxila were made of 'Mathura sandstone' is wholly irrelevant to the issue, because the majority of specimens at Nevasa and Nasik are made of basaltic trap. At Maheswar - Navda Toli, ten out of the thirteen pieces were made of trap stone."[2] This variation in material is only to be expected though it is a fact that all the Taxila specimens are of Mathura sandstone.

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1. Marshall op cit, P. 486.
2. Sankalia, op cit, P. 211.

METAL OBJECTS

It appears that India is not rich in deposits of copper, tin or silver, though iron ores are common. Consequently the inadequate indigenous supplies of copper from Baluchistan and Rajputana had to be supplemented, according to Marshall, from the mines of Afghanistan and Persia, or from still farther afield from Armenia, Caucasus or the Mediterranean countries. This poverty of copper, and tin is also borne out by the author of the 'Periplus' and Pliny. The 'Periplus' mentions both copper and tin aomong the list of articles imported from the west to Barygaza (Broach) and Nelcynda (near Coachin).[1] Pliny states that India exchanged her precious stones and pearls for western Bronze and lead as she did not possess these metals.[2]

Here it is necessary to mention that Marshall, in classifying his bronzes has slightly deviated from the generally accepted archaeological definition of the term as an alloy of copper with a varying percentage of tin. In his extended application of the term 'Bronze', he includes, apart from tin,-zinc, nickel or lead alloys. He obviously uses this term in its extended sense to avoid inaccuracy in determining the exact nature of the alloy without proper chemical analysis. This is urgently needed.

The methods employed in manufacturing the copper and bronze objects at Taxila are mainly four: 1) The solid casting, 2) Cire perdue, 3) various hammering process and the 4) repousse or

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1. W. H. Schoff 'Periplus' No. 56 P. 44-45, (New York, 1912); Warmington 'Commerce etc.' P. 267.
2. Nat. History, XXXIV, 17.

embossed work. Solid casting is the simplest of all these process and was used extensively in antiquity. It seems to have been known in Egypt as early as the Vth and VIth dynasties. But in consideration of the waste of valuable material and the inconvenient weight of the product, led to the invention of the 'Cireperdue' casting on a clay core. This was introduced into Greece about the 6th century B.C. [1]

In the hammering processes, the hammered plates of copper or bronze are rivetted together to form a vessel or statue. It appears to have held ground for a short period, prior to the 'introduction of 'cire perdue' casting, but overlaps it. The 'cire perdue' casting process, once it was introduced, continued to be extensively used throughout the history of Greek art. In fact a large number of statutes and other Bronze objects of the finest period of Greek art, which is considered to extend from about 460 down to B.C.300, have come down to us. The term 'cire perdue' refers to the manner in which the wax mould on a clay core was cast in metal. In this process, a clay model is roughly made, reproducing the desired form, but on a slightly smaller scale. Large Greek and Roman figures were usually built on a skeleton of iron with a core of soft clay, carefully beaten up and mixed with pounded pottery. A thin coating of wax was laid over the core so formed, sufficently thick to be modelled and tooled into the form intended; the small details being rendered with tools of wood, ivory or bone. The waxed core was pierced at several points with bronze rods which were left projecting to some distance. In other places, holes were left and small tubes inserted to control air pressure. The making of the outer mould

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11. Walters H. B. Cat. of the Bronzes, Greek, Roman and Etruscan, in the British Museum, Intro. XXIX (1899 London).

required great care as it had to stand the action of fire. It was made of extremely fine pounded pottery, mixed with clay and water to the consistency of a cream, which was then repeatedly applied as slip over the finished core, until it was turned into a shapeless lump. This lump was then bound round with hoops of bronze or iron and was gently lowered to a horizontal position and tilted up over the furnace. The inner surface of the mould had now received the impress of the moulding and the melted wax could be removed by means of the tubes mentioned above; while the bronze rods held the core firm and prevented it from rattling inside the mould. A hole was made in each foot of the statue through which molten bronze was poured, replacing the wax already extracted. The whole process is attended with great difficulties, demanding care and patience to get the molten metal run into all the cavities, owing to the liability of the metal cooling rapidly. Consequently the process would have to be kept constantly at a high temperature. The statue was next left to cool for some days, at the end of which the outer mould was carefully chipped off and the projecting ends of the bronze rods were cut and filed smooth. The core, was then extracted with the help of iron rakes, inserted through the holes of the foot. The defects left in the casting, such as 'honey-combing' caused by air-bubbles, cracks or raised lines had to be carefully made good and it was often necessary to touch up small details such as the hair and eyes to make them stand out more sharply. Finally the surface was prepared by colouring or gilding.

As against this 'cire perdue' process the most important and universally employed work is repoussé. The origin of this method goes back to a very early time and is found employed with the other malleable metals, such as silver and gold, as well as in copper.

The method generally adopted, is described by Walters briefly as follow: "A plate of thin metal was heated and pressed down on to a tray full of pitch, to which it of course adhered. The pattern was drown on the plate and blocked out roughly with a punch and hammer, the metal being embossed in the soft pitch which, however, is hard enough to prevent the tool going through. The plate is then heated again, removed, heated a third time and put in the reverse way and the outer side is first hammered and then worked up with a sharp graving tool."[1]

The art of working in bronze infliltrated into Italy, especially Etruria from Greece about the sixth century B.C. and produced some of the outstanding pieces of Etruscan art. Although undoubtedly Rome was indebted to Greece in acquiring this art, it was open to Egyptian and Asiatic influence; the excellence of their workmanship is undeniable." The art flourished considerably under the Empire. Gaul, as a Roman province became an important centre of the art and produced many splendid specimens. As we shall presently see, a large number of Roman bronzes have also, been unearthed at Taxila, with distinct western design, which again points to Taxila's continued contact with the Roman world of the early christian centuries to which these objects belong.

Iron, unlike copper, lead and tin, is exceptionally abundant in India and curiously enough Indian iron and steel are of exceptiona purity. Indeed, India was famous for the high quality of her iron an steel from a remote antiquity. Ktesias mentions in the fifth century B.C. that he was presented with two excellent swords of Indian craftsmanship by the Persian king.[2] Again in the 1st century

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1. Walters, op cit, P.XXXVII.
2. Mc. Crindle op cit, P.252 and No. 1.

A.D. we learn from the 'Periplus' that Indian iron and steel were being exported from 'Arikan' on the Gulf of Cambay to Abyssinia.[1] 'Ferrum Indicum' also figures in the list of dutiable article under the emperor Marcus Aurelius and Commodus.[2] Marshall's analysis and micro-examination of selected specimens from Taxila have fully corroborated the ancient literary evidence of the excellence of the ancient Indian product.[3]

Very little is known of the actual working of iron in ancient India. It has been discussed in details by various authors, notably Neogi in 'Iron in Ancient India.'[4] It appears that the technique employed in extracting iron, in the beginning must have been a 'direct process'. It is possible that in this process of iron smelting someting approaching steel was produced under certain conditions as is shown by the existence of comparatively high carbon contents in certain iron objects which have been analysed. In analysing pieces of an ancient sword from Besnagar, used as wedges by the engineers while setting up Kambala pillar of Heliodorus (c.100 B.C.) the late Sir Robert Hadfield observed that it must have been deliberately manufactured as steel.[5] The result of the ten specimens of steel from Taxila, which also were examined by the same authority, is given by Marshall in his table.[6] The Taxila specimens show a very high carbon percentage, between 1.2 and 1'7 , which is about double that of the Kambala specimen. This indicates as Marshall rightly suggests, that high carbon steel was deliberately produced at this period in India. He also, further, comments that

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1. Schoff, Periplus, No.6, P.24, 70, 172.
2. P. Neogi, Iron in Anc. India, P.66-8 (Calcutta, 1914)
3. Marshall, op cit, P. 534.
4. P. Neogi, op cit, (Cal. 1914).
5. A.S.R. 1913-14 P. 203-4.
6. Marshall, op cit, P.536; see also the analysis of Besnagar Sword in Marshall, P.535.

although no visible signs of tempering are found in any of the Taxila specimens, it seems scarcely likely that the art of tempering was unknown to them, especially in view of their contact with the west. It would indeed, have been necessary in the case of the chisels (Nos. 118-121 c.)

As to the actual process used in India, Marshall infers that it was probably the same as that by which the celebrated 'wootz' steel is still produced.[1] On this subject Neogi says,[2] "The wrought iron is, then cut into small pieces and placed in crucibles alongwith certain kinds of wood and leaves of plants, and then heated in charcoal blast furnaces with the lids closed. The blast is continued from four to six hours, when the steel is obtained in a molten condition. Water is then sprinkled or poured on the metal which is thus hardened on being quenched and the steel is obtained in a crystalline condition."[3]

Silver is scarce in India. It is found in association with gold in the Kolar mines in Mysore and at Anantpur in Madras. Although there are other fields in Bihar and Orissa, C.P. and the Central India, their extraction is an expensive proposition. Consequently, its inadequate local supply had to be supplemented from elsewhere, such as the mines near the head of Panjshir valley and others near Herat. In southern Afghanistan,[3] there were rich deposits of argentiferrous lead ore, from which silver could also be obtained. The 'Periplus' mentions that silver and gold plates were imported into the Parthian dominions in India by way of Barbaricum, at the mouth of the Indus, from where it was taken up the river to

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1. Ibid, P. 535.
2. Neogi, op cit, P. 72.
3. Marshall, M.I.C. Vol.II, P.677.

the capital of the Saka princes at Minnagara.[1] It is also not unlikely that the Mediterranean merchandise found its way up the Indus to Taxila by the same route. The Parthians are known to have acquired and imitated Mediterranean objects d' art. It is therefore not surprising that much of the silver ware found from Taxila shows unmistakable Roman influence. Such articles as the 'askos'(No.2; PL.XXI) and the spoons (Nos. 16 & 17) or the Dionysus head in silver repoussé work (No. 21) are imports. The 'Phialai Mesomphaloi' (Nos. 10, a-c, PL. XXI) however, departs somewhat from the normal Hellenistinc Roman prototypes

Before actually analysing the metal objects certain important points must be remembered. Firstly, the iron objects described and illustrated by Marshall, represent only a small fraction of the total quantity brought to light at Taxila, for as he says, "the vast majority were in so fragmentary and corroded a state that even their form was unrecognizable; and in many cases nothing remained but a rusty discoloration of the surrounding soil to show that they ever existed."[2] Secondly, as shown by Marshall, more than four-fifth of the total number of 221 iron objects included in his list came from his 'Saka-Parthian strata' of Sirkap, together with a few from the monasteries at Jaulian, Mohrā Moradu, etc. Less than one-fifth came from the Bhir Mound and the early strata in Sirkap.[3] Since the area he uncovered, representing his 'late Saka-Parthian strata (III & II) is much larger than all the other strata put together and that he combines his two strata (III & II) in one column of his table, there is no real proof that a sudden and sharp increase, of these objects occur in his 'late-Saka-Parthian' period.

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1. Schoff, 'Periplus', No. 38 & 39 P. 37-38.
2. Marshall, op cit P. 533.
3. Ibid, P. 533.

Marshall [1] classifies his objects into six groups : viz., (A) Household utensils, (B) Arms and Armour, (C) Horse-bridles and Elephant-goads, (D) Carpenter's and Blacksmith's tools (E) Agricultural implements and (F) Miscellaneous articles such as needles, plummets etc. Some of these objects, he notes are clearly of foreign origin. Thus, in Group A, the ladles with vertical handles (nos. 24 & 25), the Candelabra (Nos. 33-5), the wheeled braziers (Nos. 37, 38) and the folding chair (No.54), were all familiar types in the Graeco-Roman world of the first century A.D. but are not known elsewhere in India. In Group (B), again, the heavy iron javelins (Nos. 64-6), the plate armour for men and horses (Nos. 90, 91) the helmet (no. 92) and the cheek-bars or bits (Nos, 99, 100) must have been introduced into North-western India from the same direction. Some of the arrow-heads (Nos 72-89) must be regarded as imports. The Carpenters and Blacksmith's tools and agricultural imlements (Group D and E) were probably indigenous, but it is noteworthy that even among them, scissors (Nos 135) and the spade (No. 198) made their first appearance at Taxila in the first century A.D., about the same time that they did in the Mediterranean area.

Iron folding Chair No. 54. [2]

Marshall's specimen with hoof-feet, comes from the second stratum of Sirkap, and is identified by him as being a classical type. However, these folding chairs with crossed legs are particularly common in Pompeii. Two wooden chairs from Pompeii in the

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1. Marshall, op cit, P.533-4.
2. Marshall's PL. 170.

Naples Museum, illustrated by Gisela M. A. Richter, [1] commonly called 'Sellae-Curules' and an interesting example of inlaid metal now in the possession of Mr. E. J. Seltman, bear a close resemblance to our Taxila chair. A similar chair of very graceful design is represented in the fresco in the house of the Vettii. It shows a charming scene, depicting a lady, possibly Psyche seated on folded stool of our Taxila type and sampling the sample of scented oil which the salesman Eros has dropped on her wrist. Again a late-Roman folding chair discovered in the Holborough Knob Barrow, illustrated in the 'Illustrated London News' [2] may be compared with our Taxila one. As rightly pointed out by Richter, these types of folding chairs or stools, both in iron and bronze are in fact a substantial contribution by Rome to furniture design. [3]

Iron Candelabra Nos. 33-35 (Marshall's Pl. 163)

Of the two Candelabras illustrated by Marshall (Nos. 34 & 35), which are undoubtedly products of Roman Art, abundant parallels can be quoted from Pompeii and elsewhere, dating to the first century A.D. Comparable specimens from Pompeii are illustrated by Spinazzola [4] although they are somewhat more elaborately decorated. Reference may also be made to numerous specimens in the Louvre. [5]

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1. Richter, 'Anc. Furniture', P. 126, Figs. 300-302 (Oxford, MCMXXVI).
2. 'Illustrated London News' March, 26, 1955, P.596, Figs. 8 & 9, 'The Romans in Kent.'
3. Richter, op cit, P. 126.
4. Spinazzola, 'Le Arti decorative in Pompei' PL. 294 & 295.
5. A.De Ridder, 'Les Bronze Antiques Du Louvre' PL. 112 and 113, Vol. II. (Paris, 1915).

No. 420 (Marshall's Pl. 172) Sirkap II

This is a mutilated copper repoussé medallion, showing a bust within a wreath. It is not clear whether the bust is male or female. The figure holds a laurel branch and wears a wreath. The tunic is fastened with a pin on the left shoulder. This is closely comparable with a popular Roman device. A gold medallion of the Emperor Trigus (3rd cent. A.D.) holding the triumphal laurel illustrated by Andreas. Alföldi, [1] is a good parallel. The emperor holds the laurel in his right hand and a sceptre in the left, and wears the laurel wreath. Other instances of this popular Roman type are plentiful.

Silver 'Askos' No. 2 (Pl. XXI) Sirkap III.

This is a typical silver askos with trumpet base and a knotted handle, terminating in vine leaves. An inscription in Kharosthi round the neck reads, "year 191 of Jihonika, the satrap of Chukhsa, son of (Manigula, brother) of the great king," [2] which obviously indicates the name of the owner. Such 'askos' are typical of the first century Roman work and are common at many known Roman sites. They are particularly abundant in Pompeii, a large number of them are preserved in the Museo Nationale, Naples. For a comparable and very beautiful example, we may refer to V. Spinazzola's [3] illustrated specimen from Pompeii, which has so often been reproduced.

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1. A. Alfoldi, Mitteilungen Des Deutschen Archaeologischen Institus Roemische Abteilung, Band 50, (1935) Mit. 64, Tafeln P. 37.

2. Marshall op cit, P. 611; C.I.I. II, Pt. 1, P. 82.

3. V. Spinazzola, 'Le Arti decorative in Pompei' PL. 277, Enel Museo Nazionale Di Napoli MCMXXXVIII.

In enamelled pottery it may be compared with specimens Nos. K 15 and K 26 in the British Museum. For other closely comparable examples examples from Pompeii we may refer to illustrations in "Die Hellenistische Kunst in Pompeji ",[1] 'Les Bronze Antiques Du Louvre' [2] and 'Pompeji in Leben Und Kunst.' [3] All these examples leave no room for doubt that this particular type of jugs was a popular Roman article of daily use, made in various materials such as pottery, silver, bronze, glass and enamel.

Ram-head Pan Nos.298, 299 & 300, All Sirkap II (PL. XXII).

No. 298 is a flat bowl of bronze with a handle attached to the bowl by five rivets. The handle is decorated with a waved-pattern and beaded bands and terminates in a ram-head. The base is made of a separate piece soldered on.

No. 299, is similar to the above, except that its handle is decorated with the bead-and-reel pattern and the base is made in one piece. Its handle, also, terminates in the same ram-head form.

No. 300 is similar but unfortunately its handle is missing although the rivets which attached it remain.

All the available evidence clearly points to their Roman origin. These handled pans were very popular household utensils throughout the Romanized world, during the first half of the first

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1. Erich Pernice op cit, Band IV (1925) Abb. 18. P.14.
2. A.De Ridder, op cit, PL. 103, No. 2930 (Paris 1915) Vol. II.
3. August Mau, op cit, Leipzig 1900.

century A.D. An exact parallel of our No. 299 can be seen in the British Museum specimen No. 882, illustrated by Walters.[1] It has the same type of fluted handle ending in a ram's head. Its interior is however, decorated with the scene of 'Scylla destroying the compaion of Odysseus' in relief within a medallion. This beautiful specimen was aquired in 1877 from Bosco Reale, near Pompeii. We may also quote another closely analogtous specimen, illustrated by Bushe-Fox from Richborough[2] clearly dated to about A.D. 50. In Begram[3] (PL. XXII) identical type occurs, in alabaster, in a hoard inside a room of the 'Palace' in Phase II, ascribed to the great Kushan king, Kanishka (2nd cent. A.D.) This Begram specimen is rightly considered by Wheeler[4] to be a Roman import from the Mediterranean countries. For other similar specimens we may compare a bronze pan from Pompeii illustrated by Corte[5] and a glass specimen, illustrated by Kisa.[6] John Ward also illustrates a bronze specimen from Roman Britain.[7] Others are No. 3028 and 3050 in the Louvre, illustrated by Ridder.[8] Of these, No. 3028 is a beautiful specimen with concentric circles in the middle of the bowl. No. 3050 is a ram-head handle, identical with our Taxila

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1. Walters, Cat. of Bronzes, in the B. M. P. 162, PL. XXV? (LOND. 1899)

2. Richborough II, P. 31 & PL. XIV, Fig. 2 No. 12.

3. Hackin, opcit, Chantier 2, (1937) No.165 & PL. VIII. Figs. 16-19.

4. R. E. M. Wheeler, 'Rome beyond the Imperial Frontier' P. 163-4, (1954).

6. A Kisa, 'Das glas in Alterthum, II, P. 336 & 446, 1. Fig. 117.

5. M. Della Corte, Pompei; Les Nouvelles Fouilles' Fig. 43, P.62.

7. John Ward, F. S. A. 'The Roman era in Britain' P. 187 (Lond.1911). Fig. 54 F.

8. A.De. Ridder, 'Les Bronzes Antiques Du Louvre, Tome II, Pl. 106 and PL. 107, Nos. 3028 and No. 3050 (Paris 1915). This type of handled pan, terminating in a ram-head is variously called 'trulla' or'Patera'.

specimen No. 298.

Ladles and Spoons : Bronze = 306-308 a, b, 313 (PL. XXIII & XXIV) Silver: 15, 16.

Of the typical Roman ladles with vertical handle, Marshall's No. 306 (PL.XXIII), came from the third stratum of Sirkap; No. 307 (PL. XXIII) from Mahal and No. 308 a, b, both from the second stratum of Sirkap.

No. 306 is of copper, having a crooked vertical handle, terminating in goose-head and, two lugs on the rim. This type of ladle with goose-headed handles is particularly common at Pompeii and for parallels we may compare with the illustrated specimens of August Mau.[1] For other comparable specimens we can refer to the Roman silver 'simpulum' No.128 in the British Museum, illustrated by Walters[2] (PL. XXIII). It has a similar handle, tapering off into the neck of a swan with its head bent back on to the back of the handle. It bears the name of 'Titus utus' and was found at Arciate near Como in north Italy. Other specimens of these ladles are Nos. 3060, 3069, 3064, 3070 in the Louvre.[3] The similar silver ladle (No. 15 & 16) came from the third stratum of Sirkap which only differs in its ring-handles.

Marshall's spoons Nos. 312-315, all came from the second stratum of Sirkap and may well be dated approximately to the first

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1. August Mau op cit, P. 371, Fig. 207 Nos. q, u.
2. Walters, Cat. of Silver Plates P. 32 PL.XVII, No. 128.
3. Ridder, Louvre, Pl. 108.

century A.D. From the point of view of decorative design Nos. 312 and 313 may be classified under one group and Nos. 314 and 315 in another. Otherwise their workmanship and general type are identical.

Nos. 312, 313 (PL. XXIV) are both, according to Marshall, of beaten copper having a cloven-hoof handle and an oval bowl. While Nos. 314 and 315 are copper spoons with pear-shaped bowls and a crook handle, ending in a goose-head. For Roman spoons with egg-shaped bowl and cloven-foot termination, closely analogous to our Taxila specimens, we may refer to Walter's illustrated specimens from British Museum [1] and of the goose-head specimen, the same author illustrates one example, also from the British Museum. [2] The cloven hoof spoons with egg-shaped bowl are common at Pompeii; a particularly beautiful specimen is illustrated by August Mau. [3] An identical spoon with ridge-handle and cloven-foot termination was found by Hackin in Begram [4] (PL. XXIV) and is rightly considered by Wheeler [5] to be a Roman import to that place. The Begram spoon came from the hoard mentioned earlier and has been dated as late Roman, with the alabaster Ram-head patera. They are, both, however, typical Roman work of the first century A.D.

Harpocrate : NO. 417 (PL. XXV).

Marshall's four illustrated bronze figures (Nos. 417-420) are all of typical Roman workmanship and came from the same stratum of Sirkap (II). No. 417 is of particular interest to us. It is

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1. Walters, Cat. of Silver Plate, P. 26-27, Fig. 36 Nos. 94, 95.
2. Ibid. Fig. 37 No. 101.
3. August Mau, op cit, P. 374, Fig. 216, P.371 Fig. 207 Nos. 'V' & 'N'.
4. Hackin, op cit, (1939-40), Fig. 346.
5. Wheeler, op cit, P.159.

a solid cast statuette of the Egyptian child-God, Harpocrates. The figure stands with heels together and wears a sleeveless tunic which reaches to the ankles, leaving the left shoulder bare. The right forefinger is raised to the lips, which was interpreted by Romans as enjoining silence upon his votaries, who were forbidden to divulge the mysteries of the God. The hair which is parted in the centre, falls in curls on the right shoulder. On the head he wears the Egyptian crown of the upper and lower Egypt.

The cult of the Child-God, Harpocrates, seems to have originated in Alexandria, but early found its way to Rome, gaining especial favour during the rule of the Favian emperors, who officially recognized it.[1] However, its origin and popularity in the west goes back much further. The cult gained its footing in the Graeco-Roman world, where the Egyptian triad, Orisis, Isis, and Horus was identified with Dionysus, Demeter, and Apollo. This tendency to syncretism in the current Hellenistic religion was due to the idea that a triad was the distinguishing feature of both the Greek and Egyptian religions, the triads being identified with each others. The cult received warm support from the Ptolemies of Egypt and in the 3rd century B.C.[2] spread to other Greek centres and eventually to Rome. It is clear that during the Roman Period, figures of Harpocrate became common. The Child-God seems to have been regarded as a combination of the infant Horus, with finger placed on his mouth and the Greek Eros, with his childish form and wings. The treatment of the hair is common to both Eros and Harpocrates figures, and indeed, sometimes it is difficult to differentiate between the two, except the crown which is distinct.

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1. Lafaye, 'Histoire du Culte des Divinités d' Alexandrie and Cat. Nos. 15, 16, 65, 66, 68, 71, 74, 78, 102, 103, 112, 154, 155, 157, 217, 224, 229.

2. Walter's Cat. of Bronze, Intro. P. lvii (1899).

For parallels of our Taxila specimen we must refer to the numerous bronze statuettes of the God of the Graeco-Roman period, described by Walters [1] who illustrates an excellent example. The British Museum figures vary a good deal, some of them having a ring at the back, for suspension by a cord, [2] Two particularly beautiful specimens in Bronze were found at Begram. [3]

Since so many objects comparable with finds from Taxila, have been found at Begram, especially the pottery which has been already dealt with, it is necessary to give a brief account of the archaeological results obtained from the excavations at Begram. Begram, is situated about 45 miles north of Kabul, at the confluence of the two rivers, Ghorband and Panjshir, immediately under the mountains of Hindukush. Here a ferry crosses the river and on the south bank are situated, close together, three sites. One of them known as the 'Bordj-i-Abdullah', Ghirshman's'ancient Royal Town' covers an actual area of about 150 X 100 yds, enclosed within an earthen rampart, rivetted externally and internally with unbaked brick. Inadequate excavation of this area by the French Archaeological Mission to Afghanistan, conducted under the successive direction of J. Hackin and R. Ghirshman between 1936 and 1942, indicate that this may possibly be the work of Greeco-Bactrian kings of the second century B.C. but the results are inconclusive.

About 350 yds to the south is another oblong fortified area about 280 by 80 yds in extent, named by Ghirshman as the 'New Royal Town'. Our interest mainly centres on this site, where three main phases of occupation, ranging from the first or second century B.C.

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1. Ibid, Nos.1473-1503 and Pl. XXX.
2. Ibid. Nos. 1478, 1488, 1499, 1496, 1497 & 1498.
3. Hackin, op cit (1939-40) Fig. 322, 324;

to the fifth have been identified. According to Ghirshman, the first phase, dates from the Indo-Greek kings, to which belong the defences of unbaked brick-on-stone footings with rectangular towers at frequent intervals. This phase was succeeded without a break by phase 2, ascribed to the great Kushān king, Kanishka (2nd cent. A.D.) This phase was marked by new buildings as well as repairs to the old ones and in particular, included a 'Palace'. Ghirshman concludes that the 2nd phase ended with the conquest of the territory by the Sassanid king Shapur I about 250 A.D. on the evidence of the destroyed buildings, the coin finds and the tomb-inscription at Naqsh-i-Rustam, near Persepolis in Iran, which records Shapur's extension of empire to the Indus. Ghirshman considers that the city enjoyed a brief revival, marked by the partial rebuilding of the walls, but was finally destroyed by the White Huns after 450 A.D.

Two Rooms of the above mentioned 'Palace' of the second phase produced a hoard of Mediterranian and Oriental Wares of the greatest importance. It appears that at least one of the entrances to these rooms, had been anciently blocked. The variety of objects found inside the rooms appear to have been carefully stored, according to Ghirshman. At any rate they were not in actual use at the time of the destruction of the building. They include glass vessels from Syria or Egypt; coffers and plaques of carved bone and ivory from India; familiar Roman bronze vessels from western factories and the remains of lacquer bowls from Korea. Wheeler,[1] while treating of these objects observes in his dramatic way, "From the ends of the earth - from the west, form the Far East, from India - exotic things of

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1. Wheeler, op cit, P. 163.

beauty and worth had been gathered into the few square yards of these two sealed rooms as so much bullion into a bank strong-room." Associated Kushan coins include at least one of Kanishka himself, but the last king of the 'second Kushan dynasty' Vasudeva was also represented. This must indicate the general period covered by the collection from 2nd cent. A.D. to the earlier half of the 3rd cent. A.D. This dating is corroborated by the finds, particularly the types of western glass, which range from the first to the third century A.D. The hoard is therefore clearly, not an intergral deposit but an assemblage covering about 150 years. Ghirshman's identifying, of this mass of treasure covering a long period as a customs depot for receipt of dues in kind, collected by the kings or viceroys of Kapisa, from the caravans which traversed the adjacent highway, is difficult to accept. It is more likely that we have here the relic of the royal 'Tah-khana' or Treasure House.[1]

No. 418 : Sirkap II (PL.XXVI).

Among the bronze figurines, Marshall's No. 418 is particularly interesting. It is a solid bronze relief identified by him as a figure of Aphrodite. The Goddess stands on a lotus with the right hand resting on her hip and the left raised to the shoulder which holds the drapery. She is clad in a 'himation' only which falls from the left shoulder over the legs and leaves the upper part of the body bare. Her left foot is drawn back, the weight of

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1. The conditions under which these objects were found, also suggest that they were heaped up together, perhaps, in an emergency and this possibility must be taken into account when evaluating Ghirshman's theory that the building was a custom House. The actual condition of the finds was not unfortunately analysed at the time of discovery. — Codrington.

the body resting on the right leg. Bronze statuettes of this Goddess in variety are very common in Roman art and it must suffice to cite a few of them as parallels, to our Taxila example. The British Museum figures, described by Walters[1] and the particularly beautiful specimen in silver[2] from the same collection may be quoted. The latter is a medallion from the cover of a mirror-case with a repoussé design in high relief which depicts the toilet of Aphrodite. The Goddess here, however, is shown seated on a rock strewn with flowers, looking back over her shoulder. She wears a 'himation' round the lower limbs only, leaving the upper body bare. The Taxila specimen's treatment of the loosely hanging drapery round the thighs, with the upper body bare, is common in the Roman period. The central medallion on a silver bowl from the British Museum[3] is a good example. It depicts Aphrodite, facing to the front with the right hand raised to the head, holding an unidentified object, and in the left, a sceptre. One end of the drapery is caught up over the left arm and the rest hangs loosely round the thighs, leaving the upper body bare. For other comparable specimens with the same style of drapery loosely draped round the lower limbs, we may also refer to Walter's silver specimen No. 74, a situla[4] with reclining female figure and the figures on his PL.X.

No. 98 (PL.XXVI), Sirkap II (Gold).

It is a gold repoussé brooch with figures of Eros and Psyche in relief. The figures are standing side by side, caressing each other. Eros holds Psyche's breast with his right hand. The God is

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1. Walters, Cat. of Bronze, British Museum Nos. 1079-1124: P. 198.
2. Walters, Cat. of Silver, P. 17 Fig. No. 71.
3. Walters, Cat. of Silver, No. 140, PL.XXII.
4. Ibid, PL. XI.

nude except for a scarf-like robe around the neck, the thigh only, of the Goddess is covered with drapery. Marshall dates this brooch to the first century A.D. It is hard to find exact parallels for the design, but comparable scenes are not wanting in Greek classical art. A relief, probably from a bronze hydria, illustrated by Walters [1] depicts a similar scene, representing the wedding of Dionysus and Ariadne, symbolising the annual return of the vintage season. Here the beardless God with a wreath on his head is shown nude like our Taxila Eros, except for the lower legs which are covered with flowing drapery. The God looks towards Ariadne who had her right arm on his shoulder. However here the Goddess wears both the 'Chiton' and 'himation'. This is a particularly fine piece of fourth century Greek work from Chalke, near Rhodes. Our Taxila specimen is obviously an imitation of the same type of art form of a later date. The Taxila piece may also be compared with a fragment of repoussé relief, illustrated by Walters, [2] in which Psyche is shown with Eros with his right hand on her shoulder. Similarly Walters' No. 313, which is a hydria, [3] depicts in relief, the same amorous scene. Another very interesting bronze mirror case, depicting a somewhat similar subject is also illustrated by Walters. [4] Here the relief shows the scene of Hermes seizing a Nymph. Both figures are nude as in our Taxila specimen. Walters assigns all these specimens, illustrated by him to an earlier date, i.e., 4th century B.C. Greek work. They clearly indicate the persistence of an earlier art form into the Roman period. Another similar example of the Greeco-Roman work is illustrated by Reinach [5] in which Bacchus and

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1. Walters, Cat. of Bronze, PL. XI, No. 311.
2. Ibid, PL. XI, No. 309.
3. Ibid, No. 313.
4. Ibid, PL. X, No. 294.
5. S. Reinach, Pierres Gravées, PL.3 No. 24.

Ariane and the Nymph are shown, engaged in an erotic scene. Nude Bacchus is standing with his right leg crossed over the left, on which rests the weight of the body and caressing Ariane. The Goddess is shown sitting with an arm of the God round her shoulder. Bacchus, like our Taxila Eros, holds the breast of the Goddess with his left hand. The same style of transparent loose drapery of the Goddess is noteworthy. For a general account of these amorous figures of Eros and Psyche we may refer to Collignon's "Monuments relatifs au mythe de Psyché." [1]

Dionysus-Head : Sirkap II (PL. XXVII).

This unique piece of silver repoussé work with the head of Dionysus or Silenus, came from a hoard. The metal in which it is rendered is extremely thin and brittle. The bald head of the God is wreathed with a vine-scroll, the ears are pointed and in his right hand the God holds a two-handled wine-cup. Behind his head is a curved staff with a bell suspended from it. The whole relief is fixed on a plaque, embellished with conventional palmette and rosette designs. Behind this, according to Marshall, is a curved 'thumb-piece', intended for setting it on a table in a slanting position. This pieced of repoussé work, clearly an object of Graeco-Roman art, is considered by Marshall [2] to be a brilliant piece of western workmanship. Curiously, it is described by Wheeler [3]

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1. Op cit, P. 369.
2. Marshall, op cit, P. 573.
3. Wheeler, op cit, P. 159.

as a 'crude' piece of western workmanship. However, admitting its western origin, as its subject and the workmanship make clear, it is very difficult to find an exact parallel for this piece from any contemporary Mediterranean work. The explanation is not far to seek when we consider the bewildering variety of representation of the God, in various materials, with different attributes in 'Graeco-Roman' Art. So widely do these figures vary that scarcely any two examples are alike.

However, as far as the workmanship goes we may compare our Taxila specimen with a bronze-mirror, decorated in repoussé with a gorgon-head in a medallion found at Pompeii, [1] and the relief head of a young man and girl on the two bronze mirrors from Vonitza illustrated by Lamb. [2] The same author also illustrates other medallions from horse-trappings, with similar bearded head and curled hair, presumably of the same God. [3] For representations of Dionysus and Silenus in bronze we may refer to numerous examples in the British Museum, described by Walters, [4] especially Nos. 1346, 1347 and 1350 for Dionysus and Nos. 1366, 1367 for Silenus. Walter's other comparable specimens of the God with similar attributes are Nos. 1569-1577 in gems and cameos, all shown with bald head, beard and wreath round the head. [5]

<u>No. 253 Pyxis : Sirkap II (PL. XXVIII).</u>

This is a toilet casket of heavy cast bronze with a finial

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1. Spinazzola, op cit, PL. 240.
2. Winifred Lamb M.A. 'Greek and Roman Bronzes' PL. LXVIII a, b, (London, 1929).
3. Ibid, Pl. LXX b.
4. Walters, op cit, Nos.1326-1354 for Dionysus and Nos.1361-1367 for Silenus.
5. Walters, Cat. of the Engraved Gems and Cameos in the B. M. (1926) PL. XXI.

crowning the lid, which terminates in a central bud with four smaller projections around it. These caskets, fashioned out of various materials such as metal, ivory, stone, and even, earthen ware were probably used like the Greek 'Pyxis' for keeping jewels and trinkets in. It appears that the Buddhist borrowed the 'Pyxis' form as a receptacle for enshrining sacred relics in their stupas. This is Marshall's view and he points out that precious stones and coins are found in these caskets together with the actual relics. But they must also have been used as jewel boxes. These beautiful objects are purely classical in origin and undoubtedly persisted in the Mediterranean world as late as the 3rd century A.D. For earlier specimens of our 'Pyxis-type' we may draw a parallel with a Greek bronze toilet-box in the British Museum [1] of the 4th cent. B.C., which is said to have come from Terentium. For other comparable caskets of later date, we may quote a Roman example [2] in the British Museum, collection No. 1134, as well as No. 1931 (3-18-1) in ivory, both dated to the 3rd century A.D.

No. 10 (PL. XXI) 'Phiale Mesomphalos':

This is a round silver dish with a raised boss at the centre terminating in a knob, surrounded by six incised concentric circles. An inscription in Kharoshṭhī reads : Mimjukritasa sa 20 10 dha 2 = (The property)of Mimjukrita : 30 staters, 2 drachms. [3] This is a slightly stylized, version of the familiar Greek 'Phiale Mesomphalos' which become popular in the 3rd and 2nd centuries B.C. Two other

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1. B. M. No. (1873, 8-20) 127.
2. Morel Collection. 1904.
3. Marshall, op cit, P. 612.

similar dishes were found at Sirkap together with a coin of Zeionises.[1] Three similar dishes of copper and others of terracotta and stone have also been unearthed from the same site.[2] For comparable specimens in copper and bronze of the original classical type, we may refer to the numerous specimens in Berlin, illustrated by Heinz Luschey,[3] especially his Nos. 1-14; 15 a, 16 a, 17, 18-21, 24, 31 a, b, 34 and 35. A closely comparable and very beautiful specimen of late date (1st cent. A.D.) from Pompeii, illustrated by Spinazzola,[4] may also be compared with our Taxila series. The incised concentric circles of the Taxila specimens are of great interest in view of the fact that such concentric circles are also found in the N. B. P. type bowl. This form of decoration is common on classical bowls.

No. 335 (PL. XXIX) Ink-pot, Sirkap II.

Among the two types of metal inkpots found at Sirkap, Marshall's type 'B' is of particular interest. It has a handi-shaped body with vertical neck and projecting lugs on either side of the rim, and a waved wire-handle. No. 335 is a particularly good specimen. It has a sunk lid, pierced in the centre for the insertion of the pen. An exact parallel of this type of ink-pot was found at Begram.[5] (PL. XXIX). It must however, be remembered that these types occur in strata IV and V of Sirkap (such as No. 329a = Sk. V; 330 = Sk. IV) as well as in the later strata (especially II & I)

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1. A.S.R. 1928 P. 58. No. 71 & PL. XXII, 6.
2. Marshall, Taxila, copper & Bronze No. 289; Pottery No. 109; stone Nos. 39 &40.
3. Heinz Luschey, 'Die Phiale' (1939, Bleicherode)
4. Spinazzola, op cit, PL. 296, second row from Top.
5. Hackin, op cit, 1939-40, Fig. 353- No. 80.

No. 262. Handled Jug of Copper. Mohal. [1]

This specimen is of cast copper with an open mouth and a pearl-shaped body. It has a looped handle terminating at the top in the form of a curled leaf, while the base is decorated with a bearded Dionysus mask. This standard Roman jug, though often more ornate than the Taxila example, is common in numerous Roman sites. The closest parallels come from Pompeii where two, identical examples were found, and illustrated by Spinazzola.[2] The Pompeii specimens although have a similar body and handles terminating at the top in the form of curled leaf, however, slightly differ in the decoration of the base of the handle. One has a head of Medusa and the other a figure of Satyr. Other specimens of this type from the Louvre are illustrated by Ridder[3] and we may refer to his Nos. 2692, 2697, 2698 in Pl. 98; No. 2759 in Pl. 99; and Nos. 2808, 2805 in Pl. 101, which are closely comparable with our Taxila specimen. A similar Roman jug in silver was also found in the Chaource Treasure, now in the British Museum and illustrated by Walters.[4] Of the more ornate types a second Jug, illustrated by Spinazzola from Pompeii in Pl. 276, I, may be quoted and also the identical handle of a jug, illustrated in his Pl. 297 III. Incidentally, we must also draw a parallel to the famous Kolhapur Roman jug of bronze, which is dated to the middle of the first century A.D.[5] It was recovered from a brick building of Āndhra date in the ancient city site of Kolhapur, situated in the southern part of Bombay Province. Other similar specimens from Pompeii are illustrated by Overbeck[6] in his Figs. 243 and 244.

1. Marshall's Pl. 174.
2. Spinazzola, op cit, Pl. 280.
3. Ridder, op cit,
4. Walters, Cat. of Silver, No. 147, Pl. XXIV.
5. Wheeler, op dit, Pl. XXVII A, P. 151
6. Johannes Overbeck, Pompeji, P. 446, (Leipzig, 1884).

No. 296, Sirkap II, Gadrooned Saucer : [1]

It is a copper flat saucer having splayed sides, the rim being decorated with a beaded border and the sides gadrooned with a leaf pattern design. Marshall describes this as repoussé work but is is probably a solid casting. The gadrooning is known to be a particularly common motive of the Roman period, which seems to have evolved originally from shell-design. For analogous specimens we may refer to Spinazzola's illustrations from Pompeii [2] and a silver bowl from chatumange, illustrated by Walters. [3] In the centre of Walter's bowl, however, is a medallion with a beaded border in which is a relief of the 'three Graces'. They are nude and the middle one is shown in back view with her arms round the shoulders of the other Goddesses, who face outwards. Walters also, illustrates a fragmentary silver bowl from the 'Caubiac Treasure' [4] withidentical fluted pattern on the sides, but having a central medallions,within a beaded border,which depict an engraved scene of Aphrodite and Cupid. Aphrodite is seen with a sceptre in one hand, while Cupid flies towards her from her left. On her right is a young Satyr, nude and ithyphallic. He also, illustrates another very beautiful specimen of this type of silver dish with 29 flutings on the sides.[5] The centre is plain except for an engraved double ring. There is also another closely comparable specimen in the Victoria and Albert Museum from the N.W.F.P.

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1. Marshall's Pl. 183.
2. Spinazzola, op cit, Pl. 238, Middle row.
3. Walters, Cat. of Silver, Pl. XVIII, No. 132.
4. Ibid, Pl. XXII. No. 140.
5. Ibid, Pl. XXIX, No. 169.

(MISCELLANEOUS MINOR ANTIQUITIES

(Aphrodite or Psyche No. 96(PL.XXV)

Marshall's Nos. 96 and 97, both of which are figures of the same Goddess, Aphrodite or Psyche, although they are figured in a slightly different attitude, are evidently of the same workmanship. Similar, but variant versions of this figure in Roman art is by no means rare, as has been indicated earlier. Both of them are in repoussé relief on brooches and came from strata II and III respectively of Sirkap. In No. 96, the Goddess is shown standing on a lotus pedestal, resting her left elbow on a pillar and her right hand on her hip. The attitude recalls the bronze statuette of Aphrodite (No. 418) already discussed. The Goddess wears armlets, bracelets and a crossed breast ornament and is winged. The crossed chains of the breast-ornament of No. 96 (PL.XXV) is of the greatest interest. This commonly appears in Indian terracottas and is called in Sanskrit 'Chinnavara'. It does not occur on classical types and is undoubtedly Indian. It is found on certain of Petrie's terracottas from Memphis and even more interestingly it occurs on an Ash-chest in the Florence Museum [1] of the common type usually described as Etruscan.

At the back of the relief is attached three small rings for suspension by cord. No. 97 is also a gold brooch with the figure of winged Aphrodite or Psyche, similar to No. 96.

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1. Lawrence, D. H. 'Etruscan Places' Plate opposite P. 192 'Volterra. Ash-chest showing Acteon and his Dogs' (London, 1932).

Nos. 3, 4; 5 & 6. Ear-pendants, Sirkap III.

These are two pairs of gold ear-pendants. The face of the upper disc is decorated with a full-blown flower, surrounded by concentric bands of beading, scroll and plaited filigrée work. Between the points of the petals are granules of gold; and in the centre, a beaded circle. The outer petals of the flower are also embellished with granules, the inner petals being plain. At the top of the disc is a trefoil flower design and there is a small ring behind. From the base of the disc are suspended five-plaited chains ending in gold beads. We may refer to a very fine pair of similar ear-pendants from Pompeii, illustrated by Spinazzola.[1] The Pompeii specimens have however a male-head in the centre of each disc. For further examples of the same type of workmanship of the Roman period, we may also compare Marshall's[2] illustrations from the British Museum, especially Nos. 2331-2333 and 2335, all known to be of the Roman period, dated between first century B.C. to 3rd century A.D.

Glass.

Among various glass objects unearthed at Taxila are beads, bangles, small vessels, flasks, tiles and a few other miscellaneous articles. True glass objects appear even in the earliest stratum of the Bhir Mound, but most of the small bottles or other vessels

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1. Spinazzola, op cit, Pl. 227, top middle.
2. Marshall, F. H., Cat. of Jewellery, Greek, Etruscan and Roman, in the B.M. Pl. LI (London, 1911).

found at Sirkap are undoubtedly of Roman origin. The best preserved are small flasks of sea, or jade-green glass, identical to those commonly found throughout the Roman empire during the early Christian eras. This observation is also borne out by Hackin's find of glass ware at Begram,[1] almost all of which were imports from Syria or other factories around the coast of the Mediterrenean. Alexandria, Tyre and Sidon were all known for their glass factories during this period but Campanian coloured glass was probably even more a popular choice over the Syrian or Alexandrian product at that time.[2] The specimens of flasks illustrated by Marshall (Nos. 1-4, from the top two strata of Sirkap) are typical examples of Roman blown-glass, such as are commonly found at Roman sites both in Europe and western Asia. The Taxila specimens are of sea-green translucent glass with a silver-green patina. No. 4 is the neck of a jug with a broad fluted handle and pronounced rim. All these Taxila pieces are paralleled in the finds from Karanis in the Fayum and may be compared with numerous specimens illustrated by Harden,[3] such as his PL. VIII Nos. 600, 594, 599; PL. XI, Nos, 732, 720, 739; PL. X Nos. 815, 834, 823, 797, 833, 827, 819, 803 etc. Exactly similar examples are also common in Roman Britain and some of the British Museum glasses are identical such as No.S.85 and No. 51. 8-13, 523. A large number of such flasks have also been found in Gaul, such as those illustrated by Morin-Jean.[4] Particularly important from the point of view of the Taxila finds are his Nos. 12, 14-17, 20-22 of his morphological table. The neck and handle of Taxila No. 4 may be compared with Morin-Jean's Nos. 46-52, 55 etc. which are also identical.

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1. Hackin, op cit, Chantier No. 2 (1937)
2. Rostovtzeff 'The Social and Economic History of the Roman Empire' P. 71; Warmington 'Commerce &tc. P. 271 and No. 30.
3. Donald B. Harden, 'Roman Glass from Karanis' (1936, Ann Arbor, Univ. of Mich. Press.)
4. Morin-Jean, 'La Verrerie en Gaule, Sous l' empire Roman', (Paris 1913).

Gems and Cameos : No. 14 (Marshall's Pl. 207) Bajram. 3' Below surface.

This is a flat oval seal of nicolo with the engraved figure of Cupid, chasing a bird, probably a cock. It recalls a very similar specimen from Arikamedu [1] (PL.XXX, Nos. 11 & 12) now in the ~~new~~ Bibliothéque at Pondichery, which has been illustrated by Wheeler. This is a Quartz intaglio of undoubted Roman workmanship also representing Cupic chasing a bird, which is however, identified by Wheeler as an eagle. Marshall dates his specimen to the first century A.D. There is a comparable design on an amethyst, illustrated by Walters [2] which depicts two Erotes setting cocks to flight, a well known Roman subject. Solomon Reinach's [3] Nos. 76 [4] and 76 [6], depict a somewhat similar scene showing Eros holding a springing dog on a lead. One is in cornelian and the other in jasper. Another of his cornelians No. 76 [8] shows Eros watching cock fight [4] and still another, No. 90 [4] shows Eros in the same attitude, holding a butterfly. We may also compare our Taxila piece with Richter's [5] illustrated specimen which similarly depicts Eros, bending forward, holding a dog.

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1. Anc. Ind. Bulletin No. 2. PL.XXXIIIB, 11, 12.

2. Walters, Gems and Cameos in B.M. No. 1528 PL. XX.

3. S. Reinach, Pierres Gravées, PL. 37 (Paris 1895)

4. Ibid, For further examples of Eros and cock scene No. 92 [3] PL.71; For cocks Nos. 92 [2], 93 [6], 93 [7] etc.

5. Gisela M. A. Richler, 'Cat. of engraved gems, Greek, Etruscan and Roman, (Rome, 1956) No. 307 PL.XLII.

No. 12, Seal: Jandiāl:

This is a scaraboid chalcedony seal, engraved with a horse (deer?), running to the left. Marshall describes it as a 'Hellenistic' work, dated between the fourth to third century B.C. [1] We can compare it with Richter's specimens [2] Nos. 138 B/1, 138 B/2, 138 B/3, 138 B/4 and 141, illustrated in the same book, which are all known to be Graeco-Persian work, dating to the second half of the 5th century B.C.

No. 30, Seal (Pl.XXX) Sirkap II.

This is an oval seal of cornelian set in a heavy gold-frame, with four rings on the back. The face is engraved with figures of Eros and Psyche with a second tiny Eros behind the Goddess. The standing Eros is nude, excet for a loose garment flung round his shoulder which hangs down the back. His right foot is drawn back, the weight of the body resting on the left. Psyche stands in the conventional attitude with the loose transparent garment held in the right hand at the hip, leaving the upper part of the body bare. The pose of the standing Eros is undoubtedly of Greek origin, but was later extensively used by the Roman artists. Sir Arthur Evans [3], illustrates a gem engraved with the figure of Apollo, in exactly the same attitude. This is clearly dated to the fourth century B.C.

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1. Marshall, Taxila, P. 679.
2. Richter, op cit, Pl. XXIII.
3. Sir A. Evans, 'Greek and Greco-Roman Gems', Pl.XII, No. 60 (Oxford 1938).

Other prototypes of this familiar Apollo form are found on a Roman intaglio on a Peridot Ringstone, illustrated by Richter, [1] while others of the same kind are illustrated by Reinach [2] We may also quote Reinach's [3] No. 65[4]. His another specimen in oval chalcedony [4] depicts a nude Venus and Adonis side by side, which is comparable with our Taxila No. 30. The red-paste Aphrodite figure, illustrated by Sir Evans [5], is also comparable. Here the Goddess is shown arming and wears a transparent drapery which is very similar to the Taxila Psyche figure. Evans dates his red-paste figure to the Hellenistic period.

Beads :

Out of a total number of over 8,500 beads of various materials unearthed at Taxila, 1,736 came from the Bhir Mound, 5,534 from Sirkap and the rest from the other surrounding minor sites. This enormous collection of beads has been analysed by Marshall and a representative selection of 950 beads, constituting about one-ninth of the whole find has been exhaustively studied by the late Horace Beck, whose unrivalled knowledge of oriental beads is well-known. The result of his analysis was published in a special memoir [6] of the Archaeological survey of India Reports. In view of the enormous number available we must confine our study to a few selected specimens of special interest. Marshall on the basis of his analysis came to the conclusion that the commonest materials used for the

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1. Richter, op cit, PL.XL. No. 276.
2. S. Reinach, op cit, No. 125, PL.97 and No. 21, PL.120.
3. Ibid, PL. 32.
4. Ibid, No. 73[6], PL. 35.
5. Evans op cit, No. 79, PL. III.
6. Memoir No. 65, 'The Beads from Taxila'. Horace Beck.

manufacture of beads, both in Sirkap and the Bhir Mound were semi-precious stones, shell and glass. But the fashion changes from time to time, "Thus, in the case of the Bhir Mound collection, beads of semi-precious stones constitute as much as 42% of the whole, glass beads 32%, and shell beads 14%. In the later Sirkap collection on the other hand, those made of the semi-precious stones constitute less than 12%, glass beads 50% and shell beads 26%. In the Bhir Mound collection, again, 81 beads representing 4% of the whole, are of bone and four only of faience; while in the Sirkap collection only 13 or one in 500, are of bone, and 222 of faience." [1]

Of all these types of beads, a class of distinctive specimens of somewhat irregular barrel-shape, collared roughly at one end, in glazed quartz, deserves out special attention. They are often adorned with crude cross-hatchings. [2] A comparative study of beads from other Indian sites suggests that they may be divided into two classes : 'Groove-collared' and 'lug-collared'. Of the five 'groove-collared' beads from Arikamedu, [3] one each came from the pre-Arretine, Arretine, and post-Arretine deposits of the Northern Sector; the fourth and fifth are from the Southern Sector. The 'lug-collared beads first make their appearance in the Arretine period (1-50 A.D.) and continue throughout the post-Arretine strata of the Northern Sector to the latest period of the Southern (2nd cent. A.D.) [4] The sequence at Arikamedu indicates, as suggested by Wheeler, [5] that the 'Groove-collard' beads antidate the 'lug-collard' one, as the Taxila series also show. [6]

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1. Marshall, Taxila, P. 729.
2. Beck, PL.IV, No.11 B.M.; PL.V, 1, 2, Sk. etc.
3. Anc. Ind. Bulletin, No. 2. Fig. 41, Nos. 45-49.
4. Ibid, Fig. 41, Nos. 51-58, P. 101.
5. Ibid, P. 97.
6. Beck, PL.III, 18 = B.M.; 31 = Sk.; PL.IV. 11 = B.M.; PL.V. 1 and 2 = Sk.

Collared beads have a very wide distribution in India as elsewhere. With the exception of their prototype at Mohenjoddro [1] (3rd Millennium B.C.), they occur at Chandravalli (Mysore slate) in a stratum which also yeilds two denarii of Tiberius (Died A.D.37), Kondapur and Maski (Hyderabad) in strata said to be of the Andhra period, Sisupalgarh near Bhubaneswar (Orissa), Kosambi (U.P.), Pataliputra (Bihar), Durgapur (Bengal) [2] and on both the Bhir Mound and Sirkap at Taxila. The Bhir Mound produced five 'groove-collared' and three 'lug-collared' beads, while, Sirkap yielded only one 'groove-collared' and 'seven' lug-collared' beads. [3] At all these sites, it would seem that the 'groove-collared' beads are earlier than the lug-collared ones.

Outside India collared beads at Gezer in Palestine [4] have been dated to B.C. 1000-500. Ribbed gold beads with a collar at each end have been found in late Mycenean tombs at Enkomi and Curium in Cyprus. [5] Their occurence is also, recorded from other graves in Cyprus dated to the first half of the 6th century B.C. [6] Beck illustrates one 'groove-collared' bead from Ur (before 600 B.C.) and three 'lug-collared' ones from Egypt, (XIIth Dynasty) Palestine (800 B.C.) and Cumae (500 B.C.) respectively. [7]

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1. Marshall, M.I.C. PL. CXLIX, Fig. 5, Vol. III (1931)

2. Wheeler, Anc. Ind. Bulletin, No.2. P. 97.

3. Beck, op cit, PL.III-VI & VIII.

4. R.A.S. Macalister, 'The excavation in Cyprus', (1912, II) P.112; and III PL.CXXXVII, 60.

5. Murray Smith and Walters, 'Excavations in Cyprus' (B.M. 1900) P. 65, 81 and PL. VIII, XIII.

6. Ohnefalsch-Richter 'Kypros' the Bible and Homer (1893) PL.LXVII,7; CXLIV, 2, 5; P. 208, Fig. 170.

7. Beck, 'Classification and Nomenclature of Beads and Pendants', Archaeologia, 1928.

In the same way some of the many types found at Taxila are comparable with beads found at Mohenjaodaro and Harappa.[1] It is obvious that bead-types are widely distributed both in space and time. They are therefore of comparatively little use for the purpose of dating. But the gadrooned beads from Taxila of which Nos. 54, 20 and 4 of Beck (PL.XV) are good and representative specimens, are of undoubted Roman origin. Becks No. 20, is of milky quartz and came from 5' 6" below the surface at Sirkap and No.4. a glazed quartz came from 4' below surface at the same site. The frequent use of gadrooning during the Roman period has already been discussed.

Parallels of the interesting 'Frog-bead', illustrated by Beck[2] and Ghosh[3] from Taxila have also been found at Arikamedu[4] as well as at Kosambi[5] and Marshall records nine frog-beads from Taxila.[6] The type occurs outside India.

Another interesting type of bead which, calls for out special attention is the 'eye-bead'. It has a long history and wide distribution in the ancient orient. It occurs in the prehistoric city at Harappa,[7] as well as in Mesopotamia, Persia and China.[8]

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1. Vats, M. S. 'Harappa' Pl. CXXX Nos. 42, 43, 48, 49.
2. Beck, op cit, PL.VII, No.33, Sandial, Shell.
3. Anc. Ind. Bulletin, No.4, PL.X, No.22 = post Bastion, Cornelian.
4. Ibid, No. 2, Fig. 41, 60.
5. Wheeler, Ibid, No. 2, P. 98, F.N.
6. Marshall, Taxila, P. 748.
7. Vats, op cit, PL.CXXX, Nos. 42, 43, 48, 49.
8. Illustrated London News, 12 May, 1934, P. 732-3; also Marshall, Taxila, P. 745.

Some of these 'eye-beads' were made out of natural stones, such as onyx or banded agate which were so chosen and shaped that the different layers formed a circular eye, surrounded by one or more bands. Others were made of stone or shell on to which patches of different coloured stones were cemented in order to form the eyes; while some times the cornelian or agate beads were etched on the surface to form the eyes. In the fourth stratum of the Bhir Mound 15 of these types in shell were found as well as, 2 in glass and one agate. In the second stratum of the Bhir Mound 4 eye-beads of shell and quartz, 13 of stone and 7 of layered glass, were found. Sirkap produced 15 eye-beads of stone or glass, but none of shell.

CHAPTER VI

Dharmarājikā Stupa & Monastery

As already noticed earlier, the vast majority of the Buddhist monuments at Taxila are found scattered on the surrounding hills and valleys, outside the city-walls. A glance at the attached site-plan ( ) will make it clear that these remains may be traced on every hand. Usually they are sited in secluded surroundings, obviously to avoid the turmoil and bustle of the city's crowded life, but within walking distance from it, or in other words, within begging distance of the city. The choice of these quiet and retired spots for the location of these monastic establishments presents, indeed, an interesting material for the study of the history of early Buddhism. It is clear from Buddhist texts that the Buddha, as well as his disciples, spent much of their time in the course of their journeys from place to place during the rainy-season in such suburban retreats. Of these garden retreats, the Bamboo-garden near Rājagṛiha, the Jetavana near Śrāvasti, the Mango-Grove near Vaiśali and the Deer Park near Benares are noteworthy. The descriptions of the Bamboo-garden at Rājagṛiha and of the Jetavana at Śrāvasti, found in the Mahāvagga [1] explain how the choice of site was made. "A spot not too far from the town and not too near, suitable for going and coming; easily accessible to all people, by day, not too crowded, at night not exposed to noise and alarm; clean of the smell of people; secluded from men; well-fitted for retired life." In persuance of the old practice initiated by the Master himself, the Saṅghārāmas found at Taxila are, as might be expected, all of this garden-enclave type. It is only in the later stages of monastic developments, when the conditions had no doubt changed, that self-contained and strongly walled monasteries were erected in the city itself. They are composed of three types of

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1. Vinaya, Mahavagga, 1.22. 16&17 (S.B.E.) XIII P.143, F. Max Müller (Oxford, 1881)

buiding. In the earliest sites known to us, such as Sarnath and Sāñchi, a stupa is found placed in apposition with an apsidal Chaity-hall. At Sāñchī the stupa is in line with the long axis of the Chaity-hall. At Sarnath the Ganda-Kuti, in front of which the Buddha preached his first sermon is on the axis of the Chaity-hall. In both sites the Aśoka column is placed on the same axis between the two buildings. At Sarnath a stupa, was later fenced to one side. Monasteries do not appear to have been built on the square-court plan with surrounding cells facing inward until sometime later. The square-court monastery recently excavated at Kasia from under recent alluvium with river shells, may be the earliest yet found. But it is not earlier than the first century A.D. Later, at all Buddhist sites, independent square-court monasteries were built in large numbers, but they have no relationship in planning with the older stupas and Chaity-halls. Indeed some of them are provided with shrine in the innermost wall. This is the plan adopted in the post-Gupta cave-temples at Ajanta, Nāsik and elsewhere.

The mounds which cover the ruins of such saṅghārāmas are easily distinguishable from their almost uniform configuration. But the stupa, not the Chaitya-hall seems to have been used in their earliest days of the Church. As Marshall observes, "among the countless monuments of the Faith throughout the Indian peninsula there is no example of a stupa earlier than the reign of Aśoka, in the middle of the third century B.C., and no example of a walled, self-contained monastery until the first or second century A.D." [1] However, it appears probable that the practice of erecting stupa over the body-relics of holy persons was known in India prior to that date (3rd cent. B.C.). It was considered to be an act of religious merit favourable to salvation. Tradition clearly tells us that eight stupas were built on the body-relic of Buddha, after his death in following town: Rājagriha, Vaiśālī, Kapilavastu, Allakappa, Rāmagrāma,

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1. Marshall, op cit, P. 252.

Vethadipa, Pāvā and Kusinagara, which would seem to indicate that raising tumuli or burial-mounds, was an established practice in India. But it is equally certain that prior to the Mauryan emperor Aśoka, stupas did not become an object of marked veneration. The early Buddhist literature records with meticulous details the life of the brethren but none of them mentions anything about the cult of stupa, anterior to Aśoka's time. Admittedly, the eight stupas containing the body-relics of the Master, must have been held in reverence by the fraternity, after his death. But it is most unlikely that they were regarded as symbols of the Buddhist religion. It is probable, therefore, that the cult of the sacred relics preceded the idea of a stupa. It was Aśoka who, indeed, gave the first impetus to this remarkable cult, by opening seven of the eight stupas mentioned above and distributing the relics among all the principal towns of his empire. Over each relic he caused to be erected a stupa of imposing dimensions. From Aśoka's time, therefore, the cult of the stupa as such, developed and very soon became one of the primary symbols of Buddhism, whether it contained a relic or not Marshall observes that, "it thus became the, nucleus of every Sanghārāma before the beginning of the Christian era and was looked upon as the outward and visible manifestation of the Faith. To build or create a stupa of any shape or size was a work of religious merit. Hence myriads of these monuments were arising on every hand. Some were imposing edifices of stone or brick, standing in the open, like great Dharmarājikā Stupa ... others were placed in the apses of chapels [1] where they could be worshipped under cover." [2] Still later in early medieval times miniature representation of stupas were stamped on clay or plaster and are found in large number at Buddhist sites.

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1. Chaitya-hall.
2. Marshall, op cit, P. 232-3.

The earliest form of stupa known to us, is circular in plan with a squat, slightly curvilinear dome, set on a low plinth. This was the original form of the Dharmarājikā stupa and the imposing stupa at Manikiala as also the stupa at Jamālgarhi. But when western influence made itself felt in north-west of India increasingly (c. 1st cent. B.C.) the circular base was replaced by a rectangular lower storey and the dome was elevated on a high drum. Even in the pilasters and mouldings of the stupa base and the drum, classical features came to dominate. Still further changes were introduced in construction by dividing the plinth horizontally into multiple terraces. This was done, according to Marshall, sometime about the first century A.D. At the same time, figures of Buddha were placed in the middle bay of each face. Cunningham describing this evolution says, "The earliest topes would appear to have been simple hemispheres, in which the height was little more than one-half the diameter as in the two great stupas of Sāñchī and Satdhāra which are not later than the age of Aśoka ... The topes of the next age, with a height equal to three-fourth of the diameter may be assigned to the period from 300 B.C. to 100 ... The great Manikyala tope may be a modern reconstruction of a tope of this date. Those of the next age, with a height equal to the base diameter, may be ranged from 100 B.C. to A.D. 100. They may be seen in the bas-reliefs of the Sāñchī gateways. Of about the same age is the Kanheri tope."[1] Although his dating cannot be accepted, Cunningham reduces the evidence to a mathematical table with surprisingly accurate results, judged from other sources. His chronology is pre-dated by his opinion that Sāñchī and Bharhut were Aśokan.

The Gandhāran stupas are, in fact, derived from those of Bharhut, Sāñchī, Amravati and the earlier Cave-temples of India. At Bharhut the stupa was of brick and hemispherical in shape, but without any kind of base or upper 'processional path'. The original stupa at

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1. Cunningham, C.S.R. Vol. II, P.287.

Sñchi was of the same type, rubble masonry used to case a brick core. In the first century B.C. the 'processional path' was added. At Amravati, the upper 'processional path' does not appear, but the dome, which is slightly more than hemispherical, is raised on a high cylindrical base. In the early Ajanta Chaitya Caves No. X, the dome is raised on two drums, tired one above the other. At Karli also the base is double; while at Nasik it is single but of a considerable height, the dome being in both these cases more than hemispherical. All these examples indicate that in later times the dome showed a tendency to exceed the hemispherical shape and became superimposed on one or more tall drums, tiered one above the other.

Monasteries in the early days of Buddhism, as already hinted, were merely garden-retreats, with a number of buildings for the accomodation of the monks, who congregated there during the rainy-season. Buildings, as laid down in the Vinaya text quoted by Marshall[1] consisted of sleeping and living rooms, a refectory, kitchen, bath-room, open pavalion, a promenade and cloister for walking exercise, a privy, a well, and well-house, a store-room and a provision and drug-store. However, it is quite certain from the construction of buildings at the Dharmarajika, as elsewhere, that the living quarters of the monks, in those days were not standardised. The square-court type of buildings here characterized the monasteries of later times. Later monasteries everywhere followed the general plan of a large structure with one or more open rectangular courts, enclosed by a series of cells and other chambers facing inward, with or without a verandah in front. In the early Viharas on the other hand, detached structures on a small scale were irregularly grouped together, as is shown by the well-known Bharhut relief of 'Anathapindika's gift. Here, one of the two small huts shown, is actually labelled 'Gandakuti' and represent the Buddha's own residence. The Mauryan rock-cut caves in the Barbar Hills may be taken as representing these little

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1. Marshall, op cit, P. 233.

buildings. But Dasaratha's inscription[1] states that they were made for the sect of the Ajivikas, who were not organized as a community. The development of the Buddhist monastery can be traced in the later rock-cut temples of India, especially the two Son-Bhandar Cave near Rājgir.[2] The largest of these is rectangular and has an arched roof. The jambs of the door slope inward and both it and the window are without any moulding. These are merely solitary cells for ascetics The oldest rock-cut Viharas, such as those at Bhāja and Bedsa are cut with such precision that it seems likely that they are based upon wooden originals in plan, if not in elevation. On three sides, a series of cells open into a rectangular court, the fourth side remaining open. In certain cases, there is some evidence of the existence of a timbered screen, in others of a brick wall with rectangular doorways. Caves with wooden Verandahs of which several Kanheri groups are examples, as a whole are later in date. The only furniture of the cells was the monastic stone-beds, book-shelves and lamp-niches. The only decoration outside, consists of a combination of Chaitya-arches and the so-called Buddhist railing, borrowed from the original wooden architecture portrayed at the Bharhut and Sāñchī reliefs. Square lattice windows have the same origin. The most ancient Viharas at Ajanta Caves XII and XIII are typical. It is evident that in these early groups of cave-temples, the Chaitya-cave is the centre of the whole and the Viharas are subsidiary to it, as both Bhāja and Pitalkhora show. Of the later group of Cave-Viharas Bedda furnishes us with interesting details. Here, adjoining the Chaitya-cave, the single Vihara is cut on an apsidal plan with an arched roof. Eleven cells open into the hall, each with a chaity-window-arch over its door, the whole being connected by a string course of railing pattern.

The quadrangular, high-walled monasteries first appear in the

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1. Ind. Antiquary XX, P.364; Lüders List Nos. 954-56.
2. C. S. I., Vol. I, P.25.

north-west, according to Marshall during the first centmy A.D. and he believes, then found their way from the north-west to southward and eastward to the rest of India.[1] He also explains the adoption of the later type of monastery with high walls, to the need of greater security in the north-west India where, "the temper of the people was more violent and aggressive and where the risk of hostile invasion were rarely absent."[2] This argument is not altogether convincing; The Buddhist square-court monastery has obvious affinities with the Caravansarais of the Persian area.

In Taxila we can trace the transition between the early and later development of these Saṅghārāmas. Marshall describes it thus, "in the early part of the first century A.D. the Dharmarājikā exhibits a transitional stage in the rapidly changing character of the Saṅghārāmas. The flimsy perishable buildings of the old garden-enclave have now been replaced by stone-ones, but these have not yet taken as a quadrangular, self-contained monastery; they are merely disposed in rows, in somewhat haphazard fashion, along the edges of the enclaves, while in the centre the only object of cult worship is the great stupa and its ring of smaller satellites; for the day of the image-chapel has not yet arrived."[3] Marshall, probably rightly considers that in addition to the rows of cells, small apartments facing on to the great stupa, there were other and larger structures, assembly halls, mandapas, refectories etc., in the area to the north of the stupa-court. But no trace of these actually survive.

The later monasteries are of the quadrangular walled-in type and the earliest among them is built, according to Marshall, of semi-ashlar masonry which he thinks was introduced into Taxila in the second cent. A.D. It is necessary to mention here that the

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1. Marshall, op cit, P. 233.
2. Ibid, P. 234.
3. Marshall, op cit, P. 274-5.

theory of the development of masonary types as an index to the chronology of structures in the Gandhāra region in general, and at Taxila in particular, was first conceived by him from the Buddhist buildings at the Dharmarājikā site. But it must be realized that marshall's scheme of dating Gandhāran monuments on the basis of masonry types cannot be applied with certainty as has been already hinted (Ch. III). It has been especially demonstrated by Berger in his excavation at Swat.[1] Berger, citing the many evident anomalies, concludes "we must suppose either that the chronological scheme based on the buildings at Taxila is not necessarily applicable elsewhere in Gandhāra or else that that scheme itself needs revision."[2]

Although unfortunately nothing remains of the original fabric of the Dharmarājikā stupa or any other monument at Taxila that can be definitely recognized as Mauryan, Marshall on very reasonable grounds, of which the name itself is one, infers that is was most probably founded by Aśoka. It is intetesting to note here that Marshall in his earlier publications held different views. He said,[3] "Apparently the original stupa was built in the time of the Scytho-Parthian rulers, but repaired and enlarged in the Kushān epoch and partly refaced again about the 4th cent. A.D., to which period the decoration above the terrace belongs."

The central stupa is roughly circular in plan with a raised terrace around its base which was ascended by four flights at steps, set at the four cardinal points. Its overall diameter including the terrace and steps, but excluding the 'procession path', is 150' feet from east to west, by 146' feet 6" inches from north to south. The core is built of rough rubble masonry, strengthened by 16 walls, 3'2" to 4' 9" in thickness, radiating irregularly from the centre. These radiationg walls however, stop short above the berm of the stupa, instead of being carried down to its foundation, which clearly indicates their later

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1. Evert Berger, A. S. I. Memoir, No. 64, 1941, P.35-36.
2. Ibid, P. 36.
3. Marshall, A Guide to Taxila, P. 38, (Cal. 1981)

reconstruction. Marshall thinks that the foundation and the lower part of the superstructure upto the bottom of the radiating walls dates from the Mauryan period.[1] Subsequently, about the middle of the first cent. B.C., a series of small stupas was erected in a ring around the main edifice. This ring of stupas itself indicates clearly that the central stupa was already in existence. The rebuilding of the stupa drum and dome with the radiating walls, is ascribed by him to the first century A.D., and the destruction which necessitated this complete rebuilding is surmised to be the result of an earthquake of violent nature, occured sometime between 20-40 A.D. The reconstruction of the raised terrace was carried out in semi-ashlar style, which characterize the Sirsukh Wall. The outer facing is of large limestone blocks with chiselled Kañjūr stone let in between them to form the moulding and pilasters. The whole outer facing of the stupa may have been once finished with a coating of painted lime plaster. The ornamental stone carving on the face of the stupa above the berm is distinguished by the boldness of its mouldings and the design of its niches, which are framed alternately by trefoil arches and doorways with sloping jambs, divided one from the other by corinthian pilasters. One notable feature of the decorative plan, which need further study is that the base of the stupa drum, immediately above the berm, is decorated with a band of ornamental stonework entirely of Kañjūr stone, in contradistingtion to the berm which is partly of Kañjūr and partly of limestone. This ornamental band is dated by Marshall to the fourth or fifth century A.D. and represents in his opinion, the last phase of the repairs carried out at the Dharmarājikā stupa before its final destruction, probably at the hands of the White Huns. No relic of any kind was found by Marshall in the central stupa, although he excavated down to the virgin soil at a great depth. It may well have been rifled by treasure-hunters long before his time.

The 'procession path', encircling the great stupa was originally

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1. Marshall, Taxila, P. 236.

at ground level. Its average width varies between 11 and 12 feet. The original floor of the 'procession path' was composed of lime mixed with sand. This pavement was curiously decorated with shell bangles, embedded in the plaster which were arranged in various simple geometric designs, and was covered with an accumulation of debris about 3' thick, which, in turn was covered by another floor of lime plaster. It is interesting to note that in the debris which immediately overlay this second floor, many pieces of glass-tiles were found, similar to those found in chamber F1. From this Marshall deduces that probably once the entire 'procession path' was paved with these glass-tiles, and when later it fell into disrepair, some of them were removed to chamber F1, where they were laid in a haphazard fashion. The last floor of the 'procession-path' which is the only floor now visible, is composed of grey slate slabs. The earliest floor is dated by Marshall to the Mauryan time, contemporary with the original stupa structure, including the decoration of shell bangles in the 'path'. The second floor with the remnants of glass-tiles is referred by him to the first century A.D., and corresponds with the rebuilding of the stupa after the supposed earthquake, about a century later, when the steps around the base of the stupa were added. The last floor, he thinks was laid during the great rebuilding period in the 4th to 5th century A.D., when the ornamental band of carved niches was added above the berm.[1] Apart from the sculptures and other, minor antiquities unearthed on the 'procession path', the most important finds consisted of three groups of coins recovered from the debris, accumulated above the 'path' during the early medieval period. The largest of these groups, consisting 355 coins, was found in a hole by the side of a small block of Kañjūr overlying the western flight of steps. This group, with the exception of one defaced lead specimen, are all of copper and comprise coins of Rājuvula, Azes II, Kadphises I, Soter Megas, Kanishka, Huvishka and Vasudeva, besides some Sassanian issues of Shapur II and later Indo-Sassanian types.

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1. Marshall, op cit, P.239.

The second group discovered in the north-east quadrant of the 'path', contained 305 coins. It consists of 2 of Vasudeva of the 'Śiva and Bull' and 'Seated Goddess' types; 18 Sasanian of the 'Bust of king and squat altar' type and 285 debased Indo-Sassanian types. The third group, recovered from the debris at the east entrance, consisted of only 4 coins: 1 of Soter Megas, 1 of Kanishka, of the 'Nanaia' type and 2 of Vasudeva.

The next stage of building activities round the central stupa is marked by erection of a complete circle of small chapels, overlying the earlier ring of stupas, similar in plan to those at Jamālgarhī in the Frontier Province. When these chapels were built, evidently the bases of the small stupas were left undisturbed, possibly for religious reasons, the ground between them being fill up with debris, on top of which the walls of the new chapels were raised.

Marshall presumes that the next stage of building activities on the site is marked by the erection of gateways, opposite the steps at the four cardinal points.[1] No trace of these supposed gateways, however, is recorded anywhere in his publication. It seems that he expected to find a parallel to the imposing stupa at Sāñchī with its great gateways. His disappointment is reflected in the modified account of his final publication. He writes, "with the Great Stupa thus ringed with chapels, it became necessary to provide 'entrances' to the pradakshiṇā. At first, these entrances were probably four in number, one opposite to each of the four stairways by which the berm of the great stupa was ascended. Later on, however, the two entrances on the north and west were obliterated, their place being taken by chapel of semiashlar work and only the two entrances on the east and south were kept open."[2]

Of the numerous other structures scattered around the central stupa, apart from the above mentioned encirling stupas and chapels, a double-chambered chapel, 34' 8" square (Building L) situated to

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1. Marshall, Guide, P. 41.
2. Marshall, Taxila, P. 250.

the south-west of the great-stupa, yielded some interesting finds which deserve our notice. This chapel is dated by Marshall to about the end of the first century A.D. with some later additions in the second century A.D. Round about the plinth wall of the chapel, which is in diaper masonry of the large variety, and from other ruins in the building, numerous pieces of Gandhāra sculptures of a heterogeneous kind, "varied in style, as well as in design and dimensions,"[1] representing a long period of time, were found. He observes, "it is quite impossible to imagine all the heterogeneous pieces which make up this collection as having been designed by the original architect for the decoration of chapel L. The only possible explanation seems to be that they are a haphazard lot of sculptures turned out at different times and by different artists in the ateliers of Gandhāra, and purchased by pilgrims or others for dedication at the Dharmarājika"[2] It must be realised that this is not the only example of this particularly interesting feature at Taxila. Instances of exactly similar nature was also brought to light from the shrine A 1, at Kalawan settlement, located on the north side of the Mārgala spur. This is an apsidal building, 50' long and 26' 6" broad, with 18' nave internally from east to west, and 19' 6" apse. From a very important copper-plate with Kharoṣṭhī inscriptions on it, recovered from the relic-chamber of this shrine, its date can be fixed within a narrow margin of error. The inscription records the dedication of the relic in this stupa-shrine in the year 134 of Azes.[3] Incidentally it may be noted that this copper-plate inscription gives the date of this building within two years of the shrine G 5 at the Dharmarājikā stupa which yielded a silver-scroll inscription of the year 136 of Azes.[4] In describing the heterogenous collection of sculptures and

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1. Ibid, P. 251.

2. Ibid, 251.

3. Ibid, P. 327. See also Sten Konow in the J.R.A.S. Oct. 1932 P.949 for the reading and translation.

4. Marshall, Taxila, P.256; Sten Konow in C. I. I. Vol. II, P.70-7; J. R. A. S. Oct. 1914, P. 973-86, 'The date of Kanishka by J. H. Marshall.

relief in shrine A 1 at Kalawan, Marshall says, "... We find that they are of so very heterogeneous a character that it is impossible to assign them to one and the same date , or to imagine them as having belonged to a single uniform scheme of decoration ... We must not, of course, expect the reliefs of any one period to be all of equal merit. There must always have been some differences of style and much inequality of workmanship according to the varying abilities of the sculptors'; but in this group of Kalawan carvings the differences are much too fundamental to be accounted for in this way. The only possible explanation is that the reliefs were excuted at widely different periods and dedicated here by pilgrims from beyond the Indus, just as Gandhāra reliefs were occasionally dedicated at other Buddhist centres, such as Mathurā Sārnāthe and Bodh-Gayā." [1] But this explanation only partially explains the unusual circumstance of these finds. Exactly similar conditions were discovered by Stein at Sahri-Bahlol. [2] Here, huge quantities of sculptures, widely differing in time and workmanship, evidently not intended for that monastery, were found dumped round buildings already possessing their own decoration. Similar circumstances were observed at Swat by Berger. [3] This has led to an interesting theory which, apart from explaining the above circumstance also accounts for the bareness of the small monasteries on the hills. It is suggested that the decline of Buddhism in Swat, as witnessed by Yuan Chwang's account of 1400 deserted monasteries, led to a gradual retreat of the settlements to the plain. Such a theory gains some support from the prevalance of stucco ornaments in the later phases of Gandhāra work, indicating that the main querring sources of the stone used by the sculptors were at that period no longer available. If no new stone was being worked 'imported' stone-sculptures might well have been welcome.

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1. Marshall, op cit, P. 328-9.
2. Stein, A.S.R. XI P.101 (1911-12).
3. Berger, op cit, P. 34-35.

However, this 'reconstruction' of what actually happened must remain a mere hypothesis.

Incidentally, it may also be noted that the pavement in shrine A 1 at Kalawan was also found to be roughly covered with tiles of blue-glass, similar to those of the second pavement of the 'procession path' and chapel F 1 of the Dharmarājikā establishment, which suggests their contemporaneity.

APSIDAL TEMPLE 'I 3'

One of the most striking and interesting building on the site is an apsidal temple, situated on the western side of the central stupa. It is built of large diaper masonry similar to that used in building L, described above and dated by Marshall to "early Kushān times - probably from the close of the first cent. A.D." [1] In plan the temple is generally similar to the chaitya-Halls excavated in the hill-sides at Kārli, Ajanta, Ellora and other places in western an and central India, as well as the structural hall of more imposing dimension discovered at Sirkap. Temple I 3, however, differs in one important detail in its apse, which is octagonal, instead of round and is so distinguished from all others of the series known in India.[2] Remains of an octagonal stupa of Kañjūr stone were also found inside the apse and underlying its base was discovered a floor which seems to have been laid before the Apsidal temple was built.

A detached group ... apartments obviously intended as residential cells for monks situated on the west of the central stupa, presents an interesting feature of early monastic development. They are numbered in Marshall's plan. [3] E1, E2, F1-F3 and T2 - T7. Immediately in front of the doors of the apartments E1 and E3, were found traces of screen-walls a devise which obviously must have been adopted to ensure a measure of privacy as the Dharmarājikā stupa would be open

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1. Marshall, op cit, P.255.
2. It is interesting to note that the substitution of the octagonal plan for the true apse appear in minor examples of Norman work in England.
3. Ibid Pl. 45.

to the public at all times. Marshall is inclined to ascribe the original construction of this series of apartments as prior to the first century A.D.,[1] although he is not specific about it. As already noticed, the floor of the chamber F1 was found overlaid with glass-tiles of bright azure blue, black, white and yellow, identical with those of the 'procession path' and chapel A1 at Kālawān, which are dated to the first century A.D. This date is quite consistent with the inscription of Azes, as well as the accepted date of glass-manufacturing in the Mediterranean factories. However, Marshall also considers the paving of the floor with glass-tiles in chamber F1 to be of a much later date. In his opinion these glass-tiles, which might well have come from the 'procession path', were not laid in chamber F1 before the 4th or 5th cent. A.D. Besides the irregular manner in which the colours and broken tiles are arranged suggests that they were not originally intended for this building (pavement of F1). Other similar detached monastic quarter on this site are numbered by Marshall on the same plan as V1 - V5 to the north and W1 - W5 to the west of stupa 4. All these structures he considers, were built during the later Śaka period.[2]

Besides some interesting minor antiquities unearthed from this range of detached chambers, coins were particularly numerous in the debris. They include one specimen of Azes II, Kadphises I, Kadphis, Kadphises II and Soter Megas; four of Kanishka and Huvishka; 21 of Vasudeva; 8 Sassanian of Shapur II (?). In addition to these a small group of coins from 3' below the surface in chamber T5 consisted of : 2 of Kanishka, one of Huvishka and 5 of Vasudeva. Another two groups from 2' below surface in chamber T2, consisted of 6 specimens of Vasudeva.

MONASTERIES I

There are two distinct groups of Marshall's later Vihara of

1. Ibid, P. 246 - 7.
2. Ibid, P. 274.

quadrangular type on the same site which he supposes to have been introduced at Taxila in the second century A.D. One, situated on the north-west corner of the stupa area, is comparatively small and of little interest. Nothing has survived except its derelict foundations. Built of rubble and semi-ashlar masonry, its court from north to south measures 91'; and 105' from east to west. The central court which includes a stupa (20ft 6" square) seems to have been enclosed on all four sides by seventeen chambers of varying dimensions. No trace of any verandah in front of the cells was found. Three small deposits of coins found buried at 2' 3" below the surface indicate that it was occupied at least up to 4th cent. A.D. They comprise (a) 9 of Menander, 8 of Vasudeva, 3 Sassanian, (b) 9 of Vasudeva, 3 Sassanian; and (c) 2 Vasudeva and 2 Sassanian specimens.

The other monastery group is located on the north-east corner of the site. The mound which covered the ruins of this group occupied an area of 450' from north to south by 370 from east to west. The unusual massive structures of this monastery were found buried under 16' of accumulated debris, but little else can be said of it.

Marshall, however, finds four distinct building periods here, representing the late Śaka period to the 7th century A.D.[1] Earliest buildings are represented by Stupa 1 and 4 and a row of apartments, on the west and south of the stupa courts 'A' and 'B', which he dates to the late Śaka period. His second building period consists of the large court 'G', surrounded by cells and halls of assembly etc. on its South side (Ga - Gd), and perhaps includes also the lowest stratum of the eastern court 'J'. This group which is characterized by the earliest type of semi-ashlar masonry, he dates from the second century A.D.[2] The third building period represents 'court H' with its surrounding cells, which encroached on the south-

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1. Ibid, P. 275 - 6 and PL. 61.
2. Ibid, P. 275.

east corner of the earlier 'courts'. They are all built of later semi-ashlar masonry and he assigns them to the 4th/5th century A.D. Marshall also, treats the second stratum of the eastern 'court J' and stupas 2 and 3 to this, period. His last period consists of the 'Courts H and J' and numerous other structures of 'decadent semi-ashlar or nondescript masonry' which he dates to the 6th or 7th century A.D.

Of the earlier group of these buildings, stupa 4 yielded some interesting antiquities. A globulour casket of grey schist, containing some bone relics, a sivèr coin of Azilises, a silver coin of Augustus Ceasar, together with a thin sheet of gold some beads and pearls, etc, was discovered in the centre of the plinth, immediately underlying the foundation of the stupa. The occurrence of two silver coins of the Śaka emperor Azilises and one of Augustus Caesar in the same casket suggests that they may have been contemporary.

The massive walls of these buildings, Marshall interprets as being connected with their defence. The existence of a watch-tower (?) on the north of 'Court G' also lends some support to this hypothesis. However, on the evidence of masses of charred timber, iron clamps, nails and other fittings with which the open quadrangle and cells of 'Court H' were littered, Marshall infers that it was destroyed by the White Huns in the later part of the 5th century A.D. A very interesting group of finds from the contemporary building period of 'Court H' was discovered in 'Court J' which corroborates his theory of the violent destruction of the site. A group of human skeletons, of which five were found lying in the open quadrangle [1] of 'Court J', with limbs separated from the bodies obviously suggests ~~ing~~ a massacre. Marshall says, that "After the massacre the building was burnt down, and the bodies were crushed and charred beneath the burning timbers and falling masonry. A sixth skeleton was found in

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1. Ibid, P. 287.

room 2 on the west side of the court, hidden among a number of large store-jars, which were also crushed beneath the fallen masonry".[1] Accompanying these skeletal remains, fragments of a charred birch-bark manuscript with Brāhmī writing dated to the 5th cent. A.D., were also recovered.[2] Marshall considers that this devastation wrought among the Saṅghārāmas at Taxila was wide-spread. He holds that subsequently the stupas, chapels and living quarters of the dwindled number of monks were repaired, the character of this post-destruction masonry being marked by its poor quality and irregular planning.

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1. Marshall, op cit, P. 287.
2. Marshall, op cit, P. 288 for transcription of the manuscript.

JANDIĀL TEMPLE

One of the most striking buildings at Taxila is this so-called Zoroastrian temple, situated about 700 yds north of the north gateway of Sirkap. The mound which covered the ruins of this monument stood about 45 feet high on a 250' square base at the time of General Cunningham's visit to that place in 1863-4 A.D., and was locally known as 'Jhandiala-ka-dheri.'[1] He describes it as 'the loftiest mass of ruin now existing near Shah-dheri.' He sank two trenches at right angles across the mound, which at the depth of 7 and 8 feet brought to light three massive walls of a large building and although he continued digging down to a depth of 12 feet below the surface of the mound, he failed to appreciate the planning of the structure. The walls, he described were of different thickness, varying from 10' 7" to 5' 2". His excavation yielded only a large copper coin of one of the Azes, which he fails to identify, amidst a quality of ashes. He however, predicted that the mound covered the ruins of an ancient temple of large dimention. Subsequently when Marshall began his excavation, the overlying walls of medieval date had to be completely removed. This revealed an imposing building about 16/17 feet beneath the surface, which measures 158 feet long, including the projecting part in front of its portico, and 85 feet wide. Its plan, as observed by Marshall[2] "is unlike that of any temple known to us in India, but its resemblance to the classical temples of Greece is striking. In Greece the ordinary peripteral temple is surrounded on all sides by a peristyle of columns and contains a 'pronaos' or front porch, a 'naos' or sanctuary, and, at the rear, an 'opisthodomos' or back 'porch', known to the Romans as the 'posticum' ... In the temple at Jandiāl the plan is almost identically the same. In place of the usual peristyle of columns is a wall

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2. Marshall, op cit, P. 223.

1. Cunningham A.S.I., Vol. 2. P. 131.

pierced, at frequent intervals by large windows which admitted ample light to the interior, but at the front entrance to the temple are 'two Ionic Columns' in antis i.e. between pilasters which supported the ends of the architraves passing above them. Corresponding to them on the inner side of a spacious vestibule is another pair of similar columns 'in antis'. Then comes just as in Greek temples, the 'pronaos' leading through a wide doorway to the 'naos', while at the back of the temple is another chamber, corresponding to the 'Opisthodomos'. The only essential difference in plan between this and a Greek temple is that, instead of an extra chamber between the 'opisthodomos' and 'naos', we have at Jandiāl a solid mass of masonry, the foundations of which are carried down over 20' below the temple floor". The unusual depth of the foundation indicates that this mass of masonry was intended to carry a heavy superstructure, which Marshall infers to have been a tower, about 40' high. The existence of two broad flight of steps at the back of the building was presumed to be the remnants of the original staircase which provided access to the tower. The entire walls of the building are built of coursed-rubble masonry, comparable to the fortification wall of Sirkap. As usual with other monuments at Taxila, the masonry is largely of local limestone, but the mouldings at the base of walls and the cornices are of spongy Kañjūr. The mouldings run completely round the outside of both the inner and the outer walls and round the interior of the 'naos'. They are of 'cyma recta' pattern. Originally the whole surface of the walls, both inside and out were undoubtedly covered with a thick coating of stucco, patches of which can still be found at various places. The entrance of the two inter-communicating chambers, Marshall's 'naos' and 'pronaos' appears to have been of wood, bound with iron, fragments of which were found, in the charred debris strewn over the floor.

No actual remains of the superstructure of this were found but from the charred wood, hinges, nails and other bits of iron, together

with a thick layer of half-burnt clay which littered the floor, he surmised that the architrave, friese, and cornice must have been of wood and were, no doubt, of the Ionic order, in keeping with the Ionic style of the columns, pilasters and mouldings. The roof, too was largely of wood, and flat, not of the ridge type usual in Greek temples.[1]

The total absence of images, reliefs or any kind of sculpture among the ruins, led Marshall to rule out the hypothesis of its ever being a Buddhist, Jaina or Brāhmanical shrine. On the other hand, existence of an unusually massive foundation behind the so-called 'naos' which he interpreted as the foundation of a tower in the nature of a'Zikurrat', tapering like a pyramid and ascended in the same way as the Zikurrats of Mesopotamian[2] led to his identifying it as a Zoroastrian Fire-Temple. The blazing fire on the altar, he thinks stood on the summit of the supposed 'tower', and the altar itself was probably constructed of large bricks laid in mud mortar.[3]

As to the date of this interesting building, Marshall, after a great deal of vacillation throughout the series of his publications in which he attributes it successively to Azes I and Vonones, the Parthian monarch,[4] finally decided in his 'Post-script' in favour of the Bactrian-Greek period. He says, "... further considerations of this vexed problem forces me to the conclusion that the temple is

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1. Ibid, P. 224.

2. Ibid, P. 226.

3. This account of Marshall is probably influence by Spooner's article on fire-altar. (Spooner, D. B.,'The Zoroastrian period in Indian history' in J. R. A. S. Jan, and July 1913. P.63-89, 405-455. These are, however, later in date. Fire altars are also to be found on the Sāñchī relief, but these are Brāhmanical.
- Marshall and Foucher, 'The Monuments of Sāñchī' Vol. II, PL.52. Panel showing the relief on South Pillar of Eastern Gateway, North face.

4. Marshall, op c it, P. 226.

approximately of the same age as the walls of Sirkap, and that it appertains, therefore, to the Greek period."[1] In arriving at his final conclusion as to the 2nd cent. B.C. date of this building, which as we shall presently see, is hardly justifiable , the following considerations obviously, played a great part in his mind. Firstly, "the striking Greek character of its plan and the design of its Ionic pillars," together with its 'peristyle' of columns and the existence of classical Greek elements such as the 'pro-naos', 'naos' and 'opisthodomos', as well as the mouldings on the walls showing the ordinary Greek 'cymarecta' pattern etc. Secondly, the descriptions of a temple at Taxila by Philostratus in his 'Life of Appollonius'. The relevant passage quoted by Marshall runs,[2] "They saw a temple in front of the wall, about 100' in length and built of shell-like stone. And in it was a shrine which, considering that the temple was so large and provided with a peristyle, was disproportionately small but nevertheless worthy of admiration; for nailed to each of its walls were bronze panels on which were portrayed the deeds of Porus and Alexander; the elephants, horses, soldiers, helmets and shields are depicted in brass, silver, gold and copper, the lances, javelins and swords all in iron." Interpreting 'in front of the wall' of the above passage as the northern wall of Sirkap with its main entrance, Marshall identifies this Jandiāl monument with the temple described by Philostratus.

The existing remains of the building leaves no doubt that the structure was once of imposing dimensions. Now, even if we admit its resemblance with the plan of the classical Greek temples, inspite of the fact, that except for the two Ionic columns and the 'Cymarecta' moulding, no other element in the construction is conclusive, there are obvious difficulties in assigning this building to a date earlier than the first century B.C. for the following reasons:

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1. Ibid, P.229.
2. Marshall, op cit, P. 227.

Firstly, the situation of the building, facing the main entrance of the city and its imposing dimension clearly indicate that it must have been a monument of national importance. We do not know a single Indo-Greek king who professed the Zoroastrian faith or patronized it. Secondly, the coin finds from the site, are absolutely clear. No coin, either recovered by Marshall or Cunningham [1] from this site goes back further than Azes I, that is to say, the middle of the first century B.C. In this connection it is worth remembering the fact that the quantity of antiquities unearthed at the site was singularly poor, and that they are recorded by Marshall in terms of 'levels' and 'depths' with a total disregard to the actual stratification. It is needless to point out how unsatisfactory this is. At any rate the absence of Indo-Greek coins disproves Marshall's hypothesis. Of the total number of coins unearthed from this site by Marshall; 4 are of Local Taxila types (Chaitya and taurine), 2 of Azes I, 1 of Kadphises I, 5 of Kanishka, 1 of Huvishka, 2 of Vāsudeva and 1 of Vakkadeva, making up a total of 16. The local Taxila coins do not help in fixing the chronology, as they are undated, though they are known to have been in circulation in the first century A.D. [2] 432 specimens of them come from the top stratum of Sirkap and Marshall himself holds that they continued to be struck after the 'Śaka conquest'. [3]

Cunningham discovered another shrine of comparable character, though somewhat smaller, in the village of Mohrā Mallīrāñ, [4] about 1000 yds distant from Jaṇḍiāl. It was adorned with precisely similar Ionic pillars. "This appears from Cunningham's description", Marshall observes, "to have been approximately contemporary with the Jaṇḍiāl temple. [5] It was clearly dated by Cunningham to the time of Azes (I or II ?), the first century B.C., from the find of a dozen of coins

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1. Marshall, op cit, P. 229 and Cunningham, A. S. R. II? P. 131.
2. Marshall, op cit, P. 757.
3. Marshall, op cit, P.757.
4. Cunningham, C. S. R. Vol. V (1872-3) P. 68-73.
5. Marshall, Taxila, P. 225.

from the foundation deposit of that shrine. Significantly enough, the coin finds from both these buildings are consistent and must lead to the conclusion that both were built at approximately, the same time, definitely not earlier than first century B.C. Marshall although draws a comparison between the two buildings, challenges the validity of Cunningham's date on the grounds that the deposit of 12 Azes coins in the foundation of the Mohṛā Malīārāñ temple was nothing more than an ordinary 'hidden-treasure' of a hundred years after the building of the shrine.[1] In another place he unjustifiably claims the priority of date of the Jaṇḍīāl temple over its 'prototype' at Mohṛā Malīārāñ on the ground of its being bigger. He says, "It is natural to suppose that it was the earlier of the two and served as a model in the matter of its decorative features, for the smaller and less important shrine at Mohṛā Malīārāñ, rather than vice versa,"[2]

The passage from Philostratus as quoted by Marshall, is in itself unsatisfactory especially where he introduces the Alexander myth in regard to his bronze plaques. It lacks credibility from beginning to end.

It also must be pointed out that Marshall's so-called Greek Peristyle, does not really exist at Jaṇḍīāl. From Marshall's plan[3] as well as his description,[4] it is clear that the continuous outer wall of the structure was pierced at intervals by large windows, obviously intended to admit light inside the continuous passage around the inner wall. This feature which is of the nature of an ambulatory and indeed, may be likened to the traditional Buddhist 'procession path'. In any case, it is entirely unGreek in character.

It appears likely that this building, which may or may not have been associated with a religious function, was originally constructed

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1. Ibid.
2. Ibid, P. 225.
3. Ibid, Pl. 44.
4. Ibid, P. 222.

during the time of Azes I (c. 57 B.C.) or a little afterwards, approximately at the same time as the temple at Mohrā Malīārāñ. It enjoyed a short life, as the poverty of finds indicate, and was destroyed during early Kushān times. All later coins, which are Kushān came from "the deep accumulation of debris covering the ruin, into which they must have found their way at some time subsequent to the destruction of the temple, but before the later building (medieval) discovered by Cunningham was erected." [1]

The stone-slab with the foot-print of Buddha (?) unillustrated by Marshall, which came from the site, in fact, does not really run contrary to the evidence furnished by the coins. This familiar Buddhist feature is common in the Sāñchī and Bharhut reliefs and is therefore consistent with a date not earlier than the first century B.C.

The Jaṇḍiāl temple may be compared with the Fire-Temple of Surkh Kotal, [2] which is dated by Schlumberger to the "Grand Kushān Period" or 2nd century A.D. In its plan classical features are clear. The temple at Surkh Kotal is situated on the road from Kabul to Mazār-i-Sharīf in the Qunduz valley (North Afghanistan). Constructed of large-sized unburnt bricks, its outside wall is relieved with pilasters and timbering is included in the building construction. It is provided with three entrances on the east. Schlumberger found three different stages in the construction of the building. The first stage consists of a square cell surrounded by an ambulatory on three sides. The roof of the cell, probably of wood, was carried on four stone-columns with 'Attic' mouldings at the base. [3] At the centre of the cell, a square platform with three steps leading upto it was, also, found. The second stage consisted of later additions effected in the corridor. It was partitioned into cells so that on the south and west there were separate chambers, while the north was left undisturbed

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1. Ibid, P. 224.

2. Daniel, Schlumberger, 'Le Temple De Surkh Kotal Bactriane' J. Asiatique, 1952, P. 433-453.

3. Schlumberger, op cit, Fig. 2, Pls. III and IV, P. 439-40.

This period of use of the temple apparently ended with a conflagration, which destroyed the roof and burnt some of the originally unbaked bricks, traces of which were found in the debris. The third stage represented rebuilding on top of the earlier ruins.

Two sculptures were recovered from the building. One of which, a badly weathered male standing figure, in local sandstone with heavy drapery and jewellery is compared by Schlumberger with the well-known Kanishka figure. Other notable decorations in the building include a frieze with the familiar motive of a garland carried by winged figures [1] (probably Eros), which commonly occurs in Gandhāra reliefs. The date of the building is ascertained from the four debased coins of which three were found among the ashes, including one of Huvishka. Inscriptions recovered from the site, also, were found, to be similar to the Greek script on the 'high Kushān Coinage'. Of the other antiquities, stamped pottery of the Begram type was discovered which, according to Ghirshman only occur in the post-Kushān stratum (Begram''')

In describing the plan of Surkh-Kotal temple Schlumberger compares it with the Susa temple excavated by Dieulafoy [2] and also, with Herzfeld's temple at Persepolis, [3] which of course, do not have the ambulatory.

It is interesting to note here, that Ghirshman [4] in drawing a parallel between the Jandiāl temple at Taxila and Parthian temple at Hatra observes, "To judge from the temples at Hatra and Taxila, on the eastern bank of the Indus, the plan of the Iranian Sanctuary at this period (Parthian) consisted of a square central chamber, separared from the exterior by an ambulatory, and was derived from that of the Achaemenians. The staircase which in Achaemenian times had been

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1. Ibid, PL. VIII.

2. Dieulafoy. M. L' acropole de Suse, P. 411-414.

3. Herzfeld, E. J.R.A.S. 1934, P.232; 'Iran in the Ancient East' P. 275, PL. LXXXV.

3. Ghirshman, R. 'Iran, from the earliest time to the Islamic conquest' P. 277. (Penguin Book, Great Britain, 1954).

external, was contrived in the thickness of the wall and led upto the roof, on which the altars were situated. Religious ceremonies still took place in the open, near the temple, but the sacred fire burnt on the roof." He obviously takes the Jaṇḍiāl monument to be a Parthian Fire-Temple, to which, of course, the supposed tower of Marshall doubtless, lends support. This hypothesis although is not unlikely, presents one difficulty, i.e. the total absence of any Parthian coinage. We virtually know nothing of the professed religion of the Śakas and to a lesser degree, of the Parthians. As for the Parthian religion, it appears almost certain that Zoroastrianism, if not in preponderance, was certainly professed by a large number of the population.[1] On the other hand, it is not unlikely that the Śakas, by their long and intimate association with Iran, must have been deeply imbibed with Iranian beliefs and at the time when this 'Fire-Temple' was erected, they regarded Zoroastrianism as their state religion.

However, one thing appears to be certain, and that is, the date of its foundation does not go back to the 2nd cent. B.C., as Marshall concludes. In all likelihood, it was founded during the early Śaka period on a unique plan, having classical features. As for the purpose of the building, it is difficult to be precise. Although the inference of its being a religious edifice is not improbable, as held by Marshall Cunningham and Ghirshman, the complete absence of any objects, reliefs or sculpture, associated with any religion, makes it difficult to prove. As it stands, it is largely the result of Marshall's reconstruction, carried out at the time of his excavation.

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1. Ghirshman, Iran, P. 268-72.

CONCLUSION

In concluding this study of the archaeology and history of Taxila, it is necessary to stress the fact that it cannot pretend to provide a complete or conclusive picture or to solve all the complex problems that arise during the review of the massive material available. But it is hoped that this new analysis will help to stimulate further research in this rich field. If the present study has established some of the points of contact between Taxila and the western world, as well as with the rest of India, with special reference to the channels through which the exchange of cultural influence flowed at various periods, then the purpose of the undertaking will be fulfilled.

In previous chapters we have tried to trace the various important trade-routes of Western Asia, Central Asia and Eastern India with which Taxila was connected from ancient times. As an emporium of international commerce and trade, notably of the Mediterranean world, Taxila being on the western gateway to India was invested with a unique prestige in the eastern world. This is amply testified by the voluminous literary references, as we have seen. The same geographical reasons again made it time and again, the objective of invading armies. This is clearly evident from the contemporary accounts and coin-finds.

Archaeologically its outstanding importance is undeniable. Of all the sites which have been excavated in the Indian peninsula, it has provided us with the greatest mass of objects, illustrating the material culture of the early historic period covering more than a millennium. These, properly classified must be accepted as an index to other sites. The results of these excavations have been admirably classified and published by Sir John Marshall. But it must be candidly admitted that his chronology of the Bhir Mound and Sirkap, built up on his classification of the finds, is not a very happy one, and needs modification. Marshall's chronology of strata and their relative depth at the Bhir Mound and Sirkap may be set out as follows:[1]

The Bhir Mound

Stratum	Date	Depth
IV	5th cent. B.C.	Foundation from 14' to 16' below surface

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1. Marshall, Taxila, Vol. I. P.3, 87-88; 118.

Stratum	Date	Depth
III	4th cent. B.C.	9' - 10' and occasionally deeper.
II	3rd " "	4' - 6'
I	2nd " "	0' - 3'

Sirkap

Stratum	Date	Depth
VII	Pre-Greek	18'- 22'
VI & V	Greek	13' - 18'
IV	Early Śaka	9' - 13'
III & II	Later Śaka-Parthian	2' - 9'
I	Kushān	0' - 2'

But in the light of the analysis set out in Chapter V, we have seen that this chronology cannot be maintained. While dealing with pottery, we have seen that strata IV and III of the Bhir Mound differs radically from strata II and I, which Marshall fails to recognize. The bulk of the N.B.P. wares, erroneously called by him pure Greek Black Pottery occur in the strata IV and III, underlying or in other words antidating his coin hoards of the second stratum. This indicates their pre-Indo-Bactrian origin. The N.B.P. wares distinctly fade out during the post-Mauryan period, but it must be remembered that two fragments were found in stratum VI of Sirkap. Indications from other North Indian sites fully corroborates its definite association with the Mauryan period and precludes the assumption of its Greek origin, if Greek is used in the strict sense. On the other hand an examination of finds in Marshall's Bhir Mound strata II and I, makes it evident that none of them can be attributed to a period earlier than the second century B.C. In other words they correspond with the first appearance of the Bactrian Greeks. Marshall's pure Greek Black wares Nos. 226 a, b, and 227 (which are in fact, all fragments of the same bowl, decorated at the base with the head of Heracles or Alexander in the guise of Heracles, wearing the lion's skin) all come from the second and first strata of the Bhir Mound, and evidently do not share any affinity

with N.B.P. fragments, he puts in the same group. The evidence of the terracotta figurines are significant on this point. As we have seen, most of the figurines, identified by Marshall as Mauryan are in fact, what Indian authors call 'Śuṅga', their distribution being confined to strata II and I of the Bhir Mound. Consequently the date of his second stratum cannot be assigned to a period prior to the middle of second century B.C. In fact as rightly observed by Gordon the bulk of these so-called 'Śuṅga' figurines are possibly later. As Marshall has confessed, the occupation of the top of the Bhir Mound was contemporary with the bottom of Sirkap, it appears obvious that both sites must have continued in occupation side by side for some time.

The indication of the coin-finds are also, consistent with the revised chronology now put forward. Of the total number of 179 specimen of the well defined series of local Taxila coins, 134 came from the first.[1] Dr. Allan suggests that apart from the technical differences (indicating their later dating) between these issues and other punch-marked series, they must be dated to the period of autonomy, between the decline of the Maurya and the Greek occupation.[2] It is in the lower two strata (IV and III) that the local bar coins are mostly found. The earlier two strata of the Bhir Mound, indeed, appear to be 'Mauryan' and 'Pre-Mauryan' with possibly a break between the fourth and the third strata. This is in fact, recognized by Marshall.[3] While all the indications point to the fact that the later two strata i.e. second and first, belong to the period of the Indo-Bactrian Greeks.

It is here necessary to review very briefly the two important hoards of coins disinterred from the Bhir Mound, which obviously have an important bearing on the chronology. Of the two hoards,[4] the larger one containing 1, 167 silver punch marked coins, with two coins of Alexander the Great, one of Philip Aridaeus III (died 317 B.C.) in mint condition and a Persian Siglos, was discovered from the second

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1. Marshall, Taxila, P.110
Dr. John Allan, 'A Cat. of the Coins of the Anc. Ind.' P.CXXXIX (London 1936) and also in Marshall's Taxila, P.855.
3. Marshall, op cit, P.87.
4. Marshall, op cit, P. 751-, 105-6 and 843.

stratum[1] in 1924. The smaller hoard, comprising 166 coins with a gold coin of Diodotus, issued in the name Antiochus II of Syria (c.235 B.C.) was found in the same stratum in 1913. Now, although the two hoards were found in the second stratum of the Bhir Mound[2], Walsh[3], Marshall and the earlier opinion of Dr. Allan[4], together with many other scholars[5], maintained that the larger hoard was buried sometime towards the close of the 4th century B.C. ; and the smaller, in the later half of the 3rd century B.C. Obviously this opinion can only be based on the internal evidence of the coins themselves. Dr. Allan, later however, rightly pointed out[6], that too much stress must not be laid on the four Greek coins in the hoards, as none of them certainly were current at Taxila, but had drifted down from the North-West just as they still do to Rawalpindi at the present day. The presence of the Greek coins only indicates a date before which the hoards could not have been buried. As has been said, the general evidence from what we know of the Punch-marked coins, indicates a later date of burial, probably the same as that of the other hoard (i.e. smaller hoard). Both may have been buried as late as the early part of the second century B.C., probably about 170 B.C.[7]

It is interesting to note that no stratum was assigned by Marshall for the smaller hoard in his earlier report[8]. There he simply said that in one of the chambers (which he found among the remains of a building, while digging the compound of the Bunglow) he found a small treasure consisting of Punch-marked coins of debased silver, a very fine gold coin of Diodotus II, several pieces of gold and silver

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1. Later Marshall ascribes it to the 3rd stratum without giving any satisfactory justification.
2. Dr. Dani, A.H. in the J.N.S.I. Vol. XVII (1957) Pt.II P.27-32, Vol XIX (1957) Pt.II P.180-1.
3. Walsh, E. H. C. 'Memoir of the A.S.I. No.59 and in Marshall's Taxila, P.843-44.
4. Allan, Cat. of the Coins of Anc. Ind. in the B.M. Intro. xlii, lvi-lvii.
5. Parmeshwari Lal Gupta 'Evidence from Taxila on the dating of the Punch-marked Coins' in J.N.S.I. Vol.XIX(1957) Pt.I, P.5-8.
6. Allan in Marshall's Taxila, P.843-44.
7. Allan in Marshall's Taxila, P.853.
8. A.S.I. A.R. 1912-13, P. 40-42.

jewellery and large number of pearls, amethysts, garnets and coral. But in his 'Taxila' Volumes, he definitely places the small hoard in the Second Stratum[1]. Mr. P. L. Gupta tried to prove that the punch-marked coins comprising both the hoards must be dated to the pre-Mauryan period on the grounds that the coins of Alexander, Philip Aridaeus and Diodotus II were found in mint condition[2] among them. This according to him indicates that they found their place in the hoard not long after their issue. Philip Aridaeus died in 317 B.C. and so, according to him, the hoard must have been buried about 300 B.C.

But Dr. Dani has rightly pointed out the obvious fallacy of this argument. He says, "Being a numismatist it is natural for him (Gupta) to have a tacit reliance on the evidence of the hoard alone as this is the usual practice followed by the numismatists. But fortunately the Taxila hoards under discussion, are not just Treasure-Trove found without any contex. As there are associated objects and as these have been unearthed in actual archaeological excavations, their stratigraphy has to be determined"[3]. He argues that in this stratum (II) local Taxila coins begin to appear in large numbers, which must not be overlooked and that they are issues of post-Mauryan date. "I need not quote the well-known view of Allan on their dating (Local Taxila coins) nor should I stress on technical difference, (indicating their late dating) between these issues and the punch-marked series, but merely point to the well-known fact that they are not the issues of the Mauryans. Consequently they must have appeared after the disintegration of the Mauryan empire ... . This fixes the lower limit of Phase B (strata II and I) in accordance with the simple rule of excavation that a stratum is dated from the latest object found, not from the earliest. Hence the discovery of the coin of Philip Aridaeus in the larger hoard, though a fact, is immaterial, if it is realised that the hoard belongs to Phase B (strata II and I) and therefore its date is related to that of the archaeological stratum"[4]. Allan by asserting

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1. Marshall, op cit, P.110.
2. Gupta, P. L., op cit, Vol. XIX Pt. I P.7.
3. Dr. Dani, op cit, Vol. XIX, Pt. II, P.180.
4. Dr. Dani, op cit, Vol. XIX (1957) Pt.II. P180.

that the two hoards were deposited about 170 B.C. only tacitly admits the truth that the second stratum of the Bhir Mound should be dated to that period, or in other words, to approximately the period when the Bactrian Greeks came to power in the North-West India.

As to the chronology of the various strata at Sirkap the evidence is admittedly complicated and inconclusive. But one thing is certain. The later strata of the Bhir Mound (II and I) and the earlier strata of Sirkap (VII, VI, and V) overlap. We have seen that the analysis of objects in these strata make it quite plain that there is no visible break in continuity between these strata of the two sites. The almost total absence of Marshall's 'Hellenistic' objects in strata IV and III and their presence and continuity from strata II and I of the Bhir Mound, into the bottom strata of Sirkap is significant enough. We have found it repeatedly in dealing with the pottery, terracotta, stone and other objects. This can only mean that the abandonment of the Bhir Mound on the establishment of the new city at Sirkap, was neither complete nor wholesale. The Bhir Mound must have continued to flourish side by side with Sirkap, probably as late as the first half of the first century A.D., after the establishment of the new city.

The problem of the dating of Sirkap is unfortunately rendered more complicated by Mr. Ghosh's excavations in 1944. Marshall found 7 successive strata at Sirkap of which strata VI and V are treated by him as Greek. According to him it was the Greeks who first established the new city within a strongly built stone defence wall. He therefore treats stratum VII as pre-Greek and pre-structural.. Ghosh on the other hand could trace only four strata, Marshall's strata VII, VI, and V being completely absent in his long trench. Significantly enough he also found the earliest building activity on the site (Sirkap) in his bottom stratum (Phase I) to be clearly contemporary with the stone-defence wall and the 'Palace) which is dated by him to 57 B.C. In other words, he assigns the foundation of Sirkap to the early Saka period. Mr. Ghosh's date of the earliest building activity at the site is however, inadequately based upon the occurrence of two coins of Azes I. Interestingly enough, this corresponds with the earlier view of Marshall and cannot be totally repudiated until further evidence is

forthcoming. It must not however, be considered that Mr. Ghosh's excavation has definetely proved the foundation of Sirkap by the Śakas, or that Marshall only 'imagined' his bottom three strata as Dr. Narain[1] seems to think. Narain says, "The so-called Indo-Greek layers, Sirkap V and VI, actually do not exist, and the only occupation prior to the fourth city of Marshall's series consisted of a few pits cut into the natural soil. Systematic occupation begins here with the construction of the city wall c. 50 B.C. after the end of the Indo-Greek regime ... Meanwhile the fact remains that even purely on grounds of stratification there is no proof of an Indo- Greek city at Sirkap. Moreover, Marshall's Indo-Greek layers have not revealed remarkably distinct Greek objects either quantitatively or qualitatively. The material remains, e.g. pottery, terracotta etc. do not differ from those of the Śaka layers. And above all it is very significant that out of 471 Indo-Greek coins found at Sirkap, only 30 are recorded in the so-called Indo-Greek strata, whereas in these same layers there have been found 61 Śaka-Pahlava coins. The majority of the Indo-Greek coins (316) are found in layers II and III"[2]. The non-existence of Marshall's bottom three strata in Ghosh's excavation does not unfortunately prove anything or falsify Marshall's statement, since apart from other reasons already discussed (infra P.70-74.), the results given by his trench were not checked by deep-digging in Marshall's area. The sites of their respective excavations are actually far apart. The veracity of both Ghosh's and Marshall's records can only be challenged by fresh work. As already explained (infra P.70-74.) both may be correct without conflicting with the general facts. The discrepancy can only be clarified if a long trench is sunk along the eastern wall, connecting the 'Palace' area and the site of Marshall's deep-digging, near the northern wall, which is impracticable for various reasons; or alternatively by laying out a series of trial trenches along the eastern wall to lay bare the actual discrepancy, which obviously must lie between those two points (i.e. the Palace and the northern wall.) Incidentally, this complicated problem also extends to the special problem of the exact function and

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1. Narain, The Indo-Greeks, P.31-32, F.N.8.
2. Ibid, This statistical result is admittedly somewhat astonishing, but he neglects the Kushān coins of strata VII, VI and V. Indeed Kushān coins occur throughout the strata of Sirkap.

relation of Kacā-Kot to Sirkap. Although Kacā-Kot is apparently an annexe of Sirkap, being distinguished by its mud-rampart, shows no signs of habitation. These problems must remain at best conjectural until further excavation throws some light upon them.

However, one thing is sufficiently clear that the bulk of the objects found in the later strata of Sirkap, especially in strata III and II, which are described by Marshall as 'Hellenistic' are, in fact clearly Roman. A distinction between these two terms must be made. This fact is consistently proved when we examine the stone toilet-trays, glass, bronze, copper and iron objects, silverware, gold jewellery and many other miscellaneous minor finds from these strata, many of which must be recognized as objects of Roman origin of the first and second centuries.A.D. This shows clearly the persistence of the eastern commercial policy of the Roman Empire. Their chief concern was to ensure the safety of the trade-routes in the East. As Buchthal has rightly pointed out "The Romans never attempted to enter upon Alexanders heritage. Their legions stopped on the banks of the Euphrates, 600 miles from the frontiers of the Kushān empire ... but Roman art reached the monasteries of the North- West India, not through Hostile armies of occupation, but through peaceful traders and caravans"[1]. These Roman objects were found from the fifth to the first strata of Sirkap. Most of them were concentrated in strata III and II. They cannot be dated earlier than the first century A.D. Evidence of trade relations during this period is, also, furnished by the abundant find of Roman Bronzes and glass at Begram. This only brings out the often neglected fact that inspite of occasional interruptions of the overland trade-relations between the Roman Empire and India resulting from her hostility with powerful Parthian rivals, who inervened, the flow of trade continued.

In the light of the above observations it becomes difficult to escape the conclusion that the chronology of Marshall regarding Sirkap needs considerable modification. He treats only the top stratum (I) of Sirkap as Kushan, but it appears that at least the first three strata (i.e. III, II and I) must be assigned to the Kushan period in which the bulk

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1. Buchthal 'The Western aspect of the Gandhāra Sculpture' (1945, a Lecture) P. 23.

of the Roman objects were found. This will be evident especially when we examine the relative distribution of Kushān coins in the different strata of Sirkap. By far the largest number came from strata III and II, and to a lesser degree from stratum I. In point of fact, out of the total number of 2,645 Kushān coins from Sirkap[1], 2,165 came from strata III and II; 441 from stratum I (of the rest 34 came from stratum IV and 5 from strata VII, VI and V). Of these, 2518 coins[2] of Kujula Kadphisis came from the strata III and II and 388 from the first stratum.

Lastly, considering the Ghosh's evidence that the earliest building activity in his bottom stratum is contemporary with the stone-defence wall of the city and the 'Palace', which he dates to about 50 B.C. and Marshall's earlier opinion it seems very probable that the stone-wall owes its origin to the Śakas. It cannot belong to a valid 'Greek' period, as Marshall postulates in his final monogram.

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1. See Marshall's chart on P. 792-3, excluding the bottom 'miscellaneous Coins'.
2. The figures on Marshall's page 785, however, slightly differs. He gives the total number of Kujula Kadphises coins as 2,522, as he includes the four silver pieces, excluded in the chart.

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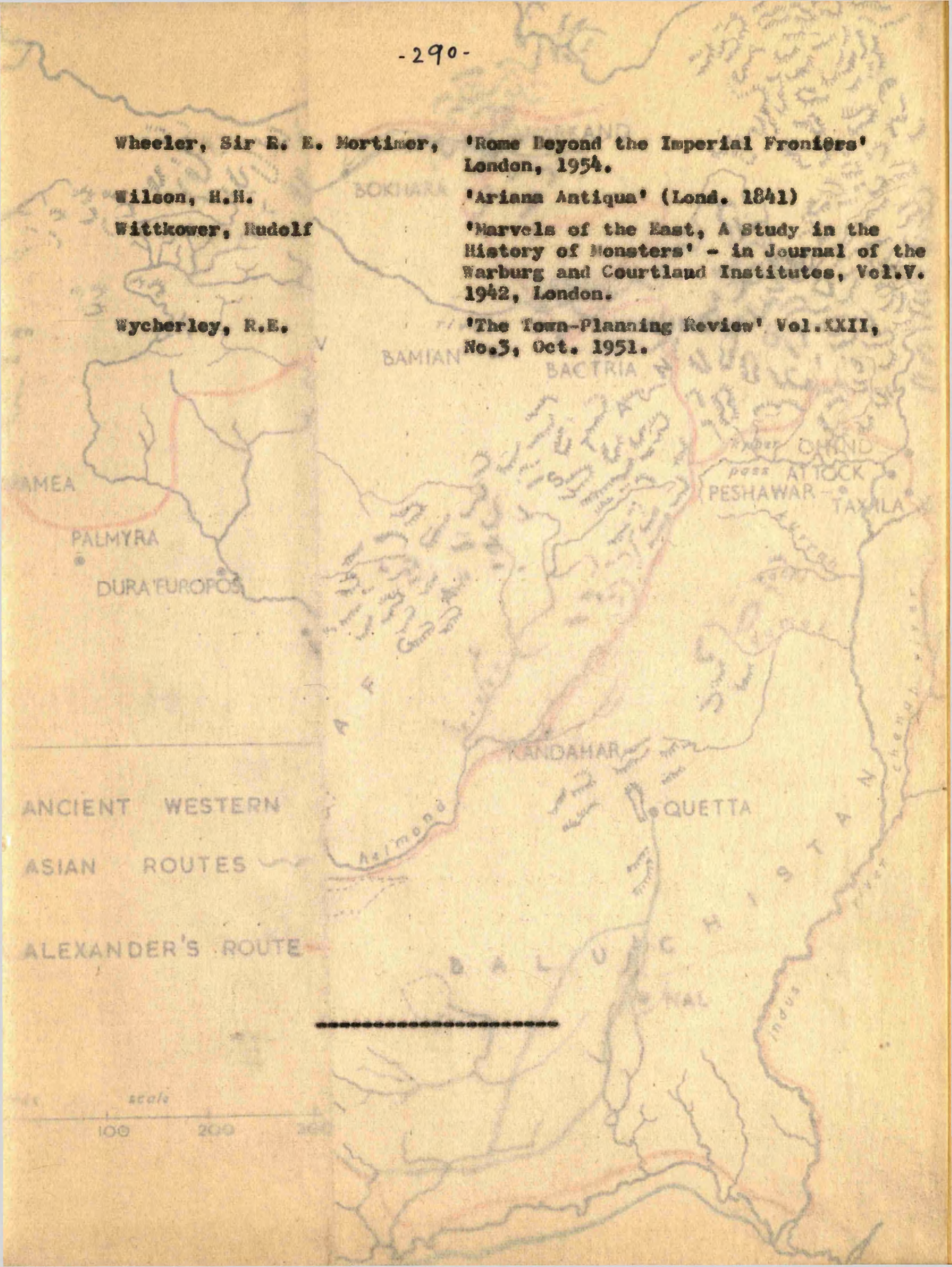
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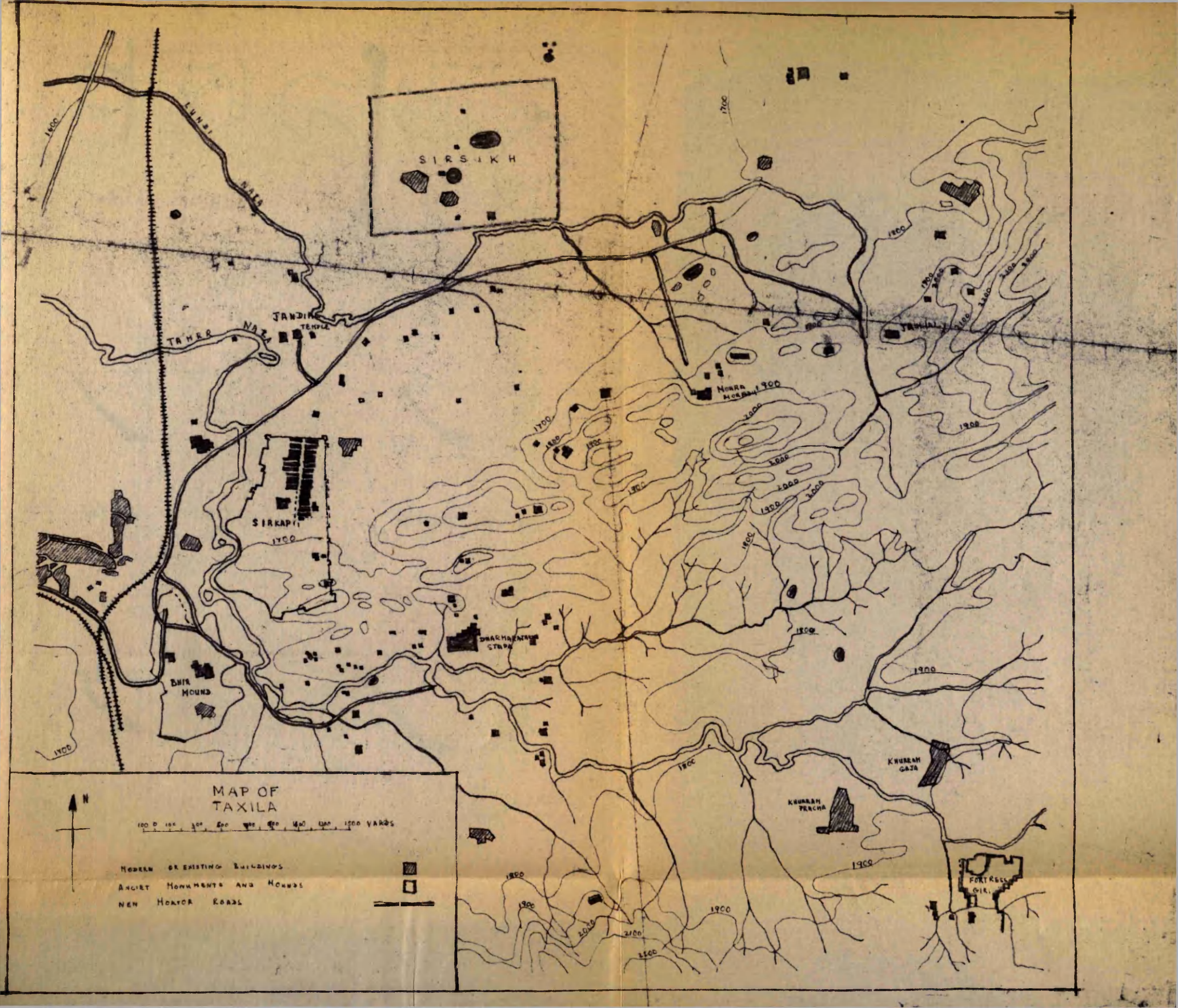
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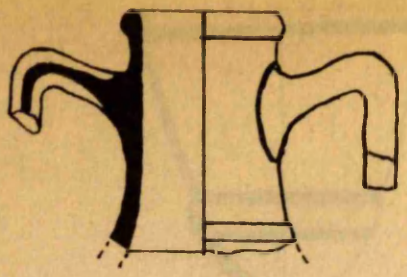
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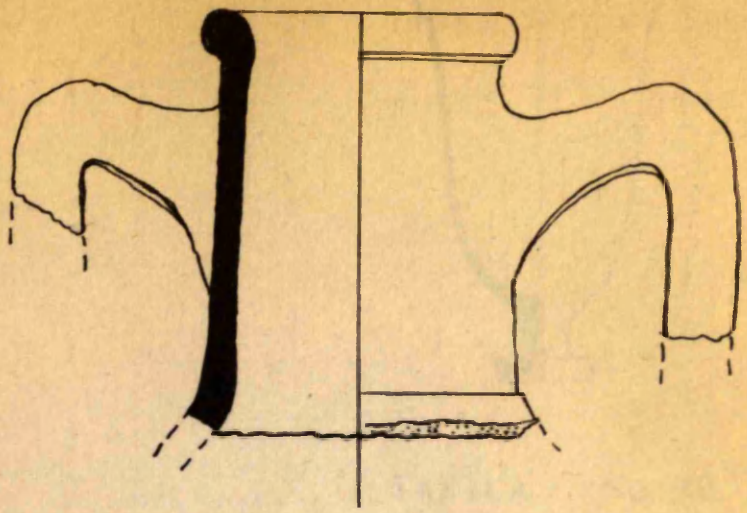



TRANS - CASPIA
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SAMARKAND
BOKHARA
TERMEZ
KUNDUZ
BAMIAN
BACTRIA
ASKHABAD
MERV
NISHAPUR
MESHED
ASTERABAD
DAMGHAN
TABRIZ
TEHRAN
RAYY
HAMADAN
BEHISTUN
KERMANSHAH
KASHAN
DASHT - I - KAVIR
DASHT - I - LUT
HERAT
FARAH
KANDAHAR
QUETTA
NAL
BAMPUR
KERMAN
SHIRAZ
ISFAHAN
SUSA
BABYLON
BAGHDAD
DURA EUROPOS
PALMYRA
APAMEA
PESHAWAR
ATTOCK
TAXILA
OHIND
PERSIAN GULF
BALUCHISTAN
HINDU KUSH
tigris
euphrates
river
helmond
indus
chenab river
1. ANCIENT WESTERN ASIAN ROUTES
2. ALEXANDER'S ROUTE
miles
scale
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100
200
300

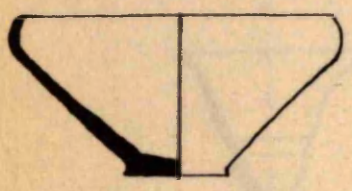

SIRSUKH
LUNDI NALA
TAHER NALA
JANDIAL TEMPLE
SIRKAP
BHIR MOUND
DHARMARAJIKA STUPA
KHURRAM GARH
KHURRAM PERCHA
FORTRESS
MAP OF TAXILA
N
MODERN OR EXISTING BUILDINGS
ANCIENT MONUMENTS AND MOUNDS
NEW MOTOR ROADS



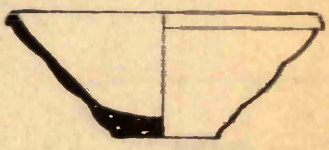
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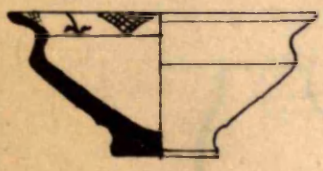
ARIKAMEDU



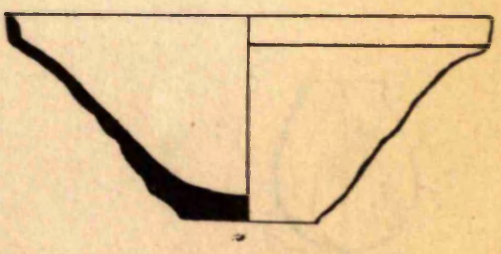
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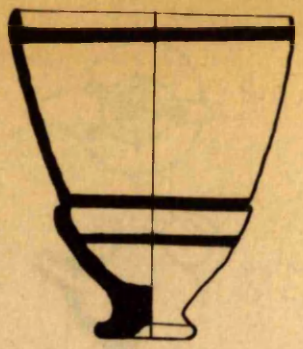


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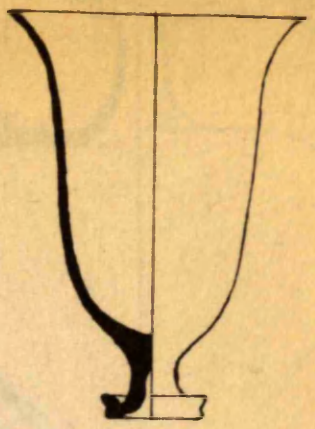


HASTINAPURA

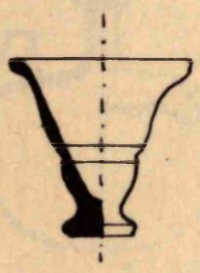
FIG. 1



BEGRAM



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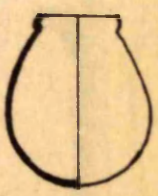
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AHICHCHATRA

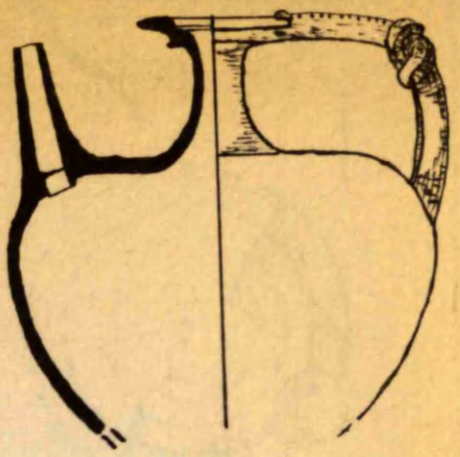


AHICHCHATRA

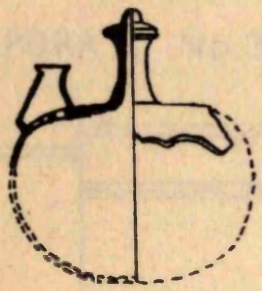
FIG. 2



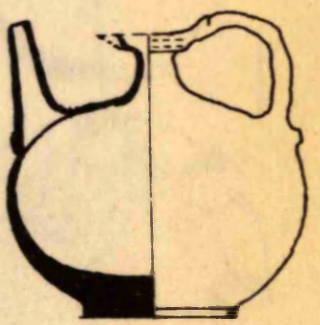
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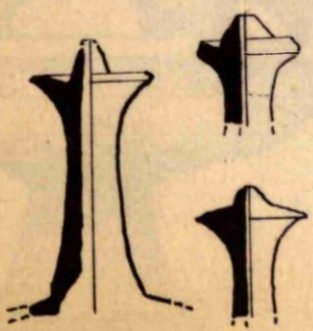
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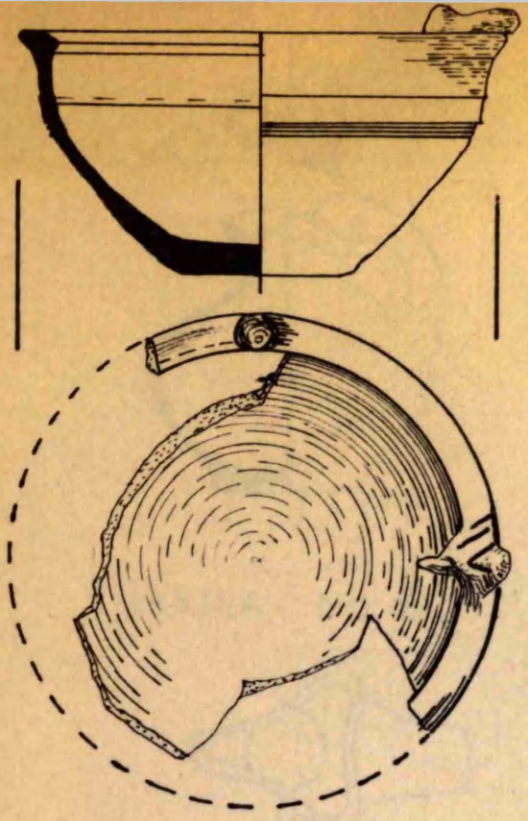


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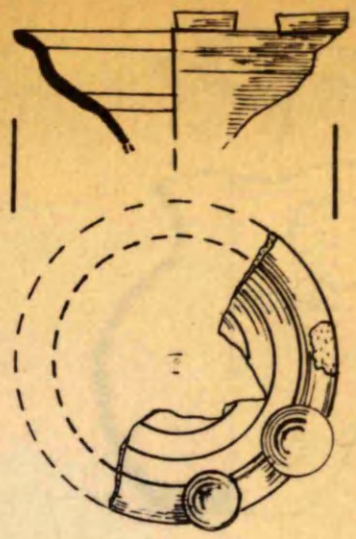


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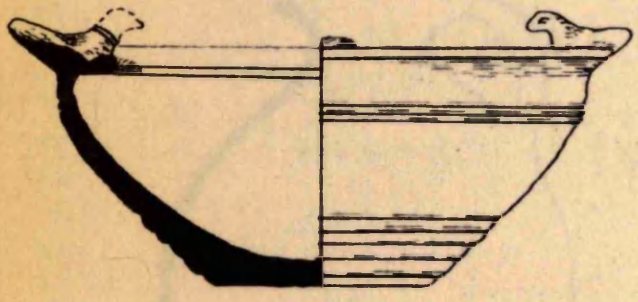
FIG. 3



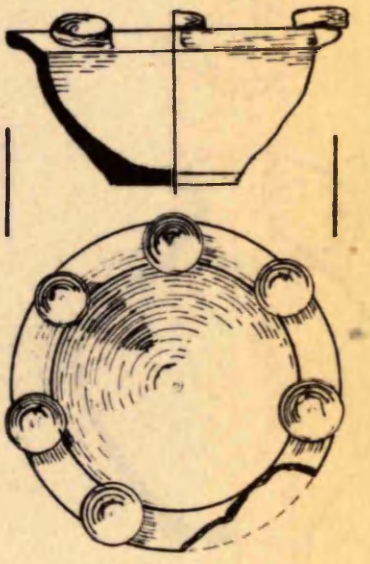
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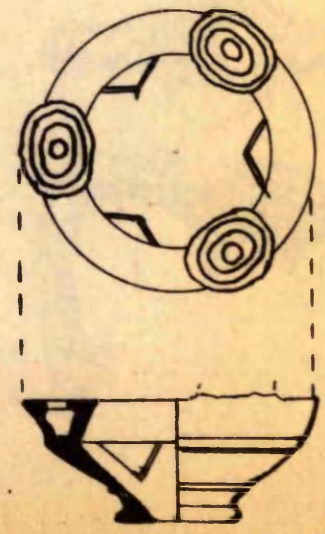
RUAR



RUAR



KERNOS *from the athenian* AGORA

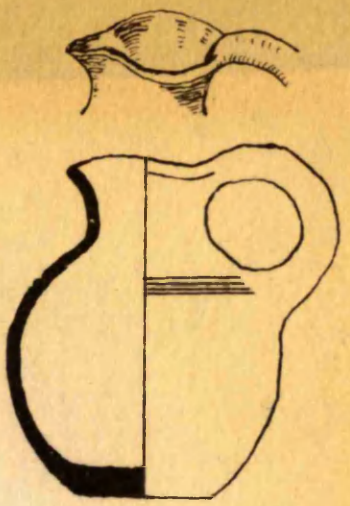


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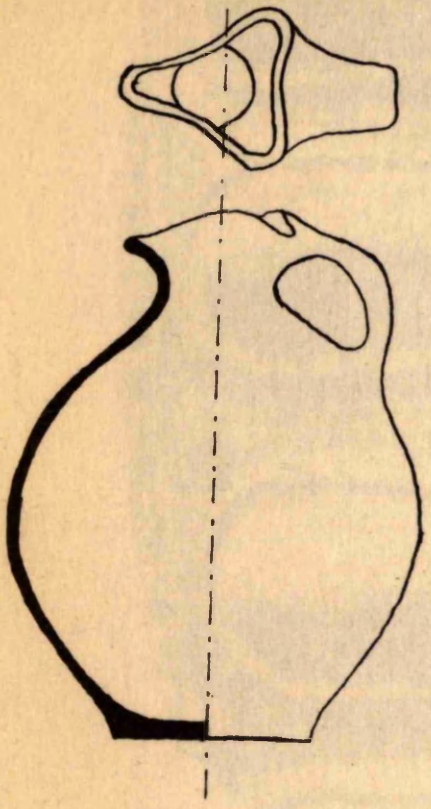
FIG. 4



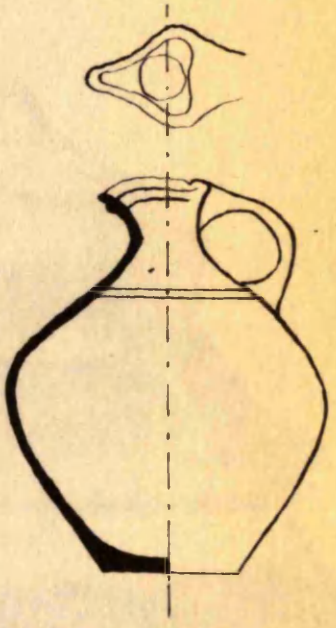
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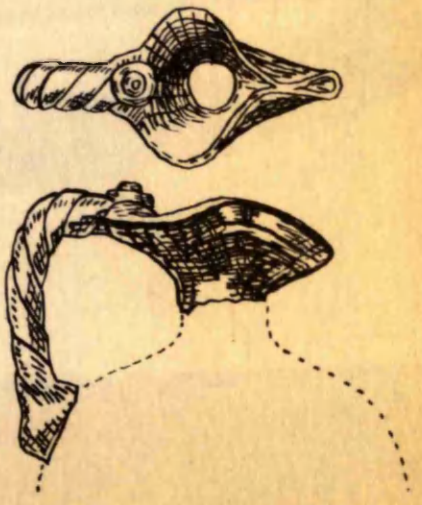
TAXILA No. 79.



BEGRAM



BEGRAM



AHICHCHATRA

FIG. 5

PL. I.



Taxila No. 226a.



Taxila No. 226 b.

PL. III

Taxila No. 228.

PL. IV

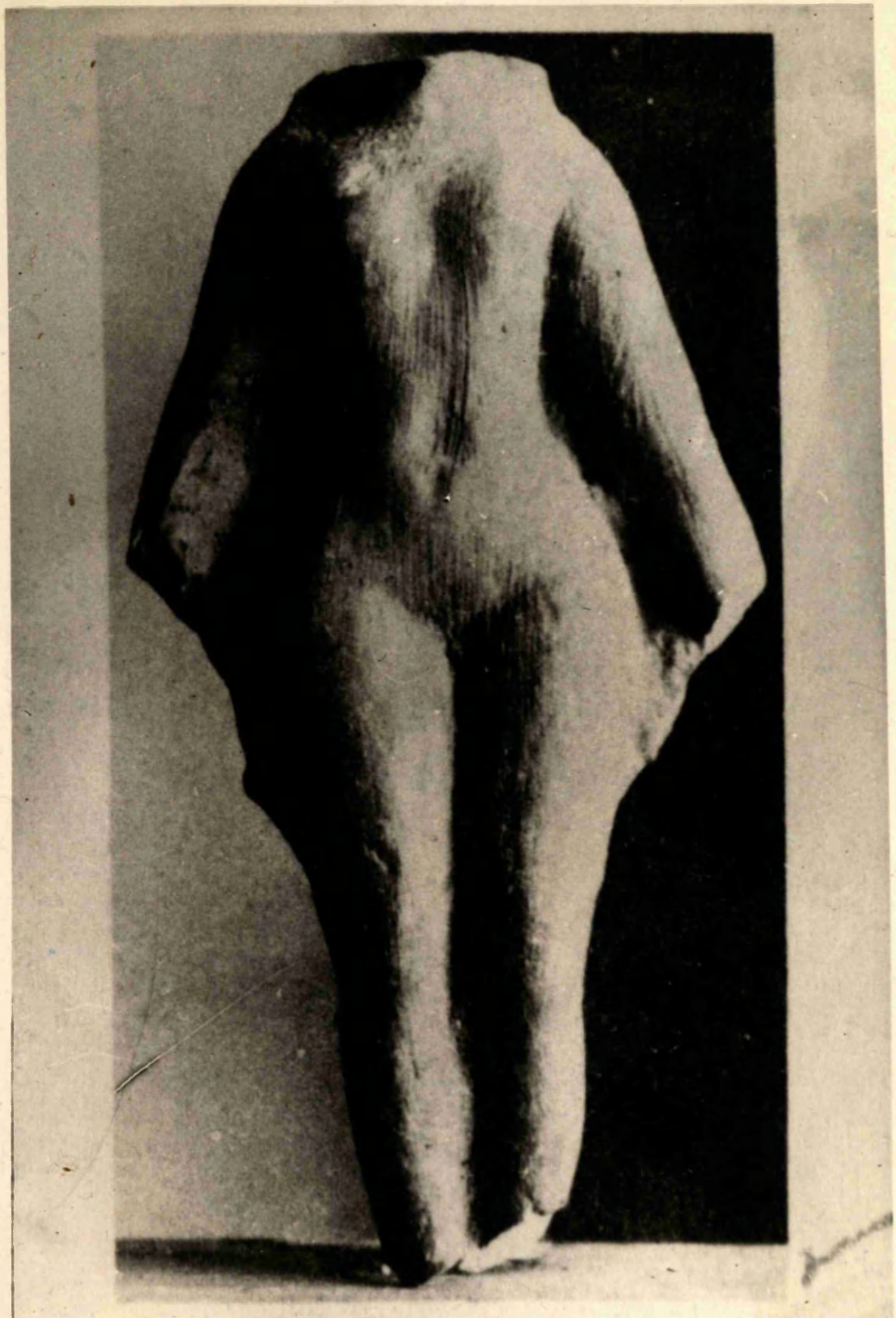
Taxila No. 234.



Taxila No. 235.



Taxila No. 237.



No. 6



Taxila No. 9.



No. 12

Ahichahatra

PL. IX.





Ahichchatra. PL. X.







No. 25.



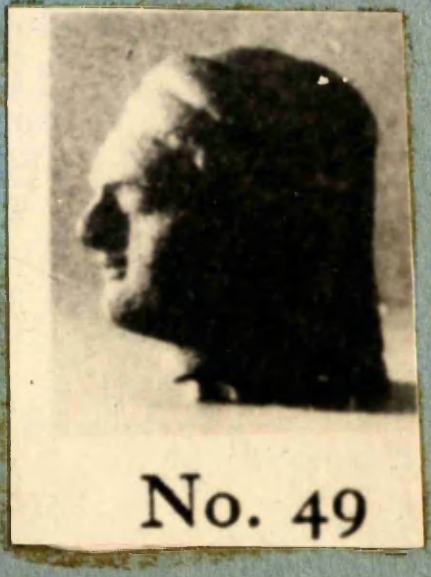
No. 46



No. 47



No. 49, *a*



No. 49



Taxila No. 159.

PL. XIII.



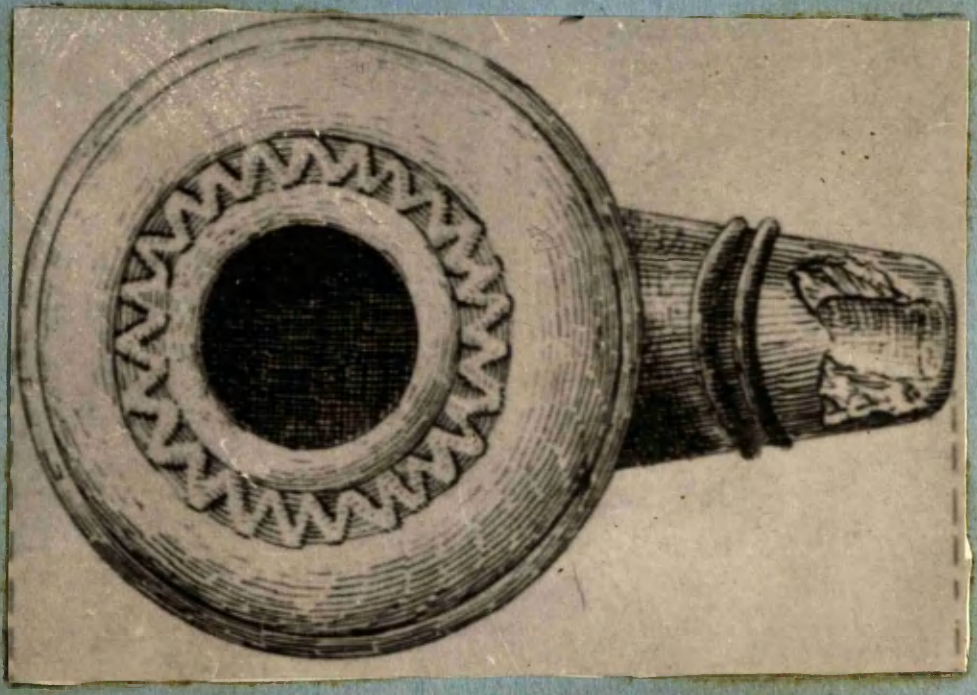
Taxila No. 154.



Taxila No. 27.



a = no. 54



No. 115.



No. 62



No. 74.



No. 76



No. 65.

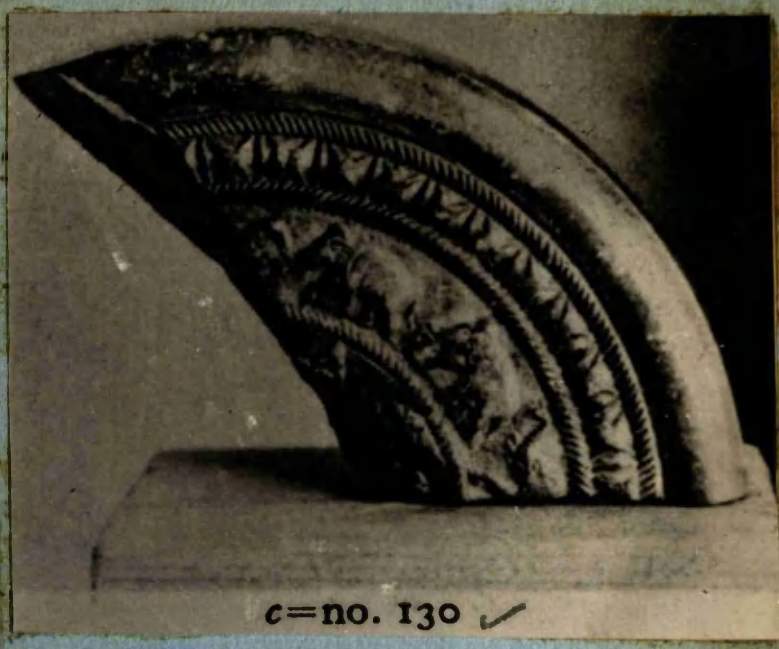


No. 68.

Ringstones. PL. XIX.

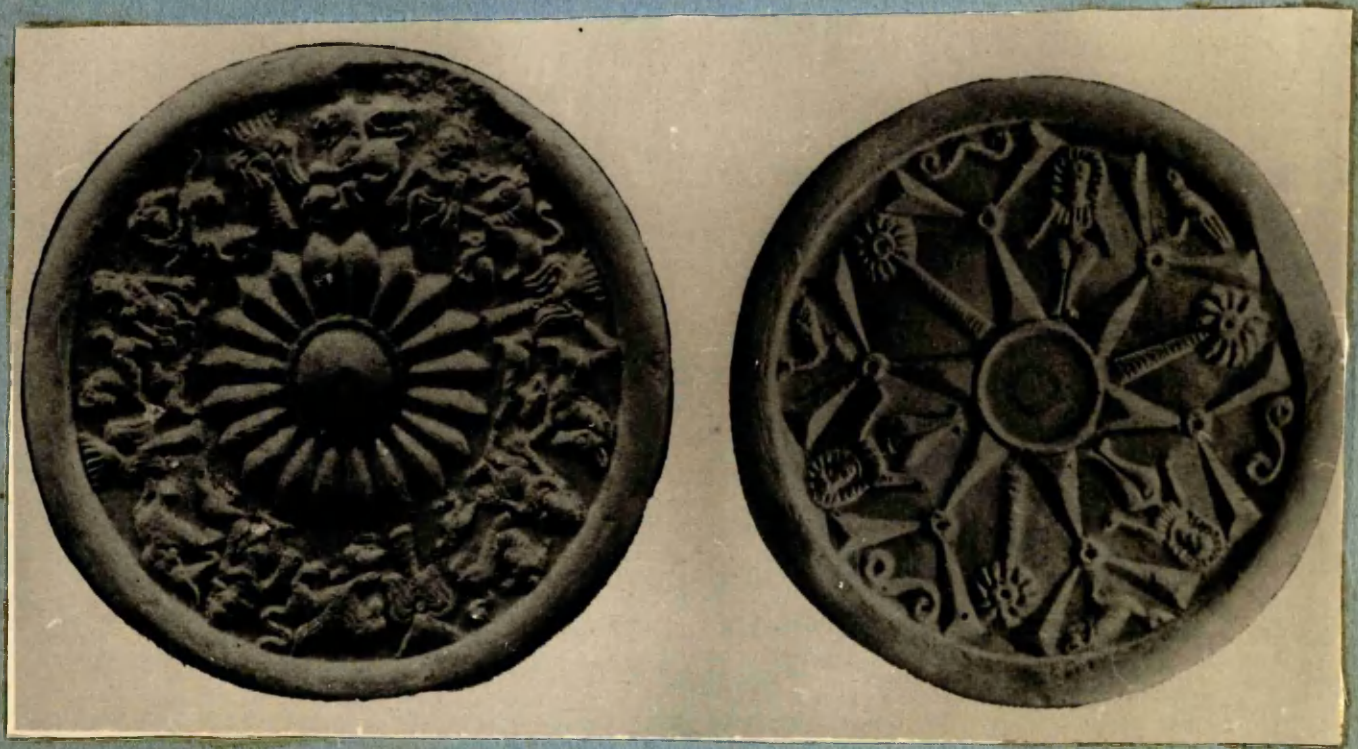


b=no. 129 ✓

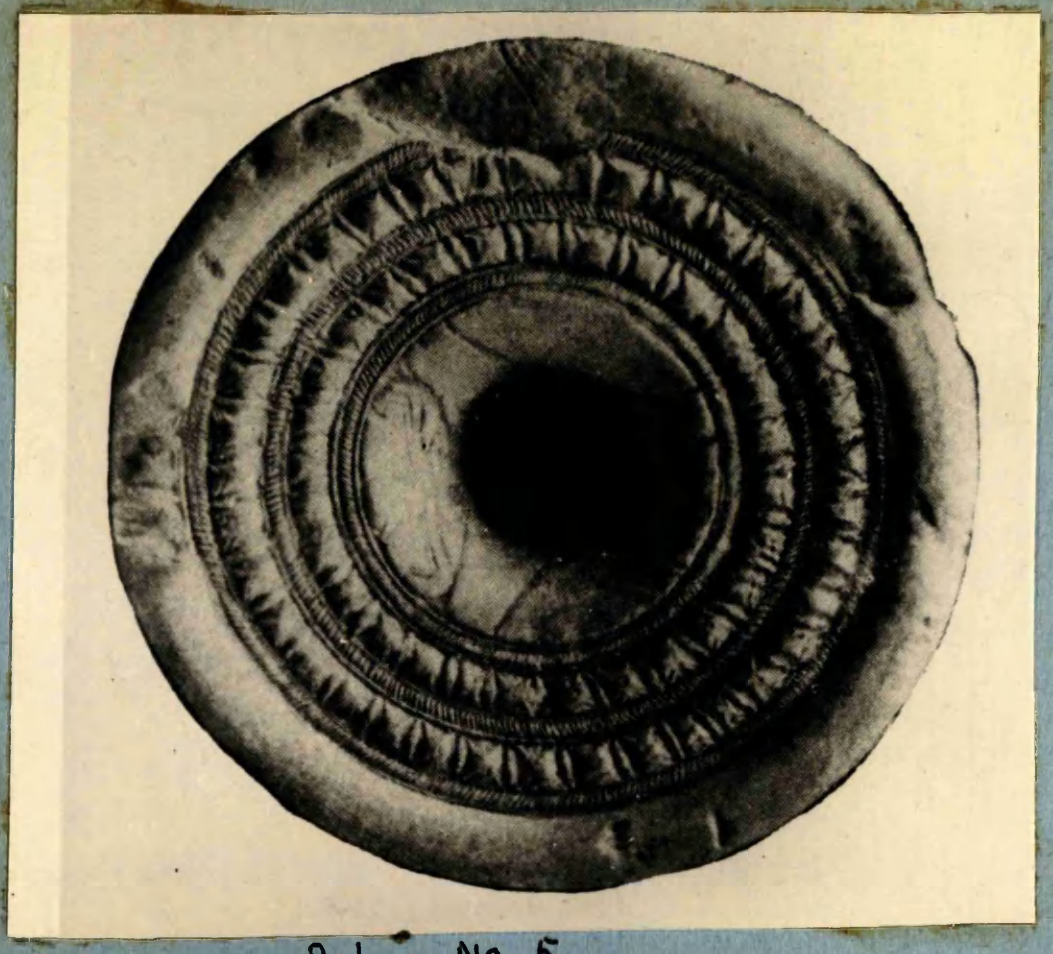


c=no. 130 ✓

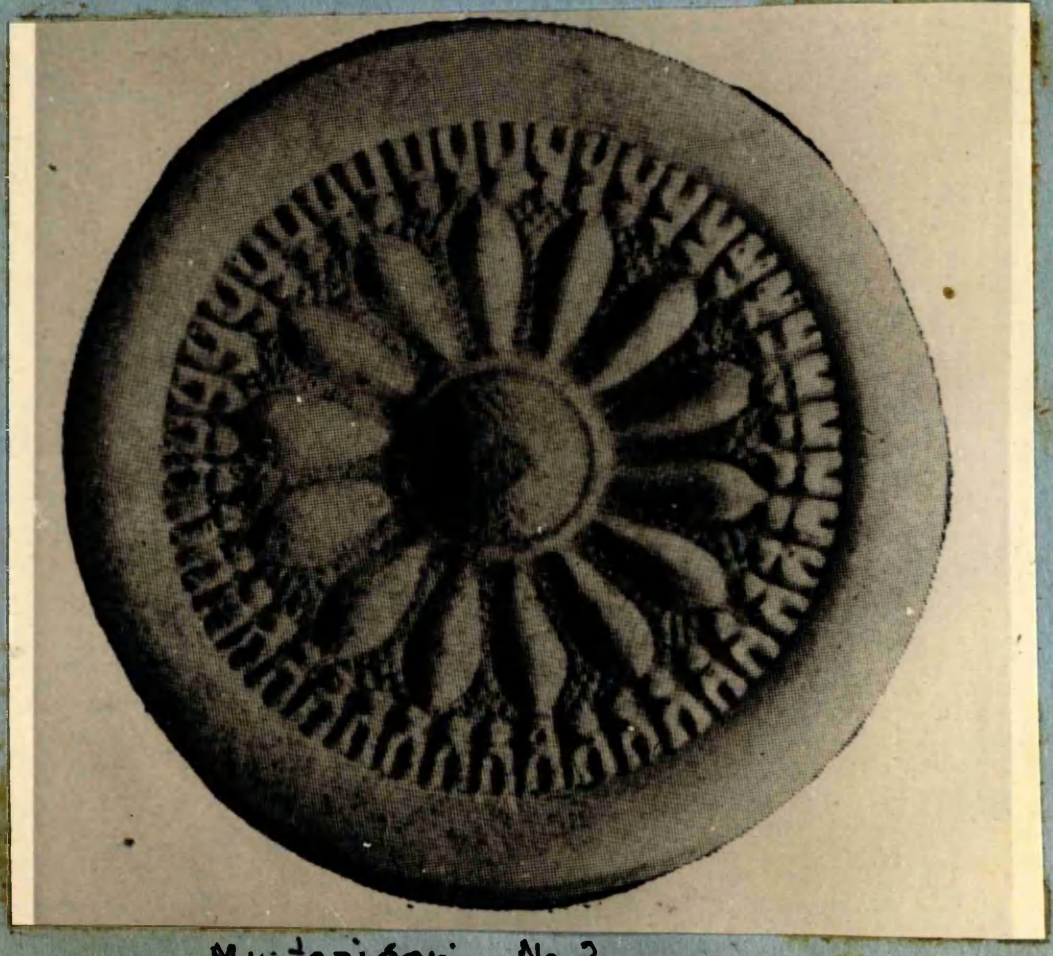
Taxila.



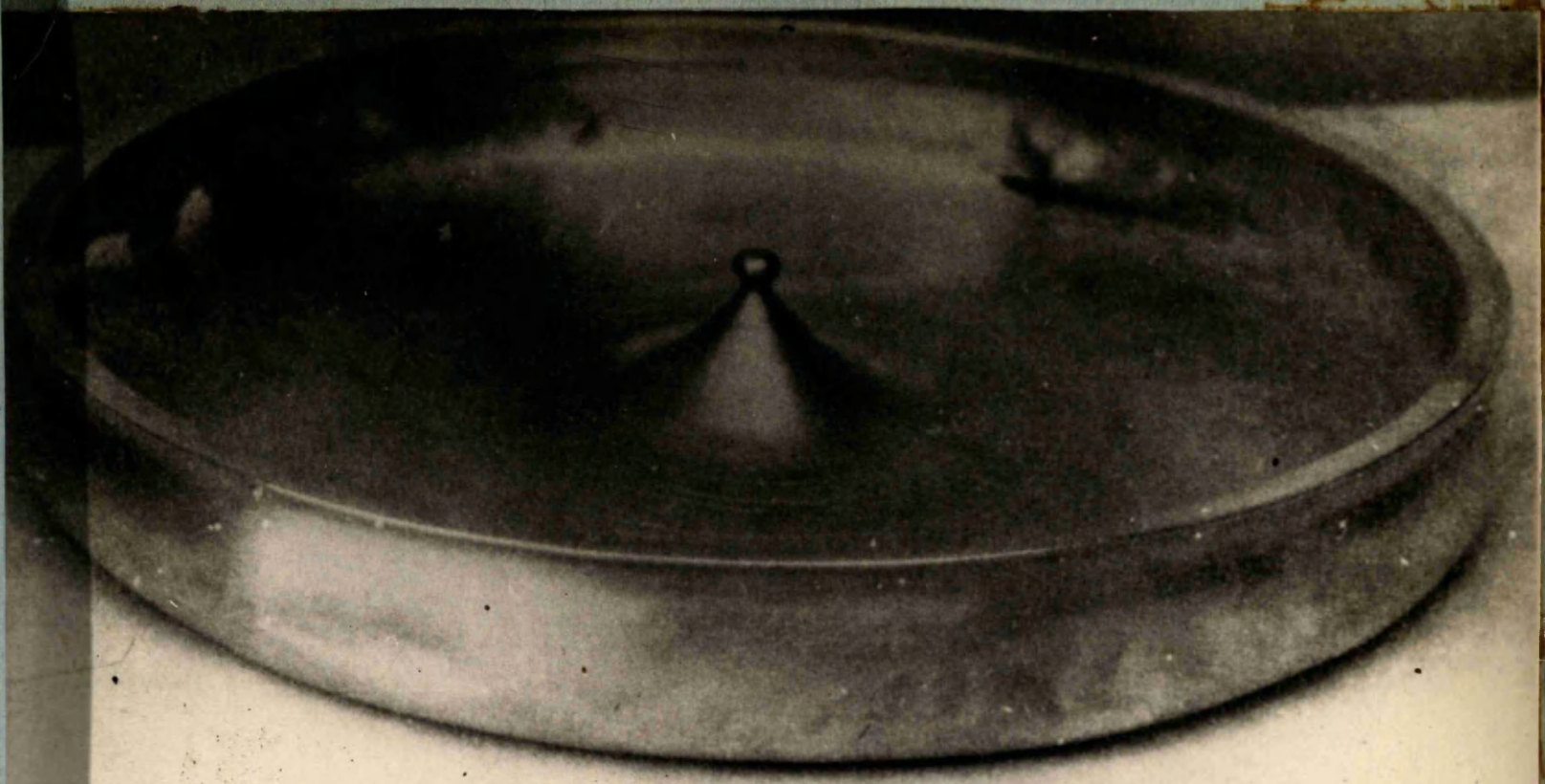
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Patna No. 5.



Murtazigani No. 3.



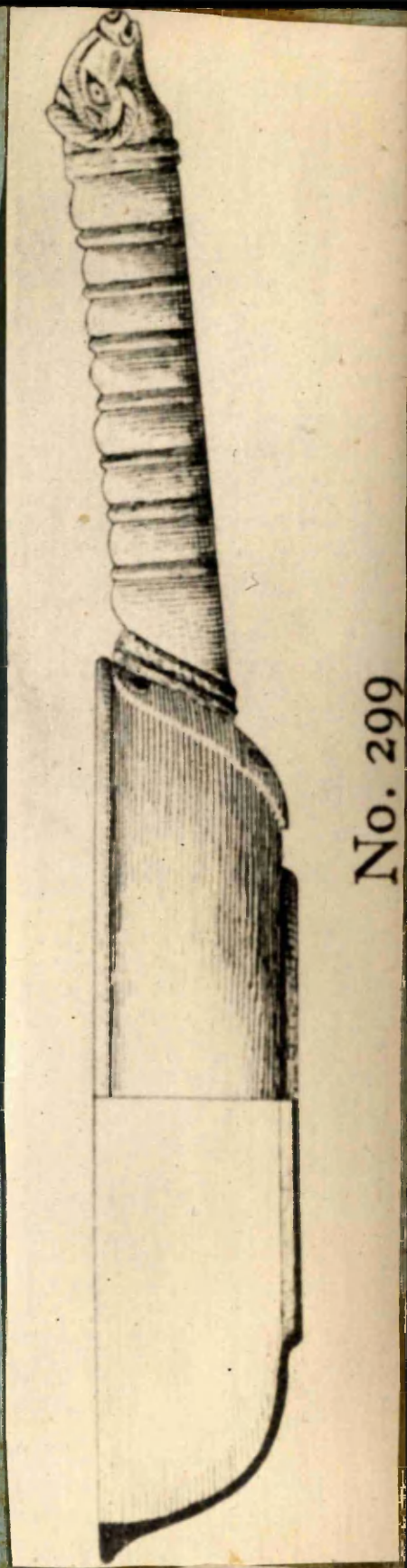
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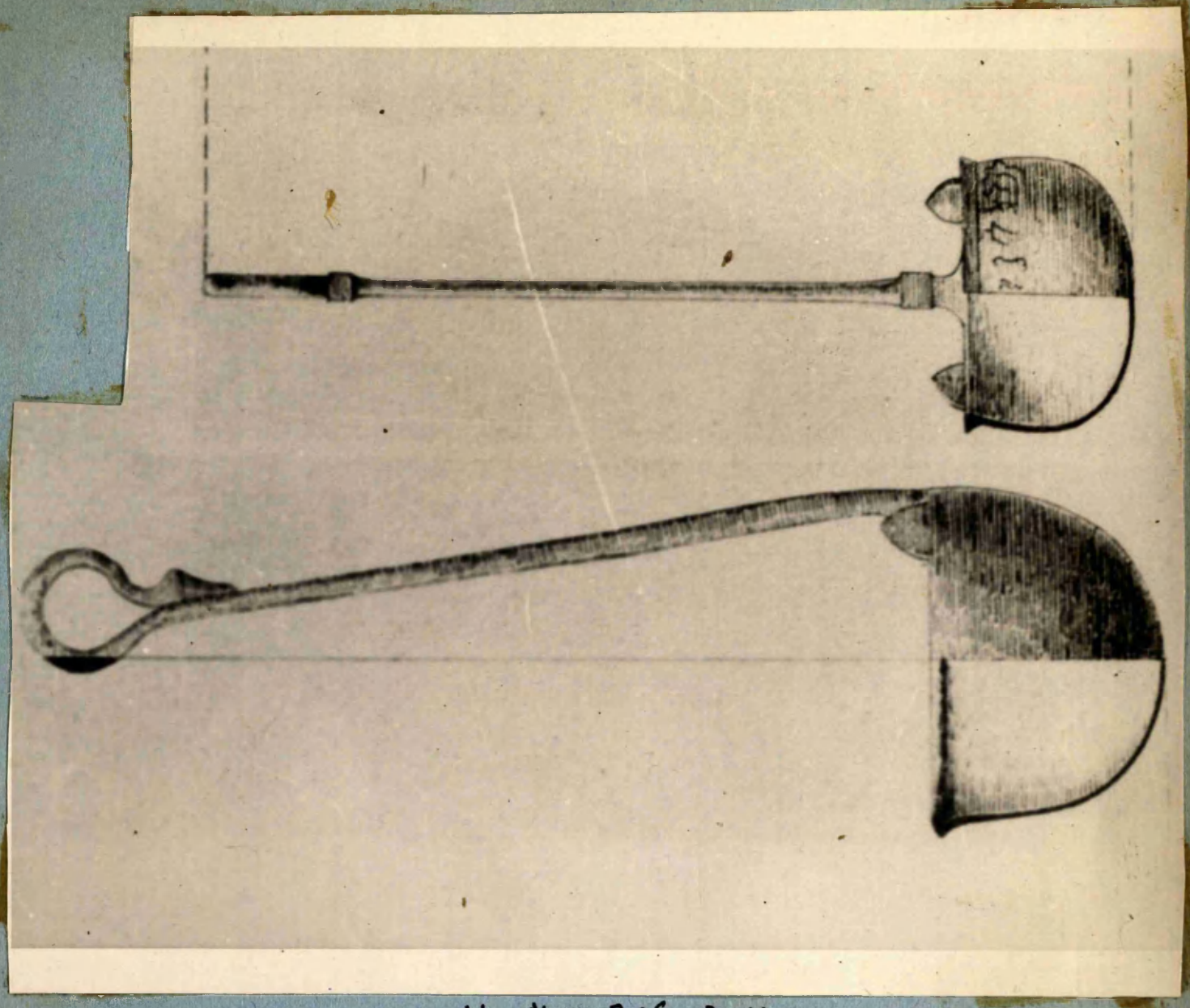
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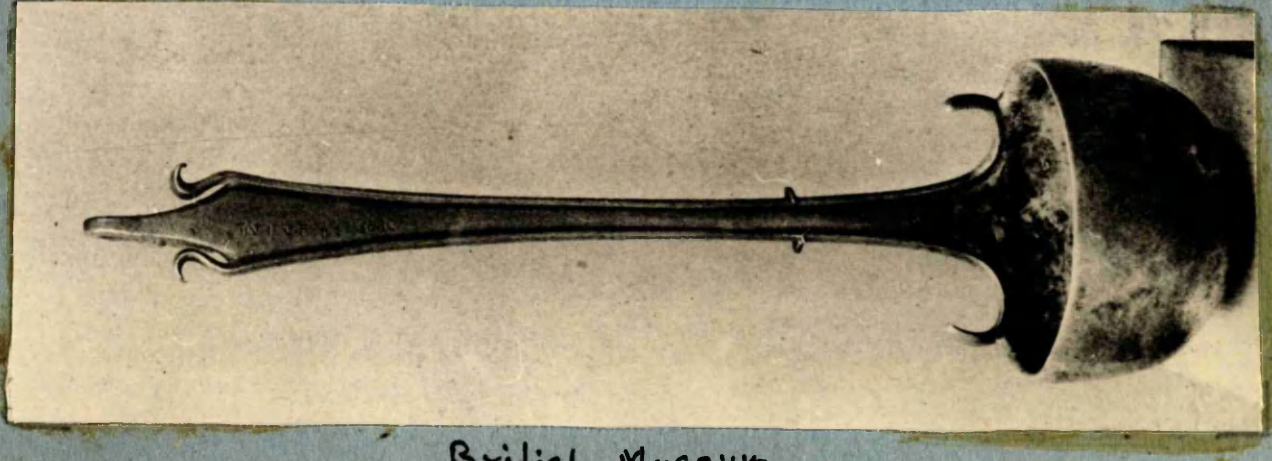
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No. 298



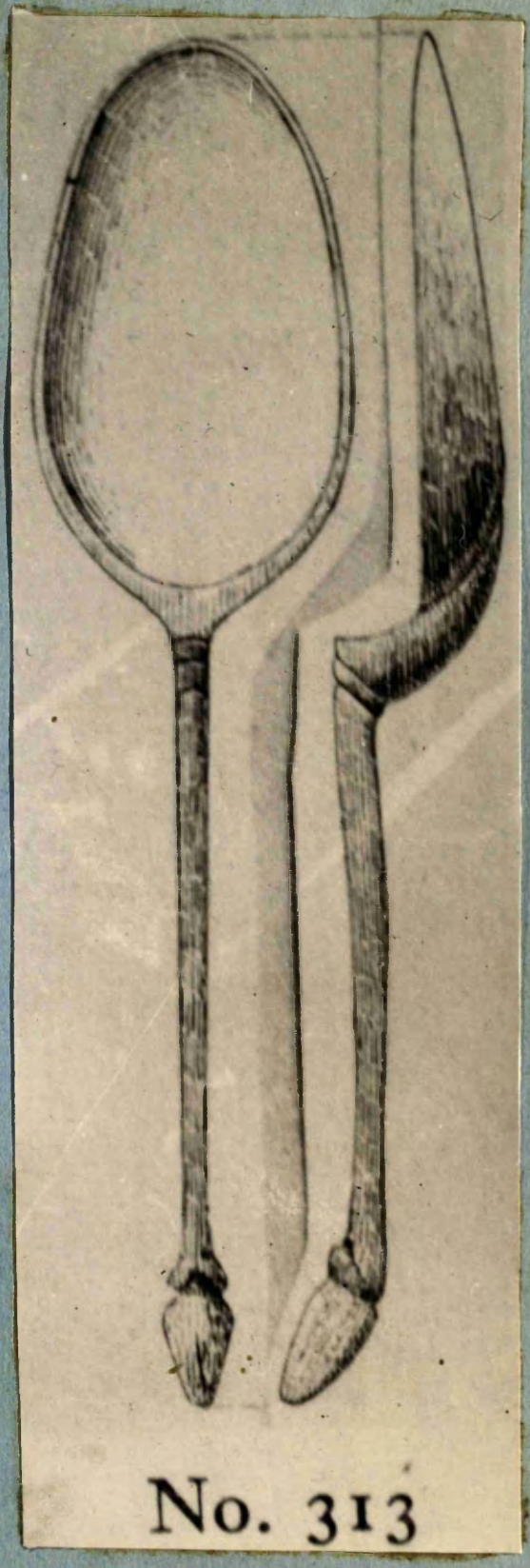
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British Museum.



Begram.



No. 313

Taxila.

Taxila.



No. 417.



s = no. 96



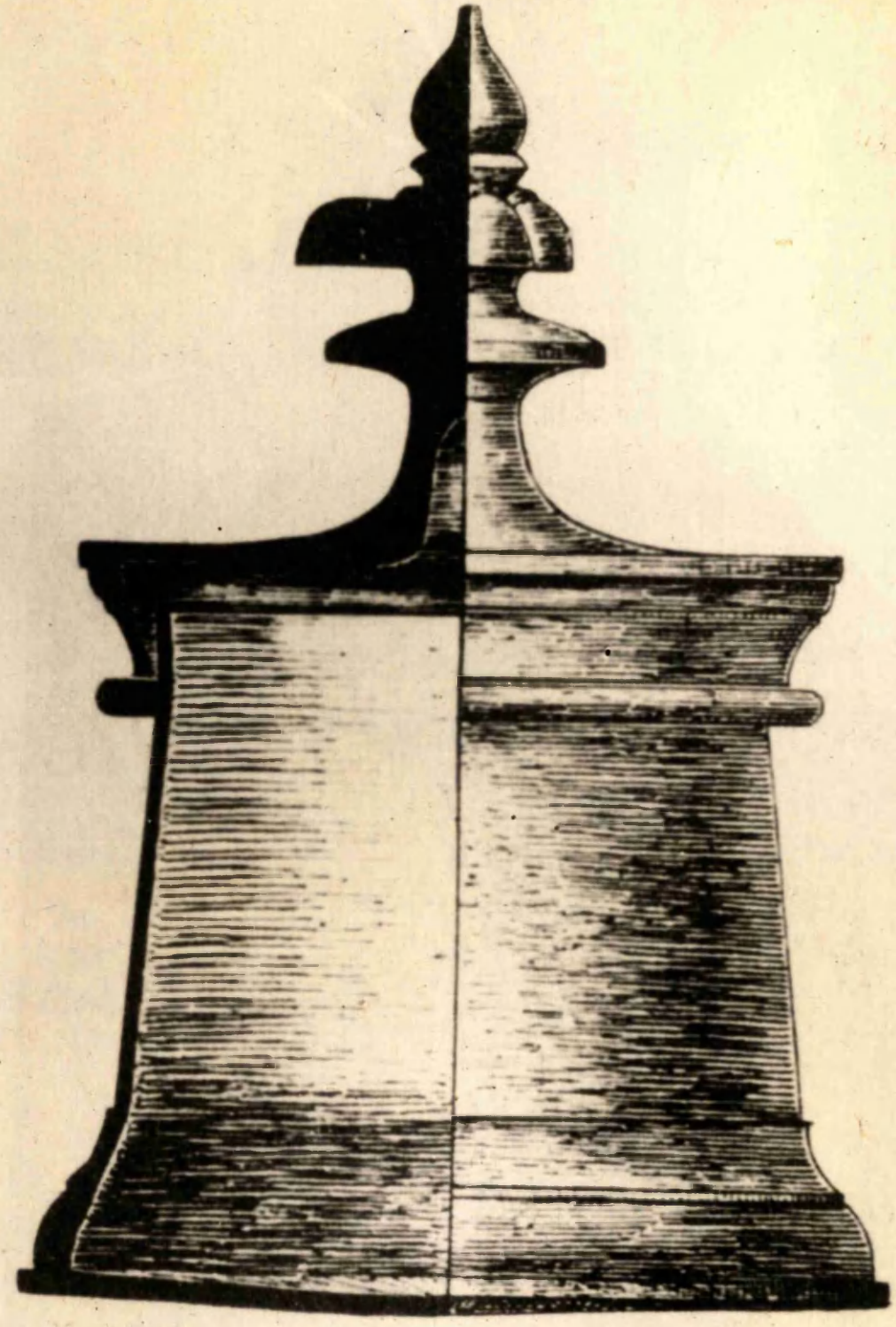
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u = no. 98



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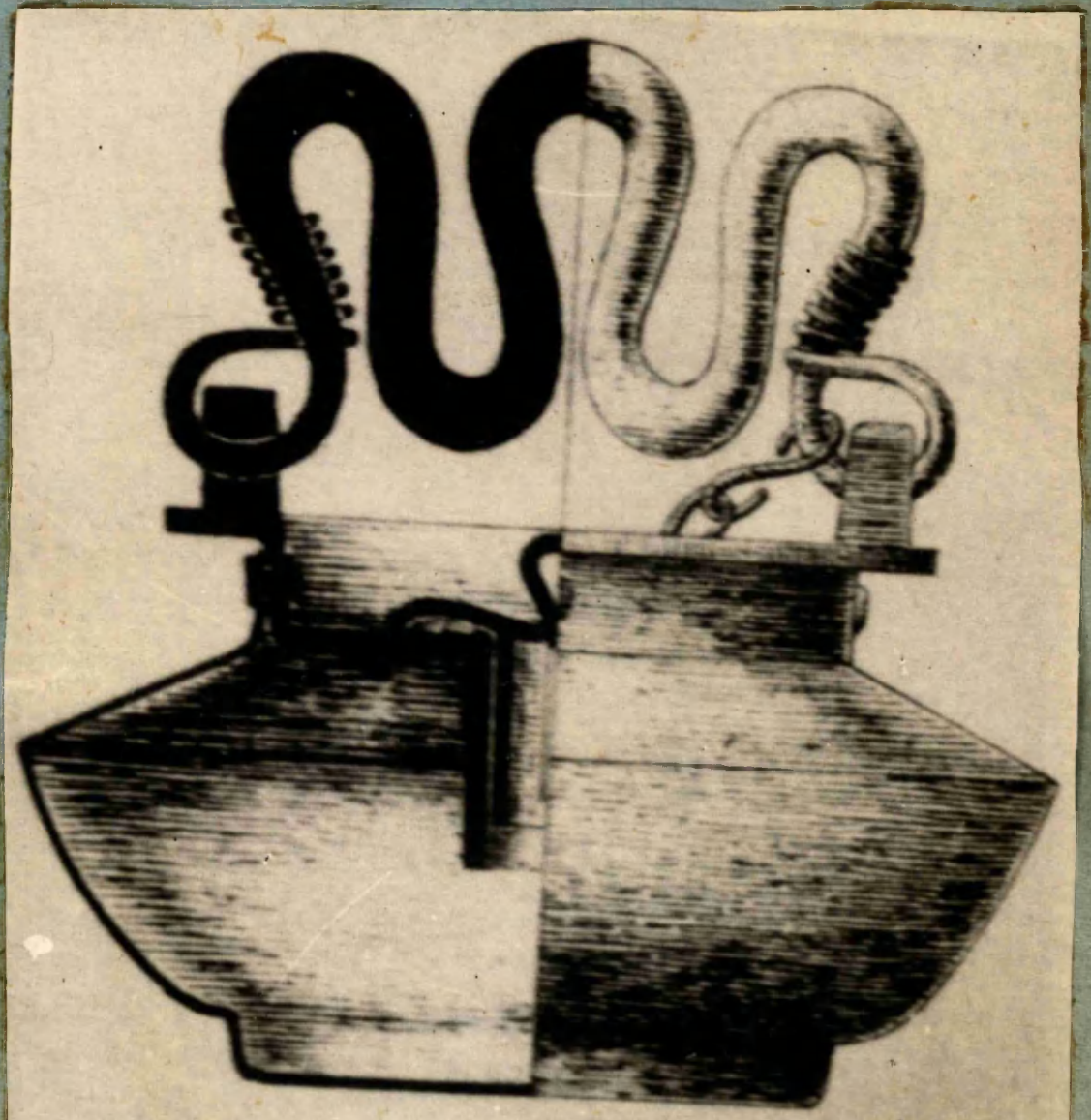


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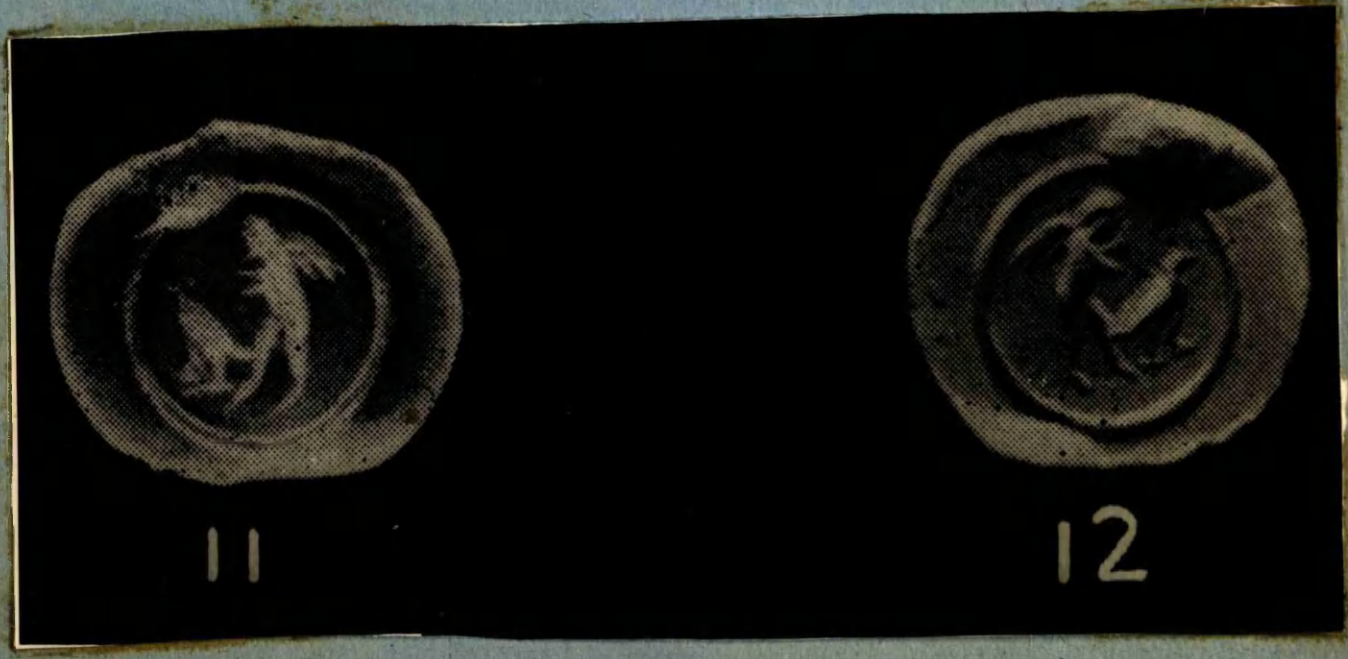
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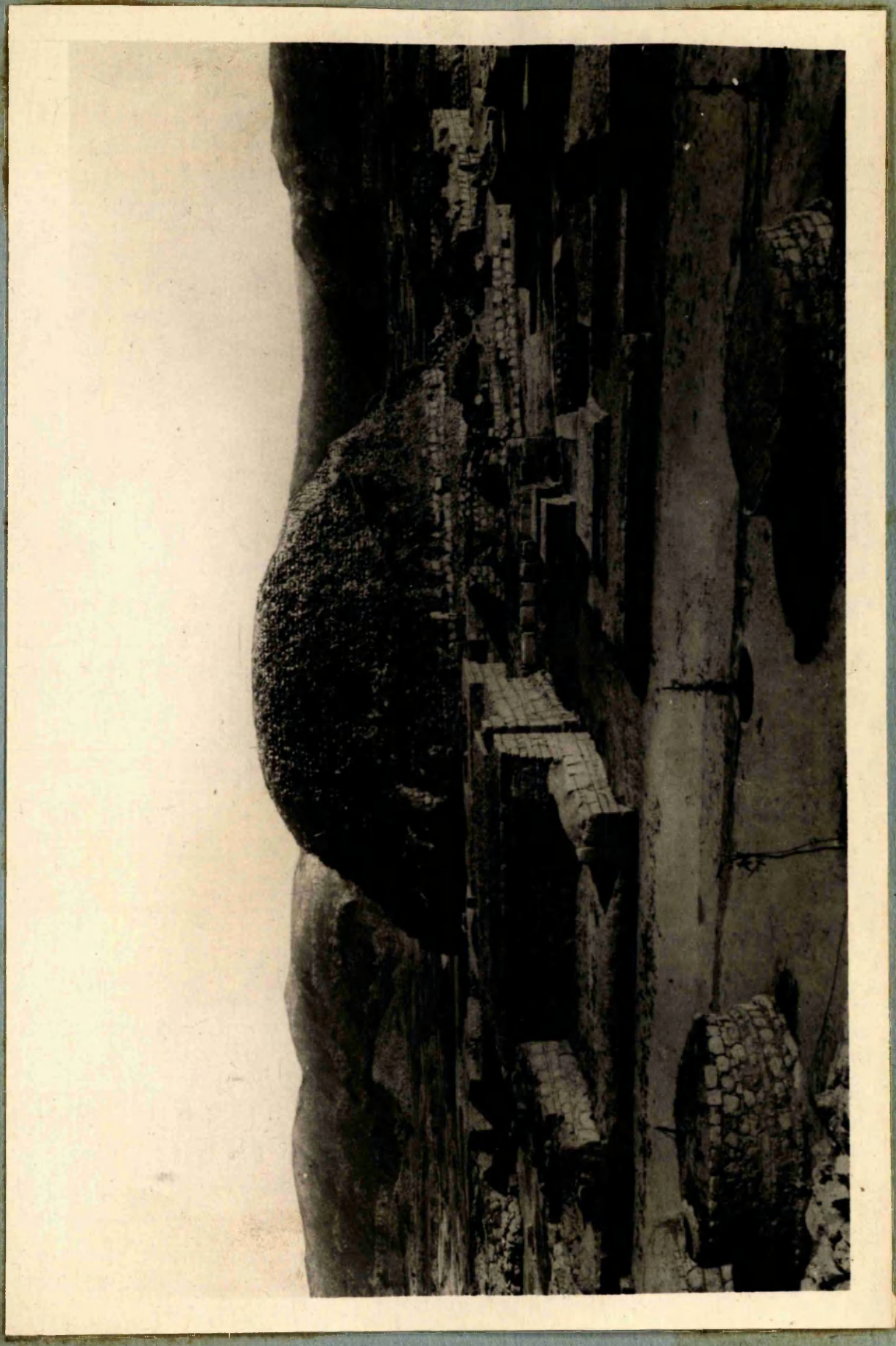
PL. XXIX



Taxila No. 30



Arikamedu.



Dharmarājikā Stupa.

Jandiāl Temple