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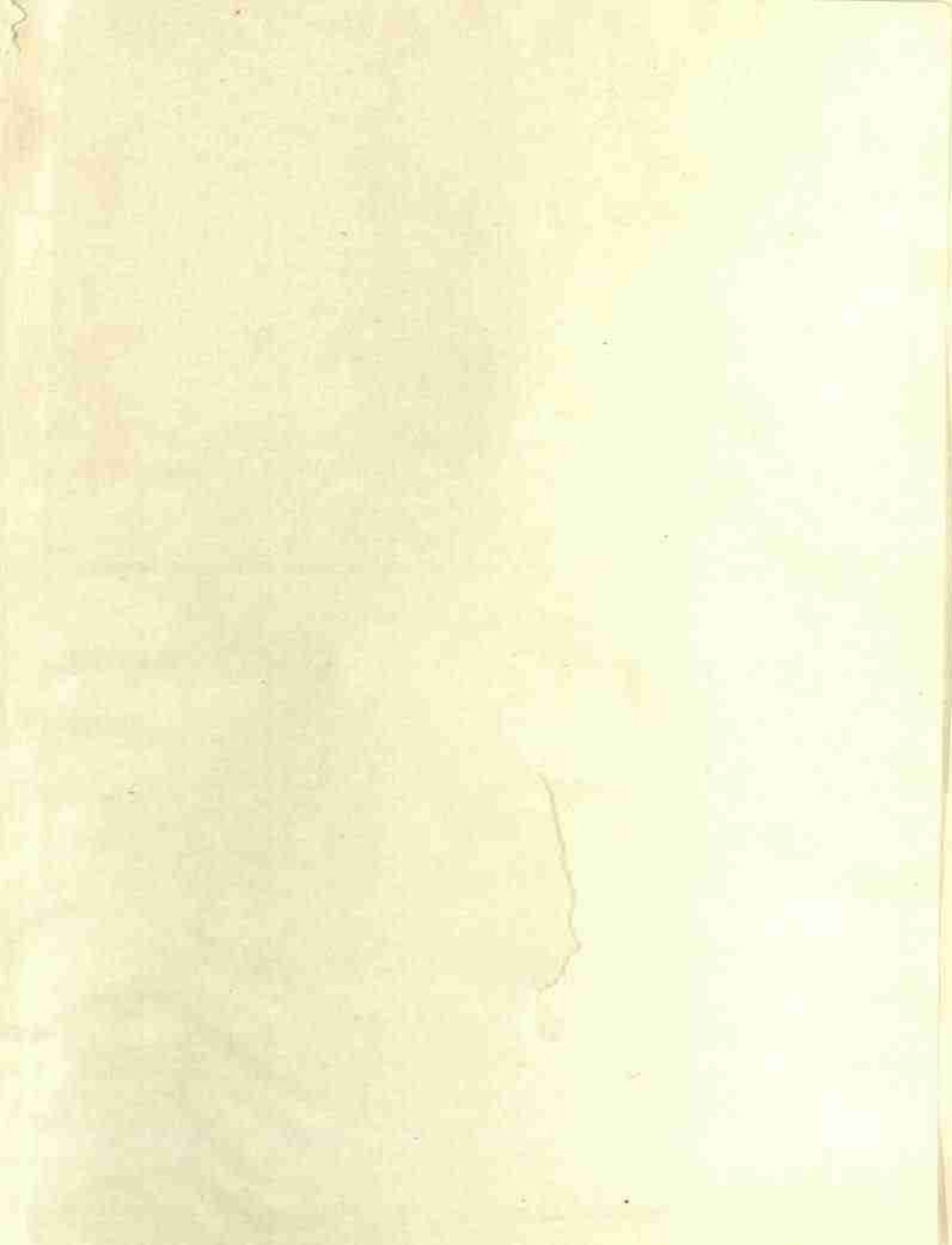
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**EXCAVATIONS AT
ŚRĪNGAVERAPURA
(1977-86)**

VOLUME 1

MEMOIRS OF THE
ARCHAEOLOGICAL SURVEY OF INDIA
NO. 88

EXCAVATIONS AT ŚRĪNGAVERAPURA

(1977-86)

VOLUME I

82830

B.B. LAL



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Cover : *Front, Tank A and Tank B with Interconnecting channel;*
Back, Śiva head (sketch)

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*Dedicated to all those
—officers, staff and workmen—
who helped the author during the grilling field-work
at Srīngaverapura
from 1977-78 to 1985-86*

FOREWORD

Śrīngaverapura, in District Allahabad, Uttar Pradesh, was one of the ancient settlements subjected to excavation under a project entitled the 'Archaeology of the Rāmāyana Sites'. The excavations were jointly undertaken by Prof. B.B. Lal on behalf of the Indian Institute of Advanced Study, Shimla, and Sarvashri K.V. Soundara Rajan and K.N. Dikshit of the Archaeological Survey of India. In the present volume, Prof. Lal has presented, besides the general sequence and other aspects of the site, details of a huge tank complex of early historical period unearthed there along with associated finds like pottery and antiquities. I am sure, the reader would find the report most useful and interesting because of its significant contents especially the grand structure of the tank and its technological aspects. It may, however, be stated that the views expressed in the report are not to be taken as the official views of the Archaeological Survey of India.

I am thankful to Prof. Lal for producing this scholarly report which could be published only with the combined efforts of my colleagues, B.M. Pande, Director, C. Dorje, Superintending Archaeologist, Arundhati Banerjee, Deputy Superintending Archaeologist, J.C. Gupta, Production Officer, K.P. Padhy and A. Jha, Assistant Archaeologists in the Publication Section of the Survey.

M.C. JOSHI
Director General
Archaeological Survey of India

22 February 1993

PREFACE

I have great pleasure in placing in the hands of the readers the first volume of reports on the excavations conducted by me, in collaboration with the Archaeological Survey of India represented by Shri K.V. Soundara Rajan and Shri K.N. Dikshit, at five sites, viz., Śrīṅgaverapura, Bharadvāja Āśrama, Ayodhyā, Nandigrāma and Chitrakūṭa, under the national project 'Archaeology of the Rāmāyana Sites'. This volume deals with a 250-metre long brick tank which is a unique example of Indian hydraulic engineering 2000 years ago. In due course, a separate volume will be published dealing with the excavation in the habitation area at this very site, which has not only given evidence of the easternmost occurrence of the Ochre Colour Ware but has also yielded a very good sequence of cultures, with occasional breaks no doubt, right up to the recent times.

Meanwhile, it is proposed to take up Bharadvāja Āśrama for the second volume in the series, because of the unusual significance of the site. A flat piece of land, opposite Anand Bhavan (the ancestral home of the Nehru family) at Allahabad, is locally known as Bharadvāja Āśrama. It carries on it a municipal garden, and there is little to indicate that there could be something really ancient about it. Thus, while working on the project, I asked myself : 'If there is any truth in the local tradition, the place ought to yield archaeological remains as early as those of Ayodhyā.' Consequently, excavations were taken up at the site and lo! its earliest levels did throw up the early variety of the well known Northern Black Polished Ware, taking it back to *circa* seventh century B.C. and making it co-eval with the earliest levels of Ayodhyā. All this clearly demonstrates that tradition need not be spurned as many people, including some scholars, are prone to do. Let adequate investigations be made before either rejecting or accepting any tradition.

The field-work under this project has taken twelve long years, viz. from 1975 to 1986, involving the aforementioned five sites. It has thrown up thousands of antiquities—coins, weights, beads, terracottas, copper and iron objects, and so on, besides truck-loads of pottery. All this material has to be patiently analysed and a comparative study made thereof. Those who have done the tedious job of report-writing know full well how time-consuming the job is. I would, therefore, urge upon my readers to bear with me. The volume on Bharadvāja Āśrama may be press-ready by the end of 1992. If all goes well, it is hoped that the remaining volumes in the series will be out by the time the country celebrates the Golden Jubilee of its Independence in August 1997.

Although all the persons concerned will be duly thanked in the pages to follow, here I would like to express my special gratitude to Professor S. Nurul Hasan who not only inaugurated the project but also helped me at various stages thereafter. I am no less thankful to the successive Directors-General, viz. Shri M.N. Deshpande, Shri B.K. Thapar, Dr. (Mrs.) Debala Mitra, Dr. M.S. Nagarajao, Shri J.P. Joshi and Shri M.C. Joshi, who gave me the necessary facilities from time to time.

12 March 1991

B. B. LAL

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CHAPTER I

INTRODUCTION

A. ABOUT THE PROJECT 'ARCHAEOLOGY OF THE RĀMĀYAṆA SITES'

It is just possible that someone might question the propriety of introducing here the Project 'Archaeology of the Rāmāyaṇa Sites', since the Śrīṅgaverpura Tank, which is the subject-matter of this volume, could as well have been described without bringing the Project in the picture. While this objection may be valid, it is equally likely that many readers might like to have at least an idea of the why and how of the Project in the course of which the discovery of this great tank was made. Hence this note on the Project. However, if any reader is not interested in the Project, he is advised to skip over this chapter and move straight on to Chapter II.

It is admitted on all hands that ancient Indian history not only abounds in lacunae but is also teeming with uncertainties about many things which are otherwise known. For instance, the identity of king Chandra mentioned in the famous Mehrauli iron-pillar inscription is still under debate. Or, while the historicity of Gautam the Buddha has been accepted by all scholars, there is no unanimity about his date: most of them hold that he passed away in 487 or 483 B.C., but there are some others who prefer to place this event in the fourth century B.C.

When such is the state of affairs even about the historically acceptable personalities, what would be the position about those who fall in the realm of tradition or at best traditional history, as, for example, Kṛishṇa and Rāma. The two Indian epics, viz. the *Mahābhārata* and the *Rāmāyaṇa*, give their exploits galore, but some historians feel hesitant to accept even their very existence. On the other hand, there are people—the masses and even amongst the intelligentsia—for whom they were historical figures, let alone the orthodox ones who would go to the extent of asserting that every little detail mentioned in these epics holds good to the very letter. They would even accept that an *akshauhīnī senā* (army) was deployed in the Mahābhārata War: according to the specifications given in the texts, an *akshauhīnī* would include 21, 870 elephants, 21,870 chariots, 65,610 horses and 1,09,350 infantry. For them it is also a fact the Śrī Rāma, after his conquest of Laṅkā, returned to Ayodhyā in an aeroplane (*pushpaka vimāna*).

The reason for these extremely divergent views is not far to seek. It lies in two major factors. In the first place, both the *Mahābhārata* and the *Rāmāyaṇa* are not contemporary with the events they seek to narrate. Secondly, there have been interpolations *ad infinitum* into these epics, which considerably reduces their dependability.

To elaborate the first factor. The history of India from the time of the Buddha onwards is so well known that there is no scope to place either Kṛishṇa or Rāma after him, i.e. later than the 6th-5th centuries B.C. Thus, if these were historical figures they must antedate the sixth century B.C. On the other hand, the linguistic and other internal evidences suggest that the texts of both these epics, as

available to us now, belong, by and large, to the couple of centuries before and after the Christian era. In fact, in some recensions of the *Mahābhārata*, a reference has been made even to the *Hūnas* (White Huns), besides, of course, to the *Yavanas* (Ionian Greeks), *Śakas* (Scythians) and *Romakas* (Romans). The inclusion of the White Huns would suggest that certain parts of the *Mahābhārata* are as late as the fourth-fifth centuries A.D., since the Huns appeared on the Indian scene only about that time. There is, therefore, a clear gap of at least half a millennium between the events, if these had a basis in history, and the texts that seek to narrate them. When even contemporary historical texts cannot wholly be relied upon, how much reliance can one place on pseudo-historical texts written after such a time-lag?

As to the second factor referred to above, both the *Mahābhārata* and the *Rāmāyana* are replete with interpolations. For example, the *Mahābhārata*, which now has about 100,000 verses, is known to have consisted at one time of 24,000 verses and was known as the *Bhārata*. Prior to that it had 8,800 verses and was called the *Jaya*. If there was an even earlier form comprising still less verses, one would not be surprised. Even this eleven-time inflation, from 8,800 to 100,000 verses, beats one hollow. Where to look for the real story? Likewise, of the nine *kāṇḍas* (cantos) of the *Rāmāyana*, those at the beginning and the end, viz. the *Bālakāṇḍa* and *Uttarakāṇḍa*, are known to be later additions. And indeed, it is believed that there do exist interpolations in the other *kāṇḍas* as well.

In such a near-chaotic state what should the seeker after the truth do? As an archaeologist, I thought of trying out the spade, if it could help in any way. The methodology was simple and straightforward. In both the epics certain sites are associated with certain events and luckily for us *sites with those very names exist even today*. Thus, the obvious step was to dig up the sites associated with these events and to find out if they can throw any light on the problem.

And the same was done. First in respect of the *Mahābhārata*. Way back, in 1950-52, I carried out excavations at the key-site of Hastināpura, the capital of the Kauravas. Thereafter intensive explorations or trial/full-fledged excavations were carried out at other sites associated with the story, either by me or other archaeologists. These sites include : Barnāwā (ancient Vārṇāvata), where the Kauravas made an abortive attempt to burn the Pāṇḍavas alive; Bairāt (ancient Virāṇanagara), where the Pāṇḍavas spent a part of their exile; Pānīpat (ancient Pāṇiprastha), Sonapat (Śonaprastha), Bhāghpat (Vṛikaprastha), Indrapat (Indraprastha) and Tilpat (Tilaprastha), the five villages which according to the tradition (their names, however, vary somewhat in the texts) the Pāṇḍavas wanted to be given to them in case the war was to be averted; Kurukshetra where the war was fought; Mathurā and Kāmpil (ancient Kāmpilya) from where respectively Kṛishṇa and Draupadī hailed; besides many a site associated with the story, in one way or the other, through local tradition.

The results of these explorations and excavations were indeed very revealing. It was found that all these sites had a common culture—known to archaeologists as the Painted Grey Ware Culture—in their lowest levels, which fact clearly tied up the sites one with the other. The Painted Grey Ware occupation at Hastināpura, the principal site in the story, is ascribable broadly to the period between circa 1100 and 800 B.C.

Hastināpura also yielded the evidence of a heavy flood in the Gaṅgā (on whose bank it is situated), which devastated a major portion of the site. As a result, Hastināpura was abandoned. In

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this context it may be recalled that according to the literature, Abhimanyu died on the battle-field and his son Parikshit came to the throne. Fifth in succession from the latter was Nichakshu during whose reign a flood in the Gaṅgā destroyed Hastināpura, and consequently the capital was shifted to Kauśāmbī:

*"Gaṅgayāpahrite tasimin nagare nāgasāhvaye
Tyaktvā Nichakshur-nagaram Kauśāmbīyam sa nivatsyati".*

"When the city of Hastināpura is carried away by the Gaṅgā, Nichakshu will abandon it and dwell in Kauśāmbī."

The literature then mentions the names of the kings of Kauśāmbī, amongst whom is Udayana, a contemporary of the Buddha.

Archaeologically, it is very interesting to note that, from its lower level, Kauśāmbī has yielded grey pottery with designs in black pigment, which is genetically connected with the Painted Grey Ware of Hastināpura. This points to a continuity from Hastināpura to Kauśāmbī.

The overall evidence from the sites connected with the Mahābhārata story thus clearly suggests that *there is a kernel of truth* in it, although the descriptions of mighty palaces or of *akshauhini* armies involving millions of people must remain in the realm of fancy, so typical of any epic whether in India or abroad. The probable date of the battle seems to have been some time in the ninth century B.C.

The realization that the *Mahābhārata* is likely to have had a basis, howsoever attenuated, prompted me to investigate the historicity of the *Rāmāyaṇa* as well. As a result, a project called 'Archaeology of the Rāmāyaṇa Sites' was embarked upon in 1975 when I was working as a Professor and Head of the Department of Ancient Indian History, Culture and Archaeology at Jiwaji University, Gwalior. The Project was inaugurated at Ayodhyā by Professor S. Nurul Hasan, the then Minister of State for Education and Culture. Some funds and staff were provided by the Archaeological Survey of India also, while the Government of Uttar Pradesh too rendered some assistance.

Somehow at Jiwaji University the Project ran into difficulty soon after its inception and there was an interruption. However, as ever, Professor Nurul came to my rescue. He, Professor S.C. Dube, the then Director of Indian Institute of Advanced Study, Shimla, and Shri M.N. Deshpande, the then Director General of the Archaeological Survey of India, decided that if I joined the Shimla Institute as a Fellow, the Survey would provide the necessary funds and most of the staff for the field-work, while the Institute would also give me some supporting staff. I joined the Institute in January 1976 and with effect from the field-season of 1976-77 the Project was resumed at Ayodhyā. The field-work continued up to 1985-86.

In the *Rāmāyaṇa* story, the principal place is Ayodhyā, the capital of king Daśaratha whose son, Rāma, is the hero of the epic. Located on the right bank of the Sarayū (fig. 1) in Faizabad District, Uttar Pradesh, the site covers an area of over one sq.km. The story goes that, at the instance of his stepmother, Rāma was exiled for a period of fourteen years. During his exile, he was accompanied by his wife, Sītā, and one of his brothers, Lakshmaṇa. After leaving the capital, the trio spent the first night on the bank of the Tamasā, and early next morning quitted the camp, leaving asleep all the

SITES ASSOCIATED WITH RĀMĀYAṆA STORY

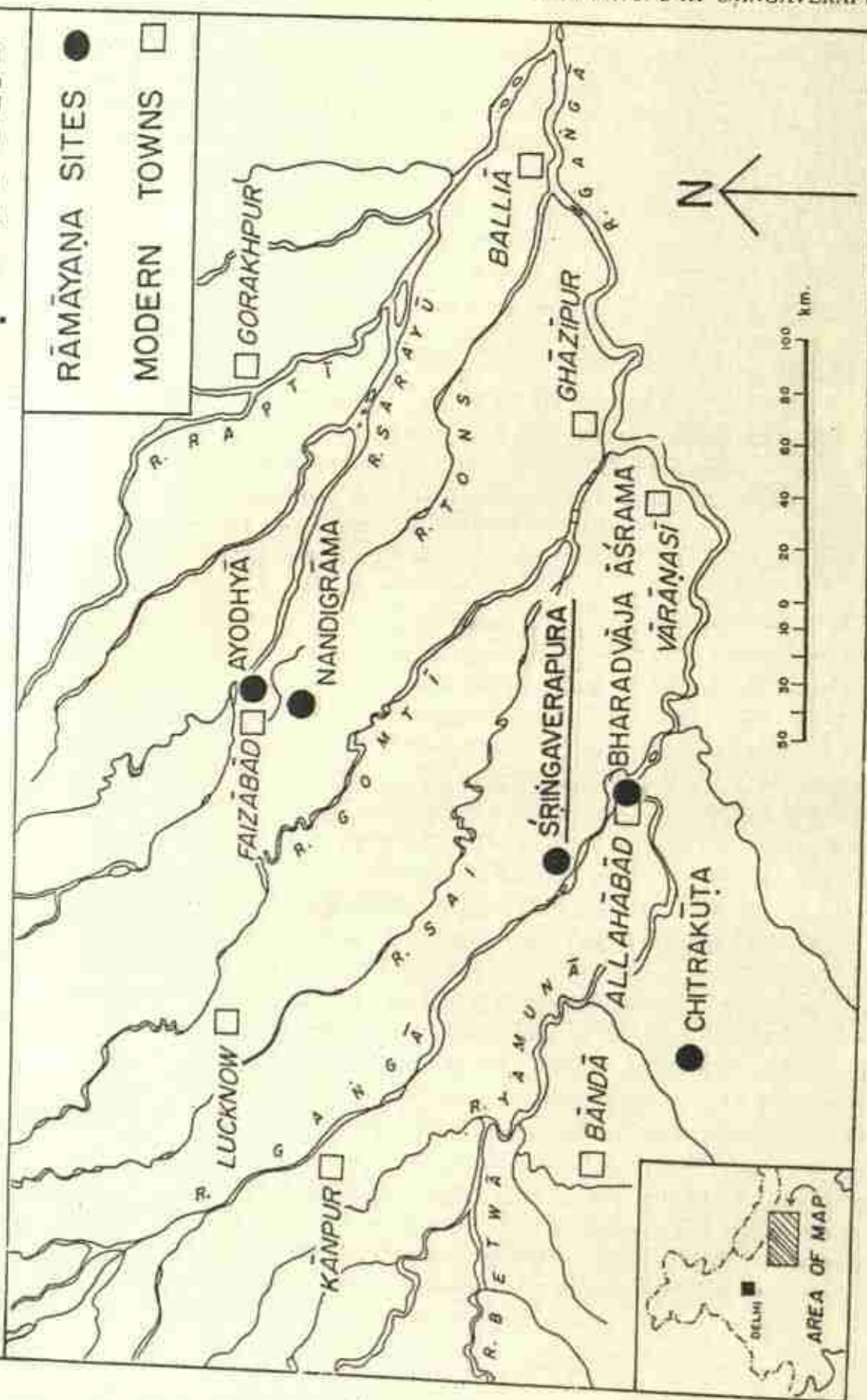


FIG 1

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citizens of Ayodhyā, who had accompanied them thereto. They then crossed successively the Gomafī (known by the same name today), Vedaśruti (identified with modern Besui) and Syandikā (modern Sai), and reached the left bank of the Gaṅgā at Śrīṅgaverapura (known today also by the same name). It was here that the local Nishāda chieftain helped them cross the Gaṅgā. From there they reached Bharadvāja Āśrama. A locality near the former house of the Nehrus at Allahabad is known even today as Bharadvāja Āśrama. After a brief sojourn at the Āśrama, they crossed the Yamunā to reach Chitrakūṭa in Banda District, U.P., where they camped on the top of a hillock. While they were staying at Chitrakūṭa, another brother of Rāma, named Bharata, came there to persuade him to go back to Ayodhyā. When Rāma did not agree, Bharata took his sandals (*pādukās*) back with him, as Rāma's symbolic representative, and carried on the government of the State, not from Ayodhyā but by staying near a place called Nandigrāma. The story then goes on further, taking the trio to Nāshika where Sītā was abducted by Rāvaṇa, the king of Laṅkā. Rāma ultimately defeated Rāvaṇa, rescued Sītā and came back to Ayodhyā after the expiry of the exile period.

Under the Project excavations have been carried out at five of the above-mentioned sites, namely Ayodhyā, Nandigrāma, Śrīṅgaverapura, Bharadvāja Āśrama and Chitrakūṭa. There is no intention to take up any site south of Chitrakūṭa. It is, however, hoped that someone else will continue the thread.

The field-work having been over, it is now proposed to publish site-wise reports on the results. This first volume is devoted exclusively to the tank discovered at Śrīṅgaverapura, which, because of its huge size and uniqueness from the point of view of hydraulic engineering, calls for separate treatment. Another volume will carry a detailed analysis of the culture-sequence at Śrīṅgaverapura. Other volumes will be devoted to Ayodhyā, Bharadvāja Āśrama, Chitrakūṭa and Nandigrāma, individually or in groups.

Perhaps after going through the foregoing, rather dreary, narration, the reader would like to know as to what after all is the upshot of the Project in so far as the historicity of the Rāmāyaṇa is concerned. While a detailed analysis of the data obtained from the various sites will be given in a subsequent volume, the position, in a nutshell, is as follows.

At Ayodhyā, the key-site of the Rāmāyaṇa episode, excavations were carried out at as many as fourteen different spots, distributed practically all over the mound. These included such traditional spots as the Janma-bhūmi, Kauśilyā-ghāṭ, Hanumān-garhī, etc. The lowest occupation in all these areas was represented by an early stage of the Northern Black Polished Ware (NBPW) Culture. While nobody can ever say as to what underlies the areas not excavated so far, the excavations already done were fairly extensive so as to avoid any chance-missing. Thus, as things stand at present, Ayodhyā does not seem to have witnessed any pre-NBPW occupation. The site continued through the Śuṅga, Kuhsan and Gupta times right up to the medieval period, but with these we are not concerned here.

Nandigrāma also began with the NBPW. But at Śrīṅgaverapura two pre-NBPW cultural strata were identified. From bottom upwards, these yielded respectively the Ochre Colour Ware and the Black-slipped Ware, with a break in between the two. From the Black-slipped Ware levels the habitation passed on to the early NBPW stage without any break. On the basis of the Carbon-14 and thermoluminescence dates for the site, the appearance of the NBPW may be assigned to the seventh

century B.C. As at Ayodhyā, at Śrīngaverapura too there is evidence of occupation through Śuṅga, Kushan, Gupta and subsequent periods.

At Chitrakūṭa, the ancient mound is by and large covered with medieval temples or modern houses. Thus, hardly any sizeable plot is available for excavation. However, from the rain-gullies in between the temples on the left bank of the Mandākinī, sherds of the NBPW and Black-slipped Ware were picked up.

Though most unassuming, the site of Bharadvāja Āśrama has a key-role to play in answering our queries. Today there spreads out a municipal garden over a major part of the site. But the sudden drop from it to the adjacent land indicates that the Gaṅgā, which has shifted its course, used to flow past the site in ancient times. The upper levels of the site yielded an occupation of the Gupta period. But below it there was no Kushan or Śuṅga occupation. On the other hand, right underneath the Gupta levels there was a thick deposit of sandy loam in which there occurred sporadically sherds of the Northern Black Polished Ware and the Black-slipped Ware. There were no regular floor-levels as such, although there did occur a few pieces of clay plaster bearing reed-marks, indicating that there may have existed a few temporary huts or shelters.

From the foregoing brief description of the cultural deposits at Ayodhyā, Nandigrāma, Śrīngaverapura, Chitrakūṭa and Bharadvāja Āśrama, it would be seen that the earliest period at which all these sites could have co-existed is that of the early stage of the Northern Black Polished Ware, which, as already indicated above, may go back to the seventh century B.C. Thus, if there is any historical basis for the Rāmāyaṇa story it is unlikely to have ante-dated the seventh century B.C.

But the co-existence of these sites in the seventh century B.C. does not by itself establish the historicity of the Rāmāyaṇa. While this is true, a closer look at the data is rather revealing.

For the sake of argument let it be assumed that the Rāmāyaṇa was a figment of the imagination of a poet called Vālmīki, and there is no historical basis whatsoever for it. Now, as has been stated earlier, the Rāmāyaṇa in the form it is available to us now, is a work of the period between the second century B.C. and the second century A.D. At this point of time, the sites of Ayodhyā, Śrīngaverapura and Nandigrāma were under occupation, but surely Bharadvāja Āśrama was not. Also, in the present state of our evidence, the same may be said about Chitrakūṭa. Thus, a vital question poses itself, viz. if Bharadvāja Āśrama and Chitrakūṭa were not in existence during the second century B.C.-second century A.D. period, nor were they then known to have existed earlier, how could anybody fabricating the Rāmāyaṇa story during the above-mentioned period include in that story these two sites? The only way in which their inclusion is explainable is that there *did exist* a pre-second-century B.C. story of the Rāmāyaṇa episode in which both Bharadvāja Āśrama and Chitrakūṭa duly figured. It was this story that had a basis in history and had been carried down through oral tradition, most likely in the form of ballads. After a stage had been reached when writing began to be freely used, viz. after the third century B.C., the story was reduced to writing.

That even in our own times, though the printing press has its full play, episodes are woven into ballads and carried down by word of mouth can be fully exemplified. In 1954 there was the Kumbha Melā (a religious festival) at Allahabad where millions of people had thronged to have a dip in the holy Gaṅgā. As chance would have it, a team of Nāgā Sādhūs (naked mendicants) suddenly appeared

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on the scene. There was a great commotion near the river-bank and people began to run helter-skelter. In the utter confusion that followed hundreds of people were killed and a very large number injured. While the newspapers and the electronic media carried the story all right, local genius wove ballads around this ghastly incident. So much so that today, hardly within 35 years of the occurrence, we have at least three versions of the same story, basically common but differing in details. I had the opportunity of tape-recording one such version while conducting the excavations at Śrīngaverapura.

In the case of Bharadvāja Āśrama, there are two more points that deserve to be specially highlighted. First, that the deposit yielding stray sherds of the NBP Ware was that of sandy loam and not of regular house-floors. The presence of reed-impressed clay-plaster clearly indicates that on the sandy bank of the river there stood a few huts—a scenario which fits well into that of a hermitage. Whose hermitage it was, unfortunately archaeology will have to remain dumb since at that point of time writing was not used in the Gaṅgā valley.

The other noteworthy point about Bharadvāja Āśrama is that there took place a revival of the site during the Gupta period. This was the time when the Rāmāyaṇa epic had been reduced to writing and when temples bearing plaques of the Rāma story had begun to be constructed. This happened much in the same way as the site of Ayodhyā saw a major upsurge in the form of the construction of temples in the wake of the popularization of the Rāma story once again, by Tulsi Das in the seventeenth century.

To sum up this very brief discussion. The combined evidence from all the five sites excavated under the Project shows that there did exist a historical basis for the Rāmāyaṇa, though of course, most of what has been described in that epic—particularly the descriptions of houses, fortifications and so on—was the result of subsequent interpolations, which naturally introduced the material culture of the period when these interpolations were made. Above all, it is to be remembered that the Rāmāyaṇa, like its companion, the Mahābhārata, was a *prabandha-Kāvya* (an epic) and not an *itihāsa* (history), and thus the poet had full freedom of imagination.*

B. ACKNOWLEDGEMENTS

First and foremost I would like to place on record my deep gratitude to Professor S. Nurul Hasan who in 1972, as the Union Minister of State for Education and Culture, permitted me to quit the Director-Generalship of the Archaeological Survey of India, in spite of there having been a heavy pressure from still higher quarters to the contrary. During the course of a discussion in his chamber in

* For a somewhat detailed, though by no means exhaustive, discussion on the subject, the reader is advised to refer to my paper 'Historicity of the Mahābhārata and the Rāmāyaṇa: What has Archaeology to say in the matter?', presented at a seminar on 'New Archaeology and India', held under the auspices of the Indian Council of Historical Research, at New Delhi on 15-17 October 1988. The proceedings are under publication. In that paper many objections raised against the seventh-century B.C. dating arrived at on the basis of the archaeological evidence and those against the identification of Ayodhyā itself have also been duly answered.

the Parliament House he realised that I seriously wanted to be free from the heavy administrative duties in order to be able to pursue one-pointedly my researches involving heavy field-work. It was he who inaugurated the Project at Ayodhyā in 1975 and again it was he who came to my help in 1976 when the Project ran into difficulty at the Jiwaji University, Gwalior. He made arrangements under which I could continue the Project as a Fellow of the Indian Institute of Advanced Study, Shimla, and field-staff and expenses for field-work were provided by the Archaeological Survey of India. Even as recently as 1987 he helped me by initiating a move by which the Indian Council of Historical Research offered me a National Fellowship, to enable me to continue the preparation of the reports on the various sites.

I would also like to thank Professor S. C. Dube, the then Director of the Institute of Advanced Study, Shimla, who kindly made available to me the services of Shri Raj Nath Kaw, photographer on deputation from the Archaeological Survey of India, and of Shri Surya Kant Srivastava who joined me after leaving his job at Gwalior. After Professor Dube's term as the Director of the Institute was over, in 1977 I was called upon by the then Minister of Education, Shri P.C. Chunder, to take over charge of the Institute. Most reluctantly, I accepted this administrative responsibility for I was given to understand that it was to be a short-term arrangement. Unluckily for the Institute and no less for me, the then Government decided to wind up the Institute. The battle that had to be fought for the revival of the Institute can be nobody's envy. It took many years before the Institute and I could heave a sigh of relief. But this long-drawn ordeal took away almost all of my time at the Institute and all that I could do during those unfortunate years was just to continue the field-work in the winter vacations of the Institute. But all was not well for the Project even after I handed over the reins of the Institute to a retired bureaucrat deputed by the Government to discharge the duties of the director. By that time the two Assistants mentioned earlier had left the Institute—Shri Raj Nath Kaw having gone back to the Survey after his deputation period was over and Shri Srivastava having found a better job at Gurukul Kangri University, Haridwar. In spite of repeated requests to my successor and even to his boss, the supremo of the Institute, no technical assistant was provided to me at the Institute and at least three precious years of my life were wasted, all the time hoping against hope. All this resulted in a corresponding delay in the preparation of the reports.

In this dark hour two persons came to my rescue and I must record my thanks to them. In 1986 I met Shri Y.S.Das, Secretary, Department of Culture, Government of India, and apprised him of the position. He said that if I could shift my venue from Shimla to Delhi he could ask the Archaeological Survey of India to provide some staff to assist me in the preparation of drawings and photographs and in the analysis of the excavated material. I told this to Professor Mrs. Margaret Chatterji who had by then taken over as the regular Director of the Institute. She very kindly wrote a letter to Shri Das making a formal request for the provision of the staff. This arrangement is since continuing and I am grateful for it to all concerned.

No large-scale field-work could have been possible without the active support of the Archaeological Survey of India, and I must record here my deep indebtedness to all successive Directors-General since 1975 to date. Shri M.N. Deshpande was the first to announce an aid of Rs. 40,000 to the Jiwaji University wherefrom the Project was started. A sumptuous grant was also made

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available to the University by the then Chairman of the University Grants Commission, Professor Satish Chandra. Shri Deshpande's successors, viz. Shri B.K. Thapar, Dr. Mrs. Debala Mitra, Dr. M.S. Nagarajao and Shri J.P. Joshi kept on helping the Project. The present Director General, Shri M.C. Joshi, and Director of Publications, Shri B.M. Pande, have very kindly arranged for an early publication of the report.

A work carried on for more than a decade naturally involved a number of participants since there was no fixed team as such. Thus, some collaborated just for a year, while some others stayed on with me for even five to six years. In 1975, when the Project was started at Ayodhyā with Jiwaji University as the base, Dr. K.P. Nautiyal, lecturer at the University, collaborated with me. As field-assistants from the same university there were Sarvashri S.K. Srivastava and R.K. Chaturvedi; and Shri K.M. Asthana was the photographer. Amongst the officers of the Archaeological Survey of India who joined me for that season were Shri Mahadva N. Katti and Shri L.M. Wahal. The Uttar Pradesh Government also deputed Shri Hem Raj for a while. The work at Ayodhyā was resumed in 1976-77 with the Shimla Institute as my base. During that season I was joined by Shri K.V. Soundararajan, the then Director of School of Archaeology, Archaeological Survey of India. With him was another officer, Shri B. Narasimhaiah. The technical staff from the Survey included Sarvashri Ram Babu, M.S. Mani, R.K. Sehgal, J.C. De and A.K. Misra. From the Institute there were Shri S.K. Srivastava and Shri R.N. Kaw. This very team assisted in the small-scale work at Nandigrāma. During the third season (1979-80) at Ayodhyā, Shri K.N. Dikshit, Superintending Archaeologist, Excavation Branch II, was the collaborator from the Survey. The technical assistants from that organization included Sarvashri R.S. Sharma and S.K. Sharma, while Shri S.K. Srivastava came from the Institute.

The work at Bharadvāja Āśrama was conducted during two field-seasons, viz. 1978-79 and 1982-83. In both the seasons Shri K.N. Dikshit represented the Survey at the officer's level, while its technical staff included Sarvashri B.R. Meena and J.C. De in the first season and Sarvashri P.K. Trivedi, L.S. Mamani and Jamal Hasan in the second.

The work at Chitrakūṭa was mainly exploratory. As mentioned earlier, the location of medieval temples and modern houses over the mound prevented us from carrying out any worthwhile excavation. In the explorations conducted during 1980-81, I was joined by Shri K.N. Dikshit from the Survey, with Sarvashri V.C. Sharma and L.S. Mamani as his technical assistants.

It is the work at Śrīngaverapura which took us nine successive field-seasons, viz. from 1977-78 to 1985-86. Such a prolonged work became inevitable because of the enormous size of the tank of which the structural part alone measures nearly 250 metres in length. During the first season Shri K.V. Soundararajan was the principal officer from the side of the Survey; he was joined by his colleagues Sarvashri D.K. Sinha and B. Narasimhaiah. From the second season onwards it was Shri K.N. Dikshit who was the principal collaborator from the Survey. Later, at Delhi, Shri J.P. Srivastava provided necessary facilities.

The technical staff from the Survey, who assisted in the work at Śrīngaverapura, included the following:

Sarvashri J.S. Bist (two seasons), J.C. De (two seasons), I.D. Dwivedi (one season), Vishnu Kant (four seasons), D.K. Malik (one season), L.S. Mamani (eight seasons) M.S. Mani (two seasons), B.R. Meena (one season), A.K. Misra (one season), B.P. Saxena (two seasons), B.B. Sharma (four seasons), D.V. Sharma (two seasons), K.K. Sharma (five seasons), R.S. Sharma (six seasons), S.K. Sharma (nine seasons), V.C. Sharma (four seasons), Lal Chand Singh (one season), I.M. Tikoo (one season) and P.K. Trivedi (four seasons). On behalf of the Institute, Shri S.K. Srivastava participated for six seasons and Sarvashri R.N. Kaw and K.K. Grover for two each; Shri S.K. Arora worked as my Personal Assistant for three seasons.

In the preparation of the present report, inclusive of the illustrative material, I have been helped by Sarvashri K.K. Sharma and Vishnu Kant, both Assistant Archaeologists, S.K. Sharma, Senior Artist, Shri S.S. Saar, Senior Surveyor, Shri L.S. Mamani, Surveyor Grade I and Shri R.N. Kaw, Photographer Grade I. Shri B.B. Datta, Senior Personal Assistant, has typed out the entire text. To all of them my grateful thanks are due.

Lastly, much against the wishes of my wife, Kusum, who does not want her name to be published, I do record the same. She not only helped in the registration of the antiquities both at Ayodhyā and Śrīngaverapura and offered valuable criticism from time to time, but also drew my attention to a very significant reference to Kṛishṇa in the *Rāmāyaṇa* of Vālmīki. This makes us realise that the mere inclusion of the Rāmopākhyāna in the *Mahābhārata* does not establish the precedence of Rāma over Kṛishṇa, since the mention of Kṛishṇa in the *Rāmāyaṇa* would prove the other way round. Both the epics are much later than the respective events and thus such cross-references may not have much historical value. The issue has to be decided only on the basis of unimpeachable evidence.

CHAPTER II

ŚRĪNGAVERAPURA : THE SITE AND ITS CULTURE-SEQUENCE IN BRIEF

Located on the left bank of the Gaṅgā in Tehsil Soraon, District Allahabad, U.P., Śrīngaverapura (Lat. 25°35' N.; Long. 81°39' E.) is about 36 kilometres west-north-west of Allahabad. To reach Śrīngaverapura from Allahabad, which itself is located between the Gaṅgā and Yamunā near their confluence, one has to cross the Gaṅgā at Phaphamau. The road to the north goes on to Faizabad near which Ayodhyā is situated. But to go to Śrīngaverapura one has to leave the Allahabad-Faizabad road at a distance of about 5 km after Phaphamau and turn left on the road which goes to Lucknow via Rae Bareilly. On this road there is a place called Mansurabad (fig. 2). About 3 km from it towards Lalgopalganj there is a sprawling road-side village called Bhagwatipur. Here a narrow, though metalled, road forks off southwards taking the visitor to Śrīngaverapura, at a further distance of about 3.5 km. If one does not have one's own transport, one can take a bus from Allahabad, bound for Lalgopalganj or any other place further beyond towards Rae Bareilly, and alight at Bhagwatipur. At this place one can hire an *ikkā* (a horse-carriage) to reach the site.¹ Since at present there is no good place to stay at Śrīngaverapura, one has to come back to Allahabad for the night halt. Quite a few years ago (1982) when the then Prime Minister Shrimati Indira Gandhi visited the site to see the tank which was in the process of being exposed, the Uttar Pradesh Government announced that it would put up a nice tourist rest-house at Śrīngaverapura, but, as usual, nothing happened after the initial show of zeal. The Archaeological Survey of India does have a proposal to put up a site-museum for which it has acquired some land. However, a much tougher task awaits the Survey in terms of the preservation of this unique heritage, which, I am told, has started showing signs of decay. Let us hope for the best.

Śrīngaverapura is believed to have derived its name from the sage Rishyaśṛṅga who is thought to have had his *āśrama* (hermitage) here. Daśaratha, the king of Ayodhyā, had no issue from any of his three wives. This naturally was a cause of worry to him. Thus, the sage Rishyaśṛṅga was invited to Ayodhyā to perform the *Putreshū Yajña* (a kind of sacrificial ritual), as a result of which the three queens became pregnant and gave birth variously to Rāma and his brothers. The place features again in the Rāmāyaṇa story, rather prominently, since it was here that during the course of his exile, Rāma, accompanied by his wife Sītā and brother Lakshmaṇa, was ferried across the Gaṅgā by the local Nishāda chieftain, Guha. The chariot in which the trio had come up to this point from Ayodhyā was sent back and Rāma bade goodbye to the Kosala kingdom, to proceed further south. At present there is a small (modern) temple at Śrīngaverapura dedicated to the sage Rishyaśṛṅga and his wife. On the bank of the Gaṅgā there is also a locality known as Rama-chaura near which Rāma is said to have crossed the Gaṅgā. The Rāmāyaṇa also refers to an *Ingudi* tree under which the trio spent the night prior to their crossing the Gaṅgā. Local people point to a tree which is said to be a successor to

¹The nearest railway station for Śrīngaverapura is Rama-chaura, located on the Allahabad-Unnao line. However, the train connections are not many and are rather inconvenient.

LOCATION OF ŚRĪNGAVERAPURA VIS-A-VIS THE GAṄGĀ

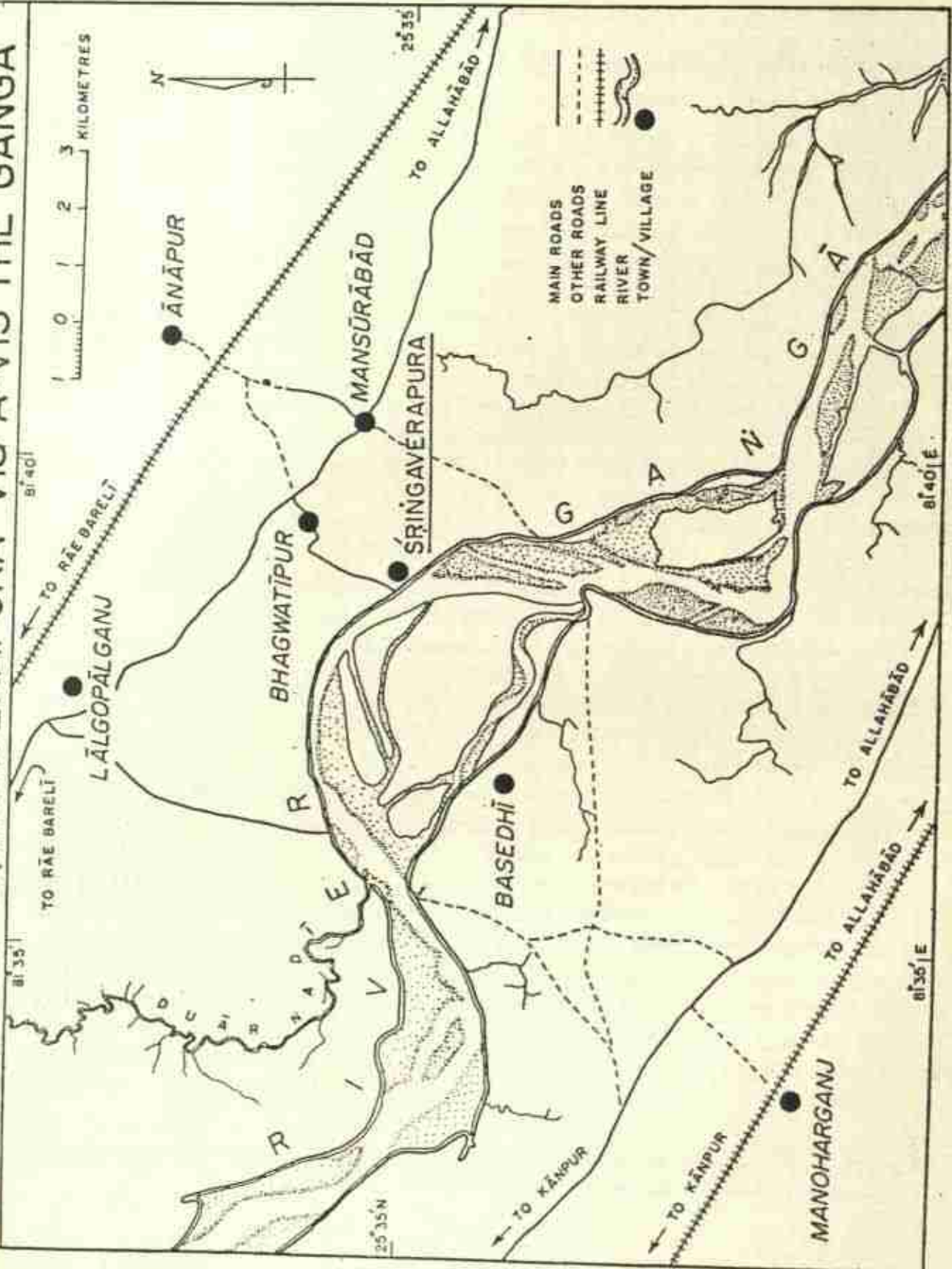


FIG. 2

that ancient tree, located at the same place. Thus goes the tradition about the site. Because of the religious associations, *melās* are frequently held at the site (cf. pl. III).

Archaeologically, there is a fairly large mound at Śrīngaverapura, which, as we shall presently see, goes back to the last quarter of the second millennium B.C. It stretches along the Gaṅgā for a distance of about one km. The survey map (fig.3) shows only the central part of the ancient settlement. While the mound in its fullness continues towards south-east, as noted on the map itself, the area to the north-west of the *nullah* shown on the left-hand extremity of this map is also replete with pottery some of which can be picked up even from a distant area between the Sanskrit Pāṭhaśāla and the river-bank. What was the width (in the east-west direction) of the settlement in ancient times it is difficult to gauge, since, as would be clear from plates I-II and IV-VI, a good deal of the mound has been cut away by the river. Jutting out from the damaged face, however, one can clearly see ancient brick-structures, terracotta ring-wells, soakage jars, etc. (pl.V). In fact, this process of erosion is going on even now. Every year during the rainy season the Gaṅgā plays havoc with the mound, and when one visits the site after the rains one finds large chunks of earth fallen from the river-side face of the mound.¹ A look at fig. 2 and pls. IV and VI would show that the river takes here a horse-shoe curve. On fig. 2 one also notes a subsidiary channel of the river near the opposite bank where Basedhi is located. It is not unlikely that in ancient times, the river was flowing far away from its present left bank. During the driest part of the year, i.e. in the first half of June when the river-level considerably goes down, one sometimes sees in the river-bed, close to the present left-hand bank, the bottom-portions of some brick-lined wells. It is, therefore, self-evident that the ancient settlement stretched far into the area now overtaken by the river. How far, it would, of course, be anybody's guess.

Seven different areas, marked respectively SVP-1 to SVP-7 on the survey-map (fig.3) were taken up for excavation. Of these, SVP-1 was excavated primarily to get a vertical sequence of the cultures available at the site, whereas large-scale horizontal excavations were carried out in SVP-4 to expose the tank to the extent time and funds allowed. Although the present volume deals primarily with the tank—its structural aspects, the finds recovered from it, its chronology, authorship, etc., it may not be out of place here to mention briefly the culture-sequence and point out the setting in which the tank itself was constructed.

The earliest settlement at Śrīngaverapura is represented by a red-ware industry, with its two sub-varieties. In one case, the pots were made of well-levigated clay and were well fired, while in the other the fabric was coarse and the firing somewhat indifferent. There is, however, evidence of an occasional slip in both the cases. Many specimens bore incised and applique designs, there also being traces of painting in a few cases. The shapes included bowls with straight or everted rim, shallow basins, jars with prominently outturned rim, vases with disc-base, etc. In the present state of our knowledge it would appear that this pottery represents an eastward extension of the Ochre Colour Ware which, prior to its discovery at Śrīngaverapura, was known to have come as far east as Saipai

¹ A proposal was mooted that the State Government should do stone-pitching against the eroded face of the mound in order to prevent any further damage, but no one knows its fate.

in Etawah District, U.P. The occurrence of pieces of mud-plaster with reed-impression suggests that the houses were made of wattle-and-daub. On the basis of thermoluminescence dating, this period (I) may be assigned to the closing centuries of the second millennium B.C.

After a short break, the site was reoccupied by a different set of people who used the black-slipped, black-and-red and burnished grey wares. Thermoluminescence and Carbon-14 dates indicate that this period (II) may have begun some time in the tenth century B.C. The inhabitants still used wattle-and-daub for constructing their houses. From the middle levels upwards of this period there also occurred a few sherds of the Painted Grey Ware of which the main area of distribution, however, is western Uttar Pradesh and regions further to the west and north.

Some time in the seventh century B.C., the well-known Northern Black Polished Ware (NBPW) came into existence; and although there was no break of occupation at the site, this period, because of its distinctive features, has been designated separately, as Period III. It was during this period that the settlement, which hitherto was rather small, began to expand both along and at right angles to the river. This period also witnessed tremendous growth in a number of ways. Thus, as time passed, systems of coinage and weights came into being and houses began to be constructed of kiln-fired bricks. In the later levels of the period writing also began to be used. The period came to an end around 200 B.C.

In the succeeding period (IV) there was no NBPW. Instead, the red ware completely overtook the scene. While the lower levels yielded a Lanky Bull coin and also those of the rulers of Ayodhyā, from the uppermost levels came terracotta sealings in characters of the first century B.C.-A.D. and a couple of coins of Wima Kadphises (A.D. 50-78). It is the upper part of Period IV that witnessed the maximum expansion of the settlement and it was during this hey-day, viz. around the beginning of the Christian era that the large brick-tank, which is the main subject of this monograph, was constructed. The habitation at SVP-1 was abandoned along with the destruction of the tank, but subsequent settlements do occur in other parts of the site.

While the periodization of the subsequent settlements will be dealt with in another monograph, to be devoted exclusively to the cultural equipment at Śrīngaverapura, here it may suffice to say that the site witnessed occupations during the Gupta, Rajput, late medieval and East India Company times. In fact, a sizeable part of the mound is still under occupation.

SRINGAVERAPURA

1977-86

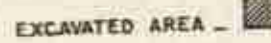
Distt. Allahabad, U.P., INDIA
SURVEY PLAN WITH TANK-COMPLEX

SCALE OF 10 20 30 40 50 60 70 80 METRES

CONTOURS IN METRES



MODERN HABITATION



EXCAVATED AREA

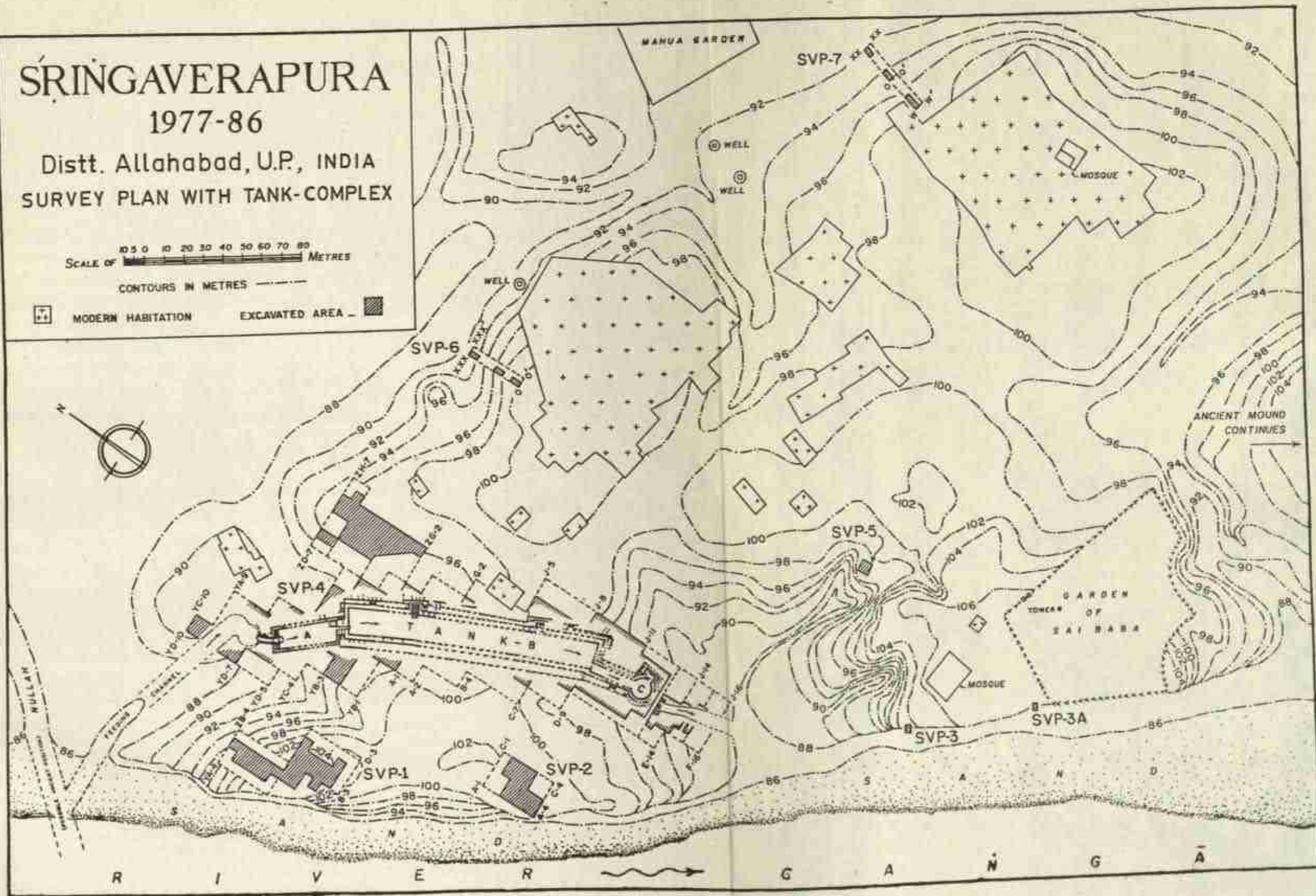
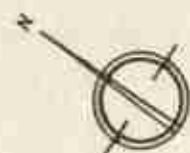
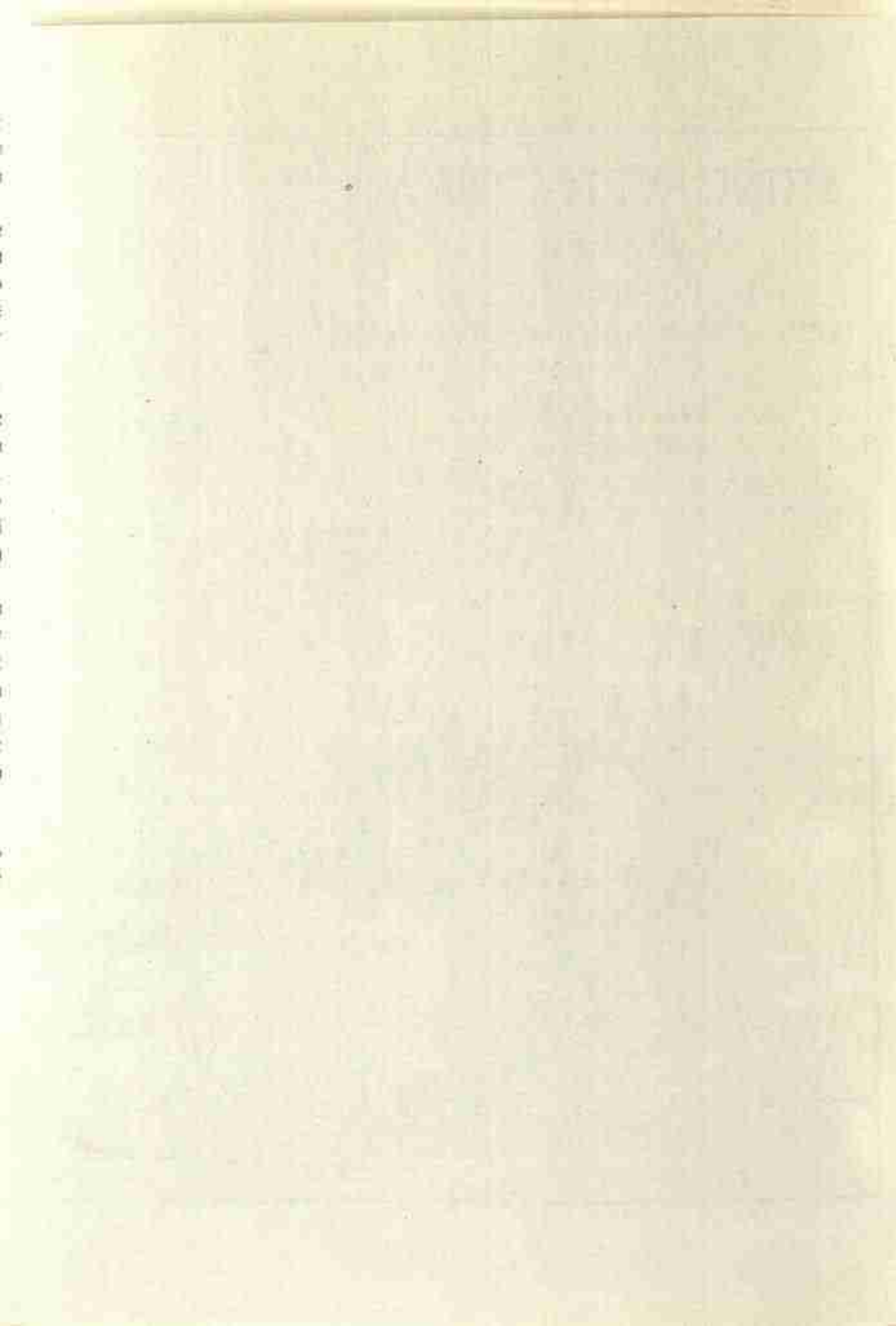


FIG. 3



CHAPTER III

AN OVERALL VIEW OF THE TANK-COMPLEX

It is quite likely that the reader may first want to know the essentials of the tank-complex, without going into details of each and every part of it. Keeping this in view, it is proposed to break up the description of the tank-complex in three chapters, viz. III, IV and V. While the present chapter deals with the tank-complex in a general way, highlighting its noteworthy features, Chapter IV will bring out the details of the various sub-units of the Brick Tank. Though in the case of the Mud Tank there are not many sub-units, yet it is proposed to deal with them in a separate chapter, viz. V. It is hoped that this arrangement would be found more convenient than devoting only one chapter to the entire description of the tank-complex. In such an arrangement, however, there is bound to be some repetition, but it is hoped that the reader would tolerate the same in order to have first an overview of the wood as distinct from the trees.

As stated in the previous chapter, the earlier habitations at Śrīngaverapura (viz. those of Periods I and II) were rather small and it was only during Period III (the NBPW Period) that the settlement began to expand. By the beginning of Period IV, i.e. in the second century B.C., it reached the maximum, as indicated by the remains of that Period practically all over the mound. It is likely that in ancient times the river flowed somewhere between its present bank and the one near Basedhi on the other side where there is a small branch of the river even now, as seen from the Survey of India map (fig.2). By changing its course to the present-day position, the river has cut away a considerable portion of the mound, which fact is amply demonstrated by the brick-structures, ring-wells, etc., jutting out from the vertical cliffs of the mound overlooking the river (pl.V). Thus, it is abundantly clear that by the second-first century B.C. the eastern portions of the settlement had extended far away from the river-bank—may be anywhere between half to one kilometre away from it. This must have posed a major problem of water-supply to those living in the eastern sector. It was, therefore, natural for the authority administering the site to think in terms of some measures by which good potable water could be provided at a convenient location. The result seems to have been the construction of the tank under discussion.¹

In India there were other contemporary or near-contemporary tanks, but the Śrīngaverapura tank outshines them all. Thus, for example, the tank discovered at Mathurā (*Indian Archaeology — A Review* 1974-75: 50) is not only very small (only 9.10 × 8.10 m) compared to that at Śrīngaverapura, but it was fed just by letting the rain-water accumulate in it, whereas in the case of the Śrīngaverapura tank water was specially brought from the Gaṅgā by means of a channel to fill it up. And it is this latter aspect wherein lies the basic difference.

¹ As of today, the tank is hardly 150 m away from the river and as such as a visitor to the site naturally questions the propriety of the tank having been constructed so close to the river. The answer, however, lies in the fact that, as already indicated above, the river-bank was far away from where it is now. Another possible reason for the construction of the tank could have been a prolonged drought in the region, but the same cannot be established in the absence of contemporary documentary evidence.

The ancient engineers tackled the problem in a very interesting manner. To the north of the mound there is a *nullah* which normally drains the water from the higher reaches into the river (cf. fig. 3; and fig. 4, inset). However, during the rainy season when the river-level rises by several metres, the flood-water enters the *nullah* and pushes upstream for quite some distance. Observing this phenomenon year after year, the engineers decided to harness this overflowing water of the river. Thus, they cut the banks of the *nullah* at an appropriate point and diverted the excess water into a specially dug channel which brought it to the area where the tank was planned. Cut into the natural soil, this channel (called hereafter the Feeding Channel) was approximately 11 m wide at the top but, with its slanting sides, narrowed down to only 3 m at the bottom (fig. 6; pls. VII and VIII). Its depth was about 5 m.

From the Feeding Channel the water entered a Silting Chamber, which was located not in a straight line with the former but to its side, with the result that the water lost a part of its force before entering the Chamber (cf. the plan, fig. 4). Further, the bottom of the Silting Chamber was about 1.35 m higher than that of the Feeding Channel (fig. 5). This rise in the bottom-level withheld a considerable part of the silt and other muck from entering the Silting Chamber.

From the Silting Chamber the water entered the Brick Tank, of which the various parts have been marked as A, B and C on the plan (fig. 4). There is a stepped ledge in front of the Inlet Channel through which the water passed from the Silting Chamber to Tank A (fig. 7; pl. IX). This stepped ledge helped considerably in breaking the onslaught of the intruding water. It may also be noted that the bottom of the Inlet Channel was about 2.32 m higher than that of the Silting Chamber (fig. 5). This arrangement was of help in two ways. First, it did not allow the silt in the lower part of the water-column in the Silting Chamber to get into Tank A. Secondly, since only the water from the upper part of the Silting Chamber entered the Inlet Channel, the water-thrust was also reduced correspondingly.

The water from the Inlet Channel did not fall directly on the floor of Tank A. Instead, it cascaded over a series of steps, first to enter a wider area from where it came down to the floor, the last fall being only about 25 cm (fig. 8, pl. XVI). Again, the water did not fall on the naked bed of the tank. A floor of large-sized bricks ($64 \times 48 \times 12$ cm) in two courses was provided to receive the water.

All the above-mentioned provisions were made quite clearly to ensure that : (i) the gushing water of the river in spate was completely tamed down before it could touch the floor even of the first sector of the Brick Tank (viz. Tank A); and (ii) the silt and the muck carried by the water were prevented from entering the tank, as best as possible.

In Tank A, one now sees two retaining walls, one behind the other (pl. XIV). There is, however, some evidence to suggest that there may have also been a third one, behind the second, some traces of which may be seen to the east of the south-east corner of Tank A (cf. fig. 4). These walls were placed in a terraced fashion and each one leaned backwards against the natural soil. All this was done in order to ensure that the walls did not succumb to the thrust of the incoming water. Had there been a single vertical wall instead of these two/three slanting and terraced walls the same (i.e. single wall) would have been more vulnerable to the thrust. The hydraulic engineers from

Lucknow (the State capital) and Allahabad who were invited to visit the tank-complex told us that this kind of arrangement is technically known as 'vertical warping' and is adopted even now-a-days in the construction of water-tanks.

A look at the plan (fig. 4) would show that Tank A does not form a perfect rectangle. Instead, it widens out a bit as it proceeds away from the Inlet Channel. We were wondering at this rather odd feature, for we could not understand as to why the people who could build such a huge tank failed to produce a perfect rectangle. However, the answer was given by the hydraulic engineers who told us that such an arrangement was on purpose. This was done to let the incoming water spread out horizontally. In technical parlance, this device is known as 'horizontal warping', they added.

There is still a third point about Tank A. Its bottom slopes down towards the southern side i.e. opposite the Inlet Channel. The result of it was that whatever silt was still left in the water (after its exclusion successively in the Feeding Channel and Silting Chamber) was carried down to the southern side and allowed to settle there. In the south-east corner a staircase (pl. XVII) was provided to take this silt out from time to time. This work was perhaps most conveniently done during the summer months when the water-level would have gone down. With the removal of the silt, the tank was readied to receive fresh supply of water during the following rainy season.

Although the water in Tank A had sufficiently been cleared of mud and other muck, yet it was not allowed to enter Tank B from the bottom-level of the former. Instead, the base of the channel (marked as Interconnecting Channel-1 on the plan, cf. figs. 4 and 9) through which the water passed from Tank A to Tank B was at a height of 1.20 m. above the bottom of Tank A (figs. 5 and 10). Thus, it was fully ensured that the water getting into Tank B was quite clean. It was this part of the tank-complex which was mainly used for the supply of drinking water. Tank C, with which we shall deal shortly, was smaller and appears to have been used more for religious purposes than for mere water-supply.

From Interconnecting Channel-1 the water did not fall directly on the floor of Tank B but cascaded, as in the case of Tank A, over a series of steps, the final fall being only about half metre (fig. 10; pl. XVIII).

Besides, a small, single-brick flooring also seems to have been provided at the point of the touch-down so that no damage was caused to the bed of Tank B. Since it was Tank B that was required to hold the maximum amount of water, its bed was lower than that of Tank A, by about a metre (figs. 5 and 10).

Tank B had three retaining walls to which one more was added in the south-east corner (fig. 4; pls. XVIII and XXXIX). All these retaining walls leaned backwards against the natural soil into which the tank was dug. In order to ensure further that the retaining walls did not collapse in, these were inter-locked with the natural soil by means of short cross-walls at intervals. While the height of the lowest retaining walls was 3.34 m, that of the other two was respectively 2.09 m and 1.72 m, thus making a total height of 7.15 m in the northern part. The total height of the walls was, however, related to the ground-level outside, probably on account of which an extra wall had to be put up in the south-east corner (pl. XXXIX).

As regards the level of the water retained in the tank-complex, it was clearly dependent on the level of the base of the Inlet channel, since, after the flood had receded, any extra water above that level would have gone back. Calculations show that when full, Tank B retained a water-column 3.80 m in depth. In terms of quantity, the contents of Tank B were about 6.5 million litres.¹ This was supplemented by 116,000 litres of water in Tank C and about 340,000 litres in Interconnecting Channel-2, located between Tank B and Tank C. All this quantity must have sufficed for the period from September to June during which there was no more intake. If this ran short, the water in Tank A, about 880,000 litres, would have also been utilized, although it was not as clean as that of Tanks B and C. In this context, it needs to be stated that the water of this tank-complex was not meant to be used by the entire population of the town, but by those who lived close to the complex. And, for all one knows, there may have been some further restrictions. For others, specially those who lived within a reasonable distance from the river, the river itself must have continued to be a convenient source of supply.

But the hydraulic engineers who put up the tank were not content with the water which they were able to harness during the floods. They also thought of the likely evaporation, particularly in the post-winter months, say from April onwards. To combat the likely shortage, therefore, they thought of another device. In the bed of the tank they dug wells connecting them with the sub-soil water. Pressure-mechanism shows that as the water-table of the tank went lower and lower, the sub-soil-water wells must have become more and more active. In the very limited area of the bed excavated in the northern part of Tank B, as many as four wells were identified (figs.4 and 11; pls. XVIII, XXVI to XXX etc). Surely, there lie many more in the area not exposed so far.

While the provision of sub-soil-water wells in the bed of the tank automatically guarded against any loss of water through downward seepage, one would have expected some kind of plaster (say of lime/bitumen) over the retaining walls in order to withstand any side-way seepage. But no such plaster was encountered in any part of the tank. However, it appears that there was no real need for such a plaster because: (i) the bricks of the retaining walls were very closely set one on the other, leaving hardly any passage for the water (see, for example, a close-up on pl. XXIII), and (ii) the natural soil behind these walls was hard and compact absorbing hardly any substantial amount of water even if it had somehow managed to seep through the brick-work.

Since Tank B was the main source of water-supply, staircases were provided in it along the side at frequent intervals to enable people to come down to the level of the water and fetch it. The first lot of steps was provided on the platform which separated Tank B from Tank A. From this platform two sets of steps went up, one each on the eastern and western side to the terrace at the top of the Second Retaining Wall (fig. 4; pls. XVIII and XX-XXII). More noteworthy, however, was an arrangement further to the south. Over here two sets of staircases descended down to a common level corresponding to the top-terrace of the Lowest Retaining Wall. From that level a brick-on-edge ramp ran downwards to be joined by three steps, the lowest of which rested on the bed of the tank (figs.4

¹Shri S. K. Sharma, Senior Artist, has kindly worked out these figures.

SRINGAVERAPURA, DISTT. ALLAHABAD, U.P., 1977-86

KEY PLAN OF BRICK TANK, SVP-4

10 2 4 6 8 10
SCALE OF METRES

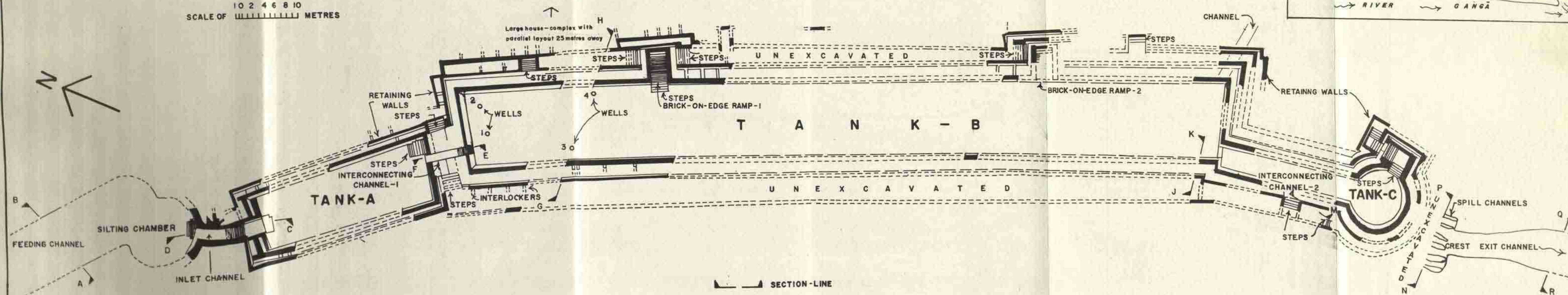


FIG. 4

SRINGAVERAPURA 1977-86:

LONGITUDINAL SECTION ACROSS BRICK TANK

(NOT TO SCALE)

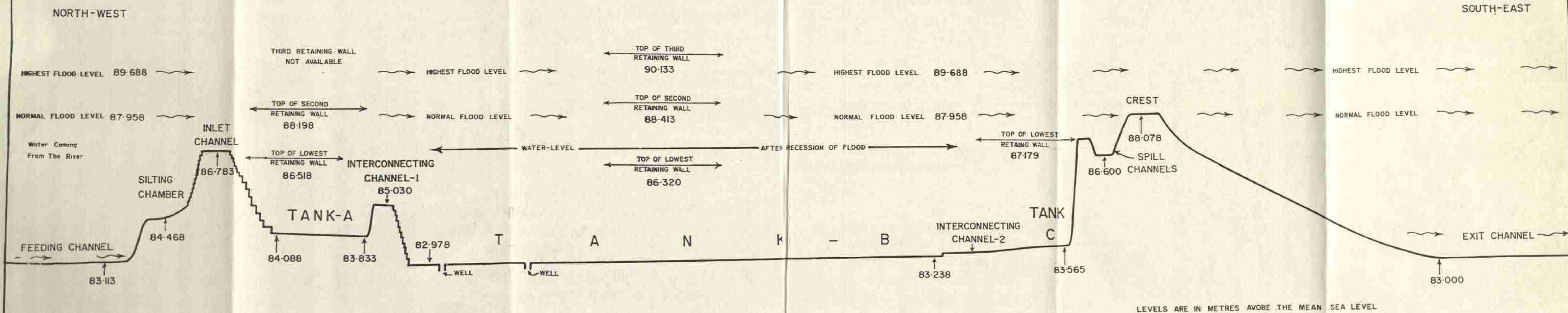
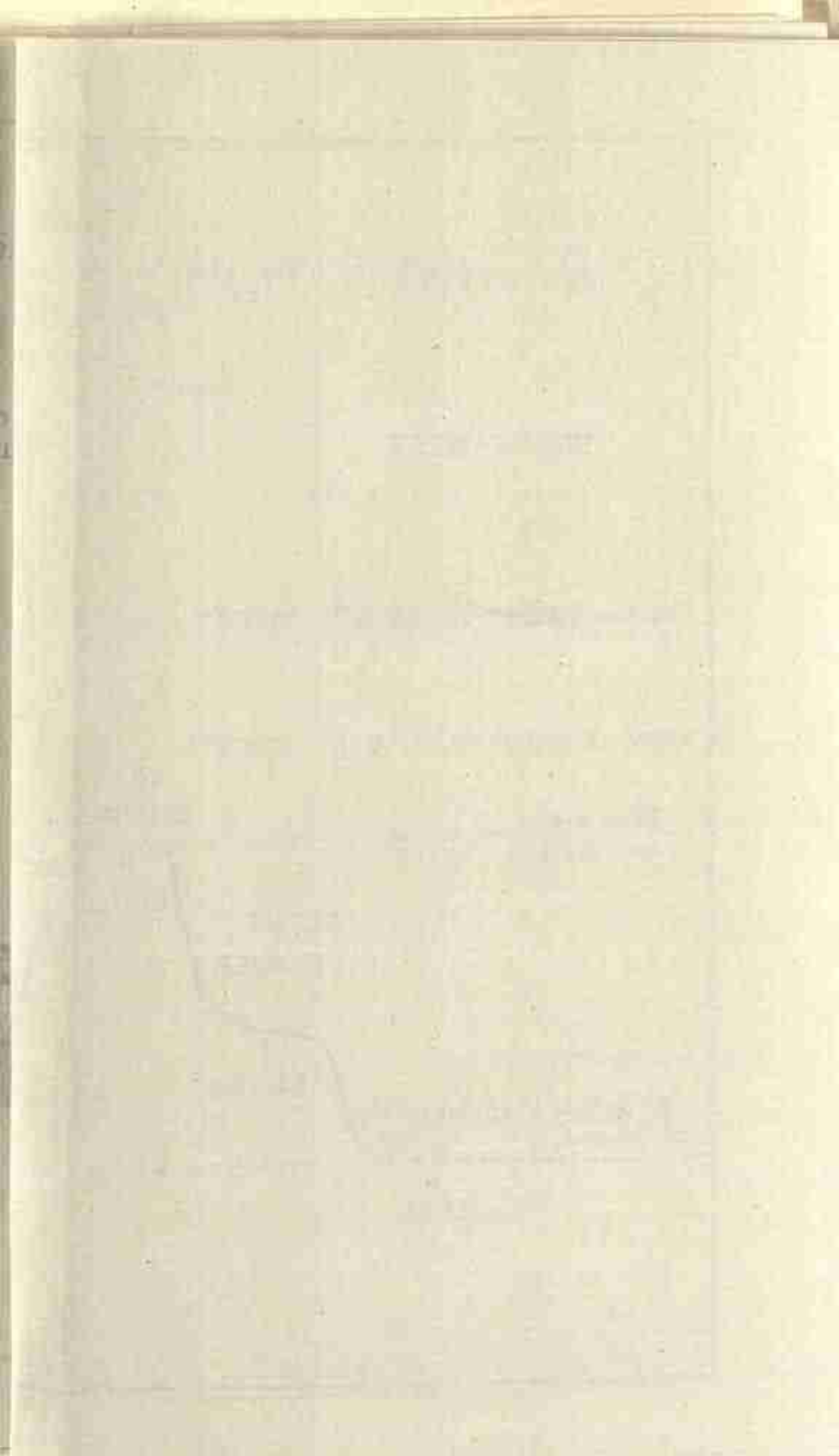


FIG. 5



and 12; pls. XXXI-XXXIII). Evidence shows that there were more of such sets of ramps along the eastern side of Tank B (fig. 4, pls. XXXVI-XXXVIII).

The water that had entered Tank B was quite clean. Hence no need was felt to provide any stepping-up arrangement in the channel (Interconnecting Channel-2, figs. 4 and 5) which joined Tank B with Tank C. (Such a stepping up was all right in the cases of transit from the Silting Chamber to Tank A and again from Tank A to Tank B where the silt had to be withheld.) Thus, there was only a line of single bricks just to demarcate the end of Tank B and the beginning of Interconnecting Channel-2 (pl. XLIV). This channel, quite unlike the Inlet Channel and Interconnecting Channel-1, was sufficiently wide, about 3-30 m, and was evidently used for fetching water and allied purposes, as indicated by the sets of steps that descended down into it (fig. 4; pls. XLVI-XLVII).

Tank C stands out by itself (figs. 4 and 14; pls. XLVIII, LIII, etc.). It was circular on plan, which feature, incidentally, breaks the angularity-dominated monotony of the entire complex. However, like the other parts, it too had three retaining walls. What exactly happened along its western circumference is not known since that area was only partially excavated. But the picture on the eastern side is interesting. Here a staircase starting from the then ground-level on the east and winding its way to the west and south, with frequent landings in between, descended all the way down stopping short only about 40 cm above the bed of the tank (figs. 4 and 14; pls. XLIX and LIV). The occurrence of a large number of terracotta figurines of gods and goddesses in Tank C, some in the lower deposits but most in the debris, indicates that there stood some religious structures by its side. Unfortunately, however, for various reasons the adjoining area could not be excavated. Hence we do not have any plan or other details of the religious complex.

Of the terracotta figures, only fragments were available. Nevertheless the same can be identified as having been parts of the figures of Kubera, Śiva, Pārvatī, Shashthī or Hārītī, etc. From this assemblage it is pretty clear that Śrīngaverapura was a veritable centre of Brahmanical religion. A few fragments appear to have been associated with Buddhism too, though the evidence is not very conclusive. However, from the artistic point of view some of the figures are indeed superb (e.g. see pls. LXXXV-LXXXVII for a Śiva-head).

As mentioned in earlier pages, the tank was filled by diverting the water of the Gaṅgā when it was in spate and its level rose by several metres. These days the flood-level normally ranges around 87.958 m above Mean Sea Level, but is also known to have touched 89.688 m MSL in exceptional times. Thus, during normal floods a 1.18-m thick column of water used to pass through the Inlet Channel. But in extraordinary times, this column could have been as high as 3 m. Since the water must have continued to flow in even after the tank had been filled, there was a clear need to provide for the exit of excess water, otherwise the same would have damaged the tank. Further, for obvious reasons this excess water could not be sent out to any part of the habitation. It had to go back to the downstream part of the river itself.

Thus, a well-thought-out waste-weir had to be organized. Tank C was the last unit in so far the Brick Tank was concerned. Hence the excess water had to be discharged through Tank C. Since the river lay to its south, it was through its southern part that the outlet was organised. Unfortunately, however, while the Lowermost Retaining Wall on this side was found intact, the ones above it had

been badly damaged (pl. LVII), perhaps by an unprecedented flood to which we shall refer shortly. This prevented us from identifying the width, etc. of the outlet with any accuracy. However, a little bit to the south of Tank C, a set of six channels, varying from 50 cm to 1.02m in width and 80 cm to 1.3 m in depth, were encountered (figs. 4 and 15; pls. LVIII-LX). All these had been dug into the natural soil; and there were also the remains of a few bricks in position signifying their deliberate use (pl. LVIII). Though the exact connection between these channels and the probable outlet in Tank C was not exposed (it was the last field-season and the work had to be wound up without excavating the intermediary space), the hydraulic engineers visiting the site pointed out that these channels could be the 'Spill Channels' through which the outgoing water first passed. This, they added, is the usual practice in waste-weirs, since it distributes the outgoing water, thus breaking its force. If such a device was not taken recourse to, the entire excess water gushing through a single channel could have caused heavy erosion resulting in serious damage to Tank C.

The unexcavated portion of the natural soil around the Spill Channels provided a sort of curtain-wall which prevented the water from flowing into all directions. It was only in the central part of this curtain that a gap was provided through which alone the outgoing water could pass (fig. 4; pl. LX). The basal level of this passage was about 1.48 m higher than the average basal level of the Spill Channels. This meant that the water had to ascend to get into the above-mentioned passage. In technical parlance of the hydraulic engineers this higher-level passage is called the 'Crest'. It was only after flowing over the Crest for about 4 m that the water sloped into the final Exit Channel (figs. 4 and 16) which carried it through a natural rain-gulley back to the river.

From the foregoing it would be seen that the ancient hydraulic engineers who designed and constructed the tank took all possible precautions to ensure its safety. But the future is never known. Thus, some time after the tank had been in use, maybe about a century or so, a great calamity befell it. The very river which fed it rang its death-knell. It appears that an unprecedented flood—such as are known to have occurred at Śrīngaverapura in recent centuries as well, overtook the tank, felling its walls helter-skelter. The western side was very badly affected where portions of the Second Retaining Wall had even been physically pushed aside (pls. LXI-LXIII). Such a physical shifting of the wall in courses appeared to me somewhat unusual. But a similar happening at the Tighra Dam near Gwalior, Madhya Pradesh, dispelled my doubt. On pl. LXIV one sees the present wall of the dam. In the left part of the picture are some large-sized chunks of the wall of an earlier dam which had been washed away due to a very heavy flood. Thus, certain portions had been physically shifted for quite some distance and left there in the vertical position. Such can be the play of an unusually heavy flood.

Besides taking the toll of a major portion of the tank, the flood was also responsible for the death of a youngster who, at that particular moment, appears to have been somewhere near the Crest. When removing the massive brick-debris in this area we came across the skeleton (pls. LXV-LXVII). As would be seen from one of the photographs (pl. LXVII), the various limbs of the body got disjointed and also pushed about a bit. The skull was also badly crushed. Since the bones were in a very bad state of preservation, the same could not be removed for an in-depth study of age, sex, etc.

After this massive destruction, the tank lay deserted for some time; How much? It is difficult to say: maybe about a half century. During this period of desertion, layers of silt and sand kept on

AN OVERALL VIEW OF THE TANK-COMPLEX

accumulating, so much so that in the northern part of Tank B, the thickness of this deposit was more than 3 m (fig. 11; pls. LXVIII-LXXI).

After some time, however, the people tried to re-use the tank. But since the accumulation of the silt-cum-sand had reached such a height, it was so difficult, if not impossible, to bring in the water from the river through the Inlet Channel which itself had got largely choked. The people, therefore, decided to put up a tank in which they could collect the rain-water directly. To achieve this end, they constructed a Mud Bund (figs. 11, 13, 17 and 18; pls. LXVIII, LXIX, LXXI and LXXII) on the western and southern sides where the upper retaining walls of the Brick Tank had largely been damaged. Since the upper retaining walls on the eastern side were not so damaged, the same were incorporated in the new tank (fig. 17). At the northern end a brick wall was put up from which there projected a platform (with mud-core and brick facing) into the tank (pls. LXXIII-LXXIV). This platform seems to have been used for drawing water on this side, whereas on the eastern side the upper parts of some of the staircases were still available for use.

The life of this Mud Tank too was not very long, perhaps fifty to a hundred years. It too was deserted and got silted up.

After some interval the site was levelled up and over a part of the area formerly occupied successively by the Brick Tank and the Mud Tank, there came up a flourishing house-complex which, on the basis of the associated pottery, terracotta figurines and a coin of king 'Vāsu' III (pl. LXXXI C) may be assigned, in broad terms, to the third century A.D. Thus, it is clear that the Mud Tank had come to an end before the beginning of the third century A.D. This is further corroborated by the discovery of a terracotta seal from a deposit that lay in an eroded part of the Mud Tank, which bears an inscription in the Brāhmi characters of the second half of the second century A.D. (pl. LXXX B). Since the life of the Mud Tank was not very long, it may have come into being some time in the first half of the second century A.D.

As mentioned earlier, there was a time-lag between the Mud Tank and the Brick Tank, as indicated by the intervening thick deposit of silt and sand. It would thus appear that the Brick Tank itself had come to an end towards the end of the first century A.D. As to its beginning, the evidence discussed in Chapter VII suggests that the Brick Tank may have been constructed some time in the second half of the first century B.C.

Now to a very important question: who built this Brick Tank? It required plenty of funds, great technical skill and administrative overseeing to put up this massive piece of work. Certainly, no small fry could do it. Also, in those days one does not envisage an independent public organization to have done it. Through a process of elimination, it appears that it must have been a king, with his all-round resources, who could have built this tank. While it is difficult to pin-point the person, circumstantial evidence discussed at some length in Chapter VIII would tend to suggest that the builder may have been king Dhanadeva of Ayodhyā under whose territorial jurisdiction the site of Śrīngaverapura lay. The issue, however, can be resolved only with the discovery of an inscription.

Anyway, whosoever may have been its builder, the fact remains that the Brick Tank discovered at Śrīngaverapura is a monument to the skill of Indian Hydraulic engineers two thousand years ago.

SOME DETAILS ABOUT THE BRICK TANK

A. THE FEEDING CHANNEL, SILTING CHAMBER, INLET CHANNEL AND TANK

As already mentioned in Chapter III, one of the more important features of the Brick Tank was the harnessing of the water of the Gaṅgā to feed it. This was done in the following manner. To the north of the mound there flows a *nullah* which ordinarily drains the water from its upper reaches into the Gaṅgā (cf. figs. 3 and 4 inset). However, during the rainy season the process often reverses, at least up to a certain distance upwards from the confluence. The water-level of the river is pretty low during the summer : on 4 May 1978 it was noted to be at 80.898 m MSL (above Mean Sea Level). But it shoots up considerably during the monsoons. Local enquiries revealed that the normal flood-level is around 87.958 m MSL, though in the high floods in 1978 and 1981, it touched even 89.452 m and 89.688 m MSL respectively (fig. 5). In any case, the rise of water from the summer to the rainy season is at least 7 m, and this rising water duly enters the *nullah* and pushes on upstream. What happens now is likely to have happened in the past as well.

Observing this phenomenon year after year, the ancient hydraulic engineers, who were evidently on the look out for a source of water-supply, thought of diverting this excess water to the area where they were planning to put up the tank. And so they did. They dug a channel, called here the Feeding Channel, connecting the *nullah* with the area where the tank was to be constructed. Since the flood-water of the Gaṅgā was already moving upstream along the *nullah*, the same easily moved up the Feeding Channel and reached the tank-area.

It appears that the area where the tank was laid out had already been partly eroded. This is indicated by the fact that whereas in the areas to the west and east of the tank the top of the natural soil (usually a hard yellowish clay with *kankar*, but with variations at different depths) ranged from 91.733 m MSL to 97.170 m MSL, in the area adjacent to the Feeding Channel it was only 88.253 m MSL. Evidently it made sense to the then engineers to utilize an erosional gully, cutting it further along the sides as per their requirements. Such a feature of the terrain would also explain the fact that whereas some of the retaining walls of the tank stood directly against the natural soil, in certain cases rammed earth had been filled up in the gap between the eroded edge of the natural soil and the retaining walls.

As just stated, the natural soil near the Feeding Channel stands at 88.253 m MSL. From this level the Feeding Channel was dug to reach an average level of 83.113 m MSL. This gave to the channel a maximum depth of about 5 m. Since even while in use and after the abandonment of the tank the edges of the Channel got eroded, it is not possible to ascertain its original width. However, taking the points from where the sides of the Channel slope down rather sharply, it would appear that the Channel was about 11 m wide at the top. However, because of the highly slanting sides, the width got reduced to about 3 m by the time the bottom was reached (fig. 6; pls. VII and VIII). The cross-section would thus be a kind of trapezium. As might be expected, the side-walls of the Channel

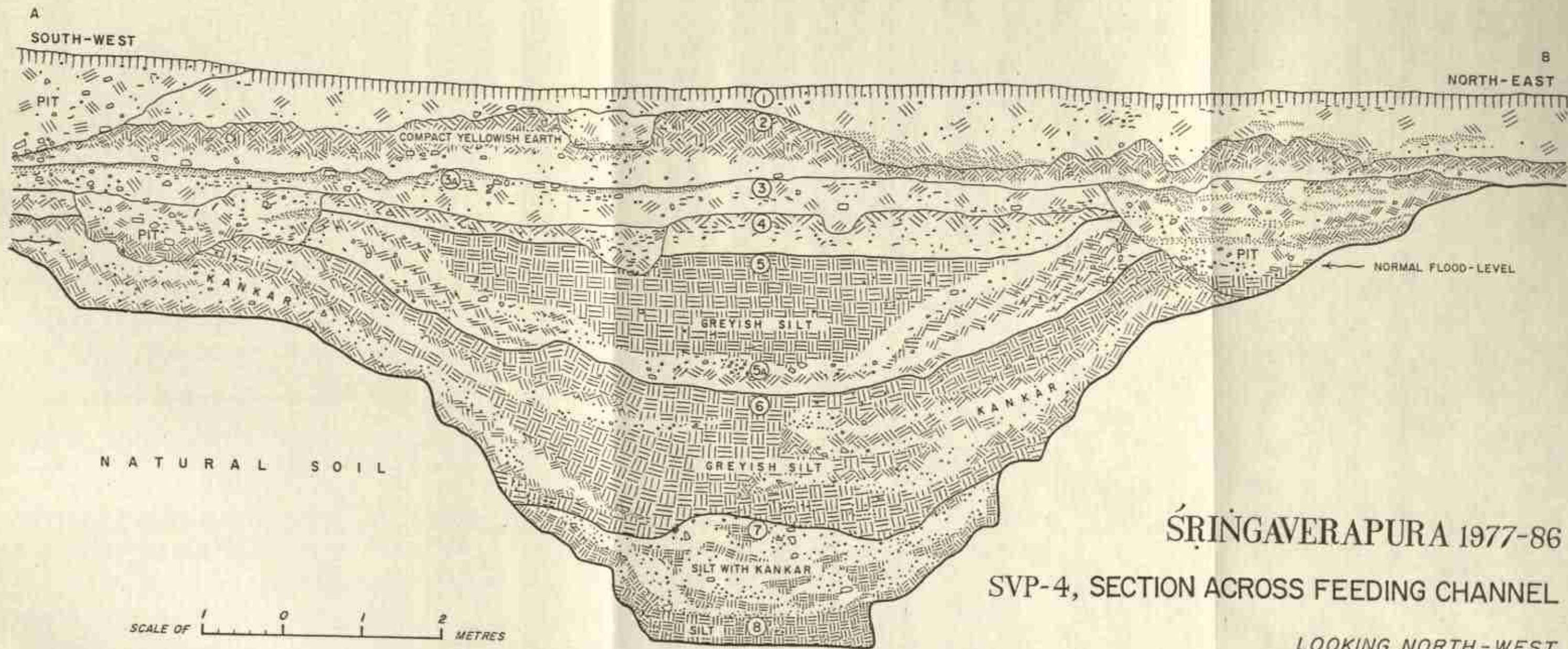
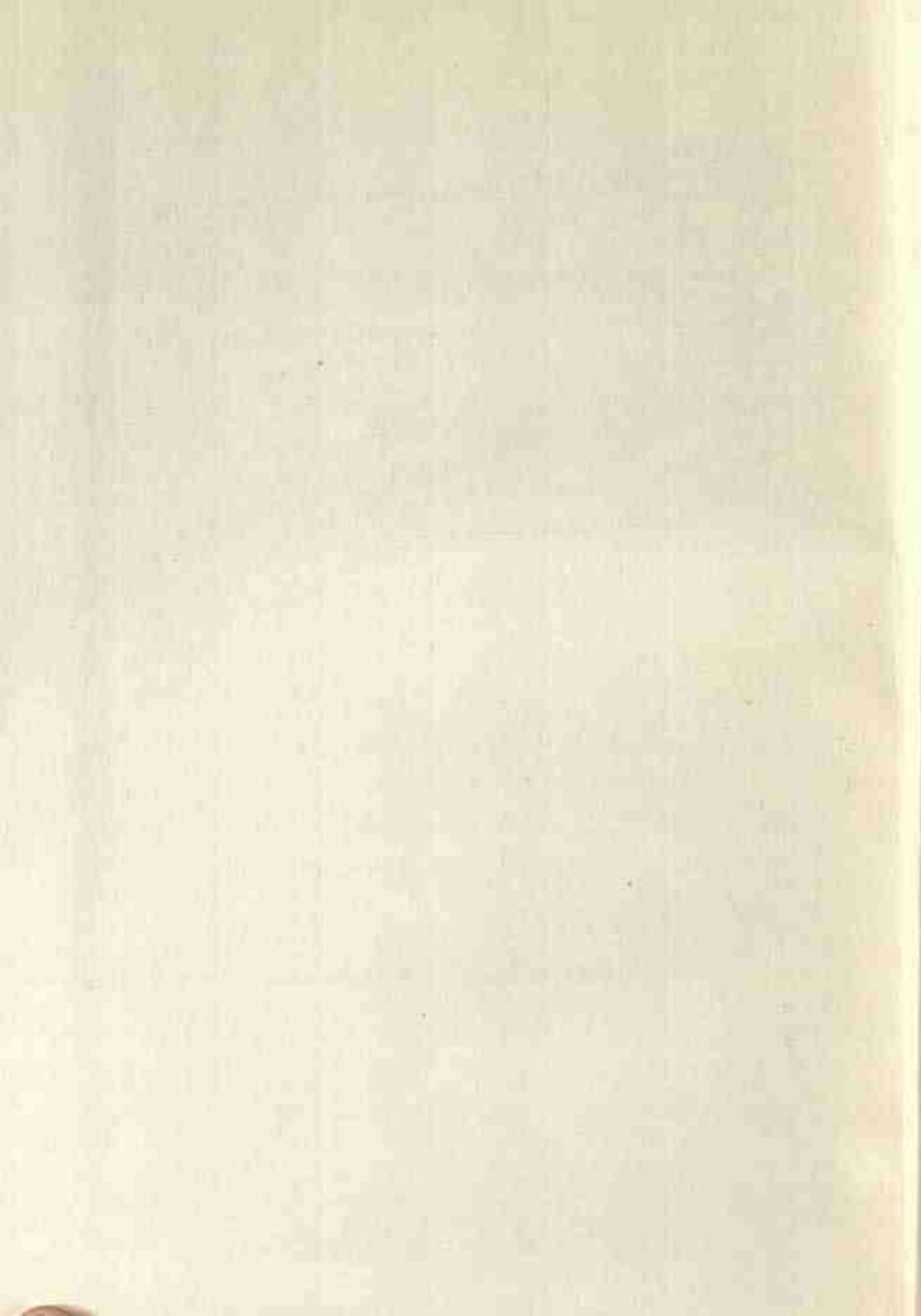


FIG. 6



SRINGAVERAPURA, 1977-86: DETAILED PLAN OF SILTING CHAMBER, INLET CHANNEL AND
NORTHERN PART OF TANK-A, SVP-4

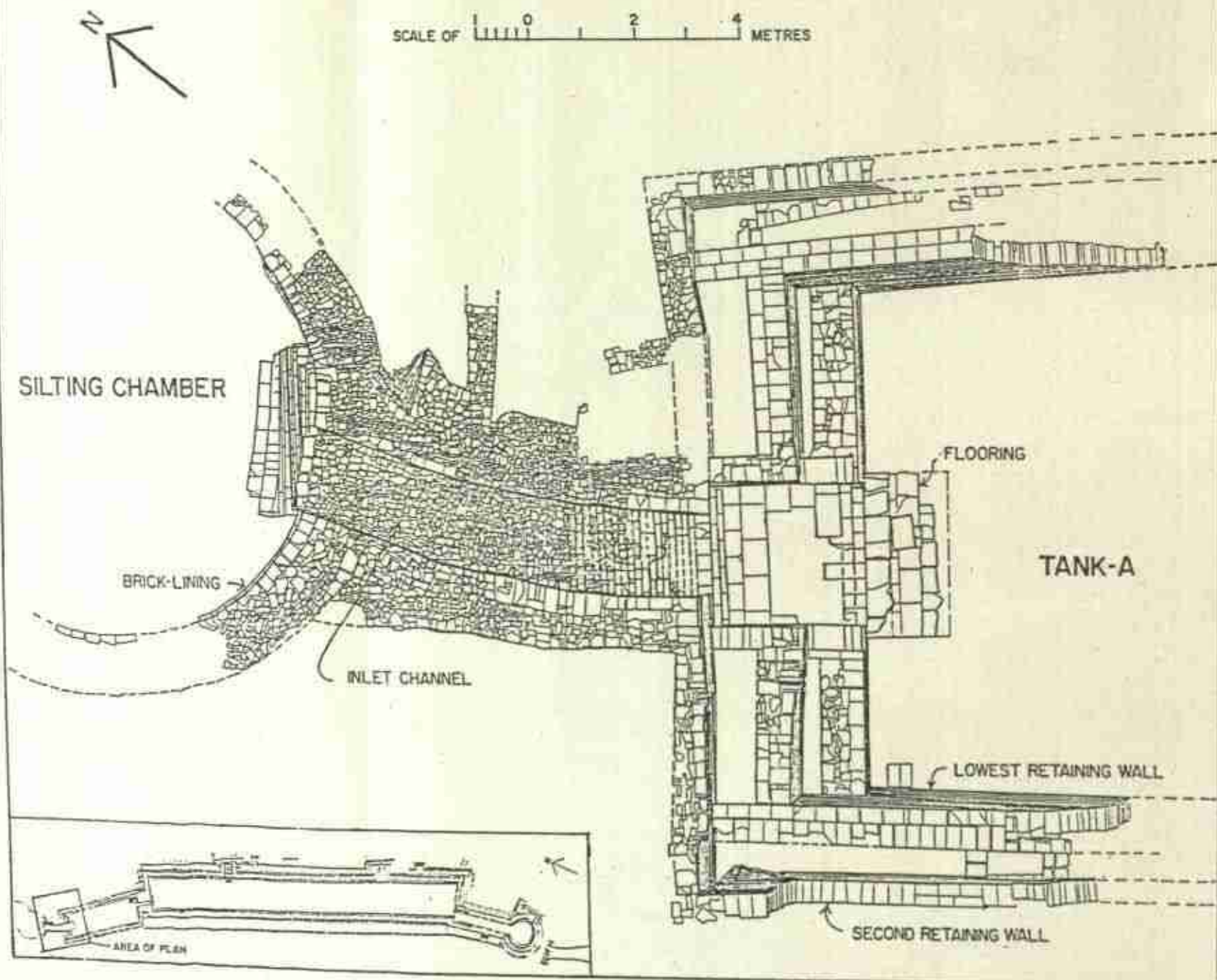


FIG. 7

got eroded and damaged by the intrushing water of the Gaṅgā. Thus, what one sees now is not the original cross-section of the Feeding Channel but as it stood after its use and erosion.

The lowest deposit in the Feeding Channel (fig. 6) consisted of silt and *kankar*. While the former came along with the river-water, the latter got washed down from side-walls of the Channel itself. Silts of one kind or another, intermixed with *kankar*, continued to get deposited, as marked by layers 6, 5A and 5. Layers 4 and upwards represent the debris and other material which got deposited in the Channel after its abandonment.

As may be seen from fig. 4, the Feeding Channel does not plunge headlong into the Silting Chamber. The latter lay not in a straight line with the former, but to a side. Thus, the entry of the water from the Feeding Channel into the Silting Chamber and thence into the Inlet Channel was not a frontal one. This kind of lay-out was evidently done to break the direct onslaught of the incoming water. There is one more point to be noted, viz. whereas the bottom of the Feeding Channel stood at 83.113 m MSL, that of the Silting Chamber was at 84.468 m MSL. This meant that the lower 1.355 m of water in the Feeding Channel was not allowed to get into the Silting Chamber. By organising this sort of rise in the bottom-levels, from the Feeding Channel to the Silting Chamber, the engineers were able to achieve two objectives. In the first place, the force of the water was broken. Secondly, a good part of the silt carried by the Feeding Channel was not allowed to enter even the Silting Chamber.

Circular on plan, the Silting Chamber had a diameter of 8-20 m. It had a sagger base, the central part of the base being about 60 cm lower than that near the edge. While most of the circumference of the Silting Chamber was left in its natural form, the part near the Inlet Channel was lined with bricks. In fact, to break the force of water a kind of stepped wall or ledge was also provided in the basal part in front of the Inlet Channel (figs. 4 and 8; pl. IX). This frontal wall as well as the side-walls of the Inlet Channel have been badly damaged by brick-robbers. Still one can see at least 14 courses of the stepped wall and some parts of the side-walls overlying the core of brick-bats. Plate X gives a view of the eastern side-wall. In it at least five courses of the face may be seen. Also seen is a stone-block which too has been cut away. A similar stone-block was found sticking out from the western side-wall of the Inlet Channel (pl. XI). On this side as many as thirteen courses were found intact at one place (not seen in the published photograph). Since the regular face of the side-walls rises from about the same level where these broken stone-blocks are located and the portion below this level is nothing but a packing of brick-bats, it is only reasonable to assume that the top of the stone-blocks, wherefrom the side-walls sprang up, was also the base-level of the Inlet channel.

In the context of the stone-blocks it may be added that the one on the western side is of pinkish sandstone with a cross-section measuring 21×11 cm, while that on the eastern side is slightly greyish in colour, having a cross-section of 21×14 cm. Since the two pieces are of different colours and sections, it is evident that it was not a single piece that constituted the 'sill'.

The base of the Inlet Channel stands at 86.783 m MSL. Since the base of the Silting Chamber is at 84.468 m MSL there is a rise of 2.315 m from the base of the Silting Chamber to that of the Inlet Channel. This rise of more than two metres was obviously provided not only to break the force of the

water but also to let the water shed a considerable amount of silt in the Silting Chamber itself, before entering the Inlet Channel. (It works out that the total rise from the base of the Feeding Channel to that of the Inlet Channel was 3.670 m, which would be quite substantial from the point of view of breaking the thrust as well as withholding the silt.)

As seen from figs. 4 and 7, the Inlet Channel is not straight but curved. This too seems to have been done deliberately, so as to weaken, to some extent at least, the force of the water.

The width of the Inlet Channel at its bottom is 1.51 m. It appears that the side-walls of the Channel were tapering slightly inwards, as adjudged from the extant portions. Originally, these side-walls must have risen as high as the Second Retaining Walls on the respective sides of Tank A (cf. below) with which these were in one built. If this slight inward taper did really continue all the way up, it is probable (though not proved) that the side-walls of the Inlet Channel ended up in a corbelled arch at the top. If so, this arrangement may have bridged the Channel, thus providing free access from one side to the other.

From its mouth near the Silting Chamber up to a length of about 5.50 m (measured along the curvature), the base of the Inlet Channel is almost flat, with only a minor slope towards Tank A. However, after this point there are 19 steps, each a single-brick in depth, making a fall of 1.26 m. At the end of these steps there is a vertical fall of four courses of bricks (figs. 7 and 8; pls. XII and XIII).

Below this fall, the Channel widens to 2.63 m (fig. 7). At this point there are two steps of large-sized bricks measuring 64×48×12 cm. However, the bricks generally used in the construction of this tank range from 41.5 to 44 cm in length, 27 to 28.5 cm in width and 5.5 to 7 cm in thickness. (Please see Chapter VI for a discussion on the brick-sizes of the latter category.)

The wider part of the Channel has a floor of large-sized bricks and extends to a length of 2.33 m. from the base of the lower of the two steps of large-sized bricks mentioned in the preceding paragraph (pl. XIII). At the end of this floor there is a step of a single course of large-sized bricks, leading to another step provided presumably by a wooden rafter. Plate XVI clearly shows a gap in the brick-work of the Lowest Retaining Wall at this point. Since no remnant of brick-masonry nor of any stone-slab have been found in this gap, the assumption that here probably lay a wooden rafter may not be an unreasonable one. (It is regretted that owing to various reasons it was not possible to get the soil in these gaps examined.) Such gaps have also been noticed in the brick-masonry below the steps leading to the floor of Tank B (pl. XIX) as well as at the lower end of the Brick-on-edge Ramp-1 (pl. XXXIII). The size of the assumed wooden rafter would appear to have been 3.40 m in length and 26×12 cm in cross-section. Inserted into the Lowest Retaining Wall, the rafter rested on the lower part of that wall. Below the rafter there were still six courses of the wall, the lowest course sitting right on the bed of Tank A (fig. 8). Juxtaposed to the lowest courses of this wall and resting on the bed of the tank there was a two-course-thick floor of large-sized bricks. Though this floor is damaged, the area covered by it seems to have been 3.06 m east-west and 1.78 m north-south. It appears likely that even the end of this two-course floor was a stepped one, with the result that the

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ultimate fall was only 12 cm. This floor must have fully withstood whatever little thrust of the water was still left after having been reduced by the various devices mentioned in the preceeding pages.

The bottom of Tank A at this point is at 84.088 m MSL, which is 38 cm below the bottom of the Silting Chamber, but 97.5 cm above that of the Feeding Channel (fig. 5). Whether these differences were deliberate or just accidental it is difficult to say.

Tank A has two retaining walls on each, i.e. eastern and western, side (pls. XIV and XV). Whether there was still another retaining wall further up it is not clear, although the debris overlying the Second Retaining Wall (counted from the bottom) on the eastern side in the southern part of Tank A itself (pl. LXXV) would tend to suggest that there may have been another wall higher up from which this debris had fallen prior to the construction of the superimposed cross wall associated with the Mud Tank. However, since the area adjacent to the northern part of Tank A has been eroded over the millennia, no traces of the third wall, if it extended to this part as well, have survived.

The Lowest Retaining Wall on the eastern side has 35 courses of bricks, accounting for a total height of 2.40 m. It slopes back at an angle of 13° to the vertical. It has an average width of 58 cm at the top where one may see two bricks laid side by side (fig. 7). As regards the elevation, there seems to be no set rule in this wall about the placement of headers and stretchers in alternate courses—an arrangement known as the English bond. There was also no fixity that if a given course was that of stretchers, no headers would be introduced in it, although by and large an attempt had been made to have a given course either of headers or stretchers. Thus, at one point, the following arrangement of the courses was observed from bottom upwards : H (headers), H and S (headers and stretchers), H, H, and S, H, H and S, H, H and S, H, H, S, H, H, and S, H, S, H, S, H, S, H, H, H, H, H, H, H and S, and finally S. This kind of rather arbitrary arrangement was not peculiar to the retaining wall under discussion, but was also noticed in many other cases as well.

The Second Retaining Wall on the eastern side has 26 courses, with a total height of 1.76 m. Its width is 43 cm, comprising a single brick length-wise. Like the Lowest Retaining Wall, the Second one also slopes back, the angle in the latter case, however, being only 8° to the vertical.

On the western side, the Lowest Retaining Wall has a height of 2.49 m, provided by 37 courses of bricks. The slight difference in height and courses from its counterpart on the eastern side seems to be due to a local depression on the western side. However, the tops of the eastern and western walls, respectively at the north-east and north-west corners, are almost at the same level, viz. at 86.518 m MSL and 86.528 m MSL. At the top, the Lowest Retaining Wall on the western side is seen comprising a header and a stretcher, making for a total width of 71 cm (fig. 7).

The Second Retaining Wall on the western side has 28 courses. It has considerably bulged in near the north-west corner, and elsewhere too its original slope has been affected (pl. XV). Its width is made up of a single brick placed length-wise i. e. measuring 43 cm (fig. 7).

As may be seen from the key plan (fig. 4), Tank A is not a perfect rectangle, as one might normally expect it to be. On the contrary, it gets wider as one moves away from the Inlet Channel. This lateral expansion, according to the hydraulic engineers who visited the site, was deliberate, so as to let the water spread out. In their technical terminology it is known as 'horizontal warping', they added. The measurements of the width of the tank on the northern and southern sides are as follows:

<i>Points where measured</i>		<i>At northern end</i>	<i>At southern end</i>
i)	Between the bottoms of the Lowest Retaining Walls	9.20 m	9.71 ¹
ii)	Between the tops of the Lowest Retaining walls	9.96 m	10.48 m
iii)	Between the bottoms of the Second Retaining Walls	12.45 m	13.00 m
iv)	Between the tops of the Second Retaining Walls	13.00 m	14.30 m

At its maximum, i.e. at the top-level of the Second Retaining Wall on the eastern side, Tank A measures internally 34.25 m in length. Since the retaining walls have been built in a stepped fashion, the length, like the width given above, also goes on decreasing as the base of the Lowest Retaining Wall is reached.²

There is one more point about Tank A which deserves to be mentioned. Its bed slopes down as one moves away from the Inlet Channel. Thus, while at its north-east corner, the base of the Lowest Retaining Wall stood at 84.088 m MSL, at the south-eastern end near the steps the level of the bottom of this Lowest Retaining Wall was 83.833 m. (cf. fig. 5). This difference of 25.5 cm seems to have been provided so that whatever silt that may have still remained in the water after all the previously mentioned refinements may get accumulated at the southern end of Tank A. At this point a staircase was provided (pl. XVII), evidently to take the silt out as and when necessary. This may have been done during the summer months in particular when the water-level went down. After this cleaning-up operation, the tank was readied again to receive fresh water during the ensuing monsoons.

In connection with the staircase it may be noted that while the core was made of horizontal bricks and even brick-bats, the actual treads were provided by placing the bricks on their edges. With this kind of arrangement, the rise each time was about 28 cm.

B. INTERCONNECTING CHANNEL-1 AND NORTHERN PART OF TANK B

As stated earlier, whatever silt had reached Tank A was made to settle down in its southern part where the bed-level was lower than that in its northern part; and this silt appears to have been removed by using the staircase in the south-east corner of that tank. In spite of all this, the water was not allowed to enter Tank B from the lower levels of Tank A, since this would have resulted in the

¹Reconstructed. While the south-east corner was covered over by the staircase in the area, the bottom the Lowest Retaining Wall in the south-west corner was not exposed.

²The various measurements given in this Report were recorded by Shri S.K. Sharma, while the Mean Sea Levels were recorded by Shri L.S. Mamani.

ŚRĪNGAVERAPURA 1977-86 : SVP-4, SECTIONAL ELEVATION ACROSS INLET CHANNEL, LOOKING SOUTH-WEST

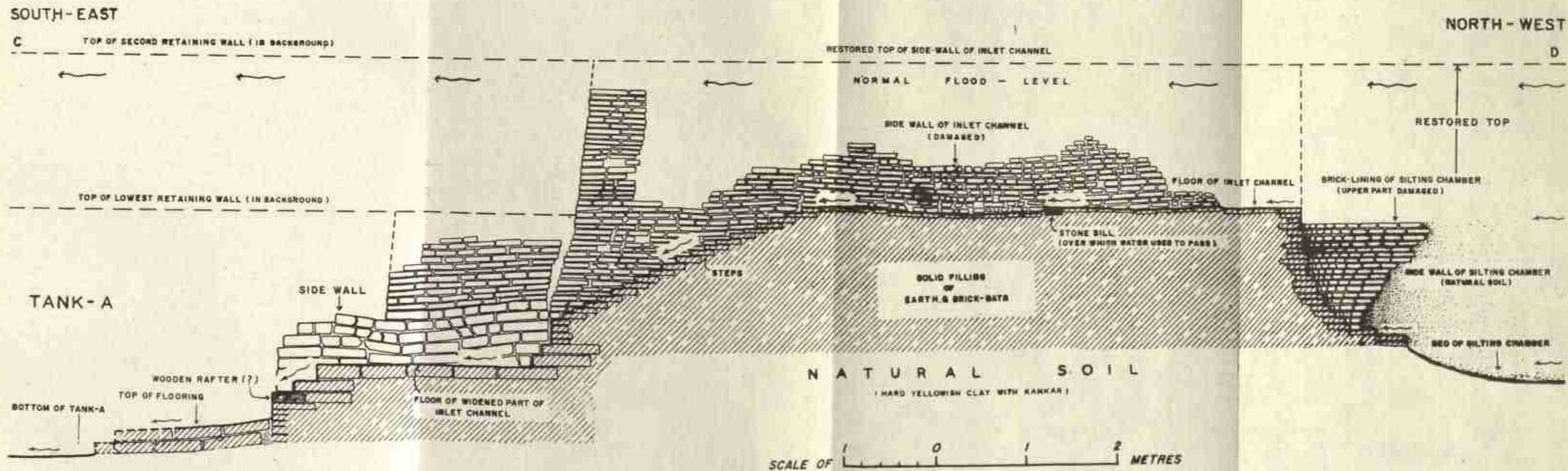


FIG. 8 .

ŚRĪNGAVERAPURA, 1977-86: DETAILED PLAN OF SOUTHERN PART OF TANK-A,
INTERCONNECTING CHANNEL-1 AND NORTHERN PART OF TANK-B

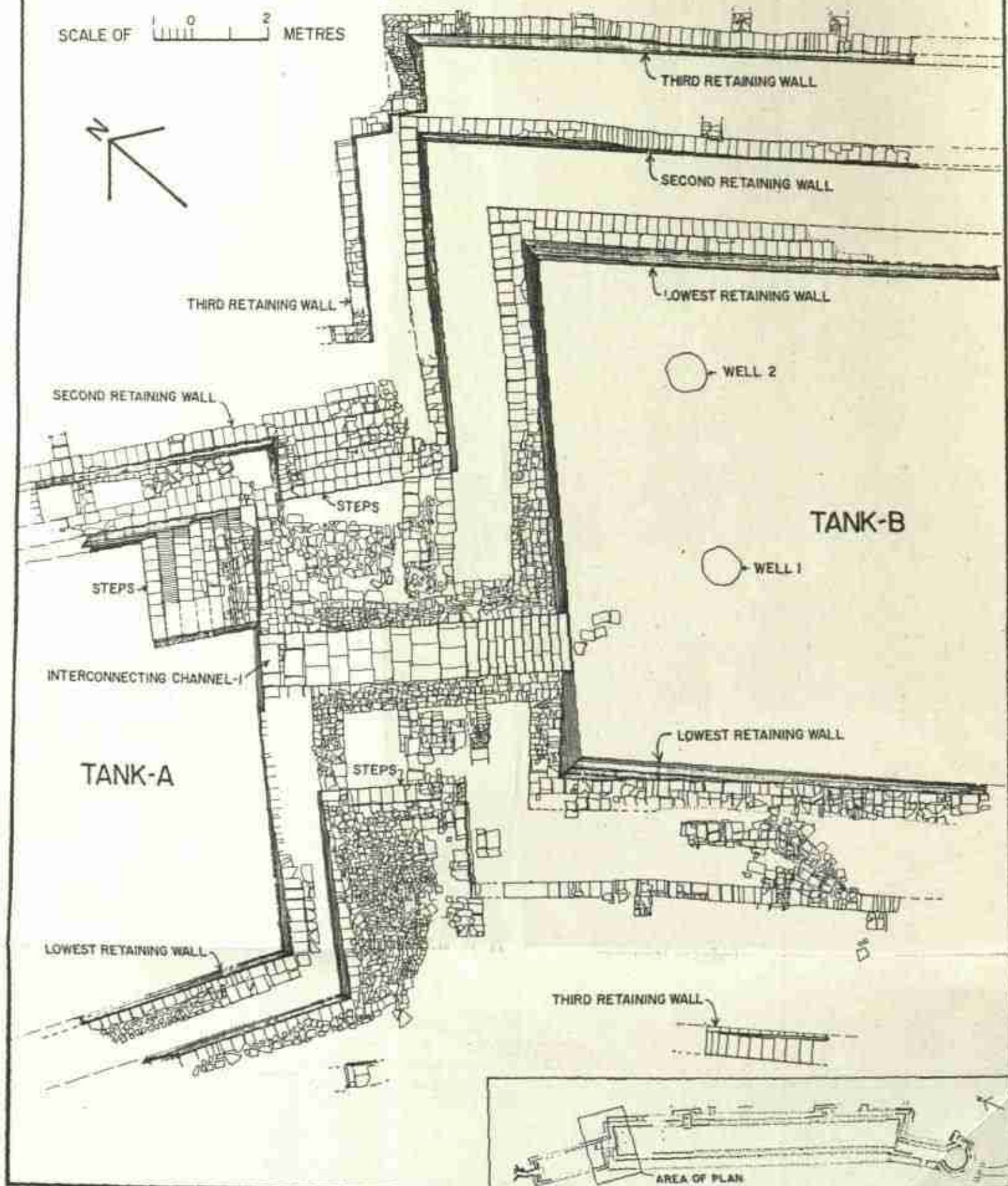


FIG. 9

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transference of even the little silt that might have been still left in it. Thus, the channel (Interconnecting Channel-1) that carried the water from Tank A to Tank B was located at a height of 1.20 m above the bed of Tank A (figs. 4, 5, 9 and 10). This ensured that only clean water from the upper levels of Tank A entered Tank B. The bed of the Channel had a minor slope towards Tank B: 10 cm in a length of 5.30 m. Thereafter there was a graduated fall of water which cascaded over a flight of ten steps, each step consisting of a single course of bricks (pls. XVIII-XIX). Since in the bed of this Channel as also in these steps only large-sized bricks had been used, the fall with each step was about 12-13 cm. Below the level of these steps one notices a gap in the Lowest Retaining Wall (of Tank B) on both sides of the Channel (pl. XIX). As discussed earlier, it appears likely that a wooden rafter may have been inserted in the wall at this level, which has since perished. Below this assumed wooden rafter there were six courses of ordinary bricks constituting the lowest portion of the Lowest Retaining Wall. With this final fall of about 55 cm, the water touched the bed of Tank B. The presence of a few flat bricks in front of the mouth of the Channel (pl. XIX) tends to suggest that there may have been a floor at the point of the fall of the water. The evidence, however, is not conclusive.

At its northern end, Interconnecting Channel-1 measures 1.28 m in width which expands to 1.37 m at the end of its floor towards Tank B. At its southernmost extremity the width of the channel is 1.40 m. This widening of the Channel towards Tank B may have been deliberate, designed to reduce the pressure of water, be it even slightly, which the builders had all along been attempting.

The side-walls of the Channel, though now partly damaged, appear to have been as high as the top of the Lowest Retaining Wall of Tank B, which means that these stood to a height of 1.39 m above the floor of the Channel on the southern side. Flush with the top of these side-walls, there was a platform on each side of the Channel. These platforms were made of 'boxes' of brick-walls filled in with mud and provided with a brick-flooring at the top (pls. XX and XXXII). Rising from the eastern end of the eastern platform there was a staircase comprising six steps and leading to the top-level of the Second Retaining Wall (pls. XX and XXI). It may be added that whereas the treads in the case of the staircase in south-eastern corner of Tank A had on-edge bricks as the uppermost course, those in the present case consisted of only horizontal bricks. Except for the lowest, each rise was made up of four courses of bricks. Just like the staircase on the eastern side, there was one on the west, rising from the western platform. Though it is badly damaged (pl. XXII), in structural details it appears to have been similar to that on the east.

In the northern part, Tank B had three retaining walls (fig. 9; pl. XVIII). Of these, the lowest had the maximum height, viz. 3.34 m, consisting of 49 courses of bricks, as counted near the north-east corner. The level of its top above MSL was 86.320 m. It sloped back at an angle of about 10° to the vertical. Widthwise, it comprised a header and stretcher, thus measuring 72 cm. This arrangement had the obvious effect on the elevation which had alternating courses of headers and stretchers (pl. XXIII). The Second Retaining Wall, placed at a distance of 2.19 m behind the top-edge of the Lowest Retaining Wall, stood to a height of 2.09 m, consisting of 32 courses of bricks. Its top was at 88.413 m above MSL. The angle of repose of this wall was also about 10° to the vertical. Its width, 43 cm, was obtained by placing a single brick lengthwise. The Third Retaining Wall

placed 2.14 m behind the Second. With its top at 90.133 m above MSL, it stood to a height of 1.72 m, and had 26 courses. Like the Second Wall it too was 43 cm in width. Its angle of slope was about 13° to the vertical. All the retaining walls were interlocked with the natural soil behind by means of short walls placed at suitable intervals. Put together, the three retaining walls provided a total height of 7.15 m from the bed-level.

The bed of Tank B near the north-east corner stands at 82.978 m MSL. Since the top of the stone-sill in the Inlet Channel stands at 86.783 m MSL and any water above that level would have drained back into the Feeding Channel after the recession of the flood in the Gaṅgā, the water that remained stored in Tank B measured 3.80 m in depth. In other words, only the Lowest Retaining Wall was drowned and the water hit against the Second Retaining Wall up to a height of 46 cm.

The width of Tank B at its bottom on the northern side, i. e. between the north-east and north-west corners was 12.45 m (fig. 9; pl. XVIII). Going upwards the tank gradually widened, since (i) each retaining wall sloped back and (ii) each higher retaining wall was placed backwards from the one below it (cf. fig. 11). Thus, at bottom-levels of the Second and Third Retaining Walls the width of the tank was 14.9 m and 23.30 m respectively. (Whereas the top of the Third Retaining Wall on the eastern side was found intact in a part of it, the top of its counterpart on the western side had been damaged. Hence we do not have the exact measurement of the width of the tank at the level of the tops of the Third, i. e. the uppermost, Retaining Wall.)

Tank B too was not a good rectangle. Thus, while the width of its bottom at the northern end was 12.45 m, that at the southern end was 12.55 m. The difference, however, is more pronounced in the length. Thus, at the top-level of the Lowest Retaining Wall, the eastern side measured 128 m whereas the western side was only 126 m.

Moving along the eastern side of Tank B, from north to south, one sees on the plan (fig. 4; pl. XXIV) a staircase between the Second and Third Retaining Walls. With a wall on each side, it has an internal width of 2.25 m. There are seven steps, all their bricks having been laid out horizontally (pl. XXV).

A very limited area of the bed of Tank B was exposed. Altogether three strips were taken up: (i) one nearer the northern end, measuring 5 m in width; (ii) another to the north of the Brick-on-edge Ramp-1, measuring about 13 m in width (in this area, however, the south-central part was not actually taken down to the bed level); and (iii) an area of 3×5 m near the place where Interconnecting Channel-2 takes off from the south-western part of Tank B. Within each of the first two strips mentioned above, two wells were discovered. No well was found in the very limited area mentioned at (iii). How many wells there were in all in the bed of Tank B it will remain a surmise until and

the area is thoroughly excavated right up to the bottom—clearly a herculean task in terms of labour and time. However, from whatever little evidence that has come to our notice it is clear that wells were also provided in the bed. Since during the course of our excavations wells

in water, it is evident that the purpose of these wells was to supply the sub-soil water as and when the stored water began to diminish on account of its consumption and

¹Recons.
Retaining Wall.

²The various
were recorded by

SRINGAVERAPURA 1977-86:SVP-4, SECTIONAL ELEVATION ACROSS INTERCONNECTING CHANNEL-1

LOOKING SOUTH - WEST

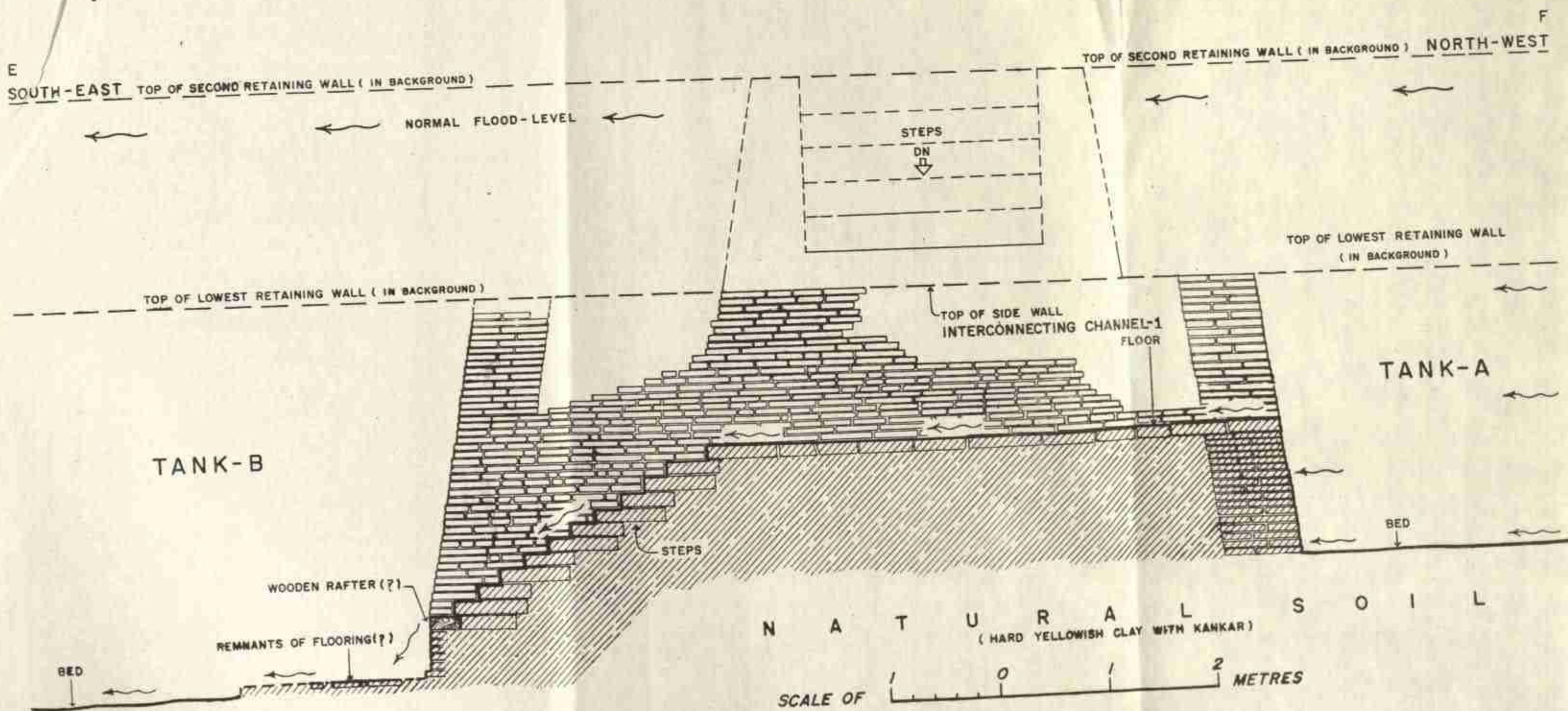


FIG. 10

01

SRINGAVERAPURA 1977-86

SVP-4, SECTION ACROSS NORTHERN PART OF TANK-B

Looking North

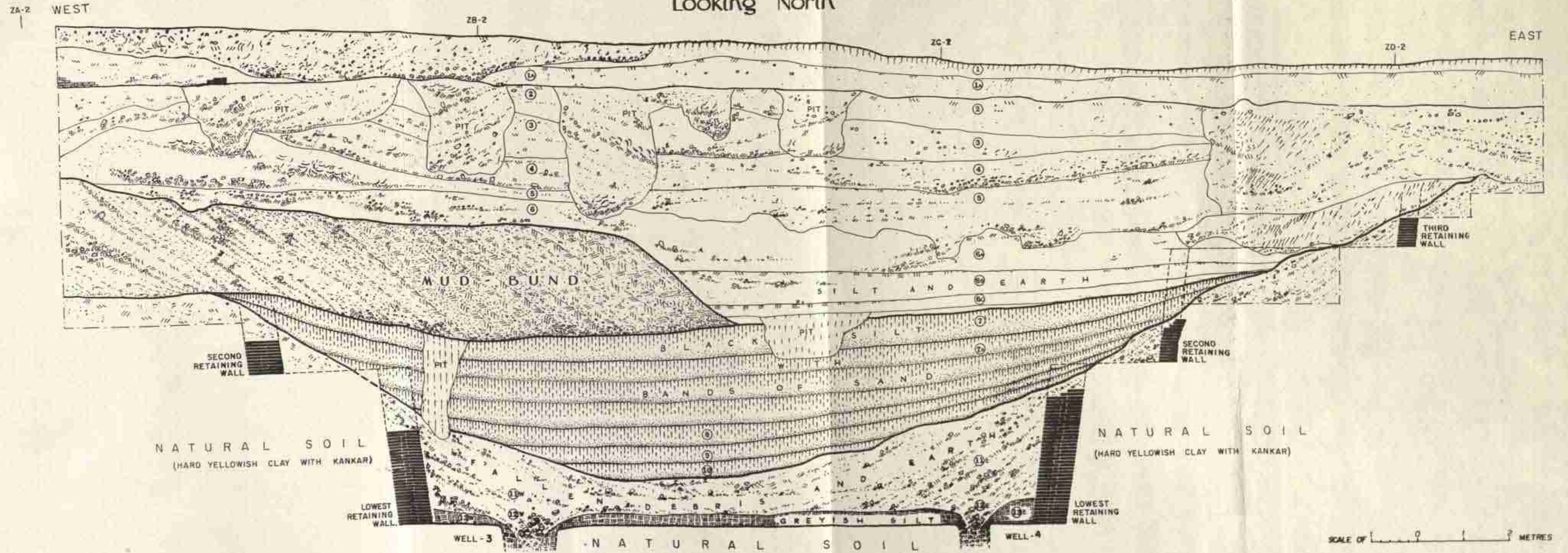
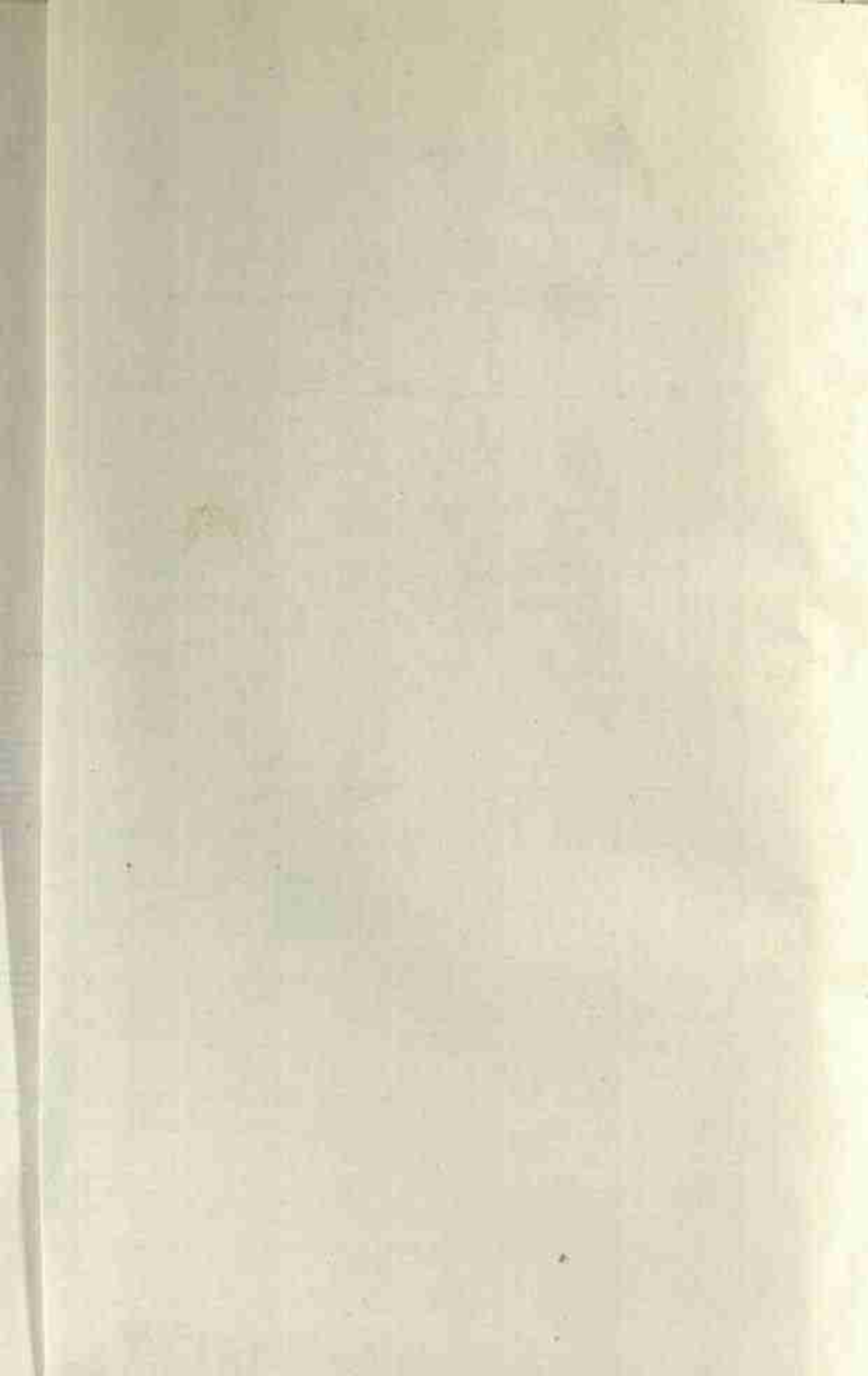


FIG. 11



SOME DETAILS ABOUT THE BRICK TANK

evaporation. With this device of providing sub-soil-water wells it seems the tank was saved from drying up even during the summer months.

Whitish encrustation on the surface of the wells made them easily identifiable before any excavation thereof was taken up by us (pl. XXVI). Of the four wells referred to in the preceding paragraph, No. 1 (pl. XXVII) lay not very far from the place where Interconnecting Channel-1 opened into Tank B. It had a diameter of 70 cm. We were able to expose it up to a depth of 58 cm only; further digging had to be abandoned because of the gushing up of the sub-soil water. Within this depth two layers were met with, the upper of which, 24 cm in thickness, consisted of whitish grey clay with dark brown specks. In composition it was similar to the lowest layer overlying the bed of the tank itself. The second layer (counted from the top) within the well was soft sandy clay without the above-mentioned specks. In it the bottom part of a water-jar was met with (pl. XXVIII). No digging was done into Well 2. On plan, however, it was found to be somewhat ovoid (pl. XXVI).

Wells 3 and 4 lay respectively at a distance of about 15 m and 20 m south of Wells 1 and 2. While Well 3 (fig. 11) was nearer the Lowest Retaining Wall on the western side (pl. XXIX), Well 4 was nearer the corresponding retaining wall on the eastern side (pl. XXX). Both the wells were found to be circular on plan, though the plan of Well 4 was not exposed up to its central part. The diameter of Well 3 measured about 90 cm. Neither of these wells could be excavated beyond a depth of about a metre because of the upward thrust of the sub-soil water. In both the wells a lot of brick-debris, fallen from the adjacent retaining walls, was found. This shows that these wells had remained operative till the destruction of the tank.

C. BRICK-ON-EDGE RAMP-1 AND ADJACENT AREA

In Tank B at a distance of about 32 m from the north-east corner, measured along the Lowest Retaining Wall on the eastern side, there was a brick-on-edge ramp. Since even in the limited excavation further to the south another ramp was met with, the above-mentioned ramp has been numbered as Ramp-1 (figs. 4 and 12 ; pls. XXXI-XXXIII). Since the structures in this area are considerably damaged, a clear picture of the steps that led from the then ground-level outside to the top of the Second Retaining Wall is not available, although some indications about the existence of such steps do exist. However, what is clear is that from the two opposite sides of the terrace constituted by the top of the Second Retaining Wall there descended two staircases, facing each other (pls. XXXI-XXXII). In the staircase on the southern side the remains of six steps were met with, each step comprising four courses of bricks (pl. XXXV). Of the staircase on the northern side, only four steps remain (pl. XXXIV). However, it may be presumed that this staircase too was like its southern counterpart. These staircases led down to the level of the top-terrace of the Lowest Retaining Wall, from where two steps and a ramp, both made up of on-edge bricks (pls. XXXI and XXXIII), led further down towards the bed of the tank. In the make-up of the ramp, which had a width of 2.85 m, the overall monotony of the brick-work was broken to some extent by placing some of the on-edge bricks in groups producing a criss-cross pattern (pl. XXXIII). Against the lower end of this ramp there appears to have been placed a wooden rafter, as surmised in the case of the Inlet Channel

and Interconnecting Channel-1. The gap in the Lowest Retaining Wall, wherein this rafter may have been inserted, is clearly seen on pl. XXXIII. Connecting the ramp with the bed of the tank there were three steps. From top downwards, the fall of these steps was less and less, there being respectively four, three and two courses of bricks in them (pl. XXXIII).

In the context of the platform that was flush with the top of the Lowest Retaining Wall and into which this Ramp was set, it may be mentioned that it was made by producing 'boxes' of brick-walls filled in with earth (fig. 12). Of these boxes, three were duly identified (pl. XXXI).

D. SOUTHERN HALF OF TANK B AND INTERCONNECTING CHANNEL-2

In the southern half of Tank B, another brick-on-edge ramp (Ramp-2) was noted along the eastern side (fig. 4). Although the ramp and its adjacent area were only partly excavated, it appears that the general pattern followed here was more or less similar to that of Ramp-1. For example, the floor of Ramp-2 was also made of bricks set on their edge (pl. XXXVIII). Upwards from the Ramp, there were also two steps, again made of on-edge bricks. From the landing above these steps one set of staircase led upwards to the north (pls. XXXVI-XXXVII); and if the surmise of similarity between the lay-out adjacent to Ramp-1 and Ramp-2 is reasonable, there would be another staircase on the southern side of Ramp-2, facing the staircase just referred to. The southern staircase, however, was not exposed because of several structural strata overlying the tank-complex in this part. The treads of the steps on the northern side were made of bricks-on-edge and numbered six, of which the uppermost was greatly damaged. From the top-terrace of the Second Retaining Wall there seems to have arisen another staircase, leading to the top-level of the Third Retaining Wall. Of this staircase, however, only the southern side-wall was identified, the treads of the steps having been robbed away (pl. XXXVII). The Lowest Retaining Wall in this area was only partly exposed. It was, however, duly observed that the terrace at its top-level rested on 'boxes' of brick-walls filled up with earth (pl. XXXVI), as was the case near Ramp-1.

Another set of steps (fig.4) was identified in the area lying between Ramp-2 and the south-east corner of Tank B. However, not much work could be done over here.

At the south-east corner of Tank B, four retaining walls were noted (fig. 4; pls. XXXIX-XL). The one extra wall, above the Third Retaining Wall, seems to have been necessitated most probably because of the somewhat higher ground-level in this area. In this context, it may be mentioned that in the trenches that lay outside the tank, to the east and south of its south-east corner some occupational strata yielding the Northern Black Polished Ware were encountered. It is this deposit that may have added to the height of the ground-level outside, making it necessary for the builders to put up an extra retaining wall.

Of the Lowermost Retaining Wall only the upper 19 courses were exposed. Thus, since the bottom of this wall was not reached, it is difficult to say as to what the relative depth of the south-east corner of Tank B was in comparison to that in the north-east corner. However, as in the north-east corner, here too the wall was 72 cm wide, consisting of a header and a stretcher. The top of the Lowest Retaining Wall in the south-east corner stood at 86.323 m above MSL.

SRINGAVERAPURA, 1977-86: DETAILED PLAN OF BRICK-ON-EDGE RAMP-1 AND ADJACENT AREA, SVP-4

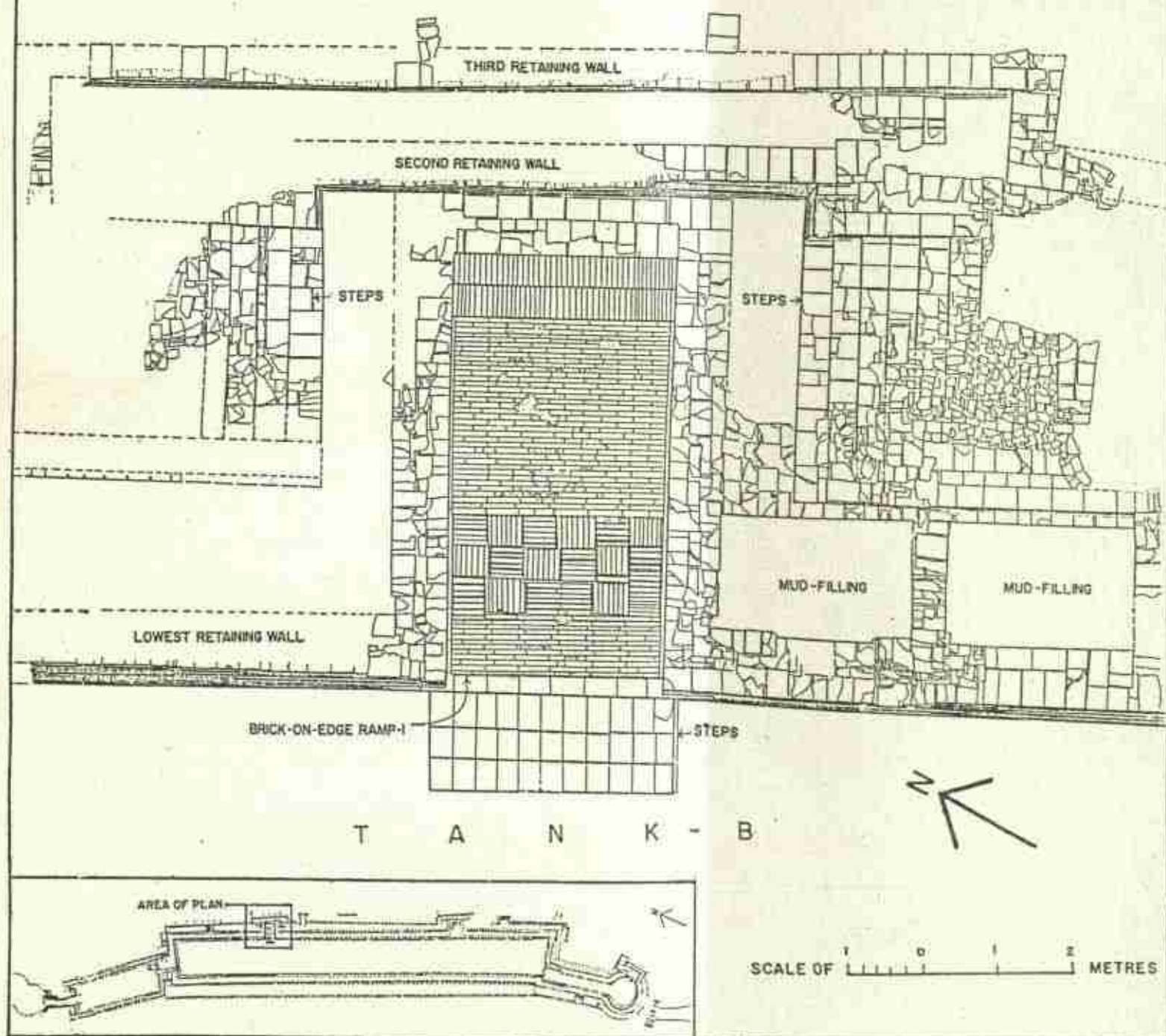


FIG. 12

ŚRĪNGĀVERAPURA 1977-86 SVP-4, SECTION OF SOUTH-WESTERN PART OF TANK-B

LOOKING NORTH

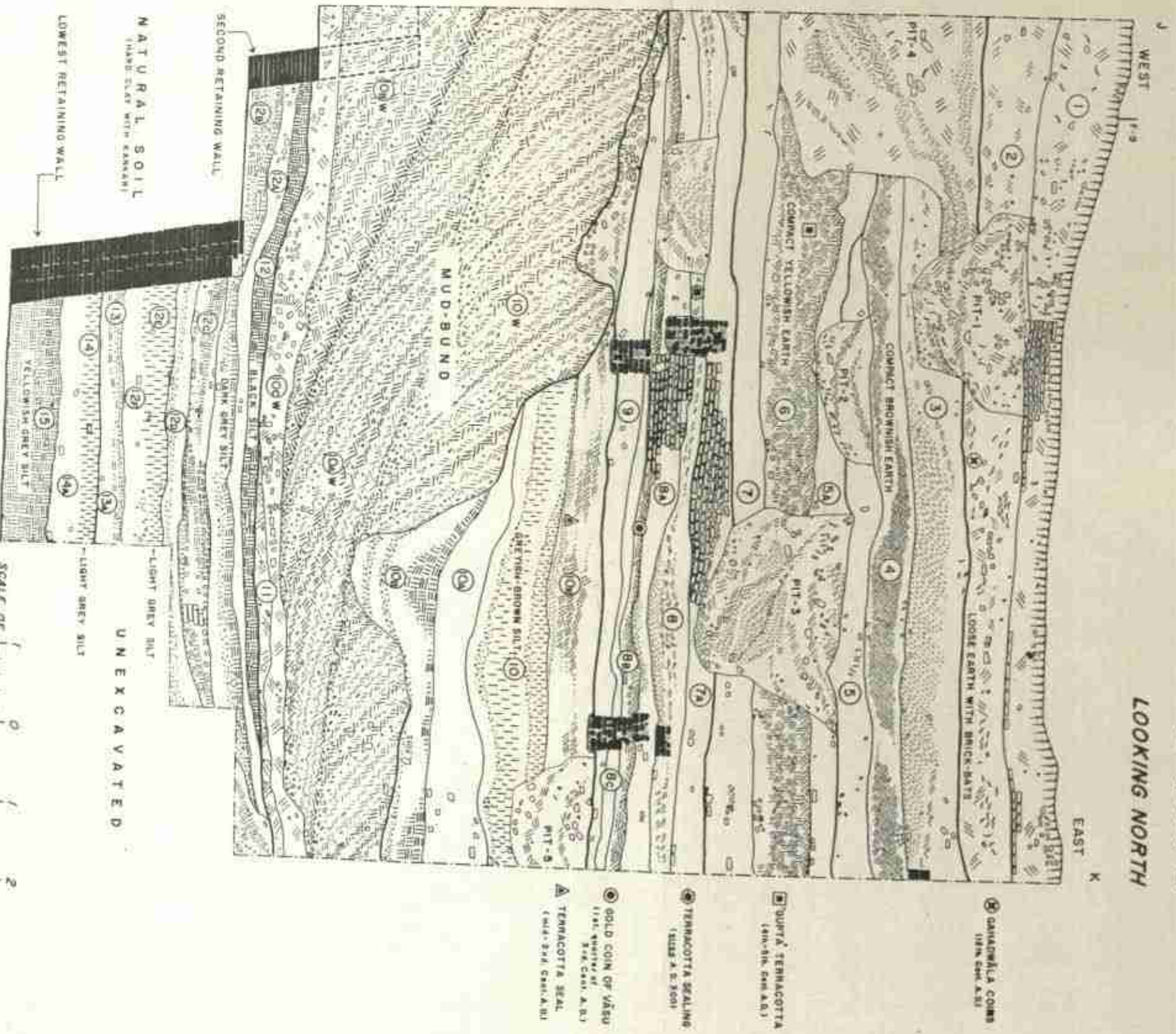


FIG. 13

The Second Retaining Wall appears to have been badly damaged anciently. It was, however, repaired, using some large-sized (64×48×12 cm) bricks as well (pls. XXXIX-XL). Its top in the south-east corner stood at 88.673 m above MSL. Including the large-sized bricks, there were 33 courses, the total height being 2.35 m.

With its top at 90.433 m above MSL, the Third Retaining Wall had 25 courses, accounting for a height of 1.76 m. Its width, 43 cm, was obtained by placing the normal-sized bricks in such a way that in elevation one would see the headers. The top of the Fourth Retaining Wall stood at 91.533 m above MSL. It had 13 courses, with height and width measuring respectively 90 cm and 43 cm.

While exposing the terrace between the top of the Lowermost Retaining Wall and the bottom of the Second Retaining Wall we noticed a broad patch on the floor. It was whitish in colour and was easily distinguishable from the adjacent natural soil. On the southern side, its edge was also very clear, though it was not so sharply marked out on the northern side (cf. pl. XXXIX). We were naturally curious to know what it meant. On excavation we discovered that this represented a channel cut into the natural soil. This channel was found to underlie the Second, Third and Fourth Retaining Walls and went beyond these to the eastern side (pl. XL). With reference to the top of the Lowest Retaining Wall, the bottom of this Channel was only 38 cm below the former. As seen in the photograph (pl. XL), the channel was blocked by the Lowest Retaining Wall.

Measured on the eastern face of the trench outside the Fourth Retaining Wall, the channel was found to be 6.7 m wide at the top (pls. XLI-XLII). With its sides slanting, it went down to a depth of 3.60 m where the width of the bottom got reduced to only 1.25 m. In the lower part there was a good deal of deposit of silt interleaved with bands of sand (pl. XLI). The bottom of this channel lay at 85.938 m above MSL, i.e. about 3 m above the general level of the bottom of Tank B. What exactly the purpose of this channel was it is difficult to determine, unless it is chased further to the east and the slope of its bottom duly ascertained. One thing, however, seems obvious that it could not have functioned as an exit channel after the construction of the retaining walls, since it is blocked by the Lowest Retaining Wall and is also overridden by the Second and subsequent Retaining Walls. It is, however, probable that it may have served as an exit channel for a short period, viz. after the excavation of the tank into the natural soil and before the erection of the Retaining Walls.

Near the southern side of this channel there lay a few structures, one of them having 30 courses and a stepped face (pls. XLII-XLIII). Since not much work was done in this area, outside the tank, it was not possible to get further details. The area, however, needs to be excavated thoroughly to ascertain as to what kind of structures (a temple-complex?) lay there.

At the south-west corner of Tank B, there was a channel (marked as Interconnecting Channel -2 on the plan, fig. 4) which carried the water further to the south. It may, however, be noted that whereas in the case of the Inlet Channel there was a significant rise from the bottom-level of the Silting Chamber (above, p. 23), or in the case of Interconnecting Channel-1 there was, again, a significant rise from the bed of Tank A (above, p. 27), in the case of Interconnecting Channel-2 there was no such significant rise from the bed of Tank B. All that we found was just a single-course structure which marked the junction between the south-western end of Tank B and the northern end

of Interconnecting Channel-2 (pl. XLIV). This separating structure, made by laying two bricks side by side, viz. a header and a stretcher, measured 72 cm in width. Since a part of the end-bricks of this structure lay underneath both the Lowest Retaining Walls of Tank B at this point, it is evident that it was a part of the original construction and not put up as an afterthought.

The width of the opening in the south-west corner of Tank B was 2.20 m at the bottom. However, since the Lowest Retaining Wall, like all other retaining walls, had slanting sides, the width of this gap at the level of the topmost course of the Lowest Retaining Walls was 4.37 m. Both the Lowest Retaining Walls had 46 courses and stood to height of 3.12 m. The level of the bed of Tank B in this corner stood at 83.238 m above MSL. In this context it may be recalled that the bed of Tank B in the north-east corner stood at 82.978 m above MSL. This would mean that the bed of Tank B rose by 26 cm from its northern to the southern end—a feature in contrast to that of Tank A where the slope of the bed was from north to south i.e. along the flow of the water. If this reversal of the slope in the bed of Tank B was deliberate, it would seem that the intention of the engineers might have been to prevent any silt that per chance was still there in the lower level of Tank B, from moving towards Interconnecting Channel-2, with the final objective of keeping the water of Tank C, which followed Interconnecting Channel-2 (cf. fig. 4), absolutely free from any silt.

To the south of the above-mentioned gap in Tank B, the width of Interconnecting Channel-2 was 3.30 m at the bottom of the Lowest Retaining Walls. Upwards, this width became more and more since (i) the retaining walls sloped backwards and (ii) each succeeding wall was placed a bit behind the lower one (fig. 4; pl. XLV).

As elsewhere in the tank-complex, in the case of Interconnecting Channel-2 also there was no absolute symmetry between its two sides. Thus, while the Lowest Retaining Wall on its western side measured 20.60 m in length at its basal level, that on the eastern side had a length of 21.60 m at the corresponding level. At the point of the junction between Interconnecting Channel-2 and Tank C, the width of the Channel, measured at the lowest points of two opposite corners of the Lowest Retaining Walls, was 3.93 m (pls. L and LII). There was thus a widening of the Channel from its northern to southern end. Very little of the eastern side-walls of Interconnecting Channel-2 was excavated because of the overlying Mud Bund and subsequent late Kushan structures. However, on the western side of the Channel staircases were noted at two places (fig. 4; pls. XLVI- XLVII). The one located about the middle of the length had five steps, each step consisting of four courses of bricks (pl. XLVI). The other staircase, at a higher level, was badly disturbed. However, in it at least four steps, each again consisting of four courses, were noted (pl. XLVII). The southern part of Tank B and its overlying strata yielded valuable evidence, in terms of seals and coins, which throws much welcome light on the chronology of the tank-complex as a whole (cf. fig. 13; Chapter VII).

E. TANK C

Unlike Tanks A and B, which were rectangular, Tank C was (more or less) circular on plan (figs. 4 and 14; pl. XLVIII). There was, however, a rectangular appendage on the eastern side comprising a staircase (pls. XLVIII-XLIX). The tank had three retaining walls. At the top-level of the

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SRINGAVERAPURA, 1977-86

DETAILED PLAN OF TANK-C, SVP-4

SCALE OF 0 1 2 3 4 METRES

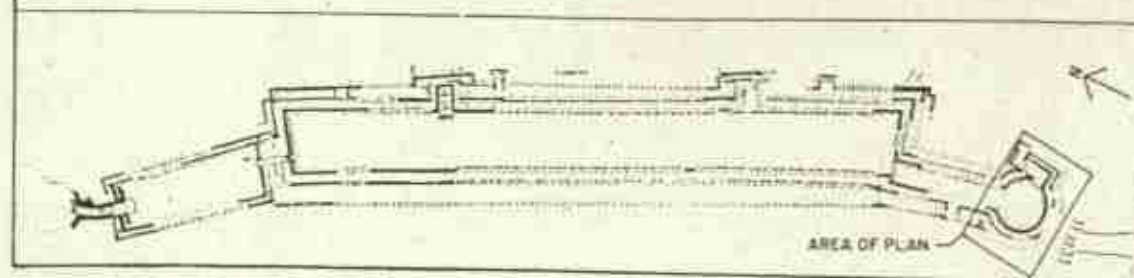
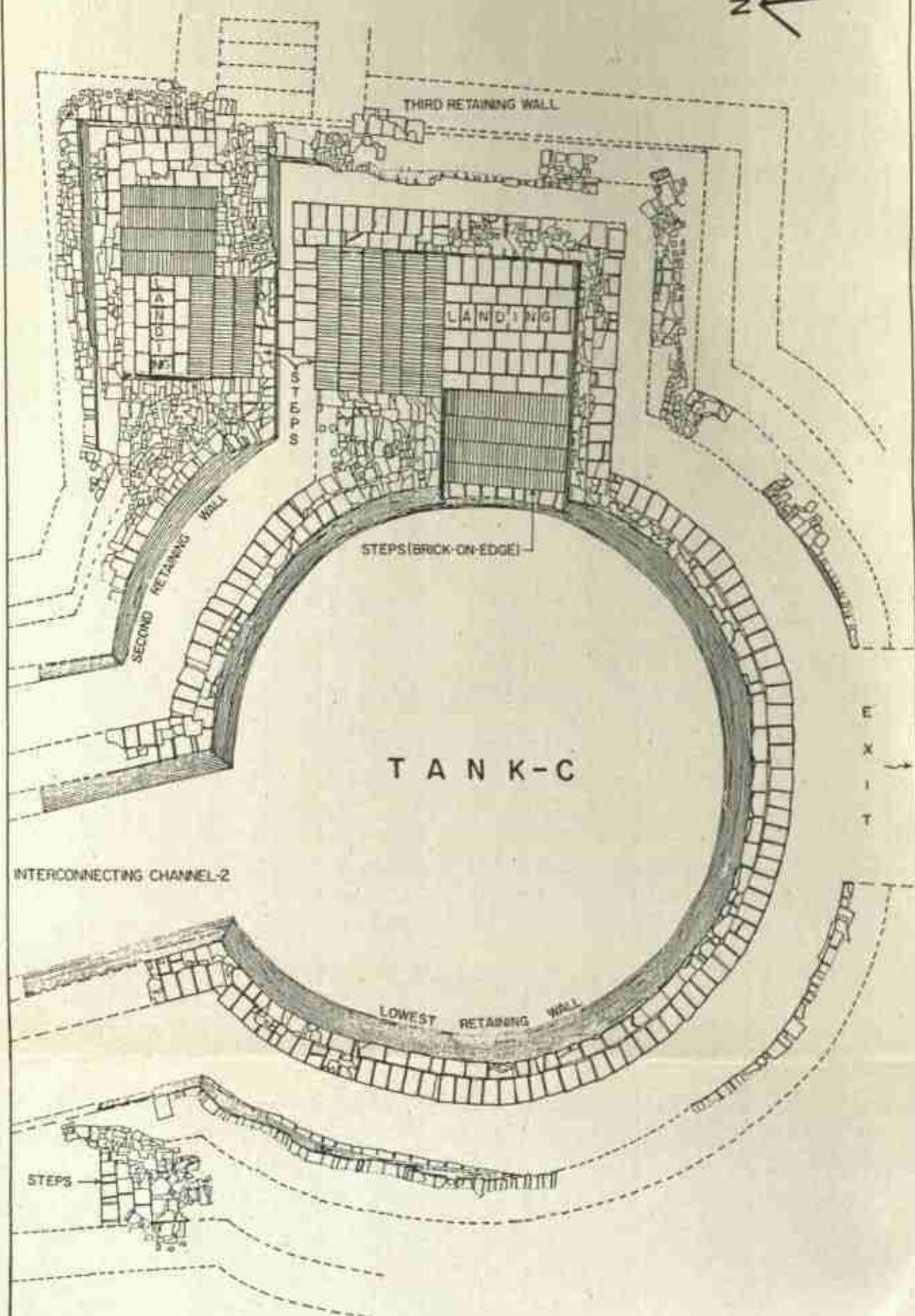
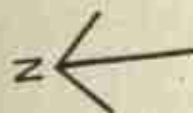


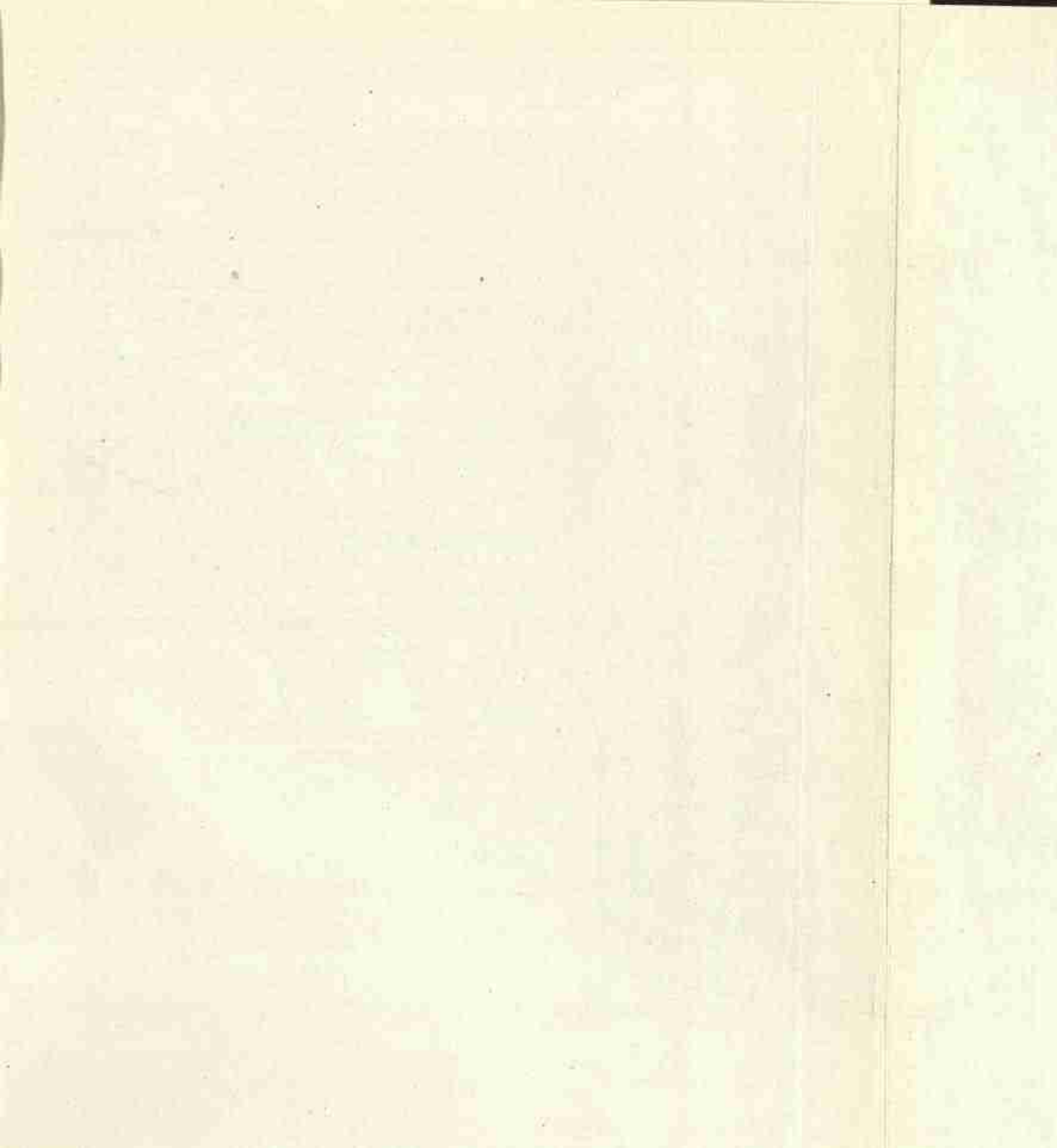
FIG. 14

SOME DETAILS ABOUT THE BRICK TANK

Lowest Retaining Wall the measurements across, i.e. from one point to another on the opposite side, varied from 9.75 m to 10.20 m. This variation was due to the fact that the tank did not form a perfect circle. We do not have the corresponding measurements at the bottom-level of the Lowest Retaining Walls since the western part of the tank was not excavated all the way down (cf. pl. XLVIII). The 'diameter' of the tank, however, kept on increasing with each succeeding retaining wall, since each wall was placed behind the one below it (fig. 14). The bed of Tank C stood at 83.565 m above MSL, which means that it was approximately 59 cm and 33 cm above the bed-levels respectively at the northern and southern ends of Tank B (cf. fig. 5). What exactly the intention of the builders was in having such an arrangement it is difficult to be sure of. A benefit of such a situation, however, must have been the prevention of silt, which usually settles down at the bottom, from moving up to Tank C. One would, thus, imagine that even though the water that entered Tank B was clean enough, that which reached Tank C was the cleanest.

The steps that led from the ground-level on the eastern side of Tank C down to its lower levels were very winding. Although no intact staircase leading from the ground-level to the top-terrace of the Second Retaining Wall was found, some indication did exist in the Third Retaining Wall about such a staircase (cf. fig. 14; pl. XLIX). However, the staircase from the top-level of the Second Retaining Wall downwards was very clear (pls. LIII-LVI). From this level four steps running in an east-west direction, led to a landing mid-way within the body of the Second Retaining Wall. From this landing four steps, running north-south, led down to a single-course footing on the top-level of the Lowest Retaining Wall. From here six steps, also running in the aforesaid direction, came down to a landing within the body of the Lowest Retaining Wall. The steps below this landing, numbering four, again changed their direction, which this time was east-west. These steps did not reach the bed of Tank C but stopped 13 courses above the bottom of the Lowest Retaining Wall. This feature, it may be added, was quite unlike what obtained in Tanks A and B where the lowest step rested right on the bed of the respective tanks (cf. pl. XVII for the staircase in the south-east corner of Tank A, and pl. XXXIII for the steps in front of the Brick-on-edge Ramp-1 in Tank B). Such a situation would tend to suggest (though not establish it unequivocally) that the water in Tank C was not expected to go lower than the lowest step. In other words, a minimum of about 90 cm of water was expected to remain in Tank C. If this assumption is correct, the minimum water-column in the northern part of Tank B may have been about 1.5 m in depth. All this, however, will remain in the realm of conjecture.

While the Lowest Retaining Wall was intact all through, the Second Retaining Wall was found damaged to a considerable extent on the southern side (fig. 14; pl. LVII), more or less opposite Interconnecting Channel-2. Since we have evidence of a Waste Weir comprising Spill Channels, Crest and Exit Channel further to the south, it is quite likely that in this damaged portion there originally existed a gap in the Second Retaining Wall through which excess flood-water got discharged.



ŚRINGAVERAPURA 1977-86

SVP-4, SECTION ACROSS EXIT CHANNEL, LOOKING SOUTH

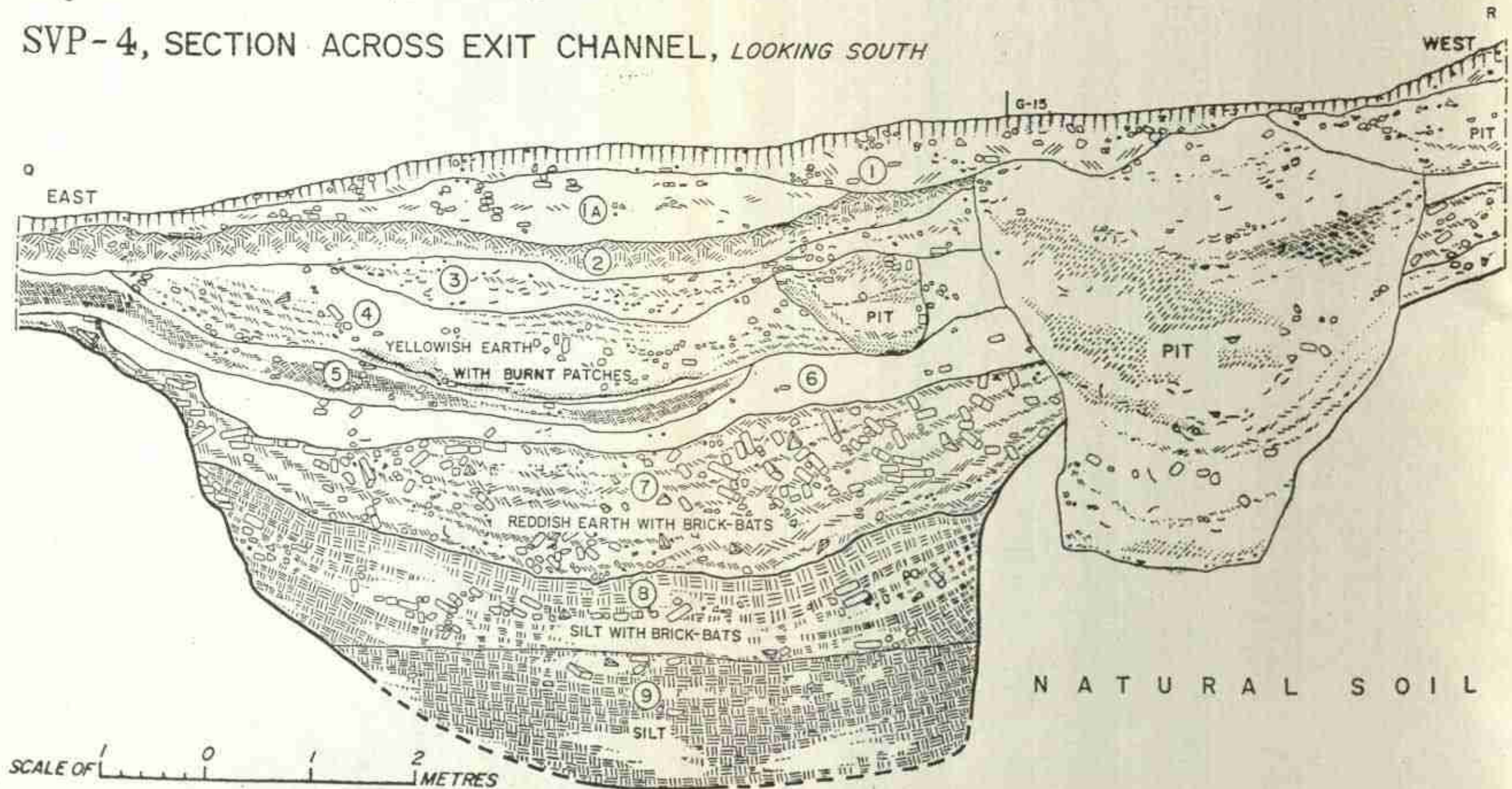


FIG. 16

F. THE WASTE WEIR

As stated in earlier chapters, the tank was filled by diverting the flood-water of the Gaṅgā through a specially dug-out Feeding Channel. Assuming that the behaviour of the floods in ancient times was not very much different from what it is now—though admittedly there is not surety for such an assumption—it would appear that even when the tank was constructed (in the second half of the first century B.C.) the floods normally touched the mark around 88 m above the Mean Sea Level (MSL). (The normal flood-level at present is stated to be 87.958 m above MSL.) The stone-sill in the Inlet Channel, over which the water passed to enter the tank-complex stood at 86.783 m above MSL. In other words, during normal floods a column of 1.18 m of water passed over the stone-sill. However, in ancient times too, as is the case now, the floods must have often been very high and severe. The high flood-levels recorded in 1978 and 1981 stood respectively at 89.452 m and 89.688 m above MSL. Hence in such high floods, the water-column entering the tank must have been as high as 3 m. Thus, after the tank had been filled and there was still no recession of the floods, the flowing water had to be drained out of the tank, otherwise the fast current would have damaged the retaining walls of the tank. Proper provision had, therefore, to be made for the exit of this excess water.

While discussing the structural components of Tank C (above p. 33) we mentioned that whereas the Lowest Retaining Wall was intact all around, the Second Retaining Wall was found damaged in the southern segment. Since, as we shall see shortly, further to the south of Tank C there were channels and other provisions for the passage of water, the exit point in Tank C was located most probably in this southern part (pl. LVII). However, as already stated, the Second Retaining Wall is badly damaged in this area and hence it is difficult to visualize what exactly was the shape of this exit.

About 4 m to the south of the above-mentioned gap in the Second Retaining Wall of Tank C, as many as six channels were noted (cf. figs. 4 and 15; pls. LVIII-LX). The hydraulic engineers visiting the site explained to us that these channels were what they call in their terminology as 'Spill Channels', designed to break the force of the outgoing water. Unfortunately, for various reasons, the space between the southern edge of the Second Retaining Wall and these channels could not be excavated and thus we are not in a position to know the exact linkage between the two.

Cut into the natural soil, which is the usual hard yellowish clay with *kankar*, these channels were not quite uniform. At the top-level, they varied in width from 50 cm to 1.02 m. Since the sides were somewhat sloping and in two cases at least there were ledges down the depth, the width at the bottom ranged from 32 cm to 80 cm. In depth, these channels varied from 80 cm to 1.30 m below their adjacent flat levels. While the southern ends of these channels were duly encountered, nothing is known as to what happened toward the north, since, as already stated, the area between the northern part of these channels and the southern end of Tank C remained unexcavated. However, the maximum available length of these channels was about 3 m. These channels have been numbered 1 to 6, counting from east to west. From the section across these channels (fig. 15) it would be seen that though generally unlined with bricks, a few of these channels did have some kind of brick-work associated with them. Thus, for example, while two courses of brick-work rested on the flat level

between Channels 5 and 6 (pl. LVIII) there were two courses of bricks on a ledge in Channel 5 and a single course of bricks on a ledge in Channel 2 (fig. 15). What exactly the purpose of this brick-work was it is difficult to say.

On the eastern side of the easternmost Channel (Channel 1), the undug vertical face of the natural soil was met with. This must have acted as a barrier, preventing the water from spilling out towards the east. It is presumed that a similar vertical cliff of the natural soil must have been left undug on the western side of these channels. But owing to heavy debris overlying the area to the west of Channel 6 the same was not probed into. (It is not unlikely that one or more channels may have been there.) However, on the southern side, the same vertical cliff of the undug natural soil stood in front of Channels 1, 2, 5 and 6 (pl. LX). But the frontage of Channels 3 and 4 was not blocked. This means that the excess water that came from Tank C got collected into all these channels but flowed further down to the south from the gap in front of Channels 3 and 4 only (pls. LIX-LX). The area in front was higher and the hydraulic engineers explained that such a feature, technically called the 'Crest', prevented the outgoing water from rushing and was thus a deliberate device against erosion. The surface-level of this 'Crest' sloped gently down towards the south—about 20 cm in a stretch of about 4 m.

In terms of height above MSL, the level of this Crest at its northern end stood at 88.078 (fig. 5). Since, as mentioned earlier, the assumed normal flood-level was 87.958 m above MSL, it would appear that in normal times this Crest was the dead end for the reach of the flood-water. However, since every 4-5 years there is a very high flood, which in 1978 touched the 89.452 m mark and in 1981 the 89.688-m mark—and the same must have happened anciently—during these years of excessive floods the water must have overflowed the Crest.

That there was such an overflow is clearly shown by the existence of a final Exit Channel (cf. figs. 4 and 16). The Exit channel, like its counterpart, viz the Feeding Channel, was dug into the natural soil and was not lined with bricks. In the area excavated, its western edge was found to have been partly damaged by a pit, but the eastern edge was relatively better preserved (fig. 16). Under the circumstances, it is difficult to be sure of the exact width at the top: in any case, it was not less than 10 m. With the sides sloping down, the width near the bottom seems to have been in the neighbourhood of 4 m. The depth was also about 4 m, measured from where the downward slope of the sides becomes prominent. Interesting, however, is the point that the bottom-level of the Exit Channel stood at 83.000 m above MSL, which is more or less the same as the bottom-level of the Feeding Channel, which, as already mentioned earlier, was 83.113 m above MSL. Whether this was just accidental or by design it is difficult to say. If it was the latter, further credit should go to the engineers to have achieved such an accuracy in actual execution. The outgoing surplus water seems to have finally entered an existing rain-gully through which it flowed back to the Gaṅgā.

G. THE END OF THE BRICK TANK

All things must have their end. It is Nature's own law. But it sounds ironical when the very life-giver becomes the one to snatch away the life. Unfortunately, this was precisely the case with the

SOME DETAILS ABOUT THE BRICK TANK

Brick Tank. It appears that the Gaṅgā which fed the tank with her water was also responsible for its destruction. It was an unusually heavy flood in the river that seems to have taken its toll. The furious waters, high and mighty, created a havoc and pulled down major parts of the retaining walls, particularly on the western i. e. the river side. Through thrust many walls collapsed, some bulged in (cf. pl. XV), while parts of some others got physically displaced to some distance (pls. LXI-LXIII). In this last case, at least eight courses still stand vertically one over the other. Such a phenomenon was rather unbelievable since one normally expects the courses to fall higgledy-piggledy and not remain standing up after displacement. But the author was convinced of such a possibility when he visited the Tighra Dam near Gwalior. Plate LXIV gives a view of this dam. In it one sees the present wall of the dam stretching all the way. In the left part are also seen some blocks of another wall. These belong to the wall of an earlier dam which was ravaged by a very heavy flood some time back. While most of the wall had been destroyed and the stones washed away, some parts of it were physically pushed downstream to some distance and are still standing in a vertical position.

But the worst happened on the Crest in our tank-complex. Owing to the fury of the flood some of the buildings standing by its side collapsed down on the floor. While removing the fallen debris we came across the skeleton of a child (pls. LXV-LXVII). The skull had got largely smashed, and almost all the bones—ulnae, radii, ribs, etc.—had got shattered and scattered. Since the bones had become highly fragile, the same could not be removed and sent for a scientific examination to ascertain the age, sex, etc. of the child. It appears that the child was standing somewhere in the neighbourhood of the Crest and got buried in the brick-debris of the collapsed structure.

After its large-scale destruction, the Brick Tank was no longer found serviceable. It had to be abandoned. During the period of its abandonment, silt and sand kept on depositing in it, which at places accumulated to a thickness of more than 3 m (fig. 11; pls. LXVIII-LXXII). This put the final seal on the glorious tale of the Brick Tank.

CHAPTER V

SOME DETAILS ABOUT THE MUD TANK

As mentioned in the preceding chapter, the Brick Tank was destroyed by a heavy flood in the Gangā. Many of its retaining walls, particularly those on the western side, collapsed, partly or largely. The debris fell into the tank filling it up to some extent. Consequently, the Brick Tank had to be abandoned. During the period of abandonment, a huge amount of silt, interleaved with bands of sand, got deposited in it. In the northern part of Tank B, the top of this silt-cum-sand deposit, around its central point (fig. 11; pls. LXVIII-LXXII) stood at 87.178 m above MSL. Since the normal flood-level was 87.958 m above MSL, there was hardly any scope to refill the tank in any worthwhile manner with the river-water. Thus, if the tank had to be rejuvenated, some other device had to be thought of.

And this was done by means of constructing a Mud Tank over the remains of the Brick Tank and letting the former be filled up directly by the rain-water, since it was not possible to bring in the river-water in any substantial quantity. All over the area, the Lowest Retaining Wall of the Brick Tank had been buried in its entirety under the silt. In so far as the Second and Third Retaining Walls were concerned, those on the western side had been badly damaged. However, these two upper walls of Tank B were much less damaged on the eastern side. Thus, the builders of the Mud Tank utilized the same on the eastern side. Over here some of the steps too were still operative (fig. 17). However, on the western side a Mud Bund was put up, partly over the ruined walls and partly over the silt (fig. 11; pls. LXVIII, LXIX, LXXI and LXXII). Since the excavated trench was not carried right across the Bund to ascertain its westernmost tip, it is difficult to say anything about its basal width. However, the available height of about 4 m indicates that the Bund was evidently higher than that. How much, it is anybody's guess.

On the southern side too, the position was more or less the same, except that the builders had to make some suitable adjustments with the immense debris that had fallen from the upper Retaining Walls of Tank C and Interconnecting Channel-2 (fig. 18).

On the northern side, however, the builders made some innovations. Over here they put up an east-west cross-wall and a platform, a little to the north of the northern part of Tank B. Thus, the length of the Mud Tank was more or less co-terminous with that of Tank B, leaving out Tank A on the northern side and Tank C on the southern. The cross-wall just referred to lay over the debris of the retaining walls of the Brick Tank (pls. LXXV-LXXVI). The platform, located about the middle of the northern side, was made with rammed earth retained on the exterior by a brick wall. The retaining wall is still available to a height of 54 courses, above a footing whose courses varied in accordance with the contour of the underlying debris (pls. LXXIII-LXXIV). The courses at the top may represent some kind of a re-build. How exactly this platform was used by the Mud Tank people it is difficult to surmise. May be it was used for drawing water by means of ropes in case the few steps still available on the eastern side got submerged. But one cannot be too sure of that.

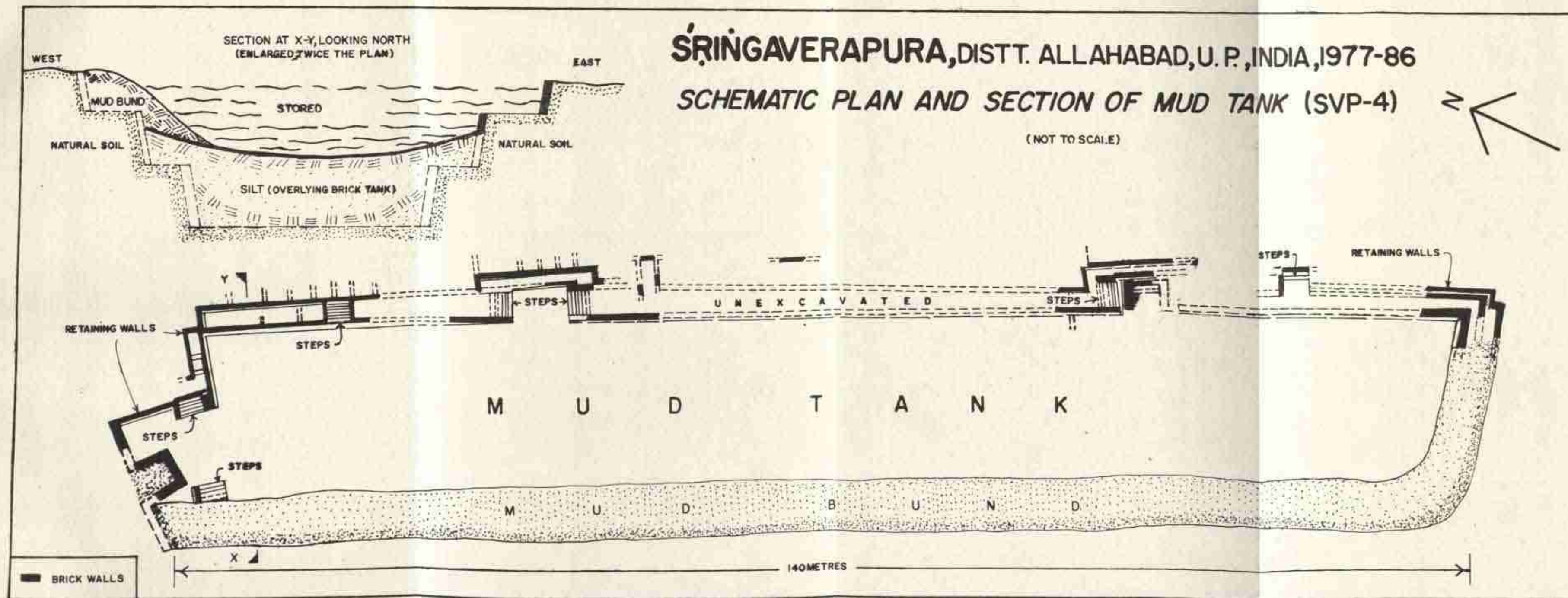
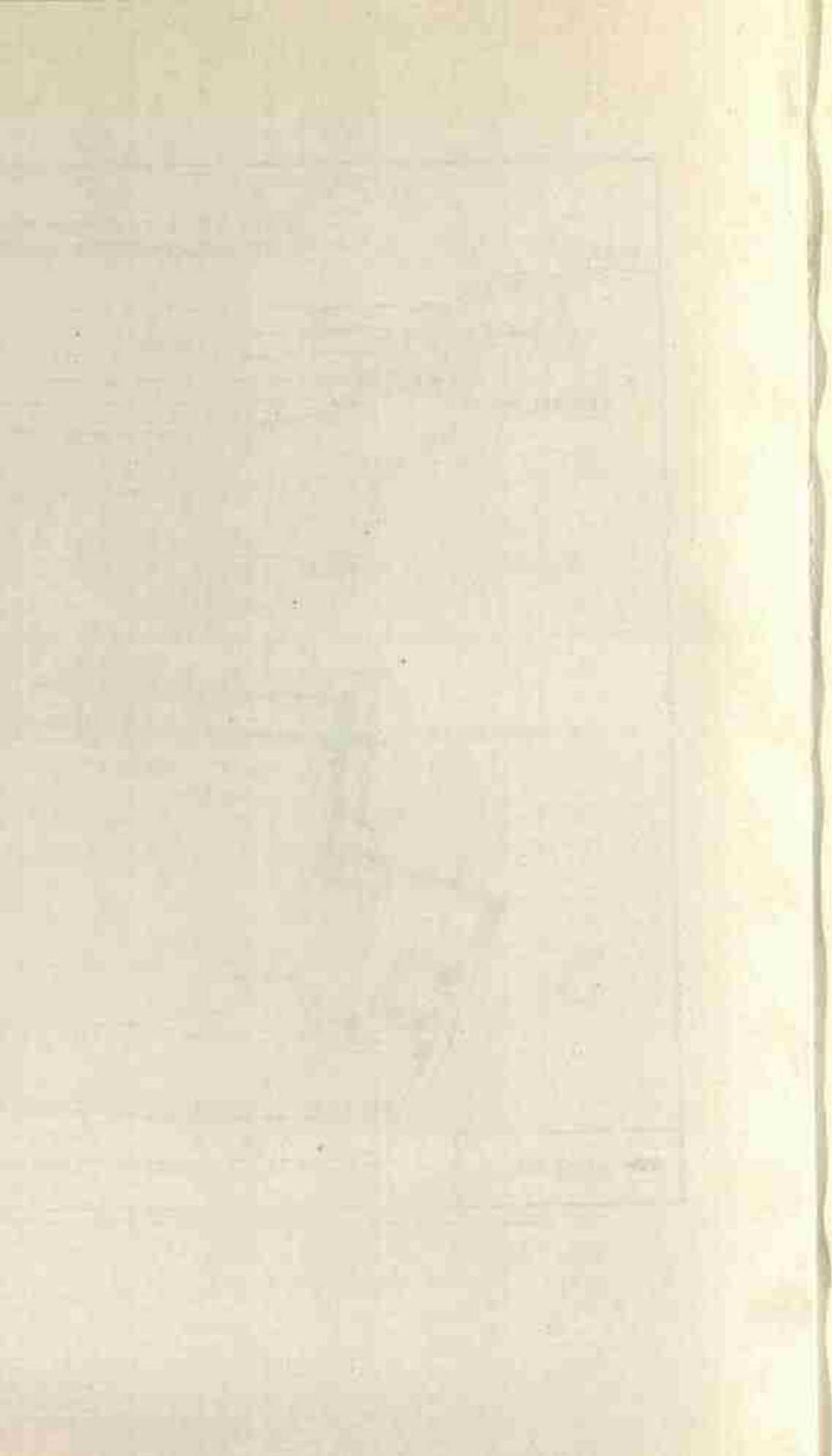


FIG. 17



ŚRĪNGAVERAPURA 1977-86

SVP-4, SECTION OVER S.W. PART OF INTERCONNECTING CHANNEL-2

LOOKING EAST

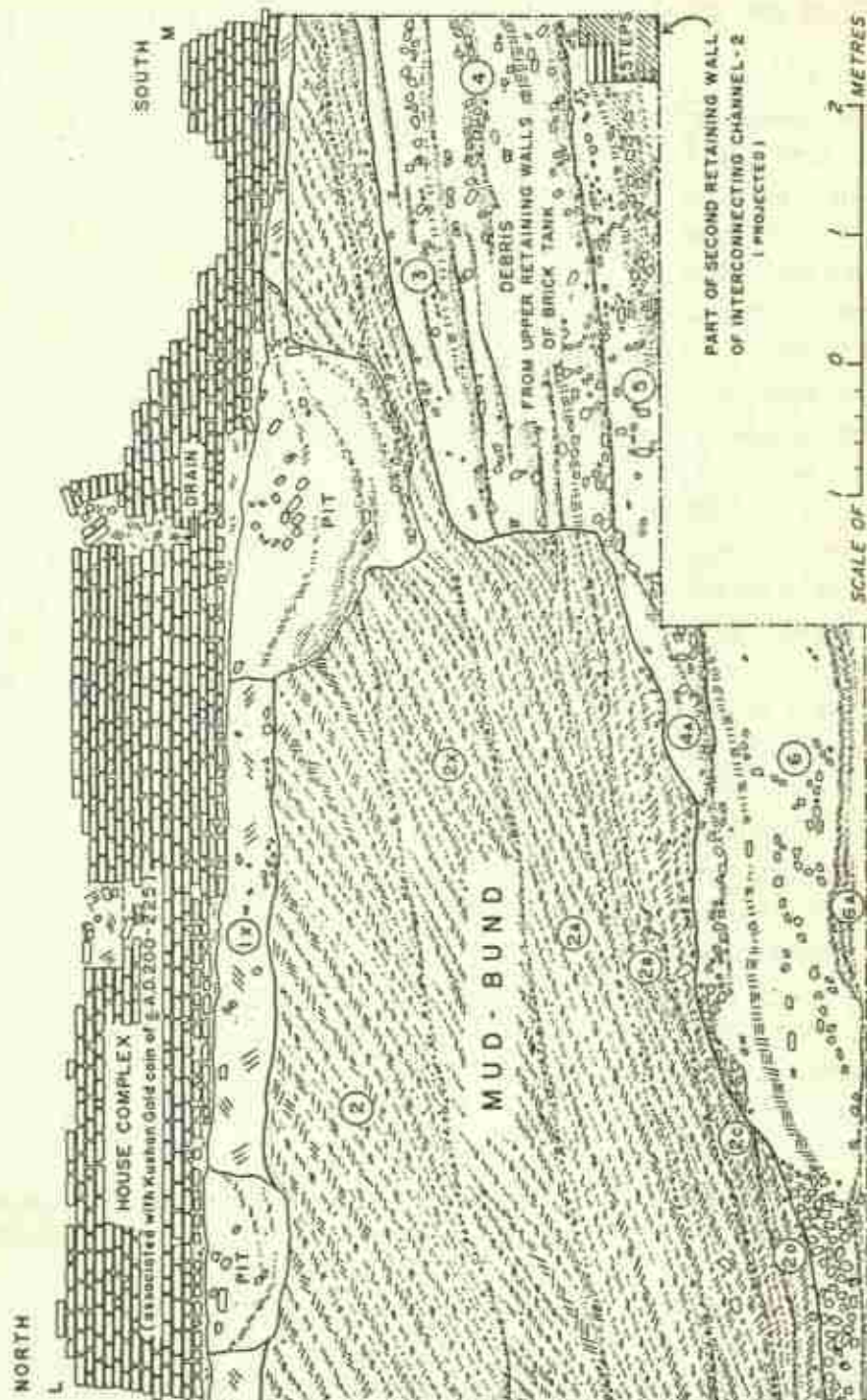


Fig. 18

CHAPTER VI

SIZES OF BRICKS USED IN THE TANK-COMPLEX—A REFLECTION

As mentioned earlier (p. 24), bricks of two different sizes had been used in the construction of the Brick Tank. First, there were the large-sized bricks, which appear to have been used mostly at places where the water was expected to fall on or flow over them, as for example in that part of Tank A where the water used to descend from the Inlet Channel (pl. XVI) or in the floor and steps of Interconnecting Channel-1 (pl. XIX). Then there were the relatively smaller bricks, used in the retaining walls, steps, etc. The number of bricks of the former category was very limited—perhaps a couple of hundred all over the tank, and their size was also uniform, viz. $64 \times 48 \times 12$ cm.

Of the other category, the number was immensely large—maybe in millions. While some of the bricks were of exactly the same size, some others were of a slightly different size, and still some others of a third size, and so on. But the *inter se* variation was not very great. Thus, their length ranged from 41.5 to 44 cm, the breadth from 27 to 28.5 cm and thickness from 5.5 to 7 cm. There is, however, an indication that these bricks had been prepared out of moulds. Now, if the bricks had been made with the help of moulds, it is self-evident that the dimensions of the moulds themselves varied. The basic question, then, is : why should the dimensions of the moulds have varied, for one expects the moulds at least to be of some standard size? While there is no doubt about some sort of standardization of the size, since the length, breadth and thickness vary only within a limited maximum and minimum (that is to say, do not go very far out this way or that), the standardization itself is not 'absolute', such as, for example, is seen in the bricks of the Indus Civilization, which have a set size of $30 \times 15 \times 7.5$ cm or $40 \times 20 \times 10$ cm (ratio 4 : 2 : 1).

The next question that would then arise is : how were the brick-moulds at Śrīngaverapura measured up? In this context it may be recalled that, ascribable to the early historical times (say from 6th-5th century B.C. to the 3rd-4th century A.D.), we do not have any 'scale' with regular divisions and sub-divisions marked on it,¹ such as we have in the case of the Indus Civilization. It is, therefore, evident that some other mode of measurement was used. A look at ancient Indian literature seems to give the answer. In it there is no reference to any standard 'scale', with its marked-out divisions, etc. On the other hand, it is the parts of the human body that provided the basis for brick-measurements (and evidently for measurement of other objects too). Thus, for example, the *Śatapatha Brāhmaṇa* refers to bricks having the length of the foot, cubit/forearm and even the thigh-bone.²

¹At least I have not seen any such scale coming from the early historical levels. But if any one has come across such a scale, I would be only too obliged for the information.

²Eggeling, Julius. 1963. *The Śatapatha Brāhmaṇa*, The Sacred Book of the East, vol. XLIII (ed. F. Max Muller), p. 137. Reprinted by Motilal Banarsidass, Delhi.

SIZES OF BRICKS USED IN THE TANK-COMPLEX — A REFLECTION

However, it is the *Arthaśāstra* that gives in great detail the units of measuring space.¹ The same are reproduced below:

8 atoms (<i>Paramāṇvaḥ</i>)	are equal to	1 particle thrown off by the wheel of a chariot
8 particles	..	1 <i>likshā</i>
8 <i>likshās</i>	..	the middle of a <i>yūka</i> (louse) or a <i>yūka</i> of medium size
8 <i>yūkas</i>	..	1 <i>yava</i> (barley) of middle size
8 <i>yavas</i>	..	1 <i>āṅgula</i> ; the middlemost joint of the middle finger of a man of medium size may be taken to be equal to an <i>āṅgula</i>
4 <i>āṅgulas</i>	..	1 <i>dhanurgraha</i>
8 <i>āṅgulas</i>	..	1 <i>dhanurmushṭi</i>
12 <i>āṅgulas</i>	..	1 <i>vitasti</i> or 1 <i>chhāyāpauruṣa</i>
14 <i>āṅgulas</i>	..	1 <i>sama</i> , <i>śala</i> , <i>pariraya</i> , or <i>pada</i>
2 <i>vitastis</i>	..	1 <i>aratni</i> or 1 <i>prājāpatya hasta</i>
2 <i>vitastis</i> plus	..	1 <i>hasta</i> used in measuring balances and cubic measures, and pasture lands
1 <i>dhanurgraha</i>	..	
2 <i>vitastis</i> plus	..	1 <i>kishku</i> or 1 <i>kāmsa</i>
1 <i>dhanurmushṭi</i>	..	
42 <i>āṅgulas</i>	..	1 <i>kishku</i> according to sawyers, blacksmiths and used in measuring the grounds for the encampment of the army, for forts and palaces
54 <i>āṅgulas</i>	..	1 <i>hasta</i> used in measuring timber forests
		1 <i>vyāma</i> , used in measuring ropes and the depth of digging, in terms of a man's height
4 <i>aratnis</i>	..	1 <i>daṇḍa</i> , 1 <i>dhanus</i> , 1 <i>nālika</i> and 1 <i>pauruṣa</i>
108 <i>āṅgulas</i>	..	1 <i>gārhapatya dhanus</i> (i.e., a measure used by carpenters called <i>grihapati</i>). This measure is used in measuring roads and fort-walls

Since the bricks are large, the smaller units of measurement, viz. those from *paramāṇu* (atom) to *yava* (barley) will not be of any use in their case. It is the units from the *āṅgula* upwards, through *dhanurgraha* (=4 *āṅgulas*), and *vitastī* (span) to *hasta* (cubit/forearm), that would be applicable in the case of the bricks.

In the absence of any standardized 'scale' as such from the early historical levels, one has to test whether the bricks during this period were sized up in terms of the *āṅgula*, *dhanurgraha*, *dhanurmushṭi*, *vitastī*, *hasta*, etc.

¹Shamasastri, R. 1915. *Kautilya's Arthaśāstra*, pp. 131-32.

Table showing measurements of *angulas*, *vitasti*, etc., of some individuals

Sl. no.	Name	Father's name	Locality	Age	Height	4 <i>Angulas</i>	1 <i>Vitasti</i>	1 <i>Hasta</i>
1.	Shri Shrinarayan	Shri Tej Mani	Sringaverapura	22	170.5	7.9	22.1	46.8
2.	Shri Nand Lal	Shri Kallu	Ram Chaura	24	164.8	7.8	21.8	47.8
3.	Shri Ram Raj Yadav	Shri Bindeshwari Pd. Yadav	Moharabe	22	164.5	7.2	21.4	46.0
4.	Shri Rama Shankar	Shri Biraha	Shyampur	19	168.5	7.3	22.2	46.0
5.	Shri Lallan Pande	Shri Chhotey Lal Pande	Sringaverapura	26	170	7.4	20.5	44.5
6.	Shri Ramji Misra	Shri Ram Achraj Misra	Ram Chaura	28	168	7.3	21.0	46.4
7.	Shri Phool Chandra Misra	Shri Ram Kishore Misra	Mallan-ka-pura	22	160	7.3	21.4	43.8
8.	Shri Ram Singh Yadav	Shri Ram Dass Yadav	Kanjia	22	164	6.9	21.6	43.6
9.	Shri Sukh Ram	Shri Ram Charan	Shyampur	25	165	7.9	20.0	42.3
10.	Shri Onkar Nath Yadav	Shri Chhote Lal	Guru-ka-pura	27	172	7.5	21.0	45.5
11.	Shri Narendra Deo Misra	Shri Mahatam Misra	Bishampur	24	159	6.5	18.0	42.0
12.	Shri Ramesh Chandra Shukla	Shri Deonath Singh	Sambharpur	24	169.0	7.4	24.3	48.2

Age in years; and height, etc. in centimetres

Was there any 'fixed size' of the *aṅgula*, *vitasti*, *hasta*, etc? Evidently not. For had it been so, it would have led to a 'standard scale', with its divisions, sub-divisions, etc. The statement that the *aṅgula* is equal to 'the middlemost joint of the middle finger of a man of medium size' can at best be a generalized one. It does not lead to any kind of 'absoluteness'.

To study this aspect in depth measurements were taken of the *dhanurgraha* (4 *aṅgulas*), *vitasti* (span), *hasta* (cubit/forearm), etc. of a large number of persons working at Śrīngaverapura. A dozen of these are given in the attached Table (p. 42).

From this Table it would be seen that the measurements of the *dhanurgraha* (4-*aṅgula* unit), *vitasti* (span) and *hasta* (cubit/forearm) vary from person to person. Further, it may also be observed from the Table that, contrary to what even the *Arthaśāstra* says, 12 *aṅgulas* of the same person do not exactly make his own *vitasti* (span), nor are his two *vitastis* (spans) always exactly equal to his *hasta* (cubit/forearm).

With this background, if we now have a second look at the brick-sizes of the tank, we will perhaps get the answer for the marginal variations in their length, breadth and thickness. As already stated, millions of bricks had been used in the construction of the tank; and it is evident that no single kiln-owner could have supplied them. It is, therefore, a reasonable assumption that there were many suppliers. Now, supposing that they had been told to supply bricks measuring X *aṅgulas* (or *vitastis*, etc.) in length, Y *aṅgulas* in breadth and Z *aṅgulas* in thickness, one can well imagine the outcome. Since the size of the *aṅgula*, *vitasti*, *hasta*, etc. varied from one supplier to another (or for that matter from one craftsman to another, actually put on the job), the sizes of the bricks thus produced *would not be exactly the same* in all cases, but would vary in terms of our modern units of measurements, viz. centimetres and metres or inches and feet. Yet these would be regarded as 'standard' bricks from the point of view of the supplier who prepared his mould in terms of X, Y and Z *aṅgulas*, as per the order given to him.

To check up if such an explanation would work, quite a few bricks of the tank were actually measured up in terms of *aṅgulas*, *dhanurgraha*, *dhanurmushti*, *vitasti*, *hasta*, etc. and the accompanying photographs (pls. LXXVII-LXXVIII) give the answer.

The above, to my mind, explains the bewildering phenomenon, noted not only at Śrīngaverapura but also at other early historical sites in India, of marginal variations in the length, breadth and thickness of the bricks even though they might otherwise be considered to constitute a standard 'group'.

CHRONOLOGY OF THE TANK-COMPLEX

Had we got dated inscription affixed to the Brick Tank, such as for example has been found in the case of the tank at Mathurā¹, we would have been in a position to date the Śrīngaverapura tank-complex securely. That being not the case, we have to fall back upon the evidence of seals, sealings and coins recovered from the tank-complex itself, or from the contemporary houses in the habitation area, or from the house that came into being at the very site of the tank-complex after its total abandonment.² Luckily, the evidence from these different sources is quite consistent and, therefore, we can be reasonably certain of the dating thus arrived at.

We may perhaps take up the seals and sealings first. While no seal/sealing was found in the Brick Tank, there is a seal (pl. LXXIX C) which came from a deposit later than the destruction of the Brick Tank but earlier than the construction of the Mud Tank. It bears an inscription (*Śavarakasya*, i.e. of someone called Śavaraka) in Brāhmī characters of *circa* A.D. 100 or, in broad terms, of a period not later than the first half of the second century A.D. This would indicate that the Brick Tank had gone into disuse by the end of the first century A.D.

No seal is directly associated with the Mud Tank. However, there are two seals which are later than the Mud Tank but earlier than the large structural complex that came up at the very site of the Mud Tank. Of these, the one reading *Jyeshthasya*, (i.e. of Jyeshtha) (pl. LXXX A) is assignable to the first half of the second century A.D. The inscription on the other seal is partly obliterated (pl. LXXX B). However, on palaeographic grounds, it may be dated to the middle or second half of the second century A.D. or somewhat later. (For the stratigraphic position of this seal please see fig. 13).

In this context we may also consider the evidence from another seal (pl. LXXX C) which was obtained from a deposit of yellow earth with *kankar* immediately underlying the earliest wall of the house-complex that had been put up subsequently over the very area once occupied by the Mud Tank. From the nature of the deposit it appears that it may have been put up for the levelling of the area at the time of the construction of the house-complex. Since on palaeographic grounds this seal is ascribable to *circa* A.D. 200 or somewhat later, it is self-evident that by about that time even the Mud Tank had become a thing of the past.

That the overlying house-complex (pls. XLVIII and XLIX) came into existence not later than the first half of the third century A.D. is indicated by the discovery of a gold coin (pl. LXXXI C) from it (fig. 13; pl. LI). This coin belongs to a late Kushan king, 'Vāsu', who succeeded Kanishka III. Computing on the basis of the more widely accepted date for the accession of Kanishka I as A.D. 78, the 'Vāsu' of our coin may have come to the throne around A.D. 200. Since the coin is not in a mint condition, the structural Sub-phase 2, from which it comes, may be dated to *circa* A.D. 250.

¹*Indian Archaeology 1974-75—A Review*, p. 50.

²For a detailed discussion on these seals/sealings and coins, please see Chapters X and XI respectively.

That this dating is in order is corroborated by the occurrence of a sealing (not illustrated here) ascribable to A.D. 300 or thereabouts in a late structural sub-phase of this house-complex (cf. fig. 13 again).

The cumulative evidence of the seals, sealings and a coin so far discussed shows fairly clearly that the various structural phases of the house-complex which came up subsequently over the very area which was once occupied first by Brick Tank and then by the Mud Tank is assignable, in broad terms, to the third century A.D., and that its beginning may be placed some time in the first half of that century. Since there is a time-lag between the end of the Mud Tank and the beginning of the aforesaid house-complex, the end of the Mud Tank may have occurred some time in the last quarter of the second century A.D. As seen above, this dating is also validated by the occurrence of a seal ascribable to the middle or second half of the second century A.D. in a deposit posterior to the use of the Mud Tank. As mentioned earlier, the seal bearing the inscription *Śavarkasya* in characters of the first half of the second century A.D. lay in a deposit earlier than the beginning of the Mud Tank but later than the destruction of the Brick Tank. This would indicate that the Mud Tank had a very short life, say from some time in the first half of the second century A.D. to its end.

Since the last-mentioned seal is later than the destruction of the Brick Tank and there is again a time-lag between the destruction of the Brick Tank and the construction of the Mud Tank—as represented, for example, by the deposits of debris and silt (cf. figs. 11 and 18; pls. LXVIII, LXIX, etc.), the end of the Brick Tank may have occurred anywhere around A.D. 100.

So far so good. But when did the Brick Tank begin? As mentioned earlier, this tank has not yielded any seal. There are, however, quite a few coins from it. But unfortunately these are mostly corroded, which is evidently due to the fact that these were of copper (a metal easily vulnerable to corrosion) and lay in the moist soil of the tank. Anyway, two of these can be identified. One is an uninscribed cast copper coin (pl. LXXXI A, 1), found in the debris overlying the landing above the lowest set of steps in the eastern part of Tank C. For the exact dating of the Brick Tank, however, this coin is not very helpful, since from the evidence of the Habitation Area (SVP-1) it is seen that this type was in use for a very long period, viz. from about the third century B.C. to the beginning of the Christian era. The other coin (pl. LXXXI A, 2), however, gives a somewhat better focus. It resembles the Mathurā coins of Rājuvula and Soḍasa, who, according to Allan, may have ruled in the second half of the first century B.C.¹ It may mean that our coin also may have to be placed about that time.

Since the foregoing is the lonely evidence for dating the Brick Tank on the basis of the finds from the tank itself, we may look round and see if the evidence from the habitation areas can be of any help.

The pottery recovered from the Brick Tank is similar to that found in certain layers of the Habitation Area called SVP-1. Of these, a late layer yielded a coin of Wima kadphises (A.D. 50-78; pl. LXXXI B, 4). There also occurred a coin of the same king in the brick-debris of the house to which the aforesaid coin-bearing layer belonged. This would mean that this particular house came to

¹Allan John. 1936. *Catalogue of the Coins of Ancient India*, pp. 187, 190-91.

an end before the close of first century A.D. After this there is also a break of occupation at SVP-1 which may have coincided with the destruction of the Brick Tank. This evidence would corroborate the afore-mentioned evidence from the Brick Tank itself, both indicating that the Brick Tank may have come to an end towards the close of the first century A.D.

In this context we may consider the evidence from another house-complex which, during the course of the excavations, we had begun to nickname a 'palace' because of its immense size. It lay about 25 metres to the east of the northern part of Tank B (fig. 4). It may further be added that the outermost wall of the house, on the tank-side, was parallel to the retaining walls of the Brick Tank, suggesting that this house-complex and the Brick Tank were parts of the same planning and constructional activity. That the two were contemporary is again confirmed by the fact that the pottery from this large-sized house is similar to that from the Brick Tank itself. Associated with this house is a copper coin of the Kosala king Dhanadeva (pl. LXXXI B, 3). A terracotta sealing bearing the name (*dha*)nadeva (pl. LXXIX B) has also been found from this very area, though its stratigraphy is disturbed. On the basis of the coin and sealing, it appears most reasonable to assume that this house was in existence during the time of Dhanadeva, who may have ruled some time in the second half of the first century B.C.¹ From the foregoing it would follow that the Brick Tank too may have been constructed some time in the second half of the first century B.C.

To sum up. Although without direct inscriptional evidence one cannot be too sure of the dates given below, there appears to be a reasonable chance of their being near the mark, with a slight margin on either side.

Brick Tank	From some time in the second half of the first century B.C. to the end of the first century A.D.
Mud Tank	From some time in the first half of the second century A.D. to its end.
Late Kushan House-complex	Third century A.D.

¹Lal, B.B. and Sharma, K.K. 1990. The Date of king Dhanadeva of Kosala : A Re-examination of the Palaeographic and Historical Evidence, *Puratatva*, no. 19, pp. 38-42.

CHAPTER VIII

PROBABLE AUTHORSHIP OF THE BRICK TANK

Although we have a fairly reasonable evidence to show that the entire tank-complex had come to an end before the beginning of the third century A.D.—the Brick Tank dating from some time in the second half of the first century B.C. to the end of the first century A.D. and the Mud Tank from some time in the first half of the second century A.D. to its end (above, pp. 44-46), there is no clear evidence about who caused this complex to be built. In particular, one would like to know about the authorship of the Brick Tank which is indeed a unique example of ancient hydraulic engineering.

There were probably no independent public organizations those days which, on their own, could have got this tank erected. It perhaps needed the patronage of or even direct efforts by someone having huge funds, organizational authority and technical back-up to get such a huge work executed. Considering the set-up of those days, the only probable authority that could have done it was a king. Śrīngaverapura is not known to have been an independent kingdom during the early historical times, much less during the time of our tank. Thus, we have to look for patronage elsewhere. In all likelihood, the Kosala kingdom, with Ayodhyā as its capital, seems to have extended southwards up to the Gaṅgā, and included Śrīngaverapura under its sway. Perhaps it was one of the rulers of Ayodhyā who may have got this tank built at Śrīngaverapura—a place which had both religious as well as strategic significance. It was hallowed because it was here that Śrī Rāma, accompanied by Sītā and Lakshmaṇa, crossed the Gaṅgā. Strategically, Śrīngaverapura was important from both the economic as well as political points. Most of the goods moving between the Kosala and Vatsa kingdoms (the latter of which lay to the south of the Gaṅgā, occupying the *doāb*), are likely to have been ferried across the Gaṅgā at Śrīngaverapura—evidently a noteworthy ferry-point since the days of the Nishāda chieftain Guha. By the same token, it had political and military importance too. In order to keep at bay the Vatsa rulers, the Kosala kings must have made Śrīngaverapura a seat of some important officer who could ensure proper administration locally and keep a watch on what was happening across the Gaṅgā on the south. An allied necessity must have been to have some sort of a military outpost, ready for use in times of emergency. In fact, all these factors must have indirectly contributed to the growth of the Śrīngaverapura township during the post-Mauryan times when Kosala became once again important under the Śuṅgas.

But we come back to the primary enquiry, viz. which king was it who is likely to have constructed this tank? We know the names of some of the kings who ruled at Ayodhyā during the second half of the first century B.C. and the first half of the first century A.D. Of them, the most likely one who may have undertaken such a large-scale construction seems to be Dhanadeva. This idea comes to the mind not because of any direct evidence, inscriptional or otherwise, at our disposal, but on grounds of what may be termed as an indirect probability in the absence of a better one. This king had a *ketana* (shrine/building) constructed in the memory of his father, which event was so important as to merit a perpetual record, namely, the well-known inscription discovered at Rānopālī,

a suburb of Ayodhyā. A fresh analysis of the evidence suggests that he may have ruled in the second half of the first century B.C. and not at the beginning of the first century A.D.¹ Since Śrīngaverapura has also yielded a coin (pl. LXXXI B, 3) as well as a seal (pl. LXXIX B) of Dhanadeva from a large building complex contemporary with the Brick Tank, the surmise that Dhanadeva or, on his behalf, his local administrator may have been responsible for the construction of this tank may not be altogether unwarranted.

As mentioned elsewhere (p. 23), there are two stone blocks jutting out from the side-walls of the Inlet Channel between the Silting Chamber and Tank A (cf. fig. 8; pls. X and XI). Most likely these ran across the channel to form a sort of sill over which water must have passed in the process of entering Tank A. Major portions of these stones have been taken away by those who robbed the adjacent brick walls. It is likely that these stone-blocks carried some inscription indicating the name of the person who got the tank constructed as also other details like regnal year, etc. Such a stone-inscription had been affixed to the tank of a comparable period at Mathurā.² However, all our attempts to trace these robbed portions of the stone slabs, at the site and its neighbourhood, proved futile. But chances that some one may still hit on these slabs cannot and should not be ruled out.

To sum up. Although it seems to be a reasonable surmise that it may have been king Dhanadeva of Kośala who got this Brick Tank constructed, let it be confessed that this would remain nothing more than a guess. The question of the authorship of the tank can be settled satisfactorily only with an inscriptional evidence.

¹Lal, B.B. and Sharma, K.K., 1990. The Date of King Dhanadeva of Kosala : A Re-examination of the Palaeographic and Historical Evidence. *Puratattva*, no. 19, pp. 38 ff.

²*Indian Archaeology 1974-75—A Review*, p. 50.

CHAPTER IX

COMPARATIVE STRATIGRAPHY OF THE VARIOUS DEPOSITS IN THE TANK-COMPLEX

Before embarking upon the description of the pottery, terracotta figurines, seals, sealings, coins and other finds from the tank-complex, it appears necessary to discuss the comparative stratigraphy of the various deposits in this complex so that one may get an idea as to which of these belonged to the life-time of the Brick Tank, which were associated with its destruction and which got accumulated in and over it after the destruction.

It may also be noted that even these last-named deposits were anterior to the construction of the Mud Tank. After even the Mud Tank had been abandoned and perhaps forgotten, there came up at the very site a large residential complex, assignable to the third century A.D. Thus, based on the deposits they come from, the finds have to be assigned their relative horizons. Hence the need for an overview of the layers/deposits that lay in the tank-complex.

As may be expected, not all the deposits in the various parts even of the Brick Tank were uniform. Thus, whereas the Feeding Channel contained by and large the silt brought in by the water of the river, in the Silting Chamber there occurred, besides the above-mentioned silt, some debris, fallen from the brick-lining at its southern rim. Tank A had an initial deposit of silt contemporary with its life-time. It was followed by debris fallen from the retaining walls at the time of their destruction. To cap it all, there was a deposit of silt-and-sand which got accumulated after its abandonment.

In Tank B, however, there was a much greater accumulation of the above-mentioned silt-and-sand layers, which at places measured up to 3 m in thickness (fig. 11). It overlay the debris fallen from the retaining walls after their destruction. With the debris was intermixed clay emanating from the natural soil behind the retaining walls. Below this debris-cum-clay there was about 50-cm thick deposit of greyish or yellowish-grey, fine silt brought in by the river-water.¹ Although most of the silt must have been left behind in the Feeding Channel, Silting Chamber and Tank A, with the various devices used in these segments, yet fine silt, though limited in amount, could have still found its way into Tank B. The pottery, terracottas, etc. recovered from this silt (which preceded the destruction-debris layer) ought to be regarded as belonging to the life-time of the Brick Tank, although, of course, some of the pre-existing i.e. pre-tank material could also have found its way into the tank, sliding from the sides.

The Brick Tank was destroyed most presumably by a heavy flood in the Gaṅgā. This flood took a much heavier toll of the western side of the Brick Tank, since the water flowing through the Inlet Channel must have moved straight on to the western side of Tank B, there being relatively lesser pressure on the eastern side where in the south-east corner as many as four retaining walls still exist

¹From this silt were recovered fresh-water shells identified as *Viviparus benoalensis*(Lamarek) by Professor S.B. Bhatia, Chairman, Centre of Advanced Study in Geology, Punjab University, Chandigarh. For details, please see Appendix II. To him the author's grateful thanks are due for this help.

(pls. XXXIX-XL). Thus, in the southern part of Tank B, specially near Interconnecting Channel-2, one finds relatively less destruction-debris and more of post-disuse layers of silt (fig. 13). Though these layers are partly similar to those constituting the enormously thick deposit of silt-and-sand in the northern part of Tank B and partly have localized traits, from the stratigraphic point of view, both the sets, viz. in the northern as well as the southern parts, are posterior to the life-time of the Brick Tank. Only a 60-70-cm thick deposit of yellowish/yellowish-grey silt sitting on the bed of the southern part of Tank B can be regarded as belonging to the period when the Brick Tank was in actual use.

The story of the layers in Tank C is also somewhat different. Here we have a basal deposit of greyish silt, 50-70 cm in thickness, which goes with the life-time of the tank. At places, particularly in the eastern and southern parts, destruction-debris and silt overlie this life-time deposit. However, in that part of Tank C which was close to Interconnecting Channel-2 there are layers of post-life-time silt (pl. LII), though these are not quite the same as those constituting the silt-and-sand deposit in the northern part of Tank B.

There is, however, another feature which may be noted in respect of Tank C. Here the debris from the upper retaining walls kept on falling during the period of desertion. Thus, one finds a sizeable deposit of this debris overlying the post-life-time silt referred to above (cf. pl. L).

As already mentioned earlier (above, p. 38), some time after the desertion of the Brick Tank, an attempt was made to put another tank, smaller in size and fed not by the river but by the rains. It has been named as Mud Tank, since on the western and southern sides a Mud Bund was provided (figs. 11, 17 and 18). On the eastern side, however, the upper retaining walls of the Brick Tank were still available (fig. 17). On the northern side, a cross-wall of bricks and a platform with mud core and brick-facing were provided. Since the earth used in the construction of the Mud Bund had been obtained from the neighbourhood, it contained a good deal of material which antedated the tank-complex, though some of the material could have belonged to the builders themselves. However, the material recovered from the silt within this Mud Tank has by and large to be assigned to its life-time.

Although the recording of each antiquity was done in terms of the Square, Quadrant and Layer it came from (including, of course, its three-dimensional position in the trench), it would not be well worth while to mention these details in respect of each find,¹ since the reader would not be able to make out on his own what these field-details from each trench mean in terms of an overall picture. The same would apply to the pottery. It would, therefore, be more appropriate to group the various aforementioned layers/deposits in terms of the life-time of the Brick Tank, its destruction and its subsequent abandonment. Likewise, a grouping can be done of the layers/deposits relating to the Mud Tank, viz. those constituting the make-up of the Mud Bund, those associated with the life-time of the Mud Tank and those following its disuse. Then there are, of course, the layers associated with late Kushan house-complex, all of which are clearly posterior not only to the Brick Tank but also to the Mud Tank. The grouping of the layers would thus be as follows:

¹These details have, however, been given in respect of the seals, sealings and coins (Chapters X and XI below), since these finds are of vital importance in fixing up the chronology of the tank-complex. In each case the relationship of the layer concerned with the history of the Brick Tank/Mud Tank/late Kushan house-complex has been discussed.

COMPARATIVE STRATIGRAPHY OF DEPOSITS

Tank A:

- Group A: Silt in Tank A that got deposited during its life-time.
- Group B: Debris-and-clay accumulation in Tank A, associated with its destruction and following the same.
- Group C: Silt-cum-sand deposit in Tank A, overlying the above-mentioned debris-and-clay accumulation.

Tank B. northern part :

- Group A: Silt in the northern part of Tank B that got deposited during its life-time.
- Group B: Debris-and-clay accumulation in the northern part of Tank B, associated with its destruction and following the same.
- Group C: Thick silt-cum-sand deposit in the northern part of Tank B, overlying the above-mentioned debris-and-clay accumulation.

Tank B. southern part:

- Group A: Silt in the southern part of Tank B that got deposited during its life-time.
- Group B: Debris-and-clay accumulation in the southern part of Tank B associated with its destruction and following the same.
- Group C: Layers of silt in the southern part of Tank B, overlying the above-mentioned debris.

(Note: Since in certain areas of the southern part of Tank B there is no clear-cut separation between the destruction-debris and the subsequent silt, Groups B and C have been clubbed together. For example, in the Section illustrated in fig. 13.)

Tank C:

- Group A: Silt in Tank C that got deposited during its life-time.
- Group B: Silt-and-debris layers in Tank C associated with its destruction and following the same.
- Group C: Thick deposit of debris overlying the above-mentioned silt-and-debris layers.

Mud Tank :

- Group D: Make-up of the Mud Bund.
- Group E: Life-time deposit in the Mud Tank.
- Group F: Deposit later than the Mud Tank but earlier than the late Kushan house-complex.

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Late Kushana house-complex:

Group G: For the present purpose all the layers associated with the late Kushan house-complex, irrespective of the structural sub-divisions, have been put under this Group.

To summarize the foregoing analysis. While the pottery and other antiquities coming from the Group A layers in Tank A, in the northern and southern parts of Tank B and in Tank C are naturally co-eval with the Brick Tank, it is equally likely that most of those coming from the Group B layers may also have been contemporary with it, finding their way into the Brick Tank at the time of its destruction or soon thereafter. However, of the objects recovered from the Group C layers some may have been contemporary with the Brick Tank, but some others may have belonged to the interval between the Brick Tank and the Mud Tank. That the objects found in the Groups B and C layers are anterior to the Mud Tank is, however, self-evident, since both these deposits underlie the Mud Bund.

Most of the objects found the make-up of the Mud Bund (Group D layers) pertain to an earlier period since they formed part and parcel of the strata from which the earth had been dug for making the Bund. However, a few of the finds from this make-up may have belonged to the builders themselves. Objects found in the layers (Group E) inside the Mud Tank will, however, have to be treated as its contemporary, barring, of course, those which may have slipped into these strata from the make-up of the Bund itself. The chronological horizon of the antiquities found in the deposits (Group F) intervening between the end of the Mud Tank and the beginning of the late Kushan house-complex is clearly self-explained.

All the layers associated with the late Kushan house-complex, irrespective of the structural subdivisions, have been clubbed together, for the present purpose, under Group G.

Thus, from the earliest to the latest, the Groups are from A to G.

CHAPTER X

SEALS AND SEALINGS

Let it straightaway be mentioned that no seal or sealing was found in the Brick Tank. There is, however, a seal (pl. LXXIX C) which came from a deposit later than the destruction of the Brick Tank but earlier than the construction of the Mud Tank. Directly associated with the Mud Tank there is no seal. But we do have two seals (pl. LXXX A and B) which are later than the Mud Tank but earlier than the late Kushan structural complex. We also have a seal (pl. LXXX C) which appears to belong to the levelling material put up at the time of the construction of the aforesaid late Kushan house-complex.

As stated in the opening sentence, we do not have any seal/sealing directly associated with the Brick Tank. We have, therefore, taken the liberty of including in the present discussion a few sealings (pl. LXXIX A) from the habitation area marked as SVP-1. These come from layers the pottery from which is comparable with the pottery from the Brick Tank. Finally, there is a sealing (pl. LXXIX B) from another large house-complex, which is located to the east of the northern part of Tank B and which, on all available evidence, came into being simultaneously with the Brick Tank (cf. above, p. 46).

Put together, these seals/sealings help us considerably in arriving at the chronological horizons of the Brick Tank as well as the Mud Tank. (For a detailed discussion on the chronology, however, attention is invited to Chapter VII.)

Selected seals and sealings are discussed below :

1. *Reg. no. SVP-1, 898 (pl. LXXIX A, no. 1).*—

Physical description.—Terracotta sealing; roughly circular on plan, max. length 20 mm, max. width 18 mm; roughly plano-convex in section, max. thickness 7 mm; slightly damaged at the back and along a part of the front upper edge. The raised edges, available on the upper and left-hand sides indicate that the seal with which this sealing had been stamped was probably a rectangular one.

Stratigraphic position.—SVP-1, Sq YA 2, Qd.2, layer 6 B. Layers 6, 6A, 6B, 6C, etc. are successive occupational floors associated with a house-complex. In layer 6A, which is slightly later than 6B, a copper coin (pl. LXXXI B, no. 4) of Wima Kadphises (c. A.D. 50-78) was found. Also, associated with this house-complex is a brick-lined soakage pit. The pottery from the aforesaid layers and from the soakage pit tallies considerably with that from the Brick Tank. Hence the utility of this sealing.

The legend, its palaeography and dating.—The inscription reads *Dhanakasa* i.e. of someone called Dhanakṣ. Palaeographically, one may note the thickening of the upper end of the vertical component of *na*, as also of the two ends of its horizontal component. Likewise, the upper end of the vertical component of *ka* is thickened; it thins down towards the lower end. However, as in the case of *na*, in the case of *ka* also the two ends of the horizontal components are thickened. Of the *sa*, the two verticals are nearly equal, while the loop at the bottom takes a somewhat sharp curve.

On palaeographic basis the sealing may be dated to the first half of the first century A.D.

2. Reg. no. SVP-1, 1047 (pl. LXXIX A, no. 2)

Physical description.—Terracotta sealing; oval on plan, max. length 23 mm, max. width 18 mm; roughly plano-convex in section, max. thickness including the raised edges on the front side 9 mm. The outline of the sunken portion indicates that, unlike in the case of No. 1 (above), the seal concerned in this case was oval.

Stratigraphic position.—SVP-1, Sq ZA1, Qd 1, layer 6B. As mentioned in the case of sealing No. 1 (above), the series of layers 6, 6A, 6B, etc. (falling in squares YA 2 as well as ZA 1) are associated with a house-complex, and that layer 6A yielded a coin of Wima Kadphises. Since the pottery from these layers as well as from a soakage pit in the house-complex is similar to that from the Brick Tank, these sealings (as well as the coin) have a bearing, howsoever indirect, on the dating of the Brick Tank.

The legend, its palaeography and dating.—The legend in this case also reads *Dhanakasa*. It may, however, be observed that though the features of the letters of this sealing very closely resemble those of No. 1, the seals with which the two sealings were stamped were different. Like No. 1, this is also ascribable to the first half of the first century A.D.

3. Reg. no. SVP-1, 897 (pl. LXXIX A, no. 3)

Physical description.—Terracotta sealing; oval on plan; max. length 24 mm, max. width 18 mm; roughly plano-convex in section, max. thickness inclusive of raised portion on the front side 10 mm.

The outline of the sunken portion indicates that the seal with which this sealing had been stamped was lenticular.

Stratigraphic position.—SVP-1, Sq YA 2, Qd 2, layer 6B. For discussion, please see the corresponding portion relating to Nos. 1 and 2 (above).

The legend, its palaeography and dating.—The legend reads *Gosalakasa* i.e. of Gosalaka. The first letter, which is not very distinct may also be read as *to*, making the text *tosalakasa*. Palaeographically, the letters are more or less similar to those in sealings Nos. 1 and 2, though not quite as bold as in the case of No. 1. First half of first century A.D.

4. Reg. no. SVP-4, 2130 (pl. LXXIX B).—

Physical description.—Terracotta sealing; appears to have been roughly circular, though a part of it is now damaged; diameter 28 mm. The non-inscribed (reverse) side shows concavity and bears reed-marks. At each of the longitudinal ends on this side there is a hole through which a thread may have passed. The thickness is not uniform: at one end it is 10 mm, while at the other 7 mm.

Stratigraphic position.—SVP-4, Sq ZE 7, Qd 3, layer 2. The sealing comes from the large house-complex located about 25 metres to the east of the northern part of Tank B (cf. fig. 4). The westernmost wall of this house-complex runs almost parallel to the easternmost wall of Tank B and, as already stated earlier (p. 46), this house-complex and the Brick Tank may have come into being

simultaneously. This is further indicated by the fact that the pottery from the lower levels of this house-complex is similar to that from the Brick Tank.

This seal lay in a small deposit which, though marked as layer 2, in fact constituted a part of a large dump. The dump, in turn, was formed by placing alongside a pit the contents of the earlier layers through which the pit had been cut. It is, therefore, likely that the sealing actually belonged to one of these layers, of which layer 5A was contemporary with the earliest wall of the house-complex. It may thus be surmised (not proved) that the sealing under consideration may have been contemporary with the earliest phase of this house-complex. This surmise gains support from the fact that in another part of this very structural complex, there also lay a copper coin of Dhanadeva (pl. LXXXI B, no. 3) in association with the earliest phase.

The legend, its palaeography and dating.—The legend reads ... *nadevasa*. The portion at the beginning is damaged, but it may be reasonable to insert *dha* there. The reading would thus be *Dhanadevasa* i.e. of Dhanadeva. This seems to be in order, since, as already mentioned, a copper coin bearing the full legend *Dhanadevasa* has also been found in the same house-complex.

The horizontal component of the first available letter, viz, *na*, though partly damaged, appears to have been straight and not bent as in the case of most (not all) of the examples occurring in the Rānopālī (Ayodhyā) inscription of the same king.¹ In this context, however, it may also be added that on the copper coin too of Dhanadeva (pl. LXXXI B, no. 3) the lower part of *na* does not show any bend. Though the *da* is partly defaced, it is nevertheless clear that its middle part was curved and not angular, as in the case of the Rānopālī inscription. In this context too, it may be stated that on the coin also (pl. LXXXI B, no. 3) the *da* does not show any angularity. It appears, therefore, that the bend in the horizontal bar of the *na* and the angularity in the middle portion of the *da* were features peculiar to the Rānopālī inscription. This excessive love for angularity (it was already there in the case of *ma* and *va*) may have been the craze of the royal scribe of Dhanadeva who perhaps wanted the letters to look calligraphically more fanciful.

The *va* is angular. But the loop of *sa* is not, which is in contrast to that in the case of sealing No. 1 (above).

One more point deserves to be noted, viz. that whereas in the case of sealing Nos. 1 & 2 mentioning the name of one Dhanaka, the letters show a thickening of the upper part and of some ends there is no such thickening in the case of the sealing of Dhanadeva. This may suggest that the sealing of Dhanadeva may have been earlier than that of Dhanaka, though this need not necessarily be so. In any case, palaeographically the seal of Dhanadeva is ascribable to the second half of the first century B.C.²

¹Sircar, D.C. 1965. *Select Inscriptions bearing on Indian History and Civilization*, vol. I. University of Calcutta, pp. 95-96.

²For a discussion on the date of Dhanadeva, please see Lal, B. B. and Sharma, K.K. 1990. The Date of King Dhanadeva of Kosala: A Re-examination of the Palaeographic and Historical Evidence. *Puratattva*, no. 19, pp. 38-42.

5. Reg. no. SVP-4, 1450 (pl. LXXIX C).—

Physical description.—Terracotta seal; fine clay, grey core, light yellow to greyish slip, well fired, glossy finish. The inscribed surface constitutes a rough rectangle with rounded off corners; max. length 23 mm, max. width 21 mm.

In elevation, the seal is roughly pyramidal, with a max. height of 24 mm. In the upper part of the pyramid there is a hole through which must have passed a thread for suspension.

Stratigraphic position.—SVP-4, Sq G7, Qd 2, layer 10, i. e. it comes from a deposit later than the destruction of the Brick Tank but earlier than the construction of the Mud Tank.

The legend, its palaeography and dating.—The legend, placed below a horizontal conch symbol, reads Śavarakasya. The noteworthy palaeographic features of the various letters are as follows.

The first letter *śa* has a somewhat rounded, instead of angular, top. The inner stroke is more horizontal than oblique. However, more noteworthy is the elongation of the left arm, since generally the two arms are equal or, if one is longer, it is the right one that is so. Ojha shows one example from Kushan inscriptions, in which the left arm is slightly longer than the right one, but it curves out.¹

To me it appears that the lengthening of the left arm is accidental. This has happened because even on the seal (which is the negative) the scribe commenced engraving this letter from the left. This can be verified from the fact that at the starting point of the letter there is a deeper notch whereas at the end of it the line has thinned out. Had the engraving of the letter been started from the right side (which should indeed have been the case in a negative), the elongated arm would have been on the left, and consequently on the right in the positive.

Śa with a horizontal inner stroke occurs in Mathurā and Sāñchī inscriptions dated in the Śaka era from 4 onwards.²

Va is triangular in shape and is almost without any upper stem. Instead, there is a notch at the top. This kind of *va* may also be seen in the inscriptions just mentioned above; and also in other inscriptions of a comparable period.

Ra has a notched top and thickened upper part. It thins out towards the bottom.

In *Ka* the horizontal component is not a straight line. Instead, it is slightly bent on both the left and right sides. The feature of bending down may be seen in the early group of Mathurā inscriptions of the second half of the first century A.D.³

Of *śya*, the *s* is of the looped variety, the loop itself being round and not angular. The *ya* is of the hooked variety. However, its upward end does not rise higher than the bottom of the loop of *sa*. Similar examples may be seen in the Mathurā inscription of Kanishka, dated to year 14.⁴

¹Ojha, G.H. 1971. *Bhāraṭya Prāchīna Lipimālā*, pl. VI, line 4. Reprint. New Delhi: Munshiram Manoharlal.

²Varma, T.P. 1971. *The Palaeography of Brāhmī Script in North India*, pl. V, Tables XXVI-XXVIII. Varanasi: Siddhartha Prakashan.

³Dani, A.H. 1986. *Indian Palaeography*, pl. VIII a, line 1. New Delhi: Munshiram Manohar Lal Publishers Pvt. Ltd.

⁴Sahni, D.R. 1983. Mathura Pedestal Inscription of the Kushana Year 14. *Epigraphia Indica*, vol. XIX, plate between pp. 96-97. Reprinted by Archaeological Survey of India, New Delhi.

As I have mentioned earlier, in this report A.D. 78 has been taken as the date of the accession of Kanishka. The seal under consideration may thus be ascribed to *circa* A.D. 100 or, in broad terms, to a period not later than the first half of the second century A.D.

6. *Reg. no. SVP-4, 2125 (pl. LXXX A).—*

Physical description.—Terracotta seal; fine clay, greyish core, ashy grey slip, well fired. The inscribed surface forms a rough rectangle with somewhat rounded off corners; max. length 28 mm, max. width 20 mm. In elevation, the seal is roughly pyramidal, with a max. height of 24 mm. A little above the middle part of the pyramid there is a hole through which must have passed a thread for suspension.

Stratigraphic position.—SVP-4, Sq G 9 and H 9 (found in the baulk between these two Squares), layer 11. This layer constitutes the uppermost part of the brown deposit in the erosional cup which was formed after the desertion of the Mud Tank. It is, however, earlier than the late Kushan structural complex which subsequently came into being in the area. Hence the seal would be assignable to the time-gap between the end of the Mud Tank and the beginning of the late Kushan occupation.

The legend, its palaeography and dating.—Covering a sizeable part of the rectangular surface of the seal, the legend reads *Jyeshthasya*.

The *ja* has the usual three arms from the lowest of which emerges the loop of *ya*. The medial *e* is drawn in line with the middle arms of *ja*.

In *shja*, the *sh* has an oblique inner line, while the *tha* forms a circle on the left-hand side of the vertical line.

The *sa* in *sya* has a prominent loop. The *ya* is of the hooked variety.

A noteworthy feature of this inscription is the presence of short head-lines, which are discernible in *sha* as well as *sa*. Such head-marks may be seen in the inscriptions from Mathurā and Sāñchī regions, dated in the Śaka years 4 and 18.¹ The same feature occurs in the Mathurā Pedestal Inscription of the year 14 (= A.D. 92).²

On palaeographic ground, therefore, the seal may be dated to *circa* A.D. 100 or more broadly, to the first half of the second century A.D.

7. *Reg. no. SVP-4, 2127 (pl. LXXX B).—*

Physical description.—Terracotta seal; clay not so fine as in No. 6; also not so well fired; brownish core, faint traces of brownish slip. Damaged at places, inscription also only partly legible. The inscribed surface measures 38×36 mm. The elevation is pyramidal, with max. height of 33 mm. There is a hole in the upper part for suspension.

Stratigraphic position.—SVP-4, Sq F9, Qd 1, layer 10 M. Consisting of brown to blackish earth with ashy bands, this layer lay in an eroded part of the Mud Tank. In the Section given on fig.

¹Varma, T.P. *op.cit.* Pl. V, Table XXVI, Columns i and ii.

²Sahni, D.R. *op.cit.*, plate between pp. 96-97.

13, layer 10 M does not appear. However, the stratigraphic position of this seal is indicated by a roughly equivalent layer, viz 10 x. Stratigraphically, therefore, the deposit is later than the actual use of the Mud Tank. It is, however, earlier than the late Kushan structural complex that came into being subsequently in the area.

The legend, its palaeography and dating.—The seal is divided into two registers by means of a horizontal line. In the upper register is the *śrīvatsa* symbol, while in the lower is the legend.

The first letter is damaged. The second is *ka* with the horizontal component drooping down on each side of the vertical. Such a feature may be noticed in the Kosam Inscription of Bhādrāmāgha's reign, year 81.¹ The last letter is *sya* of which *sa* is of the looped variety, though the loop is small and not very distinct. The *ya* is of hooked variety. Noteworthy, however, are the short head-lines above *ka* as well as *sya*, more particularly above the latter.

On palaeographic grounds, the seal may be assigned to the middle or second half of the second century A.D.

8. Reg. no. SVP-4, 2126 (pl. LXXX C).—

Physical description.—Terracotta seal; fine clay incorporating small granules of some dark-brown substance; light brown core, well fired, brownish grey slip; somewhat glossy surface. The inscribed surface forms a rough oval on plan, with the longer axis measuring 48 mm and the shorter 35 mm. In elevation the shape is roughly pyramidal, with a hole in the upper part, through which the thread for suspension must have passed. The height is 31 mm.

Stratigraphic position.—SVP-4, Sq G9, Qd 3, layer 11. Consisting of yellow earth with *kankar*, layer 11 immediately underlay a wall of the late Kushan house-complex. Thus, it is not unlikely that this compact layer may have been put up as the levelling and ramming material at the time of the construction of the house-complex. If that be so, the seal would, in a way, be contemporary with the beginning of the house-complex. In any case, it is later than the Mud Tank.

The legend, its palaeography and dating.—There are two registers, upper and lower, separated by two horizontal lines curving up at the ends and joining each other. The upper register, which is the bigger of the two, contains emblems, while the lower one the inscription. Occupying almost the central part of the upper register is a frontally placed wheel with its hubs and axle. The wheel rests on a sort of pedestal formed by successively increasing four horizontal lines. In the left-hand part is a kind of standard, having a short two-line base, a circular projection a little below the middle part and a relatively large, triangular component at the top.

The lower register contains the legend of which the various letters appear to be as follows: the first is *śri*; the second may be *ha*; the third is *vī*; the fourth is *sva* (to which perhaps *dirgha mātṛā* may have to be added for a proper reading); the fifth may be *si* or *mi* ?; the sixth would have been a clear *ka*, but for the thin vertical stroke which appears to emanate from the right-hand end of the horizontal bar of the *ka* and runs downwards almost parallel to the vertical stroke; the seventh letter appears to

¹Deva, Krishna. 1984. Kosam Inscription of Bhādrāmāgha's Reign: the year 81. *Epigraphia Indica*, vol. XXIV, pp. 253 ff. Reprinted.

be *vo*; the eighth is an unusual letter, but may be read as *ta* if it is argued that the scribe has written it the other way about; the last letter, however, is *kaḥ*. Put together, the legend may perhaps be read as: *śrī ha vi sva sī (mī?) ka vo ta(?) kaḥ*.¹ In view of the uncertain reading no attempt is made here to assign a meaning to the legend.

Palaeographically, one notices two important features. One, that the letters have a head-stroke or serif, and the other that the *mātrās* of the long and short *i* are elongated and curl up at the ends. The latter feature reminds one of the inscriptions from Amarāvati, Jaggayatpetta, Nāgārjunakoṇḍā, etc. in Andhra Pradesh.² There this feature commences from the later half of the second century A.D. and continues well into the third.

On palaeographic grounds, therefore, the seal may be dated to *circa* A.D. 200 or somewhat later. It is difficult to be more precise than that.

¹Professor T.P. Varma of Banaras Hindu University, to whom a reference was made, would like to read the inscription as follows: *Śrī Havisva sika virāh*, meaning 'heros annointed with oblation'. According to him, *havisya* is written here as *havisva*.

²Sivaramamurti, C. 1952. *Indian Epigraphy and South Indian Scripts*, pls. VI, b and c, fig. 73, p. 164. Madras: Madras Government Museum.

CHAPTER XI

COINS

All the coins recovered from the tank-complex, i.e. from the Brick Tank as well as the Mud Tank, are of copper. Shape-wise they fall under two broad categories, viz. circular and square. Size-wise, they are further classifiable into large and small. Altogether about thirty coins have been recovered from the tank-complex. Unfortunately, however, but for a few exceptions they are mostly corroded and are so much defaced that their proper identification becomes almost impossible. The exceptions include a square uninscribed cast copper coin (pl. LXXXI A, no. 1), and a coin which may belong to the Mathurā series, though the identification is not very certain (pl. LXXXI A, no.2). Both these coins would indicate a date prior to the Christian era for the beginning of the tank-complex. However, to get a better time-range, we have included in this discussion three additional coins. These are: (i) a coin of Dhanadeva (pl. LXXXI B, no. 3), which was found in association with a structural complex which, located at a distance of about 25 metres to the east of the northern part of the Brick Tank, seems to have been contemporary with it, as indicated by the pottery-evidence and common lay-out; (ii) a coin of Wima Kadphises (pl. LXXXI B, no. 4) found in a nearby habitation area, SVP-1, where it lay in a layer the pottery from which (as also from a few earlier layers) compares very well with that from the Brick Tank; and (iii) a late Kushan gold coin (pl. LXXXI C) from a house-complex which came into being in the very area in which there had earlier stood successively the Brick Tank and the Mud Tank.

The evidence of these coins would suggest that the Brick Tank may have been built some time in the second half of first century B.C. The disaster that overtook the Brick Tank seems to have occurred some time towards the end of the first century A.D. when the habitation in SVP-1 was also abandoned soon after the accumulation of layers yielding the coins of Wima Kadphises (*circa* A.D. 50-78). The late Kushan gold coin, ascribable to Vāsu or Vāsudeva III (first quarter of third century A.D.) and found in the structural complex that came into being well after the abandonment of the Mud Tank, clearly shows that even the latter (i.e. the Mud Tank) had gone into disuse by *circa* A.D. 200.

Selected coins are described below:

1. *Reg. no. SVP-4, 2572 (pl. LXXXI A, no. 1).—*

Description.—Uninscribed cast copper coin; square, side 14 mm; wt. 2.96 grammes. Though the coin is not in a good state of preservation, yet one may be able to identify an elephant on the *obverse*. There are other symbols too on this side, including probably a *nandipada* facing the elephant and an elongated symbol at the bottom, but their identification is uncertain. On the *reverse* are seen, clock-wise from top left, a hollow cross, a crescent-on-hill, a *nandipada*, and a tree-in-railing.

Stratigraphic position.—SVP-4, Sq G12, Qd 2, layer 8. This deposit consists of debris which overlay the landing above the lowest set of steps in the eastern part of Tank C. Stratigraphically,

therefore, the coin belongs to a phase posterior to the actual use of the Brick Tank. The Mud Tank however, came into being after the deposition of this debris.

Over half-a-dozen cast copper coins bearing similar symbols have been found in the habitation area, SVP-1, from layers which range in point of time from *circa* 3rd century B.C. to about the beginning of the Christian era. This, wide-ranging continuance of the type does not help us much in pin-pointing the precise date of the debris layer. However, even if we take the uppermost time-limit, it would appear that the Brick Tank had gone out of use some time in the first century A.D.

2. Reg. no. SVP-4, 682 (pl. LXXXI A, no. 2).—

Description.—Copper coin, circular, dia 15 mm; wt. 2.10 grammes. The coin is defaced, hence the details are not very clear; yet some identification is possible. *Obv.*: Standing female figure, perhaps that of Lakshmī, facing; traces of some letters of the legend along the circumference, particularly on the left. *Rev.*: again a standing female figure, perhaps Lakshmī. Elephants doing *abhisheka* not clear, at the same time not unlikely because of the presence of something like legs and part of the body on top right.

The coin resembles those of Mahākshatrapa Sodasa.¹ The Class II coins of Rajuvual also have the figure of Lakshmī on both sides.² However, since the inscription on the coin is illegible it is difficult to be sure of a precise identification of the king who issued it.

Stratigraphic position.—SVP-4, Sq ZA2, Qd 2, layer 8. This layer consists of yellowish earth with *kankar* and brick-bats which slipped down into the Brick Tank after its destruction. The coin was found in this deposit where it overlay the damaged top of the Lowermost Retaining Wall. Stratigraphically, the coin is earlier than the deposit of silt-and-sand, and, therefore, much earlier than the Mud Tank.

3. Reg. no. SVP-4, 2156 (pl. LXXXI B, no. 3).—

Description.—Cast copper coin; square, side 20 mm; wt. 2.47 grammes. *Obv.*: Elephant, with probably an inverted-triangle-headed standard in front. The legend above reads *Dhanadevasa* in Brāhmī characters of *circa* second half of first century B.C. (one may compare this inscription with that on the seal of the same king, pl. LXXIX B) *Rev.*: Though there are many symbols, only three are clearly identifiable. These are a *svastika*, about the middle of the top, a tree-in-railing on the right, and a snake along the bottom. In the middle there appears to be a group of four *nandipadas*.

Stratigraphic position.—SVP-4, Sq ZE4, Qd 2, layer 3. Associated with the earliest wall of a structural complex located at a distance of about 25 metres to the east of the Brick Tank and having a related lay-out. The pottery from this structural complex is also similar to that from the Brick Tank. In effect, it would mean that the Brick Tank is contemporary with this coin.

¹Allan, John. 1936. *Catalogue of the Coins of Ancient India*. London: British Museum. pl. XXVI, nos. 14-18, pp. 190-91. Also Smith, V.A. 1906. *Catalogue of Coins in the Indian Museum*. Calcutta, Oxford: Clarendon Press. pl. XXII, no. 13, p. 196.

²Allan, *ibid.* pl. XXVI, nos. 12-13, p. 187.

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Description.—Copper coin, circular, dia 15 mm; wt. 2-10 grammes. The coin is defaced, hence the details are not very clear; yet some identification is possible. *Obv.*: Standing female figure, perhaps that of Lakshmī, facing; traces of some letters of the legend along the circumference, particularly on the left. *Rev.*: again a standing female figure, perhaps Lakshmī. Elephants doing *abhisheka* not clear, at the same time not unlikely because of the presence of something like legs and part of the body on top right.

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Stratigraphic position.—SVP-4, Sq ZE4, Qd 2, layer 3. Associated with the earliest wall of a structural complex located at a distance of about 25 metres to the east of the Brick Tank and having a related lay-out. The pottery from this structural complex is also similar to that from the Brick Tank. In effect, it would mean that the Brick Tank is contemporary with this coin.

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²Allan, *ibid.* pl. XXVI, nos. 12-13, p. 187.

4. Reg. no. SVP-1, 832 (pl. LXXXI B, no. 4).—

Description.—Copper coin, circular, dia 29 mm; wt. 16.08 grammes. *Obv.*: King standing frontally, but head turned to the right, bearded; wearing long rounded cap, long heavy coat, trousers and boots; ribbon flowing from behind the head, right hand over an altar, left held akimbo; close-by in field to right a large club with knobbed handle; up in the same field a partially identifiable monogram; legend in Greek along the circumference, only a few letters clear, e. g. BAC. Though the name of the king is not legible, typologically the coin is ascribable to Wima Kadphises (c. A.D. 50-78). *Rev.*: Bull standing to right; Śiva standing in *tribhaṅga* against the trunk of the bull, with right hand upraised (the usual trident is not clear), and left hand resting on the back of the bull; *nandipada* close to the right-hand field; very faint traces of legend in Kharoshti along the circumference.

Stratigraphic position.—SVP-1, Sq YA 2, Qd 3, layer 6A. This is the uppermost in a series of floors (6A, 6B, 6C, 6D, etc) which have yielded pottery similar to that from the Brick Tank. The house-complex, which began much earlier, appears to have been abandoned after 6A, i.e. after the coin of Wima Kadphises. This appears also to be the time when the tank was destroyed by an unusually heavy flood in the Gaṅgā.

Note.—In the brick-debris of the same house-complex another coin of Wima Kadphises of this very type was found. Coming, as it does, from the debris, it re-confirms that the house-complex did not continue beyond the time of Wima Kadphises.

5. Reg. no. SVP-4, 1993 (pl. LXXXI C).—

Description.—Gold coin, may have originally been circular but is not so now evidently because of the wearing away of the edges, measures 22 mm vertically and 20 mm across; wt. 7.82 grammes. *Obv.*—King, nimbate, stands frontally but face turned to the right; wears conical cap, long overcoat (with pronounced curvature and pointed ends of the hem), trousers and boots; upraised left hand holds a sceptre of which the upper part, however, is indistinct; lowered right hand points towards a three-pronged object which, judging from other examples, may represent a fire-altar; a trident, adorned with ribbon, over the altar, the upper part of the trident being right in front of the king's face. Vertically written *su* in Brāhmī characters to the left of the left arm and the sceptre, also a Brāhmī ga-like or inverted English U-like letter below the left arm-pit; an indistinct legend, most probably in corrupt Greek letters, along the flange on the right and perhaps on the left. *Rev.*—Figure of a goddess, nimbate, facing, seated on a throne which has finely carved legs and framed back; wears a dress with prominent folds over right arm and in the front between the suspend legs (*pralamba-pāda-āsana*); left hand holds a cornucopia, while the outstretched right hand holds some object from which two ribbons flow downwards; above the outstretched right hand is the Vāsudeva monogram; along the flange in the right field is an inscription in Greek script, which has largely gone, but may read ARDOXSHO.

Stratigraphic position.—SVP-4, Sq F 9, Qd 2, layer 8B (fig. 13; pl. LI). As stated earlier, a large house-complex was built over the southern part of the area once occupied first by the Brick Tank and then by the Mud Tank. This house-complex had four structural sub-phases and the coin under discussion was associated with the second of these. Since a gold coin can be an item to be

treasured, it is likely that this structural sub-phase may not be quite co-eval with the date of the minting of the coin, but may be somewhat later. How much, of course, nobody can be sure of.

Discussion.—Because of the fact that the coin came from a deposit which was decidedly posterior to the abandonment of even the later of the two tanks, i. e. even later than the Mud Tank, it would be well worth while to attempt an identification of the king who issued this coin and the date involved in terms of the Christian era.

Because of the Brāhmī letter *su* on the obverse, the coin seems to belong to the category known as the "Vāsu" coins. However, not all the coins of this category have both the letters, viz. *vā* and *su*.¹ Likewise, only a few have the Brāhmī *ga*-like letter below the arm-pit.² But then who was this 'Vāsu'? Was he Vāsudeva I or some other later king going by the same name in the Kushan dynasty itself? This doubt arises because of two factors. In the first place, the legend giving the king's name in our case is almost gone. Secondly, the coins properly assignable to Vāsudeva I do not bear the vertical Brāhmī legend Vāsu, except in one case, about the association of which with Vāsudeva I, however, there seems to be some doubt.³ The highly pronounced curvature of the hem of the coat might suggest a stylistic placement after the coins of Kanishka III,⁴ although admittedly such a criterion is not always very sound.

Now comes the problem of dating this 'Vāsu' in terms of years after Christ. Like many other topics in ancient Indian history, the Kushan chronology is also under constant fire. It is largely dependent on the date of the accession of Kanishka I. There are various theories about it, such as A.D. 78, 110-15, 128 and 144. Since none of these theories is fool-proof, we have, for the sake of uniformity, adopted in this report the more-widely accepted date, viz. A.D. 78. On this basis, the 'Vāsu' of our coin, who appears to have followed Kanishka III, may be placed broadly in the first quarter of the third century A.D.

¹Rosenfield, John M. 1967, *The Dynastic Arts of the Kushans*, pl. XII, no. 246. Berkeley and Los Angeles: University of California Press.

²Rosenfield, *ibid*, pl. XII, 243.

³Chattopadhyaya, Bhaskar. 1979. *The Age of the Kushans—A Numismatic Study*, p. 92. Calcutta: Punthi Pustaka.

⁴Cf. Rosenfield, *ibid*, pl. XII, 236-40.

CHAPTER XII

THE POTTERY

A. INTRODUCTORY

Let it be stated at the outset that when a tank of such dimensions as the one under discussion is built close to a habitational site, it is quite natural that some of the deep trenches dug for its construction also cut through the older parts of the settlement, though the main focus may be on the virgin land. That in the present case some earlier parts of the settlements had actually been cut through was clear from the stratification observed in the south-eastern part of the complex. Over there some nice layers yielding the Northern Black Polished Ware were found to have been cut by the trenches dug for the laying out of the tank. In such a situation, it is obvious that some of the material belonging to these earlier strata would have fallen into the tank and subsequently mixed up with that belonging properly to the tank.

This being the case, the earlier material has to be discounted and only the latest material has to be treated as being contemporary with the tank. It is this latter material that will be relevant in so far as the dating of the tank is concerned. Before dealing in detail with this tank-contemporary material, it may in passing be mentioned that the earlier material that had found its way into the tank comprised bowls and dishes of the Black-slipped and Northern Black Polished Wares and other red ware types associated with these wares.

The pottery which is to be regarded as contemporary with the tank should really be the one that came from its basal layers. But since the tank appears to have been desilted from time to time, these basal layers are unlikely to yield a full picture of the ceramic range. It is, therefore, proposed to include in the present description, the pottery that came not only from the basal layers but also from the other subsequent layers that got accumulated *within* the tank. In this range has also been included the 3-metre-thick deposit of the bands of silt and sand, though it is admittedly not of the period when the tank was a living entity. It has nevertheless been included since some of the material that got washed down and mixed up with these deposits of silt and sand may have originally belonged to the occupational strata contemporary with the Brick Tank. Since the silt-and-sand deposit *completely seals* the Brick Tank, the inclusion of material from it provides the uppermost limit, in point of time, to which the Brick Tank could be dated. Hence the justification of including the pottery from this deposit as well.

The pottery from the tank-complex is entirely of red ware. (The odd pieces of the Northern Black Polished and Black-slipped Wares found within the tank had, as already discussed above, found their way into it from the pre-tank strata which had been cut away during the course of the digging for the construction of the tank.) Although, owing to having remained in water, the surface of most of the pieces must have undergone a change, it is nevertheless clear that many of the pots did have a slip on them, which varied from pinkish to brownish-red in colour. Most of the other pieces appear to have had just a wash. Of the slipped pieces, only a few show evidence of having been painted with a black pigment. It may, however, be noted that there are no designs as such, neither

THE POTTERY

floral nor human, nor even simple geometrical ones. All that seems to have been done was to apply a coat of paint on the exterior part of the vessel from the neck upwards. Sometimes the paint was carried over to the upper part of the interior as well. But, as already mentioned, no attempt was made to produce even a semblance of painted designs. This monotony, however, was offset by stamping a variety of designs on the exterior. In some cases appliqué bands with thumb-depression were also present. Mention must also be made of decorated spouts some of which depicted a very realistic face of the crocodile—prominent eyes, wide-open mouth with sharply pronounced teeth, and a rolled up snout.

By and large, the pottery was wheel-made, though there do occur examples which are partly wheel-made and partly hand-made. Then there is also a small percentage of exclusively hand-made pots.

The fabric appears to have depended on the size and purpose of the pot concerned. Thus, for example, while drinking cups or bowls and other small vessels were made of finer clay, the large storage jars were not only made of coarse clay, but to it were also added sandy grit as well as husk to make the body strong. Even the large basins were of coarse texture, though in their case the grit-component was less. The medium-sized vessels, as is to be expected, were made from clay that was neither very fine nor coarse.

Though on account of water-logging some of the pots have lost the crispness of their surface (a few of them even give the impression of being somewhat fragile), it must be stated that, by and large, the pottery was well-fired. This can be easily made out from the broken section of most of the pots. The large vessels—particularly the storage jars and big basins, show a greyish to blackish core, which fact shows that owing to the thickness of the section the heat could not penetrate all through the body in sufficient measure to make it all red.

Now a word about the system adopted for the classification of the pottery. We have tried to classify it on the basis of the probable use of the specimens concerned. In doing so, it is not unlikely that we may have gone wrong in some cases. But we thought it was well worth taking the risk, for by trying to categorize the pottery on the basis of the probable function we get an insight into the habits of the people. In this context, it needs to be added that though qualified as 'probable' here, the 'function' is not based on imagination, but on the use to which these vessels are being actually put in the rural areas. (The urban people have by and large forgotten such uses, since their environment has totally changed. For example, they no longer need *daharas* for large-scale storage of water since they have the taps for ready supply. Nor would they understand the need for a *barosi*, which is used in the rural areas for kindling fire to sit around, since they (the urbanites) have electric heaters.) The general way of life at Śrīngaverapura two thousand years ago can fairly well be compared to that of today in the region, in spite of the recently-introduced bus-services or nominal supply of electricity.

While trying to evolve a function-based classification of the pottery, we have, as already stated, to draw upon the present-day parallels. In sequel, we have used the Hindi terms now-a-days in vogue in the region for the kinds of the vessels discussed. We have, however, also used English words wherever suitable ones are available, but have not tried to coin such words wherever they do

not seem to exist (to the best of our knowledge of that language). For example, we do not seem to have exact English equivalents to such Hindi words as *barosī* or *dahara* or *gāgara*.

While dealing with vases and jars we have classified them into categories like *lotas*, *ghariās*, *matakās*, *gāgaras*, and *daharas*, again on the basis of their probable use. Thus, *lotas* are small-sized, compared to the *gāgaras* and *matakās*, and seem to have been used for holding a small quantity of water. These have a globular body, often with ring-base. The *ghariās* seem to have been used either in the chain of vessels employed for drawing water in the Persian Wheel system or for collecting the juice from palm and date trees (as is done even now). The *gāgaras* and *matakās* are much larger than the *lotas* or *ghariās*. Between themselves, while the *gāgaras* are distinguished by their prominent neck and a relatively narrow mouth, the *matakās* have a relatively smaller neck but a much wider mouth. With its longish neck and narrow mouth, the *gāgaras* seem to have been used for fetching water from a well by putting a rope around the neck, as is the practice in villages even now. Further, the longish neck provides a good grip and ladies are seen in the country-side carrying water back home in the *gāgara*, by placing it against the hip and throwing the hand around its neck. The wide-mouthed *matakās* seem to have been stationary, for storing water or even other liquids or semi-liquids or sometimes even solids. The *daharas* are elongated jars of extra large size, made usually of coarse-grained clay mixed with degreasing and grit. They have a relatively pointed base (compared to that of the *matakās* in whose case it is usually round) and seem to have been fixed into the ground. In fact, in the habitation strata at Śrīngaverapura this feature of fixing the *daharas* into the ground was duly noticed; and this is so even now-a-days. In rural households these extra large vessels are used for storing water on occasions of marriage or other community functions.

The most prolific type that one encounters in the pottery-collection is the *kaṭorā* (bowl) with angular rim, tapering sides and flat base (fig. 19). There are also bowls with convex sides and sagger base. Besides bowls, the other types are: *thālīs* (dishes), *kuṇḍas* (basins), *barosīs*, *hāndīs* (cooking vessels), *karāhīs* (frying pans), ring-stands, *dhakkanas* (lids), *ḍabuliyās* (miniature vases), bottle-necked flasks, *surahīs*, *lotas*, *ghariās*, *gāgaras* (pitchers), *matakās* (jars) and *daharas* (extra large storage jars).

In the case of the lids it may specifically be pointed out that the type with a central button-shaped knob on the interior of the base is conspicuously absent from the Brick Tank; it appeared only when, after some time-lag, the Mud Tank came into being. There is yet another fact which deserves to be mentioned, viz. that in case of the bottle-necked flasks the type with a pointed finial (cf. Appendix I, fig. 43) does not occur either in the Brick Tank or in the Mud Tank and makes its appearance only with the late Kushan house-complex (third century A.D.) which came into being after the total abandonment of the tank-complex.

With these introductory observations, the various types and selected specimens are discussed and described below:

B. BOWLS (Fig. 19)

Bowls account perhaps for the single largest category of vessels in the pottery-complex from the tank. The same seems to be the case in the contemporary levels in the habitation area (SVP-1) as well, where, in a brick-lined soakage pit, bowls easily outnumbered the other categories. It seems that after use the bowls were thrown away and hence their large number.

In these bowls there are two distinct types, called here A and B. Type A has a convex profile and sagger base. The rim is either vertical and square-cut (Sub-type A1, nos. 1 and 2) or slightly incurved (Sub-type A2, no. 3) or everted and pointed (Sub-type A3, nos. 4 and 5). In contrast, Type B has tapering sides, narrowing down to a string-cut disc-like base. In type B, in so far as the portion at the rim-level and immediately below it is concerned, one notices four sub-types. In Sub-type B1 (e.g. nos. 6-8) there is a pronounced depression on the inner side just below the rim, resulting in a corresponding mild buldge on the exterior. This may have been caused by pressing the thumb just below the rim on the inner side, while the bowl was still on the wheel. In sub-type B2 (e.g. nos. 12, 13, etc.) the inner depression is less pronounced or is even negligible and there is a marked angularity at the exterior of the rim. In Sub-type B3 (nos. 18-19) the rim is not angular but somewhat rounded off. Sub-type B 4 (nos. 20-21) is characterized by a marked convexity below the rim-level, though the portion further down tapers to a narrow base, as in other examples of the type.

All the bowls are wheel-made, though in the case of Type A, the lower portion has been further worked upon with hand. The fabric by and large is fine though sometimes medium-grained. The firing is good, resulting in a red core. While many of the specimens of Type A do have a slip, the use of slip in Type B is rather rare.

Selected specimens are described below: *

1. Part of a bowl of red ware; Sub-type A1; vertical square-cut rim, convex sides (upper part, however, is pressed in by hand), sagger base; medium fabric, well fired, greyish core; treated both externally and internally with red slip. From a deposit of Group B in Tank C.
2. Part of a bowl of red ware; Sub-type A1; vertical square-cut rim, convex sides and sagger base; medium fabric, well-fired, reddish core; treated both externally and internally with red slip. From a deposit of Group A in Tank C.
3. Part of a bowl of red ware; Sub-type A2; slightly incurved square-cut rim, with a groove on the exterior, convex sides; medium fabric, well fired, dull red core. From a deposit of Group B in Tank C.
4. Part of a bowl of red ware; Sub-type A3; slightly everted and pointed rim with a groove on the exterior, convex sides and sagger base; medium fabric, well fired, dull red core. From a deposit of Group B in Tank C.

*Under my general guidance, the description of individual pots in this as well as other sections has been written by Shri K.K. Sharma.

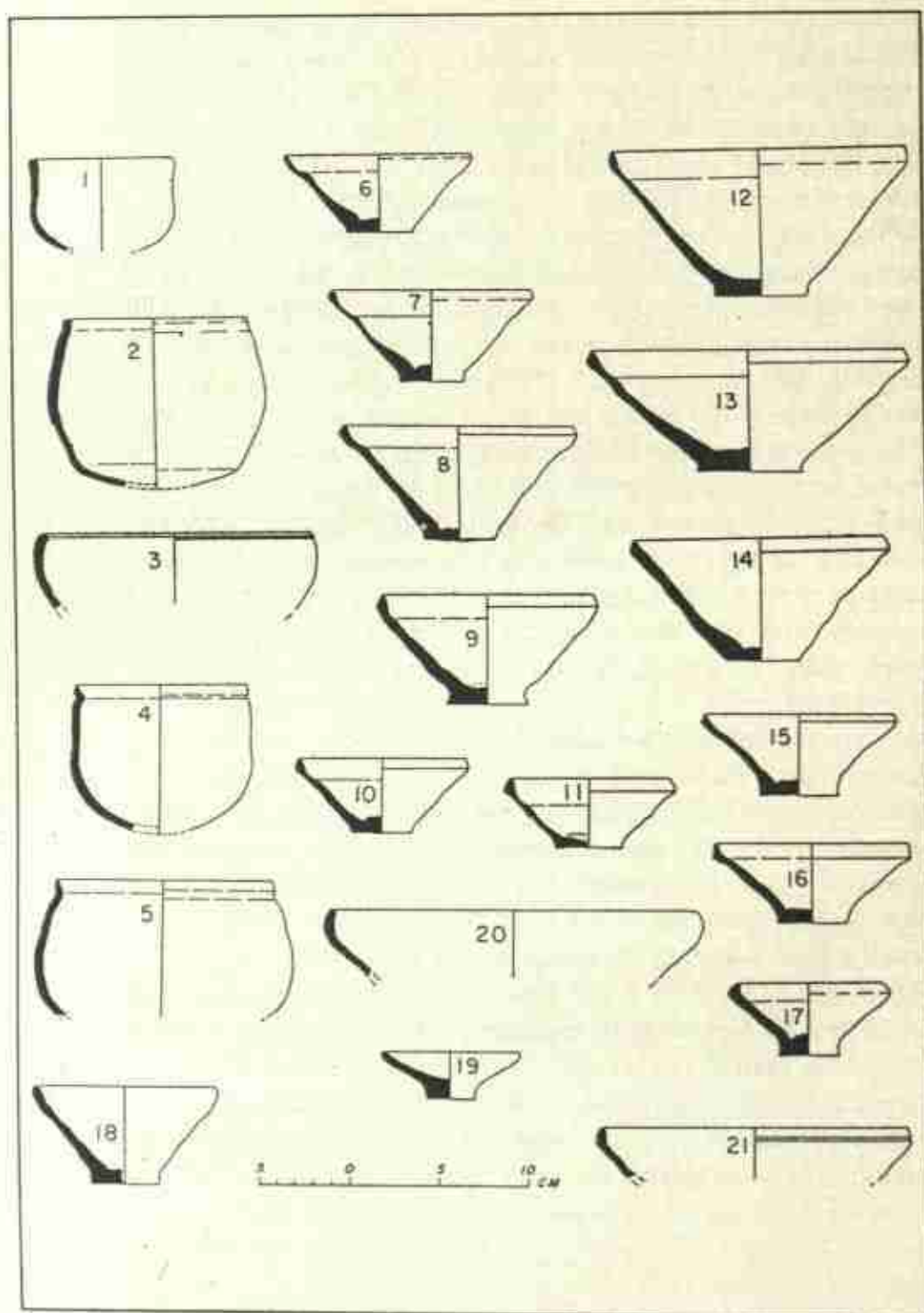


FIG. 19. Pottery : Bowls

5. Part of a bowl of red ware; Sub-type A3; slightly everted and pointed rim, convex sides; medium fabric, well fired, reddish core; traces of red slip. From a deposit of Group A in Tank C.
6. Bowl of red ware; Sub-type B1; thin and somewhat pointed rim with thumb-depression on the interior, tapering sides, disc-base; medium fabric, not very well fired, somewhat greyish core; a very small patch of red slip noticeable on the exterior. From a deposit of Group B in Tank C.
7. Bowl of red ware; Sub-type B1; slightly obliquely-cut rim with marked thumb-depression on the interior, tapering sides, disc-base; medium fabric, fairly well fired, though inner part of core is greyish; From a deposit of Group A in the southern part of Tank B.
8. Bowl of red ware; Sub-type B1; obliquely-cut rim with pronounced thumb-depression on the interior, tapering sides, disc-base; medium fabric, well fired, dull red core. From a deposit of Group B in the southern part of Tank B.
9. Bowl of red ware; Sub-type B1; obliquely-cut rim with pronounced thumb-depression on the interior, tapering sides, disc-base; fine fabric, well fired, reddish core. From a deposit of Group A in the southern part of Tank B.
10. Bowl of red ware; Sub-type B1; obliquely-cut rim, with marked thumb-depression on the interior, tapering sides and disc-base; medium fabric, well fired, dull red core. From a deposit of Group A in the southern part of Tank B.
11. Bowl of red ware; Sub-type B1; obliquely-cut rim with pronounced thumb-depression on the interior, tapering sides, mild corrugation of on the exterior, disc-base; fine fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
12. Bowl of red ware; Sub-type B2; not well pronounced but obliquely-cut rim, with mild thumb depression below it on the interior, tapering sides, disc-base; fine fabric, well fired, reddish core. From a deposit of Group B in Tank C.
13. Bowl of red ware; Sub-type B2; obliquely-cut pointed rim, with mild thumb-depression on the interior, tapering sides and disc-base; medium fabric, well fired, reddish core. From a deposit of Group B in Tank C.
14. Bowl of red ware; Sub-type B2; obliquely-cut rim; tapering sides with corrugation on the exterior, as well as interior, disc-base; medium fabric, well fired, reddish core. From a deposit of Group B in Tank C.
15. Bowl of red ware; Sub-type B2; obliquely-cut rim, tapering sides, disc-base; medium fabric, well fired, dull red core. From a deposit of Group B in the southern part of Tank B.
16. Bowl of red ware; Sub-type B2; obliquely-cut rim, mild thumb-depression on the interior, tapering sides, disc-base, medium fabric, well fired, reddish core. From a deposit of Group A in Tank C.
17. Bowl of red ware; Sub-type B2; obliquely-cut rim with very mild thumb-depression on the interior, tapering sides, disc-base, medium fabric, well fired, reddish core. From a deposit of Group B in Tank C.

18. Bowl of red ware; Sub-type B3; rounded off rim, tapering sides, disc-base; medium fabric, well fired, dull red core. From a deposit of Group A in Tank C.
19. Small-sized shallow bowl of red ware; Sub-type B3; rounded off rim, tapering sides, disc-base; medium fabric, well fired, reddish core. From a deposit of Group B in Tank C.
20. Upper part of a bowl of red ware; Sub-type B4; marked convexity on the exterior below the rim; medium fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
21. Upper part of a bowl of red ware; Sub-type B4; slightly convexity on the exterior of the rim with a groove below it, tapering sides; medium fabric, well fired, dull red core. From a deposit of Group B in Tank C.

C. DISHES (*THĀLĪS*) (Fig. 20)

Under this category have been put vessels which may have been used for eating solids or semi-solids, like the present-day *thālīs* or dishes. Compared to their diameter which is in the neighbourhood of 20 cm, the depth is very shallow, viz. between 3 and 5 cm. The base is usually flattish. All the specimens show beating marks with hardly any striations. Most of the specimens bear traces of slip, on both the interior and exterior, indicating that originally these were duly slipped.

On the basis of the rim, these *thālīs* are divisible into two broad types: Type A, having a simple featureless rim and Type B having an everted flat rim. In the latter type, some additional clay of thin consistency seems to have been added as if to strengthen the reverted part of the rim.

The illustrated examples are as follows:

1. Fragment of a dish of red ware; Type A; featureless rim, convex sides and flattish base; fine to medium fabric, well fired, reddish core; traces of red slip. From a deposit of Group A in Tank C.
2. Dish of red ware; Type B; horizontally splayed out rim, slightly convex sides and flat base; fine fabric, well fired, reddish core; traces of red slip on both the exterior and interior. From a deposit of Group B in Tank C.

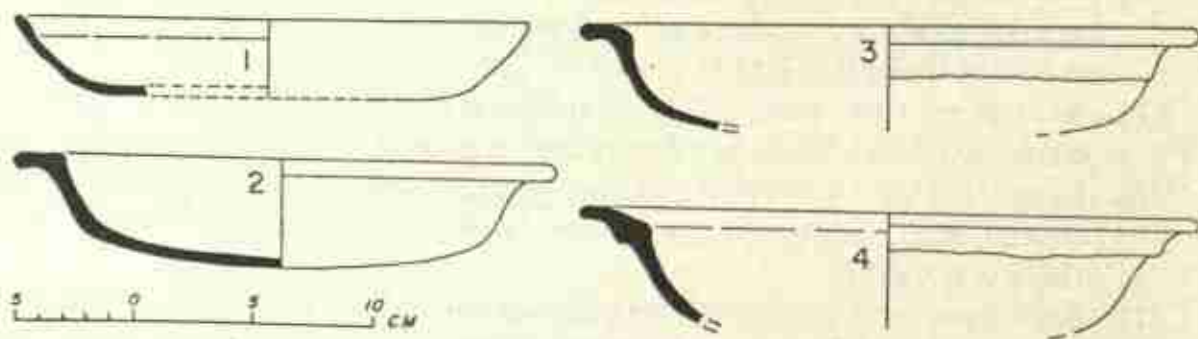


FIG. 20. Pottery : Dishes

3. Fragment of a dish of red ware; Type B; horizontally splayed out rim, evidence of application of additional clay of a the exterior below the rim, convex sides, flattish base; medium fabric, well fired, reddish core. From a deposit of Group A in Tank C.
4. Fragment of a dish of red ware; Type B; externally flared rim with a prominent rib below it, tapering sides; medium fabric, dull red core; traces of red slip. From a deposit of Group A in the southern part of Tank B.

D. BASINS (Figs. 21 and 22)

Basins are usually larger and deeper than the dishes and are used for holding water or some other liquids or even semi-liquids. Generally, these have a diameter greater than the depth. In the specimens under consideration the diameter varies from 17 to 40 cm. However, since the bases are broken, it is difficult to say anything positive about the depth. The profile is by and large convex. Since the bases are broken, it is difficult to adjudge their shape. Maybe these were flattish or sagger. On the basis of the rims, these basins may broadly be divided into five types. Thus, while in Type A (no. 1) the rim is incurved but square-cut, in Type B (nos. 2-3), it is clubbed. In both the two types called here C and D, the rim is incurved and externally collared. But while in Type C the undercutting below the rim is minor, that in Type D is very prominent, there also being a kind of ledge, perhaps to hold the lid. Type E is immensely large, and has a thick beaked rim.

Presumably because of their largeness and relatively tough use, most of the basins were made from medium to coarse-grained clay, with rice-husk as degraissant. By and large the firing is good, though, owing to the thickness of the section, the inner part of the core has remained smoky. In many cases there is evidence of application of red slip, on both the exterior as well as interior.

1. Upper part of a basin of red ware; Type A; incurved and square-cut rim, convex sides; medium fabric, fairly well fired, but owing to the thickness of the core its inner part is smoky. From a deposit of Group B in the southern part of Tank B.
2. Upper part of a basin of red ware; Type B; clubbed rim, convex sides; fine fabric, well fired, reddish core; traces of red slip. From a deposit of Group B in the southern part of Tank B.
3. Upper part of a basin of red ware; Type B; clubbed rim with a groove below it on the exterior, convex sides; medium fabric, fairly well fired, though inner part of the core is smoky. From a deposit of Group B in the southern part of Tank B.
4. Upper part of a basin of red ware; Type C; inturned, collared rim with a shallow groove below it, convex sides; medium fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
5. Upper part of a basin of red ware; Type C; inturned and externally collared and slightly undercut rim, convex sides; medium fabric, well fired, dull red core; treated both externally and internally with red slip. From a deposit of Group A in the southern part of Tank B.

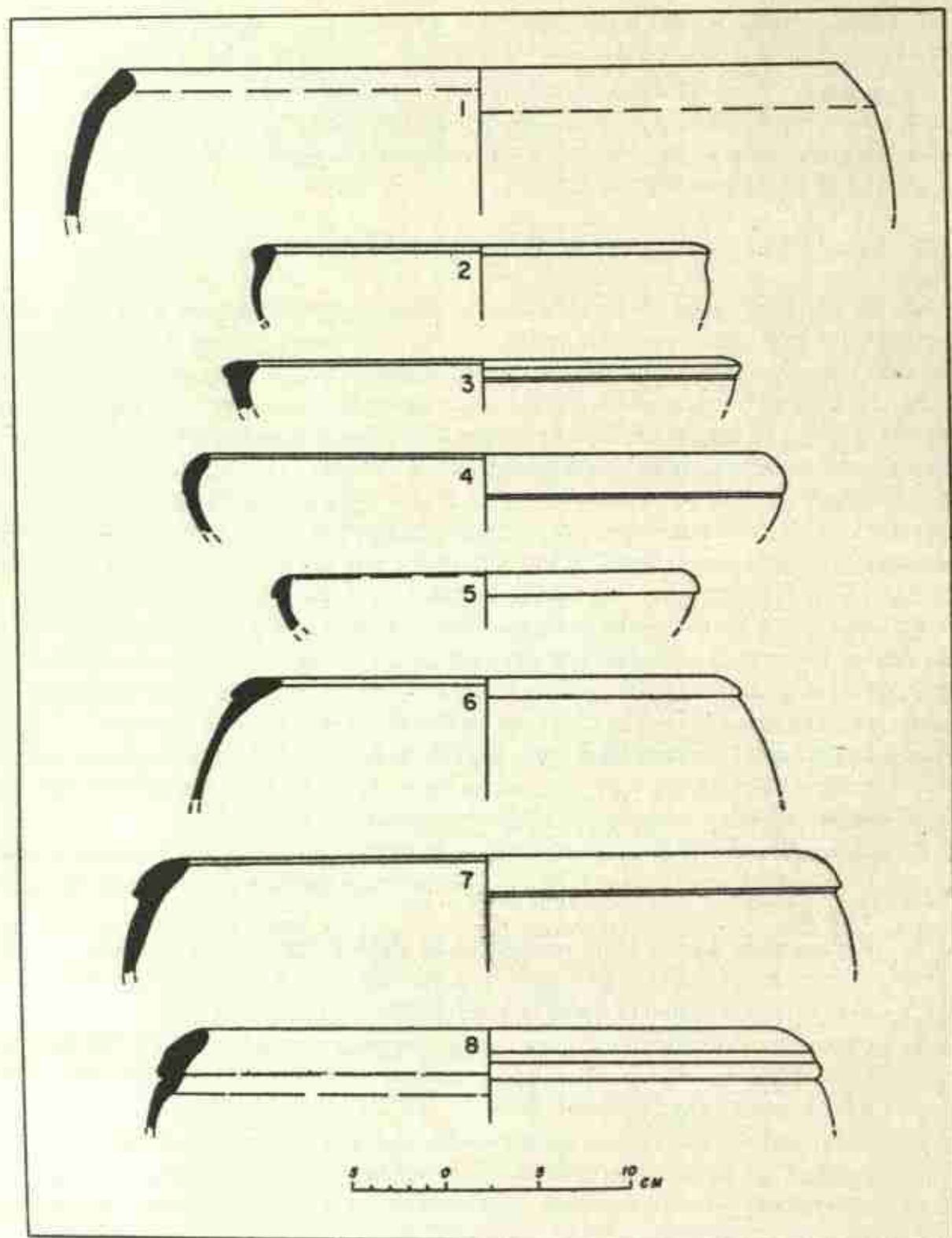


FIG. 21. Pottery : Basins

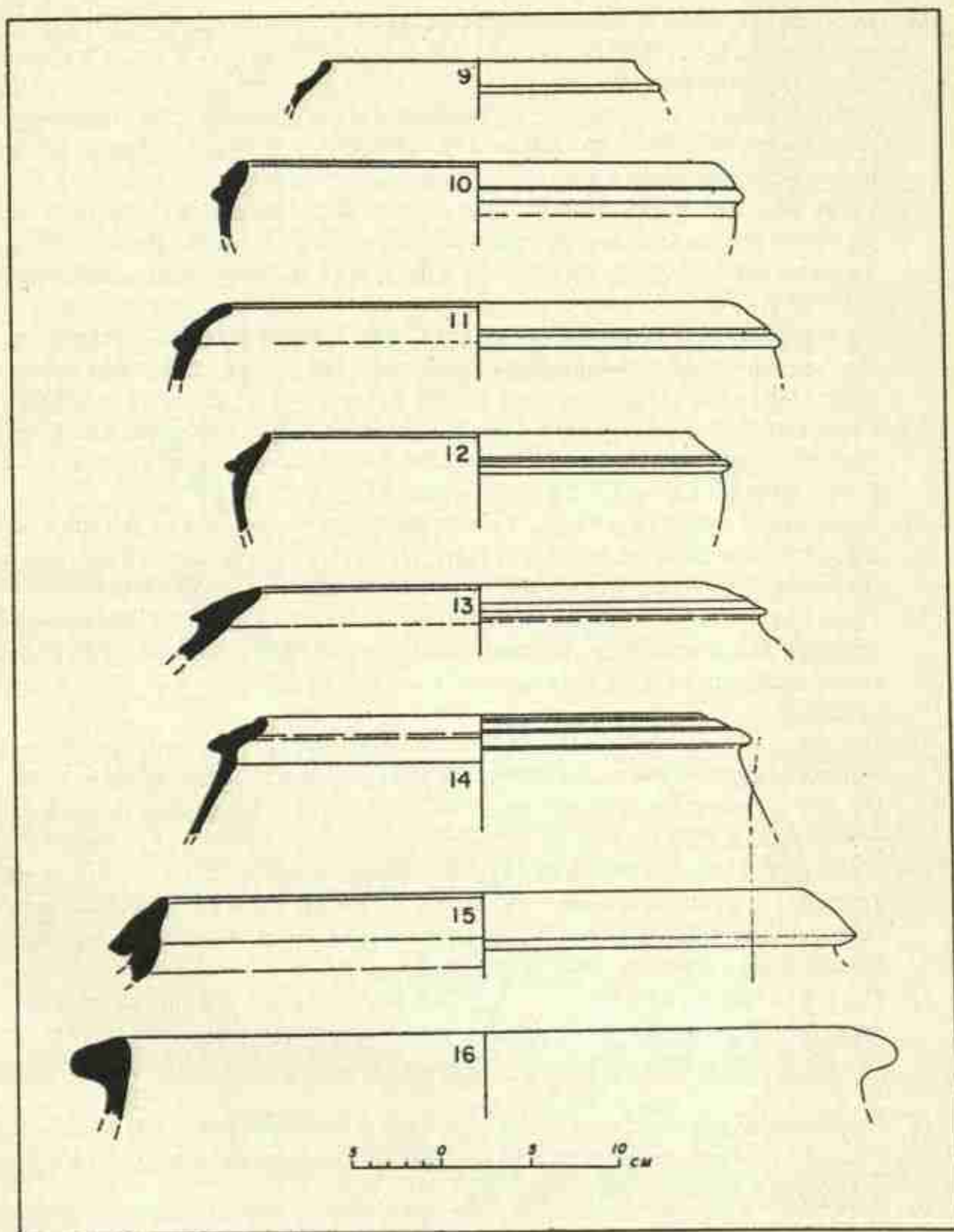


FIG. 22. Pottery : Basins

6. Upper part of a basin of red ware; Type C; inturned and externally collared undercut rim, convex sides; medium fabric, fairly well fired, though inner part of the core is smoky. From a deposit of Group B in Tank C.
7. Upper part of a basin of red ware; Type C; incurved and externally collared undercut rim, convex sides; medium fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group A in Tank C.
8. Upper part of a basin of red ware; Type C; inturned and externally collared rim with a prominent groove, convex sides; coarse fabric, fairly well fired, though the inner part of the core is smoky; traces of red slip on both the exterior as well as interior. From a deposit of Group B in Tank C.
9. Upper part of a small-sized basin of red ware; Type D; rounded rim with a ledge below its exterior, convex sides; medium fabric, fairly well fired, though inner part of the core is smoky; faint traces of red slip. From a deposit of Group B in the southern part of Tank B.
10. Upper part of a basin of red ware; Type D; inturned rim with a groove and a ledge on the exterior, convex sides; medium fabric, well fired, reddish core; traces of dull red slip. From a deposit of Group A in the southern part of Tank B.
11. Upper part of a basin of red ware; Type D; inturned rim with a groove and ledge on the exterior, convex sides; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with red slip. From a deposit of Group B in Tank C.
12. Upper part of a basin of red ware; Type D; incurved rim with a groove and prominent ledge on the exterior, convex sides; medium fabric, fairly well fired, though the inner part of the core is smoky; traces of red slip externally. From a deposit of Group B in the southern part of Tank B.
13. Upper part of a basin of red ware; Type D; inturned and externally ledged undercut rim with corrugations, convex sides; medium fabric, fairly well fired, though the inner part of the core is smoky; traces of red slip on the exterior. From a deposit of Group B in the southern part of Tank B.
14. Upper part of a basin of red ware; Type D; inturned and externally grooved rim with a prominent ledge below it on the exterior and thumb-depression on the interior, tapering sides; medium fabric, fairly well fired, though the inner part of the core is smoky; traces of red slip. From a deposit of Group B in Tank C.
15. Upper part of a basin of red ware; Type D; externally bulged and undercut rim, thumb-depression on the interior of rim; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with dull red slip. From a deposit of Group A in Tank C.
16. Fragment of a large-sized basin of red ware; Type E; externally beaked and thickened rim; coarse fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group B in the middle part of Tank B.

E. *BAROŚIS* (Fig. 23)

In contrast to the basins, the *barośis* have tapering sides and a thicker section. But what is more important is that instead of holding liquids or semi-liquids, these were meant to hold fire, as is evident from the burning marks left on their interior. In north Indian villages one frequently comes across this kind of use: in similar earthen vessels, cow-dung cakes and small pieces of wood are lighted during the winter months and the fire is used for warming up people sitting and chatting around it. Perhaps one may visualise a similar situation 2000 years ago.

The specimens concerned are as follows:

1. Fragment of a *barośi* of red ware; a kind of ledge below the rim on the exterior, tapering sides; coarse fabric with rice-husk as degreasant, ill-fired, smoky core; burning marks on the interior. From a deposit of Group C in the northern part of Tank B.

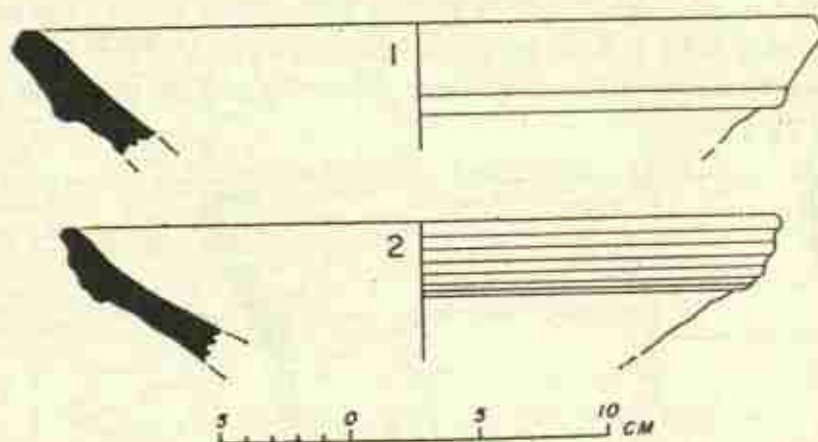


FIG. 23 : Pottery : *Barośis*

2. Fragment of a *barośi* of red ware; externally multigrooved rim, tapering sides; coarse fabric with rice-husk as degreasant, fairly well fired with smoky core; burning marks on the interior. From a deposit of Group A in Tank C.

F. *HĀNDĪS* (Fig. 24)

Hāndīs are used for the cooking of liquid, semi-liquid and even partially solid items like pulses, vegetables and rice. That these were used for cooking is suggested by the burning-marks left on the exterior of the base. Sometimes an extra coating of thin mud was applied to this basal portion to absorb heat.

These *hāndīs* are characterized by a flange around the middle of the body and a somewhat longish splayedout rim. The latter may have helped in the easy handling of the vessel when it was placed on or removed from the *chūlhās*. No example with a handle has, however, been encountered.

In the available specimens the base is broken, but it may have been sagger, to judge from the examples found elsewhere. Because of the use to which the vessel was put, the clay is medium-grained, tending towards coarseness. On the upper part of the exterior, which was not subjected to direct fire, there is evidence of the application of a slip.

Selected examples are described below:

1. Upper and middle part of a *hāṇḍī* of red ware; splayed out and drooping rim, concave neck, pointed flange at the mid-portion of the body, medium fabric, dull red core; treated externally with red slip in the upper part; clear burning-marks on the lower part of the exterior. From the make-up of the Bund of Mud Tank.
2. Middle part of a *hāṇḍī* of red ware; pointed flange at the middle of the body; medium fabric, well fired, but smoky core; treated externally with red slip in the upper part. From a deposit of Group B in the southern part of Tank B.
3. Upper and middle part of a *hāṇḍī* of red ware; splayed out, externally thickened rim, concave neck, ledge at mid-portion of the body; medium fabric, fairly well fired, dull red core; clear burning-marks on the lower part of the exterior. From a deposit of Group E in the Mud Tank.

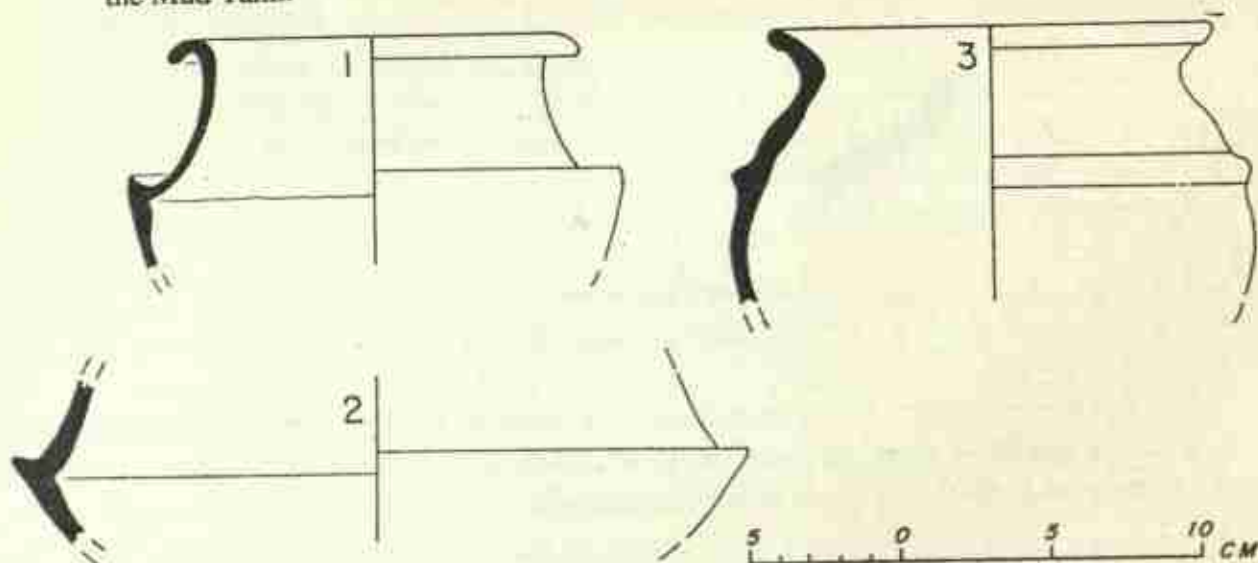


FIG. 24. Pottery : *Hāṇḍīs*

G. KARĀHĪS OR FRYING PANS (Fig. 25)

Like the *hāṇḍīs*, these vessels also seem to have been used for cooking, as indicated by the burning-marks on the exterior, particularly the base. However, whereas the *hāṇḍīs* are deep, the *karāhīs* are shallow. In the latter case, the inner diameter (excluding the handle-part) ranges around 32-34 cm but the depth is only between 4.5 and 6.5 cm. Of the three specimens described below, two clearly have a handle, while in the case of the third its presence is not so certain because of the

breakage. Those with a lug-handle are classed here as Type A (nos. 1 and 2) and the one with a looped handle, as Type B (no. 3). Since these vessels were to bear the brunt of the fire, the consistency of the clay used is from medium to coarse.

Selected specimens are described below:

1. Part of a *karāhi* of red ware; Type A; almost vertical featureless rim, somewhat longish lug-handle, mildly convex sides and probably flattish base; medium fabric, fairly well fired, though smoky core; profuse burning-marks on the lower part of the exterior. From a deposit of Group B in the southern part of Tank B.
2. Fragment of a *karāhi* of red ware; though broken, it seems to belong to Type A; slanting sides and probably flattish base; medium fabric, fairly well fired, though smoky core. From a deposit of Group B in the southern part of Tank B.

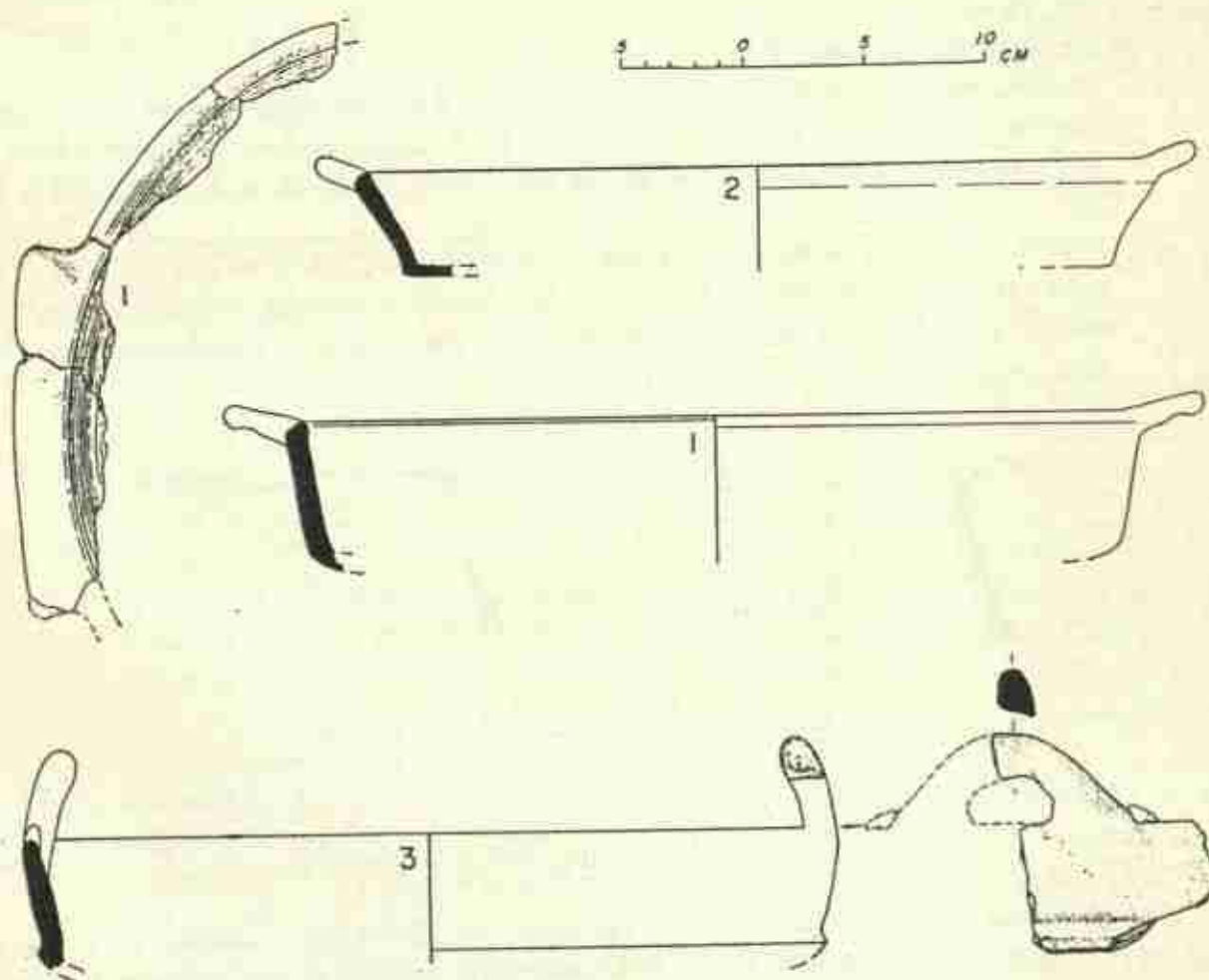


FIG. 25. Pottery : *Karahis*

3. Part of a *karāhī* of red ware; Type B; slightly slanting out rim with an appliqué loop-handle; coarse fabric, well fired, though smoky core; treated with wash. From a deposit of Group A in Tank C.

H. RING-STANDS (Fig. 26)

Ring-stands, presumably for placing other pots thereon, have also been found in the tank-complex. Obviously for the sake of stability, the diameter at the top is slightly less than that at the bottom: in the two illustrated specimens, it is respectively 9 cm and 11.2 cm and 8 cm and 12 cm. (The measurements are of the inner diameters; the specimens are broken, but large enough to give an idea of the complete shape.) The clay is fine to medium-grained and the firing is good. One of the specimens (no. 2) has evidence of a (red) slip. In the other, there are also some faint traces. Both the specimens are wheel-turned.

Selected specimens are described below:

1. Part of a ring-stand of red ware; externally collared rim, slanting out sides and featureless basal edge; two concentric grooves a little above the base; medium fabric, well fired, dull red smoky core; faint traces of red slip on the interior. From a deposit of Group B in Tank C.
2. Part of a ring-stand of red ware; externally beaked rim, slanting out sides and featureless basal edge; two mild indentations around the middle of the body; fine fabric, well fired, reddish core, treated with red slip both internally and externally. From a deposit of Group B in Tank C.

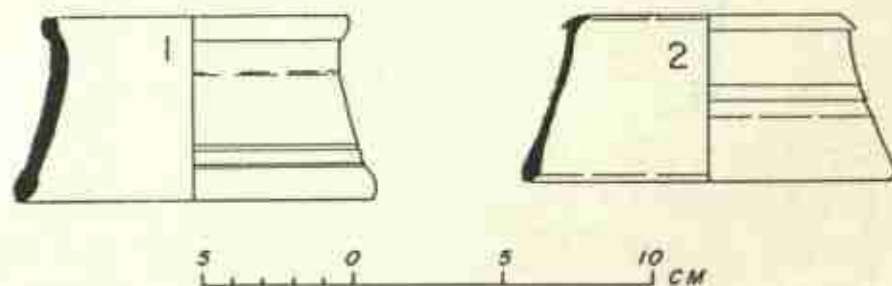


FIG. 26. Pottery : Ring-stands

I. LIDS (Fig. 27)

The lids recovered from the tank-complex fall under four distinct types, called here A, B, C and D. Of these, Type A differs fundamentally from the other three, since in its case the knob, with which the lid was held, is at the top, and the main body of the lid goes downwards from the knob in a convex or splayed-out profile. Type B is distinguished by a flanged projection a little below the rim, and a sagger base. Though the central part is broken in the available specimens, examples from

elsewhere indicate that there was no addition in the centre, by way of either a small cup-like element (as in Type C) or a knob (as in Type D). Since the interior is fairly deep, it is not unlikely that, while this type was fitted on to a jar with the sagger base downwards, the inner side may have been used as a bowl to keep something in it. Shri K.K. Sharma points out that this kind of lid is also used upside down. In such a case, the flanged portion rests on the rim of the jar below and helps to seal the contents. Type C also has a sagger (or flat) base, but its distinctive feature is the presence, on the inner side, of an additional cup-like portion (often called an 'ink-pot') which may be small or large, featureless or with prominent features. Type D also has a sagger or flat base but in this case the inner central part is a solid knob which may vary in size or details of the shape.

On the basis of the shape of the knob or cup, as the case may be, these types may be further divided into sub-types. Thus, while in Sub-type A1 the knob is plain that in A2, it is button-shaped. In Sub-type C1 the central cup is plain and cylindrical, but in C2 it has a variety of features. Likewise, while in Sub-type D1 the central knob is featureless and more or less cylindrical, in D2 it is distinguished by a button-shaped head. It needs to be added that Sub-type D2 is absent from the Brick Tank and appears only in the Mud Tank phase.

All the specimens are wheel-turned and, depending on the size, the clay is fine or medium- to coarse-grained. The firing is good. In some cases, there is also the evidence of a (red) slip.

Below is a description of the illustrated specimens:

1. Upper part of a lid of red ware; Sub-type A1; truncated conical knob, sloping out sides; fine fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
2. Part of a lid of red ware Sub-type A1; sloping out or convex body and vertical lower part; knob broken, but may have been like that in No. 1; fine fabric, well fired, red core. From a deposit of Group B in the southern part of Tank B. (Put together, Nos. 1 and 2 give an idea of the complete shape).
3. Part of a lid of red ware; Sub-type A1; thick knob, slanting sides and splayed lower portion; medium fabric, well fired, though some part of the core is smoky; dark red slip available on the interior. From a deposit of Group B in the southern part of Tank B.
4. Lid of red ware; Sub-type A2; button-shaped knob, sloping out sides; medium fabric, well fired, oxidized red core; treated both externally and internally with dark red slip. From a deposit of Group A in Tank C.
5. Part of a lid of red ware; Type B; vertical, rounded rim, prominent horizontal flange and sagger lower part; fine fabric, well fired, though core slightly greyish; treated with thin reddish slip on the interior as well as part of exterior. From a deposit of Group B in the northern part of Tank B.
6. Part of a lid of red ware; Type B; vertical square-cut rim, short flange, sagger lower part; medium fabric, well fired, reddish core; treated with very thin dull red slip. From a deposit of Group B in Tank C.

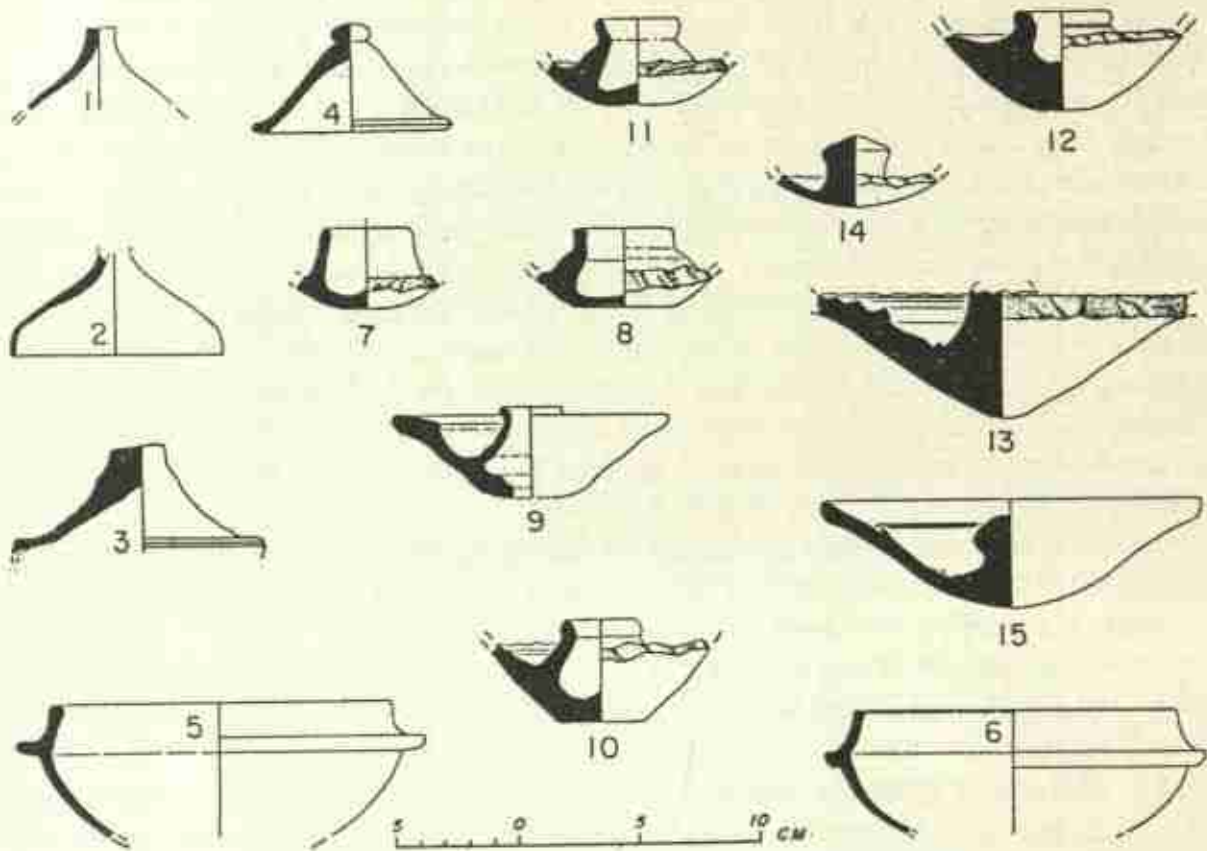


Fig. 27. Pottery : Lids

7. Part of a lid of red ware; Sub-type C1; inner central cup has a vertical featureless rim; round base; coarse fabric, ill fired, smoky core; treated both externally and internally with red slip; the part around the rim is black. From a deposit of Group B in Tank C.
8. Part of a lid of red ware; Sub-type C1; the central cup has a vertical square-cut rim; flat base; medium fabric; dull red core, traces of red slip on the exterior as well as interior. From a deposit of Group A in Tank C.
9. Lid of red ware; Sub-type C2; flat and flared rim, sloping exterior, flattish base; the rim of the vase-shaped central part is everted and is higher than the rim of the main pot; medium fabric, ill-fired, smoky core; evidence of dull red slip on the interior. From a deposit of Group B in Tank C.
10. Part of a lid of red ware; Sub-type C2; the vase-shaped central cup has an externally thickened rim, flat base; fine fabric, well fired, reddish core; treated both externally and internally with red slip. From a deposit of Group B in Tank C.

11. Part of a lid of red ware; Sub-type C2; the vase-shaped central cup has somewhat pointed rim; flat base; medium fabric, well fired, reddish core; traces of red slip. From a deposit of Group B in Tank C.
12. Part of a lid of red ware; Sub-type C2; the vase-shaped central cup has an externally beaded rim; flat base; medium fabric, well fired, reddish core; treated both externally and internally with red slip. From a deposit of Group B in the southern part of Tank B.
13. Part of a lid of red ware; probably of Sub-type D1, since the knob (broken) does not show the constriction which is there below the button-shaped knob in Sub-type D2. Corrugation in the part nearer the rim (broken), sagger base; medium fabric, well fired, reddish core, treated both externally and internally with red slip. From a deposit of Group B in Tank C.
14. Fragment of a lid of red ware; Sub-type D2; button-shaped central knob, sagger base, fine fabric, well fired, reddish core; treated internally with dull red slip. From a deposit of Group D (make-up of Mud Bund) in the Mud Tank.
15. Lid of red ware; Sub-type D2; flared featureless rim; internally grooved, button-shaped central knob; sagger base; medium fabric, not well fired, smoky core; traces of weak red slip on the interior. From a deposit of Group E in the Mud Tank.

J. MINIATURE VASES (Fig. 28)

A very small percentage of the entire pottery belongs to the category generally labelled as 'miniature vases', though admittedly the word 'miniature' is not quite an appropriate one. In our case, we have put under this category such vases as are less than 12 cm in height and about the same in width. By and large these vases are wheel-turned, though a few hand-made examples are also available. The clay used is fine to medium-grained and firing usually good. Most of the specimens have a wash, the use of slip being somewhat uncommon. An attempt at decoration around the body on the exterior is also seen in one case (no. 6). Carination is to be noted only on one of the vases (no. 11) : but obviously it is not a dominant feature.

Shape-wise, one notices five different types in these vases. The more prolific are vases with more or less globular body called here Type A1 (nos. 1-6). In Type A2 (no. 7) there is the addition of a spout. In Type B (no. 8) the body becomes relatively squattish. In Type C (no. 9) there is a distinct formation of shoulder in the upper part. Type D (no. 10) has a tallish profile. Type E (no. 11) is distinguished by its carination.

Selected specimens are described below:

1. Miniature vase of red ware; Type A1; splayedout rim, concave neck, globular body and round base; medium fabric, dull red core. From a deposit of Group A in Tank C.
2. Miniature vase of smoky dull red ware; Type A1; concave neck, globular body and round base; hand-made; medium fabric, smoky core. From a deposit of Group D (make-up of Mud Bund) in the Mud Tank.

3. Miniature vase of red ware; Type A1; obliquely cut rim with a mild depression on the exterior, concave neck, globular body, probably round base; medium fabric, well fired, greyish core; treated with thin red slip. From a deposit of Group B in Tank C.
4. Fragment of a miniature vase of red ware; Type A1; splayed out rim, concave neck, with a mild ledge, body somewhat tending towards pear-like shape, probably round base; medium fabric, somewhat smoky core; treated with red slip. From a deposit of Group B in Tank C.
5. Miniature vase of red ware; Type A1; globular body with a few concentric grooves, flat base; medium fabric, dull red core. From a deposit of Group A in Tank C.
6. Fragment of a miniature vase of red ware; Type A1; externally splayed out rim, concave neck; fine fabric; well fired, reddish core; treated both externally and internally with red slip. The middle portion of the body is decorated with finger-tip design on an applied band. From a deposit of Group B in Tank C.
7. Miniature, spouted vase of red ware; Type A2; small splayed out rim, concave neck, globular body; hand-made; medium fabric, dull red core. From a deposit of Group A in the southern part of Tank B.
8. Miniature vase of red ware; type B; externally somewhat beaked rim, concave neck, downward ledge at the middle part of the body, probably round base; medium fabric, dull red core. From a deposit of Group D (make-up of Mud Bund) in the Mud Tank.

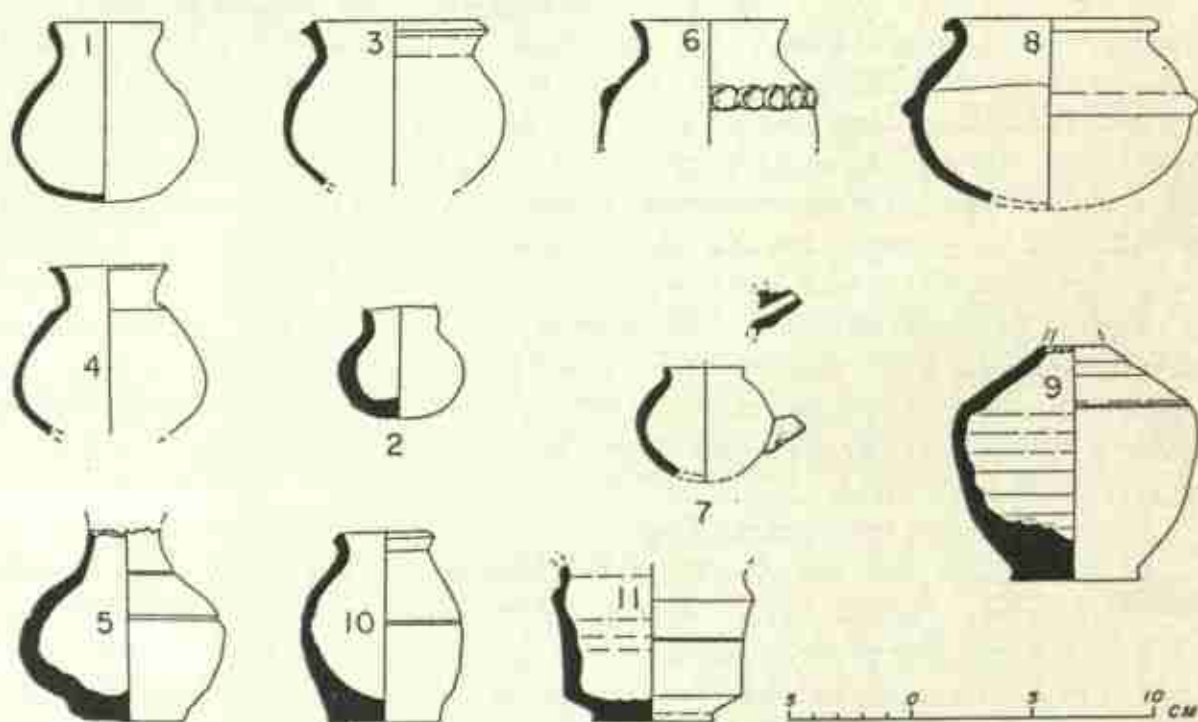


FIG. 28. Pottery : Miniature vases

9. Miniature vase of red ware; Type C; convex shoulder, mild grooves around the upper part of the body on the exterior and corrugations on the interior; flat base; medium fabric, smoky core. From a deposit of Group A in Tank C.
10. Miniature vase of red ware; Type D; tallish profile, everted rim, very mildly corrugated body and a flat base, medium fabric, reddish core; traces of red slip. From a deposit of Group A in Tank C.
11. Part of a miniature vase of red ware; Type E; has two carinations, one each in the upper and lower parts of the body; flat base; medium fabric, dull red core; treated both externally and internally with red slip. From a deposit of Group B in Tank C.

K. BOTTLE-NECKED FLASKS (Fig. 29)

Under this category are discussed specimens of a type of vessels which is characterized by its very long and narrow neck similar to that found in modern glass bottles. In many earlier reports, including that on Hastināpura (Lal 1954-55: 65), this type has been referred to as a "Sprinkler", but we are not very sure if this vessel was used specifically for the purpose denoted by that term. Due to breakage, the main body is by and large not available but from two examples (nos. 3 and 4) it appears that it may have had a tall convex profile. It is much more difficult to make a guess about the nature of the base. Examples from elsewhere, however, indicate that it may have been either flat or flat-cum-concave.

Within this category there are three types from the tank-complex which are distinguished by the nature of their mouths. In one type, called here A, the mouth is relatively wider, varying from 2.5 to 5 cm. In it there are two sub-types. While sub-type A2 has an additional hole through its neck (no. 9), there is no such hole in A1 (nos. 1-8). In the other two types, called B and C (nos. 10-12 and 13 respectively), the mouth-opening is much narrower, being not more than 1.3 cm. There is one more difference which deserves to be mentioned, viz. while in Type A the passage through the neck is wider at the top and bottom but narrower in the middle, in Types B and C it is cylindrical i.e. it has a uniform width. Further, in all the examples of Types B and C, a narrow hole passes through the thickness of the wall of the neck (as in Type A2 also). Between themselves, Types B and C are distinguished by their tops: in Type B it is more or less flat (nos. 10-12), while in Type C it is conical (no. 13).

The extra hole through the neck seems to have been provided in order that air could get out from the vessel when it was being filled up or could get into it when it was being emptied. In cases of flasks of Types B and C such a hole seems to have been a greater necessity than in Sub-type A2, since the opening was indeed very narrow.

By and large these vessels have a slip, the colour of which varies from light to dark red. In a few instances (e.g. nos. 5 and 8) the slip is also glossy. In some cases, the slip has disappeared owing to water-action, but its traces do exist. In two examples (nos. 1 and 2) there are traces of black paint as well.

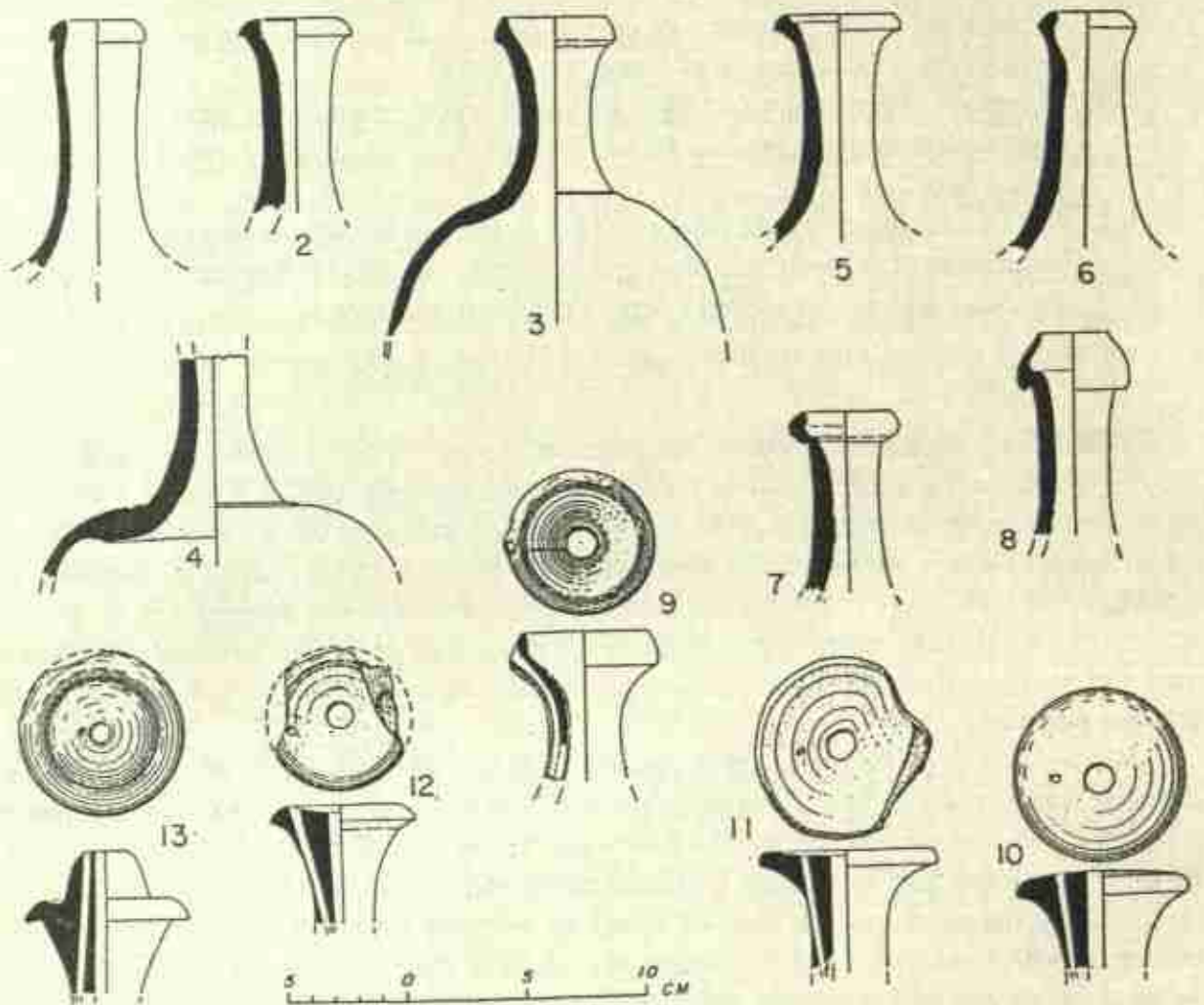


FIG. 29. Pottery : Bottle-necked flasks

It needs to be mentioned here that examples with a *pointed finial*, which may be classified as Type D are not available in either the Brick Tank or the Mud Tank. But this type does occur in the house-complex which came into being at the tank-site itself after even the Mud Tank had gone into complete disuse. From within this house-complex has also been found a gold coin of 'Vāsu' (pl. LXXXI C), which is ascribable to the first half of the third century A.D. (see Appendix-I)

The description of the illustrated specimens is as follows:

1. Upper part of a flask of red ware; Sub-type A1; externally convex rim having a prominent depression on the inner side, probably made by pressing the thumb against it; slightly concave long neck; medium fabric, well fired, reddish core; traces of dull red slip on the exterior. From a deposit of Group A in Tank C.

2. Upper part of a flask of red ware; Sub-type A1; out-turned somewhat beak-shaped rim, slightly concave long neck; medium fabric, well fired but smoky core; treated externally with red slip; traces of a black band at the lower end of the neck. From a deposit of Group B in the southern part of Tank B.
3. Part of a flask of red ware; Sub-typed A1; bevelled rim, slightly concave neck, globular body; groove at the shoulder; medium fabric, well fired, inner part of core oxidized; externally treated with dull red slip. From a deposit of Group B in the northern part of Tank B.
4. Middle part of a flask of red ware; probably of Sub-type A1; slightly concave long neck and squarish shoulder; having two concentric grooves; medium fabric, well fired, reddish core; treated externally with red slip. From a deposit of Group B in Tank C.
5. Upper part of a flask of red ware; Sub-type A1; externally splayedout rim with a prominent groove on the inner side, slightly concave long neck; medium fabric, well fired, reddish core treated with glossy red slip on the exterior and on upper part of the neck on the interior. From a deposit of Group B in Tank C.
6. Upper part of a flask of red ware; Sub-type A1; externally obliquely-cut rim, with depression on the inner side, slightly concave long neck; medium fabric, well fired, inner side of core unoxidized; treated externally with dull red slip. From a deposit of Group B in Tank C.
7. Upper part of a flask of red ware; Sub-type A1; externally convex rim having prominent depression on the inner side, probably made by pressing the thumb against it; slightly concave long neck; medium fabric, well fired, reddish core; traces of dull red slip on the exterior. From a deposit of Group B in Tank C.
8. Upper part of a flask of red ware; Sub-type A1. The most notable feature of this piece is the truncated-cone-like profile at the mouth-portion. Medium fabric; well fired, reddish core, treated externally with red slip. From a deposit of Group B in Tank C.
9. Upper part of a flask of red ware; Sub-type A2. In contrast to the specimens of Sub-type A1, it has the additional feature of a hole through the neck; funnel-shaped mouth-opening, concave neck; fine fabric, well fired, core largely oxidized; treated externally with red slip. From a deposit of Group E in the Mud Tank.
10. Upper part of a flask of red ware; Type B; rim having rounded end, flat top with a centrally placed small mouth, close to which there is a hole through the neck; fine fabric; medium-grained clay, well fired, reddish core. From a deposit of Group B in Tank C.
11. Upper part of a flask of red ware; Type B; bevelled rim, concave top with a centrally placed small mouth, close to which is a hole through the neck; fine fabric, well fired, reddish core; treated externally with glossy dark brown slip. From a deposit of Group B in the southern part of Tank B.
12. Upper part of a flask of red ware; Type B; externally pointed rim; concave top with a centrally placed small mouth, close to which is a hole through the neck; medium fabric,

well fired, reddish core; treated externally with dull red slip. From a deposit of Group B in Tank C.

13. Upper part of a flask of red ware; Type C; flanged and a somewhat pointed rim above which rises the mouth-portion resembling in profile a truncated cone; small mouth-opening with a close-by hole through the neck; fine fabric, well fired, reddish core; treated externally with bright reddish slip. From a deposit of Group B in Tank C.

L. *SURĀHIS* (Fig. 30)

We are separating the type of vessels under the heading of '*surāhīs*' from the ones placed under the category of 'bottle-necked flasks' because of two main criteria. One, in the latter case, the neck is pronouncedly slender and long, whereas in the former case, it is neither slender nor so elongated. Secondly, while in the latter case the mouth-opening is narrow, in the former it is relatively much wider. It may, however, be conceded that many specimens placed under the category of 'bottle-necked flasks' e.g. fig. 29, nos. 2 and 3, may have also been used as *surāhīs*. Indeed on functional basis, sometimes it becomes difficult to separate one lot from another, since vessels with somewhat different morphological features may have been used for the same or similar purpose. Thus, here we have the morphological features, viz. the nature of the neck and the width of the mouth-opening, as the differentiating criteria.

These vessels are wheel-turned. Made of medium-grained clay, they are well fired. Also, in all the cases, there is evidence of a (red) slip on the exterior and a part of the mouth on the interior.

Selected examples are described below:

1. Part of a *surāhī* of red ware; externally beaked rim, concave neck with round rib in its upper part on the exterior, expanding shoulders, probably globular body; medium fabric, fairly well fired, though the inner part of the core is smoky; evidence of red slip on the exterior as well as in the upper part of the mouth on the interior. From a deposit of Group E in the Mud Tank.
2. Upper part of a *surāhī* of red ware; funnel shaped mouth with externally beaked and internally bevelled rim, short concave neck; medium fabric, well fired, reddish core; treated both externally and internally with red slip. From a deposit of Group B in Tank C.

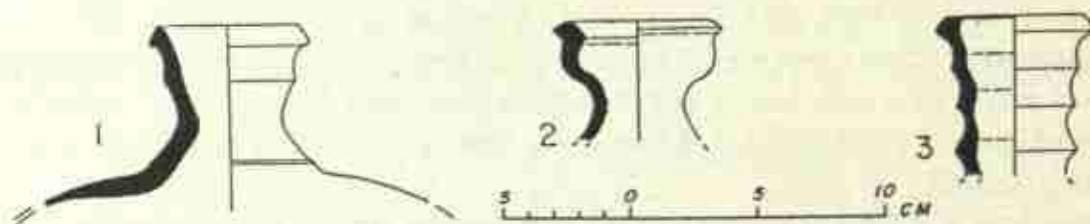


FIG. 30. Pottery : *Surāhīs*

3. Upper part of a *surāhī* of red ware; externally beaked rim with a thin groove on the top, long neck having three ribs on the exterior; use of red slip on the exterior as well as in the upper part of the neck on the interior. From a deposit of Group B in Tank C.

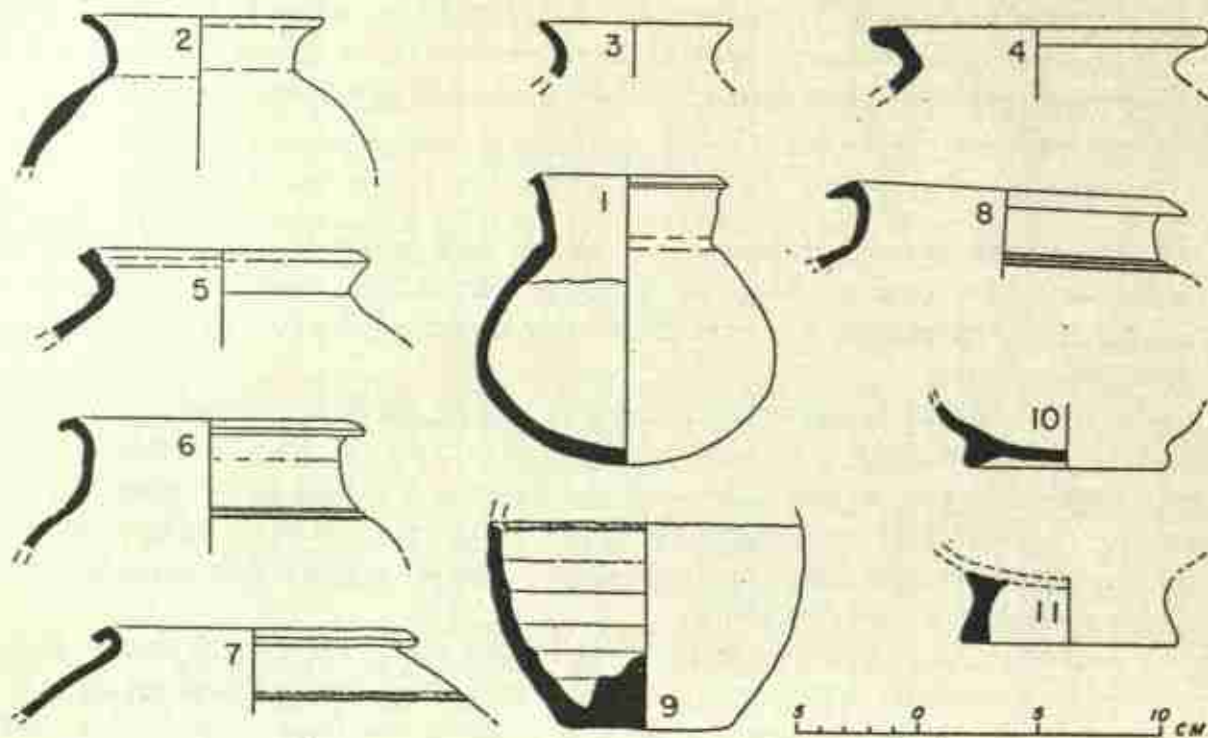
M. *LOṬAS* (Fig. 31)

Compared to the *gāgaras* and *maṭakās*, the *loṭās* are much smaller in size, but certainly much bigger than those classified as miniature vases. The *loṭās* seem to have served for actual use of water, whereas the *gāgaras* and *maṭakās* were most likely meant respectively for fetching and storing water. Hence the differentiation.

In the case of the *loṭās*, as compared to the *gharīās* (below), the body is globular. The base may be either rounded or flat or may even have a ring attached to it. Almost all the specimens are wheel-turned, though the base in the case of rounded ones seems to have been further beaten up with a dabber. The clay varies from fine to coarse. The firing is usually good, though in many cases the core has remained smoky. There is also a slip in most cases, which varies from pinkish red to brown.

Selected examples are described below:

1. *Loṭā* of red ware; mildly beaked rim, neck with a slight buldge in the middle, globular body, rounded base with beating marks; medium-grained clay, well fired but smoky core; reddish slip on the exterior and on the neck on the interior. From a deposit of Group E in the Mud Tank.
2. Upper part of a *loṭā* of red ware; splayed out rim, concave neck, globular body; relatively fine fabric, well fired though smoky core; traces of red slip. From a deposit of Group B in Tank C.
3. Upper part of a relatively small *loṭā* of red ware; splayed out rim, short concave neck; fine fabric, well fired, dull red core; traces of dull red slip. From a deposit of Group B in the southern part of Tank B.
4. Upper part of a *loṭā* of red ware; splayed out rim with flattish top, insignificant concave neck; medium fabric, fairly well fired, though smoky core; traces of dull red slip. From a deposit of Group B in the southern part of Tank B.
5. Upper part of a *loṭā* of red ware; out-turned rim with a mild depression on top; insignificant concave neck; relatively fine fabric with sprinkling of mica-dust; well fired, though smoky core; treated with red slip. From a deposit of Group B in the northern part of Tank B.
6. Upper part of a *loṭā* of red ware; externally beaked and slightly undercut rim, mildly concave neck; two grooves at the shoulder; medium fabric, well fired, though smoky core; treated with reddish brown slip on the exterior and along the neck on the interior. From a deposit of Group B in Tank C.
7. Upper part of a relatively large *loṭā* of red ware; splayed out rim, insignificant neck; grooves along the body; medium fabric, well fired, though smoky core; traces of red slip on the exterior. From a deposit of Group B in Tank C.

FIG. 31. Pottery : *loṭās*

8. Upper part of a relatively large *loṭā* of red ware; externally beaked and slightly undercut rim, mildly concave neck; multiple grooves at the shoulder; relatively fine fabric, well fired, though smoky core; treated with bright red slip on the exterior as well as along the neck on the interior. From a deposit of Group B in Tank C.
9. Lower part of a *loṭā* of red ware; internally corrugated body with a stump of clay left over in the centre of the base which is flat; medium fabric, well fired, though smoky core; traces of dull red slip on the exterior. From a deposit of Group B in Tank C.
10. Lower part of a *loṭā* of red ware; ring-base; medium fabric, well fired, though smoky core; treated externally (including the base) with red slip. From a deposit of Group B in Tank C.
11. Base-fragment of a *loṭā* of red ware; the ring is much taller than in No. 10; coarse fabric, well fired, though dull core; From a deposit of Group B in the middle part of Tank B.

N. *GHARĪĀS* (Fig. 32)

Compared to the *loṭās*, the *gharīās* have an elongated, usually pear-shaped body.¹ Their water-capacity may be slightly more than that of the *loṭās*, but certainly much less than that of the *gāgaras* and *matakās*. The *gharīās* seem to have been used either in the chain of vassels employed for drawing water in the Persian Wheel (*rahantā*) system or for collecting juice from palm or date trees. In the

¹This type is commonly known as Abichchhatrā Type 10 A.

latter case, a notch is cut in the trunk of the tree and the *ghariā* is tied with a rope below the notch so that it collects the juice as it oozes out from the trunk. The bottom of this category of vessel is usually rounded, as against that of the *lotā* which may have a flat, discular or ringed base.

Made usually of medium-grained clay, these vessels are well fired, though in many cases the core has remained smoky. They are all wheel-turned, though subsequent use of dabber is noticeable in some examples. Often a slip has also been provided.

Selected examples are described below:

1. Upper part of a *ghariā* of red ware; splayed out rim with a minor depression on the interior, short concave neck, pear-shaped (though incomplete) body with two minor buldges on the exterior; relatively fine fabric, well fired, reddish core; faint traces of reddish brown slip. From a deposit of Group B in Tank C.
2. Upper part of a *ghariā* of red ware; splayed out, externally obliquely cut rim with a minor groove, concave neck, probably pear-shaped body; medium fabric, well fired, though smoky core; treated with reddish brown slip. From a deposit of Group B in Tank C.
3. Upper part of a *ghariā* of red ware; splayed out mildly beaded rim, short concave neck, with a mild rib on the exterior, pear-shaped body with multiple grooves; relatively fine fabric, well fired, though core somewhat smoky; traces of reddish brown slip on the exterior. From a deposit of Group B in Tank C.
4. Rim-fragment of a *ghariā* of red ware; the rim is vertically thickened and has a slight concavity on the interior; medium fabric, well fired. From a deposit of Group A in the southern part of Tank B.
5. Upper part of a *ghariā* of red ware; rim with mild carination on the exterior; short concave

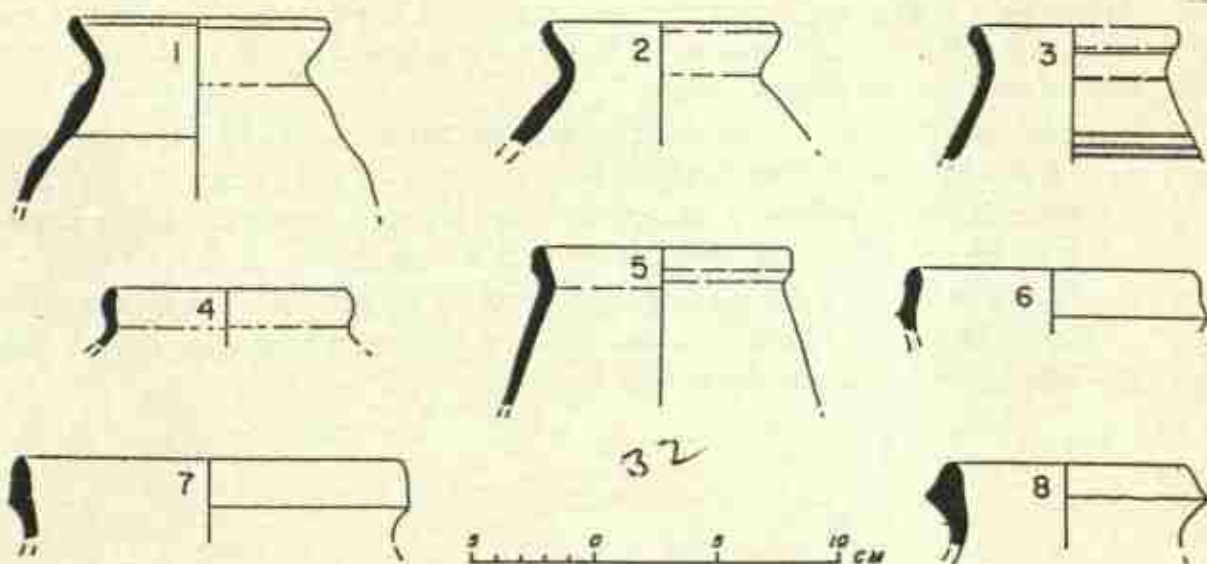


FIG. 32. Pottery : *Gharis*

neck, pear-shaped body; fine fabric, well fired, reddish core. From a deposit of Group B in Tank C.

6. Rim-fragment of a *ghaṇṭā* of red ware; the rim is vertical and rounded and has a sharp carination on the exterior; medium fabric, well fired, dull red core. From a deposit of Group B in the southern part of Tank B.
7. Fragment of rim and neck of a relatively large *ghaṇṭā* of red ware; the rim is vertical, somewhat pointed and has a sharp carination above the neck; medium fabric, well fired; though smoky core. From a deposit of Group B in the southern part of Tank B.
8. Fragment of rim and neck of a *ghaṇṭā* of red ware; the rim is thick and characterized by a sharp carination on the exterior; medium fabric, well fired, dull red core. From a deposit of Group B in Tank C.

O.ĠĀGARAS (Figs. 33 and 34)

Under this category have been placed water-vessels which are large than the *loṇās* and *ghaṇṭās* but smaller than the *matakās*. However, while like the *matakās*, the *gāgaras* too have a globular body, these are distinguished from the former (i.e. *matakās*) by their relatively long neck and narrow mouths. The *matakās* are usually kept at one place and filled with water to be taken out as and when necessary; the *gāgaras* are transportable and also used for fetching water from a well, river or tank. When fetching water from a well, a rope is tied around the (long) neck of the *gāgara* and the same is lowered in the well; after it is filled, it is drawn up over a pulley. In the process of hauling water from a tank or river, the long neck of the *gāgara* provides a good hand-grip. While bringing water home, the ladies in the country-side are often seen placing one or two *gāgaras* on the head and one along the hip, conveniently throwing a hand around its long neck to hold the pot in position.

Made usually of medium-grained clay, the *gāgaras* are wheel-turned. The firing is good and most of the examples bear a slip which varies from pinkish to brownish red.

Selected specimens are described below:

1. Upper part of a *gāgara* of red ware; horizontally splayed out and slightly undercut rim with flat top, concave neck with multiple ribs on the exterior and a depression on the interior; medium fabric, well fired, though the inner part of the core is smoky; treated with brownish red slip. From a deposit of Group B in Tank C.
2. Upper part of a *gāgara* of red ware; splayed out and pointed rim with a prominent rib on the top, slightly concave neck; medium fabric, well fired, reddish core. From a deposit of Group A in the southern part of Tank B.

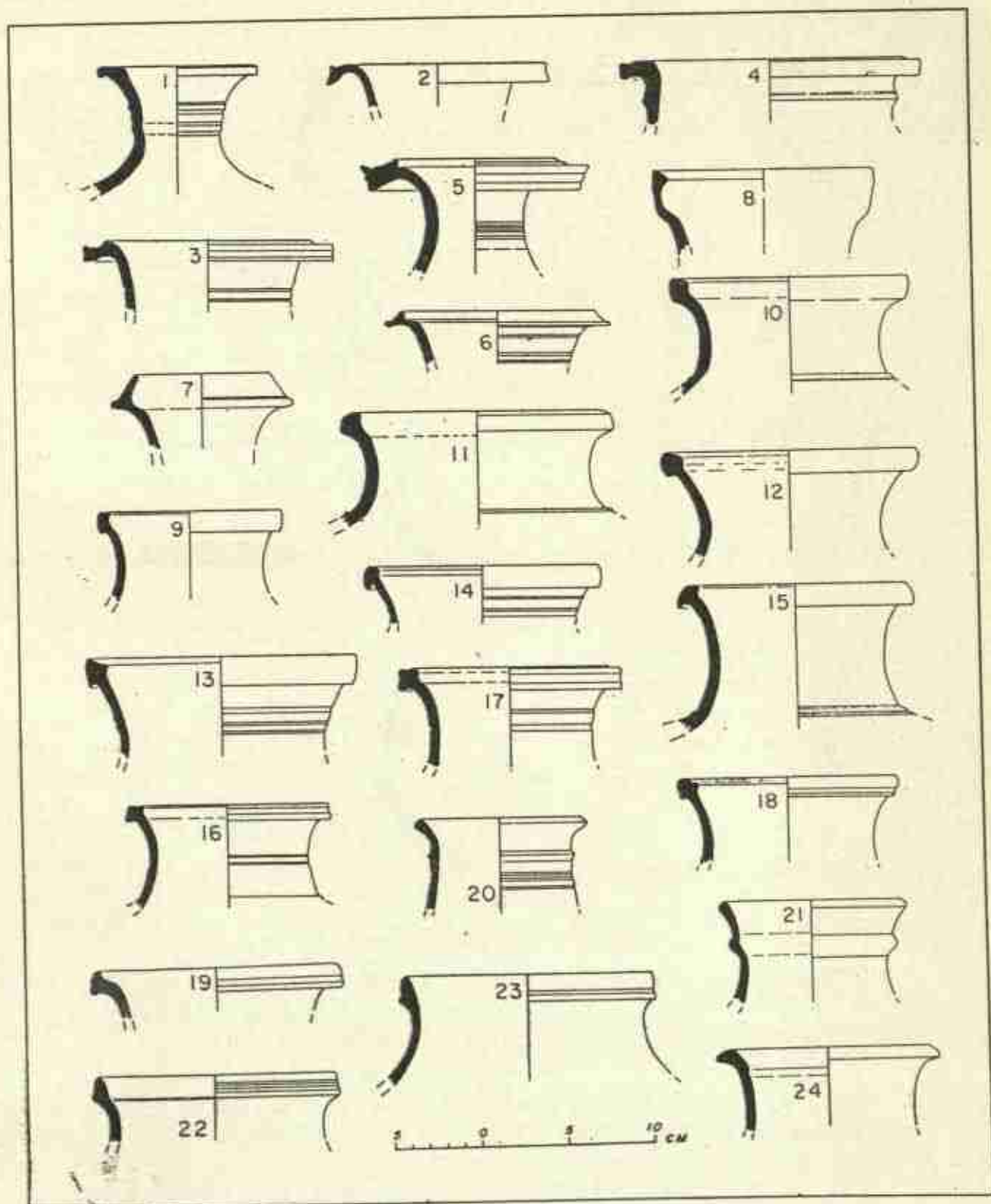


Fig. 33. Pottery : *Gagaras*

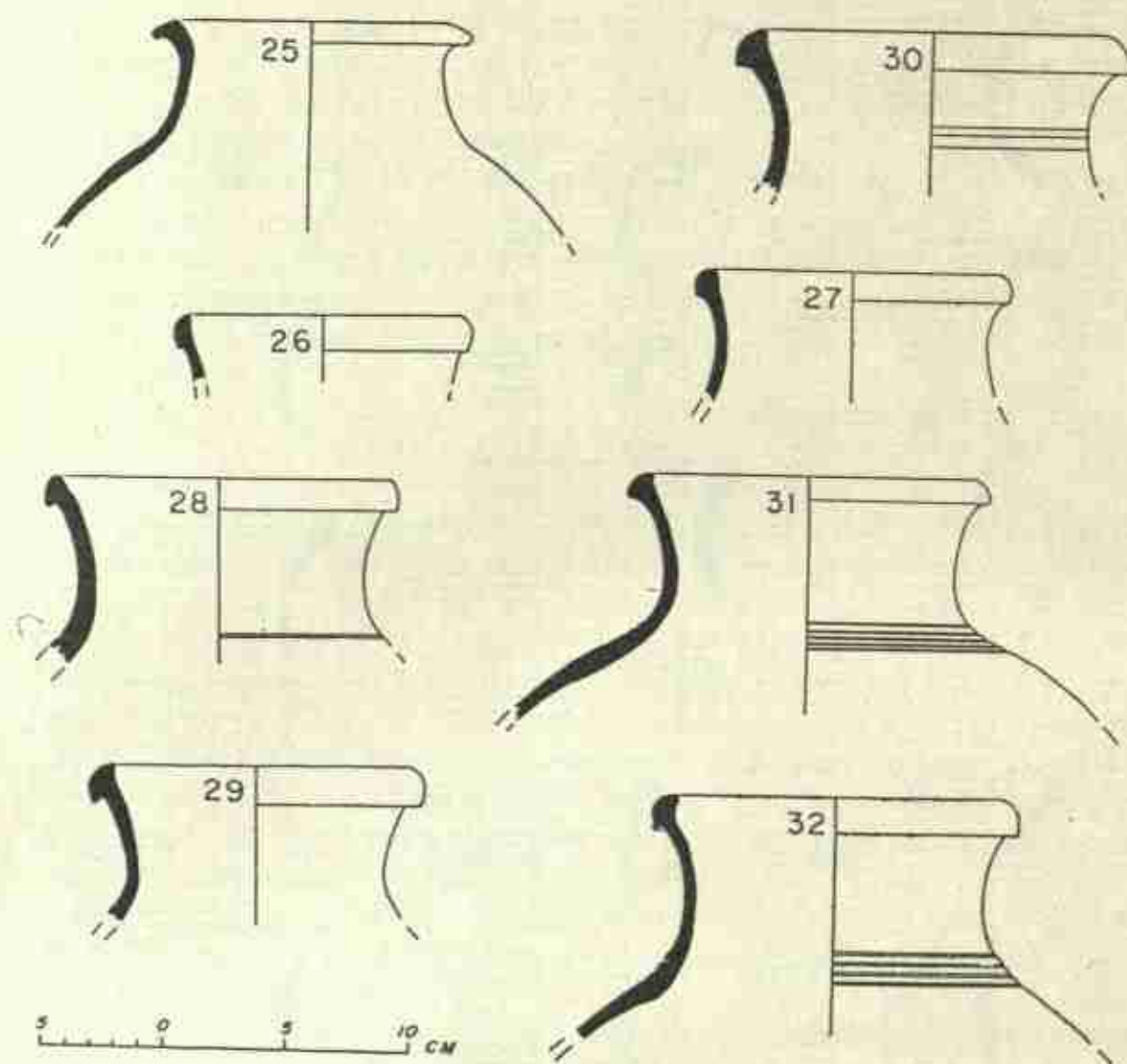


FIG. 34. Pottery : *Gāgara*

3. Upper part of a *gāgara* of red ware; horizontally splayed out rim with a wide depression on the top, concave neck with two grooves on the exterior; medium fabric, well fired, though smoky core. From a deposit of Group B in the southern part of Tank B.
4. Upper part of a *gāgara* of red ware; horizontally splayed out rim with a depression on the top, concave neck with a sharp carination and a mild groove on the exterior; medium fabric, well fired, though the inner part of the core is smoky. From a deposit of Group E in the Mud Tank.
5. Upper part of a *gāgara* of red ware; horizontally splayed out rim with multiple grooves and ribs on the top as well as on the side, concave neck also with multiple ribs and grooves on

- the exterior; fine fabric, well fired, though the inner part of the core is smoky; treated with fine slip. From a deposit of Group B in Tank C.
6. Upper part of a *gāgara* of red ware; splayed out and pointed rim with horizontal space on the interior, probably to hold a lid, concave neck with multiple grooves on the exterior; fine fabric, well fired, reddish core; treated with fine red slip. From a deposit of Group B in Tank C.
 7. Upper part of a *gāgara* of red ware; the rim is pointed on the exterior, but slopes inwards, below which there is a sharp depression; concave neck; medium fabric, well fired, reddish core; treated with pinkish red slip. From a deposit of Group C in the southern part of Tank B.
 8. Upper part of a *gāgara* of red ware; internally obliquely-cut rim with prominent depression below it, slightly concave neck; medium fabric, well fired, though the inner part of the core is smoky; treated with red slip. From a deposit of Group B in Tank C.
 9. Upper part of a *gāgara* of red ware; externally collared rim with depression on the interior, concave neck; medium fabric, well fired, dull red core; treated externally with dull red slip. From a deposit of Group B in Tank C.
 10. Upper part of a *gāgara* of red ware; externally club-shaped rim with depression on the interior, concave neck with a rib at its junction with the shoulder; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip on the exterior. From a deposit of Group A in Tank C.
 11. Upper part of a *gāgara* of red ware; somewhat clubbed rim with a mild depression on the interior, concave neck with a rib at its junction with the shoulder on the exterior; medium fabric, well fired, though the inner part of the core is smoky. From a deposit of Group B in Tank C.
 12. Upper part of a *gāgara* of red ware; externally club-shaped rim with a mild depression on the interior, concave neck; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip. From a deposit of Group B in Tank C.
 13. Upper part of a *gāgara* of red ware; the rim is externally straight but has a depression on the top probably for holding a lid, concave neck having three grooves on the exterior; medium fabric, well fired, though the inner part of the core is smoky; treated externally with red slip which extends to the depression at the top of the rim. From a deposit of Group B in the southern part of Tank B.
 14. Upper part of a *gāgara* of red ware; externally collared and undercut rim with a slight projection on the interior, concave neck having two mild ribs on the exterior; medium fabric, well fired, though the inner part of the core is smoky; treated externally with red slip which also covers the inner side of the neck. From a deposit of Group B in Tank C.
 15. Upper part of a *gāgara* of red ware; externally nail-headed rim with slight depression on the interior, concave neck with two mild ribs at the junction of the neck and shoulder; medium fabric, well fired, though the inner part of the core is smoky; treated with red slip which

- also covers the upper part of the inner side of the neck. From a deposit of Group B in Tank C.
16. Upper part of a *gāgara* of red ware; splayed out rim with two grooves, one on the exterior and the other on the top; also a depression on the interior; concave neck having two mild grooves on the exterior; medium fabric, well fired, reddish core, traces of red slip on the exterior. From a deposit of Group A in the southern part of Tank B.
 17. Upper part of a *gāgara* of red ware; splayed-out undercut rim with two grooves, a somewhat wider on the exterior and a little less wide on the top; also a depression on the interior; concave neck having two sharp grooves on the exterior; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip. From a deposit of Group A in Tank C.
 18. Upper part of a *gāgara* of red ware; splayed out rim with a groove each on the exterior and the top, and a depression on the interior, concave neck; medium fabric, well fired, dull red core, traces of red slip on the exterior. From a deposit of Group B in Tank C.
 19. Upper part of a *gāgara* of red ware; splayed out rim with a mild groove on the exterior and a depression on the interior, concave neck; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip. From a deposit of Group A in the southern part of Tank B.
 20. Upper part of a *gāgara* of red ware; obliquely cut and splayed out rim, concave neck with a prominent rib and multiple grooves on the exterior; medium fabric, well fired, though the inner part of the core is smoky; treated with red slip. From a deposit of Group B in Tank C.
 21. Upper part of a *gāgara* of red ware; splayed out rounded rim, concave neck with a buldge on the exterior and a corresponding depression on the interior; medium fabric, well fired, though the inner part of the core is smoky, traces of red slip on the exterior. From a deposit of Group B in Tank C.
 22. Upper part of a *gāgara* of red ware; rim with two grooves on the exterior, concave neck; medium fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
 23. Upper part of a *gāgara* of red ware; externally grooved rim, concave neck; medium fabric, well fired, reddish core, traces of red slip on the exterior. From a deposit of Group B in the middle part of Tank B.
 24. Upper part of a *gāgara* of red ware; externally bluntly beaked-rim and concave neck with a mild depression on the interior at the junction of the two; medium fabric, well fired, reddish core; treated with red slip. From a deposit of Group B in Tank C.
 25. Upper part of a *gāgara* of red ware; bluntly beaked rim, slightly concave neck; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip on the exterior. From a deposit of Group A in the southern part of Tank B.

26. Upper part of a *gāgara* of red ware; elliptically collared and undercut rim, concave neck; medium fabric, well fired, though the inner part of the core is smoky. From a deposit of Group B in the southern part of Tank B.
27. Upper part of a *gāgara* of red ware; externally club-shaped rim, mildly concave neck; medium fabric, well fired, though the inner part of the core is smoky; traces of red slip on the exterior. From a deposit of Group A in the southern part of Tank B.
28. Upper part of a *gāgara* of red ware; externally collared rim, concave neck, expanding shoulder with a groove on the exterior; medium fabric, well fired, dull red core; from a deposit of Group A in the southern part of Tank B.
29. Upper part of a *gāgara* of red ware; externally collared and undercut rim, concave neck; medium fabric, well fired, reddish core. From a deposit of Group A in the southern part of Tank B.
30. Upper part of a *gāgara* of red ware; nail-headed rim, concave neck with mild ribs and grooves on the exterior; medium fabric, well fired, reddish core; traces of red slip. From a deposit of Group B in Tank C.
31. Upper part of a *gāgara* of red ware; nail-headed rim, concave neck, expanding shoulder with multiple grooves on the exterior; medium fabric, well fired, though the inner part of the core is smoky. From a deposit of Group A in Tank C.
32. Upper part of a *gāgara* of red ware; nail-headed and undercut rim, concave neck with multiple grooves at its junction with the shoulder on the exterior; medium fabric, well fired, red core. From a deposit of Group A in the southern part of Tank B.

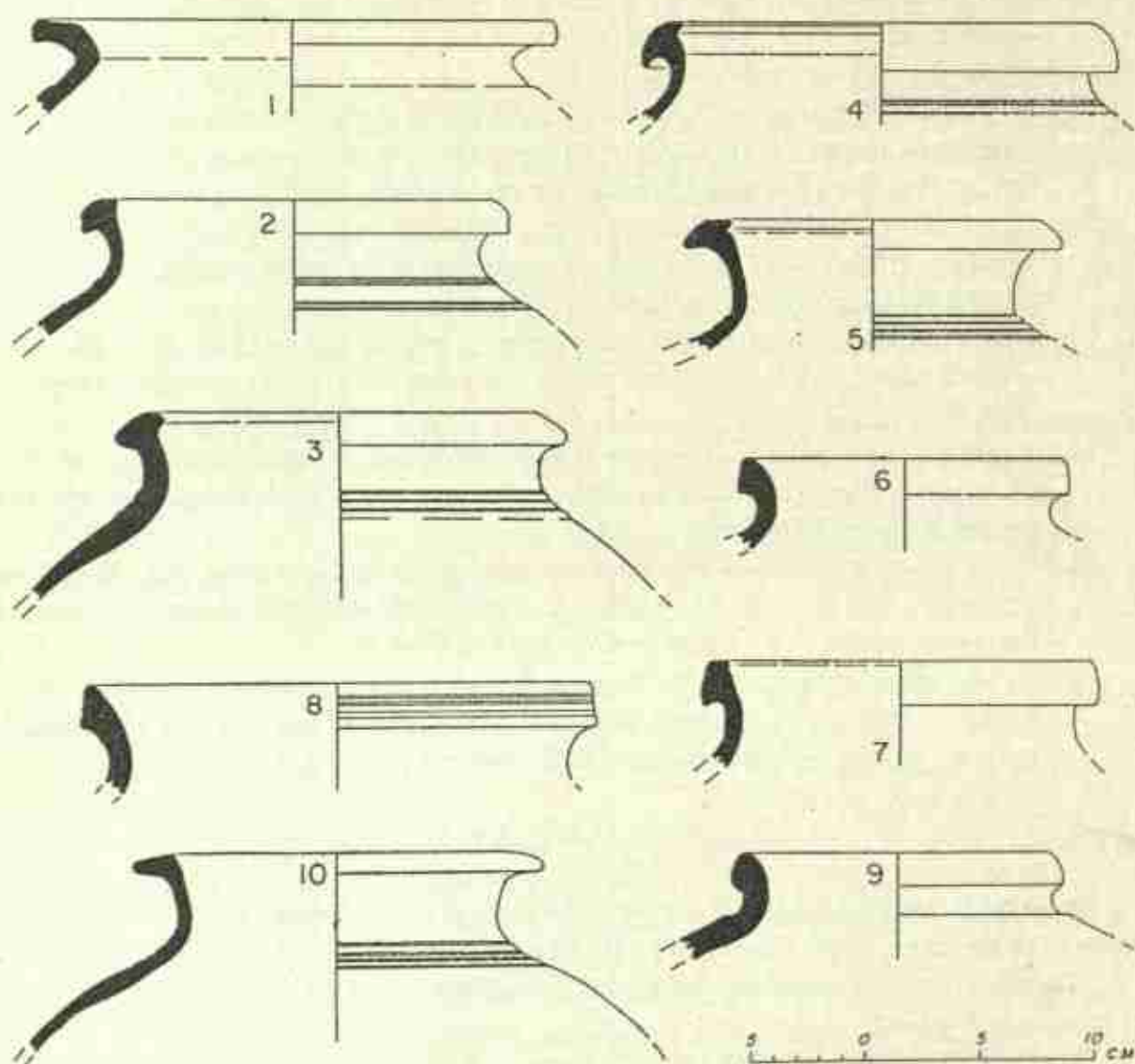
P. MATAKĀS (Fig. 35)

The *matākās* are larger than the *gāgaras*, but have a much shorter neck and wider mouth as compared to the latter. These (i.e. *matākās*) are usually meant to be stationary and kept filled with water. The wide mouth is convenient for dipping a small vessel into the *matākās* for taking the water out as and when needed.

The profile is globular. The clay ranges from medium to coarse in consistency. The pots are well fired, though the inner part of the core has remained smoky in most cases. Quite a few specimens have a slip, varying from pinkish to brownish red.

Selected examples are described below.

1. Upper part of a *matākā* of red ware; horizontally splayed out rim with flat top, insignificant concave neck; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with red slip which also covers the inner side of the rim. From a deposit of Group E in the Mud Tank.
2. Upper part of a *matākā* of red ware; externally clubbed and undercut rim, short concave neck, expanding shoulder having concentric grooves on the exterior; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with red slip which

FIG. 35. Pottery : *Maṭṭkāś*

also covers the inner side of the rim. From a deposit of Group A in the southern part of Tank B.

3. Upper part of a *maṭṭkā* of red ware; nail-headed rim with depression on the interior, short concave neck; expanding shoulder having multiple grooves on the exterior; medium fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group B in the northern part of Tank B.
4. Upper part of a *maṭṭkā* of red ware; externally splayed out nail-headed rim with depression on the interior, short concave neck, expanding shoulder having concentric grooves on the exterior, medium fabric, fairly well fired, though the inner part of the core is smoky; treated

externally with red slip which also covers the inner side of the rim. From a deposit of Group A in the southern part of Tank B.

5. Upper part of a *matākā* of red ware; externally beaked rim with a depression on the interior, concave neck, expanding shoulders having four concentric grooves on the exterior; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with dull red slip. From a deposit of Group E in the Mud Tank.
6. Upper part of a *matākā* of red ware; externally collared rim, short concave neck; medium fabric, well fired, though the inner part of the core is smoky. From a deposit of Group B in Tank C.
7. Upper part of a *matākā* of red ware; externally collared rim, concave neck; medium fabric, fairly well fired, though the inner part of the core is smoky; treated externally with red slip. From a deposit of Group A in Tank C.
8. Upper part of a *matākā* of red ware; splayed out multi-grooved rim, short concave neck, medium fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group B in the southern part of Tank B.
9. Upper part of a *matākā* of red ware; externally beaded rim, short concave neck, with a mild ledge at the shoulder; relatively coarse fabric, well fired, though the inner part of the core is smoky. From a deposit of Group B in the southern part of Tank B.
10. Upper part of a *matākā* of red ware; horizontally splayed out beaked rim with flat top, concave neck, expanding shoulder having four concentric grooves on the exterior; medium fabric, fairly well fired, though the inner part of the core is smoky; treated with wash. From a deposit of Group A in the southern part of Tank B.

Q. *DAHARAS* (Figs. 36 and 37)

The *daharas* are large storage jars, usually with an elongated profile and heavy narrow base. In the country-side such vessels are used for stocking a large amount of water (or other material) on the occasion of marriage or community-feasts. Sometimes even cereals are stored in such vessels. These are fixed into the ground, for which purpose the narrow (almost pointed) heavy base is quite suitable.*

In keeping with their large size, these vessels are made of coarse-grained clay to which degreasant and sometimes even grit were added. The firing is good, though the core has remained smoky in many cases. In quite a few examples there is also evidence of a slip which varies in colour from pinkish red to somewhat brownish.

*From the tank-complex we do not have complete examples to illustrate the elongated nature of this type, but we do have elongated specimens from the habitation-strata, where these were also found affixed to the ground. Since, as already stated, the specimens from the tank are incomplete, it is not unlikely that some of them may have had a globular profile, but nothing can be said about it with certainty. If some examples did actually have a globular profile, they may have to be classed as large-sized storage *matākās*, since the *daharas* are characterised by an elongated profile and narrow, somewhat pointed base.

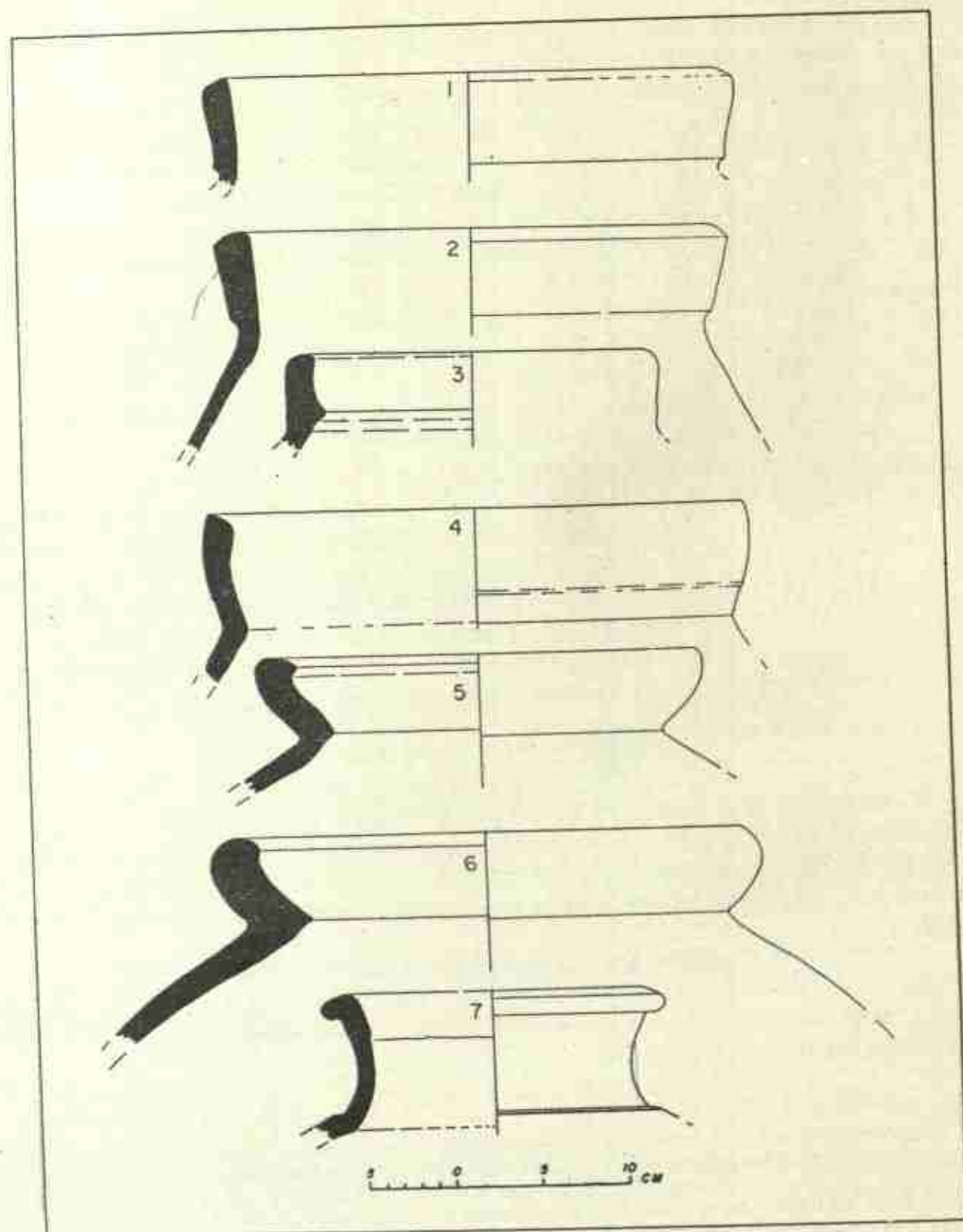


FIG. 36. Pottery : Daharas

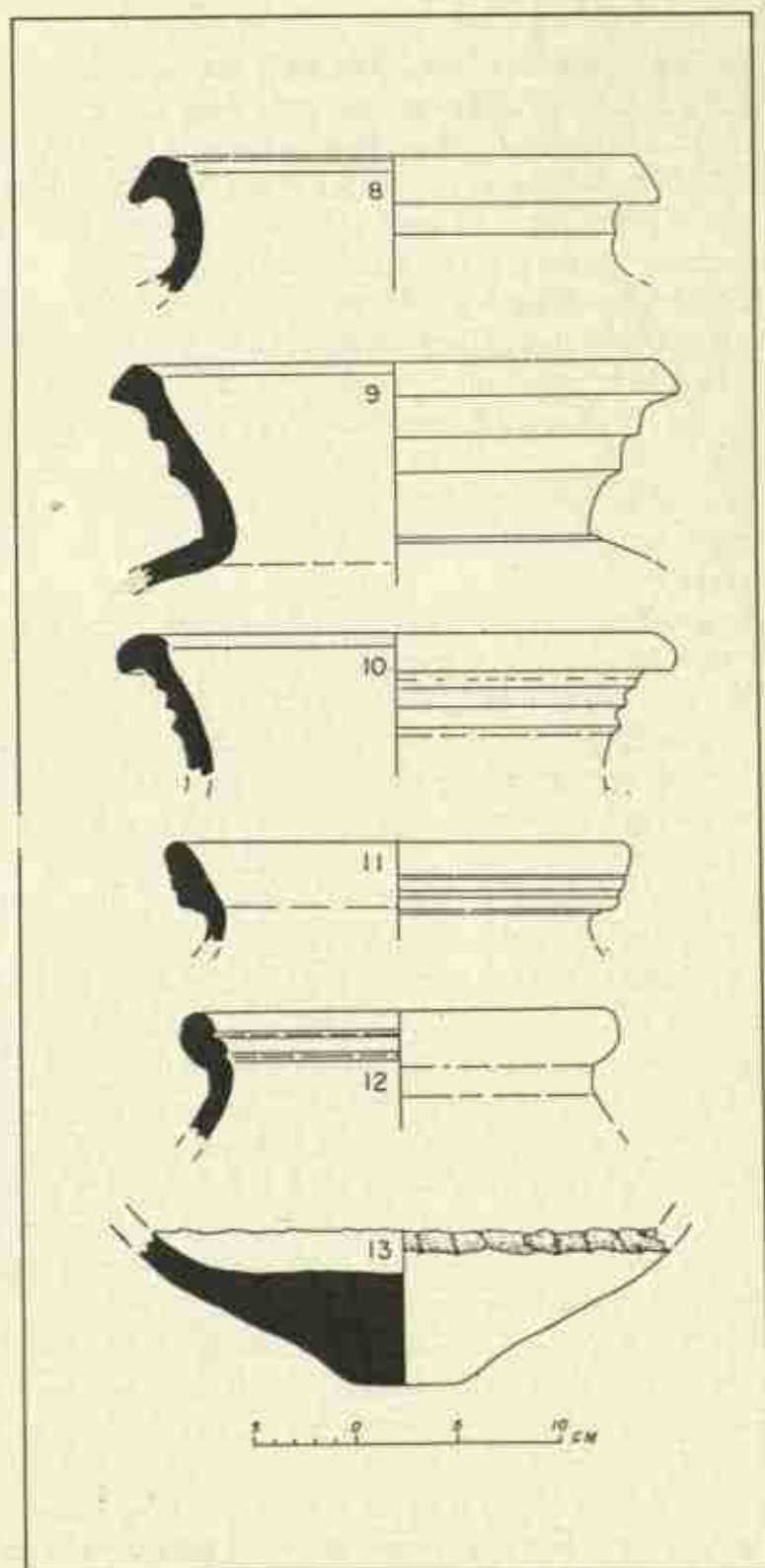


FIG. 37. Pottery : *Daharas*

Selected specimens are described below:

1. Rim-fragment of a *dahara* of red ware. The rim is somewhat slanting out and is bevelled at the top; coarse fabric, fairly well fired, though the inner part of the core is smoky; traces of brownish slip on the exterior. From a deposit of Group A in the southern part of Tank B.
2. Upper part of a *dahara* of red ware; slightly slanting out, externally thickened and bevelled rim, short concave neck; coarse fabric, well fired, reddish core. Evidence of pinkish red slip. From a deposit of Group D i.e. make-up of the Mud Bund.
3. Upper part of a *dahara* of red ware; vertical rounded rim with a ridge and groove below it on the interior; coarse fabric, ill fired, smoky core. From a deposit of Group B in Tank C.
4. Upper part of a *dahara* of red ware; incurved, internally bevelled rim, short concave neck; coarse fabric, well fired, reddish core. From a deposit of Group C in the southern part of Tank B.
5. Part of a *dahara* of red ware; internally concave and slightly beaked rim, short concave neck with carination on the interior; coarse fabric, ill fired, smoky core. From a deposit of Group A in Tank C.
6. Upper part of a *dahara* of red ware; internally concave and round-topped rim, short concave neck having carination on the interior; coarse fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group B in Tank C.
7. Upper part of a *dahara* of red ware; externally somewhat beaded rim, concave neck with grooves at its junction with the shoulder; coarse fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group A in Tank C.
8. Upper part of a *dahara* of red ware; externally beaked rim, concave neck having a ridge on the exterior; coarse fabric, well fired, dull red core; traces of red slip on the exterior. From a deposit of Group E in the southern part of Tank B.
9. Upper part of a *dahara* of red ware; externally beaked rim, two ridges on the exterior of the slanting neck, also a band at the junction of neck and the shoulder; coarse fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group B in Tank C.
10. Upper part of a *dahara* of red ware; externally beaded rim, three ridges on the exterior of the slanting neck; coarse fabric, fairly well fired, though the inner part of the core is smoky; traces of red slip. From a deposit of Group D i.e. the make-up of the Mud Bund.
11. Upper part of a *dahara* of red ware; externally thickened multigrooved rim, short concave neck; coarse fabric, fairly well fired, though the inner part of the core is smoky. From a deposit of Group D, i.e. the make-up of the Mud Bund.
12. Upper part of a *dahara* of red ware; externally rounded rim with two sharply cut prominent grooves on the interior, short concave neck; coarse fabric, well fired, dull red core; traces of light brown slip on the exterior. From a deposit of Group D i.e. make-up of the Mud Bund.
13. Bottom-part of a *dahara* of red ware. It is thick and heavy, and while the exterior is somewhat pointed the interior is flattish; traces of pinkish red slip. From a deposit of Group C in the northern part of Tank B.

R. SPOUTS (Fig. 38, pl. LXXXII)

It is unfortunate that all the spouts recovered from the tank-complex are detached from the vessels of which they had formed a part. However, on the basis of evidence from elsewhere it appears these spouts were attached to the type called the flask. Since these had been luted to the main body, they got easily detached when the pots broke. The provision of spouts in the flasks seems to have been made to facilitate the pouring of water. It may also be added that none of the specimens has any straining holes.

All the specimens seem to have been hand-modelled. They all have a tubular passage. Outwardly, while some are plain, some others have the form of the mouth of an aquatic animal—either crocodile or turtle or duck. The clay is fine-to medium-grained. The firing is good. In most cases there is provision of a slip, in some shade of the red.

Selected specimens are described below:

1. A plain tubular spout of red ware with tapering profile and featureless mouth. Hand-modelled, medium fabric, well fired, reddish core, traces of red slip. From a deposit of Group B in Tank C.
2. A tubular spout of red ware with somewhat cylindrical profile and featureless mouth. It has two concentric grooves on the exterior. Hand-modelled, medium fabric, well fired, reddish core, treated with red slip. From a deposit of Group A in Tank C.
3. A tubular spout of red ware with collared mouth. Hand-modelled, medium fabric, well fired, reddish core; traces of red slip. From a deposit of Group B in Tank C.
4. A tubular spout of red ware with long tapering profile and collared mouth. It has also a medial ridge. Hand-modelled, medium fabric, well fired, dull red core. From a deposit of Group B in the northern part of Tank B.
5. A *makaramukha*-type spout of red ware with tubular mouth-opening. With prominent bulged eyes, wide open mouth and prominent teeth, the delineation of the animal is life-like and very impressive. Hand-modelled, medium fabric, well fired, reddish core, treated with red slip. From a deposit of Group B in Tank C.
6. An animal-faced spout of red ware. The identification of the animal, however, is not certain. Hand-modelled, medium fabric, well fired, reddish core, traces of red slip. From a deposit of Group A in Tank C.
7. A duck-faced (?) spout of red ware with tubular mouth-opening. Hand-modelled, medium fabric, well fired, reddish core, traces of red slip. From a deposit of Group A in Tank C.
8. A turtle-faced spout of red ware with tubular mouth-opening. The delineation of the eyes, eyebrows, snout and crown is life-like. Hand-modelled, medium fabric, well fired, though smoky core. It is treated with red slip. From a deposit of Group B in Tank C.

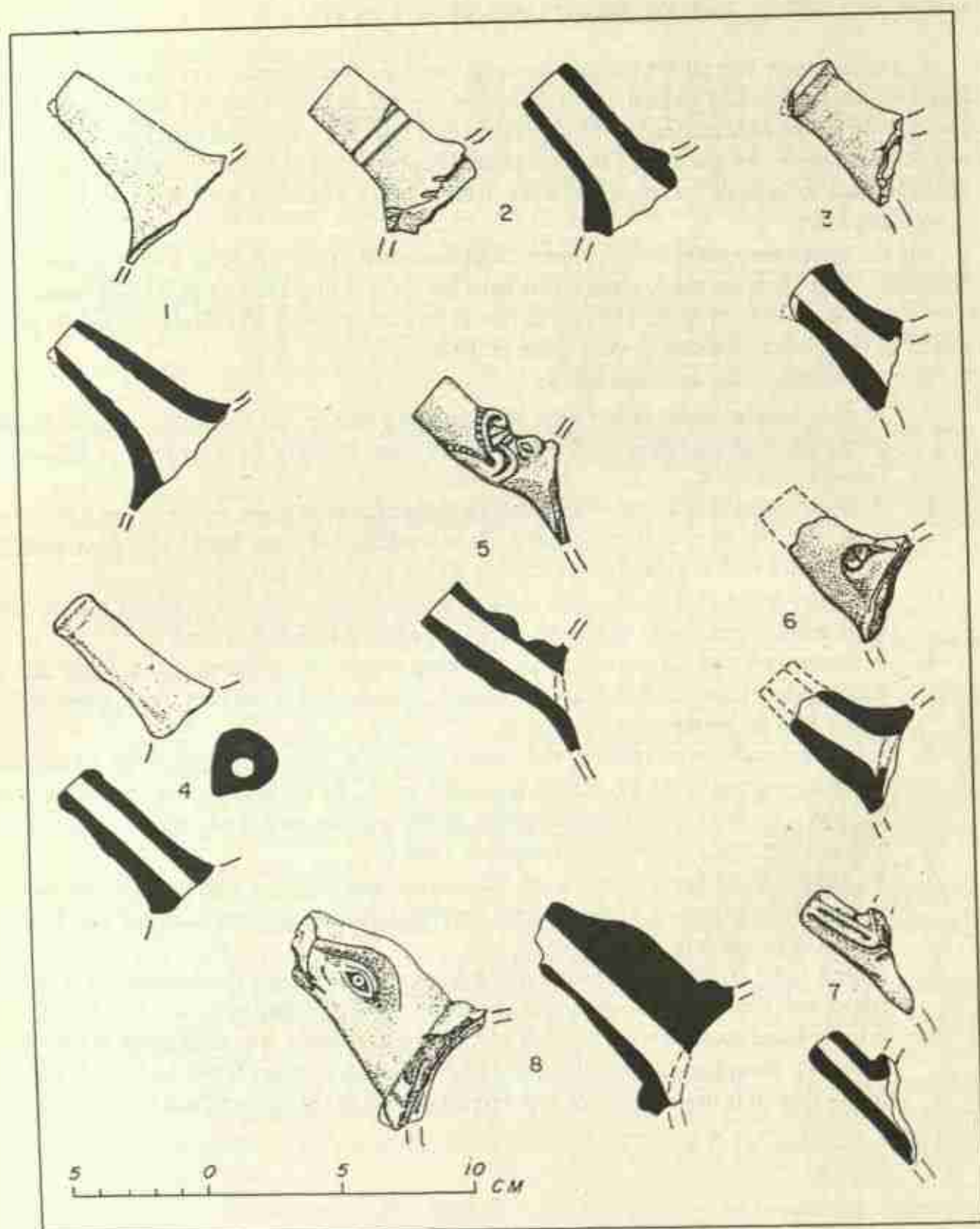


FIG. 38. Pottery : Spouts

S. DECORATED POTTERY (Figs. 39 and 40; pls. LXXXIII-LXXXIV)

Some of the pots bear incised or stamped designs on the exterior, particularly at the shoulder-level and/or on the belly. No design seems to have been executed on the lower half of the pot. The incised designs comprise longitudinal or horizontal notches, triangles and dots, whereas the stamped designs include the sun, floral motifs and the *triratna*. Besides, there is also one specimen (no. 1) on which a coating of clay seems to have been given first and then the design was carved out thereon.

Selected examples are described below:

1. Belly part of a vase of red ware with applique fish-scale designs in relief on the exterior. It appears that a thin paste of clay was applied to the wet pot and then the design was produced by using a piece of bamboo/twig or some similar object. From a deposit of Group B in the middle part of Tank B.
2. Shoulder part of a vase of red ware. The design on the exterior consists of two concentric lines below which is a series of incised vertical notches with the wider end downward. Medium fabric, well fired, reddish core. From a deposit of Group B in the southern part of Tank B.
3. Shoulder and belly part of a vase of red ware. The exterior bears incised and stamped designs. At the shoulder-level there are 'S'-like notches placed between two sets of incised concentric lines, one above and two below. Further down there is a stamped leaf-like design at regular intervals. Medium fabric, fairly well fired, though smoky core, traces of blackish slip. From a deposit of Group B in the southern part of Tank B.
4. Shoulder and belly part of a vase of red ware. The exterior has two panels of incised designs. In the upper panel, at the shoulder-level, there is a row of S-like notches placed between two sets of concentric lines. Beneath the lower set of lines, there is a row of triangular notches. Medium fabric, fairly well fired, though smoky core, traces of red slip. From a deposit of Group A in the southern part of Tank B.
5. Shoulder and belly part of a vase of red ware. The incised design on the exterior consists of the following: a line at the top, below which there are three sets of designs, one below the other. In the uppermost set, at the shoulder-level, there is a row of notches. Below the notches there are three concentric lines, followed further down by triangular notches having a dot above. Medium fabric, fairly well fired, though smoky core, traces of red slip. From a deposit of Group B in Tank C.
6. Shoulder and belly part of a small vase of red ware. The exterior has incised designs in three sets. The uppermost, at the shoulder-level, has nail-like notches placed between two sets of concentric lines. Lower down is a row of triangular notches followed by two concentric lines. In the lower set there are again two concentric lines. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group A in Tank C.
7. Shoulder and belly part of a vase of red ware. The exterior has incised designs. At the shoulder-level, there is a row of vertical notches with dots below them. Then there is a set

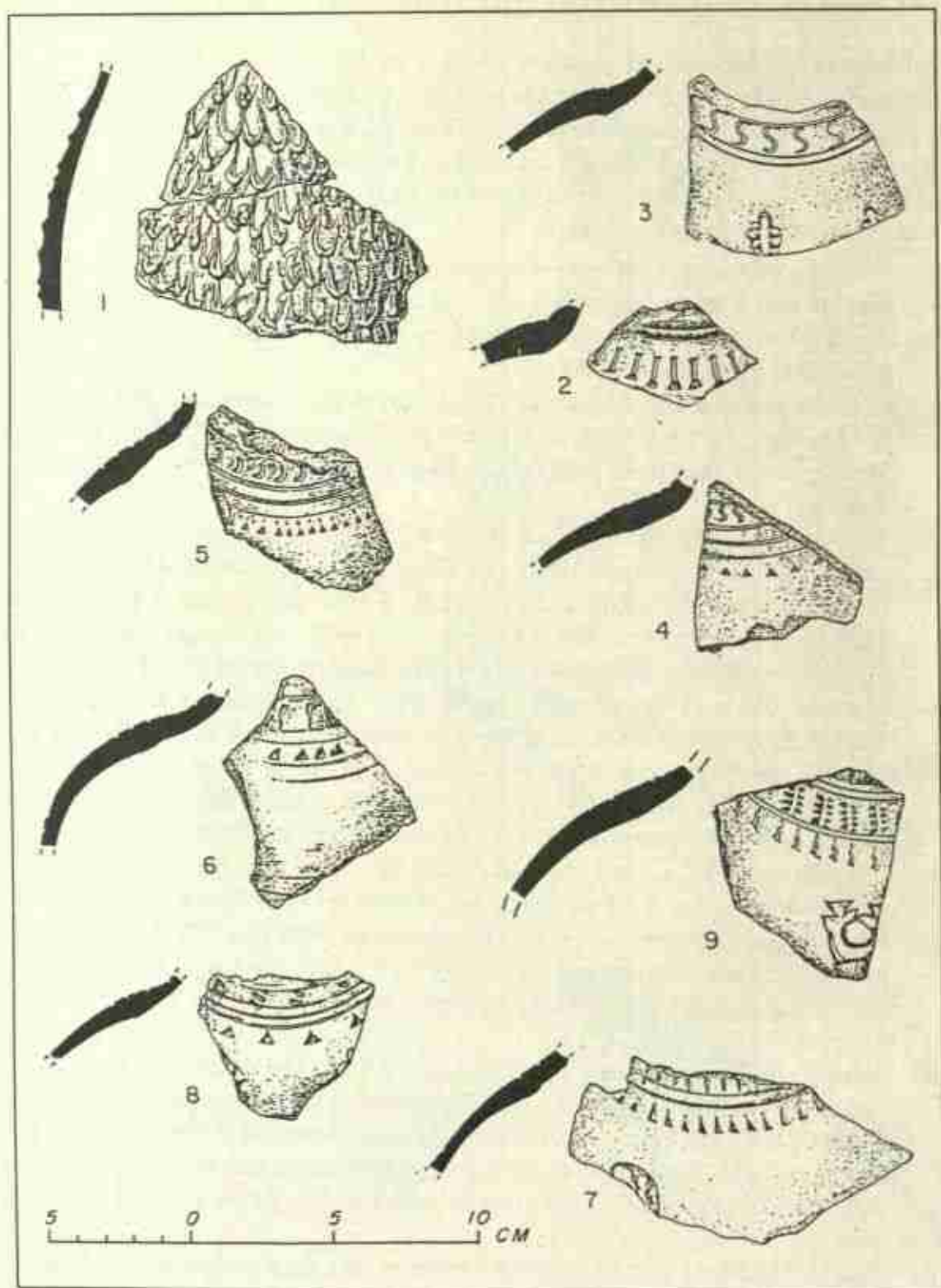


FIG. 39. Decorated pottery

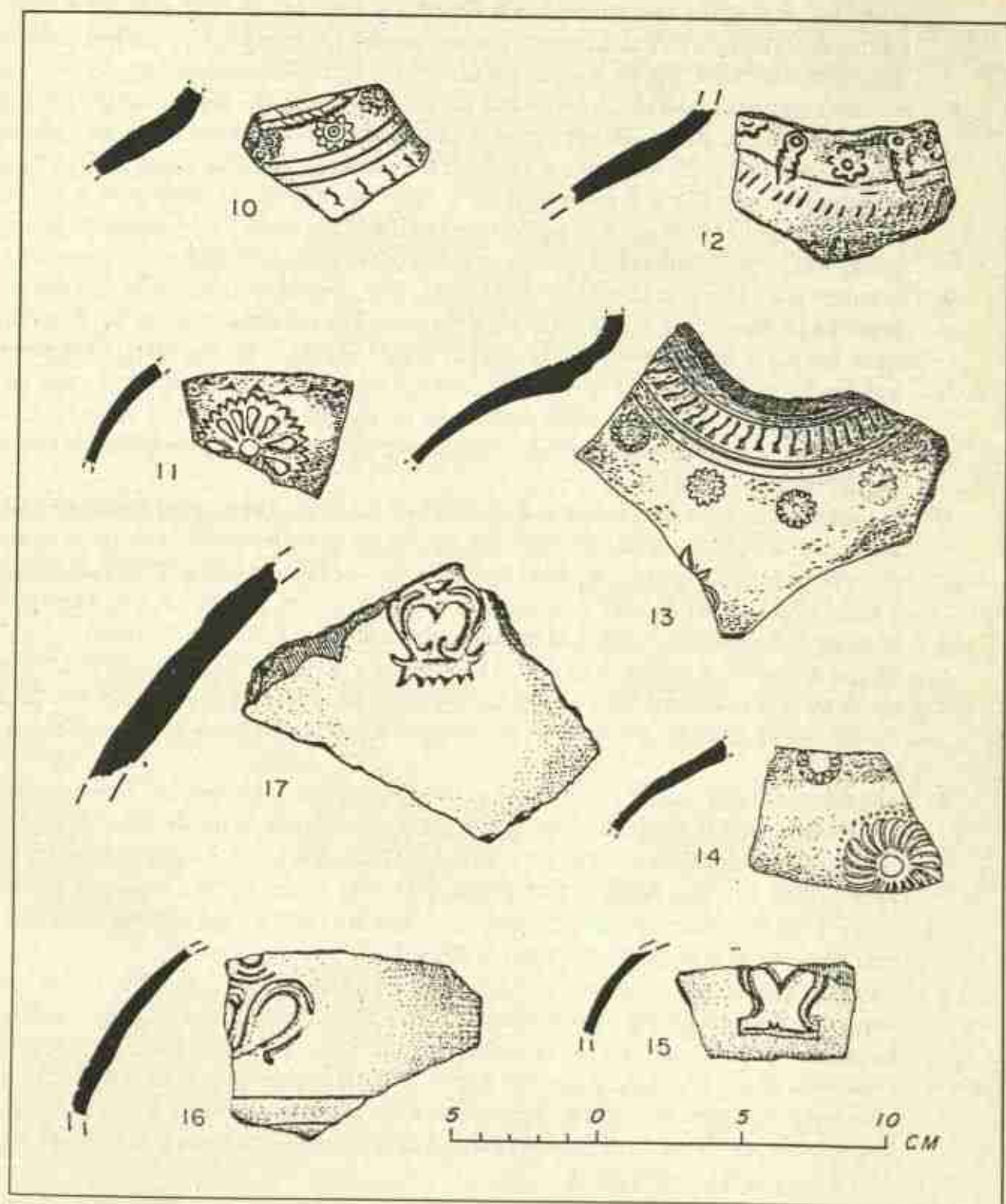


FIG. 40. Decorated pottery

- of incised lines below which there is a series of triangular notches with dots above them. Further down there is an indeterminate stamped design. Medium fabric, well fired, reddish core, treated with red slip. From a deposit of Group B in Tank C.
8. Shoulder and belly part of a vase of red ware. The exterior has a series of incised and impressed designs. At the shoulder-level, there is a series of two horizontal notches placed between two concentric lines above and three below. Below the lower group of lines there are triangular notches at regular interval. Further down, there appears to be a row of stamped designs consisting of some floral pattern. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group B in Tank C.
 9. Shoulder and belly part of a vase of red ware. The exterior has a series of incised and impressed designs. The designs fall into three tiers. The uppermost tier, at the shoulder-level, has a row of stamped leaf-like designs placed between two concentric lines above and two below. In the middle tier, there is series of longitudinal notches with the wider end downward. In the lowest tier, at the belly-level, may be seen a part of a *triratna*. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group B in the southern part of Tank B.
 10. Shoulder and immediately lower part of a vase of red ware. The exterior has incised and impressed designs in two tiers. The upper tier, at the shoulder-level, has a floral design placed between two sets of concentric lines, two above and three below. The lower tier has a series of triangular notches with the wider end downward. Medium fabric, fairly well fired, though smoky core, traces of red slip. From a deposit of Group A in Tank C.
 11. Part of a vase of red ware. The design consists of a series of triangular notches below which there is a stamped floral design having ten petals. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group A in the southern part of Tank B.
 12. Shoulder and belly part of a vase of red ware. The exterior has a series of impressed and incised designs. These fall into two tiers. In the uppermost tier, at the shoulder level, there is a row in which a flower alternates with a design not clearly identifiable (inverted floral vase?). This row lies between concentric lines. The lower tier has a row of oblique notches. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group B in the southern part of Tank B.
 13. Shoulder and belly part of a vase of red ware. The exterior has a series of incised and impressed designs, falling into three tiers. The uppermost tier, at the shoulder-level, has longitudinal notches with the wider end downward. These are placed between two sets of concentric lines. The middle tier has a row of floral design at regular interval. In the lowermost tier, at the belly-level, there seems to be a part of a stamped *triratna*. Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group A in the southern part of Tank B.
 14. Part of a vase of red ware. There are two decorated stamped designs on the exterior; a floral design placed at the shoulder-level and a 'sun' symbol, within dotted circle on the belly.

THE POTTERY

- Medium fabric, fairly well fired, though smoky core, treated with red slip. From a deposit of Group A in the southern part of Tank B.
15. Belly part of a vase of red ware having a stamped *triratna* design, with a band of small triangular notches. Fine fabric, fairly well fired, though smoky core; treated with red slip. From a deposit of Group A in the southern part of Tank B.
 16. Belly part of a vase of red ware with a stamped *triratna* symbol and two concentric lines. Medium fabric, fairly well fired, though smoky core, traces of red slip. From a deposit of Group B in Tank C.
 17. Belly part of a jar of red ware with an impressed *triratna* symbol. Medium fabric, fairly well fired, though smoky core, traces of red slip. From a deposit of Group B in Tank C.

CHAPTER XIII

TERRACOTTA FIGURINES

A. INTRODUCTORY

Amongst the antiquities recovered from the tank-complex, terracotta objects account for the largest number. And out of the terracotta objects, human figurines far outnumber other categories, such as animal figurines, votive tanks, pestles, flesh rubbers, lamps, etc.

The maximum number of terracotta human figurines have been obtained from the brick-debris that immediately overlay the ruins of Tank C (cf. pls. XLVIII-L and LVI). Unfortunately, most of them are fragmentary and do not readily give an idea of what these were originally like. But a closer study of different parts of the body is very revealing. For example, in one case the foot (pl. CXLII B), on reconstruction, would be about 200 mm in length¹, while in another case the hand from *mañibandha rekhā* to the tip of the *anāmikā*, measures 130 mm (pl. CXXXVI B). In still another case, the length of the face, from the basal part of the hair to the chin is 142 mm (pl. LXXXV). In one case, only the breast has been met with. But it has a basal circumference of 330 mm (pl. CXXXIV A), which is as much as that of an adult female. These dimensions suggest that the figures concerned were pretty large and in some cases may have been nearly life-size. There is evidence also of pedestals (e.g. pls. XCVIII C) on which these figures were seated. In one case, it appears that the figure was perhaps standing, since the circular pedestal finishes off just behind the legs (pl. CXLIV A). The largeness of these figures and their sculptural features suggest the possibility of their having been installed as images in some shrines. A further indication in that direction is given by the discovery from the tank of quite a few terracotta lamps with unmistakable soot-marks (pl. CLX). Some of these lamps may have been lighted in the shrines where images had originally been installed, although it is not unlikely that lamps may have also been immersed in the tank-water, as is the general practice even now.

Iconographically, the images include those of Śiva (pls. LXXXV-LXXXVII), Pārvaī (pl. LXXXIX), Kubera (pl. XCII), Nāga/Nāgī (pls. CXVII-CXIX), Shashthī/Hārītī (pls. XCV-XCVI), Pāñchika (pl. XCVIII). The indication is that Śrīngaverapura was primarily a centre of the Brahmanical religion, though some of the figures may relate to Buddhism as well (cf. pp. 129-30 and 146).

It appears that close to the tank-complex, most likely in the neighbourhood of Tank C (and maybe even near the south-eastern part of Tank B), there were some shrines² wherein these images had been installed and worshipped, the tank itself having been used in the pre-worship ritual of

¹The foot is broken, but its length can be reconstructed on the basis of the other parts, such as toes, etc. The width is 80 mm. I am thankful to Shri K.K. Sharma and Shri Vishnu Kant for recording the measurements of the terracotta figurines.

²Unfortunately, circumstances did not permit an excavation of the adjacent areas, which would have thrown valuable light on the issue.

bathing. After the tank had gone into disuse (for probable reasons discussed above, pp. 36-37), the shrines fell into ruins and the debris of these structures and the broken images therefrom found their way into the depression that the central part of Tank C still formed. Though most of the images came from the debris that physically overlay the ruins of Tank C, these would appear to have been in use along with the Brick Tank itself and hence may be regarded as contemporary with it. In any case, these are earlier than the Mud Tank, which, on the basis of stratigraphy (cf. fig. 18), is posterior to this debris.

These terracotta figurines fall stylistically into two different categories: one sculptural and the other in a folk-like tradition. Obviously, therefore, their treatments differed, though in both the cases these were hand-modelled. In this context it may be worth while to add that no example of mould-made terracotta figurines, such as are found in the Śuṅga or Mauryan levels, has been met with in the tank-complex. Nor were there any mould-made Bodhisattva-type of figurines (cf. pl. CLXIV) which were met with for the first time in the overlying house-complex of the third century A.D.

In the case of the sculptural figurines, the modelling was careful and calculated, due attention having been paid to the respective parts of the body in order to make them life-like. An attempt was made to enliven the face with expression. Thus, for example, the face of Śiva (pl. LXXXV) delineates very successfully a blending of bliss and benignity with serenity and a kind of awe, commanding respect (not fear). Or the face of Kubera (pl. XCII) brings forth bloom and joy, such as a Yaksha rolling in plenty (symbolically demonstrated by his fat belly) would possess. The various sub-parts of a major part, for example the nose, eyes, mouth, ears, etc. in the case of the face or the toes and even the nails in the case of feet (e.g. pls. CXXI-CXXII) have been given their due proportions and minute attention. While dealing with the Śiva-head in detail (below, pp. 111-15) I will endeavour to analyse the possibility that principles of iconometry may have begun to germinate even as early as the first century A.D. The hair-do is equally noteworthy: as for instance the *jaṭā* in the case of Śiva or the curly hair in the case of some other figures (pls. CXXI-CXXII), or the bun in still some other cases (e.g. pls. CXVIII-CXIX). The turban that Kubera wears (pls. XCII-XCIII) is no less interesting; so is the one of the Nāga-head (pl. CXX). Likewise, with the ornaments: while Kubera wears ear-studs and a necklace, Śiva, being a *yogin*, has none of these. The armlets (e.g. pl. CXXXVIII), anklets (e.g. pl. CXLIII A), etc. are equally noteworthy.

In contrast to the foregoing, the figurines executed in what may be termed as the 'folk style' are crude and evidently mass-produced. Most of the ornaments and sometimes even the eyes and ears were made in the appliqué technique (e.g. pls. XCV-XCVI). The toes were indicated by drawing four incised lines on the frontal end of the feet. Likewise, in most cases the hair or head-dress was nothing but an unseemly mass of clay-lump with incised lines (e.g. pls. XCV-XCVI). The skirt in the case of females was just summarily shown without folds or other details. The child carried by the Shashthī/Hārītī figures, done in this style, was nothing but a flat lump of clay with two each of pinched up legs and hands and a pinched up head (e.g. pls. XCV-XCVI).

A few of the figurines wear a conical cap (pl. CXXVIII) or garments which are indicative of some foreign influence. Since these figures go back to the period around the beginning of the

Christian era, it is not unlikely that this 'foreign influence' may have percolated through a 'Śaka-Parthian' source.

The consistency of the clay varied from piece to piece. Thus, while in the case of most of the sculptural figures, care was taken to use relatively well-levigated, medium-grained clay, in the case of the cruder pieces and more particularly in the bigger ones, the clay was coarse. There are, however, a few pieces in which fine clay had been used. Firing on the whole was good, though on account of the thickness of the section the inner part of the core remained smoky. By and large a slip was used, which varied in colour from light chocolate through brown to even bright red. Unslipped pieces are few and far between.

Particular attention may, however, be drawn to a piece which seems to be a part of a large-sized disc probably with a central hollow (pl. CXLIV B). It may have belonged to a pedestal, though one cannot be too sure of that. But the point to be noted is that it is glazed along the edge and on the annular space on both sides. To the naked eye¹ it appears that there are two coatings, the lower one in a bluish colour and the upper in greenish. Glazed pottery is generally associated with the advent of the Muslim rule in India, say around the 13th century A.D.² Thus, to find it in a level of the first century A.D. seems perplexing. But that this is not so is borne out by the fact that pottery and bracelets bearing turquoise blue or bluish green glaze have been found at Rang Mahal in levels ascribable to *circa* A.D. 300.³ In an earlier context, amphoras bearing green and dull buff glaze have been found in the Parthian levels at Sirkap⁴ which would be more or less contemporary with the Brick Tank complex at Śrīngaverapura. Thus, the evidence of glaze may go well with that of the conical cap referred to earlier and point to a Śaka-Parthian influence in certain cases, as indicated earlier.

In Section B of this chapter are described figures of gods and goddesses of the Brahmanical faith as well as those associated with Buddhism. Since in most of the cases the specimens are broken and are often very fragmentary, it has not always been possible to identify the concerned figures with a degree of certainty. Thus, alternative identifications are equally possible. Then there are figures which have not yielded any clue whatsoever about their identification as deities, though chances are that these may have been so. We have also included in the descriptive list that follows fragments of parts of the body, such as heads, breasts, waists, arms, feet, etc., since these throw valuable light either on their manufacturing techniques or on such facets as hair-styles, ornaments, pedestals, etc.

Votive Tanks, constituting an independent category, have been dealt with under a separate Section, C. In this Section, it has also been pointed out that an in-depth study is necessary to ascertain whether these objects were really 'votive' in nature or not and whether they had anything to do with the concept of a 'tank'.

¹A chemical examination of the piece is underway.

²Lal, B.B. 1954-55. Excavations at Hastināpura and other Explorations in the Upper Gaṅgā and Sutlej Basins 1950-52. *Ancient India*, nos. 10-11, p. 20.

³Rhyd, Hanna, 1959. *Rang Mahal*, pl. 82, p. 136. Lund (Sweden): CWK Gleerup Publishers.

⁴Marshall, John, 1951 (Reprinted 1975). *Taxila*, Vol. II, pp. 407-408, Varanasi: Bharatiya Publishing House.

TERRACOTTA FIGURINES

In Section D are included figurines of animals and birds which, besides being toys, may have served some other functions as well. These include the elephant, horse, bull, deer, ram and duck.

Selected specimens are described below, under three Sections, viz. B, C and D.

B. FIGURINES OF GODS, GODDESSES AND HUMAN BEINGS

1. (Pls. LXXXV-LXXXVII).—This head of three-eyed Śiva is important on account of its chronological horizon as well as its artistic merit. It is, therefore, proposed to make an exception in this case and deal with it in much greater detail than would be done in the case of the pieces that follow.

As to its chronological horizon, it may be noted that it comes from the Brick Tank—to be more precise from a layer of Group B in Tank C.¹ It is, therefore, ascribable in broad terms to the first century A.D. since the Brick Tank itself appears to have gone into disuse in the last quarter of that century. Thus, it may perhaps be the earliest securely dated terracotta head of a three-eyed Śiva, discovered so far.

Made from relatively fine and well-levigated clay, it is well fired, though one may see the smoky core along the damaged edges at the back. The back itself is nearly flat, and the inside is hollow (pl. LXXXVII). In the back one may also see the remnants of the finished edges of a roughly oval aperture measuring 75 mm vertically and about 57 mm across.

The face had originally been provided with a bright reddish-brown slip, the remains of which are clearly noticeable on the left side, right from the matted locks down to the chin-level. Owing to weathering, the right side is not only completely devoid of the slip but is also pitted.

The overall height of the piece, from the top of the tuft of hair (*jaṭā*) to the available portion of the neck, is 232 mm. The width, from ear to ear (both inclusive), is 142 mm.² The matted locks of the hair are raised vertically up in twelve bands and, in the lower part, are tied round by four bands of the hair itself. The forehead is broad, in the central part of which is placed the third eye, horizontally. Although the ridge of the nose is partly damaged, it seems that the central dot of the eye fell in line with it. The eye is shown with incised lines; the black ball by an incised circle and the pupil (*kañīnikā*) with a deep central dot. Below the third eye, on either side, are ocular ridges. These are highly arched (*chāpākāram*). No eyebrows as such are, however, separately delineated. The two normal eyes have been done in the same manner as the third eye. The eye-lids in these two cases are, however, thick, as in reality. (The third eye, in any case, is symbolic.) The (black) balls of the two (normal) eyes are slightly upraised and not exactly in the middle of the vertical space. They are slightly overlapped by the upper eye-lids. It would appear that these are fixed in an upward and inward contemplative gaze. Though a portion above its right nostril is damaged, the nose appears to have been sharp, not flat or snubbed. The nostrils are well marked out but not obtrusive. The lips too

¹For the grouping of layers in the Brick Tank, Mud Tank, etc. and for their *inter se* relationship please see Chapter IX.

²This is what it works out to be after making some slight allowance for the right ear which is slightly abraded.

have been superbly delineated, with a faithful depiction of the arches of the upper lip and the medial vertical depression (*goḥī*) above it, as also of the medial vertical line of the lower lip. The chin is very distinct and gently protruding. The cheeks are blooming, yet not obtrusive. The ears are elongated (*pralamba*) and show the various sub-parts in detail. The face on the whole is somewhat elongated, not roundish.

Negatively, one may note the absence of any ornaments: either as a band tied around the lower portion of the matted locks, or in the ears, or even on the neck. Likewise, there is no beard nor are there the moustaches. The latter of these negative features would indicate that the artist had in mind a youthful figure and not a grown up one.

The absence of ornaments and the presence of the *jaṭā* would indicate that the figure was meant to be that of a *yogin*. This suggestion is further vouchsafed by the presence of the third eye which gets opened only in the case of the *yogins*. In this context one may also recall the slightly introvert eyes and the gentle smile spread over the face. All these features would indicate that it is the figure of Lord Śiva, the Great Yogin, immersed in blissful contemplation.

There are two further observations which one would like to record. First, the neck is not vertical but distinctly slopes backwards. And, although the edges of the piece at this point are not intact, yet a survey of the back shows that the sloping neck merged with the nearly flat back. This would indicate that the neck was not affixed to a trunk, but the piece, as it is, was a complete entity. This fact, combined with the flatness of the back as well as the presence of a hollow therein would suggest that this Śiva-head was perhaps meant to be hung, say on a wall, affixed thereto with the help of a thick (wooden?) peg. Or, was it meant to be affixed to a *līṅga* making it an *ekamukha līṅga*? That this latter line of thinking may not be altogether fanciful is indicated by the occurrence of an *ekamukha līṅga* at Kauśāmbī.¹ Though the Kauśāmbī specimen is unstratified, stylistically the face is similar to those occurring from as early as the first century A.D.²

In view of the importance of the figure, it is proposed to record a few measurements³ (fig. 41) and other observations. It may, however, be added that the measurements have been taken on a horizontal plane and not along the slope. Some minor adjustments have also been made in respect of parts which are either abraded (for example, the right ear) or, on the other hand, overstretched through linear delination (like the lateral end of the left eye).

Part of face	Approximate measurement
(i) Average diameter of the eye-balls (inclusive that of the third eye)	9.5 mm
(ii) Average length of the eyes (inclusive of the third eye)	28-29 mm
(iii) Width of the nose at the lower end (between the outer walls of the nostrils)	28 mm

¹Sharma, G.R. 1969. *Excavations at Kauśāmbī*, 1949-50. Mem. Arch. Surv. Ind., no. 74. Pls. XXVII B and C.

²*Ibid.*, pl. XXVII A.

³I am grateful to Shri Vishnu Kant for taking these measurements.

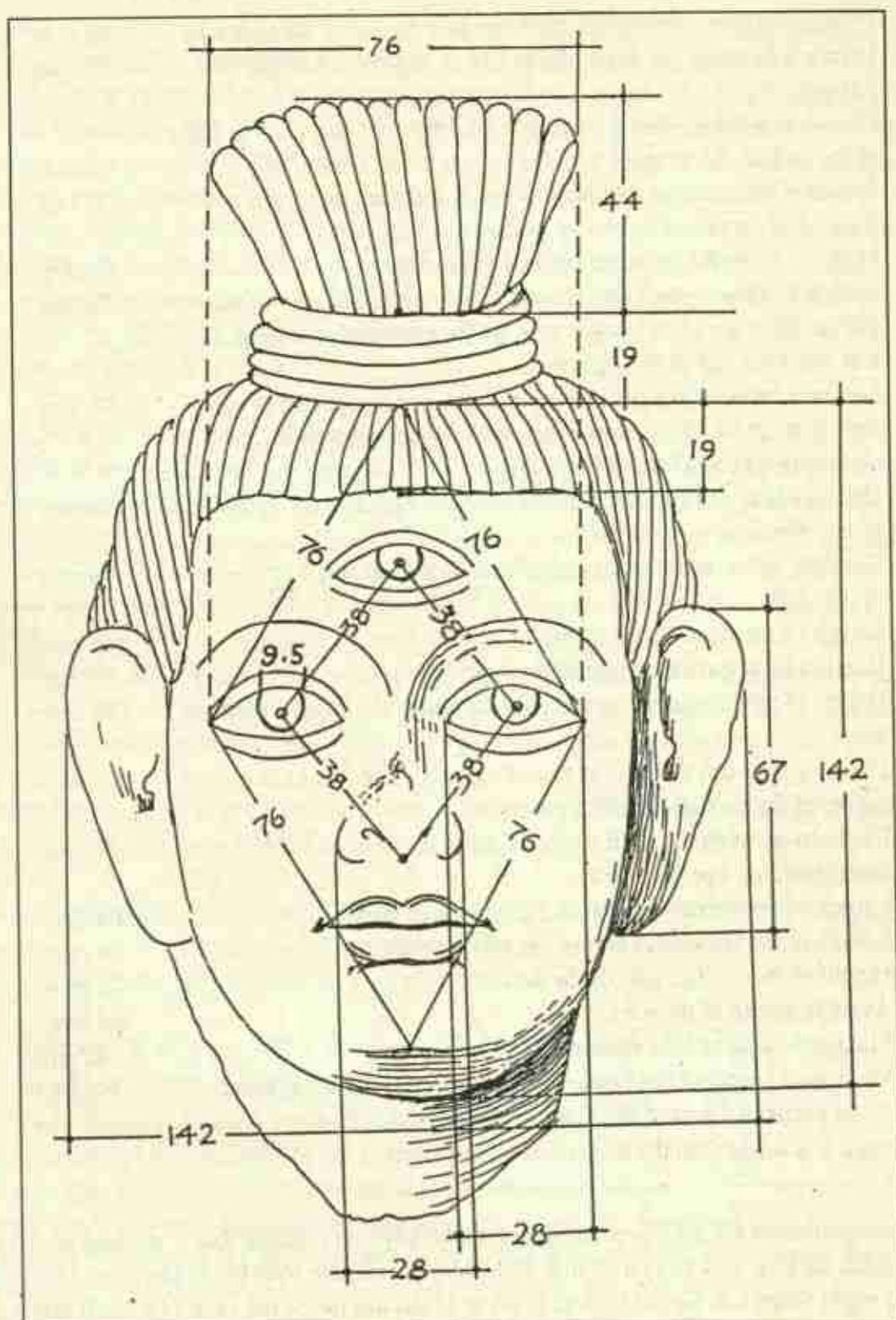


FIG. 41. Terracotta : Siva-head (Measurements in millimetres)

(iv)	Distance between the dot of third eye and the dot of the right eye	38 mm
(v)	Distance between the dot of the third eye and the dot of the left eye	38 mm
(vi)	Distance between the dot of the right eye and the central point at the end of the nose	38 mm
(vii)	Distance between the dot of the left eye and the central point at the end of the nose	38 mm
(viii)	Distance between the outer ends of the two eyes	76 mm
(ix)	Distance between the basal groove of the horizontal part of the <i>jaṭā</i> (at the point of its intersection with the central vertical axis) and the outer end of the right eye	76 mm
(x)	Distance between the basal groove of the horizontal part of the <i>jaṭā</i> (at the point of its intersection with the central vertical axis) and the outer end of the left eye	76 mm
(xi)	Distance between the outer end of the right eye and the high point of the chin	76 mm
(xii)	Distance between the outer end of the left eye and the high point of the chin	76 mm
(xiii)	Length of the vertical part of <i>jaṭā</i>	76 mm
(xiv)	Height of the horizontal part of the <i>jaṭā</i>	19 mm
(xv)	Height of the remaining part of the hair (along the central vertical axis)	19 mm
(xvi)	Distance between the high points of the eye-ridges and the lowest points of the hair above these points	19 mm
(xvii)	Distance between the high points of the eye-ridges and the corresponding eye-dots below	19 mm
(xviii)	Length of the horizontal part of the <i>jaṭā</i> (at its base)	64 mm
(xix)	Length of the horizontal part of the <i>jaṭā</i> (at the top)	54 mm
(xx)	Height of the vertical part of the <i>jaṭā</i>	44 mm
(xxi)	Average length of the ears	67 mm
(xxii)	Maximum width of the face including the ears	142 mm
(xxiii)	Maximum length of the face, as measured from the basal point of the horizontal part of the <i>jaṭā</i> to the end of the chin (which is lower than the high point of the chin)	142 mm

An examination of the above-noted measurements would indicate that if we take no. (i) as a unit, no. (ii) is thrice its size, and so is no. (iii). Nos. (iv) to (vii) are four times the unit, while nos. (viii) to (xiii) are eight times (cf. fig. 41). Nos. (xiv) to (xvii) are twice the unit. No. (xxi) is a trifle more

than seven times the unit. It may also be observed that nos. (xxii) and (xxiii) are also equal to each other, and are approximately fifteen times the unit.

The foregoing measurements and observations tend to show some kind of a pre-planning on the part of the artist. However, nothing more can be said on the basis of a single piece. At the same time, it is felt that an exercise of this kind ought to be undertaken in respect of other contemporary examples, in order to ascertain if or not there existed any concept of iconometry in the minds of sculptors concerned. No doubt we do have texts on iconometry, but these are much later. At the same time, it is generally believed that codification comes into being after a fairly long practice, more particularly when rigidity begins to set in. Hence an exercise of the kind suggested here may be well worth while even if the results are negative at the end.

From a layer of Group B in Tank C. Reg. no. SVP-4, 3840. Ht. 232 mm.

2. (Pl. LXXXVIII A).—In the absence of any clear indication about the hair-style or head-dress, it is difficult to be sure of the sex. Maybe it is a male-face. If this assumption has any justification, then the head may have been that of Śiva. However, in this case the third eye is placed vertically. Unfortunately, the piece is unstratified and thus it is not possible to work out any sequence between the horizontal and vertical placements of the third eye in the case of these two Śiva heads. Attention, at the same time may be drawn to the heads of Pārvaṭī discussed at Nos. 3 and 4.

The eyebrows of this head are highly arched. These, along with the eyes, are shown with deep incised lines. The eyes are highly elongated and slanted. The eye-balls are represented by punched circlelets. The nose seems to be sharp, though the left nostril is partly damaged. The mouth and chin are well marked out and the cheeks are rather bloomy. What, however, is also to be noted is the serene expression of the face.

The back of the head is flattish. The neck slopes backwards. There is no evidence of a tenon. It is thus likely that this face was affixed to some other piece in a manner discussed in the case of No. 1.

Hand-modelled; solid; back flattish; medium-grained clay; fairly well fired; faint traces of chocolaty slip.

Unstratified; from the area of Tank A. Reg. no. SVP-4, 241. Ht. 88 mm.

3. (Pls. LXXXIX A and B).—The roundness¹ and other features of the face tend to suggest that it is that of a female. This, combined with the presence of the third eye on the forehead, would indicate that the head is that of the consort of Śiva, viz. Pārvaṭī. It was obtained from a deposit in the Mud Tank, which came into being after the abandonment of the Brick Tank. On the basis of its stratigraphic position, the head may be dated to the second century A.D.

Delineated with deep incised lines, the eyes are long, stretching from the nose almost up to the ears. These remind one of what the literature describes as *ākarnachakshu*. Unfortunately, however, a

¹The face measures 94 mm vertically i.e. from the bottom of the hair to the chin, and the same horizontally i.e. between the ears.

sizeable part of the right eye is damaged. The eye-ball of the left eye is damaged. The eye-ball of the left eye is not in its centre, but nearer the nose. Perhaps the same was the position in respect of the right eye. Such a position would suggest a kind of focussing on the region between the eyebrows (*ājñā-chakra*) from which shoots up vertically the third eye. The third eye, however, is not of the same length as the other two eyes, evidently because of the restriction imposed by the breadth of the forehead. Nor are the incised lines as deep as those of the other eyes.

The ocular ridges (or eye brows) are prominently raised and merge with each other as also with the root of the nose. The nose is also unmistakably prominent and in profile forms a clear arch, such as in the case of the nose of a parrot (*śuka-nāsikā*). The nostrils (not seen in the photograph) are somewhat obtrusive holes. The mouth is not straight, but curves up slightly. No attempt has been made to delineate the features of the lips, such as the *goṣṭhī* of the upper lip or the central vertical line of the lower (cf. the Śiva-head at No. 1). The chin is rounded. The cheeks are broad and somewhat prominent.

The ears (of which the right one is largely damaged) are not side-ways, as in a normal case, but are projected forward, giving a sort of frontal view. Whether there were any pendants in the ears, it is difficult to say, since the lobe of even the left ear is damaged.

Above the fore head is a raised-up band with obliquely incised lines. The identification of the prominent mass of clay, with a number of incised lines, projecting forward in form of a hood, is somewhat debatable. The incised lines run across its flattish top and fan out laterally. Whether this mass was intended to represent the *jaṭā* or something else cannot be categorically stated.

Though the artistic idiom of this piece is different from that of the Śiva-head (No. 1), it has nevertheless its own form and appeal.

Hand-modelled; solid; coarse-grained clay; well fired though the core has remained smoky; reddish-brown slip.

From a layer of Group E in the Mud Tank. Reg.no. SVP-4, 3657. Ht. 135 mm.

4. (Pl. LXXXVIII B).—Though largely worn out, this face is also to be noted for the third eye. It has been placed vertically, as in No. 3, but there is a difference between the two cases in so far as their technique is concerned. While in the case of No. 3, the depiction was done by means of incised lines, in the present case an oval piece of clay was applied. Another point to be noted is that relating to the hair which is parted at the centre. Such a hair-style would indicate that it is the head of a female. In that case, the figure could be that of Pārvatī.

Hand-modelled; solid; back somewhat roundish; medium-grained clay; not very well fired, the back part is smoky; below the right cheek there is faint indication of a brownish slip.

From a layer of Group A in Tank A, Reg. no. SVP-4, 247. Ht. 78 mm.

5. (Pls. XC-XCI).—The figure is seated on a roughly cylindrical *mūrhā* in *pralambapāda āsana*. The *mūrhā* itself is placed on a flat *pattikā* on which also rest the feet of the figure. (Only one foot is available now.)

In this specimen one sees two cups placed on the *pattikā*, one to the right of the *mūrhā* and another adjacently behind the right leg. It is likely that there may have been similar cups on the left side, as suggested by a negative scar adjacent to the left side of the left leg. The part to the left of the *mūrhā* where such a cup may have existed is, however, broken.

What is more important about the figure is the presence of the head of an animal in between the feet. For all one can make out, it seems to be the head of a bull.¹ Another point to be noted is that the figure itself is that of a female, as indicated by the ornament worn by her around the ankle. Put together, these two factors would indicate that the figure may have been that of the consort or female aspect of Śiva whose *vāhāna*, the *nandī*, is well known. Since Pārvaṭī is generally associated with *godhā* (alligator), it is possible that the figure may have been the forerunner of Maheśvarī who, in later literature,² is described as having *nandī* as her *vāhāna*. Admittedly, the other details of this goddess given in the texts concerned are more elaborate, but these may not have been there in the period around the beginning of the Christian era.

Like the other specimens, this piece too is hand-modelled. While the legs are solid, the *mūrhā* is hollow. In it may be seen marks of a pack of reeds which was stuffed into it to support it at the time of its making. The reeds got burnt during the course of firing, leaving their impression on the clay. The firing itself is reasonably good, though the inevitable smoky core is there. The clay too is rather coarse. However, the piece bore a brownish slip of which ample patches have survived.

From a layer of Group B in the south-eastern part of Tank B. The specimen was found in three separate pieces but in close proximity of one another. These have been registered as SVP-4, 2075; SVP-4, 2354 and SVP-4, 2358. Ht. 130 mm.

6. (Pls. XCII-XCIII).—As suggested by its prominent belly, the figure may have been that of Kubera, though other attributes like purse, etc. are not available.

The face has been beautifully modelled. It has a sharp nose (though the tip is damaged) and wide-open eyes with the eye-balls indicated by deep circular holes. The lips are well marked out, both showing the medial line. The face is chubby with a sort of smile on it. On both the cheeks may be seen a line starting from near the temple, coming half-way down parallel to the ears and then curving in towards the cheek-ridge. Judging from a similar kind of depiction in the case of a few other terracotta heads (cf. pls. CXXXI A and B), could this outline demarcate the beard? But in those cases there is a dotted infilling to indicate the hair, which is absent in the present specimen.

On the head there is a turban with looped projection on the left side. In the centre there may have been a kind of crest of which only the basal part remains now. In the ears may be seen the *kundalas* made of a central knob and three concentric foils. Starting from the top of one shoulder, passing

¹This identification has also been confirmed by Dr. B.M. Arora, Director, National Zoological Park, Mathura Road, New Delhi.

²Cf. Rao, T.N. Gopinath. 1968. *Elements of Hindu Iconography*, vol. 1, p. 387. Second edition, Reprinted by Motilal Banarsidass, Delhi.

across the chest and going up to the other shoulder is a flat necklace, indicated by an applied band with incised oblique lines. The chest is broad with prominent nipples.

The legs are broken, but from whatever remains thereof, it can be said that the figure was not standing (pl. XCIII). It was seated on a pedestal, may be in the *pralambapāda āsana*. The pedestal, of which only a fraction now remains, was hollow. It appears to have been circular on plan with a partly concave profile. The feet may have rested on a flat base. This reconstruction of the delineation of the legs and the design of the pedestal is based on a few other examples available from the site itself.

Made of well-levigated, medium-grained clay with degreasing of husk, the piece is well fired, though in the thicker portions the core is smoky. Faint traces of a reddish brown slip are available here and there, indicating that the entire figure originally bore that kind of slip. It appears to have been made in different parts which were joined together before firing. Thus, one can see the luting of the head with the trunk. The same appears to have been the case with the arms and the legs, which unfortunately are now broken. The trunk is hollow, while the position in respect of the head is not very clear.

From a layer of Group B near Brick-on-edge Ramp-1 in the northern part of Tank B. Reg. no. SVP-4, 3139. Ht. 255 mm.

7. (Pl. XCIV).—The head of this figure is similar to that of No. 6. Thus, if any guess is to be hazarded, this figure too may have been that of Kubera. However, there are no *kundalas* in the ears, one of which (the left one) is intact. The part above the forehead is also broken, leaving one to guess about the turban. The head is hollow and so is the trunk; of the latter, no worthwhile details have survived.

The composition of the clay and the degree of firing are also the same as in the case of No. 6. However, traces of a reddish brown slip are more clearly to be seen in this case than in the other one. These are noticeable on the portion of the right cheek and neck.

From a layer of Group B in Tank C. Reg. no. SVP-4, 3889. Ht. 144 mm.

8. (Pl. XCV B).—The most important piece of the figure is the child which lends to the lady her iconographic identity. According to the Buddhist tradition, she would be regarded as *Hārītī*, whereas in the Brāhmanical one, she may be called *Shashīlī* or *Jātahārīnī*. It is believed that, to begin with, she was a malevolent figure, posing a threat to the children, but later on became benevolent, offering to them her protection. Like the main figure itself the child too has been made in a folk-style: a flat lump of clay from which the head, hands and legs have been made just by pressing, pinching and making short incisions. The navel, is also shown by a small incision or hole.

Sitting in the *pralambapāda āsana* over a roughly cylindrical pedestal (*mūṛhā*), the lady wears a skirt going well below the knee. The right leg is broken, but the evidence in regard to the left one shows that the legs did not rest on a flat *pīṛhā*. On the left foot is an anklet depicted by an applied band.

Made in what may be called a folk-style, the overall look is not aesthetically of a high order, such as for example one sees in the Śiva figure (pl. LXXXV). Nonetheless the piece has its charm in terms of a forthright depiction. The nose has been marked out by pinching up the clay of the face, while the eyes are shown with applied oval pallets, a hole therein representing the eye-ball. Likewise, the mouth is shown with an applied pallet incised horizontally, thereby also depicting the lower and upper lips. The ears are shown by pressing the clay flat, thereby presenting a frontal, somewhat unnatural look. At the level of the ear-lobes there are applied discs with three holes, representing ear-studs. From the top of the right shoulder starts a necklace which passes over the right breast. It is now broken but, judging from other examples (cf. pl. XCV A), it may have passed over the left breast (now missing) and gone on to the top of the left shoulder. The necklace is depicted with an applied band which is also vertically incised to show ornamentation. The navel is a deep, circular depression. The fingers have been shown by deeply incising the mass of clay. On each wrist there is a wide bracelet shown, again, by the applique technique.

It is a completely hand-modelled figure, with the various parts prepared separately and then joined together. Thus, while the trunk and pedestal are in one make, the hands, legs, breasts, etc. were made separately and luted to the former. So was the head, which probably has a tenon at the base (cannot be seen now), as in the case of many other heads. The clay used is fine and well levigated. The firing is also good. There are faint traces of a reddish brown slip which has largely disappeared because of the piece having remained in touch with water for a long time.

From a layer of Group A in the northernmost part of Tank B. Reg. no. SVP-4, 452 A. Ht. 165 mm.

9. (Pl. XCVA).—As indicated by the presence of the child, this is also the figure of *Hārītī/Shashthī*. The child sits on the left lap of the deity and is held by her left hand. It (the child) has been made from a flat lump of clay, of which the portions concerned have been pinched up to delineate the head, hands and legs. Such figures have usually been called 'star-shaped'.

The deity sits in the *pralamba-pāda āsana* on a cylindrical pedestal and wears a skirt which comes down to the knees. She has a fan-shaped head-dress, marked out by incised vertical lines. The eyes are lenticular, shown by applied pallets with central holes for the eye-balls. The mouth too has been done in the same technique, by applying a horizontally elongated pallet and incising it in the middle. The nose, however, is pinched up from the self-same clay of the face. On the forehead, right above the nose, is a circular hole. Partly overlapping it is an applied circular pallet, again with a hole. What these two indicate it is difficult to say.

The ears are also applied and project sideways. At the level of the lobes are shown circular ear-studs, again with applique pellets with a central hole. From shoulder to shoulder, passing over breasts, is a necklace shown by an applied and incised band. On the wrist are bracelets and on the foot, anklets, all these in the same applique style.

Like No. 8, this is also completely hand-modelled. To the combined trunk-cum-pedestal unit were affixed the head, hand, legs, etc. Since the base of the pedestal is closed from below, it is difficult to be sure whether the trunk and pedestal were hollow. Perhaps these were so, since through

a little hole at the bottom it is possible to push a thin wire well into the body. The clay is fine-grained and well levigated and the firing is also good. There are very faint traces of a reddish brown slip, most of which has been eaten away by the grey sticky clay still tenaciously adhering to it.

From a layer of Group A in the northernmost part of Tank B. This figure and the one described at No. 8 were found close to each other. Reg. no. SVP-4, 452. Ht. 156 mm.

10. (Pl. XCVI).—Because of the presence of the child this figure is also identifiable as *Hārītī/Shashthī*. She has prominent breasts, the left of which is held by the child (head broken) standing on her (the deity's) lap. She holds a handled (?) cup with her left hand. Attached to the right hand is some *āyudha*, having a broad base and pointed end. A part of her lower garment projects forward ending up at the knees. She is seated on a pedestal (*mūṛhā*) in the *pralambapāda āsana*, her feet resting on a flat base. She wears anklets on both feet. The toes are separated from each other by incised lines.

The facial features are very prominent. The eyes are large, with the pupils shown with deep circular holes. The eye-brows are indicated by relatively high ridges, running right up to the ears. The nose is sharp and unusually tall, so much so that its length from the root to the tip is only a little more than its maximum height. The mouth is slit and forms a crescentic arc, instead of being straight. Such a style has been used in a few other cases as well. The chin is somewhat flat and pointed, while the cheeks tend to be a bit prominent. The forehead is receding. The face, on the whole, is slightly tilted back, as if the deity is looking in the distance. The mood appears to be somewhat serious. The ears are flat and project sideways. In each of the lobes there is a *kundala*. Around the neck there is a three-string necklace. The arms, both upper and lower, are loaded with bangles in sets of four or five. On the left wrist is a plain *karā*, while that on the right has some triangular projections.

The figure is hand-modelled and made in parts, joined together before firing. The trunk is hollow into the upper part of which a solid head was inserted with a tenon. The pedestal, which has a circular base and a concave profile, is also hollow. The firing is good. The black marks that one sees on the face, arms, breasts, toes, etc. are evidently due to some fire in whose contact the figure had apparently come.

From a layer of Group F, i.e. posterior to Mud Tank but anterior to the late Kushan house-complex. Reg. no. SVP-4, 2343. Ht. 216 mm.

11. (Pl. XCVII).—In the category of the figures we have been just discussing this is artistically by far the best. Unfortunately, we have only a part of the child and just the left hand of the person, very likely a lady, that holds him.

The child is nude, with the male organ clearly depicted. A band (perhaps representing a *chhoontā*¹) runs around his waist. He places his right hand on the left part of his abdomen, while his left hand rests over the left hand of the bigger (female) figure. He wears a pair of bracelets (*karās*) on

¹ Made of a series of bands of thread, a *chhoontā* is usually black in colour. In Bundelkhand, it is put around the waist of small children, perhaps to ward off any evil befalling them.

each of his wrists. A two-string necklace with a *triratna* adorns the neck. Tied to the pendant is a long, decorated strand going up to and overriding the bracelets of the left hand. The figure of the child is indeed virile and forceful.

As already stated, of the larger figure only the left hand remains with which she holds the child. There is a bracelet on the wrist. The depiction of the fingers and the thumb and even of the nails thereon is superb. From the size of the hand, it would appear that the figure itself may have been about a metre tall.

The figure is made of medium-grained clay and is well fired. There is also evidence of a bright red slip. The enormously large black patch that one sees on the left part of the piece is evidently due to some subsequent fire to which the piece was exposed, as happened in the case of a few other terracottas, such as No. 10, etc.

From a layer of Group B in Tank C. Reg. no. SVP-4, 2691. Ht. 170 mm.

12. (Pls. XCVIII and XCIX).—Seated in *pralambapāda āsana*, there are two human figures, of which only the lower parts, below the waist, are extant. The seat-bench is oblong, and is much taller than wide. A circular hole runs through its entire length. With the seat-bench is built a low, flat platform on which rest the feet.

The figure on the proper left wears a pair of anklets, while that on the right does not. Since the bust portions are broken, the presence of anklets remains the only distinguishing feature between the two figures. Thus, one might say that the figure on the proper left is that of a female and the one on the right of a male. Both the figures wear *dhōṭī*. In the absence of *āyudhas* or *vāhanas* or any other *kāñchhana* it is difficult to identify the figures. However, if a guess is at all to be hazarded, there seem to be three possibilities. (Surely, there could be more.)

Since the site has produced a number of female figures holding a child, which may be identified as those of *Hārītī* (pls. XCV and XCVI), it is likely that this seated couple may represent the same deity with her consort, *Pāñchika*. Figures of *Pāñchika* and *Hārītī*, in an early historical context, have been found at many sites in the Gaṅgā valley. Again, since the tank-complex has also yielded the figures of Kubera (e.g. pl. XCII), it is not unlikely, though less likely than the first alternative, that the couple represents Kubera with his consort, Riddhi. Such representations are also available in early historical contexts. A third possibility, namely that of Umā-Maheśvara, may also come to the mind in view of the occurrence of the heads of Śiva (pl. LXXXV) and Pārvaṭī (pl. LXXXIX), but this seems still less likely than the second alternative mentioned above, since no *vāhana* is shown at the foot-level where it generally occurs.

The piece is hand-modelled. It is made of medium-grained clay and is not very well fired: a major part of the core has remained black. While the legs are solid, the upper part seems to have been hollow. At places there are faint traces of a brownish slip.

The figure is unstratified, but comes from the brick-tank complex. Reg. no. SVP-4, 474. Length 250 mm.

13. (Pl. C).—In this case what has survived is the lower portion of only one figure. However, there is enough evidence to show that the piece as a whole represents a couple. To the proper right of the extant figure there is a sufficiently long extension of the seat, indicating that in the now-damaged portion there would have existed another figure. At its left end, the seat has a leg, which suggests that a similar leg would have existed at the proper right end. This, again, shows that the seat did really extend further to the right, providing enough room for another figure.

Of the extant figure, only the left foot has survived. On it, however, there is an anklet, indicating that the figure is that of a female. Since she is seated on the left, it is only reasonable to assume that the figure on the right would have been that of a male. As to the identification of the couple, nothing more needs to be added to what has already been stated in respect of No. 12 above.

The leg of the seat deserves special attention. While its lower part is faceted, in the upper there is a ribbed *āmalaka*-like component sandwiched between two sets of horizontal beadings. Its counterpart at the right end is also expected to have been like this. Incidentally, this gives an idea of what the legs of seats and cots would have been like in those days.

Hand-modelled from somewhat coarse-grained clay, this piece is better fired than No. 12, though the inner part of the core has remained black. Enough has survived of the brown slip that once covered probably the entire piece.

The specimen was found in several bits. While some lay close to one another, the foot wearing the anklet lay a little away. Thus, these are registered separately, the former lot bearing No. SVP-4, 3749 and the latter SVP-4, 3770. All the fragments, however, come from a layer of Group B in Tank C. Length 330 mm.

14. (Pl. CI).—In this case too only the lower part of the left-hand figure is available. But on the pedestal there are negative scars to show that on these there rested the feet of another figure on the proper right. The pedestal is flat and bears an interesting criss-cross design at the left end which has survived almost intact. Maybe the design ran along the entire periphery of the pedestal.

The extant figure, which is on the proper left, wears anklets, indicating that it is a female. Inferentially, therefore, the figure on the right would have been a male. About the possible identity of the couple, the matter has already been discussed in detail under No. 12.

The specimen is hand-modelled. Made of medium-grained clay, it is well fired, though the inner part of the core is smoky. There is evidence of a brown slip having covered the entire piece.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2932. Length 245 mm.

15. (Pl. CII).—Of this figure the buttocks rest on a roughly cylindrical seat (*mūṛhā*), while adjacent to the right leg there is what may be the vertical leg of some sort of another rest. The legs of the figure are solid, but the belly and the cylindrical *mūṛhā* are hollow. From the pronounced belly it appears that the figure may have been that of a *yaksha*, probably Kubera or Pāñchika or Jambhāla. He has a deep navel and wears a *dhottī* with a frontal fall.

Since generally these figures have a symmetrical disposition of their components, one would expect another leg (of the front rest) on the left side, similar to the one on the right. But it is not there

in the available piece. Could it then be that there was another figure on the left, adjacent to the left leg of which there may have existed the counterpart of the leg of the rest discussed above? Since there is no evidence of a running seat from one figure to the other, as for example there is in Nos. 12 and 13, it would appear that the figure on the left was also seated on a roughly cylindrical *mūṛhā* as is the extant figure. If this reconstruction about the specimen having consisted of two figures has any validity, then it may well be that the figure on the left was that of a female. It would put this example also in the category of couples, like the previous ones.

Made of medium-grained clay, the specimen is hand-modelled. The firing is good, though the core, as in other cases, has remained smoky. There is evidence of a chocolate-brown slip which may have covered the entire piece.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2764. Ht. 160 mm.

16. (Pl. CIII A and B).—Though only a part of the bust of this figure is available, it appears that this specimen too falls in the category of couples discussed earlier. The reason for such an assumption is that across the back of this female figure and extending even up to the upper left arm, there is the left hand of another person (pl. CIII B). Judging from examples of other couples, it would appear that on the proper right there was a male figure, which held this lady in a kind of embrace.

The female figure is very well modelled. She has prominent round breasts with marked nipples and wears a torque around the neck, spiralled *kundalas* in the extended ear-lobes and a *keyūra* in each upper arm. At the back there are almost vertical incisions, marking out the hair.

Made of well-levigated, medium-grained clay, the piece has a hollow neck wherein was evidently inserted the tenon of the head. The firing is good. There is also evidence that the entire piece was covered with a reddish brown slip.

From a deposit of Group B in the south-eastern corner of Tank B. Reg. no. SVP-4, 2355. Ht. 95 mm.

17. (CIV A and B).—Though more fragmentary than No. 16, this figure seems to have followed the pattern of the former. It has prominent breasts and wears a *keyūra* in the right upper arm. Presumably the left upper arm also had a similar *keyūra*. Like No. 16 this figure too seems have worn a torque which has since peeled off, leaving negative scars along the curve where it had been affixed. However, more interesting and telling is the negative scar at the back, running almost horizontally below the incised vertical lines representing the hair. This negative scar at the back shows that along it had been affixed something that has since peeled off. Judging from the back of the figure at No. 16, it would appear that in this case too there was the hand of another person thrown across the back. If it be so, this figure too would form a part of a couple.

Made of medium-grained clay, the specimen is hand-modelled and well fired. The body is hollow, but the hands are solid. There is a mortice at the neck to hold the tenon of the head.

From a deposit of Group C in Tank C. Reg. nos. SVP-4, 2761 and SVP-4, 2763. The two pieces were found separately, though close to each other, and were also registered separately. Ht. 85 mm.

18. (Pl. CV A and B).—Because of the spiralled *kundalas*, the remnants of the torque and the incised lines of the hair (bobbed) at the back (pl. CV B), this piece appears to have been modelled on the same pattern as No. 16. The bust and neck too are hollow. There is, however, no hand across the back and thus it is difficult to say if this piece too belonged to the 'couple' category.

Made of rather coarse clay, the specimen is not very well fired. The smoky core looms large. However, there is ample evidence of a slip, chocolate-brown in colour.

From a deposit of Group B in the south-east corner of Tank B. Reg. no. SVP-4, 2352. Ht. 148 mm.

19. (Pl. CVI A).—Only the neck, ears and hair at the back are extant. The spiralled *kundalas* inserted in the extended ear-lobes and the vertical incisions of the back-hair, however, suggest that this piece may have been modelled on the lines of No. 18.

Made of coarse-grained clay, the piece is relatively well fired. The neck is hollow. There is also evidence of a brown slip having been applied to this specimen.

From a deposit of Group C in the south-east corner of Tank B. Reg. no. SVP-4, 2008. Ht. 73 mm.

20. (Pl. CVII).—This is a female figure, executed in what may be termed as the folk style. The nose is pinched up and broad; hardly any space is left for the forehead. Eyes and mouth are shown with applied oblong pallets. Each eye has two horizontal lines to mark out the upper and lower lids, while the eye-ball is indicated by a small circular hole. The pallet of the mouth is also horizontally slit to depict the upper and lower lips. The ears are unusually large and are shown frontally. To their lobes are attached circular *kundalas*, the decoration being shown with holes. From one shoulder to the other there runs a necklace; it is an applied band having a central horizontal line, with a series of pin-holes above it and incised oblique notches below. The breasts are smaller as compared to what are shown in many other figures. These are also applied. Central holes indicate the nipples. From these radiate a series of lines; what these represent it is difficult to say. The arms are broken right at the beginning. There are two large circular depressions at the lower end. Perhaps the legs were affixed thereto, though one cannot be too sure of it.

Made of fine-grained, well-levigated clay, the specimen is hand-modelled. The firing is good. There are traces of a bright red slip.

From a deposit of Group C in the south-east corner of Tank B. Reg. no. SVP-4, 2006. Ht. 191 mm.

21. (Pl. CVI B).—This is a small but beautifully modelled piece. The head is gone, but there is evidence of a necklace. The breasts are very prominent. The right fore-arm is full of bangles. There is also an indication of a girdle.

The clay used is fine and well-levigated. The firing is good. The piece has a nice reddish brown slip on it. The back is damaged.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3710. Ht. 53 mm.

22. (Pl. CVIII A).—This figure is characterised by prominent breasts, relatively thin waist and broad hips. Hands, legs and head are all missing. The body is hollow; the hole in the upper part must have carried the tenon of the head.

Medium-grained clay; well fired; evidence of reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3001. Ht. 100 mm.

23. (Pl. CVIII B).—Part of another female figure with prominent breasts, of which only the right one has survived. Above this breast, there are traces of a necklace. Below the waist, there is evidence of a *sāṛī* with a frontal knot.

The body, as in other cases, is hollow, with the provision of a hole at the neck-level to hold the tenon of the head. Medium-grained clay; well fired; traces of reddish brown slip.

From a deposit of Group B in the south-eastern part of Tank B. Reg. no. SVP-4, 2380. Ht. 90 mm.

24. (Pl. CIX A).—The face is damaged but it appears to have been that of a goat. In which case, the figure may have been that of Naigameśa. Such an assumption is further supported by the longish ears. The nose is pinched up, while the mouth is shown by a deep-cut slit. A flat trapezoidal piece above the head may perhaps represent the head-dress. It has a hole, presumably for suspending the figure. The back is flat (not rounded) which would make it easily amenable to rest against a wall or some such flat surface. While the right hand is almost completely broken, the left one is better preserved. At the tip one notices a part of a depression (mostly damaged) which may represent a summarily portrayed palm such as in No. 25. The legs are broken, the left more than the right.

The figure is hand-modelled and solid. It is made of medium-grained clay and is well fired. The body has a pale red colour, while on it there are faint traces of a reddish brown slip.

From a layer of Group C in the northern part of Tank B. Reg. no. SVP-4, 3130. Ht. 120 mm.

25 (Pl. CIX B).—Though not having dangling ears so characteristic of Naigameśa, this figure would also appear to fall in the same category. The nose, with a high ridge has been produced by pinching it up. The mouth is shown by a horizontally slit pallet. The ears are depicted by making trapezoidal extensions from the face. The hands and legs are somewhat stumpy. The small spoon-like depressions at their ends are evidently meant to show the palms and feet. The back is not rounded, but unevenly flat.

Hand-modelled and solid, the figure is made of rather fine clay and is well fired. There are faint traces of a thin reddish brown slip.

From a layer of Group F, i.e. later than the Mud Tank but earlier than the late Kushan house-complex. Reg. no. SVP-4, 2330. Ht. 115 mm.

26. (Pl. CX A and B).—The figures shown at Nos. 26-28 (pls. CX and CXI) appear to belong to a folk tradition and depict the same concept though because of the damaged portions in each case, all the features are not present in any single piece. The common characteristics seem to be: a face with elongated incised eyes, a turban on the head, a necklace, pot-belly with deep navel, seated posture and last but not least concious portrayal of the male organ, though shielded from the view by the lower garment passing over the thigh. However, as per the practice followed in all the previous cases, each of these specimens is described separately, though it may involve some repetition. Running from shoulder to shoulder, below the neck, there is a raised band which may represent a kind of ornament, as seen in many other specimens. The belly is slightly protruding and has a deep circular navel.

The figure is seated. While the left leg is broken, the right one stretches out. This, too, is broken below the knee. Perhaps the figure was seated in the *pralambapāda āsana*. A small damaged part above the knee indicates that on it there rested the right hand.

The pot-belly, the crested turban and the *pralambapāda āsana* remind one of the figure of Kubera (pl. XCII), though stylistically and aesthetically the two stand quite apart. If an iconographic identification of this figure is at all attempted one might guess that it may be that of a Yaksha. However, in the absence of other attributes—the hands are broken—one cannot be sure of it.

Made of medium-grained clay, the figure is hand-modelled. It is solid and, therefore, heavy. The firing is good. There is evidence of a pinkish slip.

Unfortunately the figure is unstratified, though it comes from the general area where Tank B is located. However, one may note its stylistic similarity to No. 27, which was found in a Group B deposit of Tank C. Reg. no. SVP-4, 3129. Ht. 180 mm.

27. (Pl. CXI A).—The eyes and mouth have been made in the same style as those in No. 26: these are not applied but incised. The eyes are elongated and show a prominent bulge. The eye-balls are indicated by deep circular holes. The mouth is a long horizontal slit across the middle of the face. The ears are splayed out frontally and have two holes each. A little band applied to the lower part of the right ear at its back, might indicate some kind of an attempt at providing a pendant (?), but the left ear shows nothing even of this kind. Below the neck, from shoulder to shoulder, there runs the usual applied band with slanting incisions, representing a decorated necklace. It is likely that the figure wore a turban as in No. 26.

The hands are broken and there is no clear evidence regarding the manner in which the legs were delineated. There is a small, pinched up protrusion below the belly. But what it indicates (the male organ?) it is difficult to say.

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The gently protruding belly might suggest that the figure represents a *yaksha*, though in the absence of other corroborating attributes (the hands are broken), there cannot be any certainty about it. Made of medium-grained clay, the figure appears to be a solid one. At places where the pedestal and belly are damaged there is no indication of any hollowness. The firing is good.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3751. Ht. 203 mm.

28. (Pl. CXI B).—It is a highly worn out figure, but seems to have been similar to Nos. 26 and 27. The male organ is clearly delineated. The belly is somewhat pronounced, with a deep navel.

Medium-grained, well-levigated clay. Well fired. No traces of slip have survived, though it may have been originally there, as in other examples.

From a deposit of Group A in the northern part of Tank B. Reg. no. SVP-4, 3141. Ht. 176 mm.

29. (Pls. CXII - CXIV).—Here is a specimen of which we were lucky to get some parts and unlucky not to have got the others. However, from what is available we are able to visualize the nature of the figure concerned. It is a male figure seated in *sukhāsana*, the left leg turned in and the right hanging down. The left hand rests on the bent left leg in the region of the knee. The right hand, however, is missing. *Uttariya* as well as *dhoti* are to be seen in low relief: particular attention may be drawn to the folds on the back (pl. CXIV). Many of the ornaments call for special attention because of their design and workmanship. Though the left ear is damaged, it seems to have had a *kundala* which is unique. It is an elongated one, with the front representing a *vyāla-mukha* (pl. CXIII) and the hind part a four-petalled flower (pl. CXIV). Of the *kundala* on the right side only the back part, bearing the four-petalled flower has survived. The ornaments on the two arms are not identical. The one on the left arm has two bands overlain by a petalled roundel with a hanging loop. The one on the right arm is broken, yet one may note the upper part which bears the *vyāla-mukha* similar to that in *kundala*. Across the chest there went a necklace of which some remnants may be seen. At the back one may also note the knot of the string of a necklace.

Hand-modelled; hollow; coarse-grained clay; fairly well fired, though the core has remained smoky. Ample remains of a dark brown slip, particularly on the back.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3805. Ht. 261 mm.

30. (Pl. CXV).—This is a male deity in *abhaya-mudrā*. The figure wears a kind of necklace with entwined strands and a large cylindrical pendant in the centre. Two incised lines running all along behind the neck and four small lines going down from the lower of the two above-mentioned lines—all these indicate the strands of the thread with which the necklace was tied. Two incised lines running from the top of the left shoulder, diagonally across the chest, down to a little above the belly on the right side, represent the sacred thread (*yajñopavīta*). These very lines run diagonally at the back to show the continuity of the sacred thread.

The right hand, which wears a wristlet, is held in the *abhaya-mudra*. This feature, as mentioned at the beginning, suggests that the figure may be that of a deity. However, in the absence any other attributes it is difficult to identify it correctly.

Hand-modelled; hollow; coarse-grained clay; fairly well fired, though the core has remained smoky. Traces of brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 3131. Ht. 100 mm.

31.(Pl. CXVI A).—Part of a torso of a male figure. Noteworthy in this case is the torque which has three bands. What this piece was meant to represent it is difficult to say.

Hand-modelled; hollow; medium-grained clay; well fired, though the core has remained greyish (not smoky). Ample evidence of brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2626. Ht. 145 mm.

32. (Pl. CXVI B).—This is a head resting on a discular pedestal. The eyes constitute the most prominent part of the face. Drawn with incised lines, these are lenticular and show a kind of bulge. They run right up to the ears. The nose is slightly pinched up, while the arch-like eyebrows run above the eyes and join the upper ends of the ears. The latter project out frontally. A single depression below the nose marks out the mouth on the one hand and the chin on the other. A fraction of the back of the head is damaged. What existed there (or not) one would never know.

This kind of well-marked-out head on a small pedestal is something uncommon. What was intended to be depicted is anybody's guess. It was perhaps not a gamesman which usually is much smaller and has an animal-head. In the general religious context of the other terracotta figurines from the site, if this piece is also thought to have had some religious connotation, then one can only hazard a guess, of course most hesitatingly, in terms of a *mukhalinga*. *Lingas* of the *chala* or *jaṅgama* i.e. portable or moveable variety, are known from religious texts. These could be made of baked or unbaked clay. But it is the presence of a *mukha* which renders the identification rather complicated and hazardous. A terracotta *eka-mukha linga* is known from Kauśāmbī. Though it is unstratified, its facial features are similar to those of the terracottas from Periods V-VI of the site, ascribable to *circa* first-second century A.D.¹ It must, however, be added that the Kauśāmbī specimen is in the normal *mukhalinga* style, unlike the Śrīngaverapura specimen. Rājghāt however, has yielded a specimen almost similar to ours, but its stratigraphical horizon is surprisingly very late, viz. A.D. 700-1200.²

Hand-modelled; solid; medium-grained clay; fairly well fired; traces of soot also visible.

From a deposit of Group C in the south-eastern part of Tank B. Reg. no. SVP-4, 2003. Ht. 60 mm.

¹Sharma, G.R. 1969. *Excavations at Kauśāmbī 1949-50* (Mem. Arch. Surv. of India, no. 74), pls. XXVII B and C. Delhi: Manager of Publications, Govt. of India.

²Narain, A.K. and Agrawala, P.K. 1978. *Excavations at Rājghāt (1957-58 : 1960-65)*, part IV A, p. 69, part IV B, pl. III, 8. Varanasi : Banaras Hindu University.

33. (Pl. CXVII A and B).—The terracottas from the tank-complex include a few specimens which show that Nāga-worship was also in vogue at the site during the first century B.C. - A.D. Though these pieces are fragmentary, they retain enough to show that they originally belonged to Nāga images. There is a good deal of literary evidence about the Nāgas, and the tradition would appear to have an unbroken continuity since even now Nāga-worship is in vogue. In fact, in northern India there is special day fixed for propitiating the Nāgas, called Nāga-Pañchamī. Four specimens, numbered 33-36, are illustrated here, the details of No. 33 being as follows.

The front and back sides of the hood are clearly identifiable (pl. CXVII A). The two eyes, shown with a central dot, a surrounding circle and an overall roughly circular outline—all incised, are very prominent (pl. CXVII B). At the back of the hood there are incised designs consisting of circles and some curvilinear motif. The sides and lower part of the hood are, however, broken.

Hand-modelled; solid; medium-grained clay; well fired, though the core is smoky; evidence of reddish brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2687. Ht. 105 mm.

34. (Pls. CXVIII A and B).—The front part of the hood is fashioned in the same general manner as that of No. 33. However, it is the back of the hood that is of great artistic interest. It shows the hair-do in receding circles with a final tail at the back. The incised decorations may (or may not) represent wreaths of flowers, as may be seen in later sculptures. Even now ladies use these devices to boost up their hair-do. Judging from the hair-style, it would appear that the image concerned was that of a Nāgī.

Hand-modelled; solid; medium-grained clay; well fired. Traces of reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2709. Ht. 99 mm.

35. (Pls. CXIX A and B).—The hood and a good bit of the hair-do are broken, though the identification of both these is not difficult to make out. In this case, however, the interesting part is the depiction of a large decorated circular object surrounding what may be the tail portion of the hair. If that be so, then the decorated circular object may represent a large wreath, such as is worn by ladies in the southern parts of India even today.

Hand-modelled; solid; medium-grained clay, well fired; traces of reddish brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 3094. Ht. 99 mm.

36. (Pls. CXX A and B).—Though one cannot be too sure of it, this piece represents the turban which rested over a head which is now gone. (Incidentally, the interior of the head was hollow, as may be seen from the under-side of the piece.) The turban is represented by a series of alternating straight and zig-zag vertical lines in low relief. Below there is another decorated band, and still lower are three horizontal strands going all the way round.

Above the turban may be seen the frontal side of the snake-hood resting horizontally. The hind part is broken, but most likely it was here that the remaining part of the hood rose up, so as to be seen from the front.

The turban would perhaps indicate that the figure meant to be represented and was that of a (male) Nāga, in contrast to those at Nos. 34 and 35.

Hand-modelled; solid; coarse-grained clay, fairly well fired, though smoky core; traces of reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3754. Ht. 74 mm.

37 and 38. (Pls. CXXI A and B).—These are two pieces which appear to belong to the same head, but unfortunately they do not join. In fact, there are a couple of other smaller bits but these too do not join. However, the two illustrated pieces are important since they show, in the first place, that the head was fairly large: it may have been life-size. But more noteworthy than the foregoing are: (i) the style of the hair; and (ii) the presence of the *ushnīṣa* above the head.

The hair is curly. On the sides and front it is shown in relief while at the back it is in repose (cf. pl. CXXI A). The *ushnīṣa* has two horizontal bands between which there is a set of five double-circles representing some kind of ornamentation. Pl. CXXI B shows, below the curly hair, respectively the forehead and the arched eyebrow in relief, the hair in the last-named case being depicted with thin slanting incisions.

From what we know of the early forms and styles in Indian art, this particular method of depicting the hair, as also the *ushnīṣa* would suggest that the figure concerned may have been that of a Bodhisattva, or may be of Buddha himself. In this context attention may also be drawn to the representation of a deer which was not an independent piece but may have been attached to a pedestal (pl. CLVI). That piece may have come from a pedestal showing the preaching Buddha, though one cannot be sure on that point.

Hand-modelled; hollow, except for the *ushnīṣa* which is solid; coarse-grained clay; fairly well fired, though the core is smoky; light brown slip.

Both the pieces come from a deposit of Group B from Tank C. The larger piece, illustrated on pl. CXXI A, bears Reg. no. SVP-4, 3760 and measures 143 mm in height. The smaller piece, pl. CXXI B, has Reg. no. SVP-4, 2607 and the height is 108 mm.

39. (Pls. CXXII A and B).—In this specimen more parts are available: the hind part of the head; the right cheek and ear; and a part of the neck. Interesting also is the bit affixed to the inner side of the neck (pl. CXXII B), with which the head was joined with the trunk. The hair is curly and some kind of stamp seems to have been used to impress it. No part of the hair is in relief.

Hand-modelled; hollow; coarse-grained clay; well fired, though the core has remained smoky; ample evidence of brownish slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2758. Ht. 153 mm.

40. (Pls. CXXIII A and B).—Though largely worn out, this specimen is to be noted for the hair-do which indicates a side-way parting, and for what may be an ornament in the middle. The indication thus is of a female face. The modelling appears to have been good and a sober expression seems to have been imparted to the face.

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Hand-modelled; solid; tenon available, medium-grained clay; fairly well fired; faint traces of slip.

From a deposit of Group B in Tank C. The specimen was found in two pieces which bear Reg. nos. SVP-4, 2994 and 2875 respectively. Ht. 144 mm.

41. (Pls. CXXIV A and B).—The face in this case is much more worn out than in No. 40, but it seems to have been well modelled. The specimen, however, is to be noted for a decorated hair-band (or a diadem?) above the head. One may also note the tenon with which the head was fixed to the trunk.

Hand-modelled; hollow; coarse-grained clay; not well fired; slip, if any, has completely disappeared.

From a layer of Group B in the south-eastern part of Tank B. Reg. no. SVP-4, 2356. Ht. 147 mm.

42. (Pl. CXXV A).—Though the nose is broken, the piece seems to have been well modelled. It has arched eyebrows, each shown with a ridge superimposed by an incised line. The eye-balls are shown with punched circlets. The upper and lower lips are well pronounced, while the chin is less so. The cheeks are blooming. The face on the whole, bears a serene, slightly smiling expression. One may also note the circular depression on the forehead which may represent a *bindi*. The circular part with radial incisions above the forehead may represent either the hair-do or even a head-gear.

Hand-modelled; solid; medium-grained clay; the flat back bears vertical impressions of thin reeds, indicating perhaps the nature of the material on which the specimen was kept before drying; well fired; traces of light chocolate slip available practically all over.

From a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 2336. Ht. 90 mm.

43. (Pl. CXXV B).—Another worn out face. The specimen, however, is to be noted for its head-dress with a *mukuta*-like protuberance in the centre. The tenon, which must have gone into the neck-socket, is very well pronounced.

Hand-modelled; solid; back flattish—rather incurved; medium to coarse clay; well fired, though the tenon has remained smoky; ample traces of light red slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3734. Ht. 130 mm.

44. (Pl. CXXVI A).—This fairly well executed little piece is to be noted for a somewhat serene expression of the face and for the head-dress. The various parts have been indicated with incised lines. Noteworthy, however, is the presence of the tenon.

Hand-modelled; solid; flat back; fine clay; not well fired; no trace of slip available.

From a deposit of Group B in the northern part of Tank B. Reg. no. SVP-4, 3090. Ht. 86 mm.

45. (Pl. CXXVI B).—This piece is to be noted for its applique technique. The eyes and ear-pendants are shown by applying flat circular pallets with a central hole. The upraised head-dress has six incised lines.

Hand-modelled; solid; somewhat rounded back; medium-grained clay; well fired, though the core is smoky.

From a deposit of Group A in Tank C. Reg. no. SVP-4, 3134. Ht. 67 mm.

46. (Pl. CXXVI C).—The method of depicting this head is somewhat unusual. The upper part of the skull is flat and right from its front part begins the root of the nose, without leaving any space for the forehead. The nose is sharp and prominent and the mouth and chin are well marked out. The eyes are shown by applying oval pallets. The ears appear to have been produced by just pressing the clay sideways with the thumb and forefinger, with the result they are mere rectangular adjuncts without any delineation of the various sub-parts. Behind the flat skull is a backward extension of incised clay lump, perhaps meant to delineate some sort of hair-do. Noteworthy also is the long tenon with the help of which this head must have been inserted into the neck.

Hand-modelled; solid; medium-grained clay; well fired; faint traces of pinkish slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2513. Ht. 105 mm.

47. (Pl. CXXVII A).—Like some other specimens, this too has raised arch-shaped eyebrows, prominent eyes and nose and pronounced lower and upper lips. There is also the usual notched band above the forehead.

Hand-modelled; solid; neck damaged; coarse-grained clay; not very well fired, the back and a part of the face are smoky. Some traces of brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 3058. Ht. 78 mm.

48. (Pl. CXXVII B).—This head is hollow, unlike that in No. 47. The back part, however, is broken. It has a somewhat prominent nose (but not of the kind as in No. 49), slightly bulged eyes and prominent eye-ridge. On the whole, the specimen is fairly well executed.

Hand-modelled; hollow; medium-grained clay; fairly well fired; traces of brownish slip.

From a deposit of Group A in the northern part of Tank B. Reg. no. SVP-4, 3147. Ht. 95 mm.

49. (Pls. CXXVIII A and B).—This is a rather unusual piece. It is to be noted for its very prominent, sharp nose. It may be observed that the length of the nose, from its root to the tip, is more or less the same as its height from the base of the nostrils to the tip. The eyebrows are highly arched, as in many other cases. But over here the artist seems to be fond of depicting the various parts by means of prominent curves, since even the mouth has been given a prominent curvature—which is not the case in any other specimen. The notched band above the forehead may represent a kind of fillet, while the conical projection behind it seems to represent a cap, maybe of the Indo-Parthian type.

Hand-modelled; hollow; back in the round; medium-grained clay; not very well fired. Faint traces of brownish slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2711. Ht. 116 mm.

50. (Pls. CXXIX A and B).—This specimen is also to be noted for its very prominent, rather unusual nose. It (the nose) has been produced by pinching up the clay so much that it becomes obtrusive. In the process, the forehead has become insignificant. The eyes, shown with incised lines, are also obtrusive and, like the nose, encroach over the space for the forehead. The mouth is shown with a horizontally incised line. Above the insignificant forehead there is an incised horizontal band culminating in roundels at the ends and an incised rectangular projection, both of which may represent a kind of head-dress.

Hand-modelled; solid; flat back; medium-grained clay; well fired; traces of light chocolate slip.

From a deposit of Group F in the Mud Tank. Reg. no. SVP-4, 2128. Ht. 83 mm.

51. (Pls. CXXX A and B).—The mouth is damaged and hence one cannot guess what it was like. But the nose is unusually high and prominent, shooting across the forehead as far up as the hair-line. The eyes are very much bulged. There is no separate delineation of the eye-ridge and the forehead itself pales into insignificance. The raised knob above the head may represent an ornament of the kind worn even now-a-days by the women-folk in rural northern India. The broken band below the neck evidently represents a necklace.

Hand-modelled; solid; flattish back; medium-grained clay; well fired; traces of brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3737. Ht. 107 mm.

52. (Pl. CXXXI A).—Part of a face to be noted for the style of the beard which has been depicted with dots, the extent being represented by a curved line. However, the depiction of the moustache is in a somewhat different style, viz. by means of vertical lines. The eyes are large, the eye-ball being shown with a prominent hole.

Hand-modelled; hollow; medium-grained clay; not very well fired, smoky core; no traces of slip left, if there was any.

From a pit earlier than the late Kushan structures which lay over the Mud Tank. Reg. no. SVP-4, 2629. Ht. 85 mm.

53. (Pl. CXXXI B).—This fragment of the face is interesting because of three things: viz. (i) the outline and details of the beard; (ii) the curled up moustache; and (iii) a jutting out canine tooth. Because of the last-named feature, the specimen may be placed in the category of ferocious figures, more of which are shown on pl. CXXXII.

Hand-modelled; hollow; coarse-grained clay; well fired, though smoky core; reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2807. Ht. 120 mm.

54. (Pl. CXXXII A).—The mouth is open, with the upper teeth prominently depicted. At the right end a canine projects out of the mouth. Though the left part of the mouth is broken, one is inclined to imagine that a similar canine also projected out at the left end. The chin is heavy and well-pronounced. The nose is broad, with prominent nostrils. The facial muscles are rugged, to depict which the artist has provided depressions between the cheek and the nose, as also to the right of the mouth. Since the site has a Śaivite association, one wonders if the face has anything to do with the concept of Bhairava? No satisfactory answer, however, can be given, since there is no other corroborative evidence.

Hand-modelled; coarse-grained clay; well fired, though smoky core; reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3799. Ht. 72 mm.

55. (Pl. CXXXII B).—Fragment of another fearful face. In this case the mouth is almost complete, but only two upper teeth are shown. There are no canines, which makes the face less fearful. The nose, however, is broad and the nostrils prominent. It may also be noted that the holes of the nostrils, which appear to have been made with a pointed reed or some such tool, go right through to the other side.

Hand-modelled; coarse-grained clay; well fired, though smoky core; traces of reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3002. Ht. 70 mm.

56. (Pl. CXXXII C).—Fragment of yet another fearful face. In this case, the forehead and turban may also be seen.

Hand-modelled; hollow back; relatively fine clay; well fired, though smoky core; glossy, reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3718. Ht. 77 mm.

57. (Pl. CXXXIII A).—This specimen is to be noted for the boldness of the modelling of the eyebrow and the eye itself. While the former is highly raised and is indicated by incised oblique lines, the latter has a deeply incised outline and a prominent eye-ball. The figure, of which this is just a fragment, is likely to have been fairly large.

Hand-modelled; hollow; medium-grained clay; well fired; reddish brown slip clearly identifiable between the eyebrow and the eye.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2933. Ht. 65 mm.

58. (Pl. CXXXIII B).—This fragment, comprising a damaged eyebrow and parts of the forehead and the hair is to be noted for the style of the last-named item, showing an oval knob.

Hand-modelled; hollow; coarse-grained clay; fairly well fired, though the back has remained smoky; traces of light brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2796. Ht. 71 mm.

59. (Pl. CXXXIII C).—Another piece with a prominent eyebrow. Of the eye, only a part of the upper lid remains. What is strange in this case is that the forehead has almost been covered by the hair which is shown on a little higher plane, with obliquely incised lines.

Hand-modelled; hollow; coarse-grained clay; fairly well fired; slip, if originally any, has almost disappeared.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 3035. Ht. 75 mm.

60. (Pl. CXXXIV A).—Right breast, to be noted not only for its large size but also for the sculpturesque representation. From the size (basal circumference 330 mm) it is evident that the female figure of which it was a part must have been nearly life-size. The nut of the nipple is slightly raised, while the lower part of the nipple itself is marked out with more-than-half circle. The delineation of the breast is quite natural since it swings slightly inwards. Above the breast there are two bands, of which the lower is incised. These evidently represent an ornament which passed right above the breast.

Hand-modelled; hollow; coarse-grained clay; well fired, though the core remains smoky; faint traces of brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2938. Ht. 123 mm.

61. (Pl. CXXXIV B).—Part of the chest. The figure concerned may have been life-size, as indicated by the ovalish nipple which measures 24 x 20 mm. Since the piece is a part of male body, the nut of the nipple is low and not as prominent as in the case of the female breast discussed earlier (no. 60).

Hand-modelled; hollow; medium-grained clay; well fired; remains of brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3100. Ht. 98 mm.

62. (CXXXV A).—Right hand in *abhaya-mudrā*. This piece is similar to the right hand shown in specimen No. 30 (pl. CXV). Though the fingers and a part of the thumb are damaged, it is not difficult to identify the *mudrā* as *abhaya*.

Hand-modelled; solid; medium-grained clay; well fired, though smoky core; glossy, reddish brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2708. Ht. 100 mm.

63. (Pl. CXXXV B).—Part of unattached right hand.

Hand-modelled; solid; fine-grained clay; well-fired, even the core is red; glossy, bright red slip.

From a deposit of Group C in the southern part Tank B. Reg. no. SVP-4, 3262. Ht. 97 mm.

64. (Pl. CXXXVI A).—Part of the right hand in the *varada-mudrā*. It has been very nicely modelled, as may be observed from the delineation of the thumb-nail and from the fingers. There is also a decorated wristlet, the details of which are, however, not seen in this photograph.

Hand-modelled; solid; coarse-grained clay; well fired; reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3936. Ht. 107 mm.

65. (Pl. CXXXVI B).—Another right hand in *varada-mudrā*. This piece is bigger than the preceding one. The distance between the tip of the ring-finger (*anāmika*) and the wrist-line (*maṇibandha-rekhā*) is 130 mm. With this as the basis and using *madhyama daśatāla-māna* (since the hand in *varada-mudrā* must have belonged to a deity), the full height of the figure is likely to have been about than 1.30 m.

Hand-modelled; fingers and lower part of palm solid, but the upper part of palm and wrist hollow; medium-grained clay; fairly well fired; faint traces of brownish slip.

From a deposit of Group B in Tank C. Reg. no. 3753. Ht. 151 mm.

66. (Pl. CXXXVI C).—Though broken, this hand too seems to have been in the *varada-mudrā*.

Hand-modelled; fingers and lower palm solid, upper palm hollow; coarse-grained clay; fairly well fired, core smoky.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3837. Length 111 mm.

67. (Pl. CXXXVII A).—This is the right hand clasping a cylindrical object, perhaps some *āyudha*. The lower part shows evidence of having got detached from the main body. Maybe the hand rested on the knee-region of a seated figure. There is also a wristlet decorated with oblique designs.

Hand-modelled; solid; medium-grained clay; well fired, though the core has remained smoky; ample evidence of a brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2570 Ht. 71 mm.

68. (Pl. CXXXVII B).—Unlike the previous example, this is the left hand. However, the *āyudha* held, though broken, seems to have been similar to the other example just cited. There is evidence of a decorated wristlet as well.

Hand-modelled; solid; medium-grained clay; fairly well fired, though the core is smoky; evidence of a brownish red slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2553. Ht. 45 mm.

69. (Pl. CXXXVIII A).—A part of the upper arm wearing a beautifully made *keyūra*.

Hand-modelled; solid; coarse-grained clay; well fired, but smoky core; brownish red slip all over.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2681. Ht. 78 mm.

70. (P. CXXXVIII B).—Part of an arm. The girth of the upper part, viz. 245 mm., indicates that the figure concerned may have been nearly life-size. The specimen is particularly to be noted for the decorated armlet which has a clasp consisting of two *makara-mukhas* back-to-back.

Hand-modelled; solid; coarse-grained clay; not very well fired, most of the core is smoky; traces of brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2768. Ht. 180 mm.

71. (Pl. CXXXIX A).—Waist and hip portion of a figure which, judging from the measurement across the hip, viz. 205 mm, may have been nearly a metre in height. The specimen, however, is to be noted for the girdle that passes around the hip. It has two strands which show a distance of about 35 mm in the central part but become closer to each other at the two sides, the intermediary distance being about 15 mm. It may also be noted that the lower strand curves up as it reaches the sides. By showing this kind of arrangement of the two strands, the artist has imparted a natural touch to the girdle. Each strand has a row of discular ornaments interspaced with smaller vertically oval pieces. The incised horizontal lines are perhaps meant to represent the garment underneath the girdle.

Hand-modelled; hollow; coarse-grained clay; well fired, even to the core. Ample remains of light brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2685 and 3764 (found in two parts). Ht. 130 mm.

72. (Pl. CXXXIX B).—Lower part of the belly. It has a deep navel and slight bulge below it. Also to be noted is the upper part of the *dhoti* which has been tied up with a frontal knot. The folds of the *dhoti* and the extra piece which hangs down from the knot have been well delineated.

Hand-modelled; hollow; coarse-grained clay; well fired; though the core has remained smoky; ample evidence of reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3779 and 3890 (found in two parts). Ht. 180 mm.

73. (Pl. CXL A).—Part of the right leg. Foot broken. The folds of the *dhoti* are indicated by deep incised grooves and its lower end by a raised oblique band.

(The contours of the grooves and of the band show that it is the right leg.) In the upper part of this specimen (at the back, not seen in the photograph), there is a slight projection which indicates a bend. It would thus appear that the figure concerned was a seated one. The size of even the available portion indicates that the figure must have been fairly large.

Hand-modelled; hollow; coarse-grained clay; fairly well fired, smoky core; evidence of reddish brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2808. Ht. 250 mm.

74. (Pl. CXL B).—As indicated by the fall of the lower garment, this is a part of the left leg. The breakage at the upper hind part of the piece suggests that the thigh extended backwards, horizontally; that is to say the figure was a seated one, as was the case with No. 73, above. The garment in the present case, however, shows no folds.

Hand-modelled; hollow; coarse-grained clay; well fired; very faint traces of light chocolate slip. Unstratified. Reg. no. SVP-4, 3902. Ht. 230 mm.

75. (Pl. CXLI A).—Part of the right foot, on a low pedestal. All the toes are intact, and one cannot fail to appreciate the fine oblique lines between the great toe and the one next to it. These are naturalistic. One may also note the fine delineation of the nails.

Hand-modelled; solid; coarse-grained clay; fairly well fired, though the core has remained smoky; traces of dark brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2516. Length 149 mm.

76. (Pl. CXLI B).—Part of the left foot, placed on a straight-sided low pedestal. The horizontal lines on the latter suggest some kind of decoration. Though most of the toes are damaged, one may still see in one case the style of the delineation of the nails, which is more or less similar to that found in No. 75.

Hand-modelled; solid; coarse-grained clay; well fired, though the core has remained smoky; traces of brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 3867. Length 150 mm.

77. (Pl. CXLII A).—Part of another fairly large-sized left foot. The piece is detached from its pedestal.

Hand-modelled; solid; coarse-grained clay; fairly well fired, smoky core. Traces of brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2766. Length 145 mm.

78. (Pl. CXLII B).—Part of the right foot. Its width, 80 mm, suggests that the figure may have been nearly life-size. The care given to the delineation of the toes is to be noted.

Hand-modelled; solid; coarse-grained clay; fairly well fired, though smoky core. Traces of brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3705. Length 135 mm.

79. (Pl. CXLIII A).—This is another elegant foot with nicely delineated nails and toes. A simple yet graceful anklet is also present. The foot (it is the left one) rests on a two-tiered pedestal which may have been square or rectangular on plan.

Hand-modelled; foot solid, pedestal hollow; medium-grained clay; very well fired, even the core is red; faint traces of brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3809. Ht. 120 mm.

80. (Pl. CXLIII B).—Part of the left foot on a circular pedestal.

Hand-modelled; foot solid; pedestal hollow; coarse-grained clay; fairly well fired, though the core is somewhat smoky; dark brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2512. Max. length 125 mm.

81. (Pl. CXLIV A).—In this case both the feet are present. The pedestal is two-tiered, but, unlike the one in No. 79, it is circular on plan. The back of the pedestal is complete and thus there

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seems to be no further backward extension of the figure concerned. In that case, it is just possible that the figure may have been a standing one, though one cannot be too sure on that point.

Hand-modelled; feet solid, pedestal hollow; coarse-grained clay; fairly well fired, though the core has remained smoky; reddish brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2561; diameter of pedestal at the base 220 mm.

82. (Pl. CXLIV B).—This specimen seems to have been a part of a pedestal, though one cannot be too sure on that point. It is discular on plan, the central part of it being perhaps hollow. (The edges are not very firm.) One foot is extant; there may have been others too—perhaps three or four in all. Above the foot, there are two circular knobs, the exact purpose of which is also not known.

However, what makes this piece important is the glazed slip which runs along the circumference, both on the upper as well as the lower side. The provision of the slip on the lower side is again intriguing, since one does not expect the glazed slip to be there on a part which was normally not open to the view. Thus, our identification of this piece as a part of a pedestal may not be final.

The glaze seems to consist of two thin layers, one over the other, the lower being bluish and the upper greenish. Though glazing is usually a characteristic feature of the pottery of the medieval times in India, say from the 12th-13th centuries onwards, there is evidence of glaze having been used as early as the Parthian levels at Sirkap and around A.D. 300 at Rang Mahal (see above, p. 110).

Hand-modelled; solid; fine-grained clay; fairly well fired.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2810. Extant length 155 mm.

83. (Pl. CXLV A).—Part of a pedestal. It is characterized by an incised decoration on its upper projection, at each end of which there is a suspension. Below this projection is a plain portion, but below the latter there is another projection. Since this part is damaged it is difficult to say if this too had any decoration.

Hand-modelled; hollow; coarse-grained clay; well fired, though a part of the core is smoky; traces of light chocolate slip.

From a layer of Group C in Tank C. Reg. no. SVP-4, 2756. Length 230 mm.

84. (Pl. CXLV B).—Found close to specimen No. 83, this piece may have belonged to the same pedestal as the former. This is suggested by the typological similarity of the two pieces, as well as by their fabric, firing, slip, etc. At the same time, one may also note that the upper projection in the present case is not decorated; also of the two knobs at the ends only one bears a design similar to that in the case of specimen No. 83; the other knob is plain. However, in spite of these differences it is still possible that the two pieces may have belonged to the same pedestal since it is just likely that the hind portion of the pedestal, which was not generally open to the view, may have been plain.

Hand-modelled; hollow; coarse-grained clay; well fired though the core is smoky; light chocolate slip.

From a layer of Group C in Tank C. Reg. no. SVP-4, 2755. Length 225 mm.

85. (Pl. CXLVI A).—This is the tallest of the pedestals encountered in the excavation. However, it is not merely its height that is significant, but the design as well. It seems to have had four sides of which unfortunately only one is intact. There are, however, remnants of the two adjacent ones which help us in visualizing what the entire piece may have been like. In elevation, each face seems to represent a 'niche', indicated by the sunken portion which is also marked out by deeply incised outline. In the centre of this niche there is an incised square. Since a major portion of the area falling within this square is damaged, it is difficult to be sure of nature of the aperture within it. There also runs another incised line above the niche-line, and this upper line seems to have run over the other niches on either side. Above these niches there is a circular part, marked out by two incised parallel lines, having a height of about 40 mm. The image, if any, would have stood above this circular portion, though nothing is left to indicate the nature of the image.

Hand-modelled; hollow; coarse-grained clay; well fired; ample remains of a light brown slip.

From a layer of Group B in Tank C. Reg. nos. SVP-4, 2874 and 2937 (found separately but later joined together). Ht. 200 mm.

86. (Pl. CXLVI B).—This is another large-sized pedestal, though only a part of it has been found. On plan, it seems to have been quadrangular rather than circular. The front seems to have had a platform-like projection with a hollow underpart. There is no decorative feature otherwise.

Hand-modelled; hollow; coarse-grained clay; fairly well fired, though the core is smoky; very faint traces left of a brownish slip.

From a deposit of Group B in the south-western corner of Tank B. Reg. no. SVP-4, 4025. Ht. 190 mm.

87. (Pl. CXLVII A,1).—This is a small figure of a boy with outstretched legs. No feet are shown. Instead, there is an elongated notch at the pointed end. The hands are broken, hence the method of their depiction is uncertain. Noteworthy, however, is the portrayal of the face. There is a broken part of clay behind the head, which is difficult to explain. Was this figure attached to another one?

Hand-modelled; solid; fine clay; well fired; pinkish slip.

From a deposit of Group C in the south-eastern corner of Tank B. Reg. no. SVP-4, 2068. Ht. 70 mm.

88. (Pl. CXLVII A,2).—This small figure is to be noted for the pleasant expression on the face and for the hands clasped against the chest. The delineation of the various parts of the face is good; in particular one may note the details of the left ear.

Hand-modelled; solid; fine clay; well-fired; traces of a brownish slip on the head.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3859. Ht. 58 mm.

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89. (Pl. CXLVII B, 1).—Crude schematic figure of a child, of the type usually held by *Hārītī/Shashṭī*. (cf. pls. XCV-XCVI). It is characterized by short but pointed hands and legs and pinched up face.

Hand-modelled; solid; medium-grained clay; well fired; light brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3757. Ht. 50 mm.

90. (Pl. CXLVII B, 2).—Similar to No. 89 in style and make-up.

From a deposit associated with the lowest structural phase of the late Kushan house-complex. Reg. no. SVP-4, 2050. Ht. 49 mm.

91. (Pl. CXLVII B, 3).—Similar to Nos. 89 and 90 in style and make-up.

From a pit associated with the lowest structural phase of the late Kushan house-complex. Reg. no. SVP-4, 2503. Ht. 51 mm.

92. (Pl. CXLVII B, 4).—Though larger than Nos. 89-91, this figure is also in the same general style. However, there seems to be no slip in this case.

Unstratified. Reg. no. SVP-4, 2329. Ht. 75 mm.

93. (Pl. CXLVII B, 5).—This figure had been given a somewhat different treatment than No. 92, though in general the two appear to be similar. Thus, in this case, though the nose is pinched up, the eyes have been separately delineated. Further, there are pin-holes in the eyes and ears, over the head, at the end of the arms and legs, in addition to those between the legs. It is difficult to guess the reason for the same.

Hand-modelled; solid; fine clay; fairly well fired; no evidence of slip.

From a deposit of Group C in the south-eastern corner of Tank B. Reg. no. SVP-4, 2359. Ht. 85 mm.

C. VOTIVE TANKS

Although, following the prevalent nomenclature, the above-mentioned caption has been given to the category of objects described hereunder, it would be well worth while to make an in-depth study of the issue, namely whether or not these objects were really meant to represent 'tanks' and whether or not they were actually used as offerings, as the term 'votive' would imply. Perhaps such a study might reveal that there may be a case for calling these objects as miniature shrines, used for ritualistic purpose. However, pending such an investigation, the existing nomenclature is retained here.

Unfortunately, our collection does not have even a single complete specimen. Even the broken portions are not large enough to let us reconstruct the full shape of the specimen concerned. However, piecing together the evidence from all the specimens it would appear that these objects were meant to represent a walled enclosure, the enclosure itself being either square or rectangular on plan. Against the wall of this enclosure we have in one case a seated figure with outstretched legs (pl.

CXLVIII A). While the identification is not fool-proof, the figure may represent a deity—perhaps a Mother Goddess. There is, however, no association of a child, as seen in the case of (some larger) figures illustrated on pls. XCV-XCVI. On the basis of known examples from elsewhere, it may be assumed that in the case of the Śrīngaverapura examples too, birds with outstretched wings may have perched on the top of the walled enclosure. In contrast to these square/rectangular examples there are the circular ones (pl. CXLIX). These do have the birds on the rim and maybe there were lamps too. But these are in the shape of bowls. As far as this writer is aware, these bowl-like 'tanks' do not show such features as seated figures, etc., and thus it is just possible that the two categories may not have been conceptually identical. Our collection also has about half-a-dozen cylindrical miniature 'pillars' with rosette-like portion at the top. A well-preserved example of a votive tank from Sonkh clearly shows that such a piece stood on the floor of the 'tank'.¹

Made of medium to coarse-grained clay, the specimens are well fired. A reddish brown slip is also present in most of the cases.

Selected specimens are described below:

94. (Pls. CXLVIII A and B).—Part of a votive tank which may have been square/rectangular on plan. Against the wall is seated a figure with outstretched legs resting on the floor. The breasts, though not prominent, would indicate that the figure may have been that of a female—a guess also supported by the presence of an ornament, perhaps an anklet, on each foot. A torque also goes around the neck, resting above the breasts. There is evidence of armlets as well. The breasts as also the ornaments have been done in the applique technique. The nose is pinched up, while the eyes and mouth have been shown with incised lines. The ears have a hole each. However, what is more interesting is the conical protrusion behind the head, which looks more like a cap in the Śaka-Parthian style than a bun of the hair. A continuous line in the centre, and the two dotted lines, one on each side of the former, perhaps represent the stitching line of or a kind of decoration on the cap.

Hand-modelled; solid; medium-grained clay; well fired, though the core has remained smoky; ample evidence of slip all over except on the lower part of the base. The back (pl. CXLVIII B) bears the impression of a woven mat on which the piece seems to have been placed for drying before firing.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2707. Ht. 94 mm.

95. (Pl. CXLVIII C).—This is a crude figure which may (or may not) have belonged to a votive tank. The flat bottom suggests that it may have been seated. There is also evidence for legs which may have stretched out, perhaps in the manner of the figure shown at No. 94. The arms are also broken. The face has been rather crudely done: a pinched up nose, and eyes shown with small applique pallets. The left ear is broken, while the right one is nothing more than a little lump of clay. However, the conical cap, with lines radiating out from the peak, calls for attention.

Hand-modelled; solid; medium-grained clay; not well fired; no clear trace of slip.

¹Hartel, Harbert. 1976. Some Results of the Excavations at Sonkh. In *German Scholars on India*, Vol. II, Fig. 29. Bombay: Nachiketa Publication Ltd.

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From a deposit of Group B in the northern part of Tank B. Reg. no. SVP-4, 3140. Ht. 90 mm.

96. (Pl. CXLIX A).—Part of a circular bowl with a broad, somewhat grooved, rim on which sits a bird with outspread wings. The wings and tail are marked with notches.

While the bowl seems to have been wheel-turned, the bird was hand-modelled. The latter was affixed to the former before firing. Medium-grained clay; well fired; thin reddish slip.

From the make-up of the Mud Bund. Reg. no. SVP-4, 3057. Diameter of the bowl 24 cm.

97. (Pl. CXLIX B).—Part of another circular bowl with an everted, broad rim on which is perched a bird with outspread wings. The spinal line and wings of the bird bear pin-hole decoration. Likewise, there is a pin-hole design (?) on the rim as well.

While the bowl/basin is wheel-made, the bird is not. The two were joined together before firing. Medium-grained clay; well fired.

From a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 3903. Dia. of the bowl 23 cm.

98. (Pl. CXLIX C).—Part of a bowl with a discular piece affixed to the rim. The centre of the disc has a pin-hole. There are three pin-holes, two in one group and one separately, on the rim.

Bowl wheel-turned; disc hand-made; the two conjoined before firing. Medium-grained clay; well fired. Brown slip on the exterior as well as the interior.

From a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 3904. Dia. of the bowl 20 cm.

99. (Pl. CL A).—A cylindrical piece bearing a rosette-like component at the top. The 'rosette' consists of a central discular piece bearing pin-hole decoration and six (of which two are broken) outspread petals (?), each bearing an incised line. Though the bottom part is broken, there is indication that the stem curved out. As stated earlier, the piece may have been fixed on to the floor of the 'tank'.

Hand-modelled; solid; coarse-grained clay; well fired, though the core has remained smoky; reddish brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3854. Ht. 85 mm.

100. (Pl. CL B).—Another cylindrical piece with a surmounted rosette. In the present case, however, only one petal (?) is extant, though there are clear indication of the others having been there.

Hand-modelled; solid; medium-grained clay; well fired; traces of brownish slip.

From a deposit of Group B in the southern part of Tank B. Reg. no. SVP-4, 2948. Ht. 85 mm.

101. (Pl. CL C).—Another piece typologically similar to the foregoing. This, however, has a greater girth and somewhat lesser height than the other two.

Hand-modelled; solid; medium-grained clay; well fired; evidence of brown slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2606. Ht. 70 mm.

102. (Pl. CL D).—In this piece the rosette, with its central part and the petals, is very clear. The cylindrical stalk which this rosette must have surmounted is, however, missing.

Hand-modelled; solid; medium-grained clay; not very well fired, smoky core; very faint traces of brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2811, Dia. of the rosette 47 mm.

D. ANIMALS AND BIRDS

The number of the terracotta figurines of animals and birds is larger than that of the Votive Tanks but decidedly much less than that of the figurines of gods, goddesses and human beings. Whether these animal/bird figurines had any religious association or not it is difficult to be sure of. Perhaps a few of them may have had. But that some of them were used as toys seems to be clear from the devices used in them for propulsion (pls. CLVIII and CLIX A).

The animals include the elephant, horse, bull, deer, ram and perhaps a lion (?). Of the birds, the duck alone is definitely identifiable.

In terms of the technique, all the specimens are hand-modelled. Further, while the bigger ones are hollow, the smaller ones are solid. The clay used in the case of the bigger specimens is coarse-grained, whereas that in the case of the smaller ones is usually medium-grained, but sometimes even fine and well levigated. The firing, by and large, is good, though there are a few pieces which had not been fired well. For obvious reasons, the core of the bigger specimens has remained smoky, even though the exterior is well fired. Most of the specimens bear a brownish red slip which sometimes tends to be bright.

Selected specimens are described below:

103. (Pl. CLI).—Though broken, this is a large-sized figure of an elephant, as would be clear from the portrayal of the ears, of which the left one is nearly intact. A bit of the head is also extant. Resting on the back is an oval piece with a central depression. Perhaps it may represent the *haudā* (a kind of seat). The tail is turned a bit to one (left) side. The legs are broken and so also a major part of the head, trunk, etc.

Hand-modelled; hollow; coarse-grained clay; well fired, though the core has remained smoky; reddish brown slip all over the body.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2939. Length 217 mm.

104. (Pl. CLII).—Head of a large-sized elephant. The delineation of the various parts is excellent, in particular that of the eyes and the raised knobs of the head. Though the trunk and tusks are broken, one can well visualize from whatever remains of them and of the portions nearby that these too must have been done very artistically and close to reality.

Hand-modelled; partly hollow and partly solid; coarse-grained clay; well fired, though the core has remained smoky; ample evidence of a reddish brown slip.

TERRACOTTA FIGURINES

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2514. Length 161 mm.

105. (Pl. CLIII A).—This is an incurved trunk of an elephant which must have been fairly large-sized. Also extant is the part from where the tusks had emanated. The thin folds of the skin on the underside of the bent-in trunk are very well delineated.

Hand-modelled; solid; coarse-grained clay; well fired, though a part of the core has remained smoky; bright red slip all over.

From a deposit of Group C in Tank C. Found in two parts; Reg. nos. SVP-4, 2520 and 2706. Length of the piece, measured along the curvature of the trunk, 247 mm.

106. (Pl. CLIII B).—Though the face, which is the most distinctive part of an animal, is broken, it appears that this piece also represents an elephant. This guess is hazarded because of the 'seat' resting on the broad back of the animal. The tail is turned side-ways, as in the case of No. 103. What, however, is noteworthy in the present specimen is the stamped design of leaves on the 'seat' and on the hanging which passes over the neck. This leaf-design goes back to the Mauryan and even pre-Mauryan times.

Hand-modelled; solid; coarse-grained clay; well fired, though the core has remained smoky; evidence of light brown slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2769. Length 104 mm.

107. (Pl. CLIV A).—This specimen shows two elephants side by side, standing on a common, low platform. The hind parts too are conjoined with a broad vertical strip which has two holes, one at the back of each elephant. In addition, there also runs a relatively narrow strip, bearing notched decoration from the back of one elephant to that of the other. The head of the elephant on the proper left is completely damaged. However, that of the elephant on the right is fairly intact, except that the end of the trunk is damaged, giving it the appearance of an elongated snout. The ears are broad, as expected. The eyes have been shown with small, pin-holed, applied pellets. The front legs of each elephant are separated by means of a large hole, which does not seem to have any functional purpose.

Hand-modelled; solid; coarse-grained clay; fairly well fired; pinkish slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2816. Length 145 mm.

108. (Pl. CLIV B).—In this case there is only one elephant. However, the broken platform would tend to suggest that there may have been another, although one cannot be too sure of that. The general treatment of this elephant is more or less similar to that of the one in No. 107; and so are the technical details.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2795. Ht. 97 mm.

109. (Pl. CLV A).—A horse, with prominent mane and ears. The eyes have been shown in the form of lozenges, which style goes back to the Mauryan times, if not earlier. The applique bands, passing below the ears may represent the reins. The snout and legs are broken.

Hand-modelled; solid; coarse-grained clay; well fired, though the core has remained smoky; traces of thin pinkish slip.

From a deposit of Group C at the southern end of Tank B. Reg. no. SVP-4, 2641. Length 80 mm.

110. (Pl. CLV B).—Another horse, with prominent mane and the reins. The eyes in this case too are lozenge-shaped.

Hand-modelled; solid; fine clay; well fired, no smoky core; red slip all over.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2945. Length 66 mm.

111. (Pl. CLV C).—Yet another horse with lozenge-shaped eyes. The applique bands depicting the reins have peeled off, but the negative marks are there.

Hand-modelled; solid; fine clay; well fired, no smoky core; traces of thin red slip.

From a deposit of Group C in Tank C. Reg. no. SVP-4, 2510. Length 73 mm.

112. (Pl. CLV D).—Though the face is damaged, the animal represented is the ram, as indicated by the curved horns. The right eye largely damaged, but that on the left is intact (not seen in the photograph). It is lozenge-shaped, as in the case of the horses, discussed earlier.

Hand-modelled; solid; fine-grained clay; well fired, no smoky core; reddish brown slip all over.

From an unstratified deposit in the Exit Channal. Reg. no. SVP-4, 2984. Length 82 mm.

113. (Pls. CLVI A and B).—The face and particularly the horns clearly indicate that the animal is the deer. But what is important about the specimen is that it was meant to be affixed to some other piece, as indicated by the depressed part of the body on the left side (cf. pl. CLVI B). That the left side was not meant to be seen is further suggested by the fact that it is the right side of the body that bears the spots (shown with short incisions) and not the left. Likewise, even the left eye is not delineated. Further, though the legs are broken, it appears that the animal may have been in a seated posture, though, of course, one cannot be too sure of it. All this makes one ask the question, viz. what was the purpose of depicting the animal in such a posture? A parallel that comes to the mind is the depiction of seated deer below the Buddha images. Whether this was so with the specimen under discussion cannot be said with any degree of certainty. In this context, however, one may recall that some of the images may have been of Buddhistic association (above, pp. 129-30), though there, again, the identification is not very certain. We have, thus, to leave the matter in the realm of guess-work.

Hand-modelled; solid; medium-grained clay; well fired, no smoky core; reddish brown slip all over.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2870. Length 145 mm.

114. (Pls. CLVII A and B).—The face in this case is damaged, which makes it difficult to identify the animal with any degree of certainty. Maybe it was a lion (?)

Hand-modelled; solid; medium-grained clay; well fired; brownish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 2863. Length 75 mm.

115. (Pls. CLVII C and D).—This is the head and part of the bull. What is interesting is that not only are the eyes depicted with punched circlelets, but the entire head is also decorated with such circlelets. Another interesting feature is the presence of a tubular hole right across the front part of the body. Through this hole may have passed an axle supporting the wheels. It is thus likely that the specimen may have been used as a moveable toy.

Hand-modelled; solid; coarse-grained clay; reasonably well fired, though the core has remained smoky; traces of reddish brown slip.

From a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 3138. Length 87 mm.

116. (Pl. CLVIII).—This appears to be a ram, as suggested by the delineation of the right horn, though the same is not intact. There is a hole across the hind part, through which an axle may have passed for holding wheels. On the back there is a much larger hole with a protrusion at the top, the purpose of which is difficult to guess. Anyway, this specimen, like No. 115, may have been used as a toy.

Hand-modelled, partly hollow, partly solid; medium-grained clay; fairly well fired; glossy, brown slip all over.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3763. Length 98 mm.

117. (Pl. CLIX A).—Here is a bird with a hollow body across which a hole has been pierced. As in the previous two cases, the hole was evidently meant to hold the axle on which wheels were affixed. Thus, this too was a wheeled toy. Across the neck also there is a hole through which a cord was presumably passed in order to pull the toy.

Hand-modelled; hollow; fine-grained clay; well fired; faint traces of pinkish slip.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3704. Length 97 mm.

118. (Pl. CLIX B).—Head and neck of a bird, most likely the duck. The mouth and eyes have been well delineated. In the absence of the remaining part of the body, it is difficult to say if this piece was also meant to be a wheeled toy.

Hand-modelled; hollow; medium-grained clay; well fired; traces of pinkish slip.

From a deposit of Group A in Tank C. Reg. no. SVP-4, 3009. Length 85 mm.

119. (Pl. CLIX C).—With its outstretched wings, this specimen would appear to represent a bird, though the face is unlike that of a bird. The piece has a discular pedestal as well.

Hand-modelled; solid; medium-grained clay; well fired; glossy, brown slip.

From a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 3259. Length 106 mm.

CHAPTER XIV
MISCELLANEOUS OBJECTS
A. INTRODUCTORY

The tank-complex has also yielded miscellaneous objects of terracotta, stone, metal, etc., some of which may have come from the pre-existing strata cut at the time of the construction of the tank but more may have belonged to the inhabitants using the tank and, therefore, would be contemporary with it. Since, however, most of these objects do not throw any specific light either on the chronology of the tank or on the use of or any ceremony associated with the tank, and further since these objects are of a generalized kind and occur in a much larger number in the co-eval habitational strata and will be described in detail in the volume dealing with the culture-sequence at Śrīngaverapura, it has been decided not to burden the present volume with a detailed description of these miscellaneous objects. This would avoid repetition as well as save some space of the present volume which is getting rather bulky, considering the fact that the item dealt with in it, viz. the tank, represents only a fraction of the total data from the Śrīngaverapura. At the same time, since readers might like to know at least the categories to which these objects belong it may be stated that these comprise: mullers, skin-rubbers, balls, beads, wheels, discs, lamps and a crucible of terracotta; mullers, balls, pestles and querns of stone; bone points, often called styli; a soapstone lid; and some metal objects. Of these, only the following are described here in detail: viz. (i) terracotta lamps, since these might throw some light on rituals, if any, connected with the tank; (ii) a terracotta crucible; (iii) a soapstone lid; and (iv) metal objects, since all these are not of a generalized character.

B. TERRACOTTA LAMPS (pl. CLX)

It is interesting to note that quite a few lamps have been recovered from the tank area. While the soot-marks seem to have disappeared in many cases owing to long contact with water, the same have survived in certain cases. These lamps fall into two broad types. Type A, which is dominant, consists of smaller wheel-turned lamps with a sort of discular base, tapering-out sides and obliquely-cut rim. The inner diameter at the top ranges between 50 and 60 mm, while the depth inside is from 10 to 15 mm. Made of fine- to medium-grained clay, the specimens are well fired. The other type, B, is hand-made and much larger. In these specimens the base is flat and the thickish sides rise vertically up to a height of about 45 mm. The inner diameter at the top is about 50 mm, while the inner depth, signifying the capacity for holding the oil, is about 20 mm. Noteworthy is the provision of a pinched-out lip on one side for holding the wick. However, in the case of Type A the position and number of soot-marks on the edges suggest that the use of more than one wick, burnt at both the ends.

While these lamps, particularly those of Type B, may have been burnt and placed in front of the deities in the shrines, it is not unlikely that some lamps of Type A may have been immersed in the tank itself. In this context it may not be out of place of mention that the practice of immersing lighted lamps in holy rivers and tanks is still prevalent in India.

MISCELLANEOUS OBJECTS

Six specimens, five of Type A and one of Type B, are described below, along with their provenance.

1. Lamp, with soot-mark at one place along the rim (seen in the photograph roughly around the middle of the rim on the near side). Red ware, wheel-made; discular base with paring marks, tapering sides, obliquely-cut rim; medium-grained clay, well fired. Internal diameter at the top 60 mm; internal depth 12 mm. From a deposit of Group A in Tank C. Reg. no. SVP-4, 2560.
2. Lamp, with faint but identifiable soot-marks at four points along the rim. This would suggest that there were two wicks, lighted at both the ends. Red ware, wheel-made; discular base with paring marks, tapering sides, mildly rounded rim; medium-grained clay, well fired. Internal diameter at the top 50 mm; internal depth 13 mm. From a deposit of Group C in Tank C. Reg. no. SVP-4, 2628.
3. Lamp, with soot-marks on the rim, clear at least at four places, with two more diffused ones. Maybe that the lamp was used more than once. Red ware, wheel-made; discular base with paring marks, tapering sides, sharp obliquely-cut rim; medium-grained clay, well fired. Internal diameter at the top 63 mm; internal depth 15 mm. From a deposit of Group B in the northern part of Tank B. Reg. no. SVP-4, 3096.
4. Lamp, broken, but having soot-marks all along the rim and partly on the exterior profile as well. Maybe that besides having been used as a lamp, the piece also got in contact with some fire. Red ware, wheel-made; discular base with paring marks, tapering sides, sharp obliquely-cut rim, medium-grained clay, well fired. Internal diameter at the top 62 mm; internal depth 14 mm. From a deposit of Group A in the southern part of Tank B. Reg. no. SVP-4, 3087.
5. Lamp, with pinched out lip, but faint soot-marks. Buffish red ware, hand-made; flat thick base, vertical sides, featureless rim; coarse clay, not well fired, showing greyish black patches here and there. Internal diameter at the top 50 mm; internal depth 17 mm. From a deposit of Group B in Tank C. Reg. no. SVP-4, 3055.
6. Lamp, broken but with clear soot-marks at two places. Red ware, base broken, presumably wheel-made like nos. 1-4, mildly oblique rim; medium clay, well fired. Internal diameter at the top 62 mm; internal depth 15 mm. From a deposit of Group A in Tank C. Reg. no. SVP-4, 3056.

C. TERRACOTTA CRUCIBLE (pl. CLXI)

One does not know what a crucible has to do with the tank. But there it is. It seems somehow it found its way into Tank C. Maybe not far away there was a workshop of some metalsmith.

The clay is medium-grained. Owing to intense heat to which it was evidently subjected, it has been vitrified and is spongy. The base is rounded, even somewhat pointed; the profile is concavo-convex, with an outward flare at the rim-level. With a height of 68 mm and the maximum internal

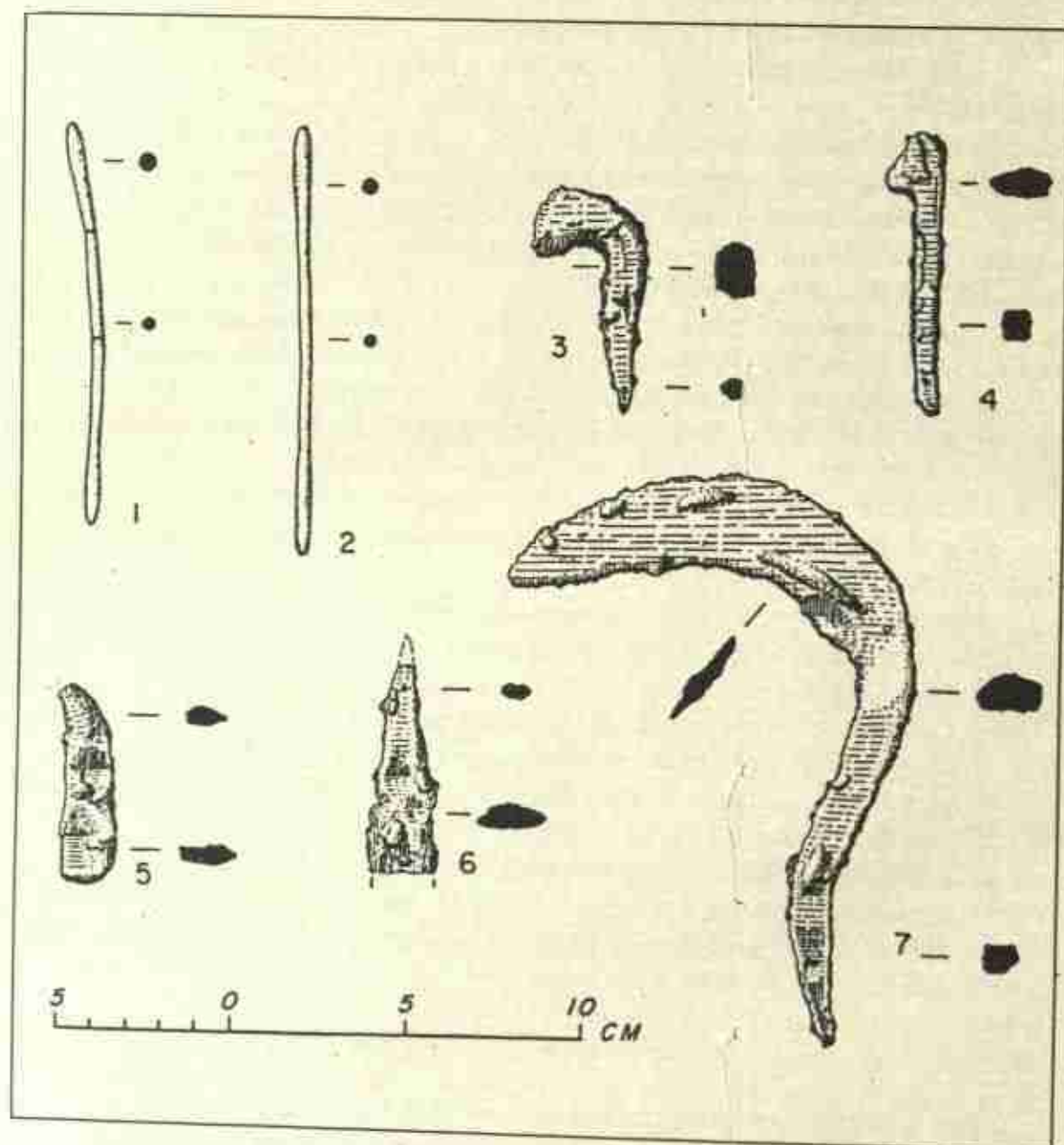


FIG. 42. Metal objects : 1-2, copper; 3-7, iron

MISCELLANEOUS OBJECTS

diameter of 38 mm the crucible does not have much capacity. It was perhaps used for smelting the more costly metals. No chemical examination, however, has been done.

From a deposit of Group B in Tank C. Reg. no. SVP-4, 3133.

D. SOAPSTONE LID (pl. CLXII A)

The excavation in the Brick Tank has yielded a lid made of soapstone. It has a knob on the upper side. The knob as well as the upper surface bear incised concentric circles. The diameter and total height (including that of the knob) are 41 mm 18 mm respectively. The specimen comes from a deposit of Group B in Tank C. Reg. no. SVP-4, 3758.

E. METAL OBJECTS (pl. CLXII B, fig. 42)*

The tank-complex has yielded a small foil of gold and a few objects of copper and iron. Of the latter, only selected specimens are illustrated.

The gold foil is damaged. However, it forms a circle on plan (dia. 18 mm) and bears an embossed design of a petalled flower (pl. CLXII B). It comes from a deposit of Group E in the Mud Tank. Reg. no. SVP-4, 1064.

Of copper, two antimony rods are illustrated (fig. 42, nos. 1 and 2). These are of the usual variety, having thickened ends and circular section. Their lengths are respectively 116 and 124 mm. Both come from a deposit of Group B in the south-eastern part of Tank B. The Registration nos. are respectively SVP-4, 2069 and SVP-4, 2070.

Five iron objects are illustrated (fig. 42, nos. 3-7), the details of which are as follows:

3. Nail with a roughly rectangular section and hooked head. Ht. 65 mm. From a deposit of Group B in Tank C. Reg. no. SVP-4, 3003.
4. Nail with a square section and triangular head. Ht. 80 mm. From a deposit of Group B in Tank C. Reg. no. SVP-4, 3006.
5. Part of a knife-blade, flat in section. Ht. 57 mm. From a deposit of Group A in Tank C. Reg. no. SVP-4, 3050.
6. Upper part of a spear-head (?) with a lenticular section. Ht. 58 mm. From a deposit of Group B in Tank C. Reg. no. SVP-4, 2995.
7. Sickle with a curved blade and tang. Ht. 160 mm. From a deposit of Group B in Tank C. Reg. no. SVP-4, 3037.

*Contributed by Shri Vishnu Kant.

APPENDIX I

The sole purpose of this Appendix is to bring to the notice of scholars that certain types of well recognized objects, viz. incised terracotta tablets (pl. CLXIII), some terracotta figurines (pl. CLXIV) and a particular pottery-form (fig. 43) occurred at Śrīngaverapura *for the first time* in layers associated with a house-complex from which a gold coin of Vāsu, ascribable to the first quarter of the third century A.D., was found (pl. LXXXI C; fig. 13). This would imply that these objects came into being only in the late Kushan times and not before. These did not occur in the Brick Tank which is ascribable to the period from some time in the second half of first century B.C. to the end of the first century A.D., nor even in the subsequent Mud Tank datable from some time in first half of the second century A.D. to its end (see above, pp. 44-46). This evidence from Śrīngaverapura needs to be cross-checked through close observation when excavations are undertaken at other early historical sites, since it may now be possible to differentiate between 'late' and 'early' Kushan terracotta objects and pottery-types. In this context it may also be well worth while recalling that amidst pottery no clear example of the lid with a button-shaped central knob was found in the Brick Tank. It occurred for the first time in the Mud Tank (fig. 27, nos. 14-15).

The afore-mentioned three categories of objects are described below.

A. INCISED TERRACOTTA TABLETS (pl. CLXIII)

While a detailed study of these tablets will be published in a subsequent volume, here it would suffice to say that shape-wise these are generally either square or rectangular. The present collection has two pieces which seem to be rather unusual. In one case a rectangular piece seems to have been obliquely cut (before firing) to produce a trapezoidal shape (No. 7) and in another the shape is somewhat ovalish (not illustrated). The lines on these tablets had been incised *before* firing. The clay is usually fine and the firing good.

It is possible to group these tablets into types and sub-types on the basis of the shape as well as the patterns of the incised lines. Thus, for example, no. 1 has three lines on one side but none on the other. No. 2 has three lines on one side, but 12 smaller lines on the other—in groups of three, each group being placed in a quadrant created by the intersection of a central vertical and a central horizontal line. In the case of No. 3, while the number of lines follows the pattern of No. 2, the lines on both sides are curved. No. 4 shows a basic departure from any of the foregoing. It has twelve small straight lines, three in each of the four quadrants on one side and the same number on the other, but in the latter case these are curved. Nos. 5, 6 and 8 are rectangular. Of these, No. 5 has three straight lines on one side, but is plain on the other. No. 6 has three lines on each side. In the case of No. 8, there are three lines on one side, but six small lines on the other, placed in two groups of three each, separated by a long time in between. No. 7 is trapezoidal, there being three straight lines on one side, and three curved ones on the other.

APPENDICES

The Registration nos. of the illustrated specimens are: No. 1, SVP-4, 2058; No. 2, SVP-4, 2102; No. 3, SVP-4, 2089; No. 4, SVP-4, 3190; No. 5, SVP-4, 3605; No. 6, SVP-4, 2016; No. 7, SVP-4, 2030; No. 8, SVP-4, 2822.

B. TERRACOTTA FIGURINES (pl. CLXIV)

Here are two terracotta figurines of Bodhisattva made very likely out of the same mould. The back, as one would expect in the case of single-mould terracotta figurines, is flat. The clay is fine and the firing good. Both the pieces bear ample traces of some whitish substance, which originally seems to have covered them. Both were found in a pit contemporary with the late Kushan structures. shown on fig. 13.

No. 1: Ht, 166 mm; Reg. no. SVP-4, 2530. No. 2: Ht. 168 mm; Reg. no. SVP-4, 2419.

C. POTTERY (fig. 43)

The figure illustrates three specimens of a type commonly called the 'sprinkler'. Particular attention may be drawn to the fact that sprinklers with pointed finial did not occur in either the Brick Tank or the Mud Tank, but were found for the first time in layers associated with the late Kushan house-complex (cf. fig. 13). These are made of well-levigated clay, have reddish brown or greyish black slip and are well fired.

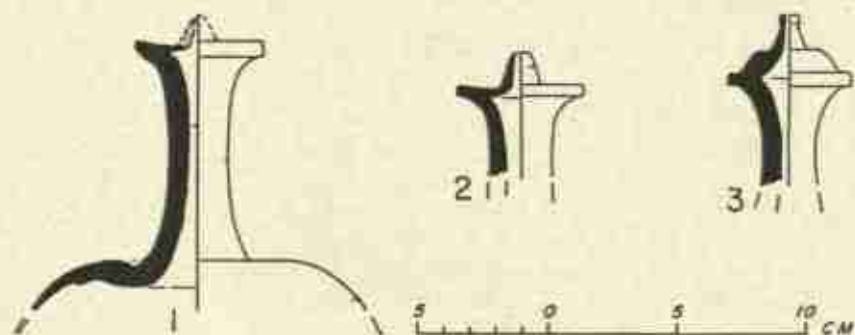


FIG. 43. Pottery : 'sprinklers' with pointed finial

APPENDIX II

REPORT ON GASTROPOD SHELLS FROM THE BRICK TANK

By S.B. Bhatia, Chairman, Centre of Advanced Study in Geology, Punjab University, Chandigarh

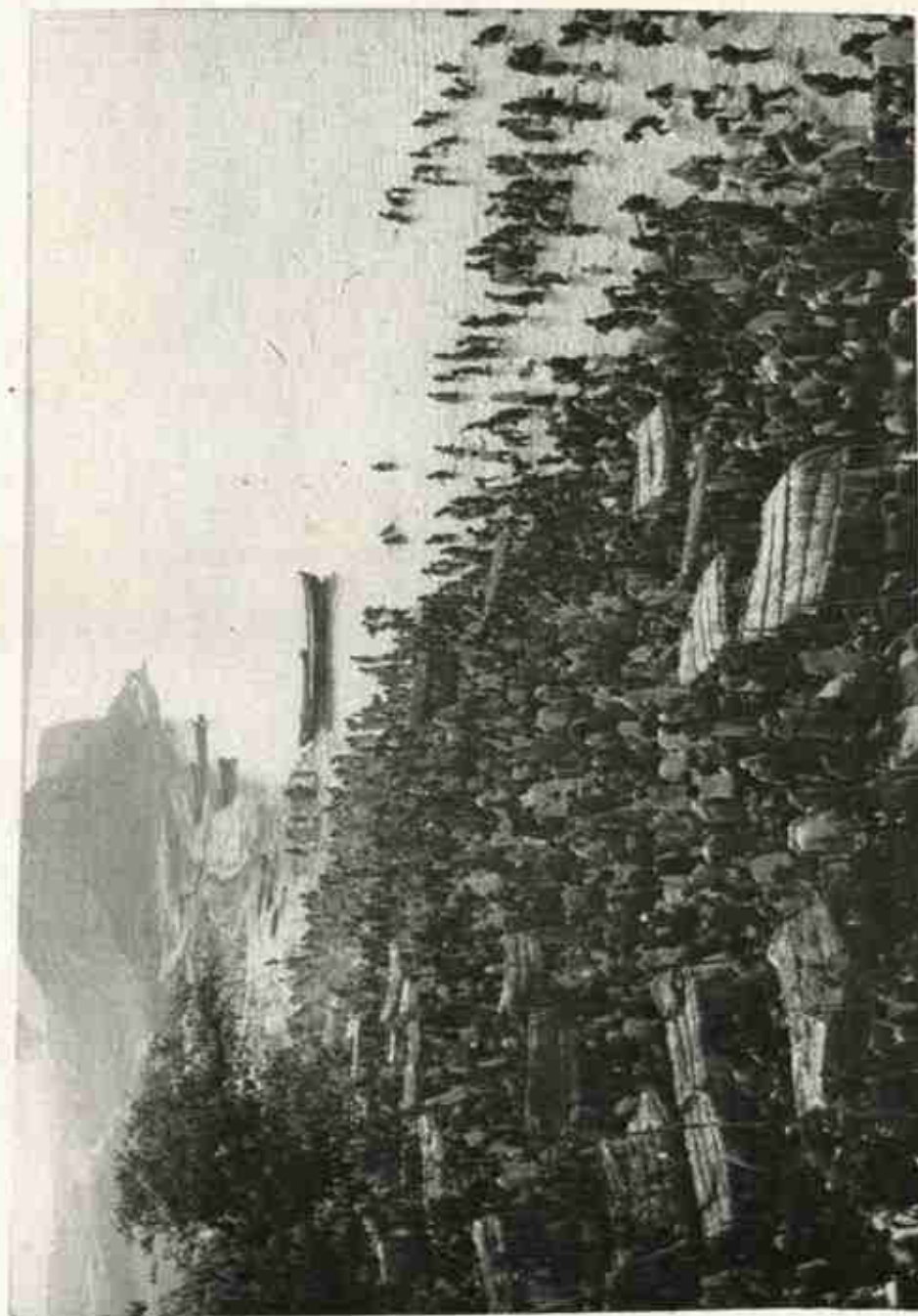
All the gastropod shells from the three different levels from the tank at Srīngaverapura that were sent to me for comments belong to a single species of the group *Viviparus benoalensis* (Lamarck), a widely distributed Indo-Burmese species. Although the coloured bands characteristic of this species are not seen on the surface of the shells, possibly due to the sub-fossil nature of the specimens, there is no doubt as to their identity with *V. benoalensis*. This species, as is characteristic of all viviparids, is an important element in the freshwater faunas of Eastern Asia and India.

According to Prashad (1924) and Annandale (1921), species of this group have a thin, almost smooth shell and have varying number of more than three colour bands on the shell.

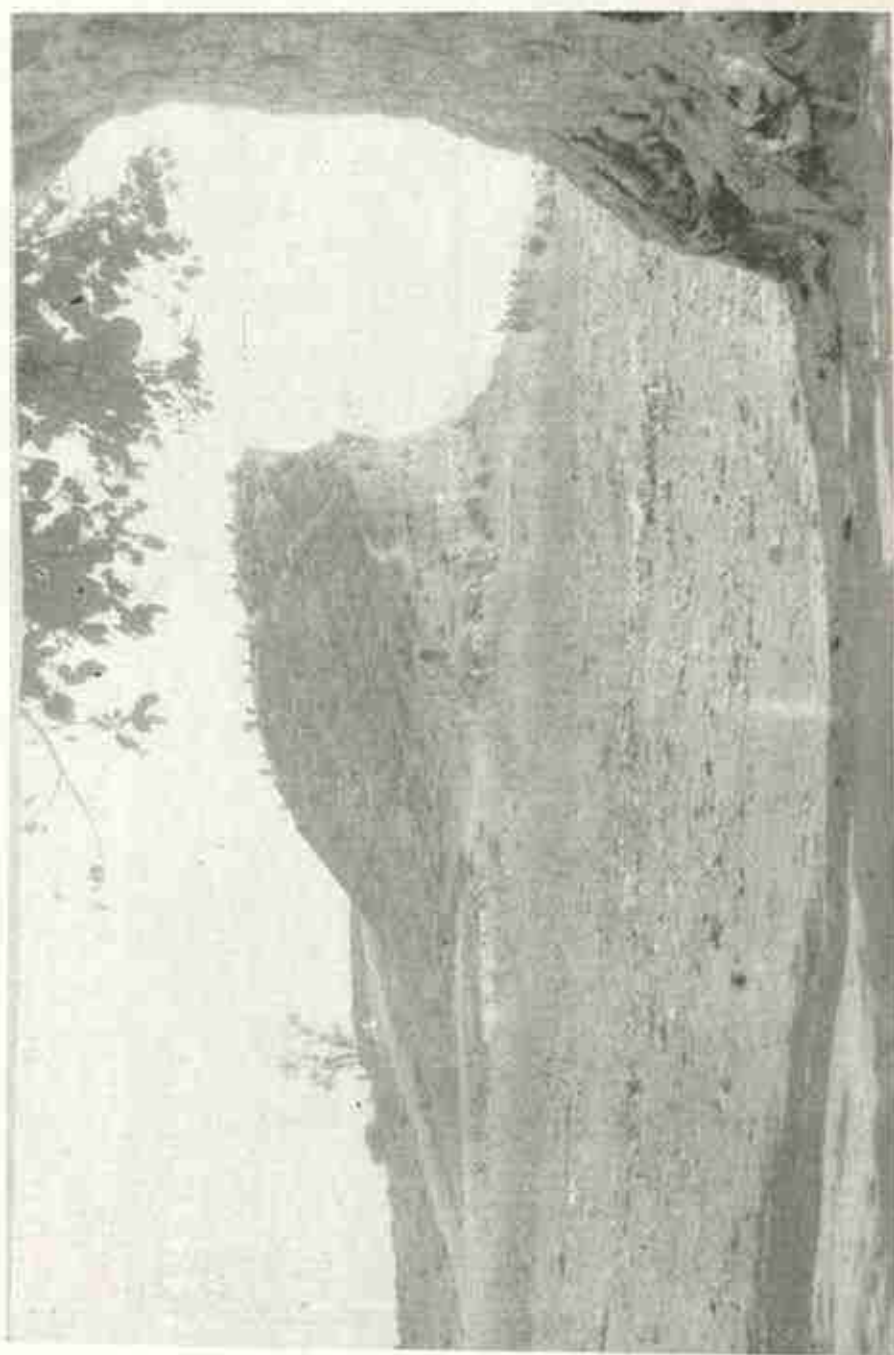
The fossil specimens of *V. benoalensis* have been found in the Narmada Gravel and in recent alluvium (Prashad, 1924) and also from the Pinjor Formation near Chandigarh (Bhatia and Mathur 1973). All these fossil records are not older than Pliocene.

References:

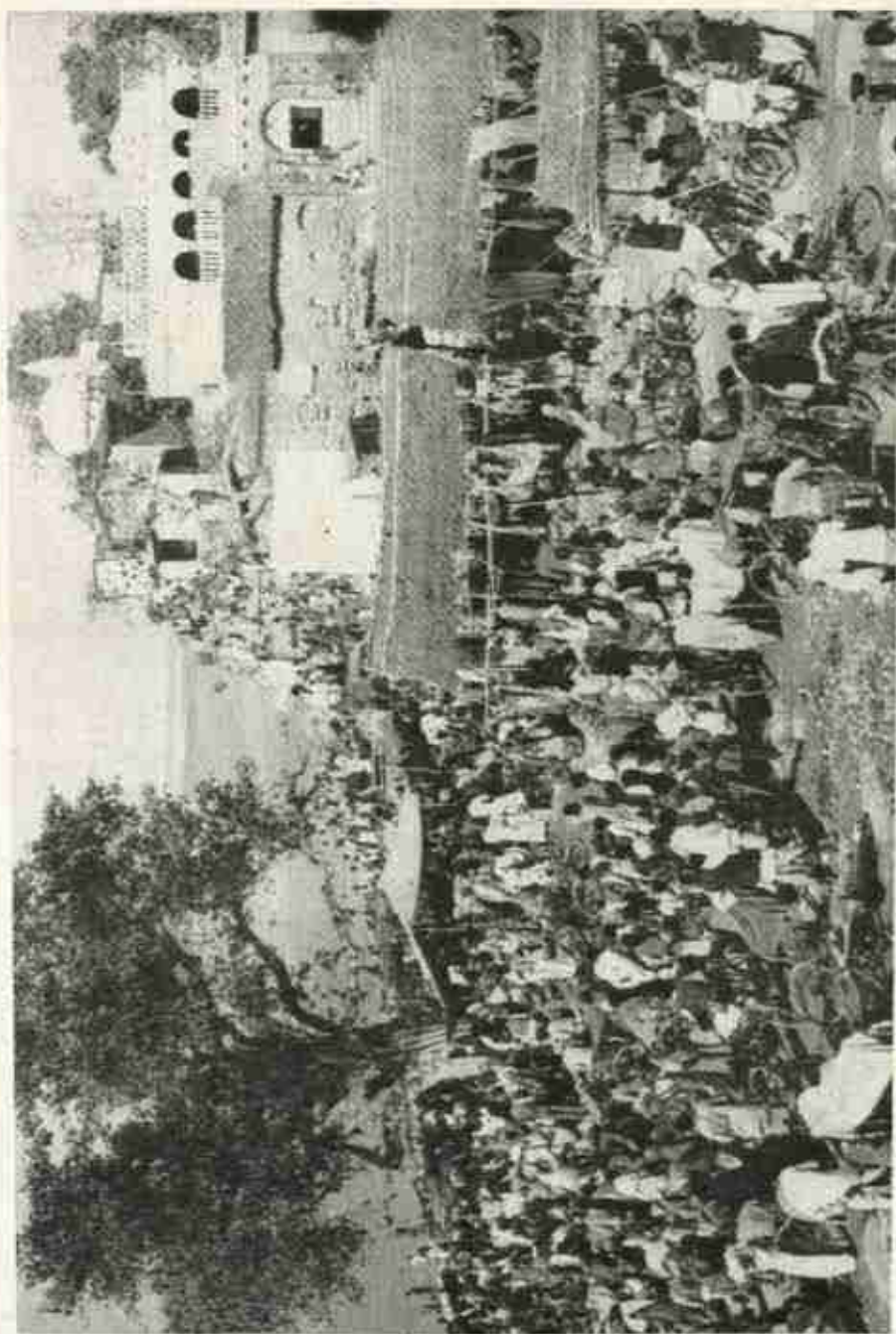
- Annandale, N. 1921, Indian Fossil Viviparæ. *Rec. Geol. Surv. India*, 51 (4), 362-367.
Bhatia, S.B. and Mathur, A.K. 1973. Some Upper Siwalik and Late Pleistocene molluscs from Punjab. *Himalayan Geology*, 3, 24-58.
Prashad, B. 1924. Recent and Fossil Viviparids. A study in Distribution, Evolution and Paleogeography. *Mem. Ind. Museum*, 8 (1), 153-251.



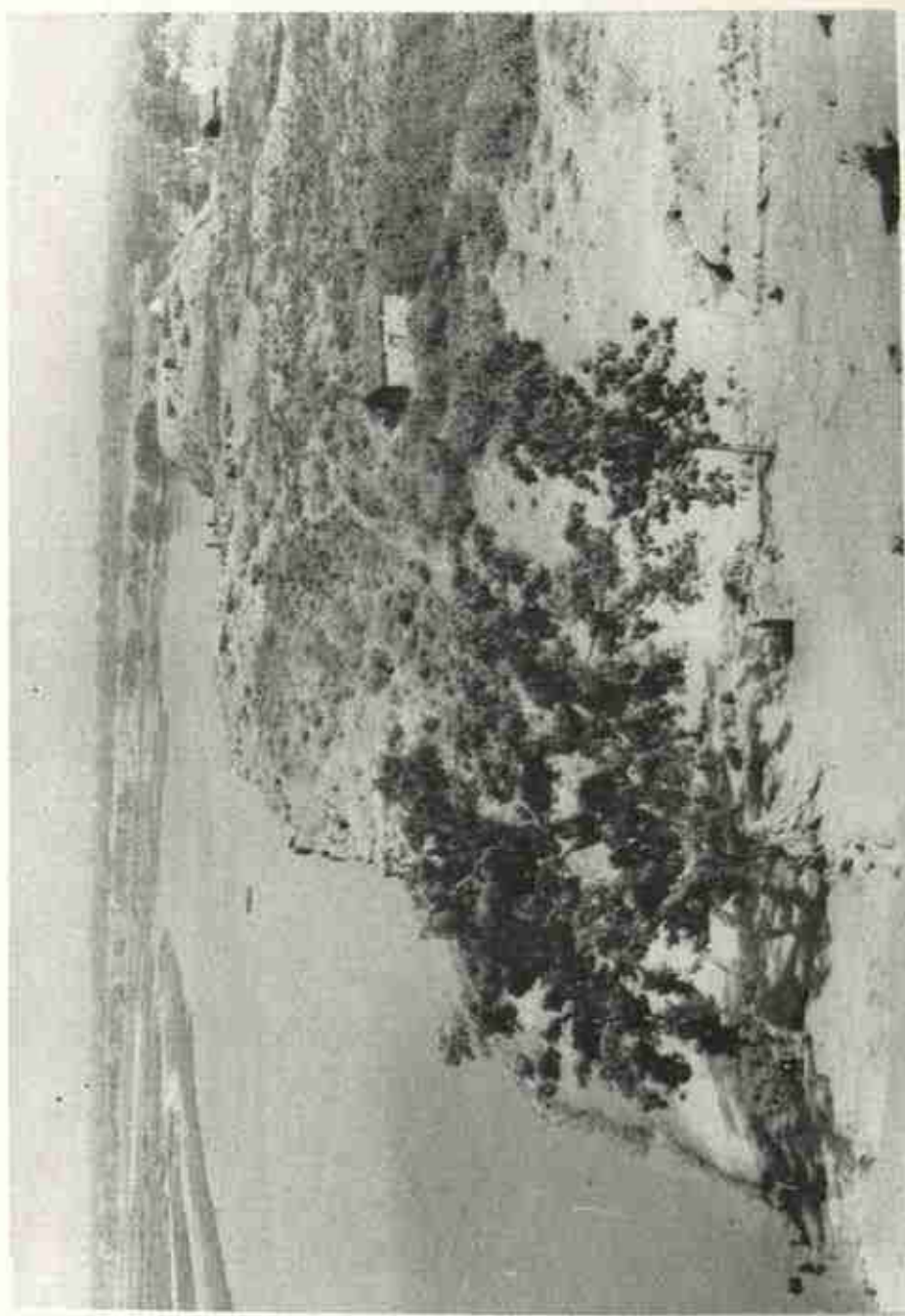
A view of the Śrīngaverapura mound with the Ganga. Because of the religious importance of the place, people come here on specified occasions for having a holy dip in the river. Looking south. See p. 13



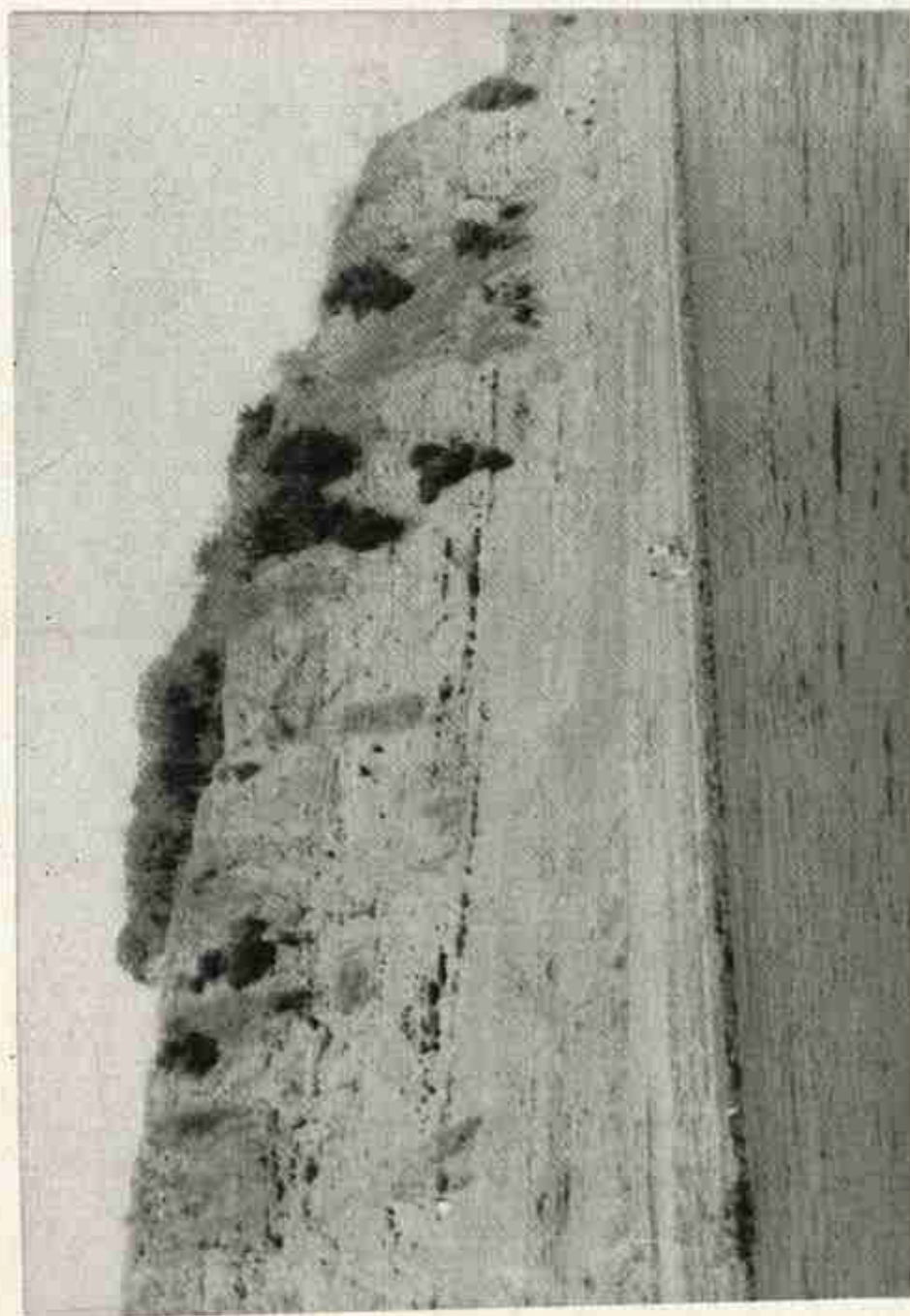
A closer view of the mound seen in the distance on pl. I. See p. 13



A view of one of the religious *melās* held at Śringaverapura. See p. 13



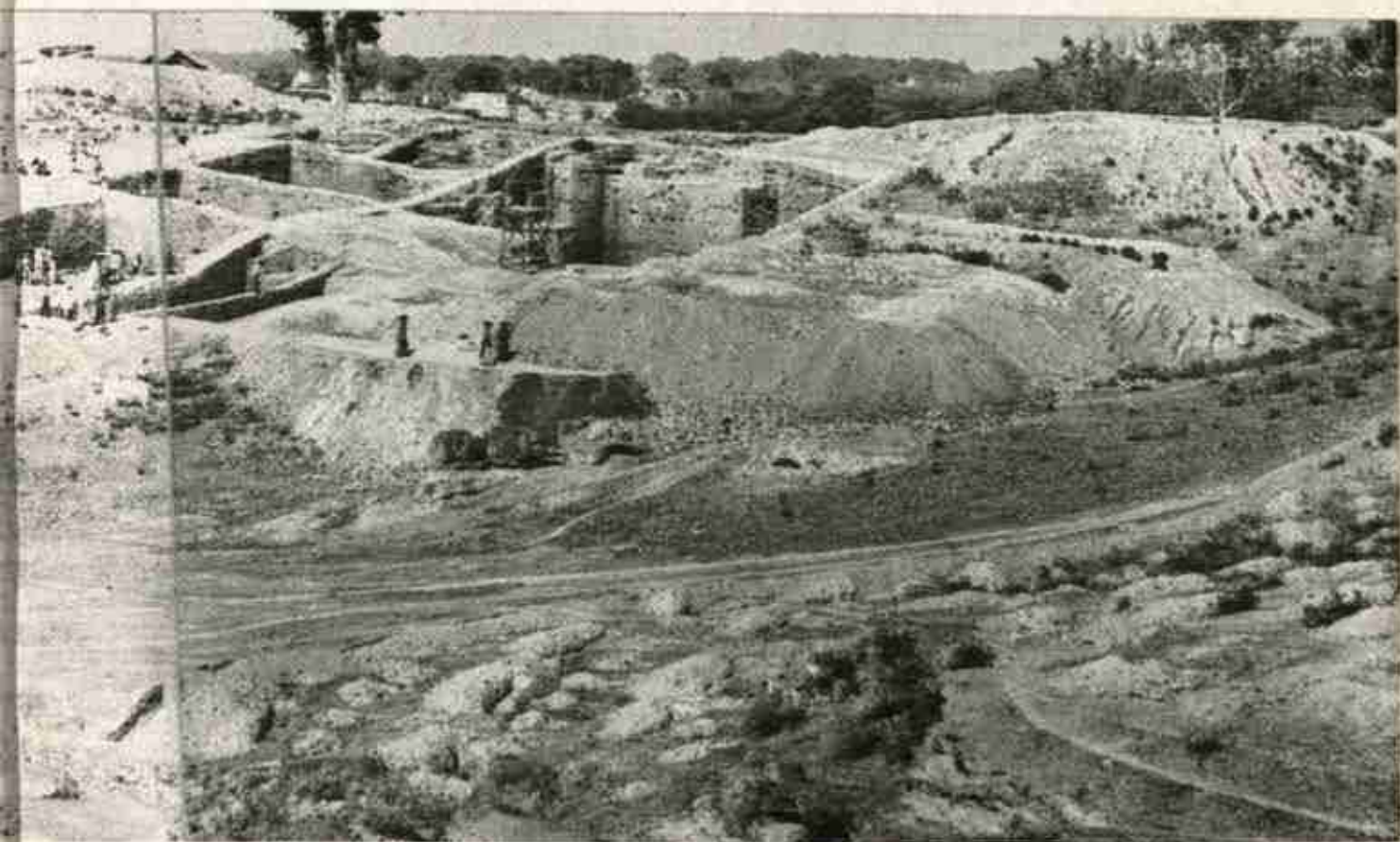
Another view of the Śrīngaverapura mound. Looking north-west. See p. 13



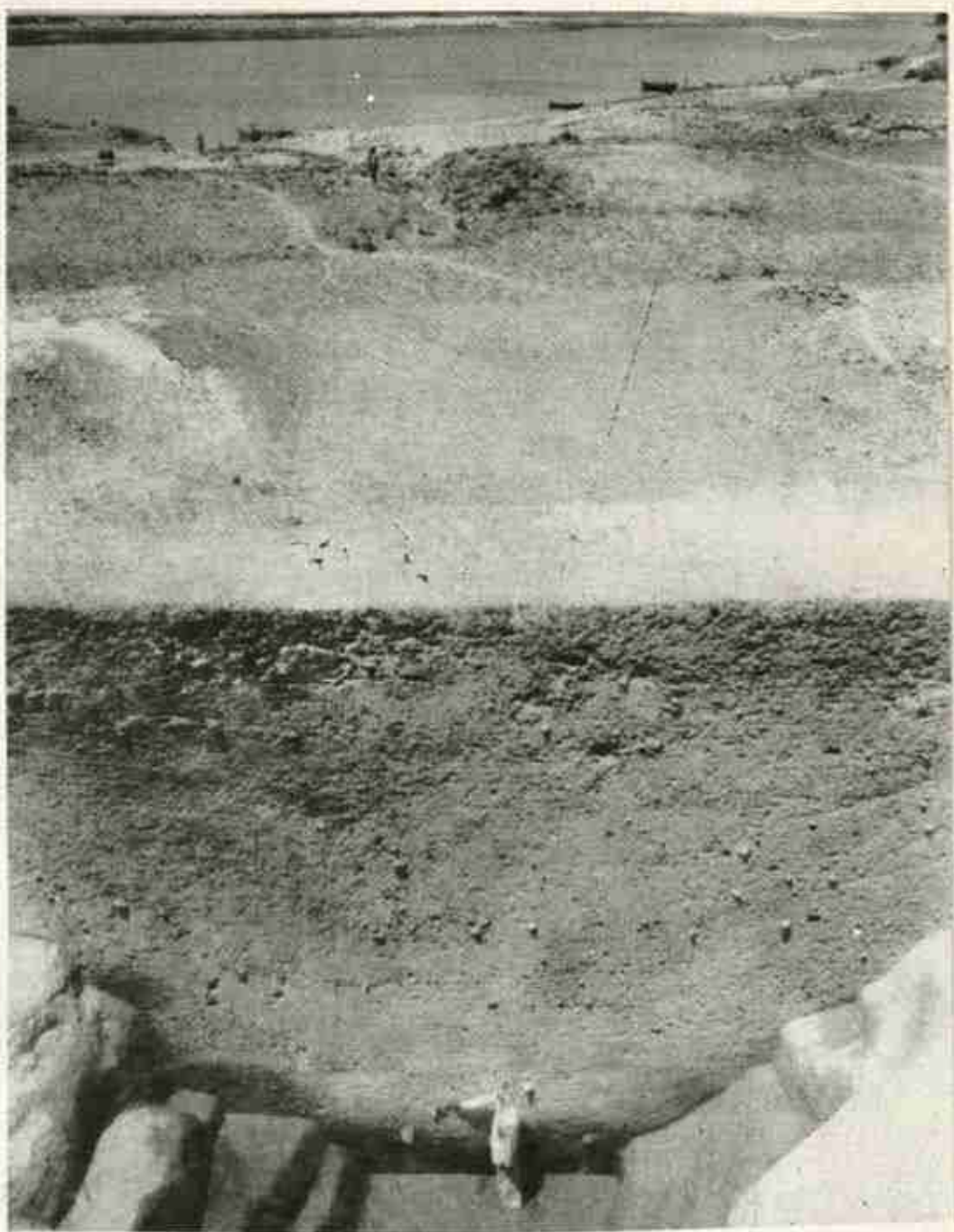
Śrīngaverapura: the ancient mound had considerably been cut away by the river. Jutting out from the section may be seen ancient walls and a ring-well. Looking east. See pp. 13 and 15



A panoramic view of the Śrīngaverapura mound
Look



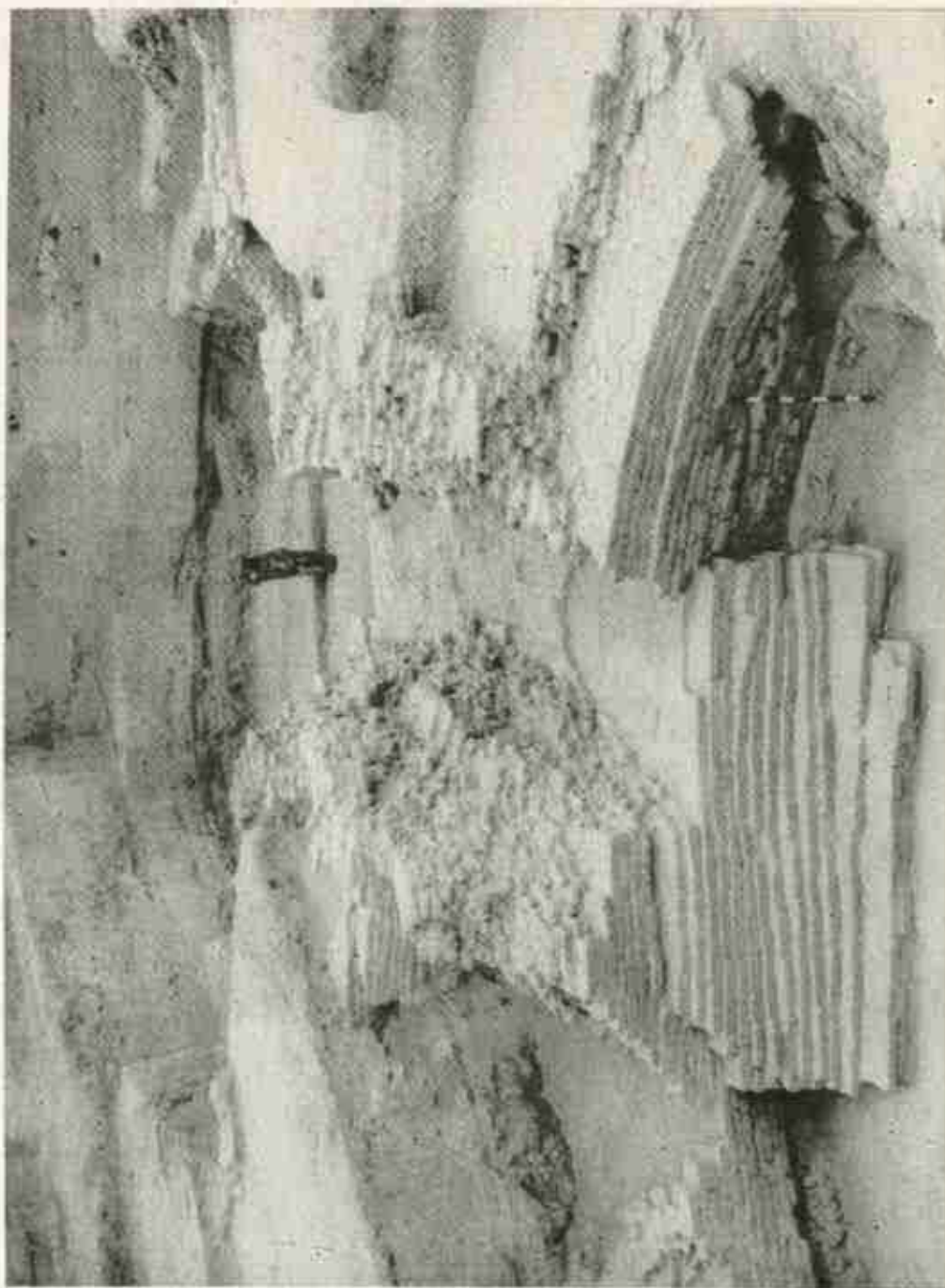
a few trenches on the right, in which the Exit Channel was encountered.
ing north-west. See p. 13



A view showing the Feeding Channel in the foreground; depression of the same, buried under the sand, in the middle distance; and the Ganga in the background.
Looking north-west. See pp. 16 and 22



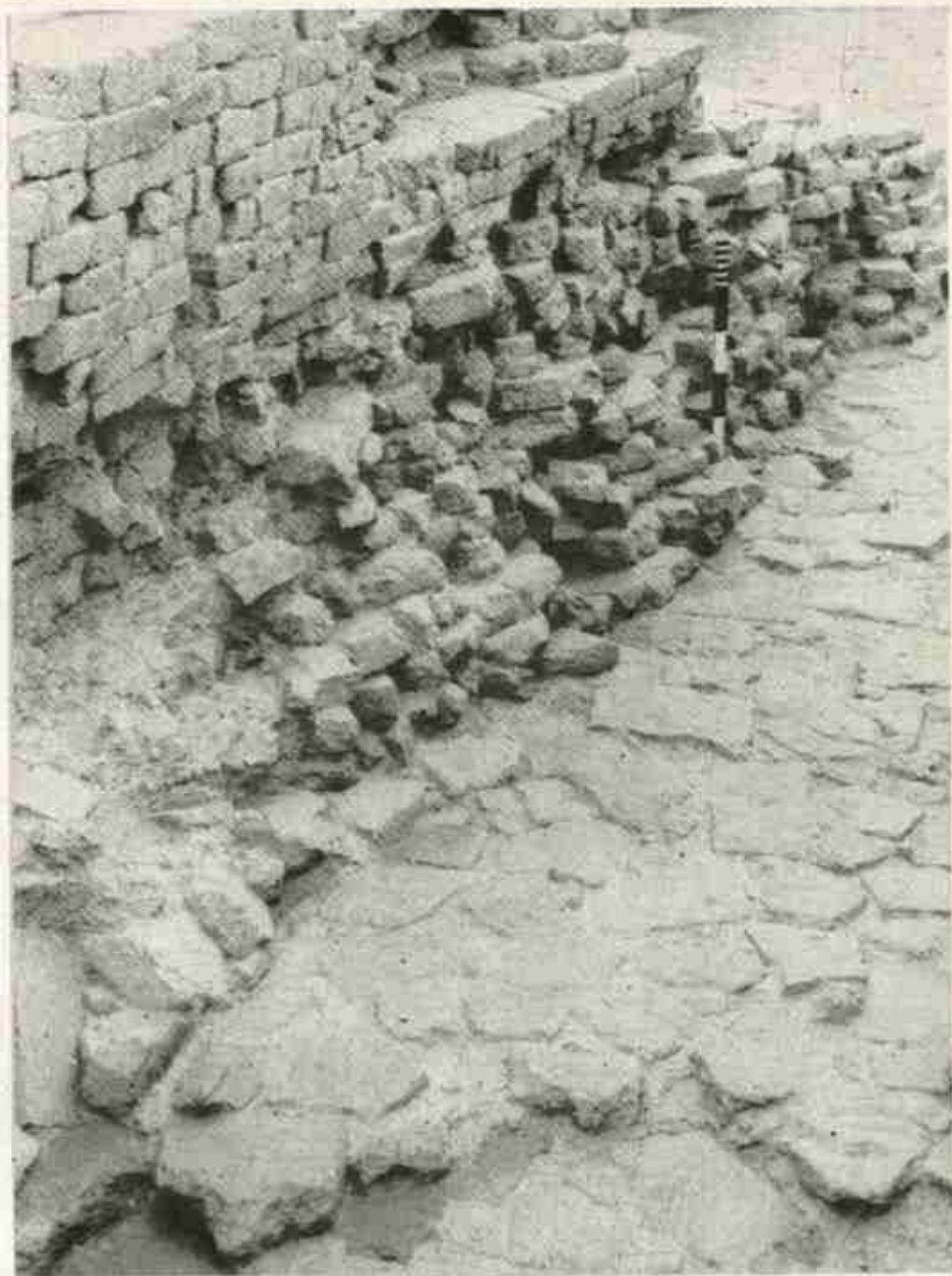
A closer view of the Feeding Channel. Its sides, cut into the natural soil, had anciently been eroded.
Looking north-west. See pp. 16 and 22



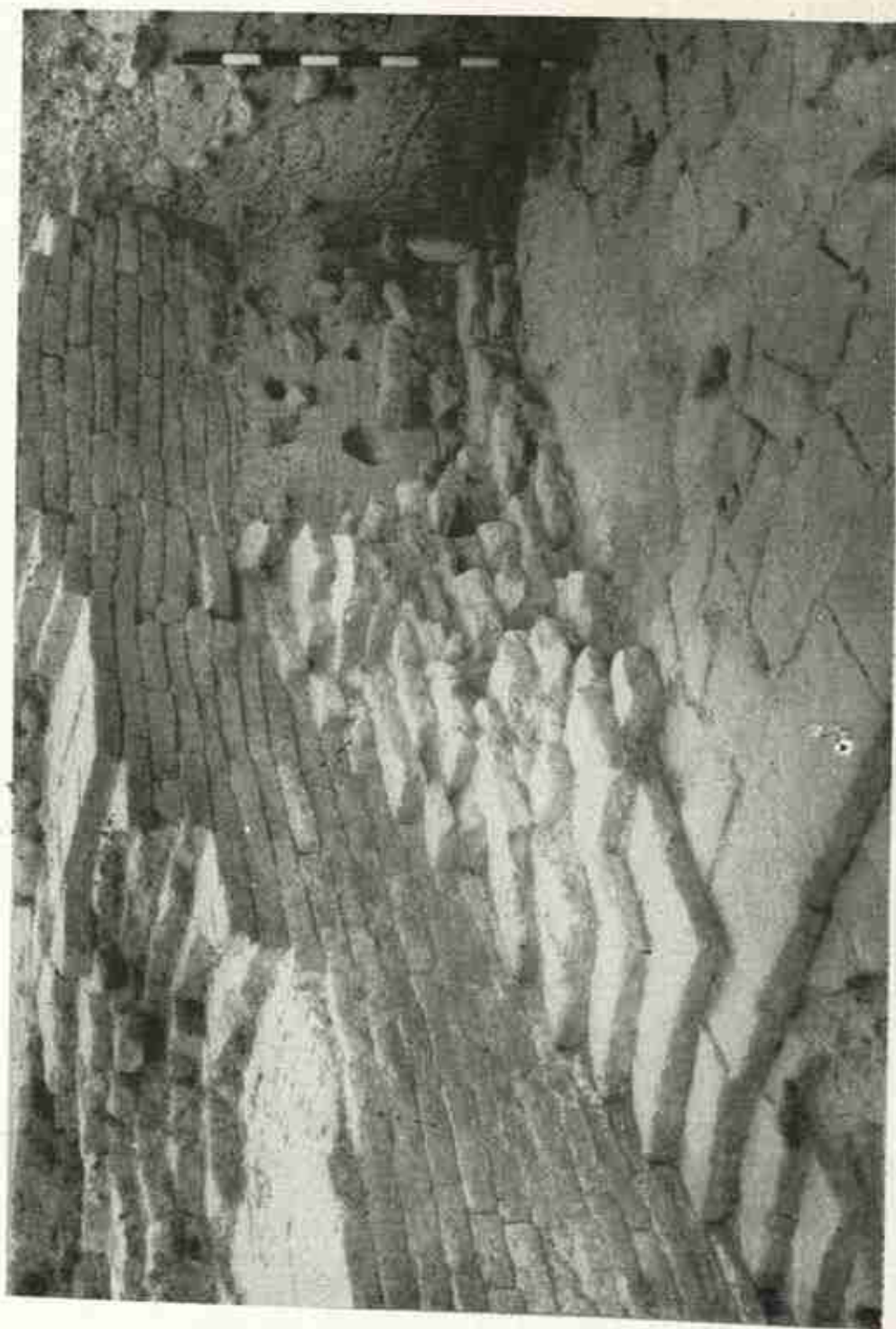
A view of the Inlet Channel, with a stepped ledge in front. The figure in the background stands in Tank A.
Looking south-south-east. See pp. 16 and 23



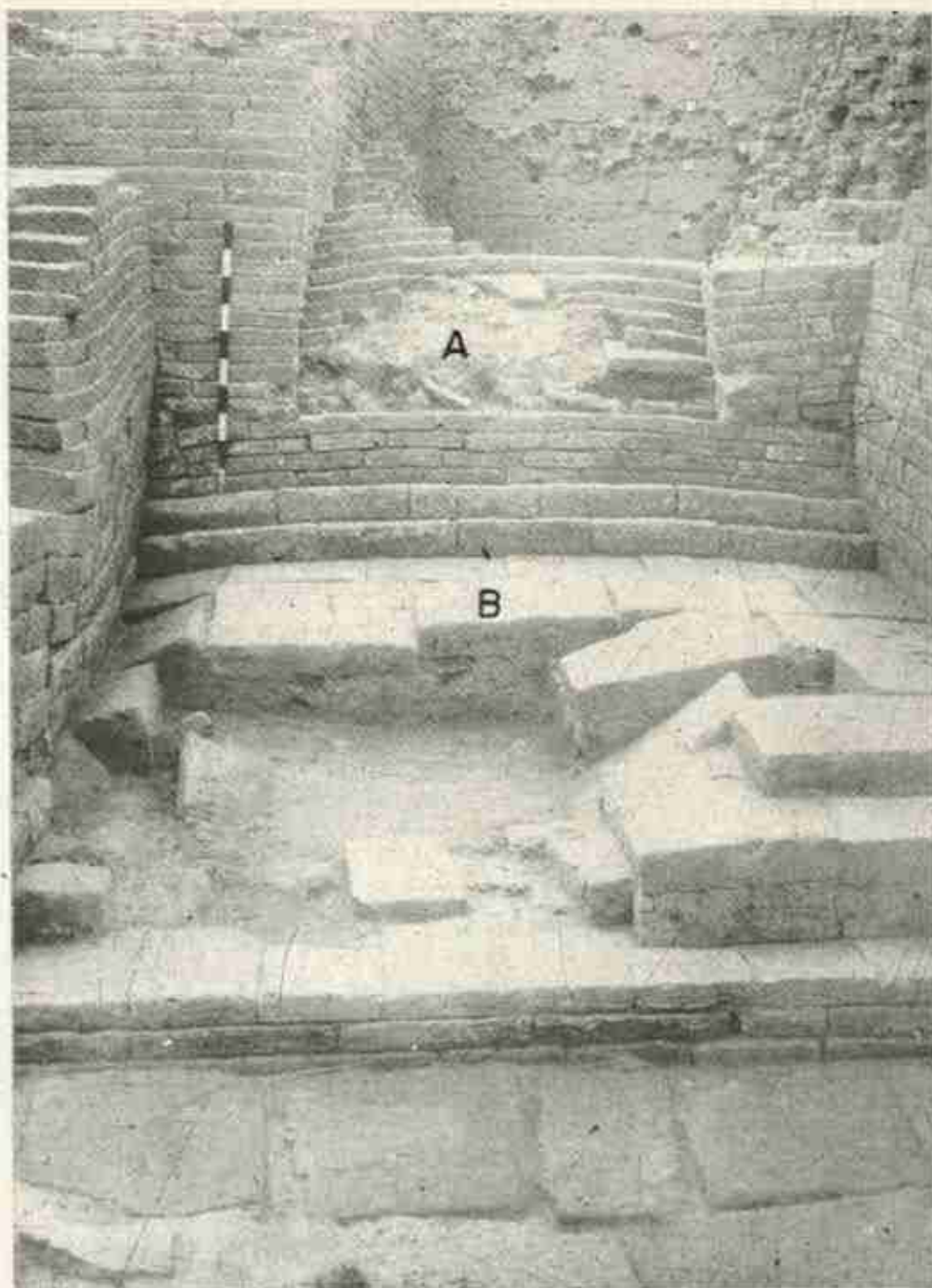
A view of the eastern side-wall of the Inlet Channel. The broken stone in the centre seems to have been a part of the slab over which the incoming water used to pass.
Looking east. See pp. 23 and 48



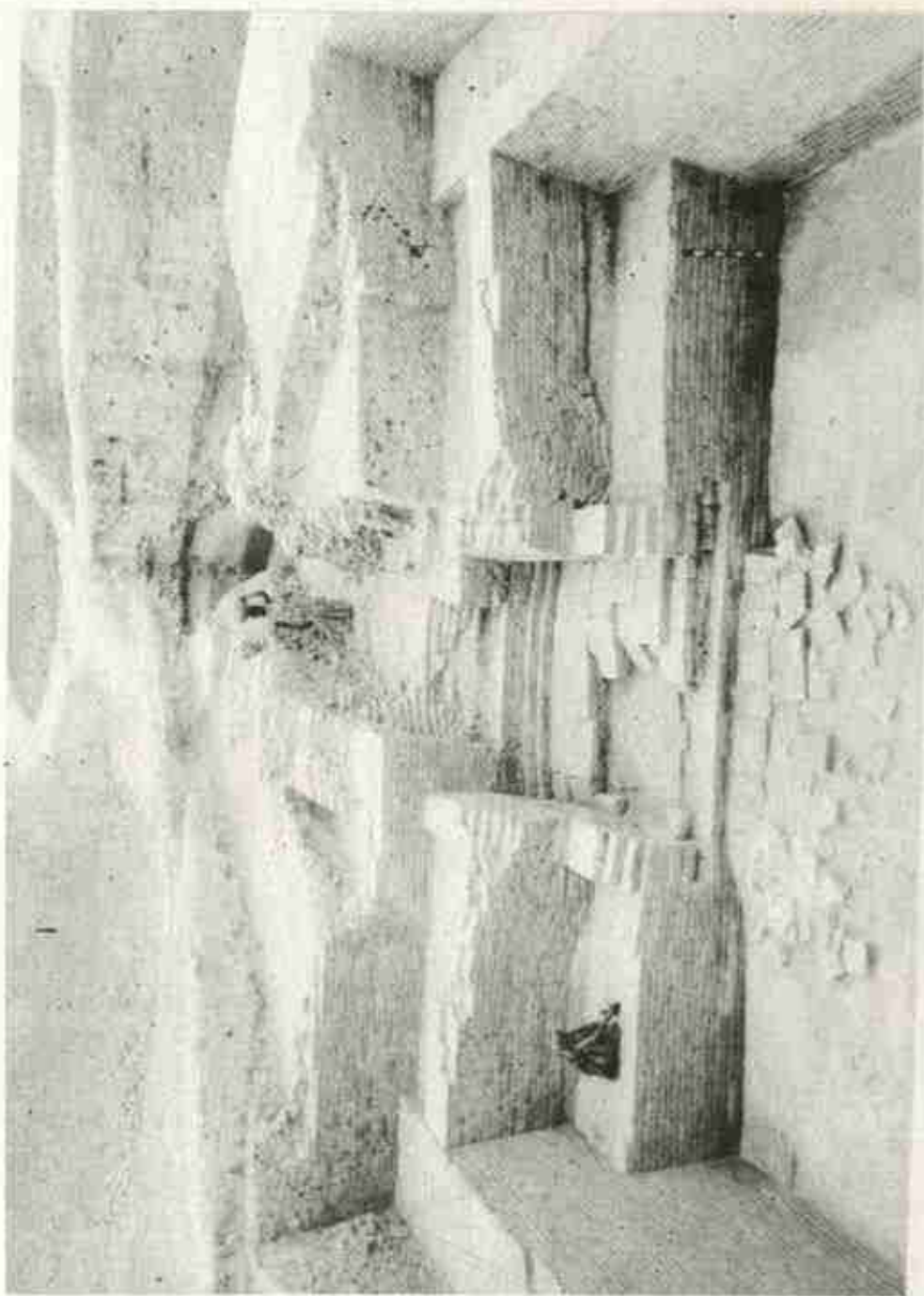
A view of the western side-wall of the Inlet Channel. In the middle of the upper part may be seen the damaged stone-block corresponding to the one seen on pl. X.
Looking west. See pp. 23 and 48



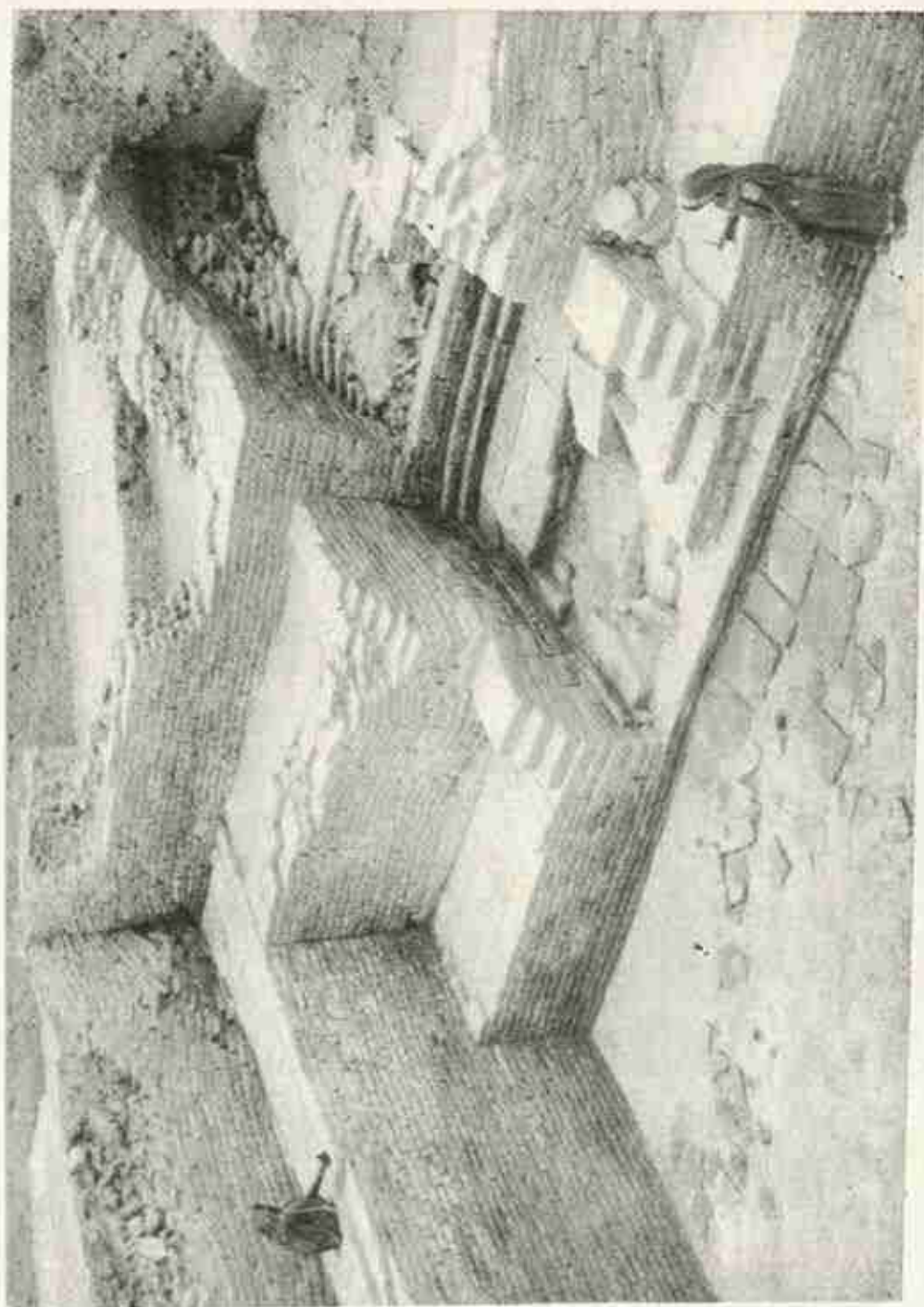
Close view of a part of the western side-wall of the Inlet Channel. Abutting it are seen the damaged steps over which water used to cascade in the process of reaching Tank A. Looking north-west. See p. 24



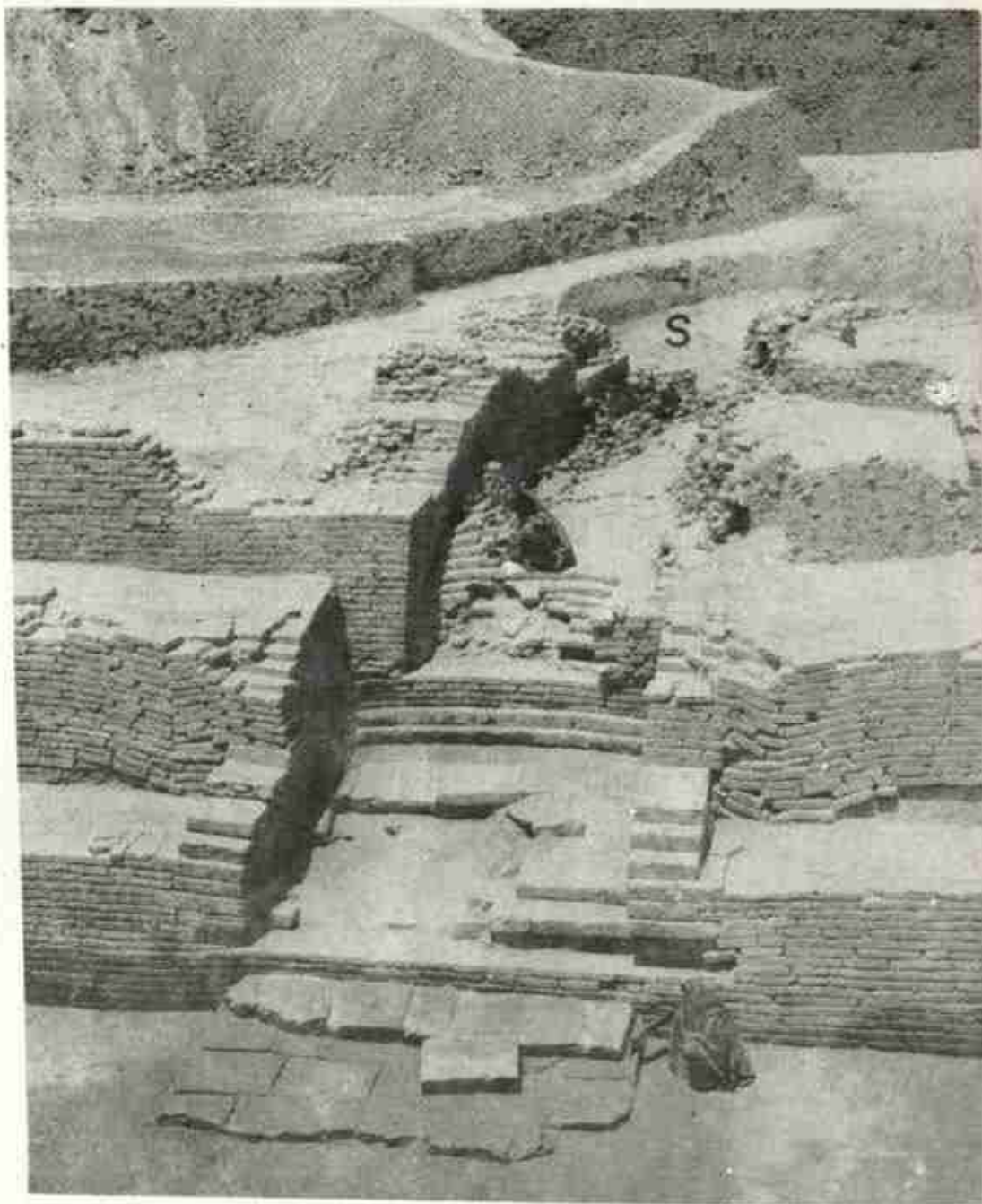
A view of the narrower (A) and wider (B) parts of the Inlet Channel. Large-sized bricks were used in the wider part as well as in the flooring on the tank-bed where the water finally fell. Looking north-west. See p. 24



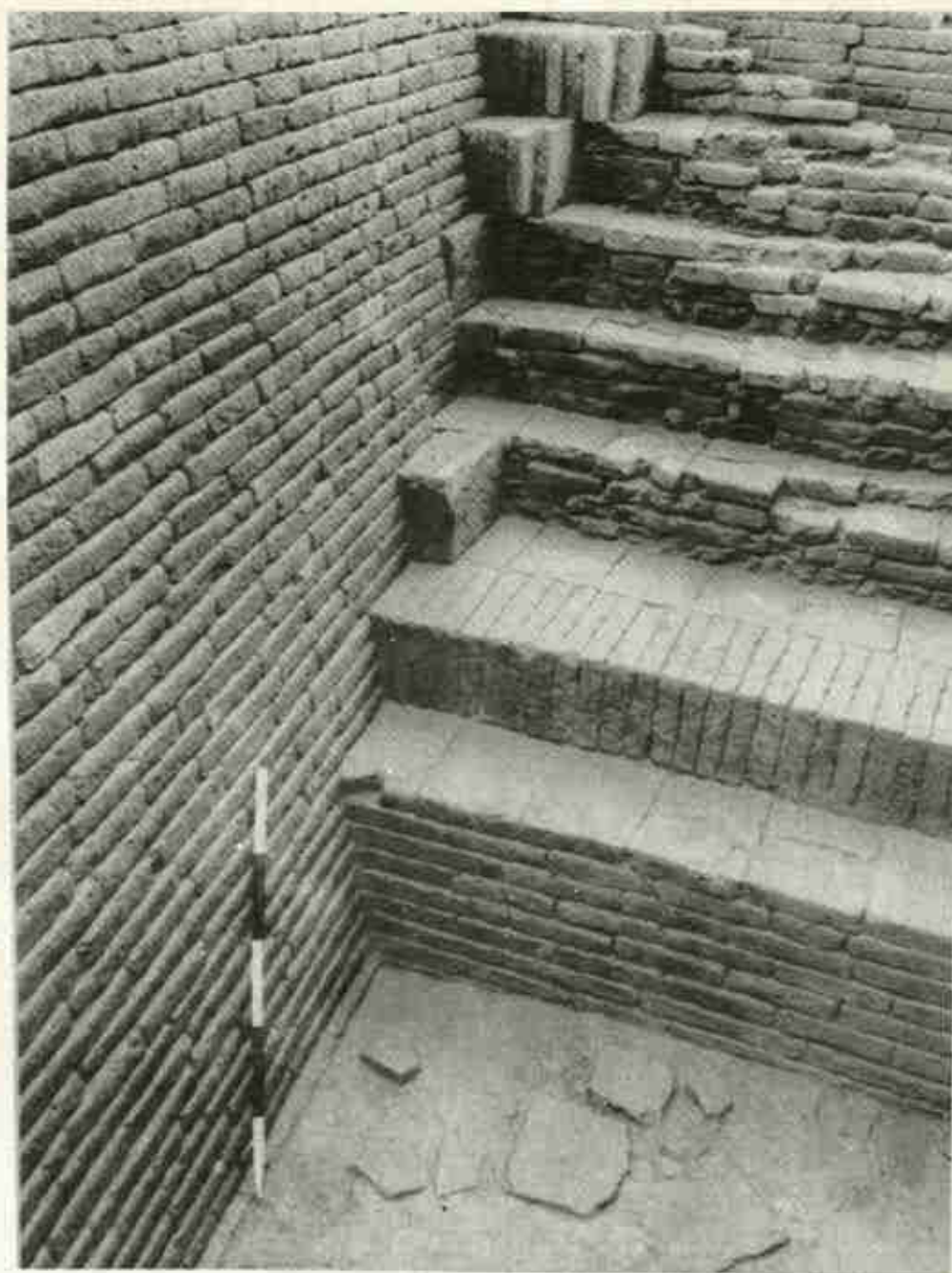
A view of the Inlet Channel and the northern part of Tank A with its retaining walls. Looking north-west.
See pp. 16 and 25



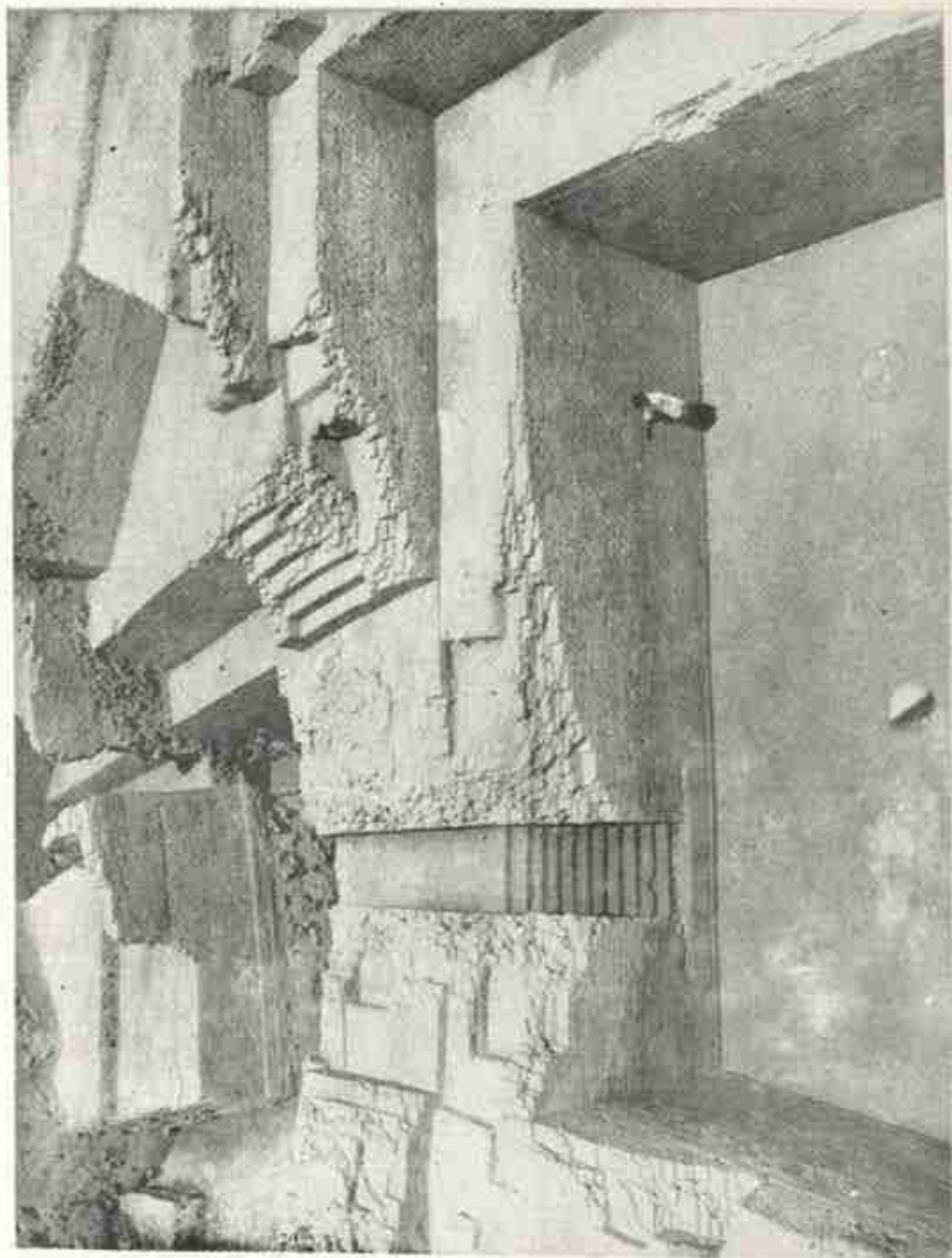
Another view of the Inlet Channel and the northern part of Tank A. Looking west. See pp. 25 and 36



A view showing the northern part of Tank A, Inlet Channel and Silting Chamber (marked S). It is probable that a wooden rafter was inserted in the gap in the Lowest Retaining Wall (near the head of the lower seated figure). Looking north-west. See pp. 16, 24 and 40

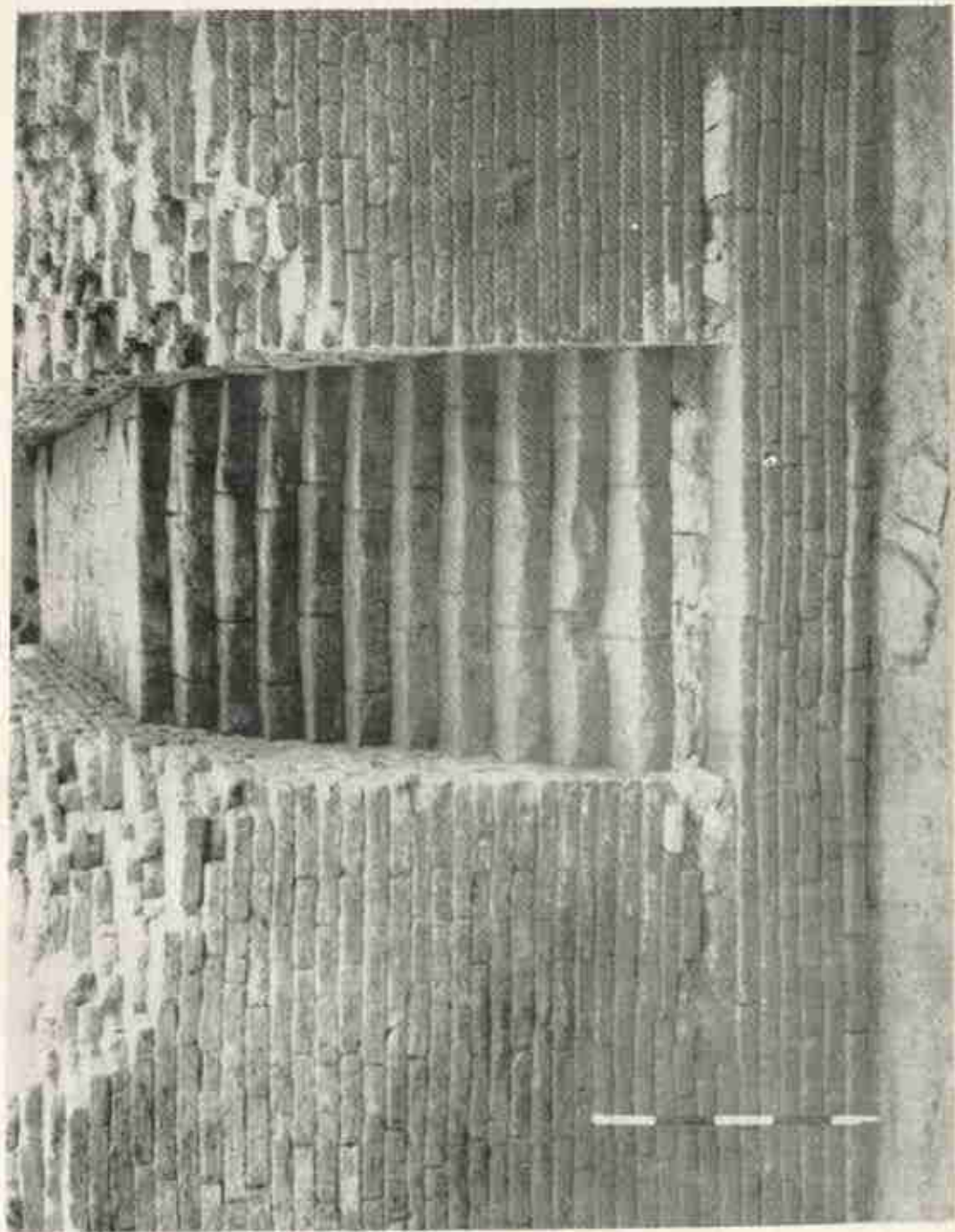


Lowest Retaining Wall and staircase at the south-eastern corner of Tank A. Looking south-east. See pp. 17, 26 and 33



A view of the northern part of Tank B, with Interconnecting Channel-1 (middle distance) through which water flowed from Tank A (background). The brick structures at the higher level were associated with subsequent Mud Tank. Seen in the bed of Tank B are plans of two of the wells provided to utilize sub-soil water.

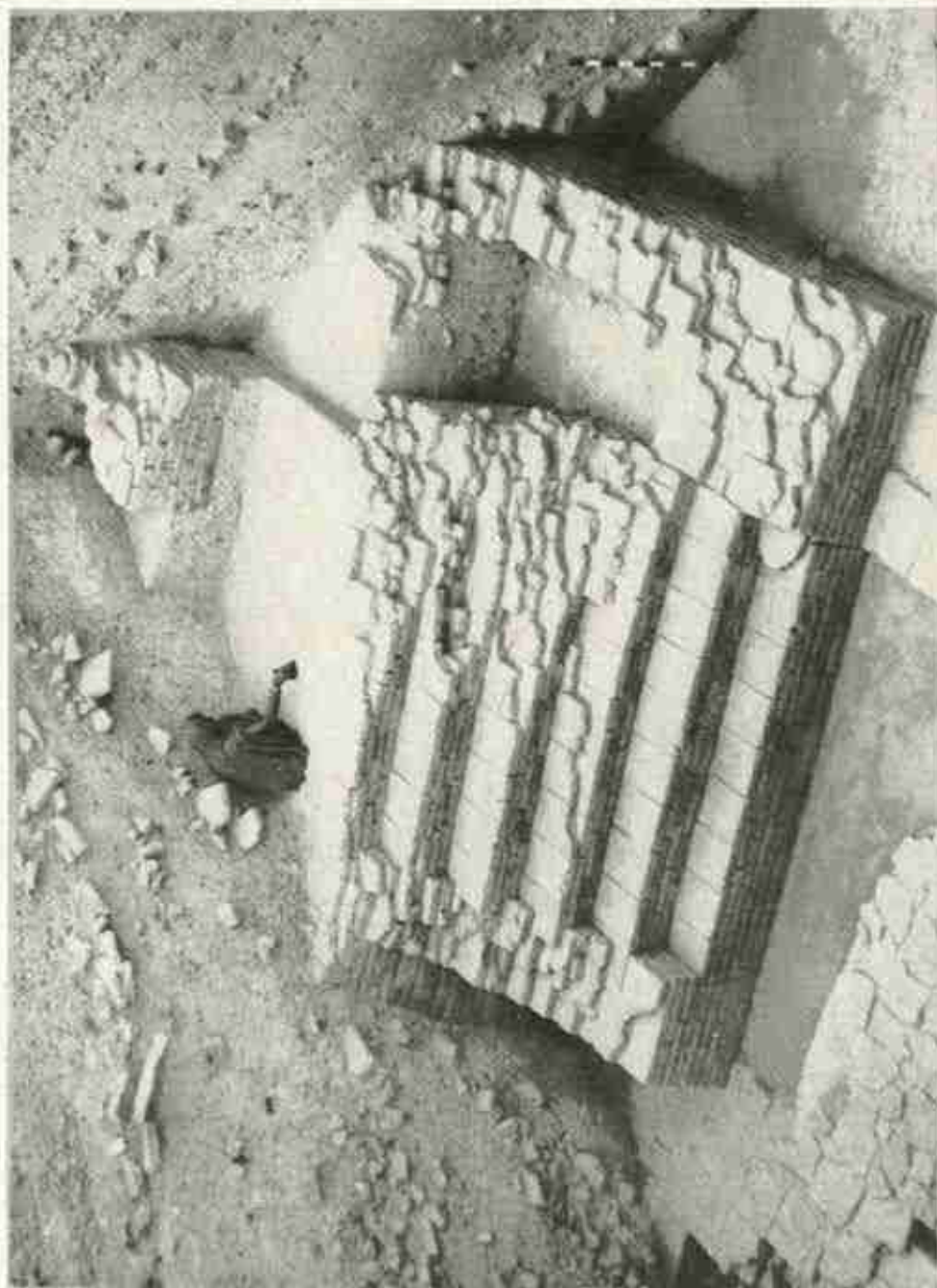
Looking north-west. See pp. 17-18 and 27-28



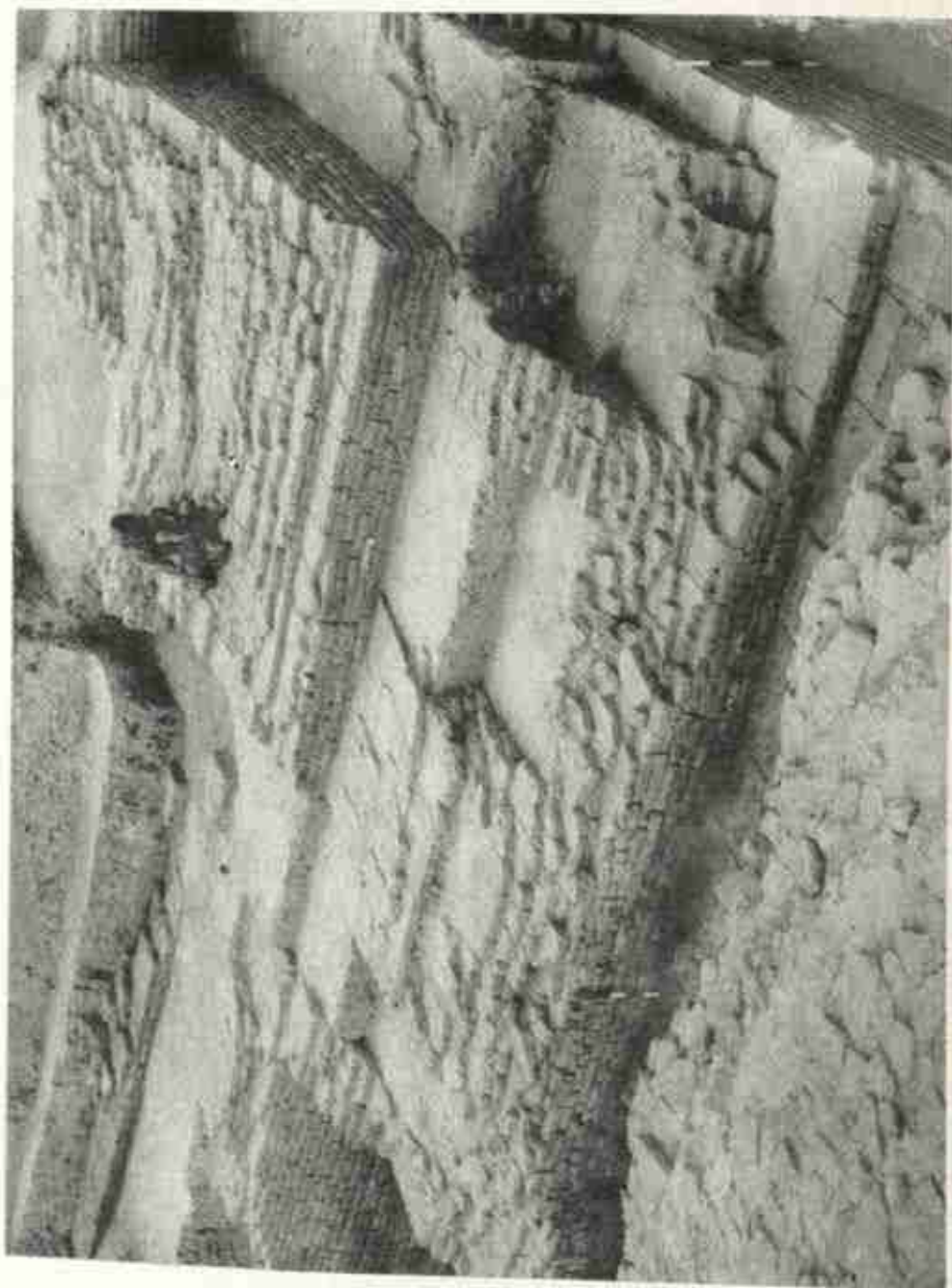
Close-up of steps in Interconnecting Channel-1, with flanking parts of Lowest Retaining Wall of Tank B. It is probable that in the horizontal gap in the brickwork a little above the tank-bed a wooden rafter may have been inserted.
Looking north-west. See pp. 24, 27 and 40



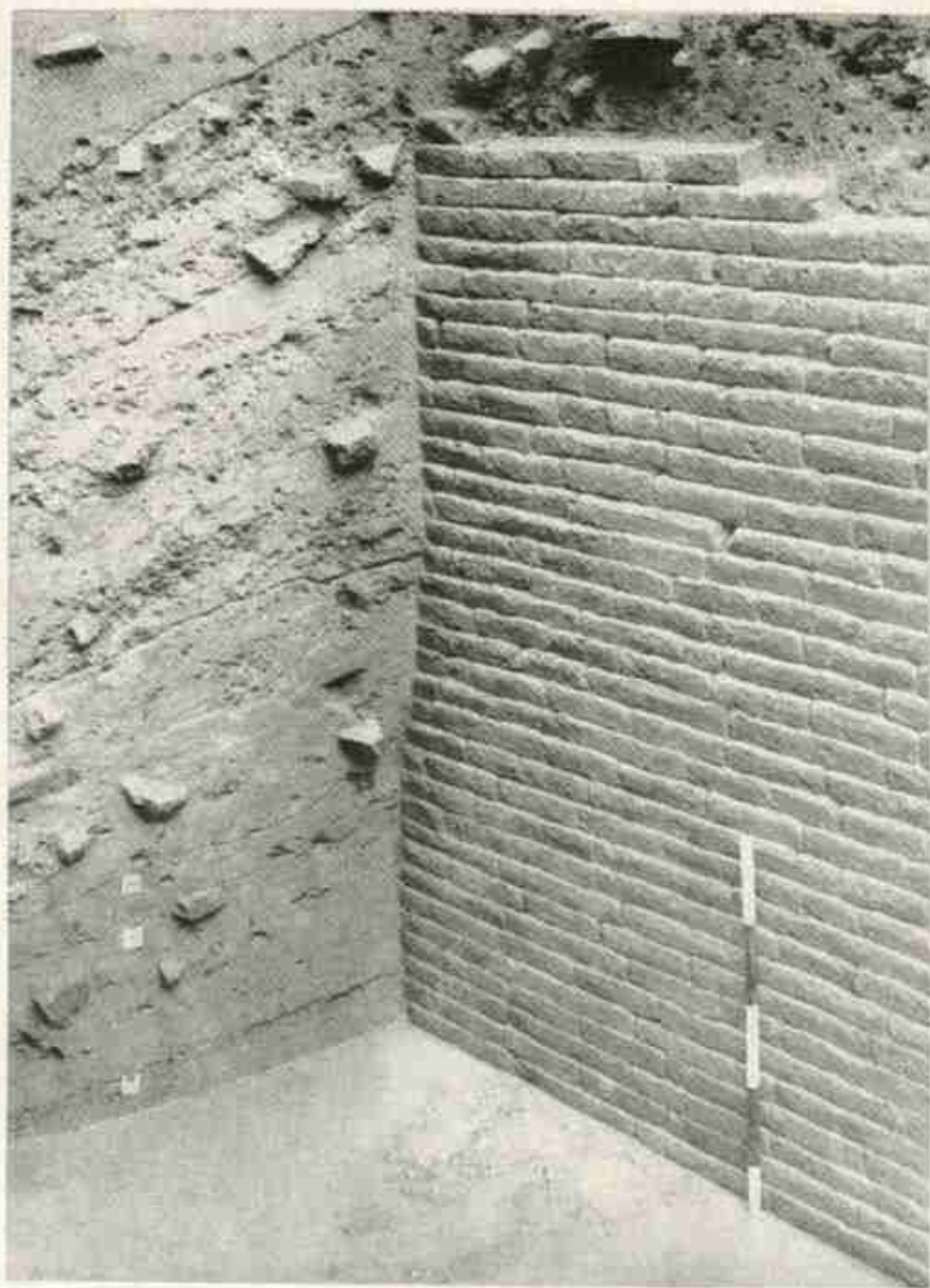
A closer view of the platform on the eastern side of Interconnecting Channel-1, and steps rising therefrom (cf. pl. XVIII). Looking north. See pp. 18 and 27



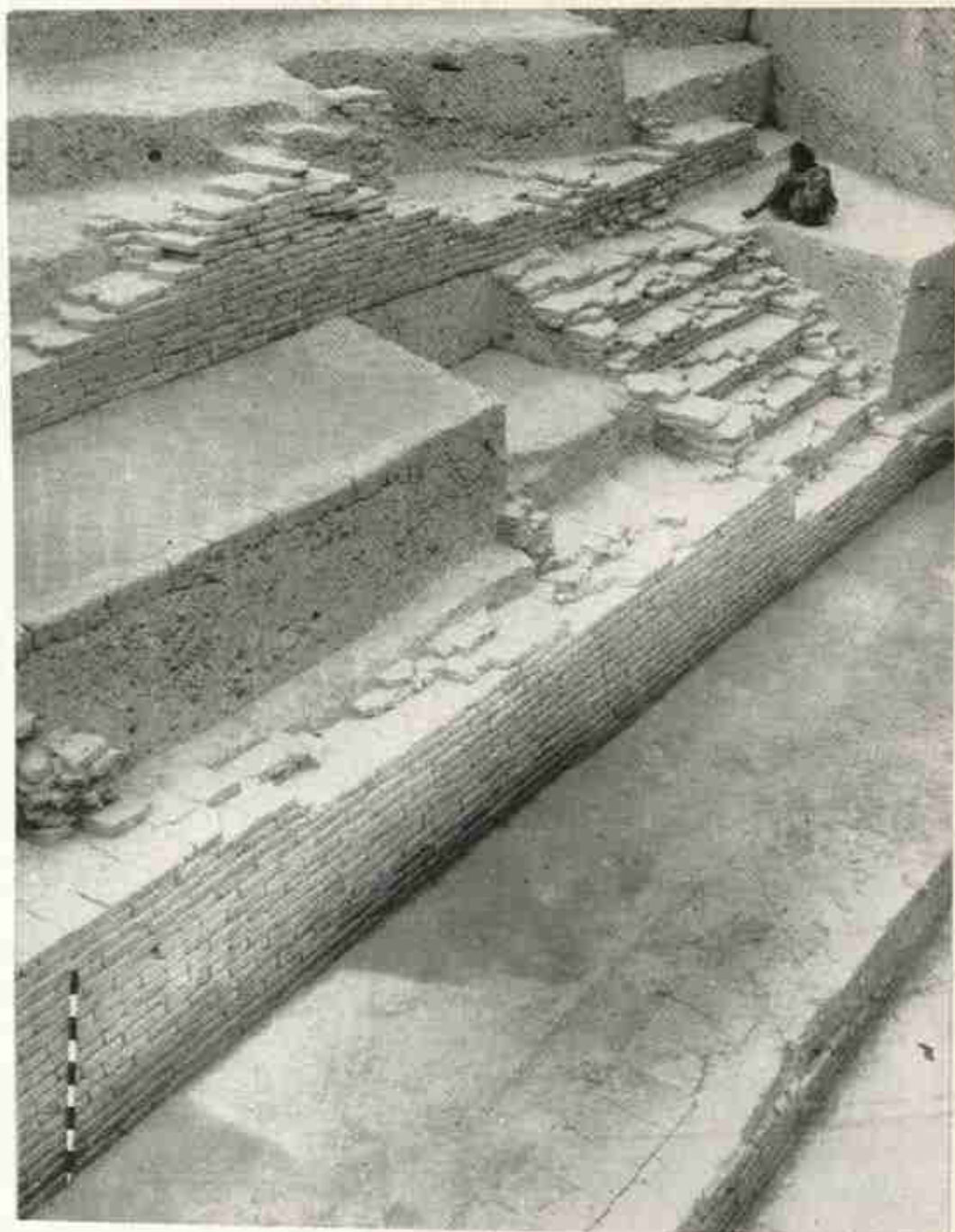
A close-up of the steps seen on pl. XX. The wall in the background is a part of the Third Retaining Wall. Looking north-east. See pp. 18 and 27



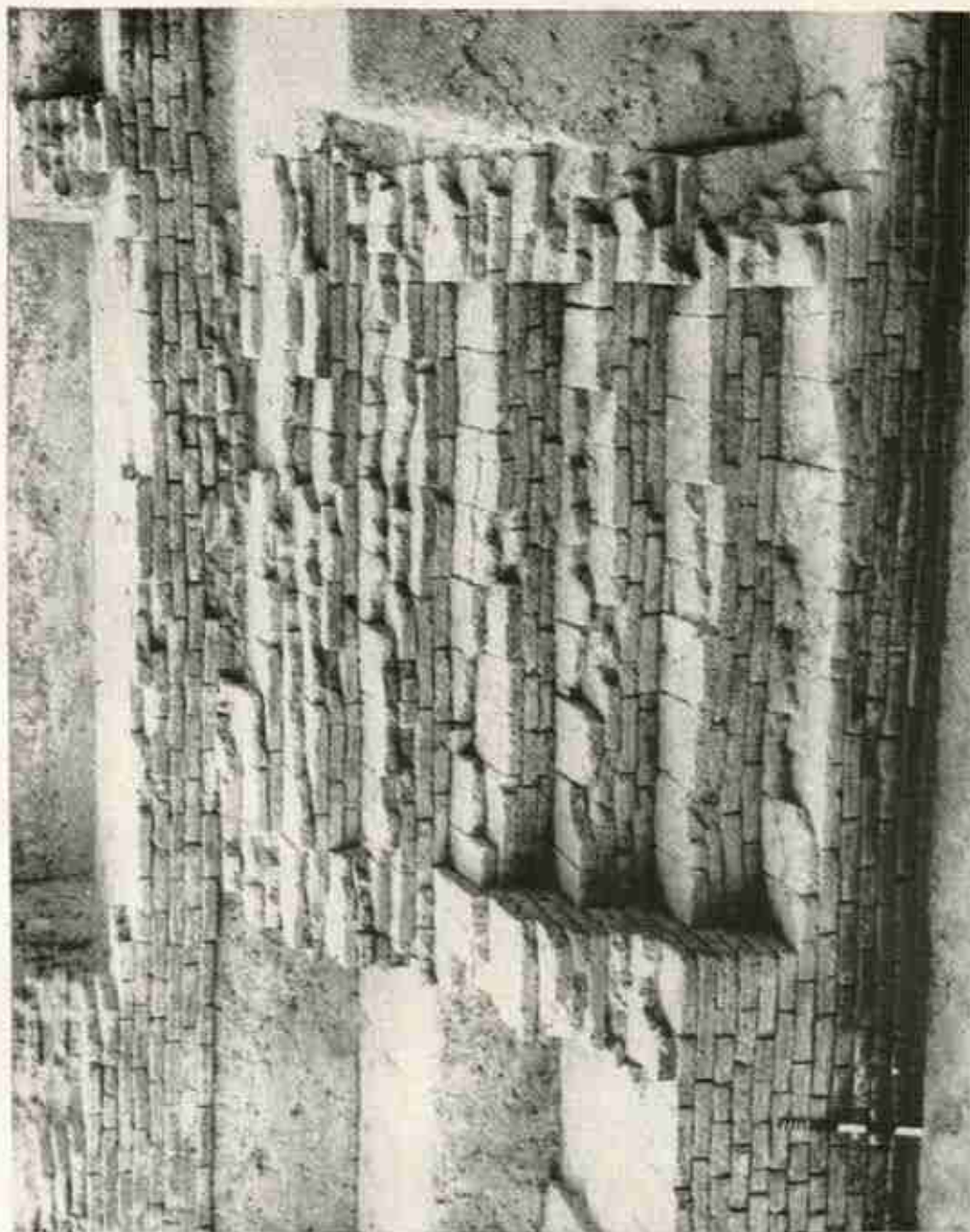
A view of Interconnecting Channel-1, and of the platform and steps on its western side, Looking south-west.
See pp. 18 and 27



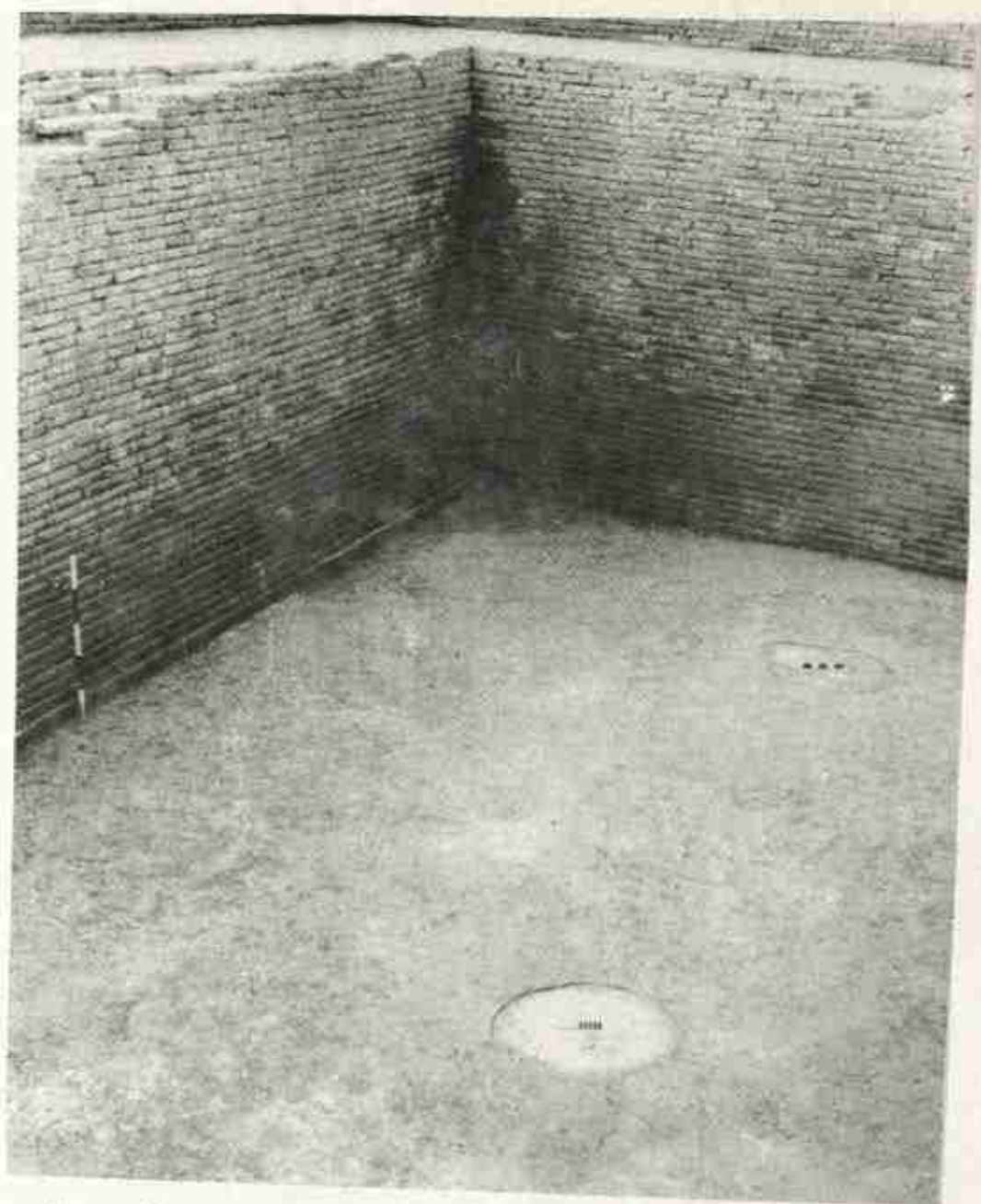
Close-up of a part of the Lowest Retaining Wall on western side of Tank B, showing courses of headers and stretchers. Looking south-west. See pp. 18 and 27



A view of the three successive retaining walls on the eastern side of Tank B, with steps in background. Looking south-east. See p. 28



Close-up of the steps seen on pl. XXIV. Looking north-east. See p. 28



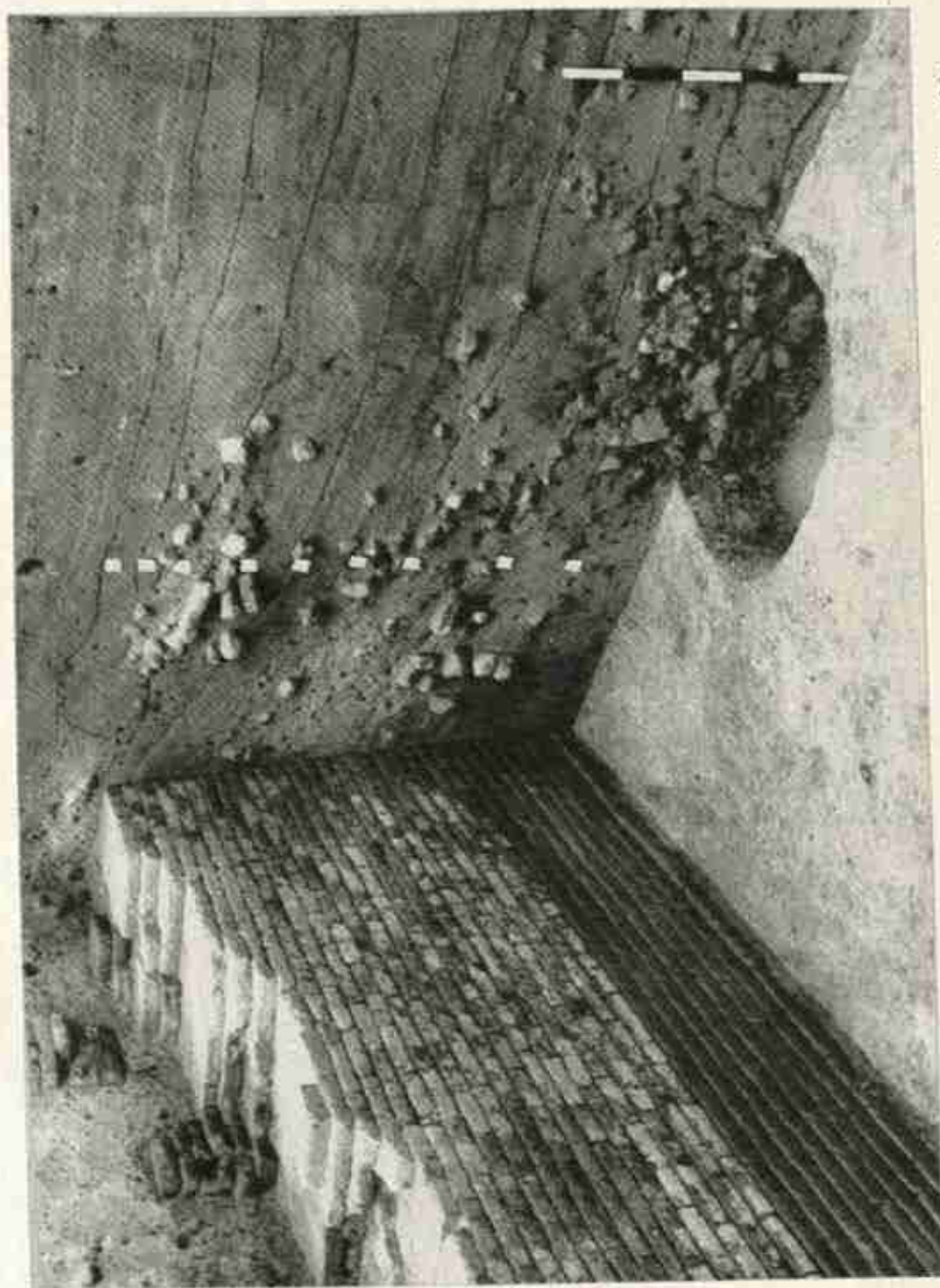
The two white circles (with scales) in the bed of Tank B represent plans of sub-soil-water wells (Nos. 1 and 2 on plan, fig. 4). In the background is the north-eastern corner of the Tank. Looking north. See p. 18 and 29



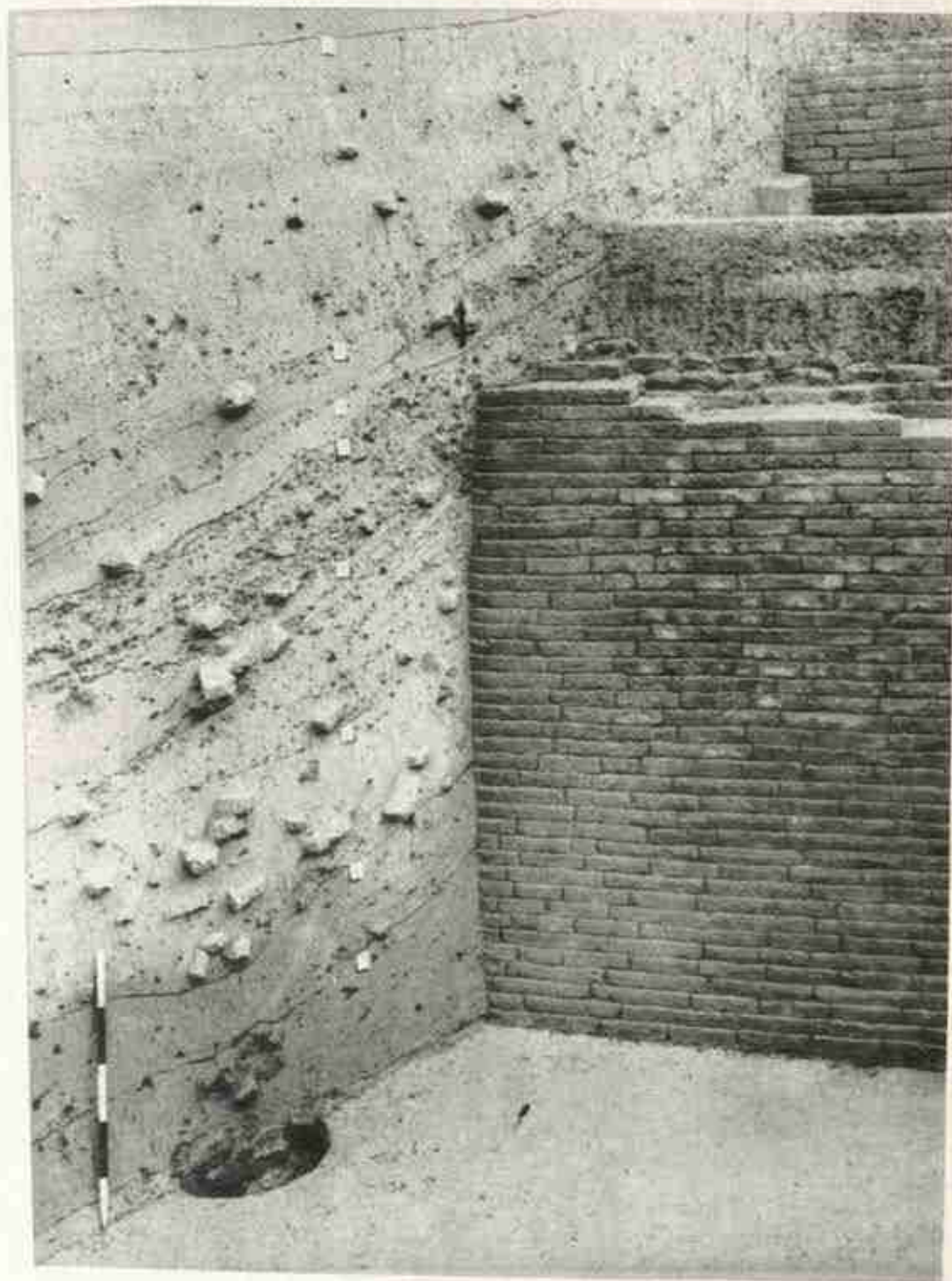
Close-up of plan of Well 1, before excavation. Looking north-west. See p. 29



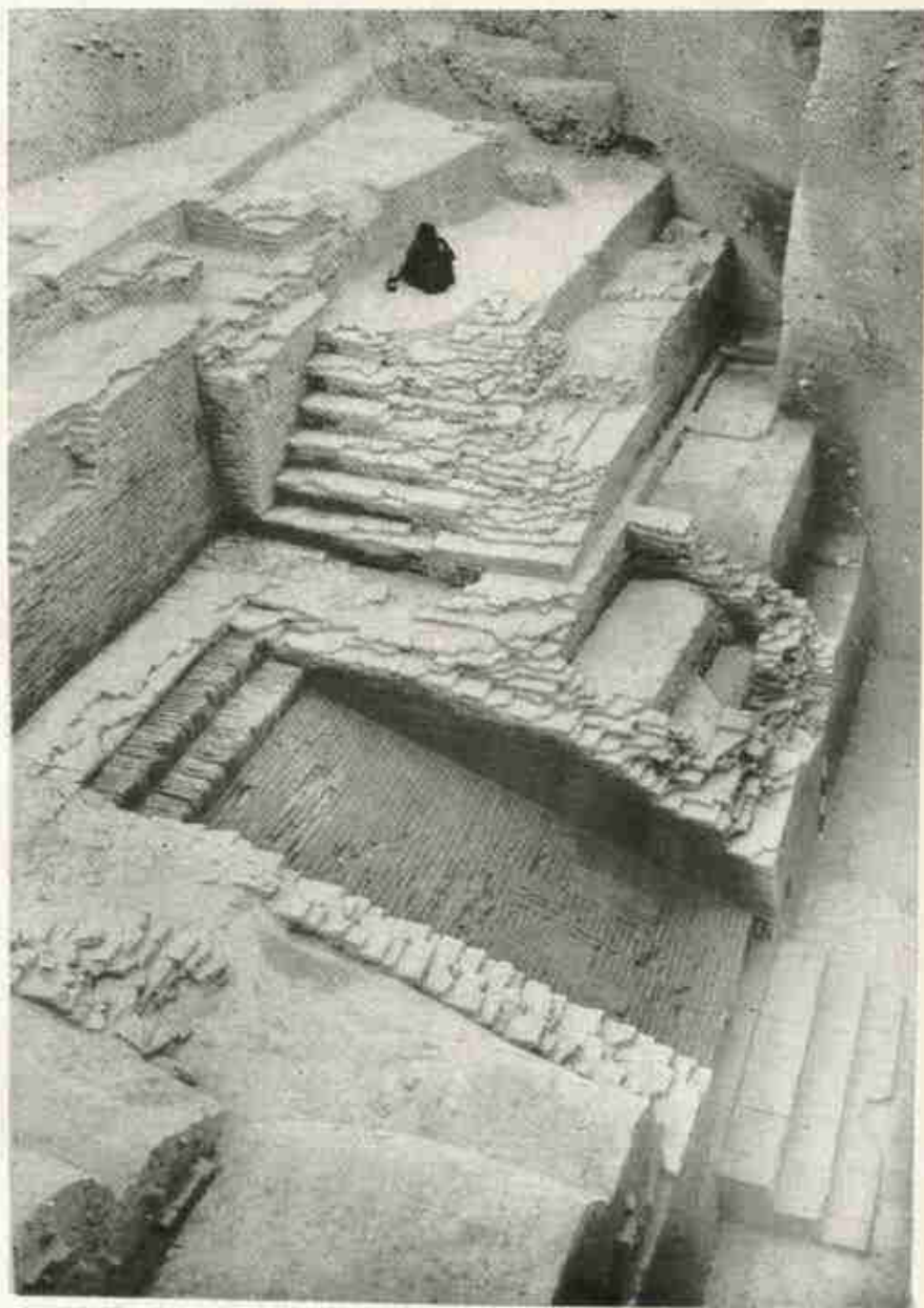
Close-up of Well 1, during excavation with broken jar in it. Looking north-east. See p. 29



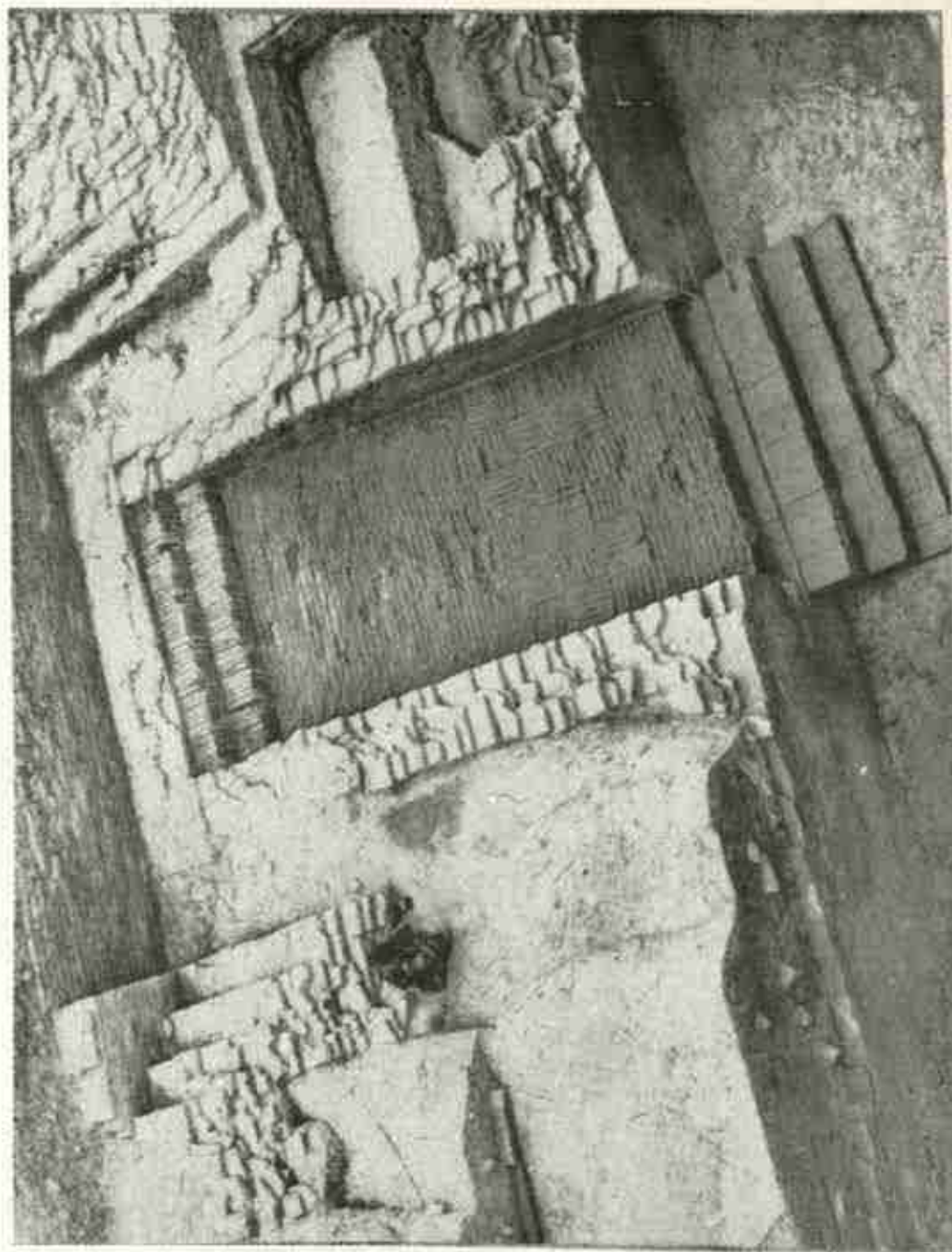
A view of Well 3, with the Lowest Retaining Wall on the western side of Tank B. Looking north-west. See p. 29



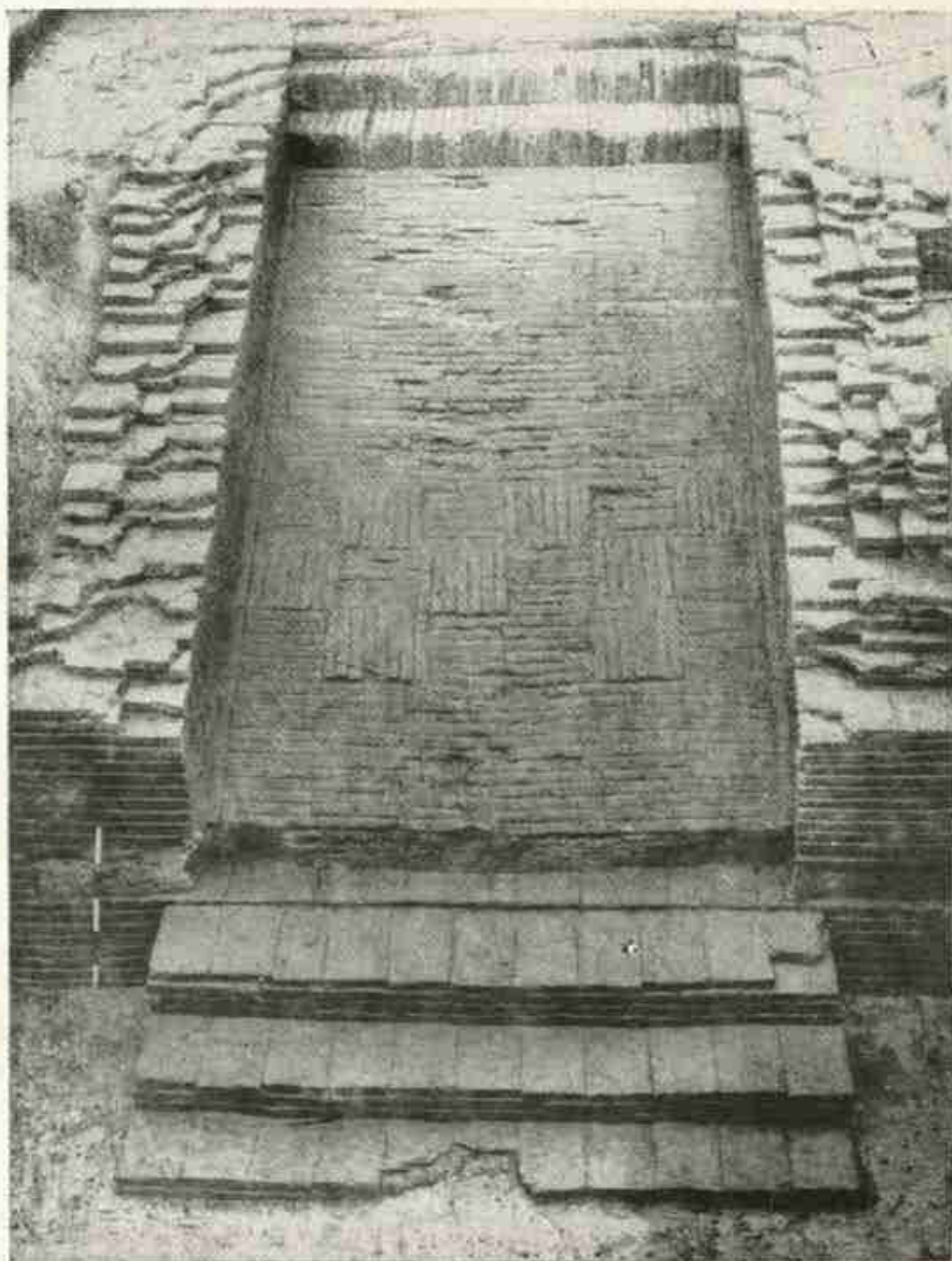
A view of Well 4, with the retaining walls on the eastern side of Tank B. Looking north-north-east. See pp. 18 and 29



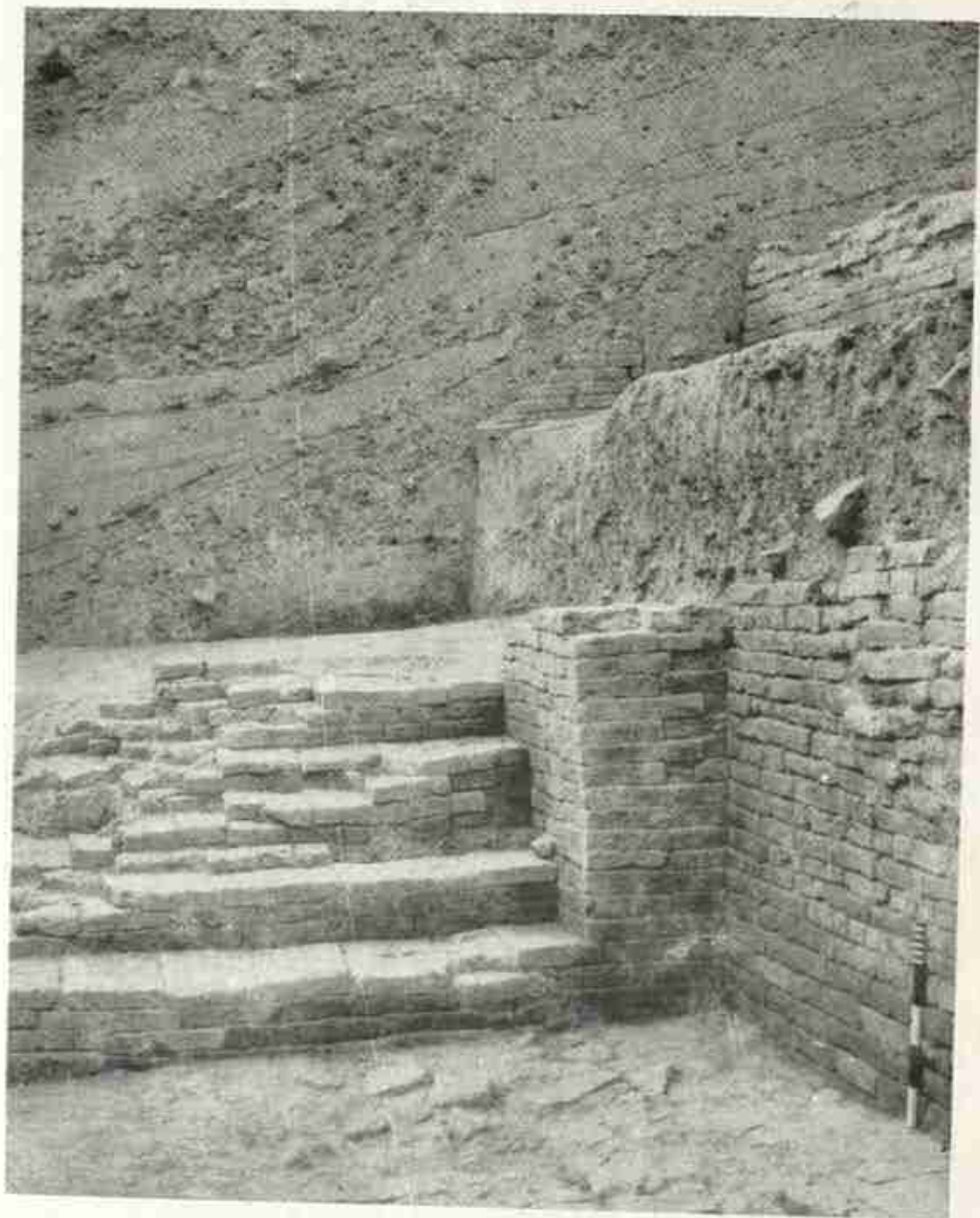
A view of Brick-on-edge Ramp-1, adjacent staircases and three retaining walls, on the eastern side of Tank B. (cf. plan, fig. 4). Looking south-east.
See pp. 19 and 29-30



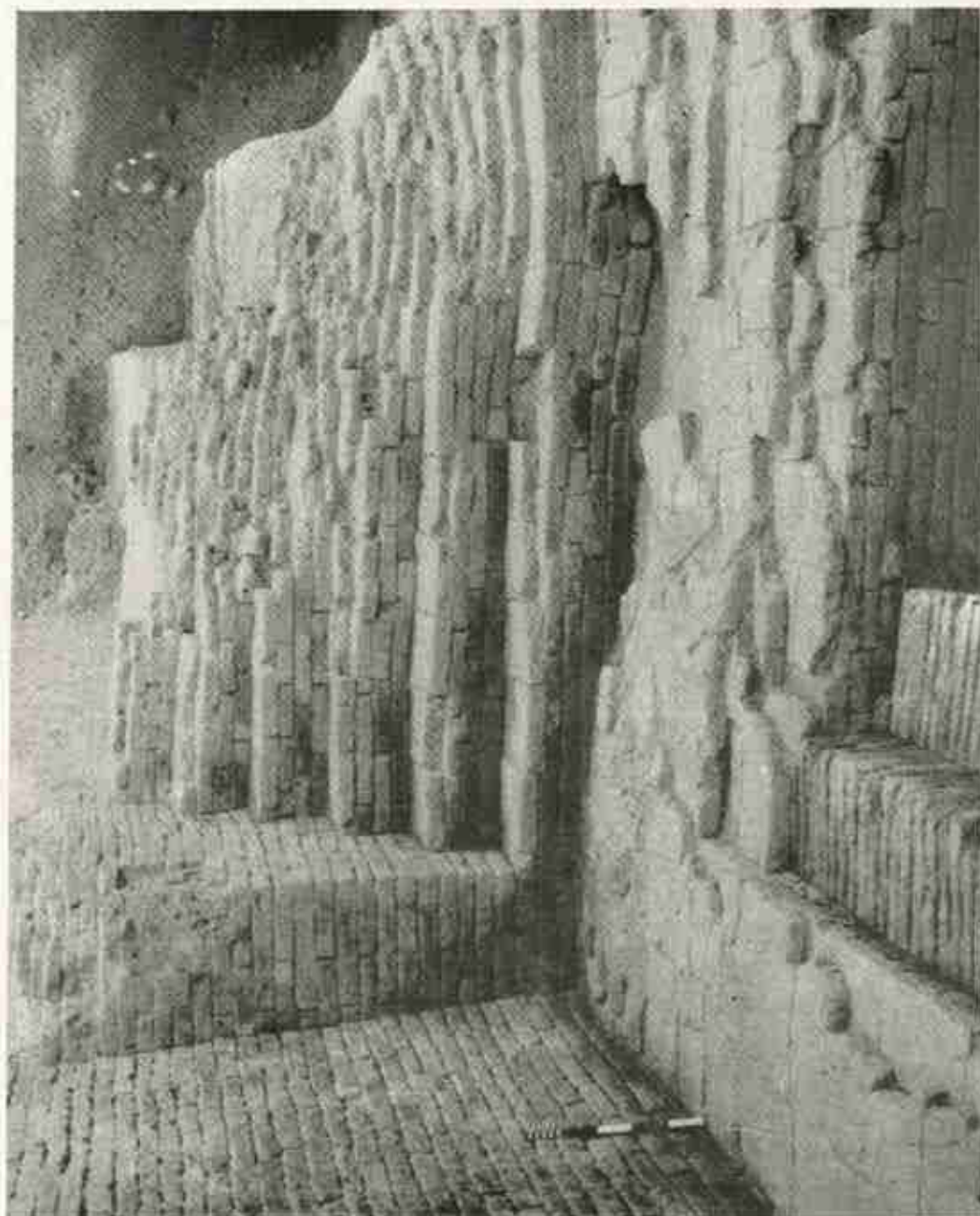
Another view of Brick-on-edge Ramp-1, with the two staircases above it on either side. Looking east.
See pp. 19, 27 and 29



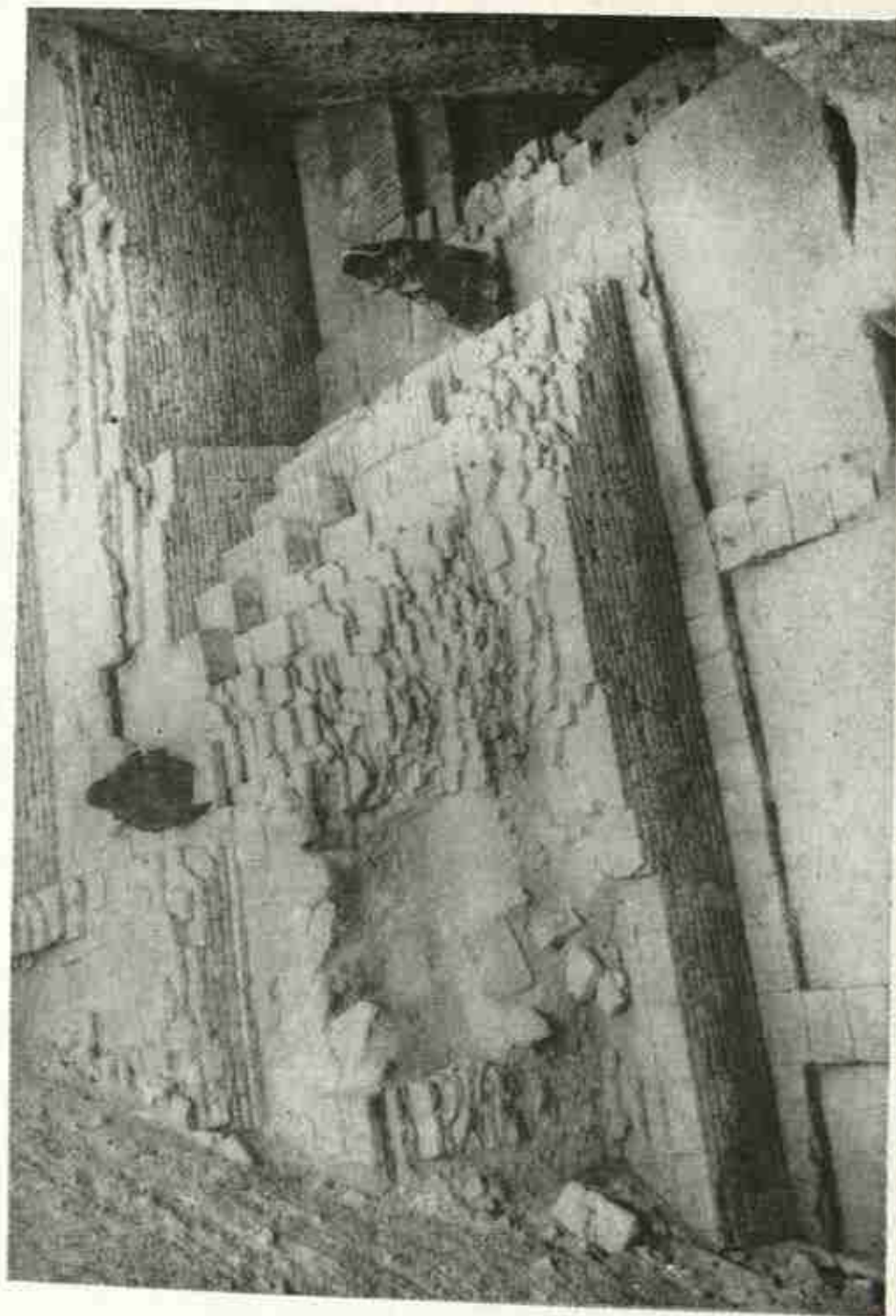
Close-up of Brick-on-edge Ramp-1, with three steps leading down to the bed of Tank B.
In the gap in the Lowest Retaining Wall, wooden rafter may have been inserted.
Looking north-east. See pp. 19, 24, 29-30 and 33



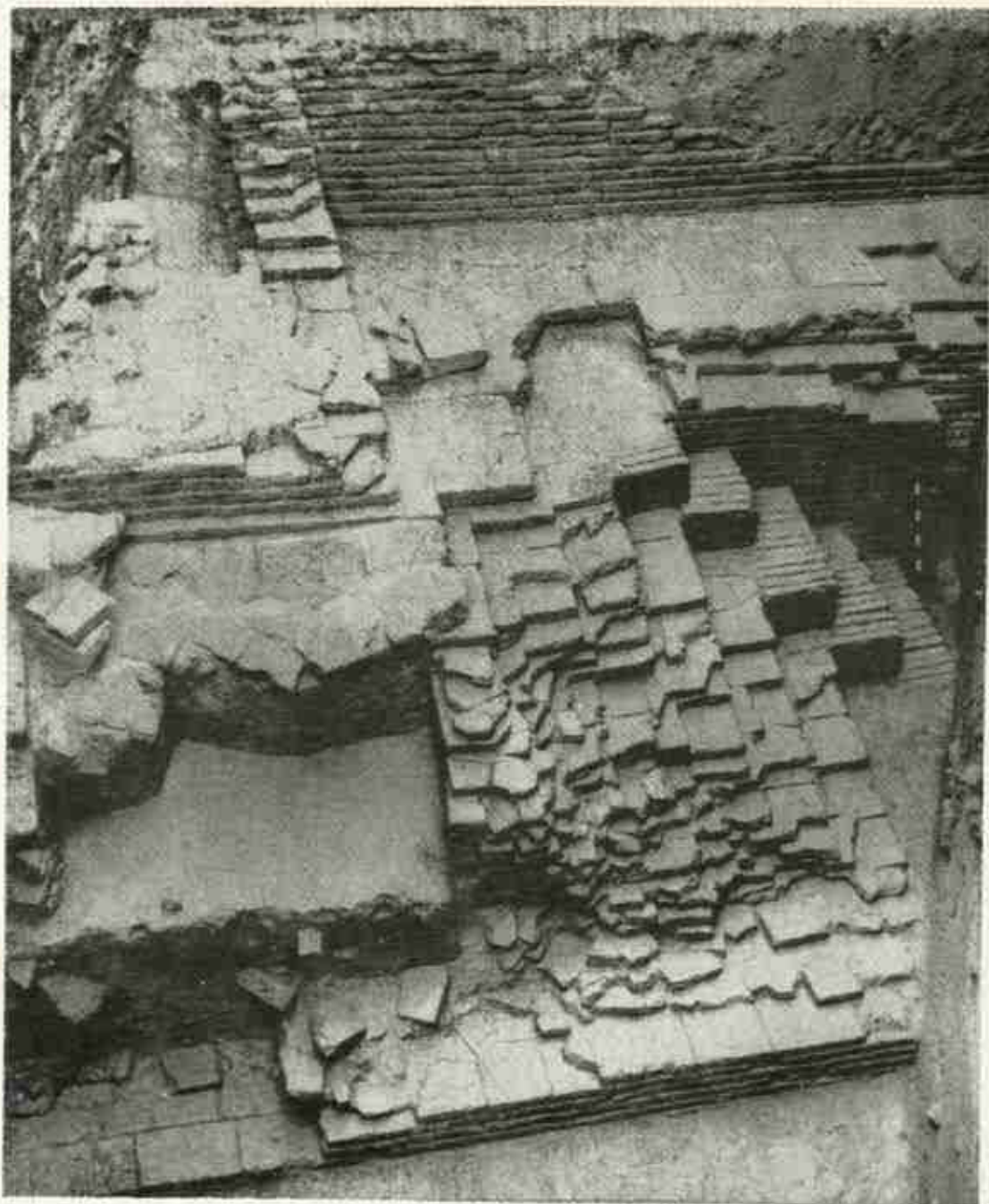
Close-up of the staircase on the northern side of Brick-on-edge Ramp-1.
Looking north. See p. 29



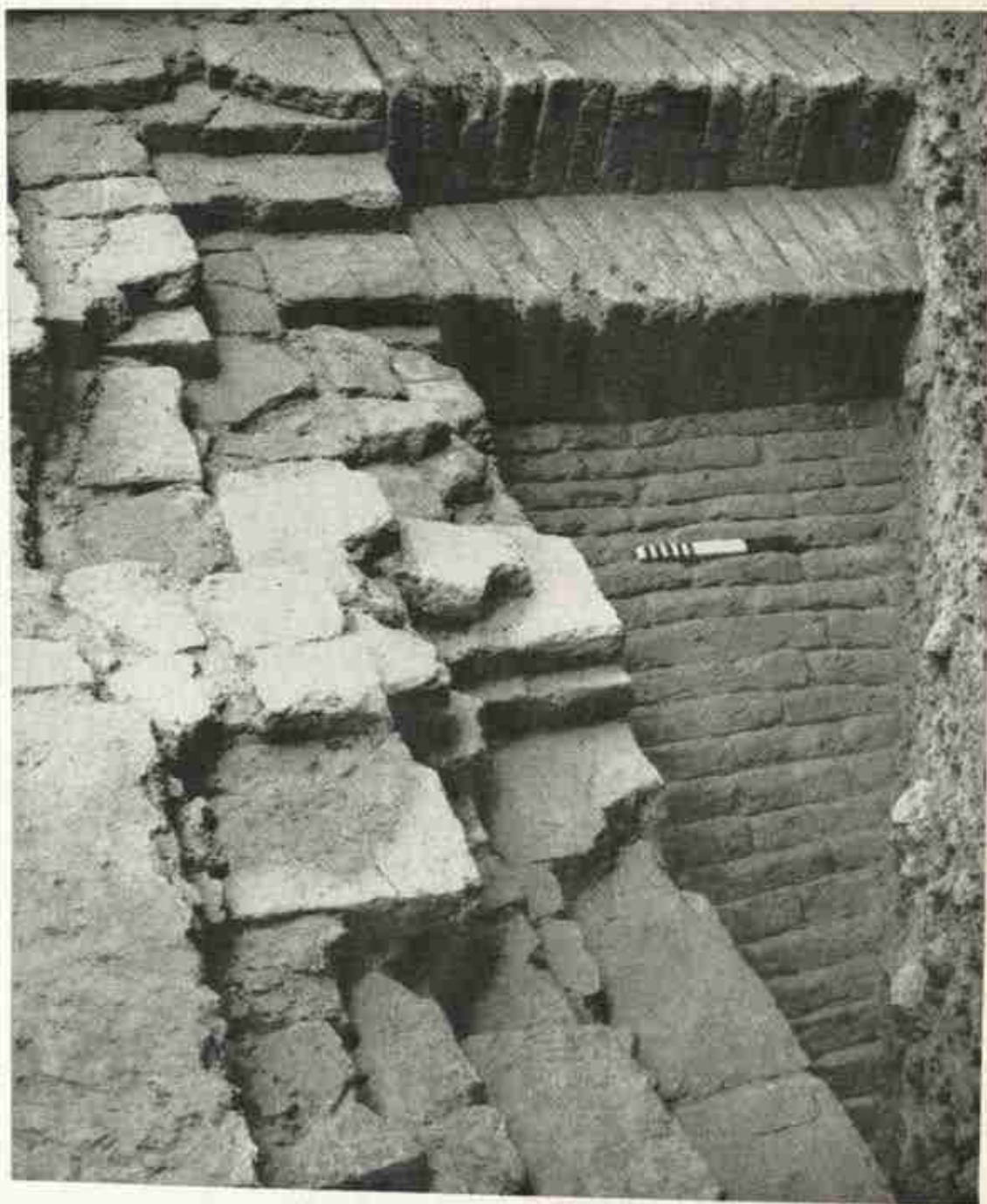
Close-up of the staircase on the southern side of Brick-on-edge Ramp-1, with an adjacent retaining wall on left. Looking south. See p. 29



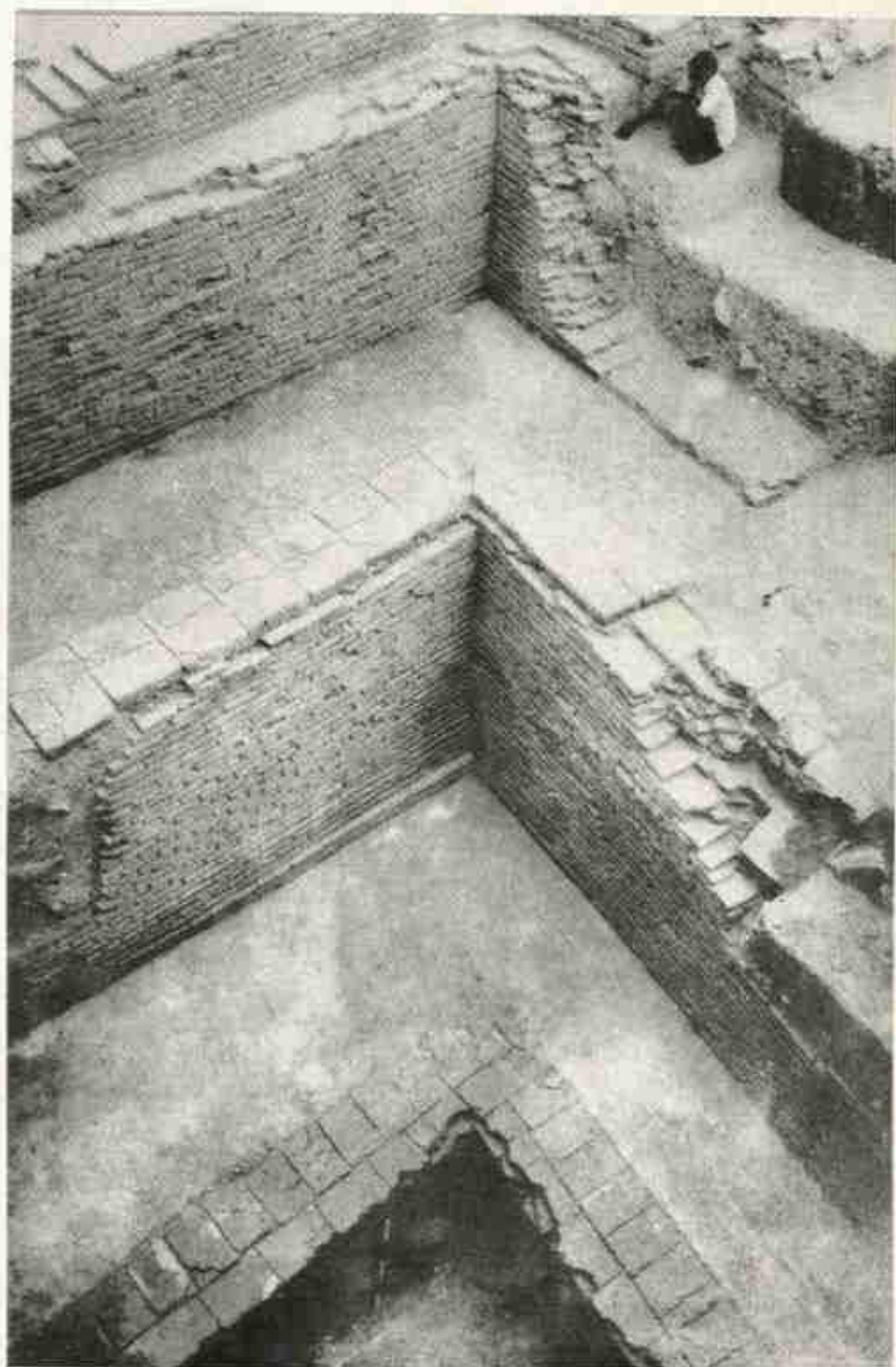
A view of the retaining walls and platforms adjacent to Brick-on-edge Ramp-2 (behind the lower female figure). The platforms were not of solid brick-work but consisted of box-like chambers with earth-filling covered by bricks. Looking north-east. See pp. 19 and 30



Another view of a part of what is seen on pl. XXXVI. See pp. 19 and 30



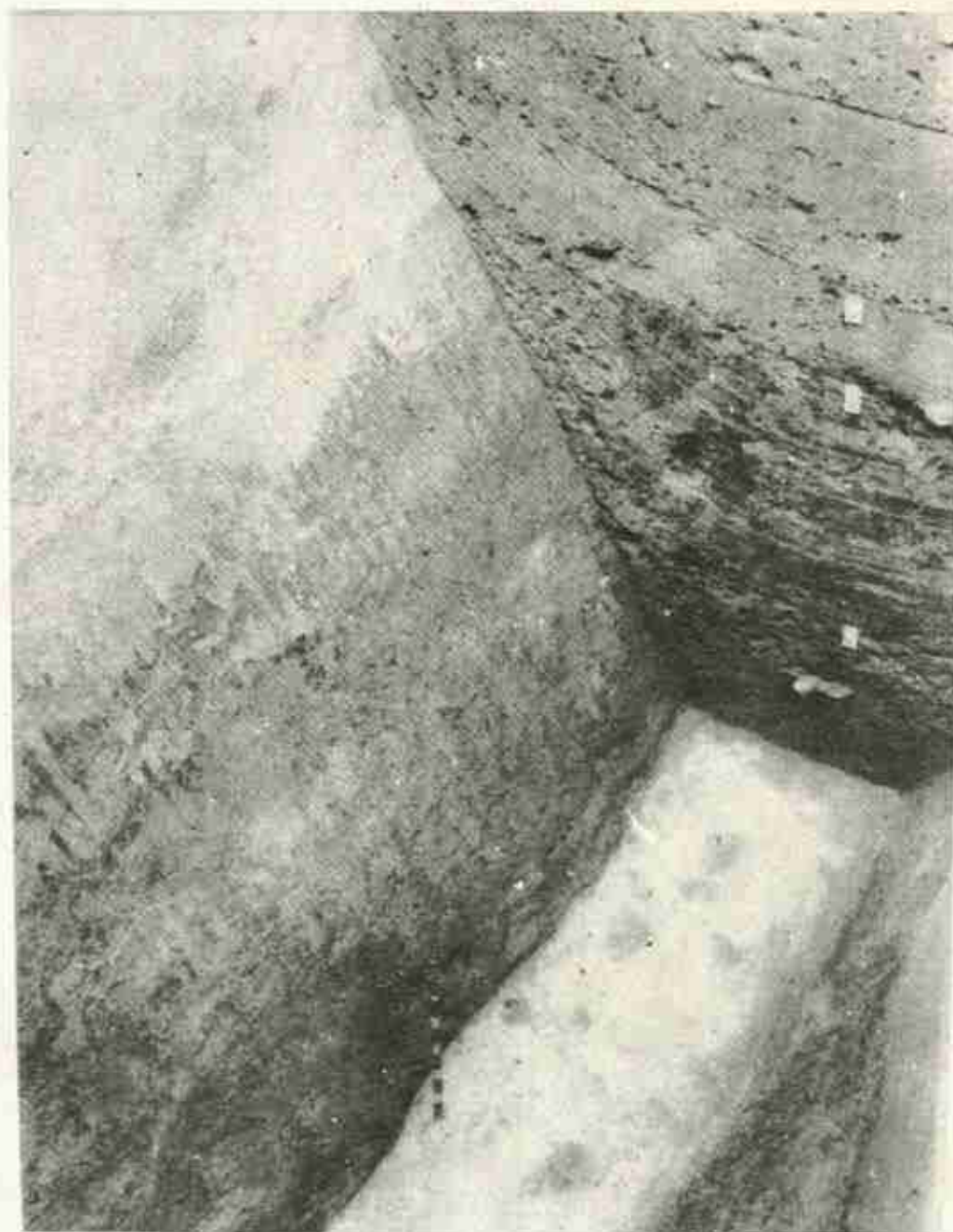
A closer view of a part of Brick-on-edge Ramp-2. See pp. 19 and 30



A view of the four retaining walls at the south-eastern corner of Tank B. Looking east.
See pp. 17, 30-31 and 50



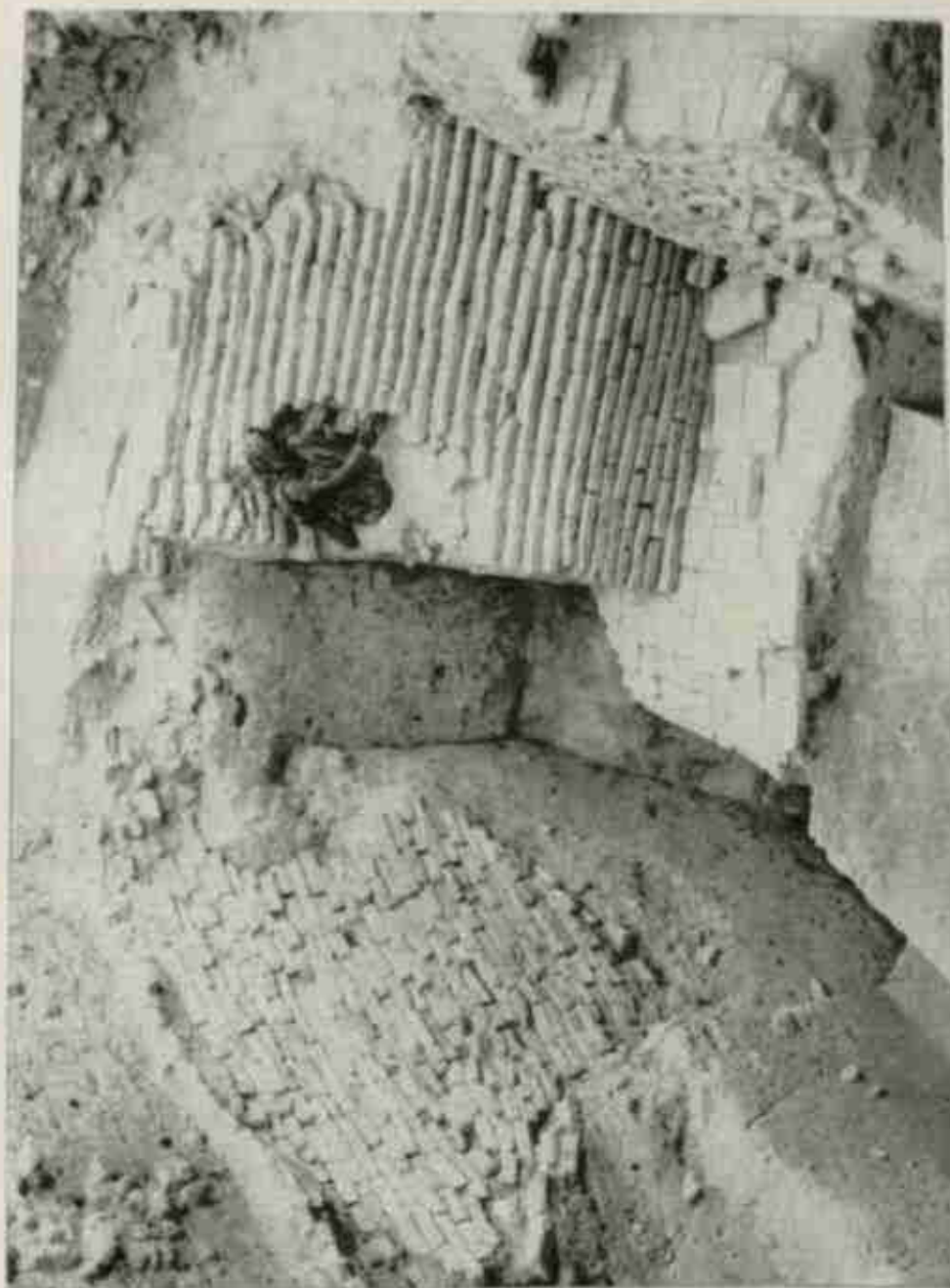
Another view of the four retaining walls, with a channel underlying the Second Retaining Wall (counted from the bottom). See pp. 30-31 and 50



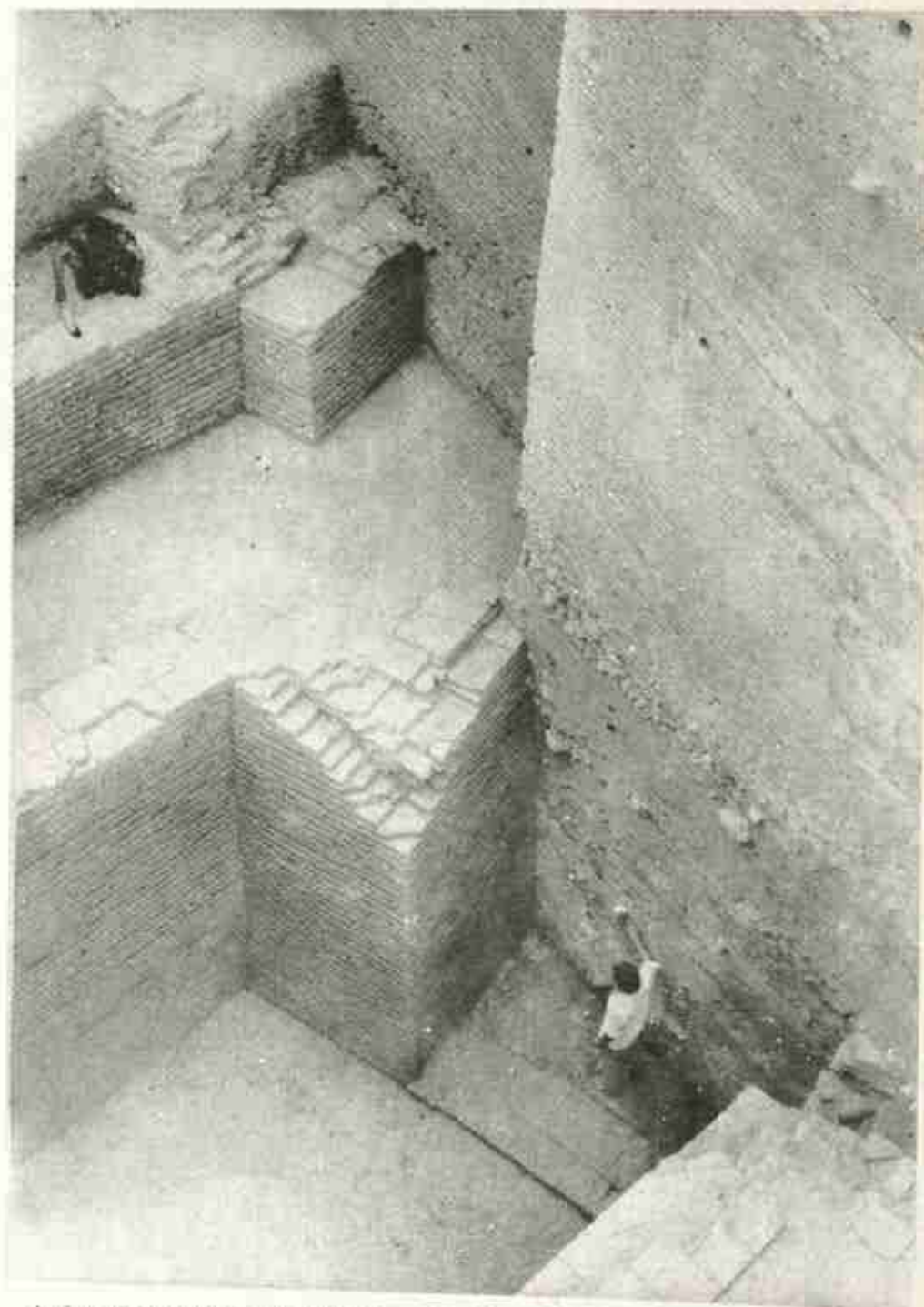
A view of the same channel outside the south-eastern corner of Tank B. Looking west.
See p. 31



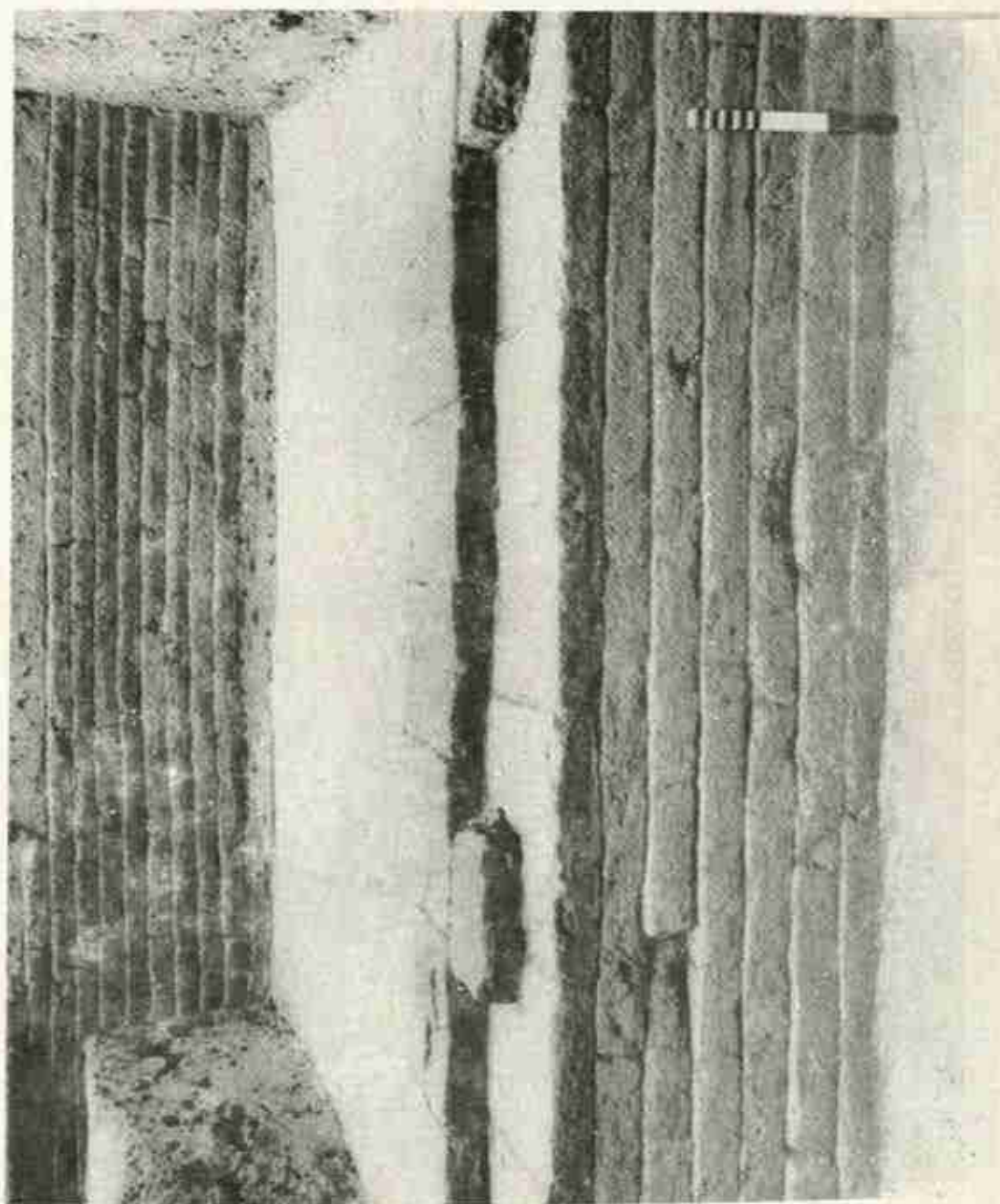
An opposite view of the channel seen on pl. XL.I. Higher up, a few structures were noticed which, however, could not be fully exposed. Looking east. See p. 31



A closer view of the structures seen on pl. XLII. Looking south. See p. 31



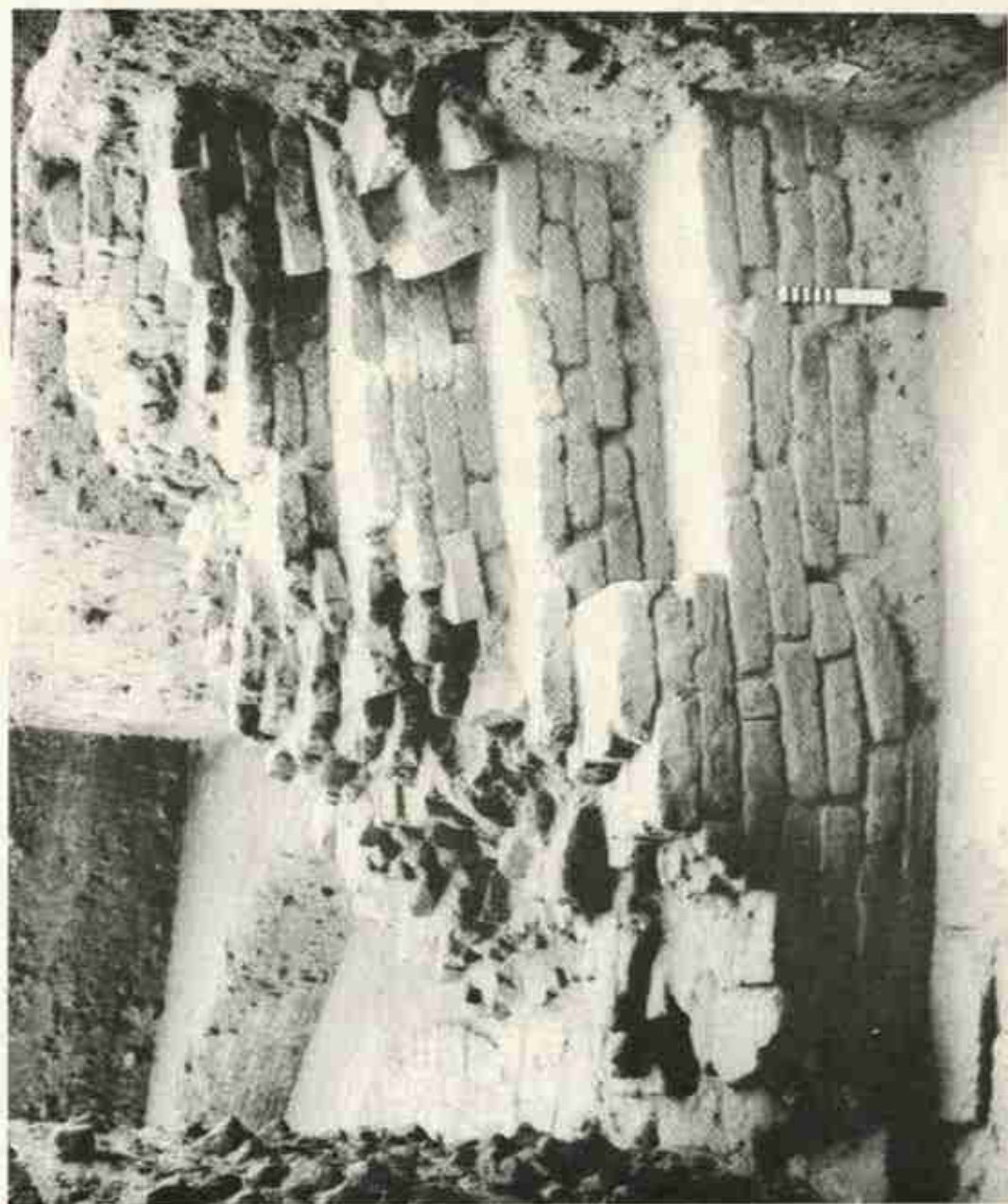
A view of the northern end of Interconnecting Channel-2 (foreground) where it takes off from the south-western end of Tank B. Looking north. See pp. 19 and 31



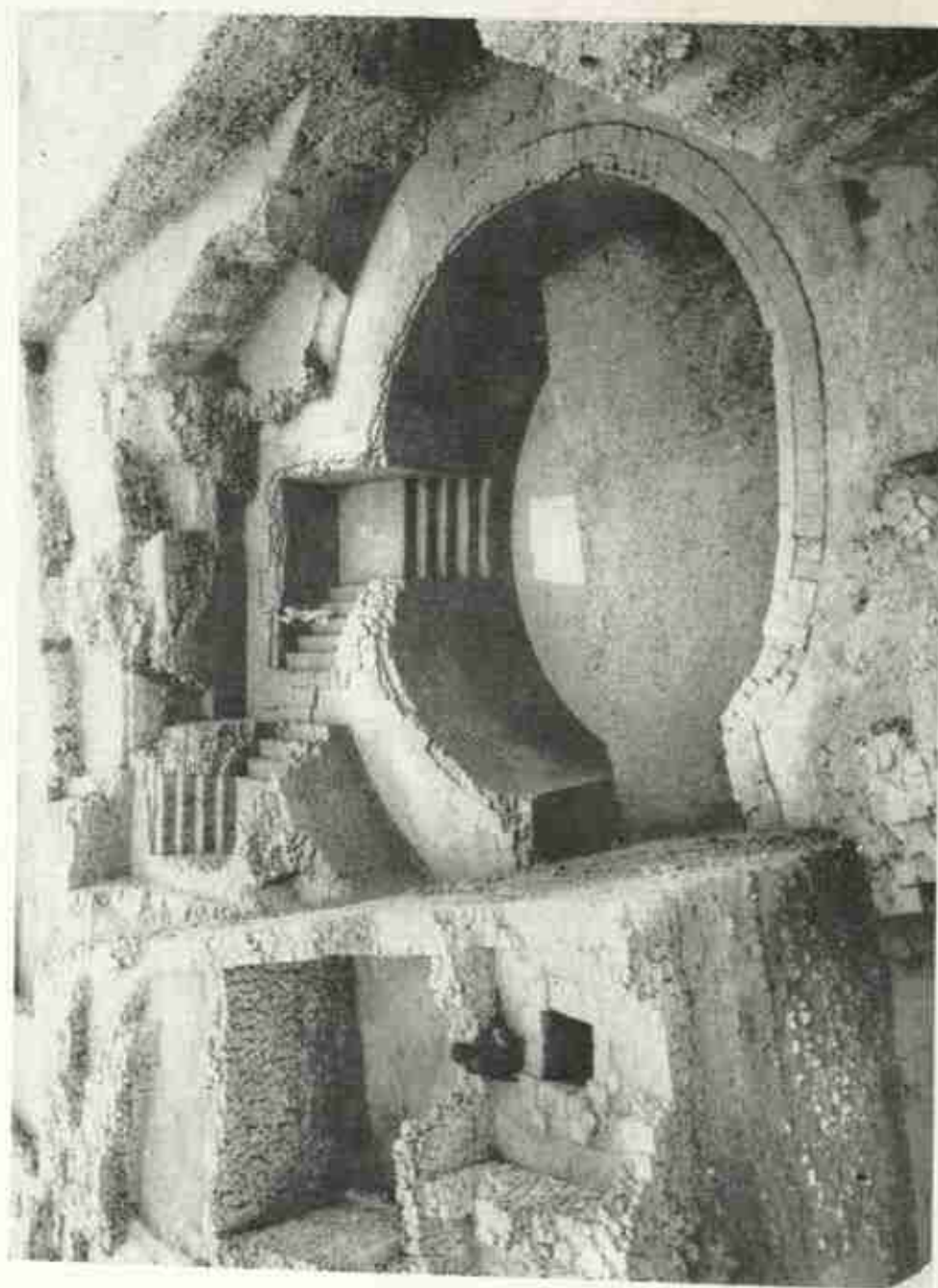
A view of the two retaining walls on the western side of Interconnecting Channel-2. Looking west. See p. 32



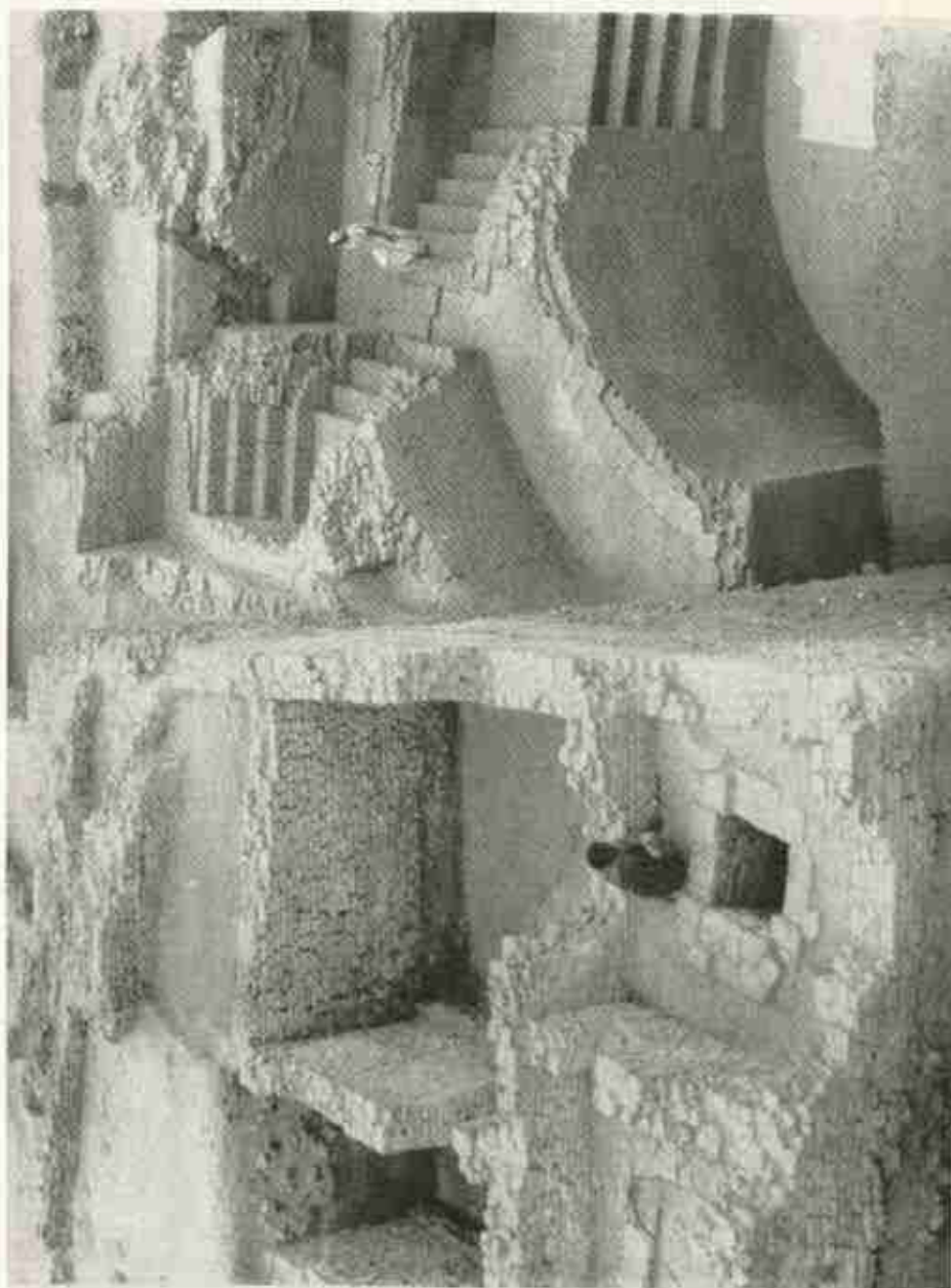
A view of the staircase located about the middle of the western retaining walls of Interconnecting Channel-2. Looking north. See pp. 19 and 32



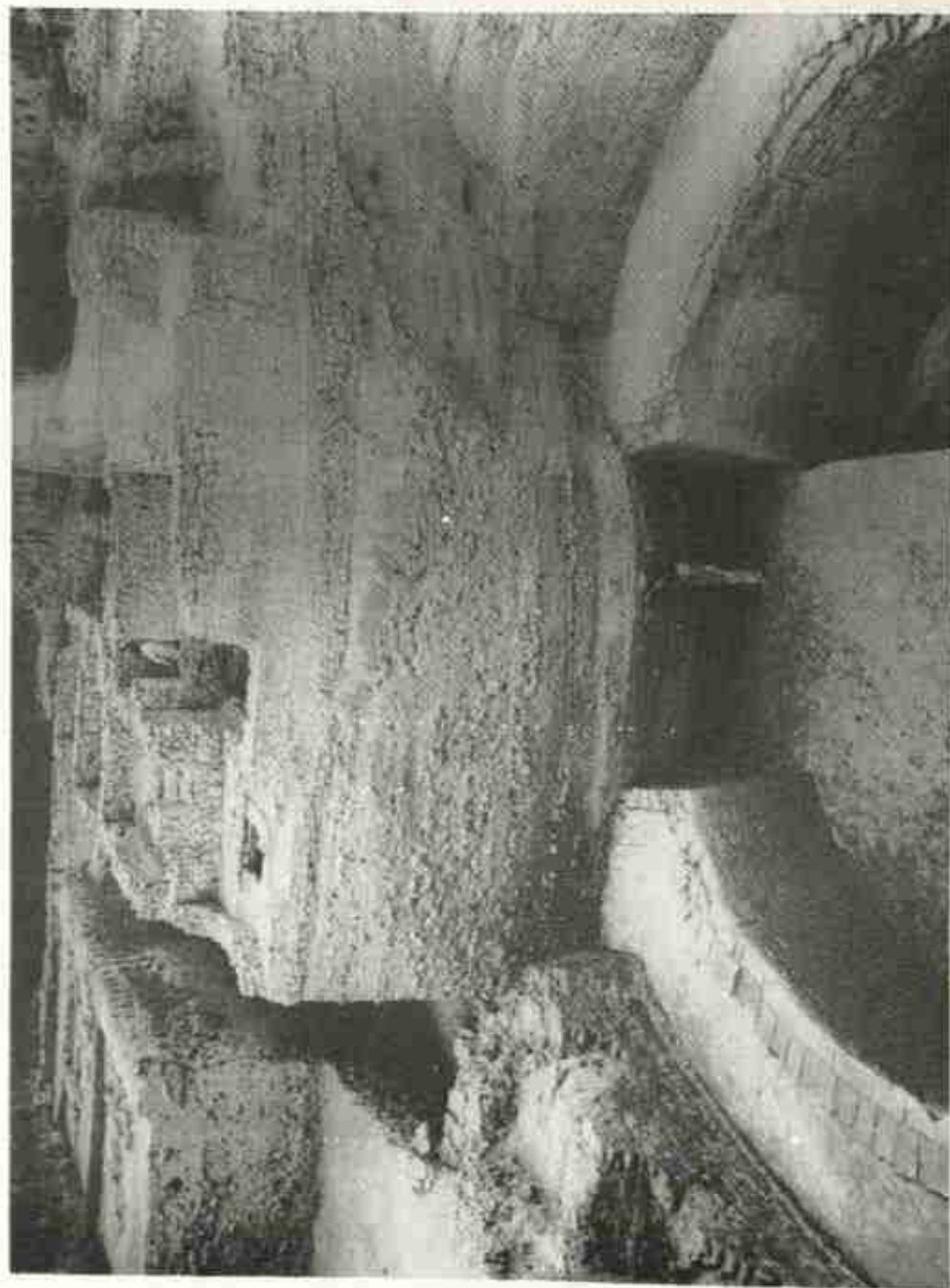
Another staircase located at the south-western end of Interconnecting Channel-2. Looking south. See pp. 19 and 32.



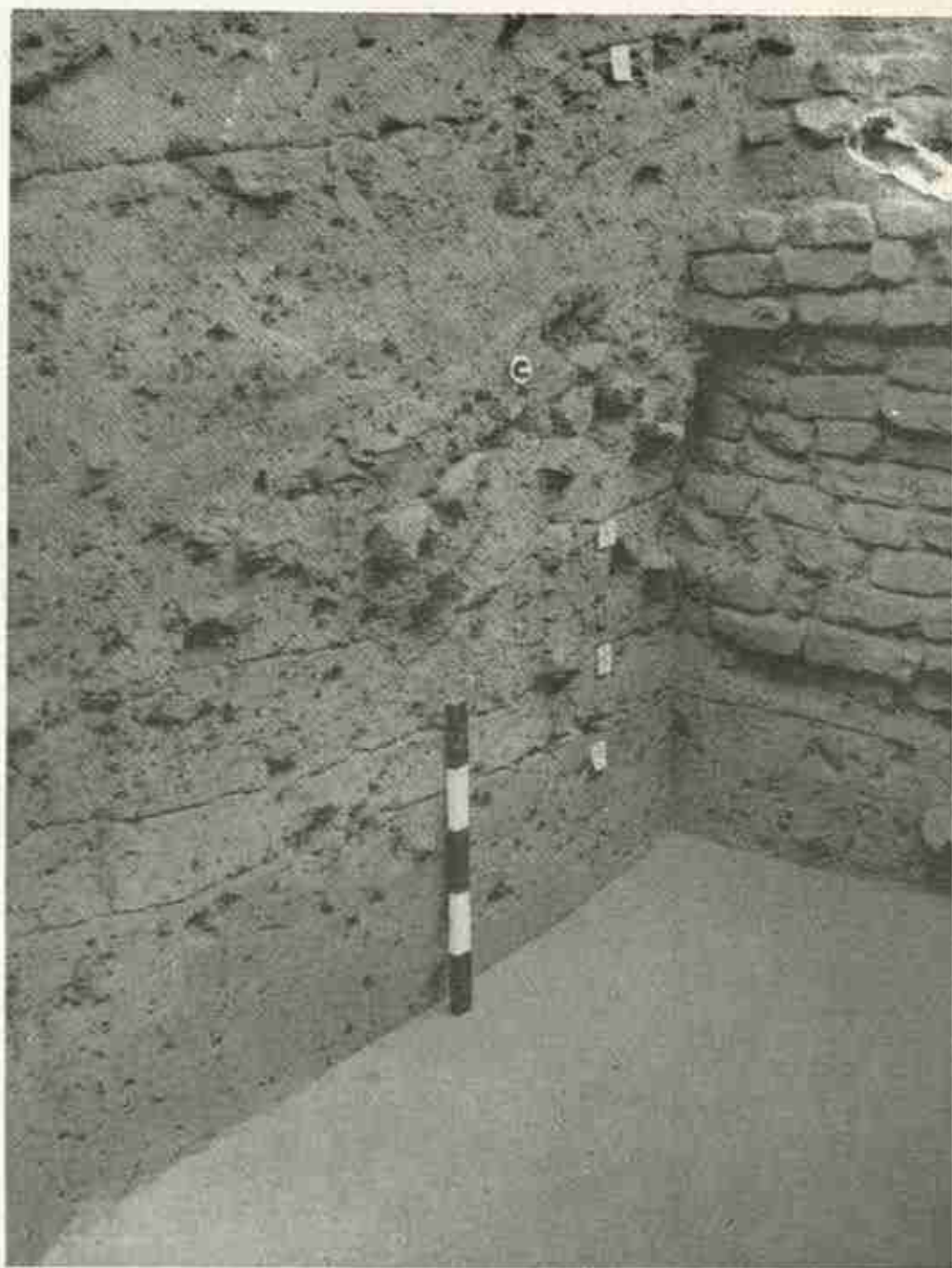
An overall view of Tank C, with subsequent late Kushan structures on left. Looking east. See pp. 32-33, 44 and 108



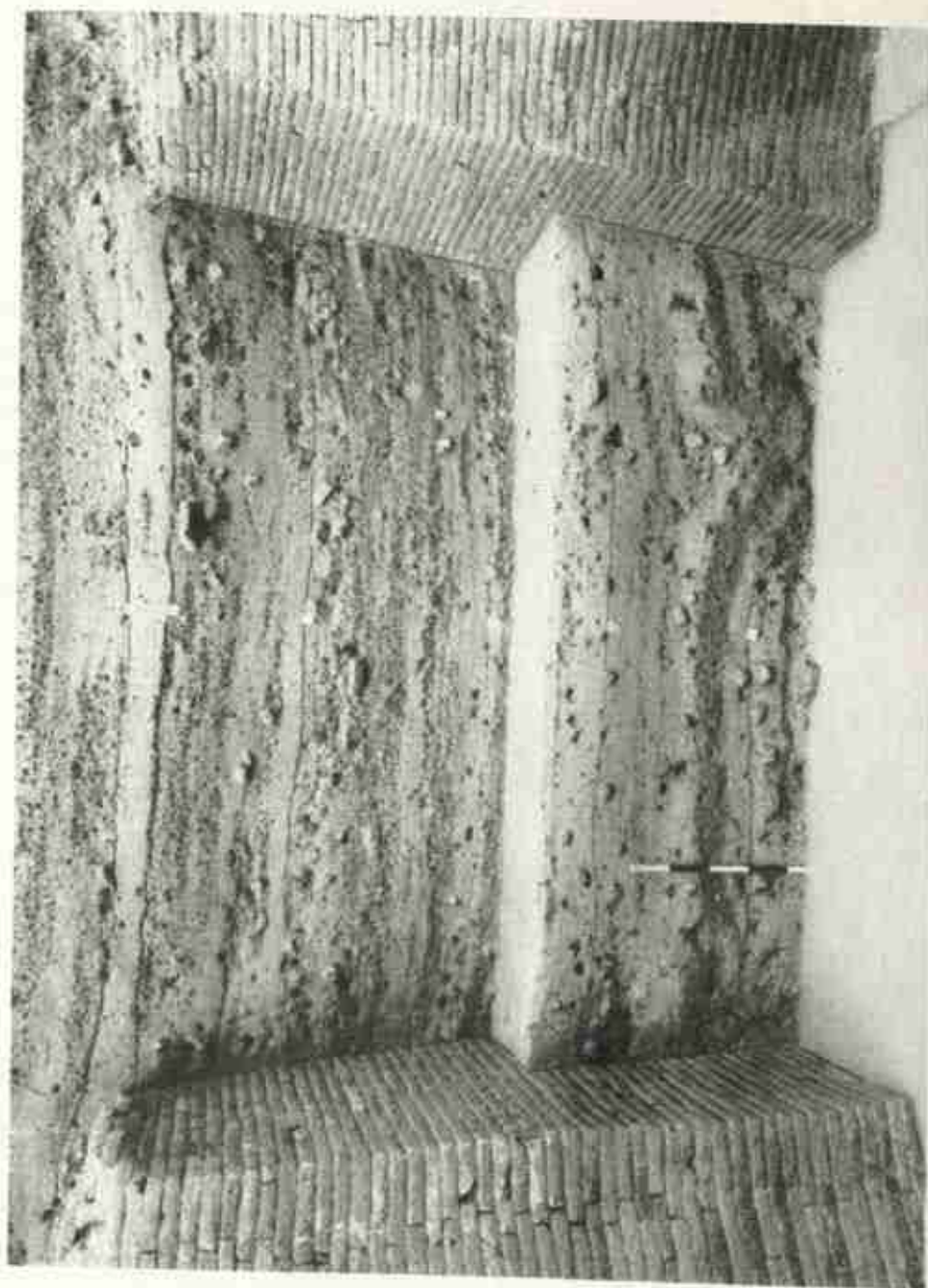
A closer view of the north-eastern part of Tank C and of the subsequent late Kushan structures. Looking east.
See pp. 19, 32-33, 44 and 108



The figure in the lower part stands at the southern end of Interconnecting Channel-2, where it joins the northern part of Tank C. The section in front shows layers of silt and debris and subsequent late Kushan structures.
Looking north. See pp. 32, 50 and 108



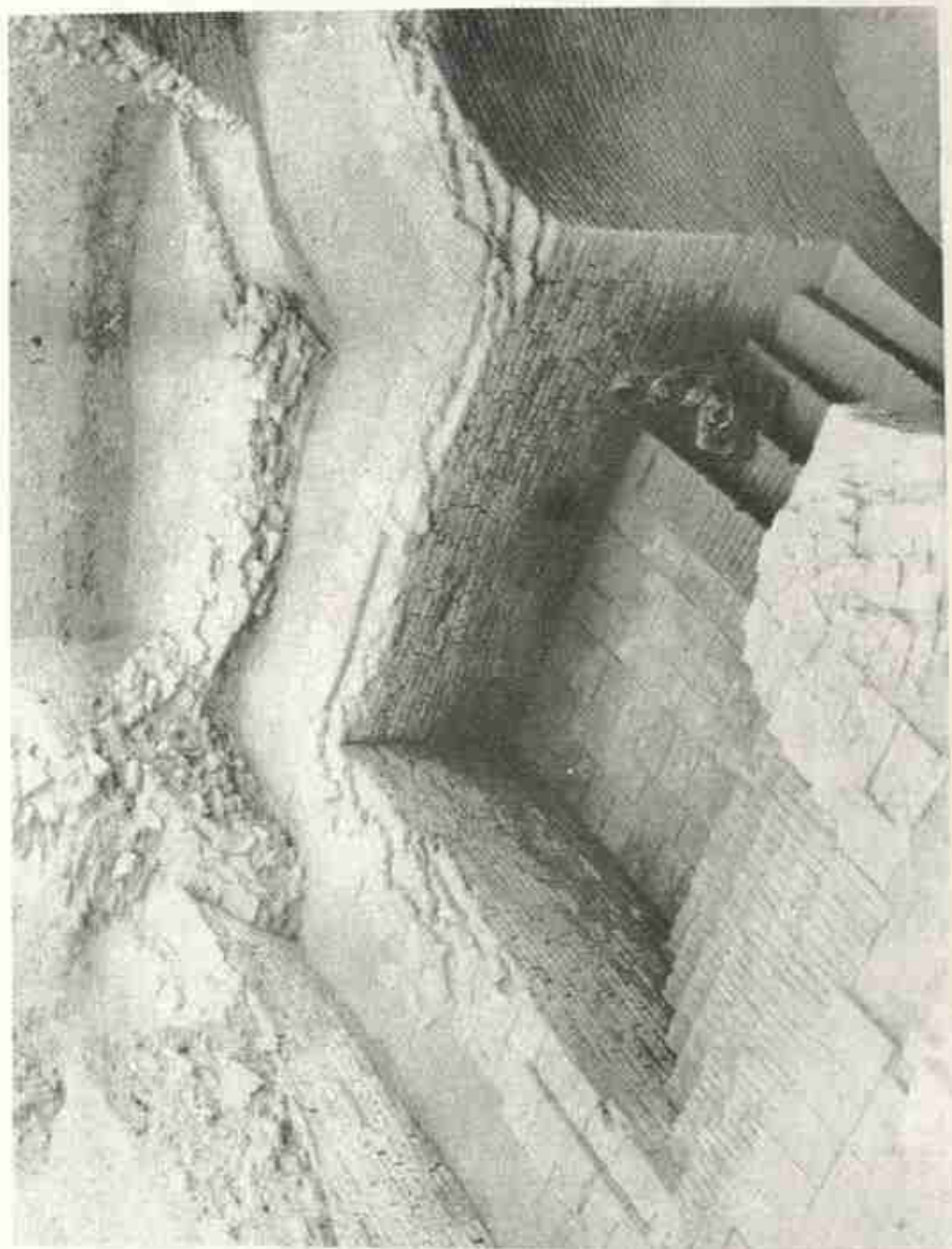
Close-up of structural sub-phases of the late Kushan period. The white circular label marked C represents the position of the gold coin of 'Vāsudeva III' (pl. LXXXI C).
See pp. 44 and 62



Close-up of layers of silt with debris, at the junction of Interconnecting Channel-2 and Tank C. Looking north.
See pp. 32 and 50



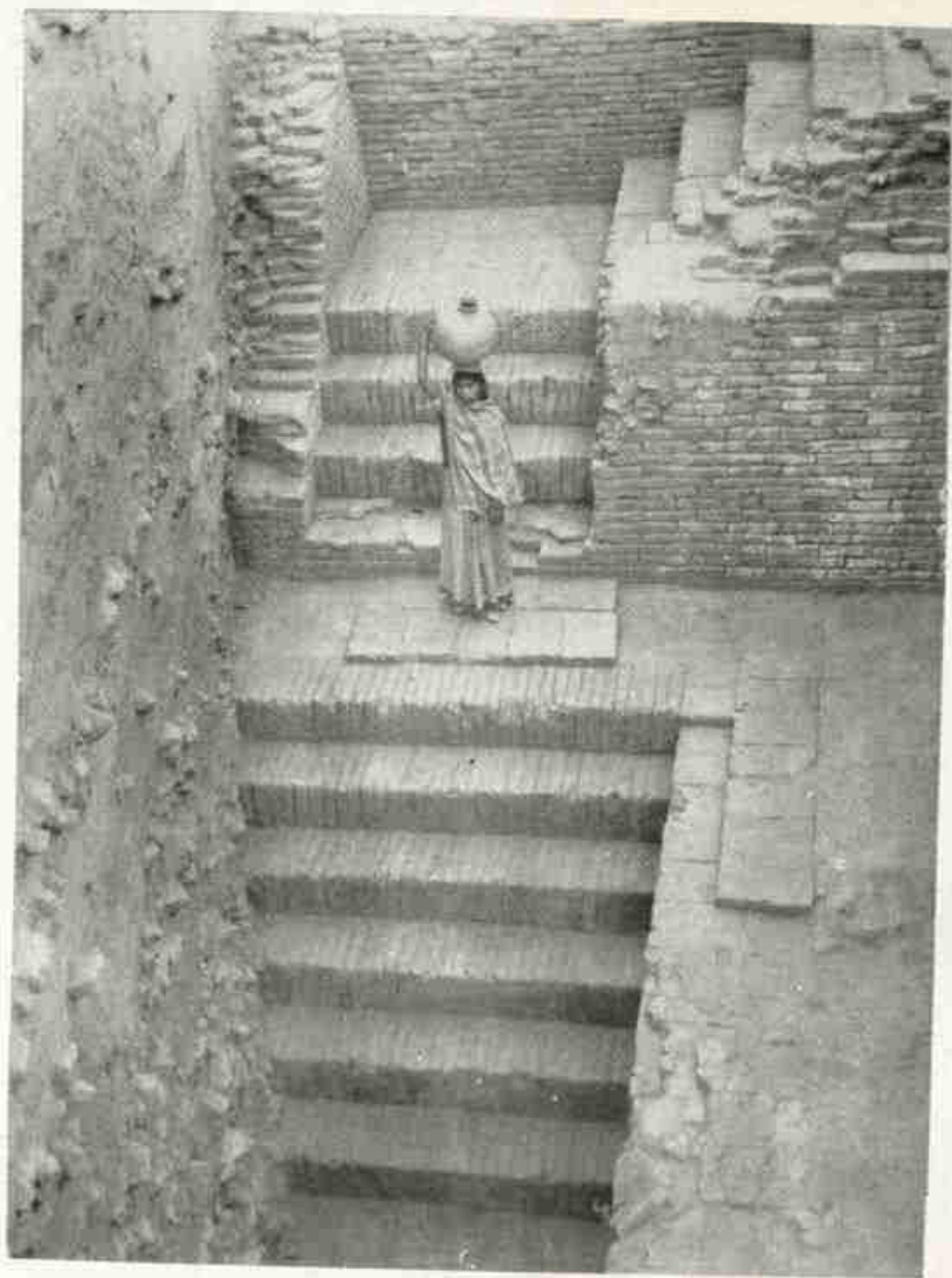
A view of the staircase on the eastern side of Tank C. Looking north. See pp. 19 and 33



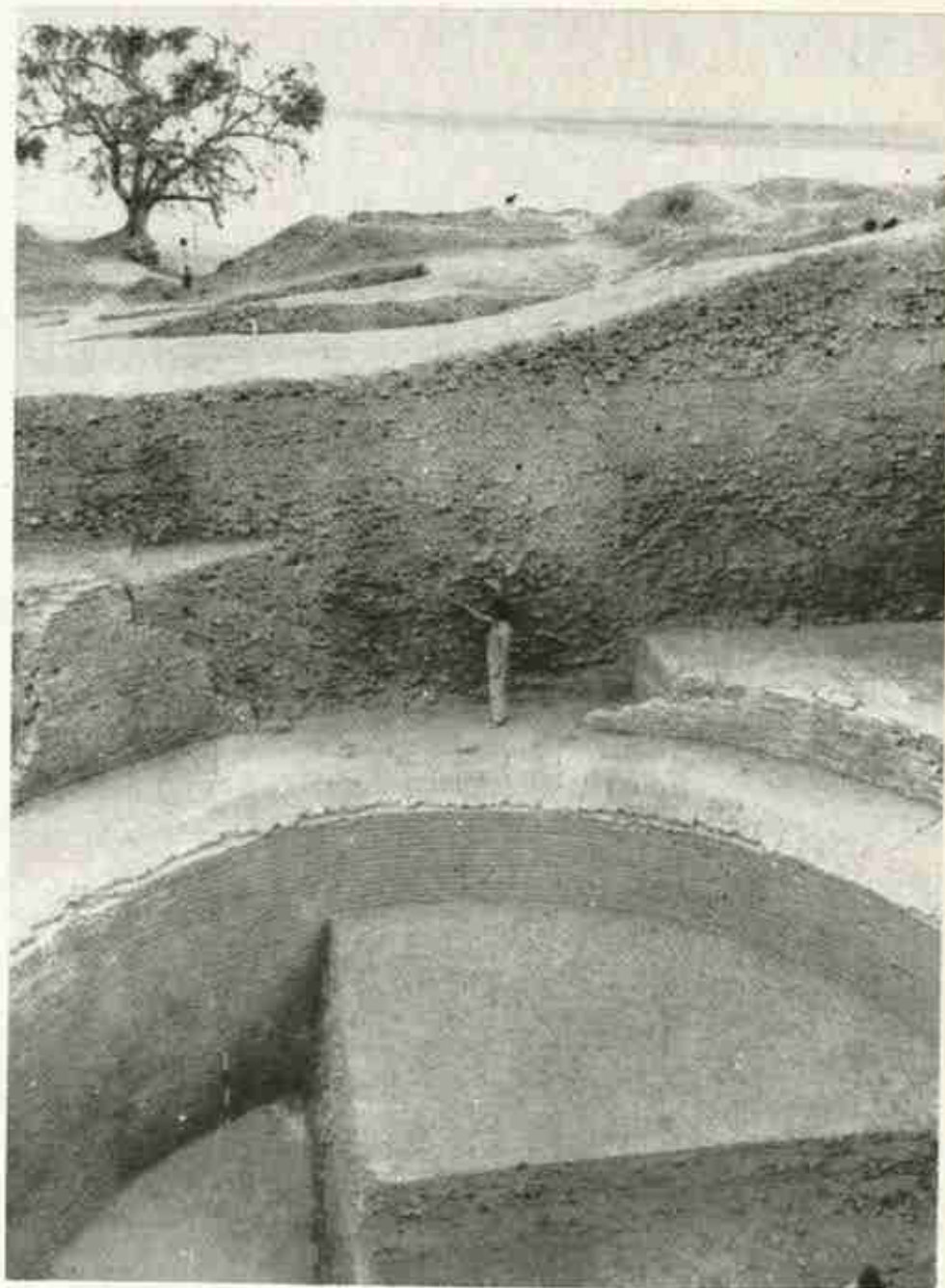
A closer view of the lower part of the staircase with a little bit of Tank C in right foreground. Looking south-east.
See pp. 19 and 33



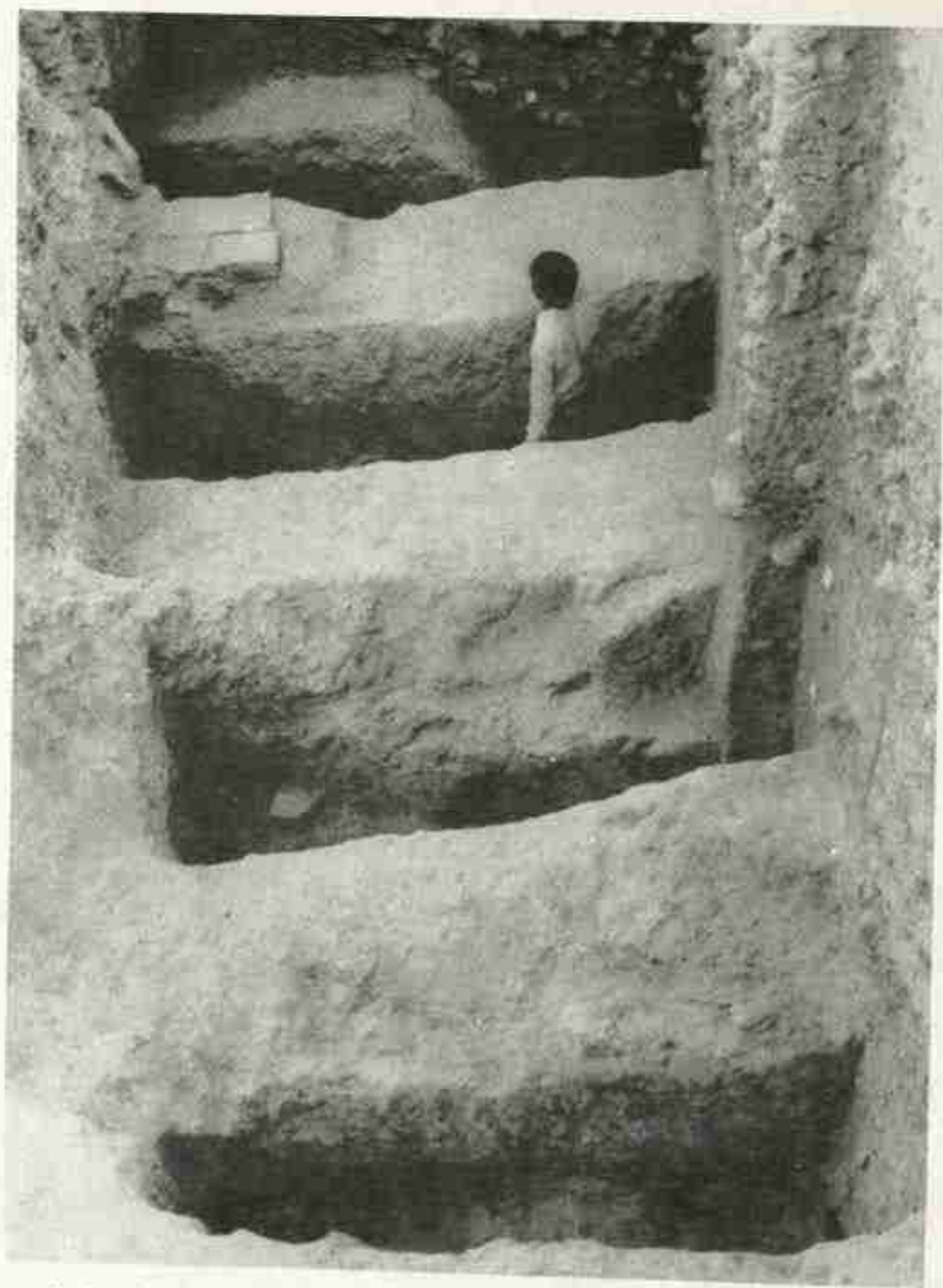
A part of the staircase with badly damaged Second and Third Retaining Walls in background. Looking east.
See p. 33



A closer view of the staircase, showing the brick-on-edge treads and the overlying debris in the section on the left. Looking north. See pp. 33 and 108



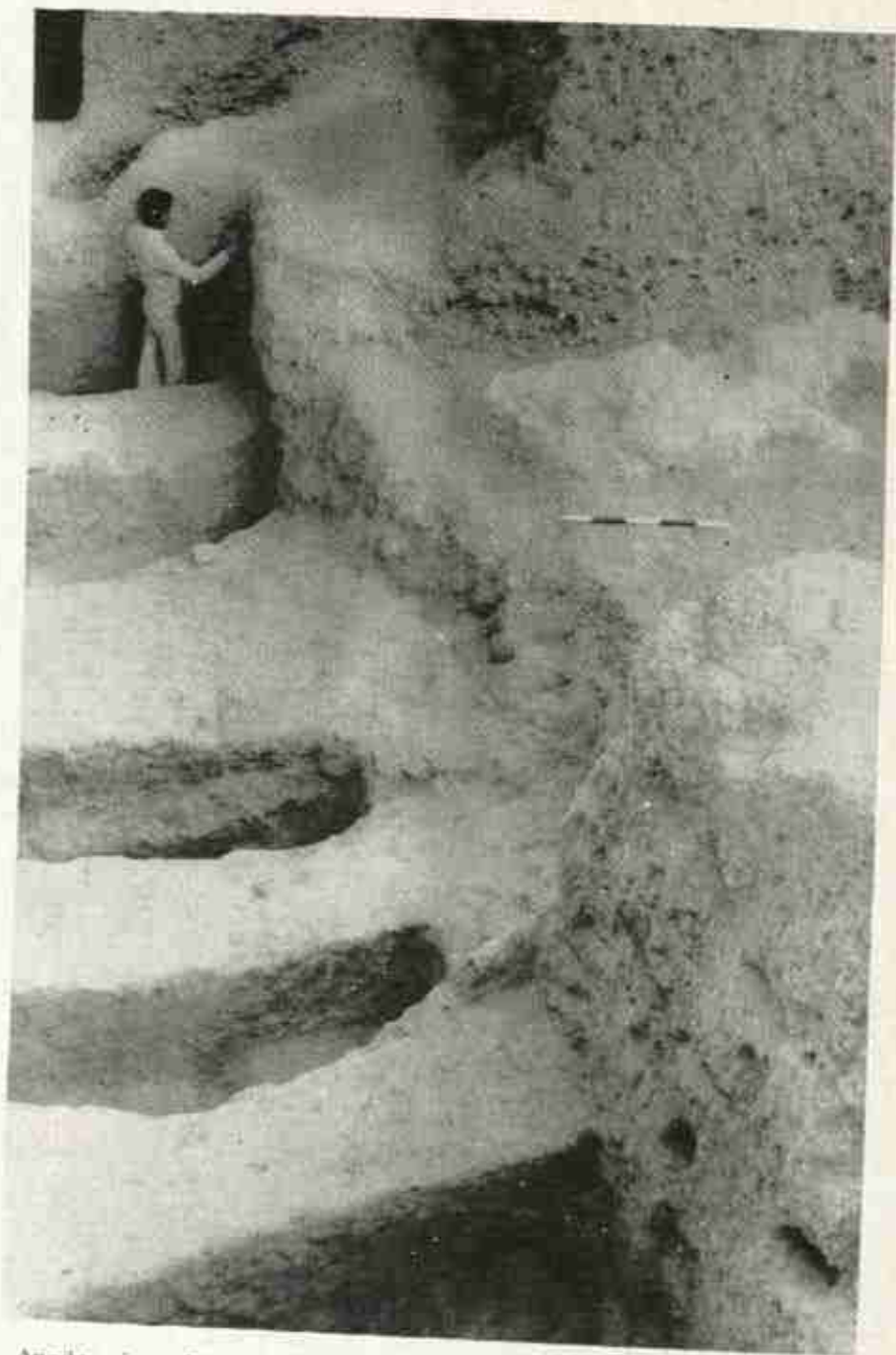
A view of the southern part of Tank C. While the Lowest Retaining Wall was intact, the one above it was found damaged. Probably over here lay the exit. In the background may be seen the Gangā to which the excess water went back.
Looking south. See pp. 20, 33 and 35



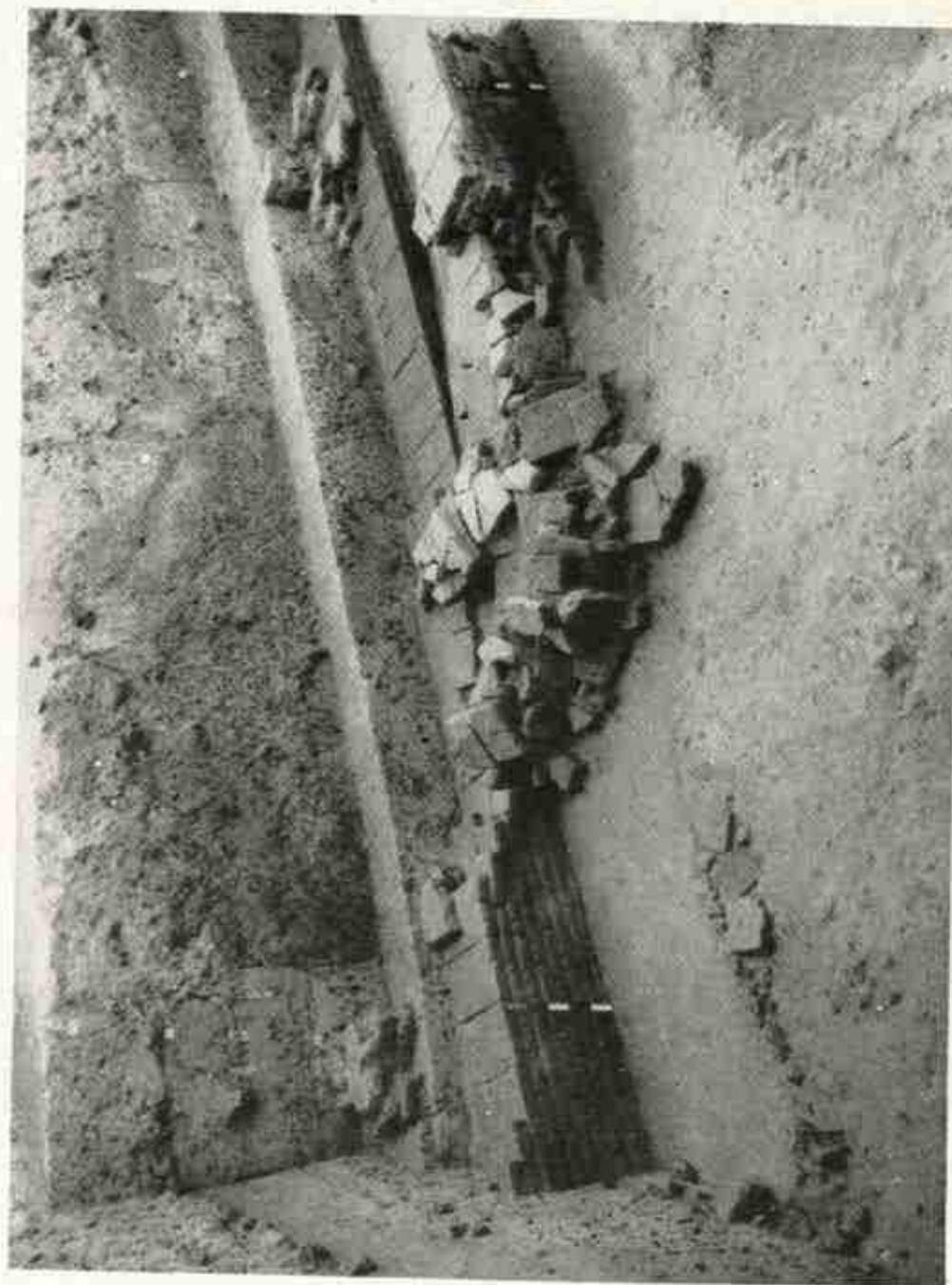
A view of the Spill Channels. The figure stands in Channel-5 between which and Channel 6 some brick-work may also be seen. Looking west.
See pp. 20 and 35



Another view of the same Spill Channels. The figure points to the mass of natural soil left undug. The water, however, was allowed to pass from in front of only a couple of the Channels, to reach the Crest (with scale). Looking west. See pp. 20, 35 and 36



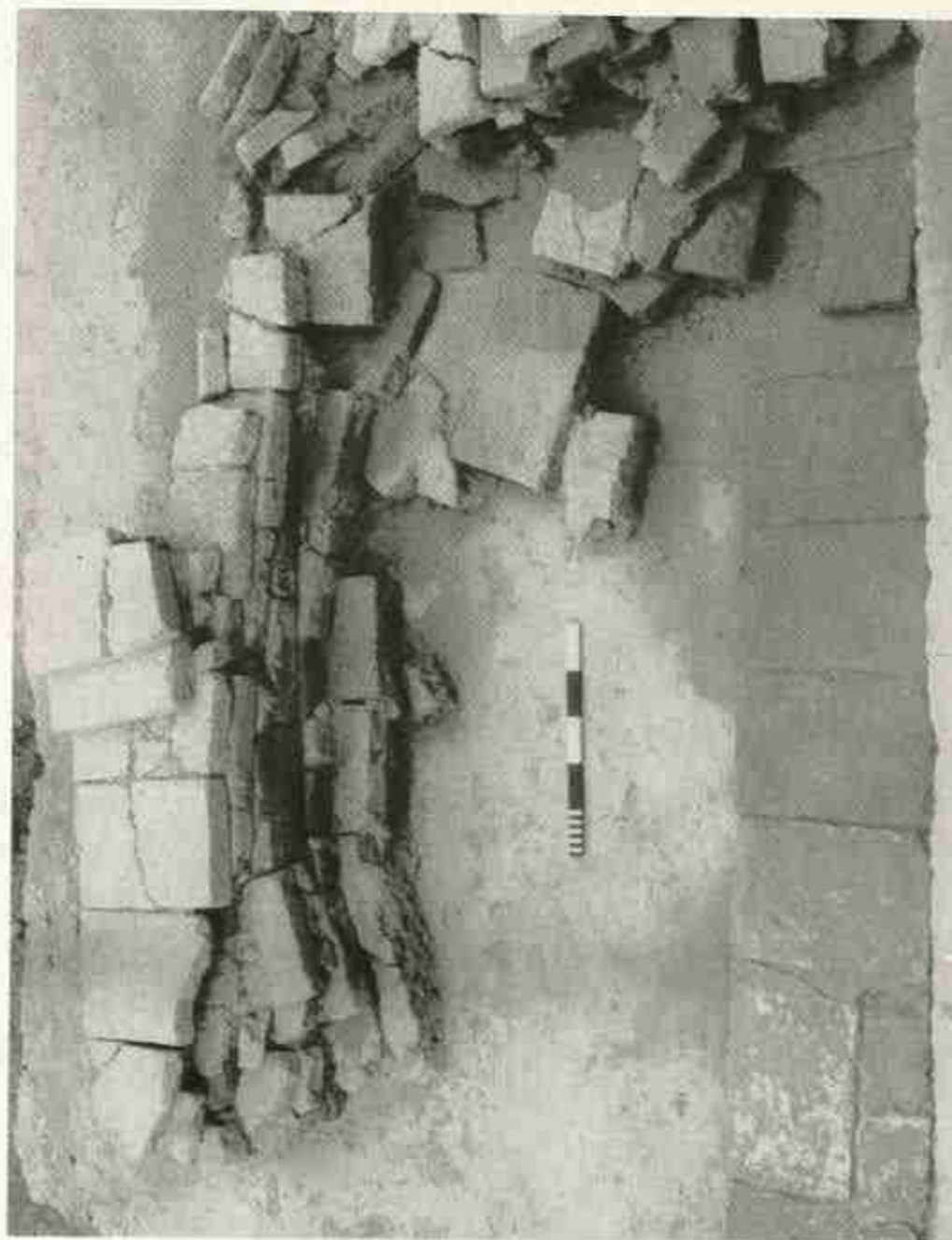
Another view of the Spill Channels. The figure stands in Channel 1, while the scale rests on the Crest. Looking east. See pp. 20 and 35-36



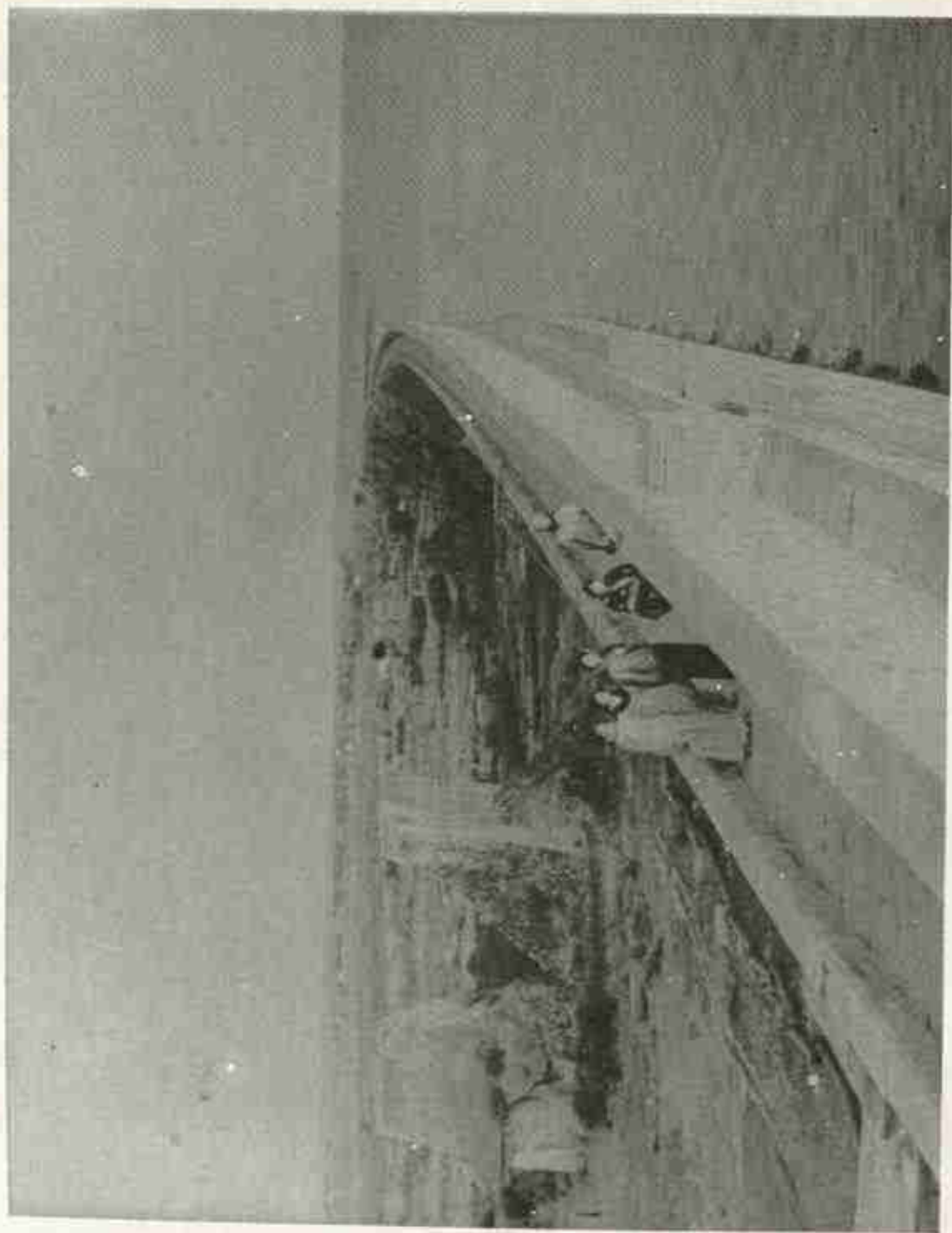
A view of the Second Retaining Wall on the western side of Tank B. The scale on left stands against the wall *in situ*, while that on right is placed against displaced portion. In the middle are collapsed bricks. Looking west.
See pp. 20 and 36



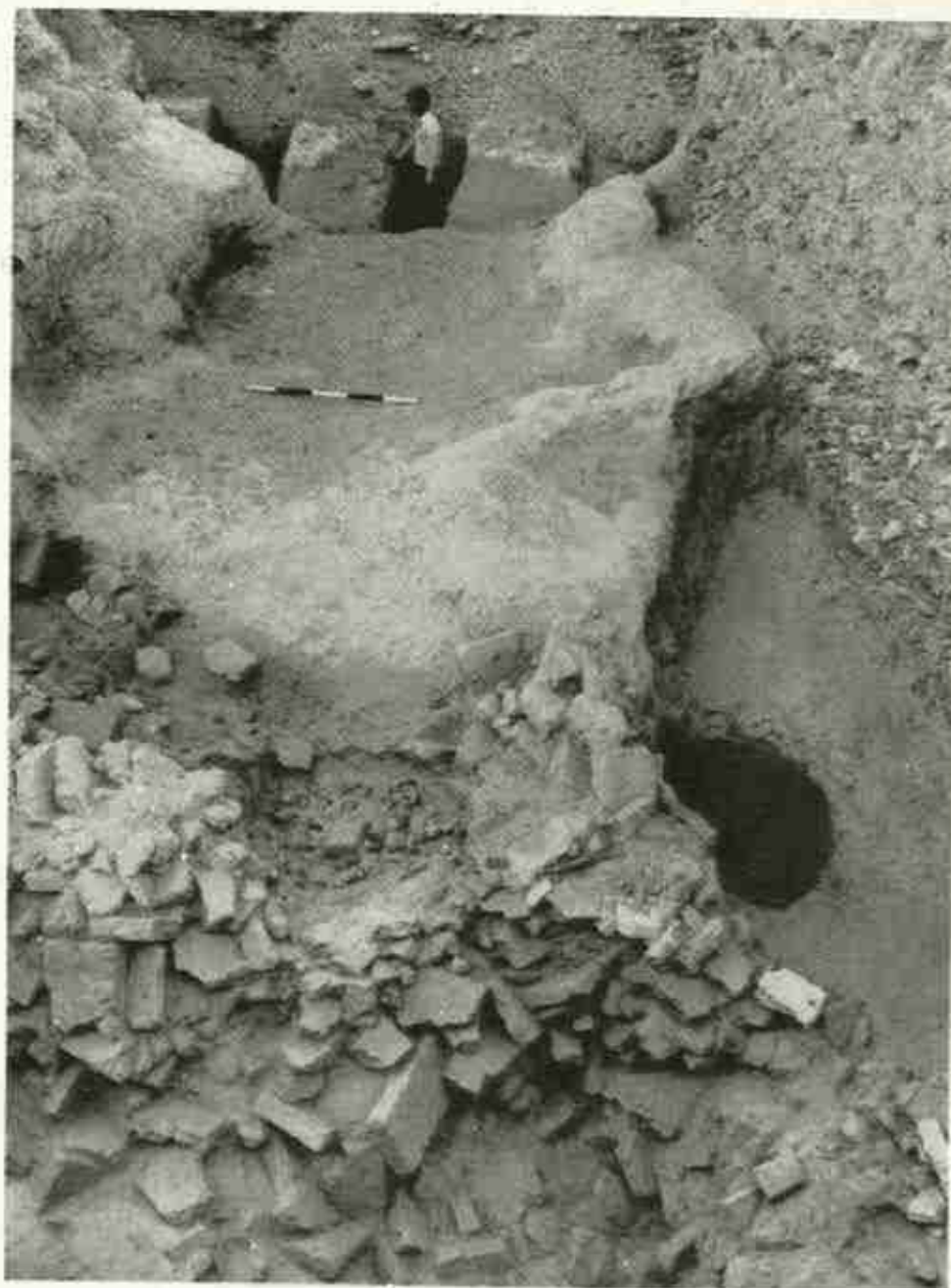
Another view of the dislodged wall. The scale in the background rests against the silt which got deposited after the desertion of the Brick Tank. Overlying the silt is a portion of the Mud Bund. Looking south. See pp. 20 and 36



Close-up of the dislodged wall. Looking east. See pp. 20 and 36



A view of Tighra Dam near Gwalior. On middle left are seen some of the washed away parts of the earlier wall.
See pp. 20 and 37



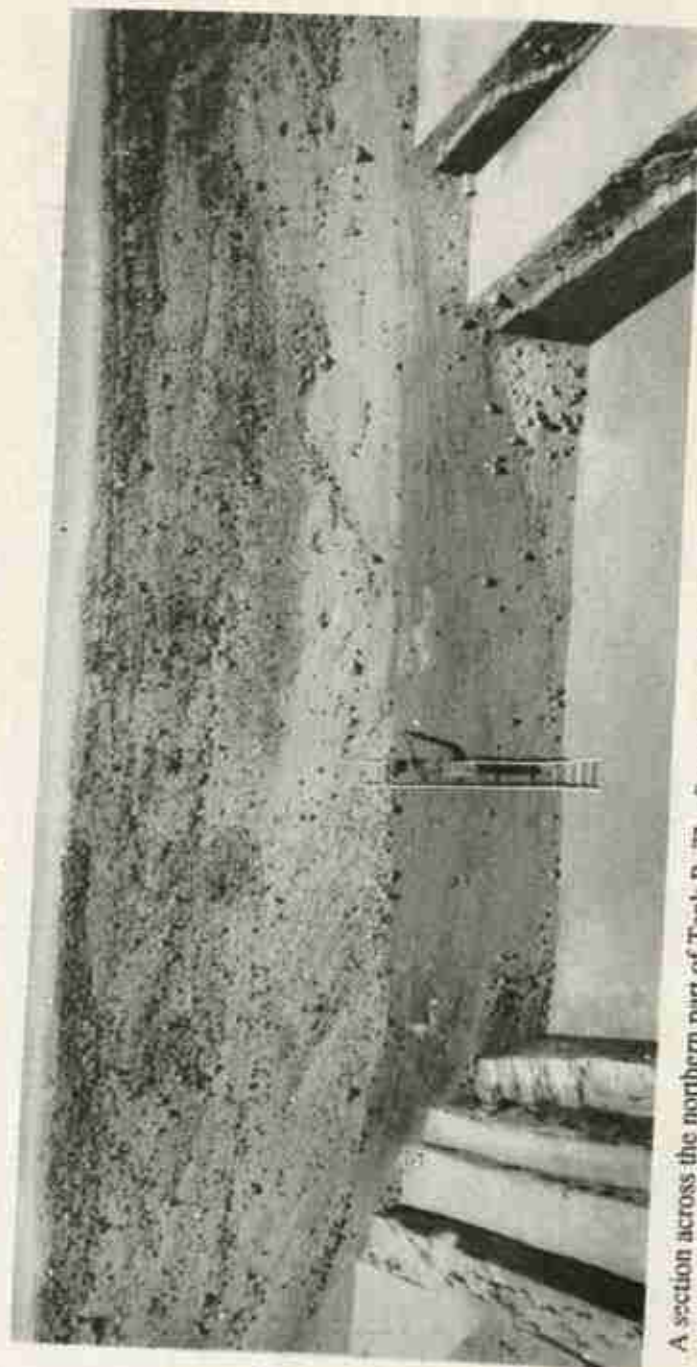
A view showing the Spill Channels (background, with human figure), Crest (middle distance, scale) and mass of debris (foreground). Buried within the debris, was found the skeleton of a child. Looking north. See pp. 20 and 37



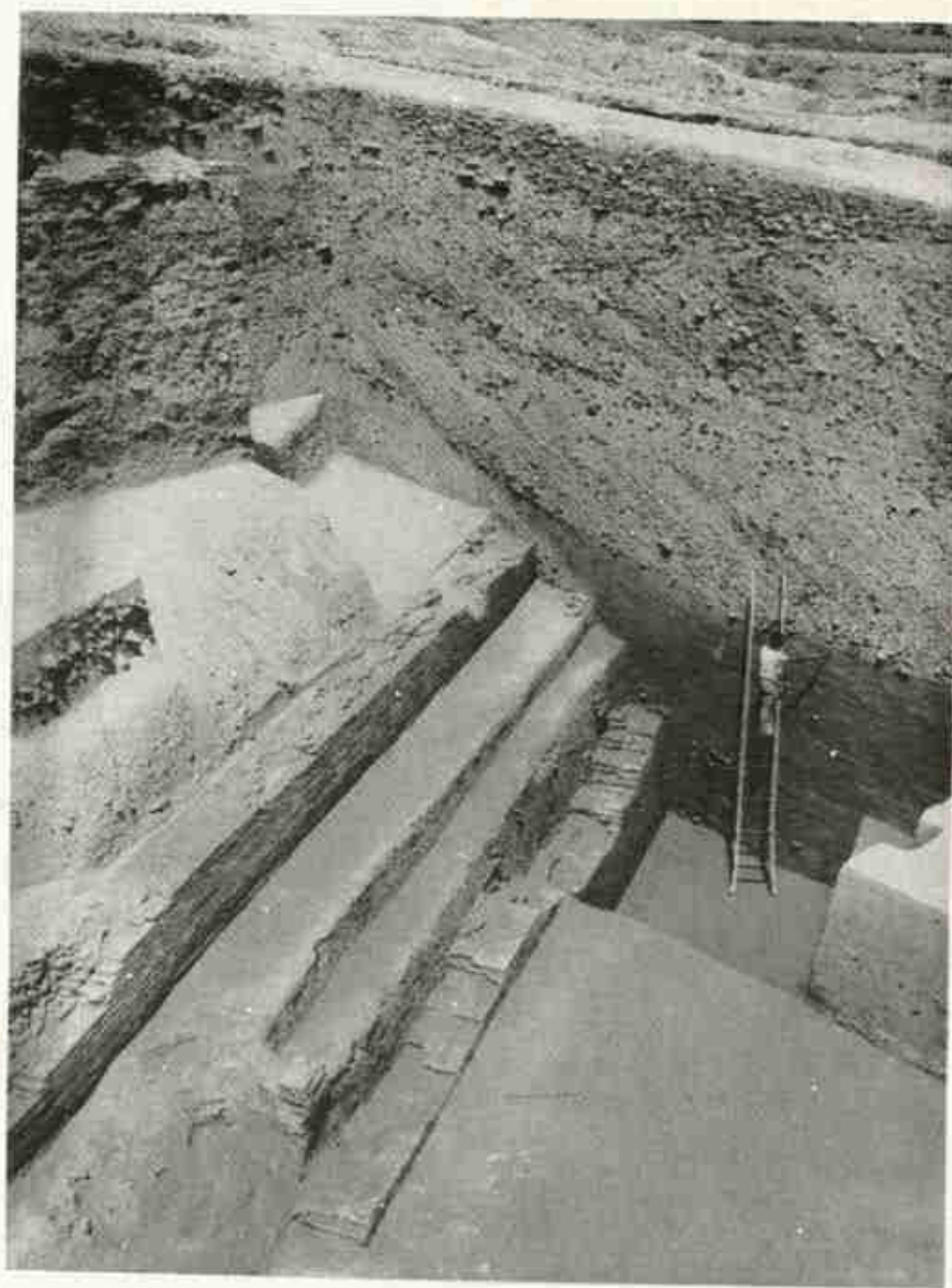
A closer view of the debris with the skeleton of a child. Looking north. See pp. 20 and 37



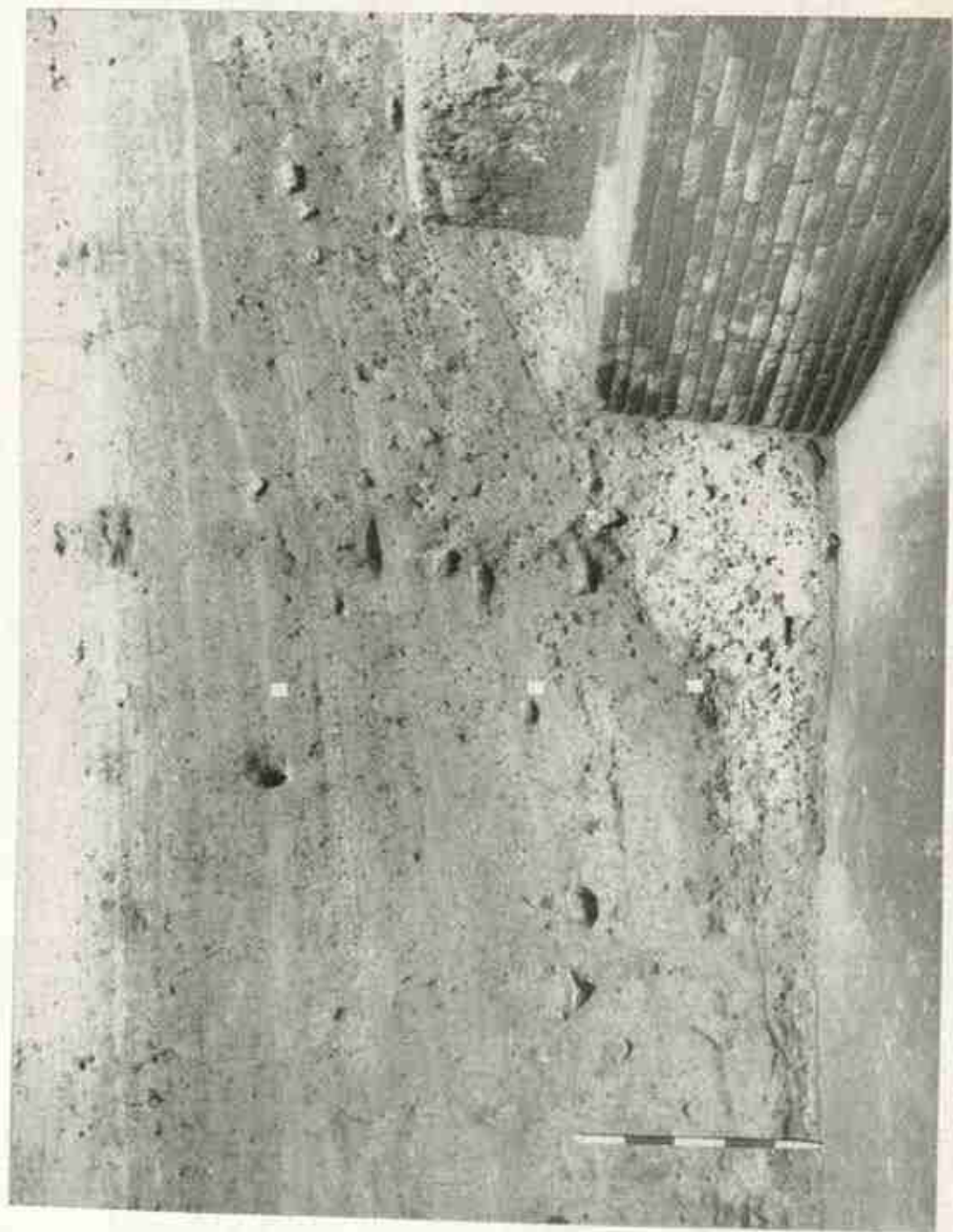
Close-up of the child's skeleton messed up in the debris. Looking east. See pp. 20 and 37



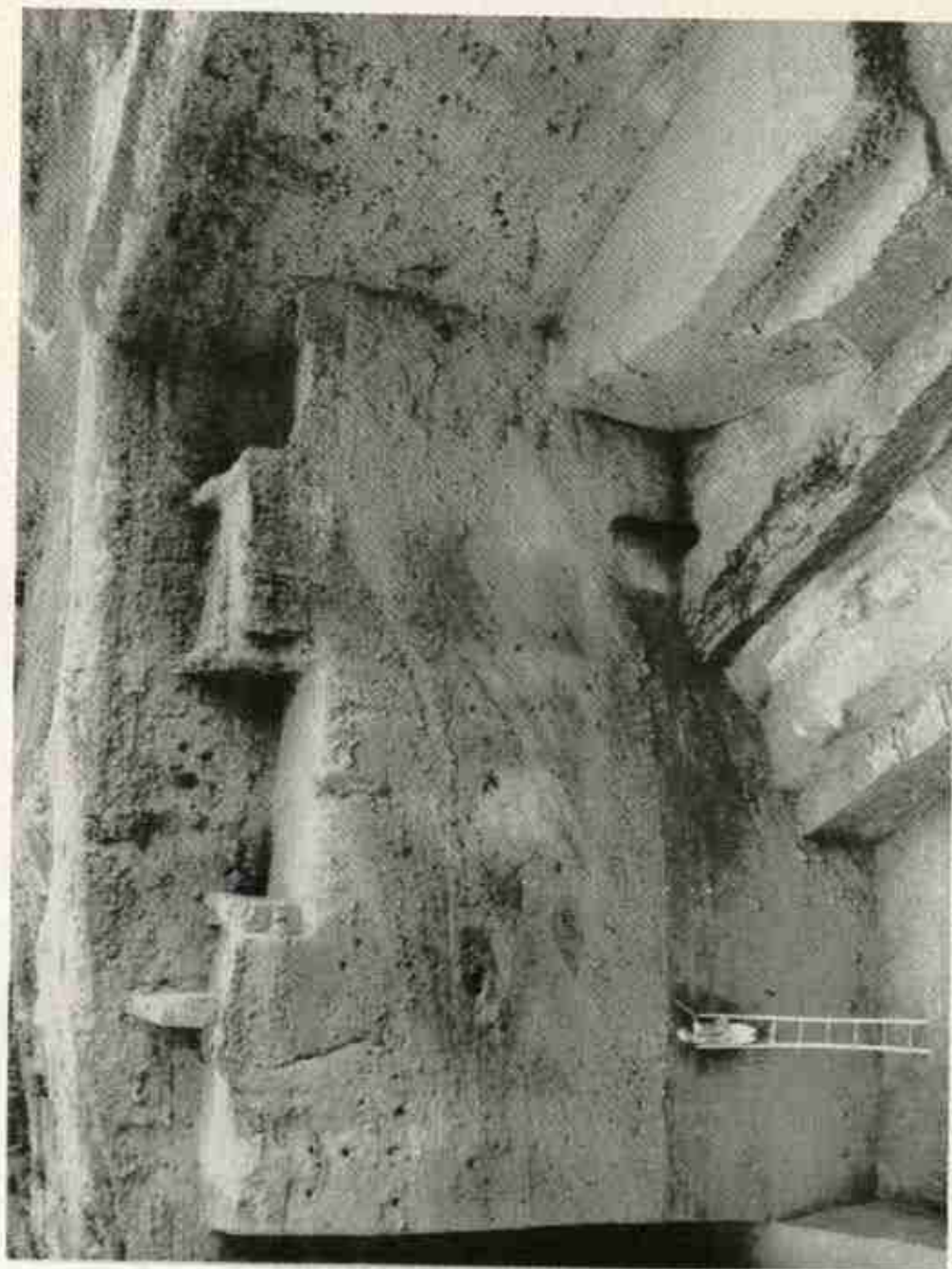
A section across the northern part of Tank B. The figure (on ladder) points to the top of the silt that got deposited after the abandonment of the Brick Tank. The slanting layers overlying the silt on left constitute a part of the Bund of the subsequent Mud Tank. Looking north. See pp. 21, 37-38 and 45



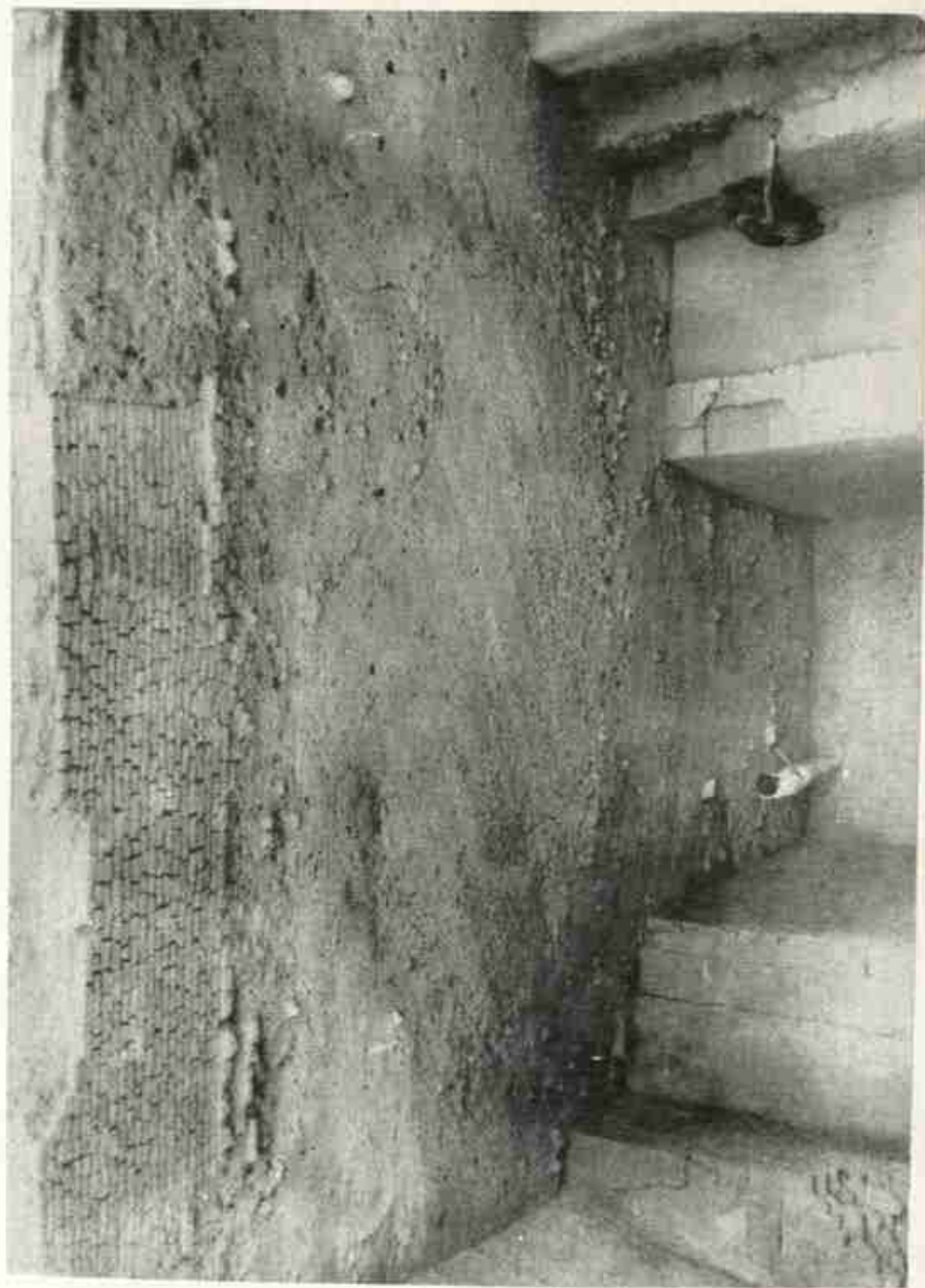
A closer view of the left part of the Section shown on pl. LXVIII.
See pp. 21, 37-38 and 45



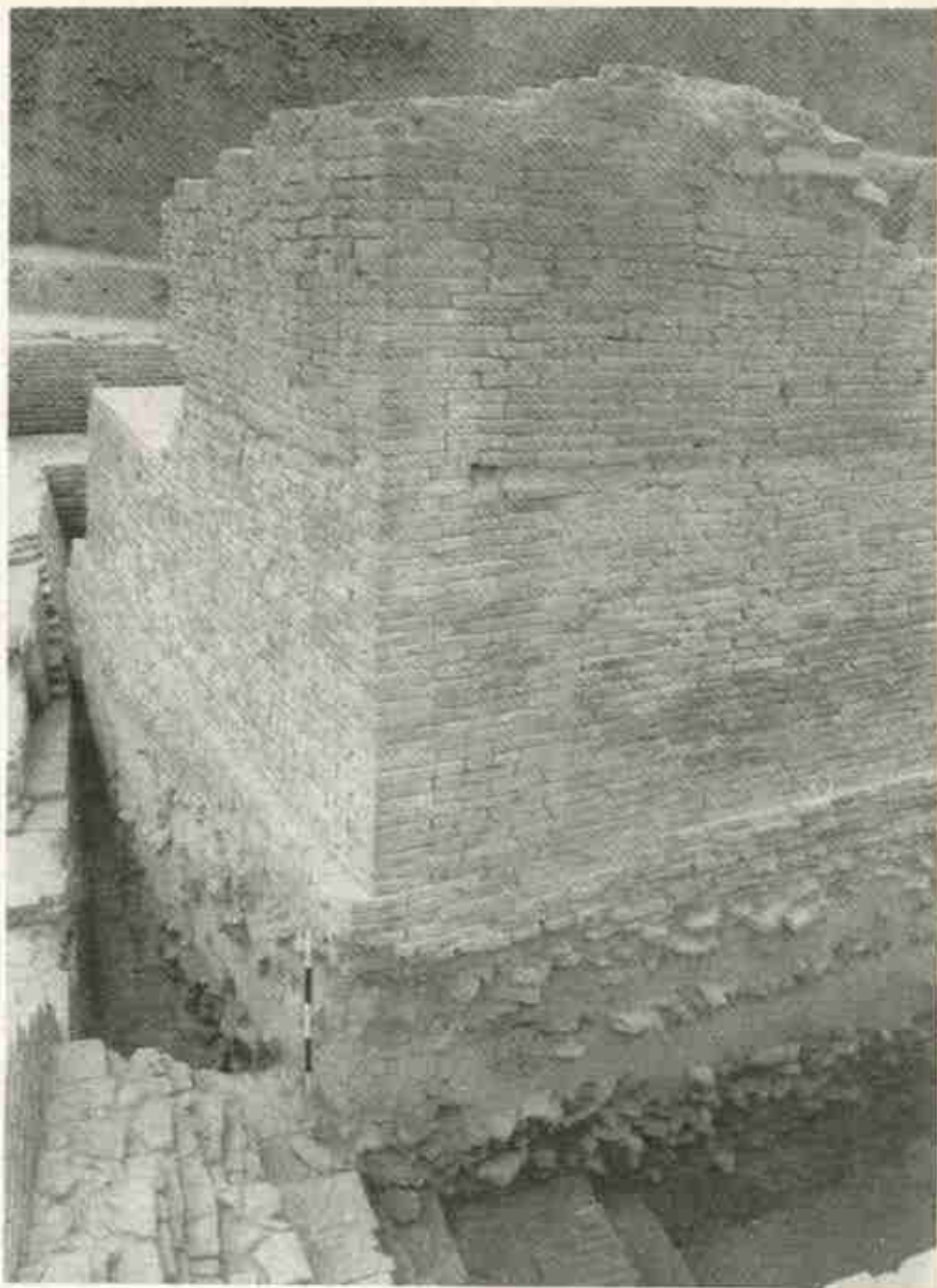
Right part of the Section shown on pl. LXVIII, giving a close-up of the bands of sand and silt. See pp. 21 and 37-38



Another view of the silt and overlying Mud Bund in the northern part of Tank B. The structures at top belong to third-fourth centuries A.D. Looking south. See pp. 21 and 37-38



The figure stands in Interconnecting Channel-2. The silt deposit within the Channel partly overlies the adjacent Retaining Walls. Above the silt may be seen successively the oblique layers constituting the Mud Bund and a late Kushan structure. Looking south. See pp. 21 and 37-38

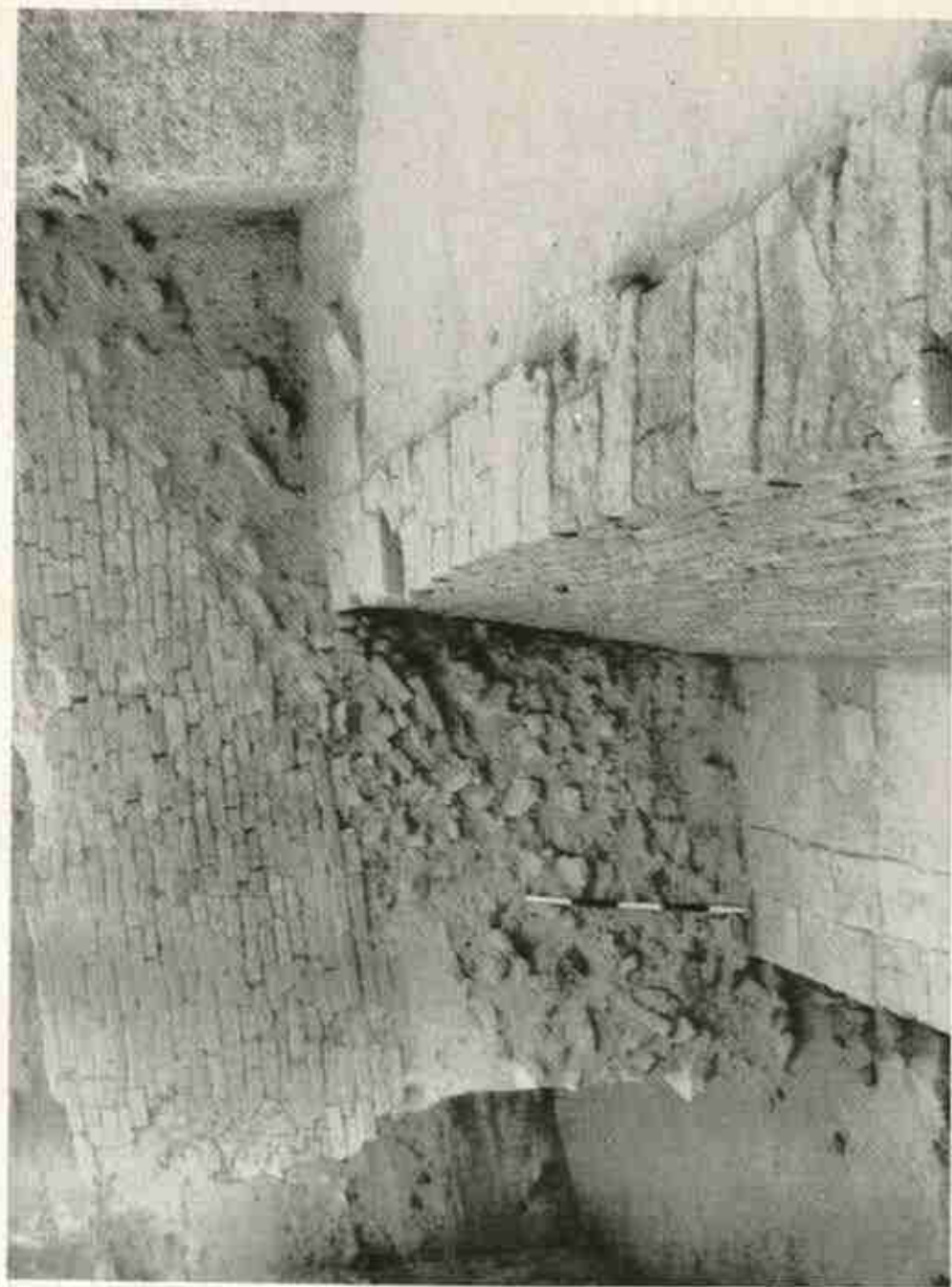


Brick-casing of the mud-platform constituting a part of the Mud Tank at its northern end. This casing overlies the debris fallen from the Brick Tank whose walls and steps are seen in the foreground and along the left side. Looking north-west.

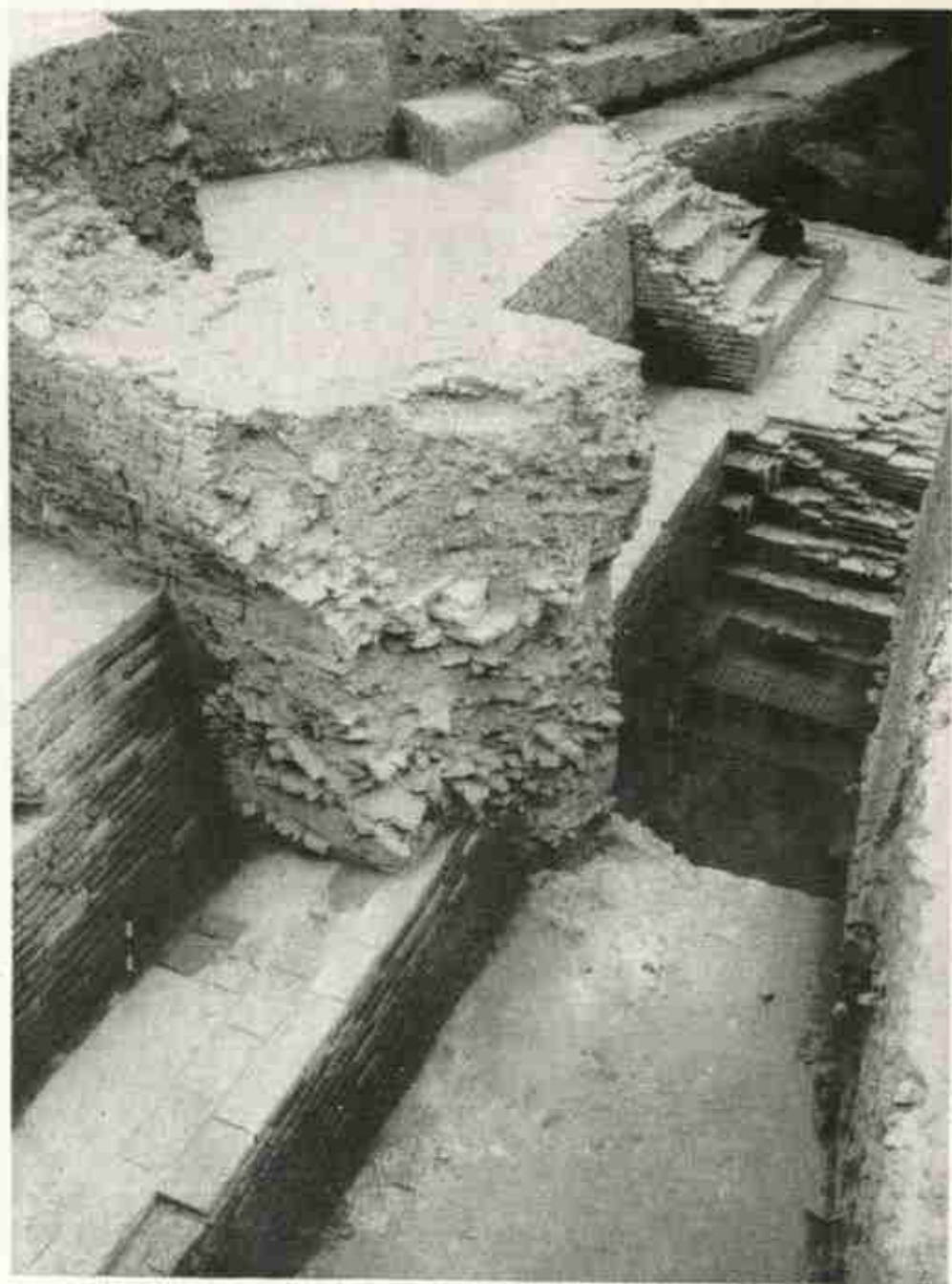
See pp. 21 and 38



Another view of the brick-casing with the mud-platform enclosed by it. On right are seen Interconnecting Channel-1 and adjacent platforms of the Brick Tank. Looking north-east. See pp. 21 and 38



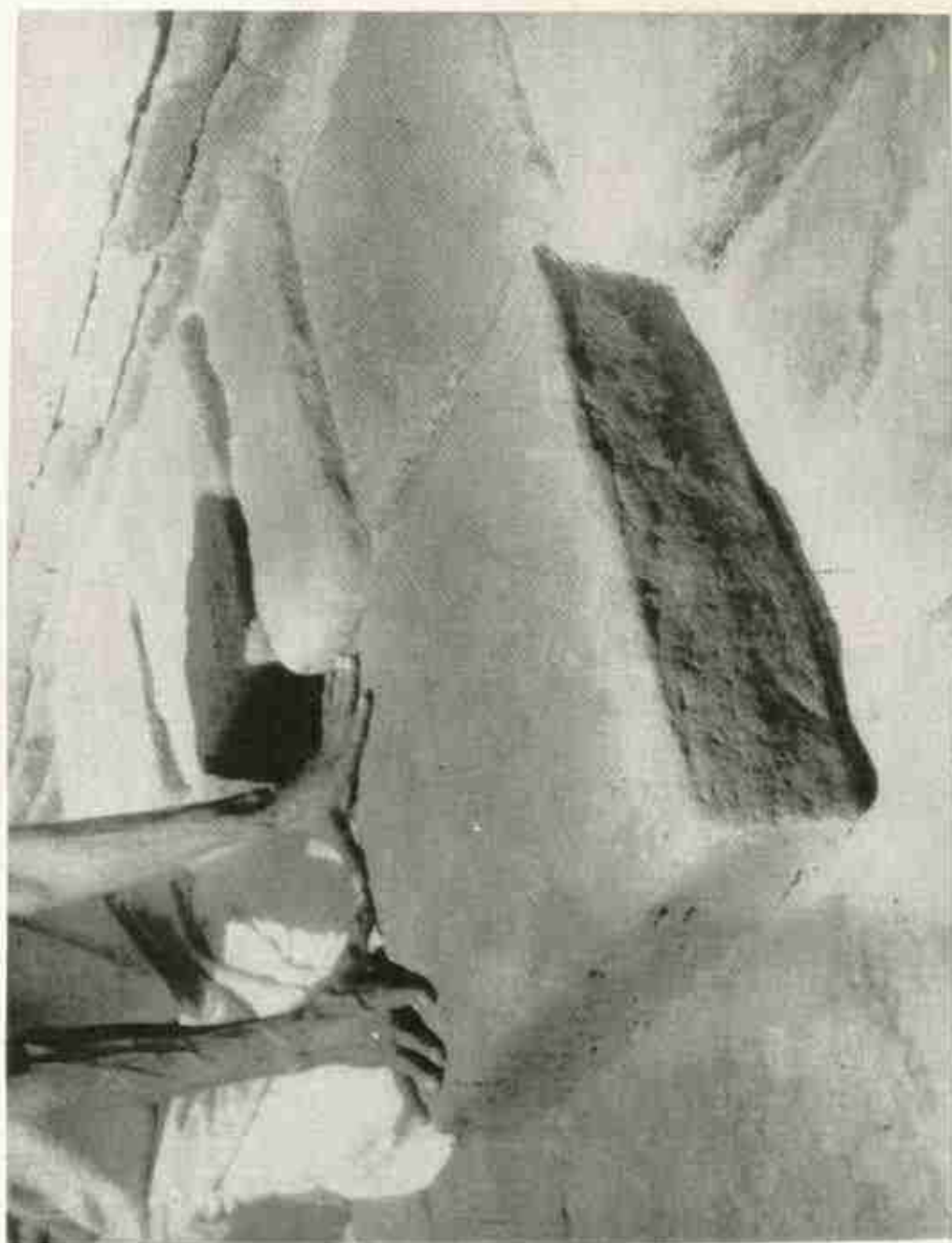
The scale stands against the debris overlying the Retaining Walls of Tank A. The cross-wall at the higher level overlies this debris and belongs to the Mud Tank. Looking north-west. See pp. 25 and 38



A view from the opposite side of the cross-wall, showing debris and Retaining Walls of Tank A seen on pl. LXXV. See p. 38



Close-up of a part of the Lowest Retaining Wall on the eastern side of Tank A. The bricks measured one *vitasti* (span) and four *angulas* (finger-widths) in length. See p. 43



The bricks used in the flooring where water fell from the Inlet Channel into Tank A measured two *vitastis* (spans) in width, two *vitastis* and eight *angulas* (finger-widths) in length and six *angulas* in thickness. See p. 43



A



B



C

A, Terracotta sealings, reading 1 and 2, *Dhanakasa* ; 3, *Gosalakasa* ; B, Terracotta sealing, reading (*Dha*)*nadevasa* ;
C, Terracotta seal (left) and its cast, reading *Śavarakasya*. See pp. 44, 46, 48, 53-54, 56 and 61



A

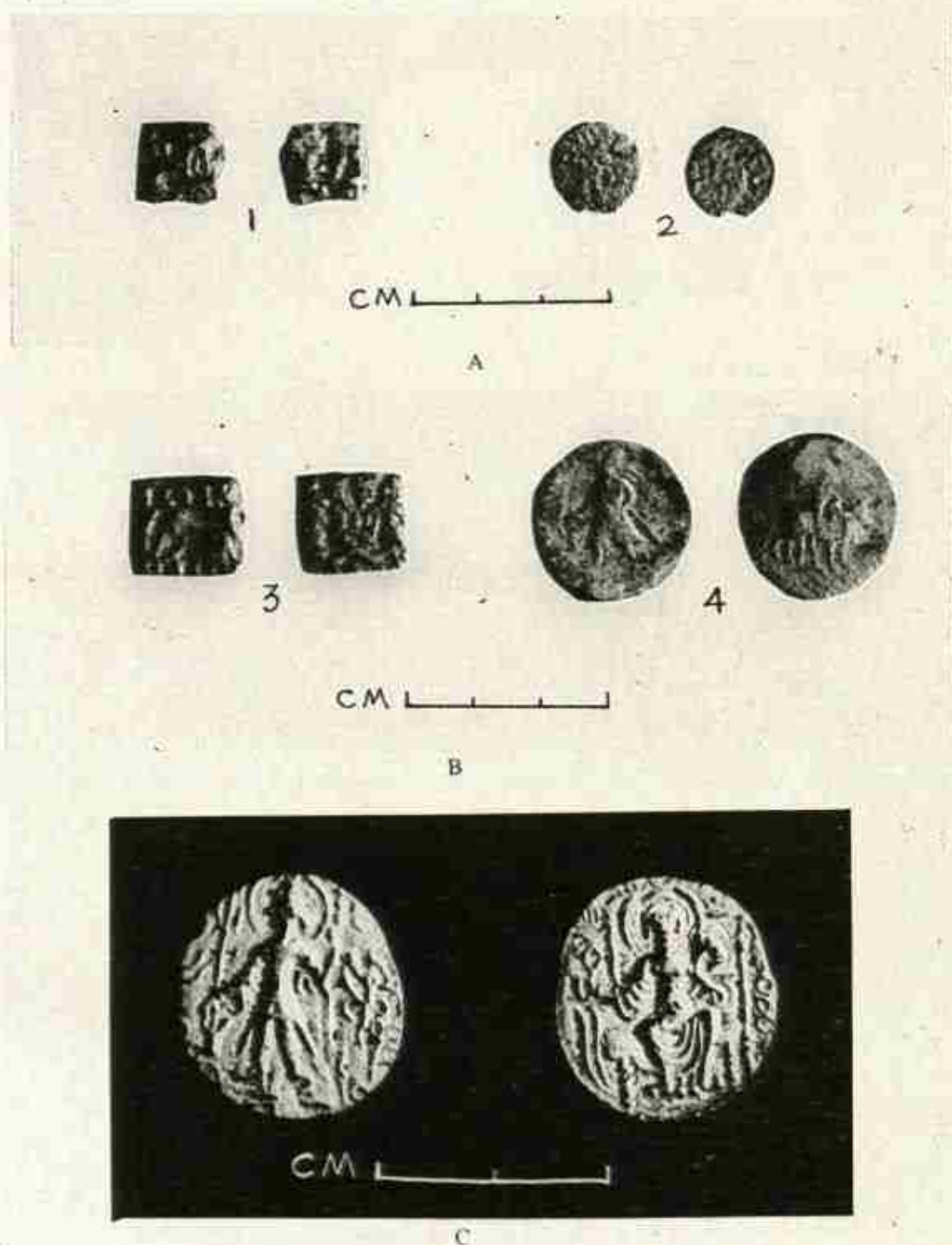


B

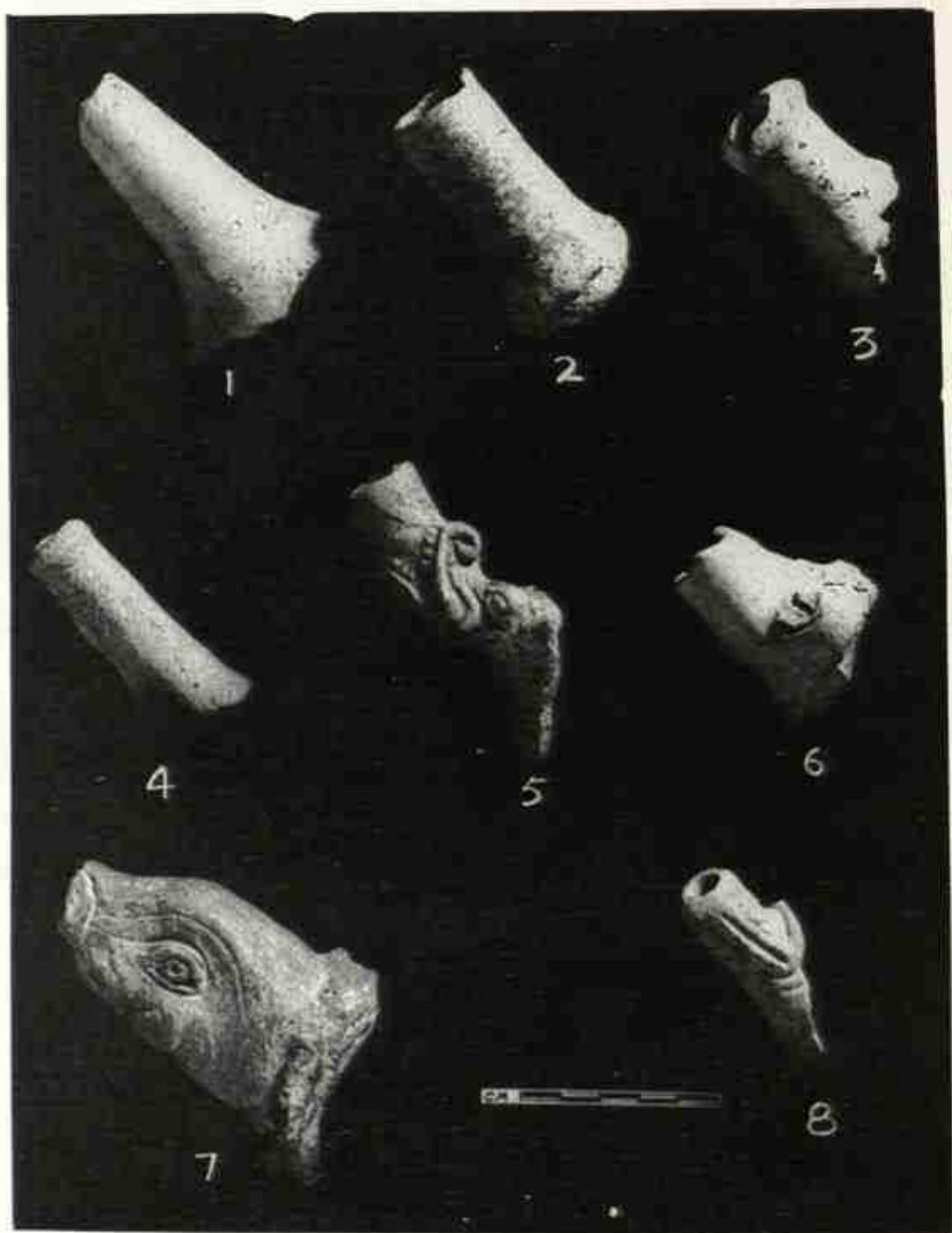


C

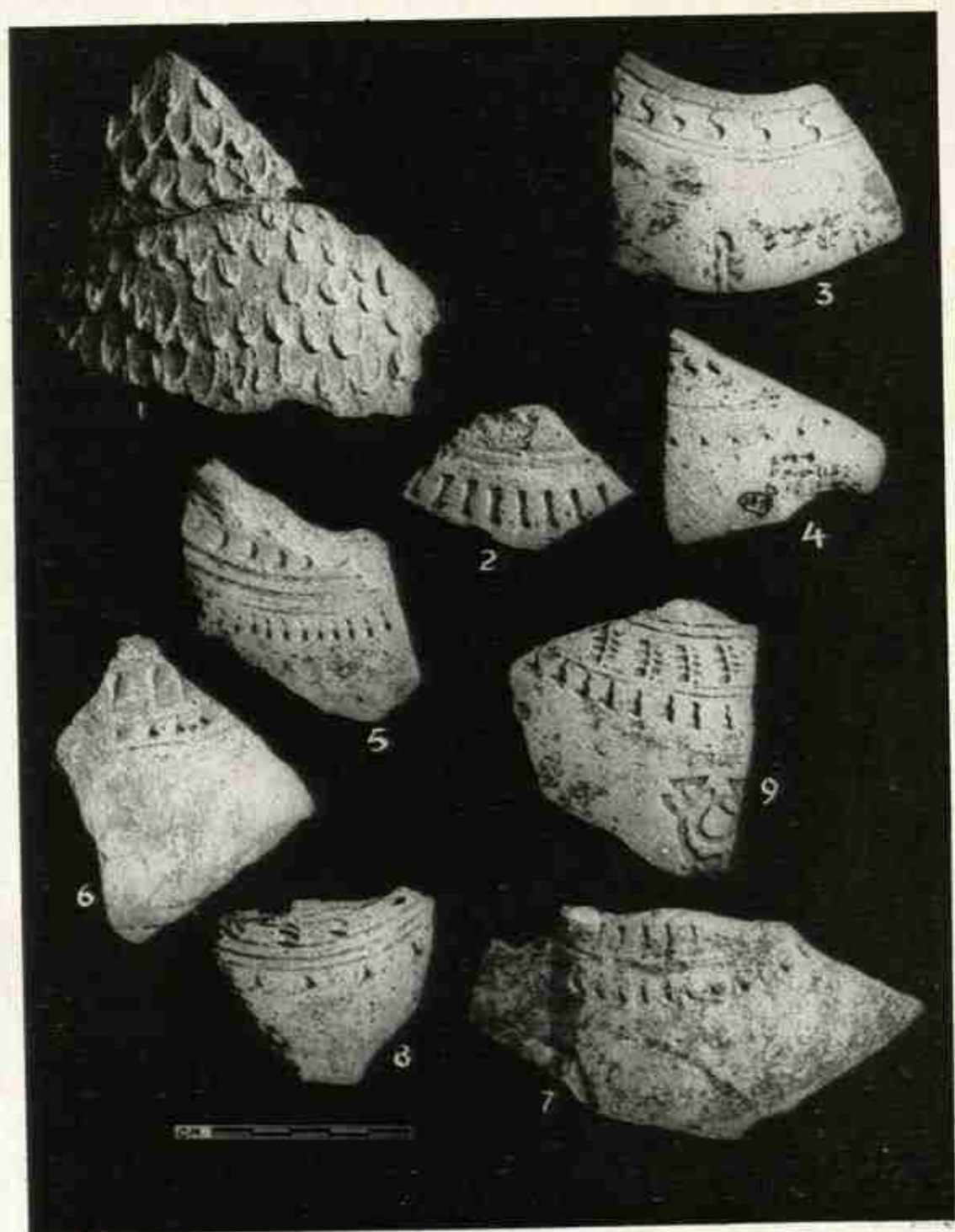
A, Terracotta seal (left) and its cast, reading *Jyeshthasya*; B, Terracotta seal (left) and its cast, reading...*kasya* ; C, Terracotta seal (left) and its cast. For discussion on the reading. See pp. 21, 44, 53 and 57



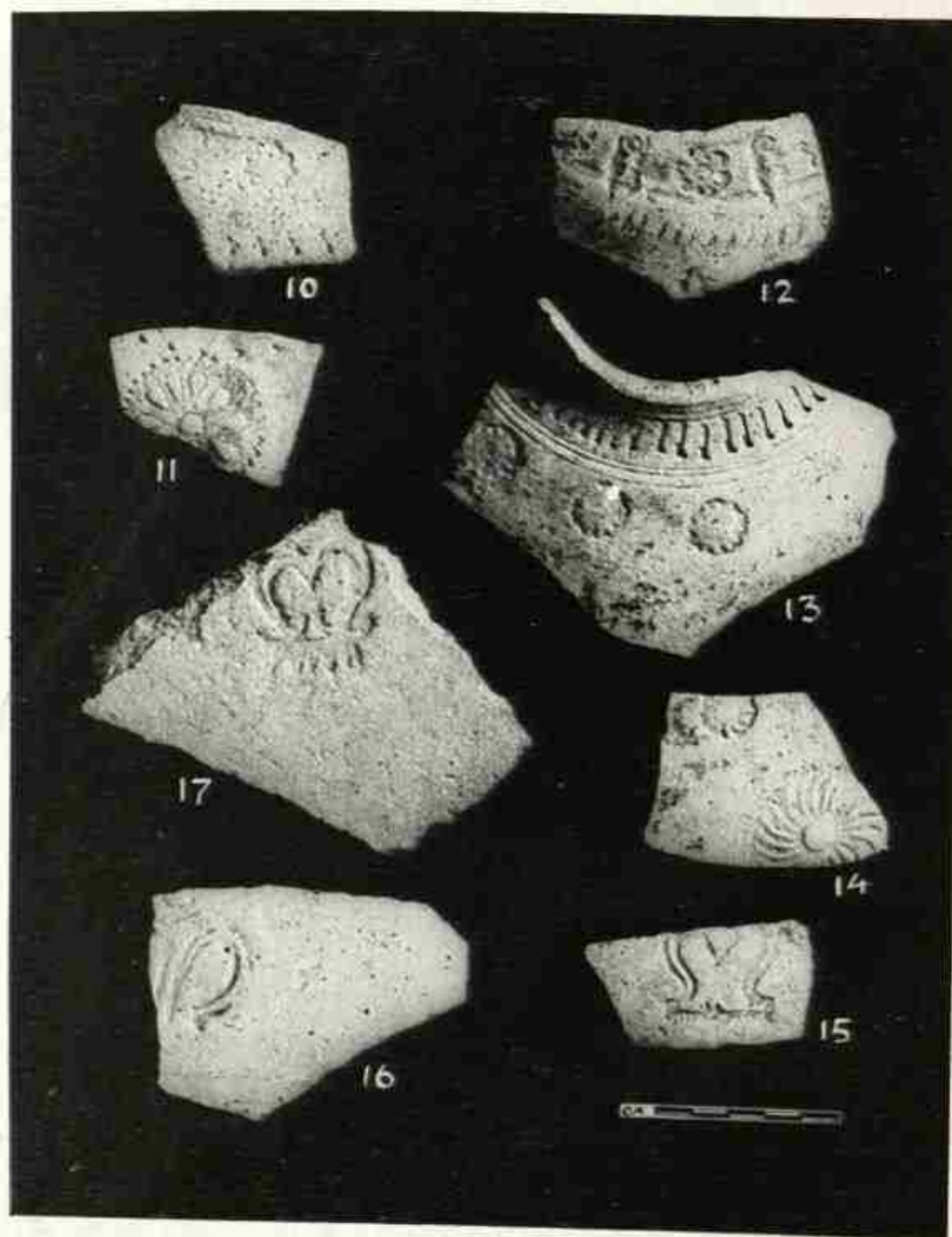
A, 1, unscripted cast copper coin and 2, copper coin; B, 3, copper coin of Dhanadeva and 4, copper coin, probably of Wima Kadphises (legend not clear); C, gold coin of 'Vasu' who probably followed Kanishka III
See pp. 21, 45-46, 48, 53, 55, 62-63, 85 and 152



Pottery spouts. See p. 101



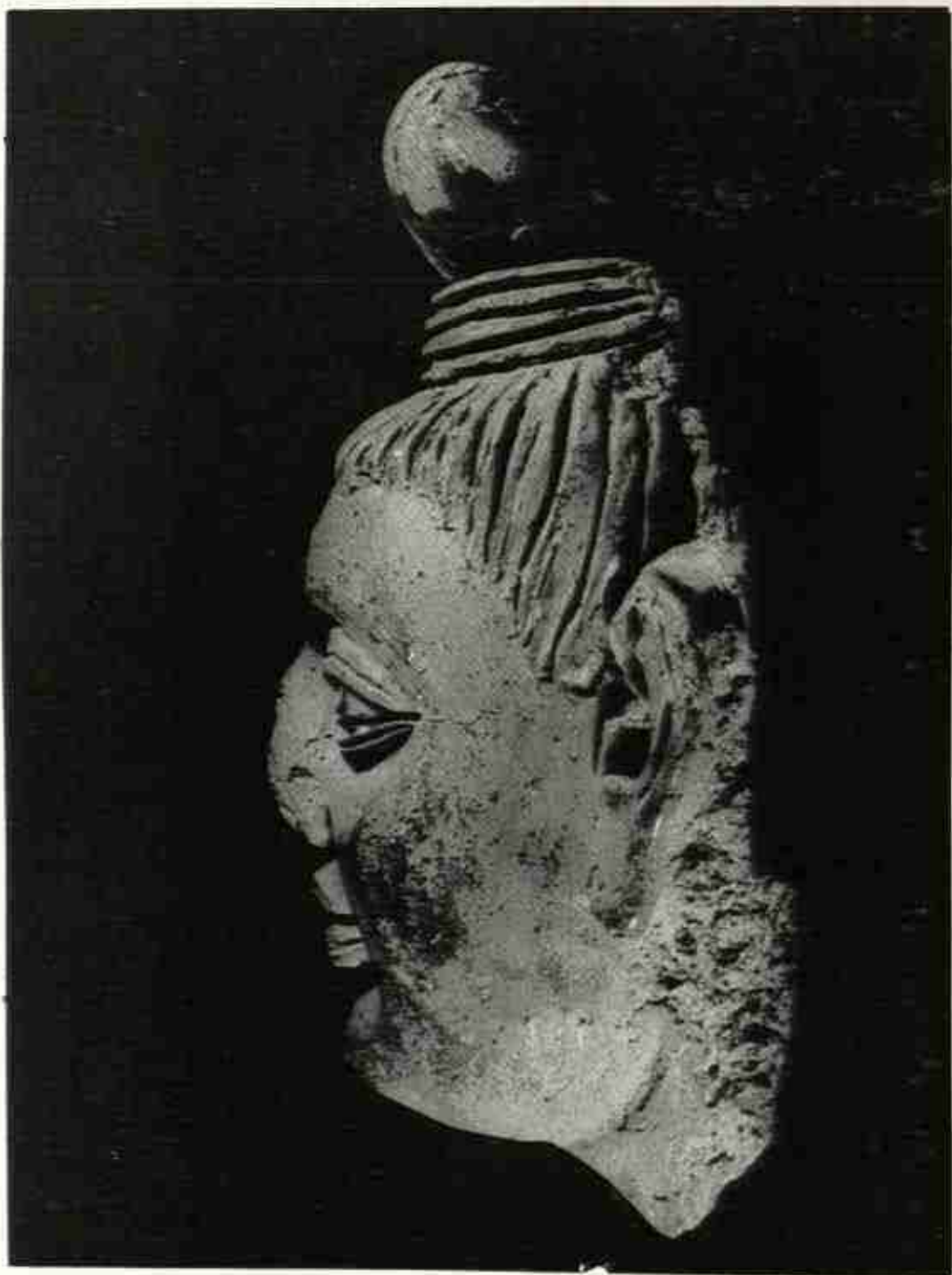
Decorated pottery. See p. 103



Decorated pottery. See p. 103



Terracotta head of three-eyed Śiva, Ht. 232 mm, See pp. 19, 108-109, 111, 118 and 121



Side-view of the Śiva-head shown on pl. LXXXV. See pp. 19, 108 and 111



Back-view of the Śiva-head shown on pl. LXXXV. See pp. 19, 108 and 111



A

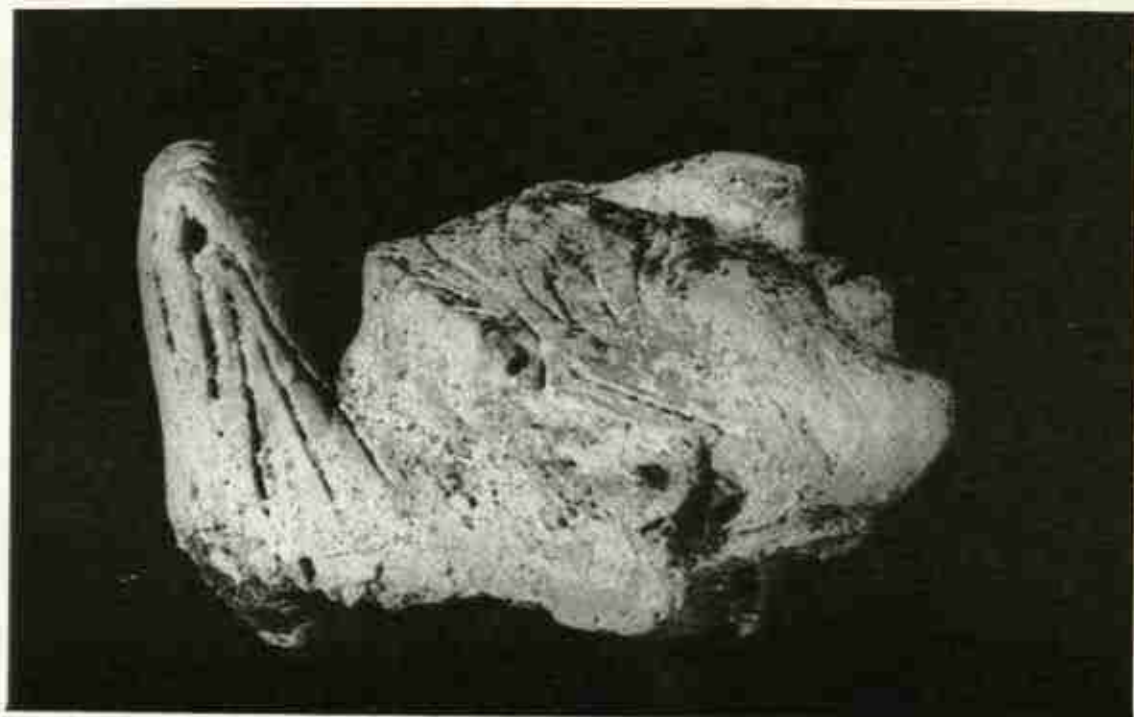
A, Terracotta head of three-eyed Śiva. Ht. 88 mm; B, Terracotta head of three-eyed Pārvatī. Ht. 78 mm.
See pp. 115-116



B



B



A

Side and front views of a terracotta head of three-eyed Parvati. Ht. 135 mm. See pp. 108, 115 and 121



Terracotta figure, probably of Maheśvari, with bull's head between the feet. Ht. 130 mm. See p. 116.



A



B

Two side-views of the figure shown on plate XC. See p. 116



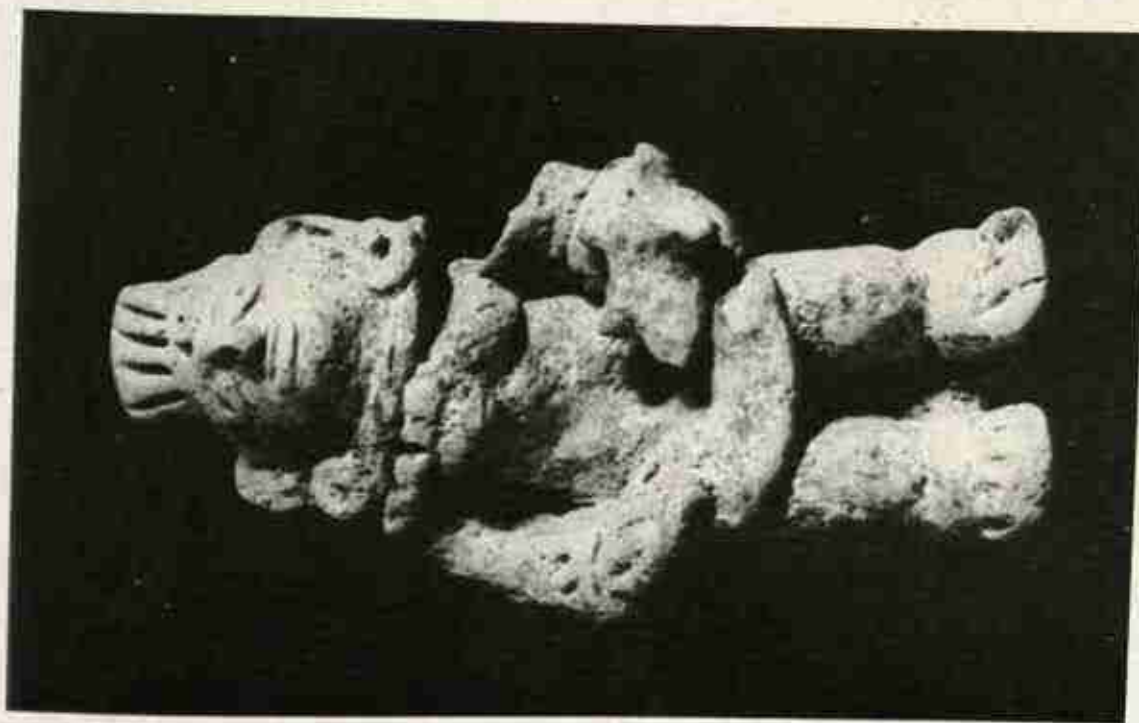
Terracotta figure of Kubera. Ht. 255 mm. See pp. 108-109, 117, 121 and 126



Side-view of Kubera shown on pl. XCII. See pp. 109 and 117



Terracotta figure of Kubera (?). Ht. 144 mm. See p. 118



A

Terracotta figures of Hārītī/Shashipī, each holding a child. Ht. A, 156 mm; B, 165 mm.
See pp. 108-109, 118-119, 121 and 141



B



Terracotta figure of Hārītī holding a child (broken). Ht. 216 mm. See pp. 108-109, 120-121 and 141



Terracotta figure of a child held by a bigger figure whose hand may be seen on the right.
Ht. 170 mm. See p. 120



Terracotta seated couple. Length 250 mm. See pp. 108 and 121



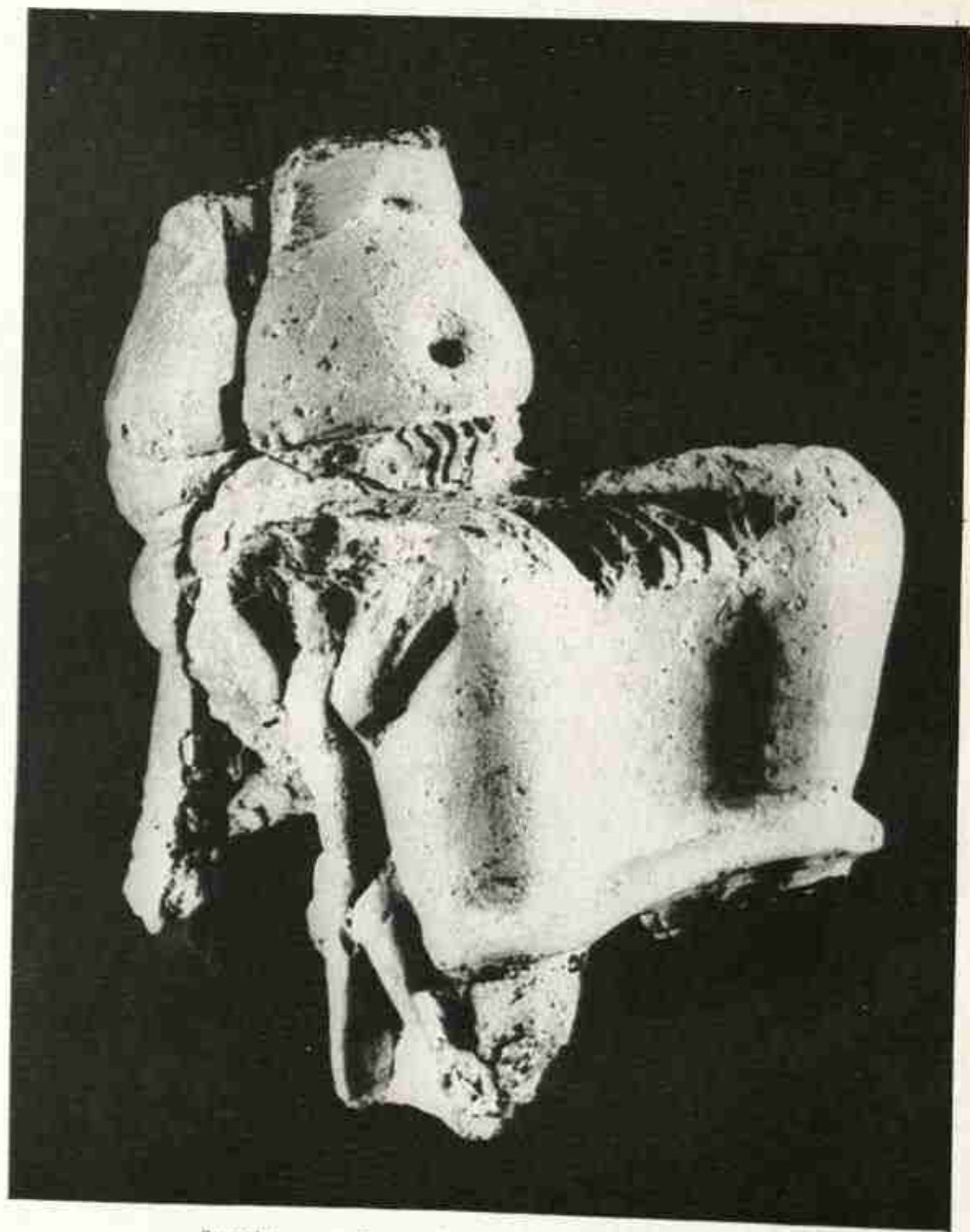
Side-view of the couple shown on pl. XCVIII. See pp. 108 and 121



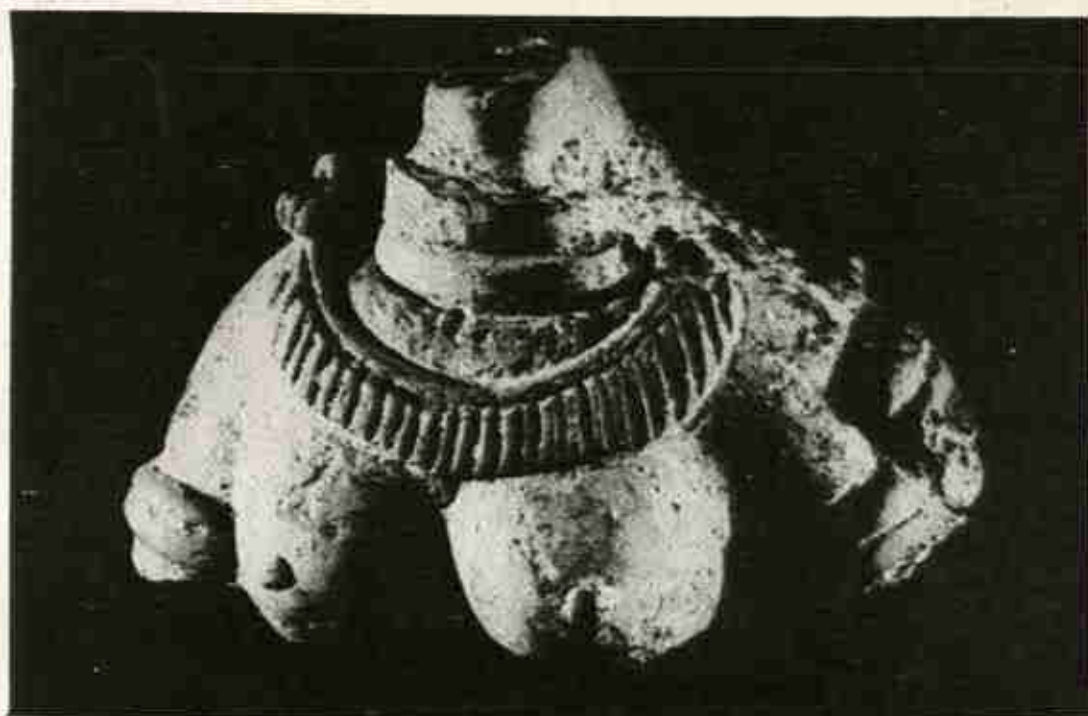
Terracotta seated figure. There seems to have been another figure on its right. Length 330 mm. See pp. 108 and 121



Terracotta seated figure. Evidently there was another figure on its right. Length 245 mm. See p. 122



Seated terracotta figure of a Yaksha. Ht. 160 mm. See p. 122

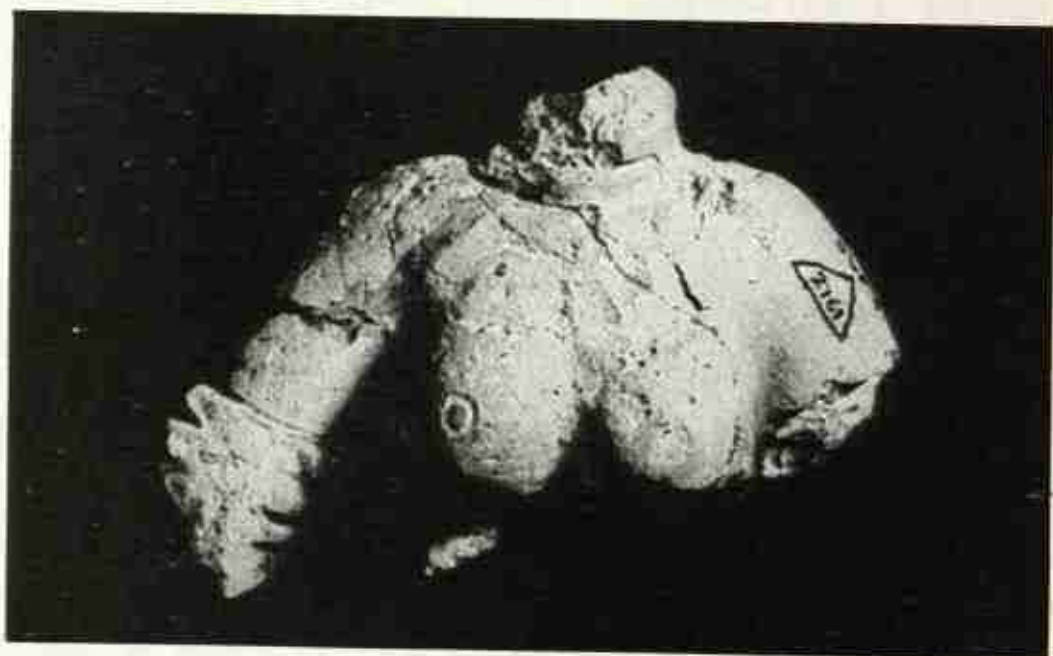


A

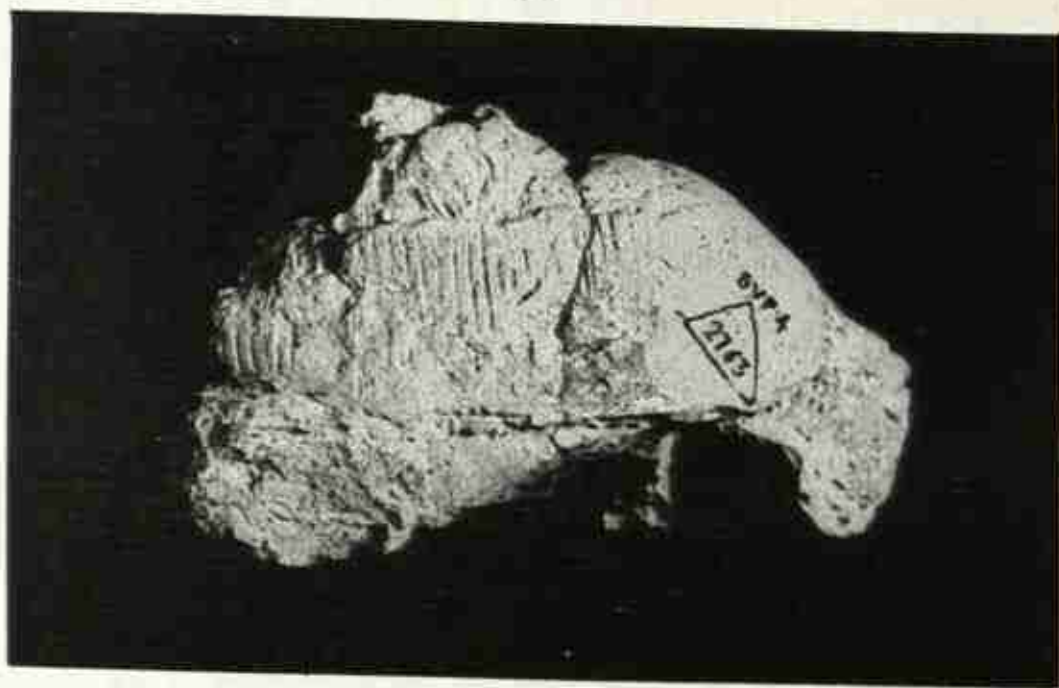


B

Two views of a terracotta female bust. On its left arm may be seen the left hand of another person.
Ht. 95 mm. See p. 123

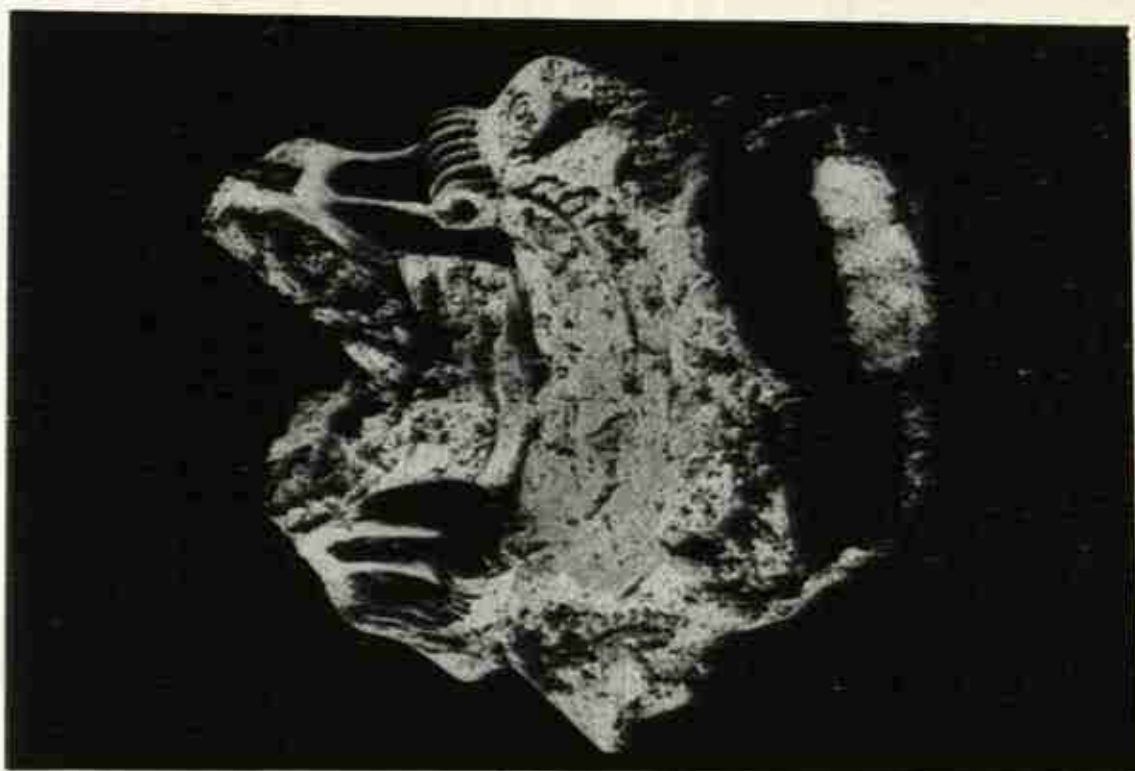


A

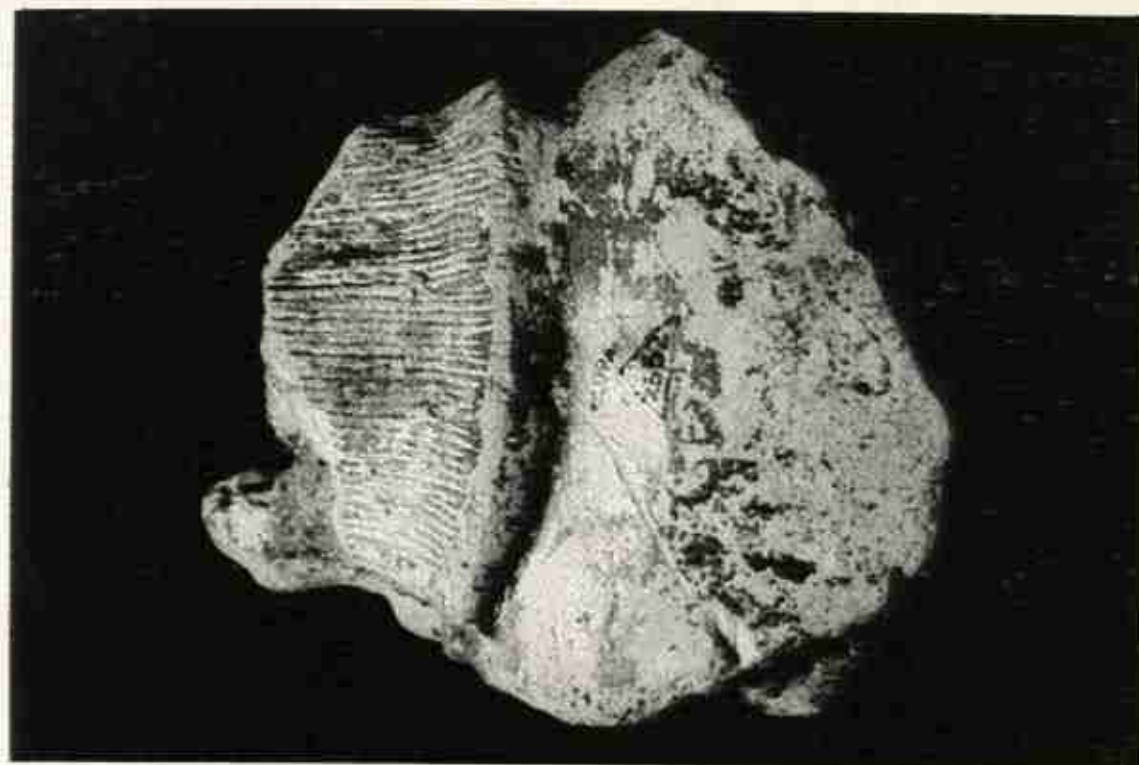


B

Front and back views of the upper part of a terracotta female figure. Ht. 85 mm. See p. 123



A

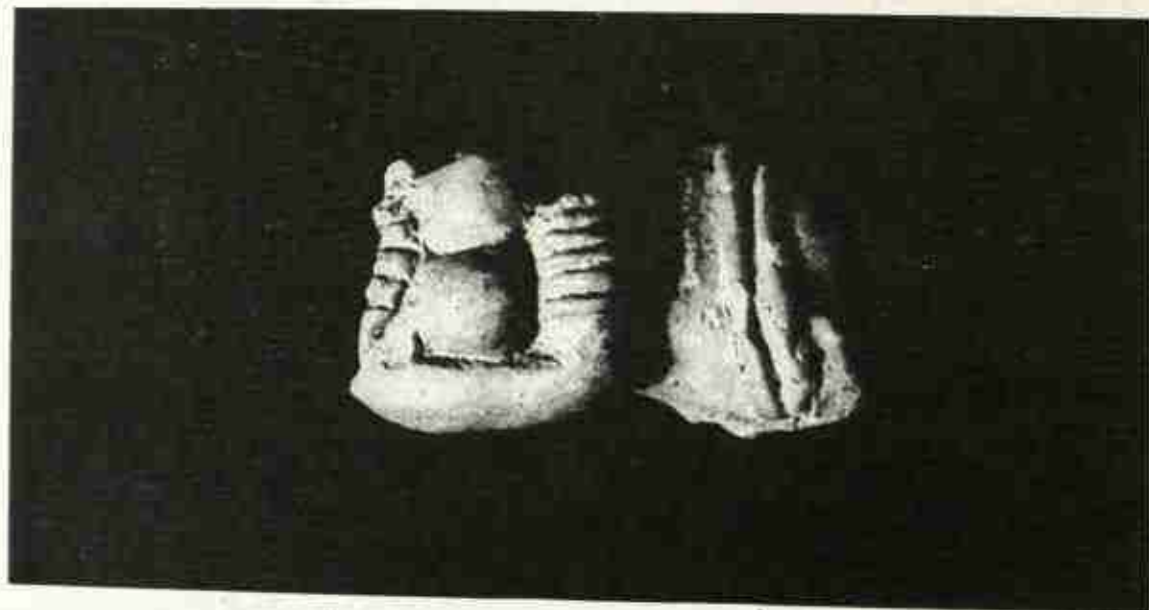


B

Front and back views of the upper part of a terracotta female figure. Ht. 148 mm. See p. 123



A

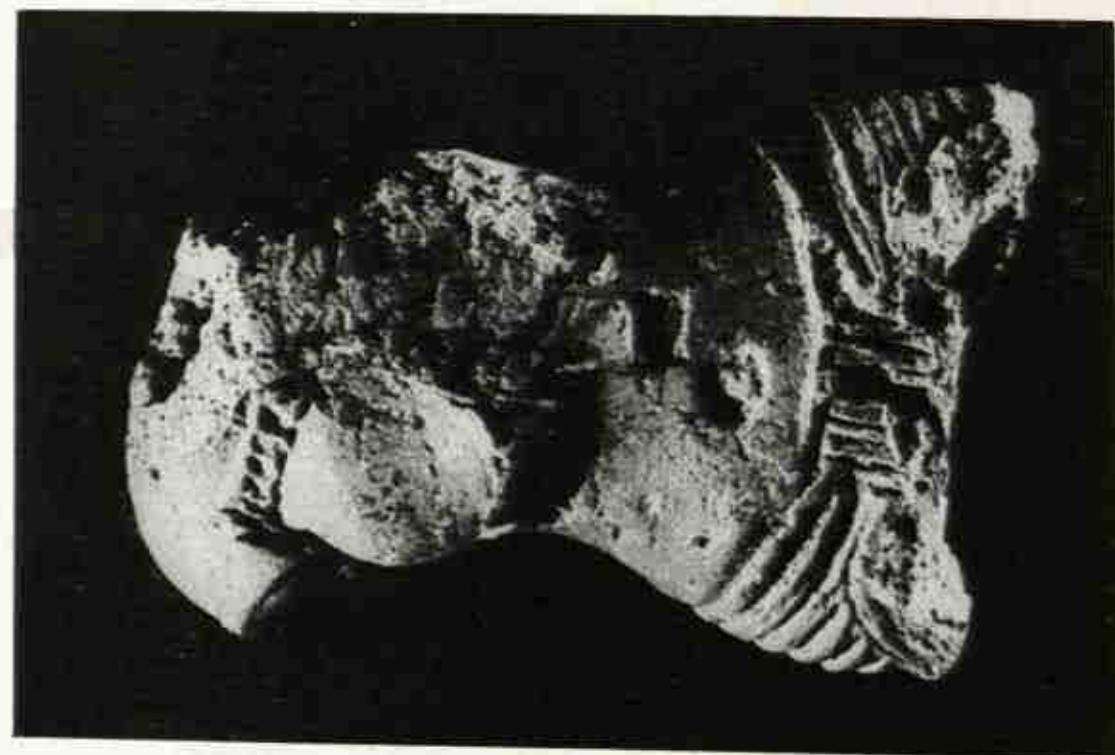


B

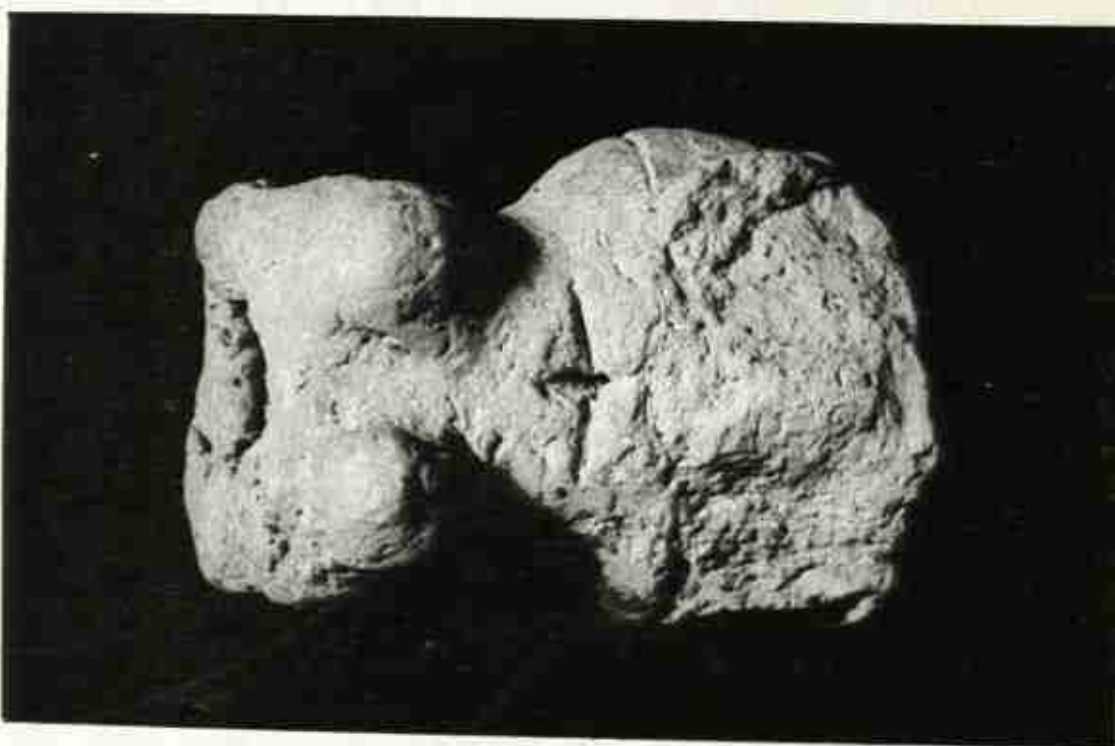
A, Part of a terracotta figure. Ht. 73 mm; B, Part of a terracotta female figure. Ht. 53 mm. See p. 124



Terracotta female figure. Ht. 191 mm. See p. 124

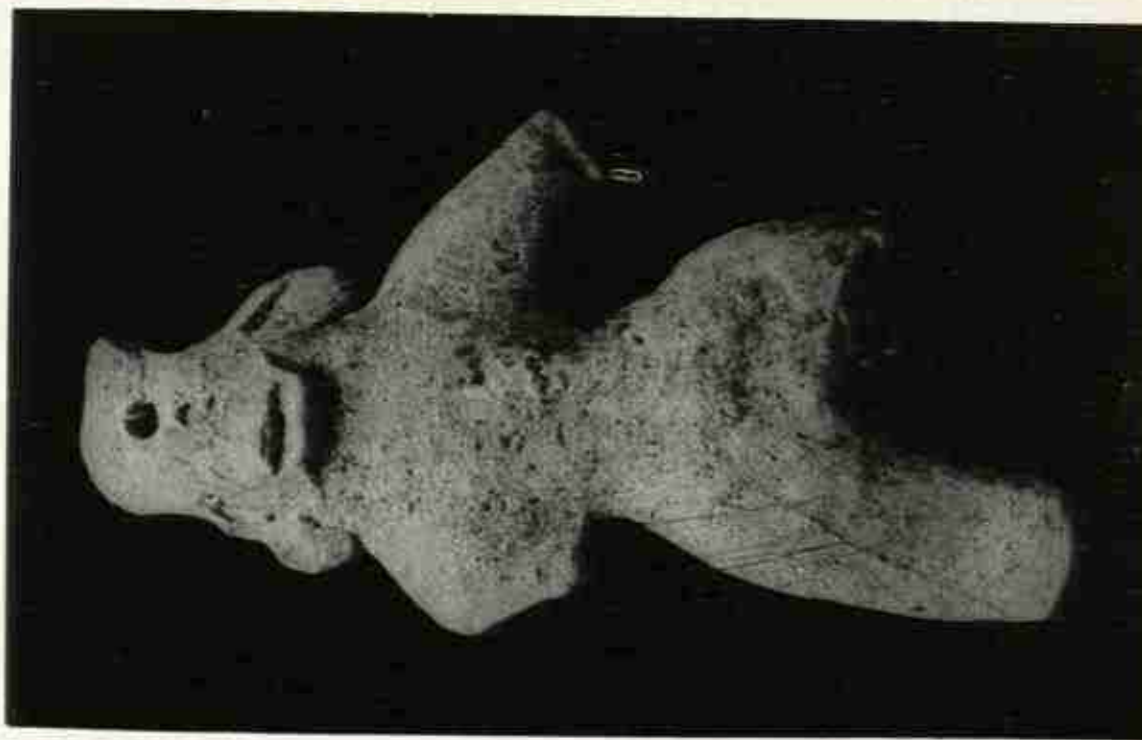


A



B

A and B, Upper parts of terracotta female figures. Ht. respectively 100 mm and 90 mm. See p. 125

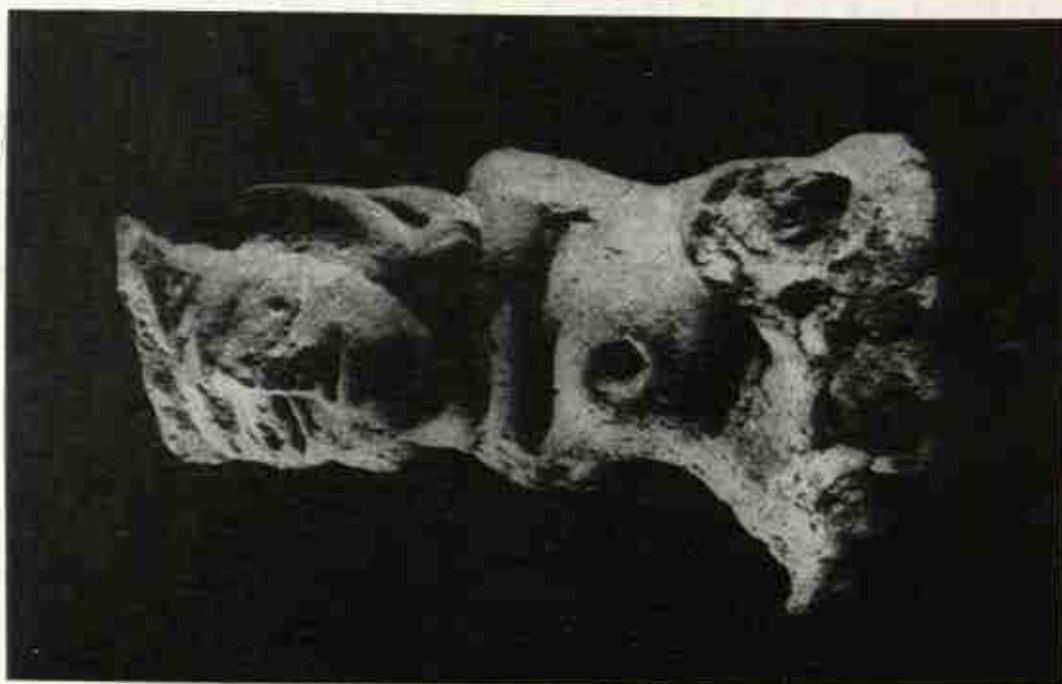


A



B

A, Terracotta figure of Naigameśa. Ht. 120 mm; B, Terracotta figure of Naigameśa (?).
Ht. 115 mm. See p. 125



A

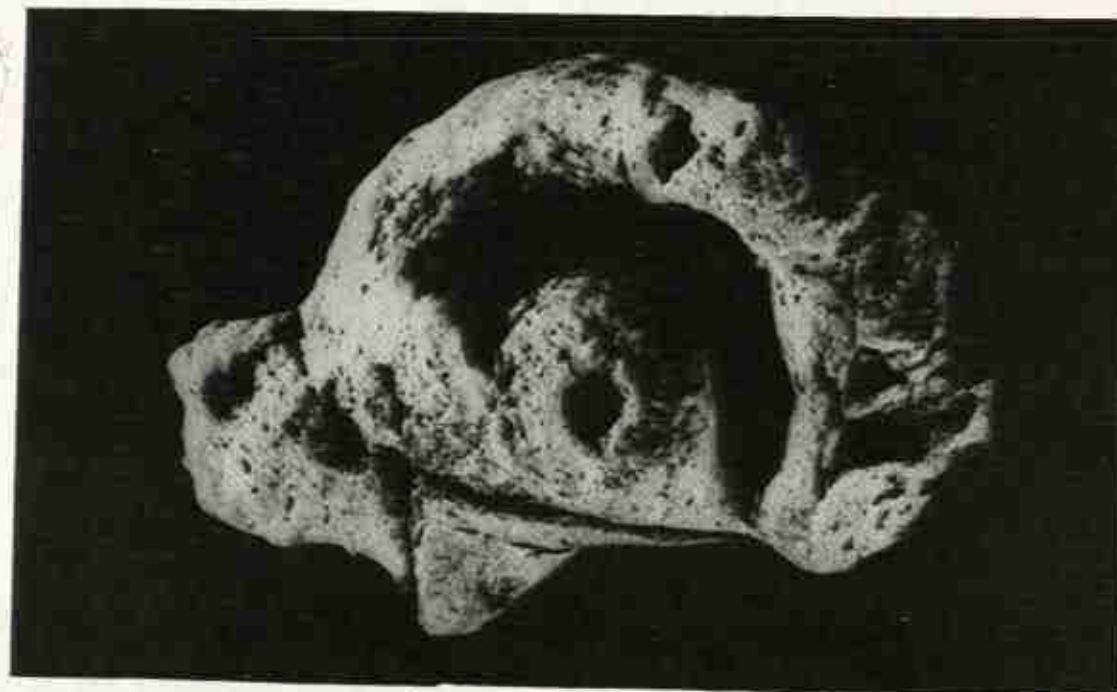


B

Two views of a terracotta male figure (the male-organ is seen in B). Ht. 180 mm. See p. 125

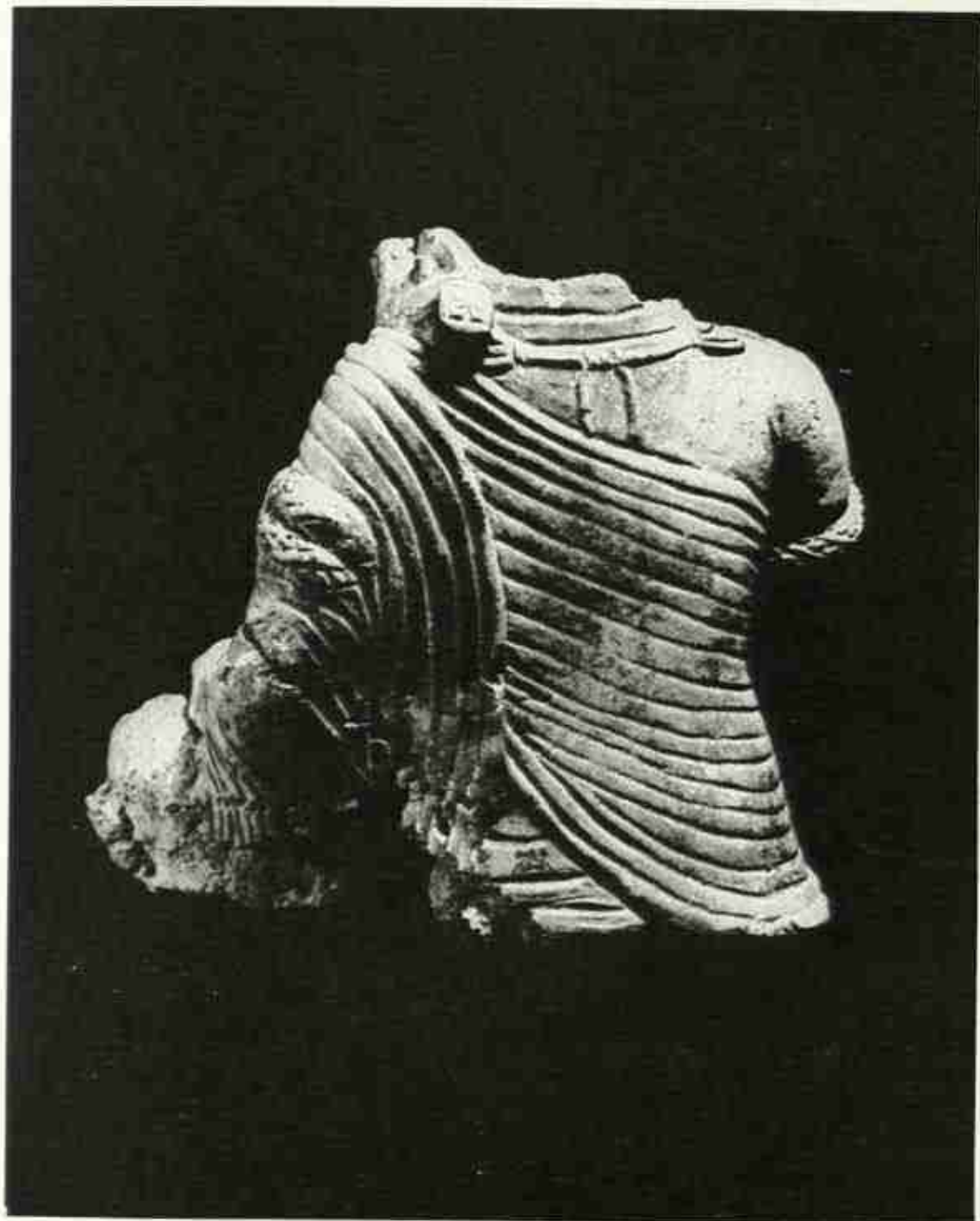


A



B

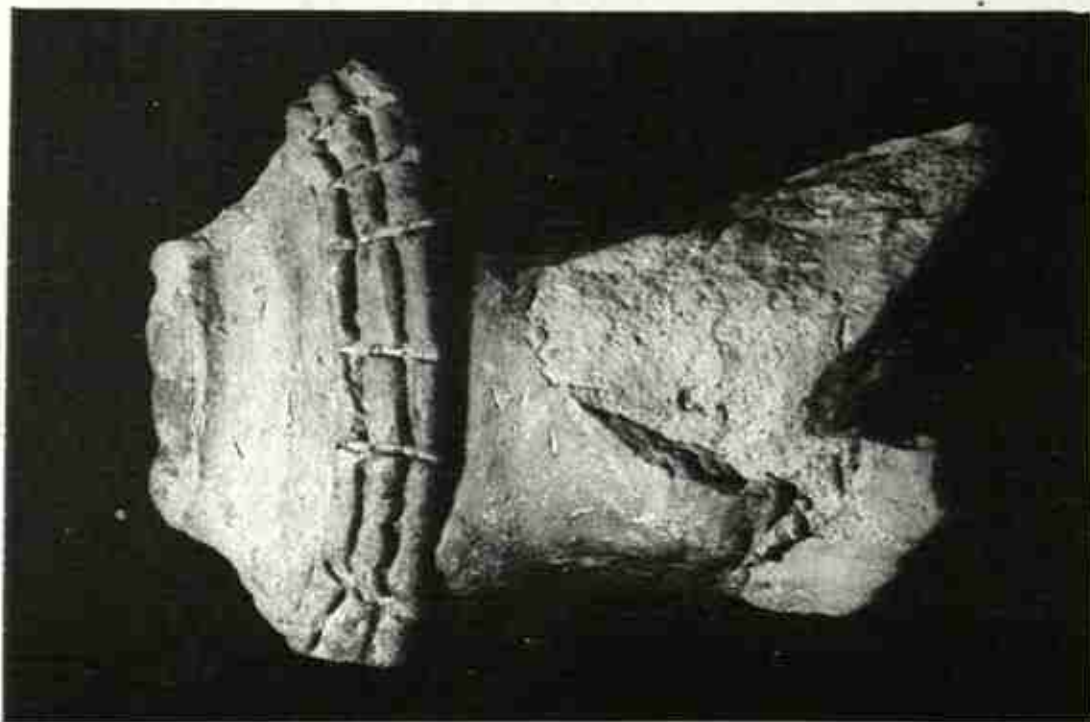
A, Terracotta male figure. Ht. 203 mm; B, Terracotta figure, with clearly delineated male-organ. Ht. 176 mm. See pp. 125-126



Back-view of the figure shown on pl. CXII. See p. 127

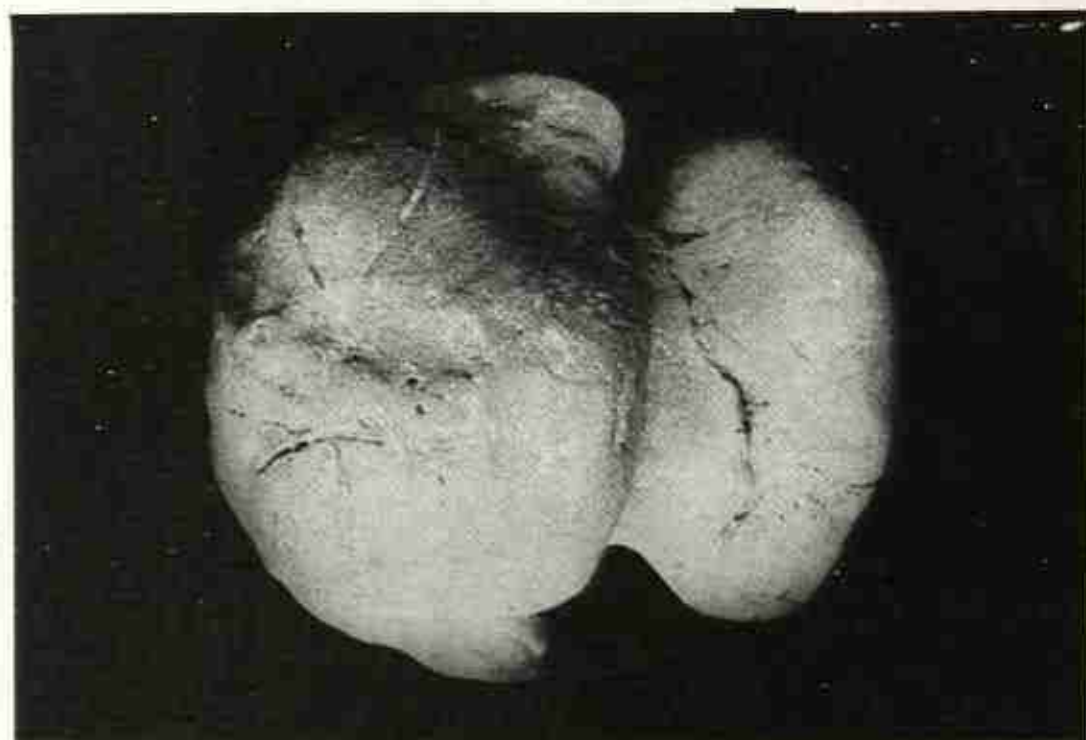


Terracotta male deity in *abhaya-mudra*. Ht. 100 mm. See p. 127

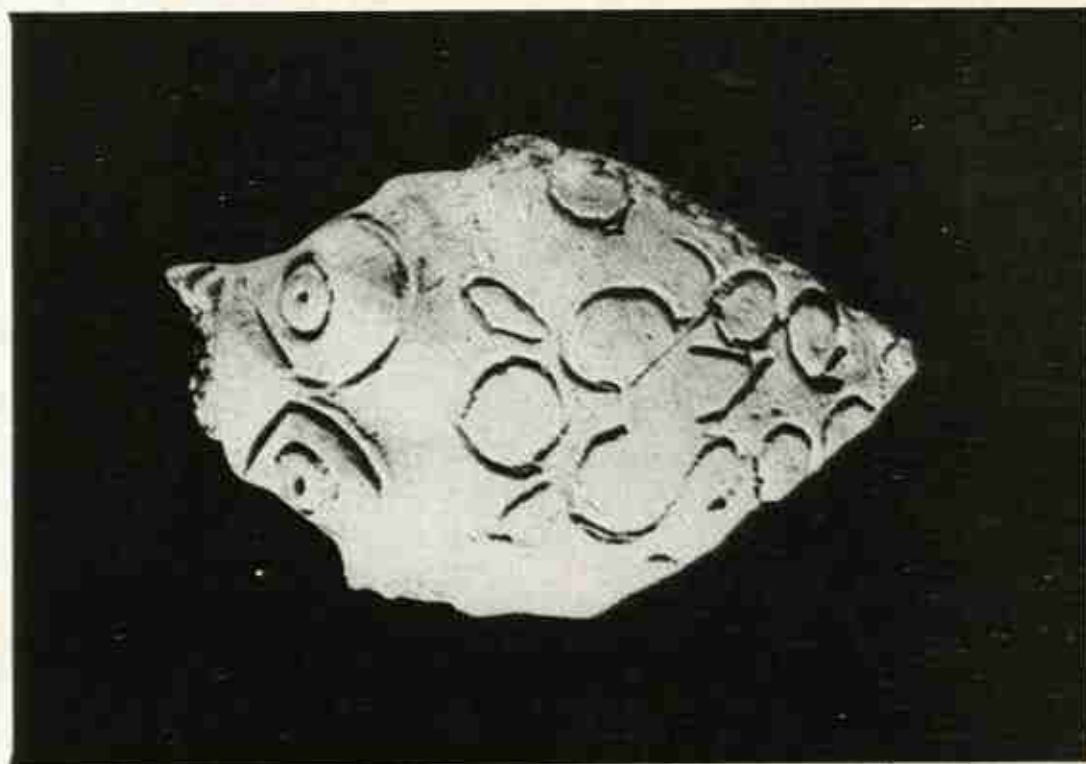


A

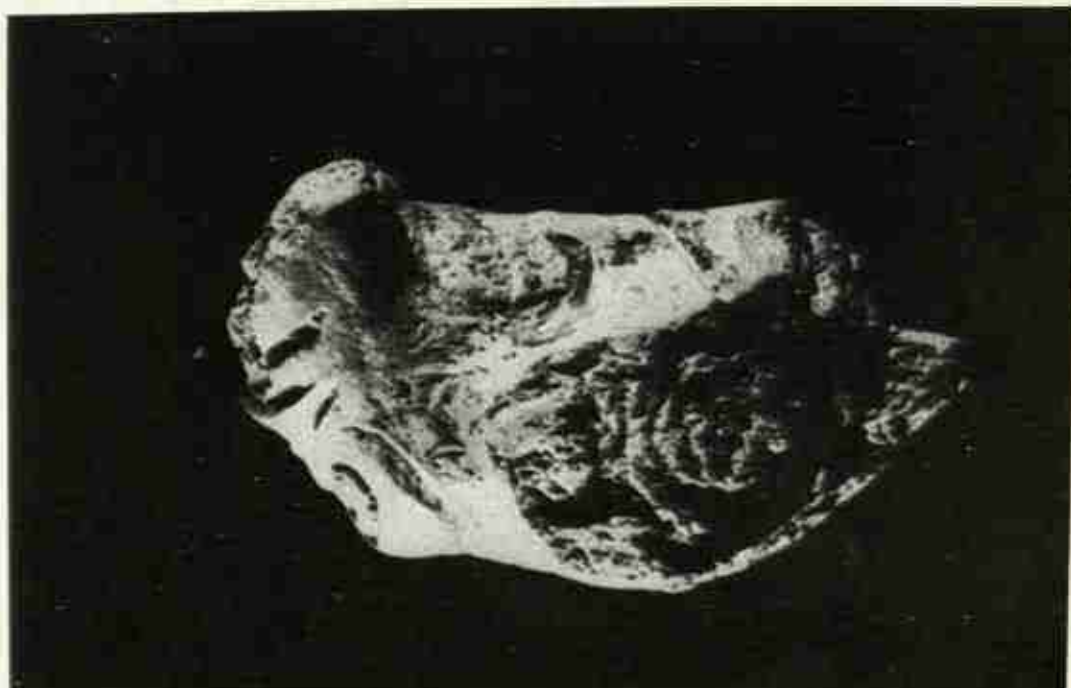
A, Terracotta torso of a male figure. Ht. 145 mm; B, Terracotta head. Ht. 60 mm. See pp. 127-128



B

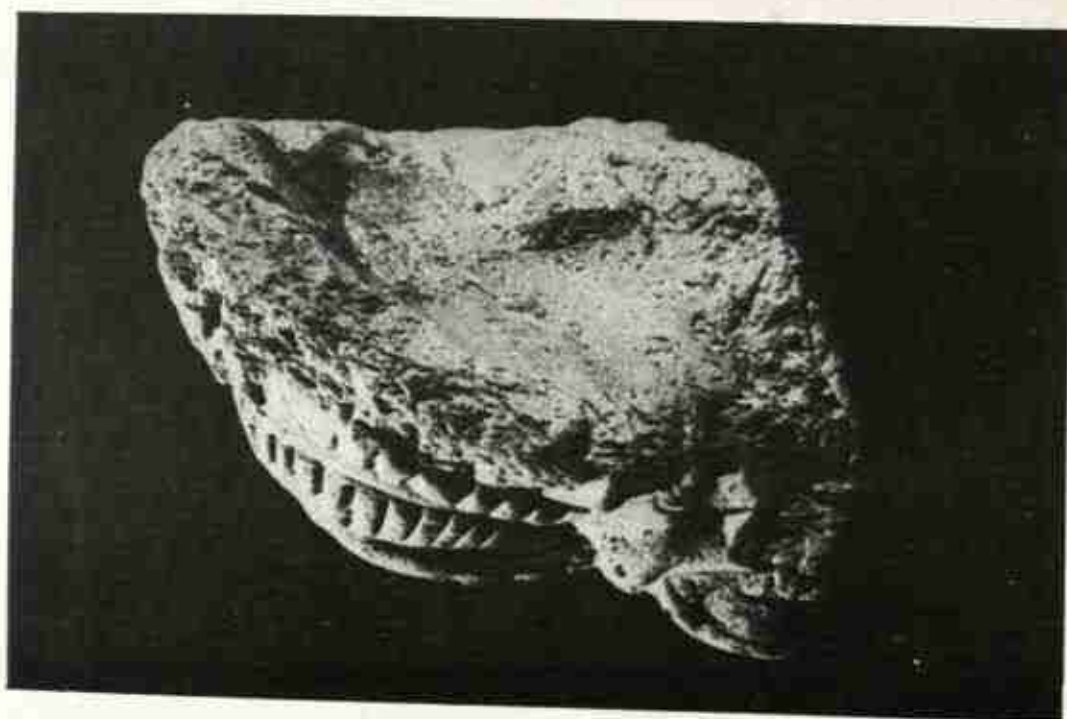


B



A

Side and top views of a terracotta Naga-head. Ht. 105 mm. See pp. 108 and 128-129



A



B

Two views of a terracotta head of a Nāgī. Ht. 99 mm. See pp. 108-109 and 129

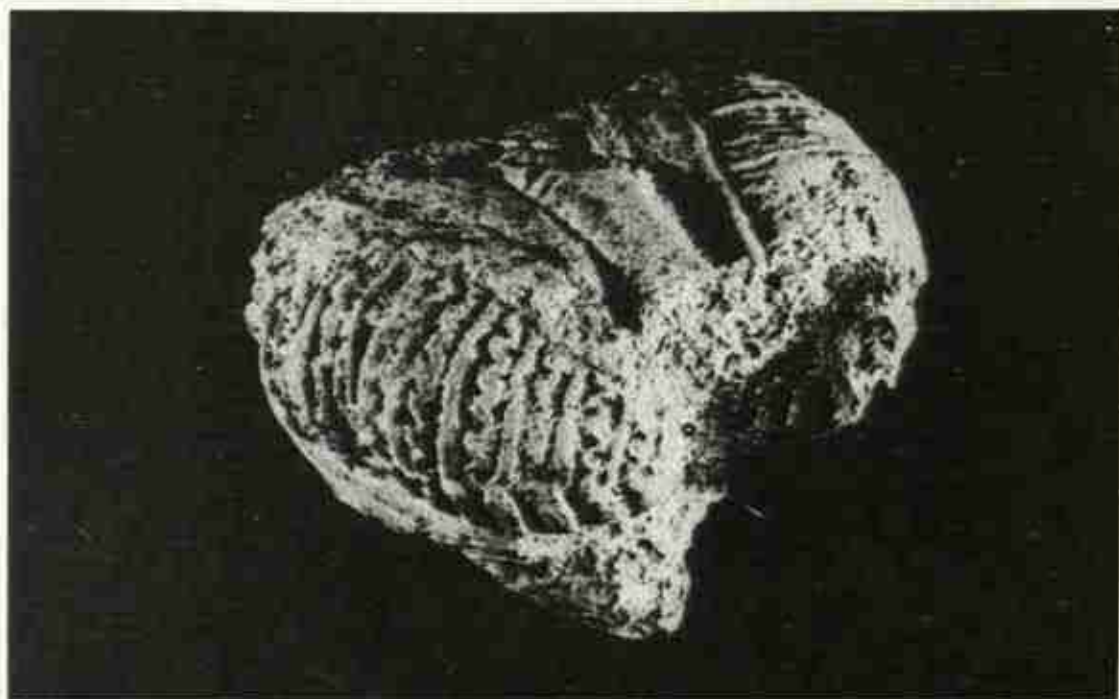


A

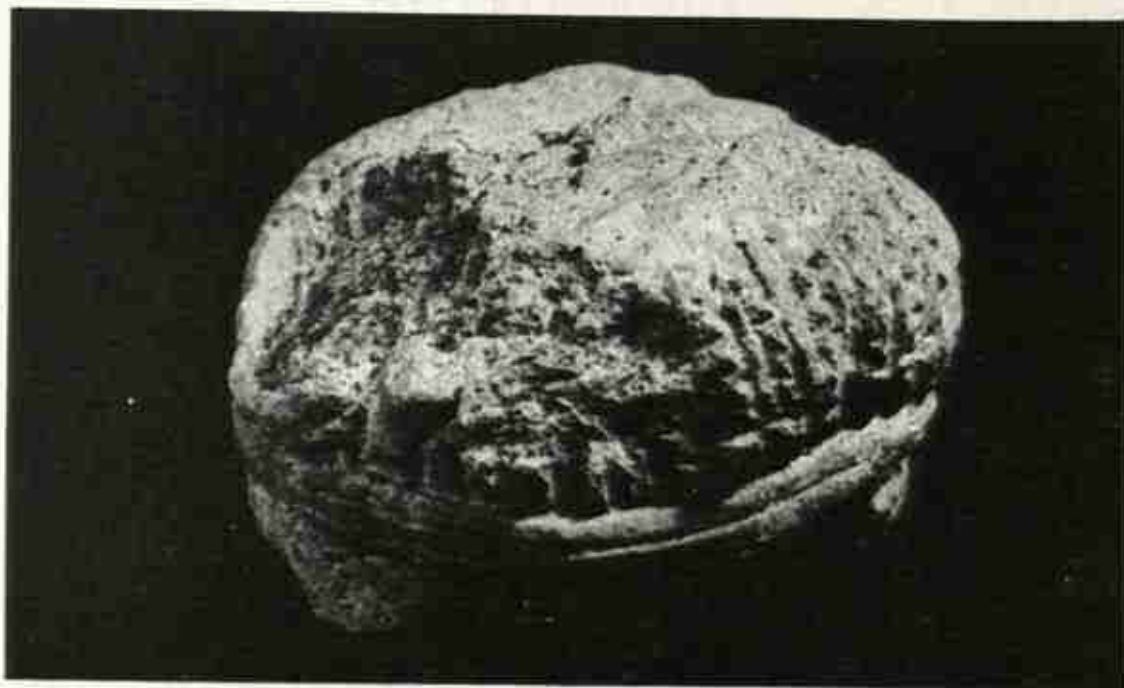


B

Two views of a terracotta, showing the hood (A) and hair-do(B). Ht. 99 mm. See pp. 108-109 and 129



A



B

Two views of a terracotta turban which may have rested on a head (missing). Ht. 74 mm.
See pp. 109 and 129

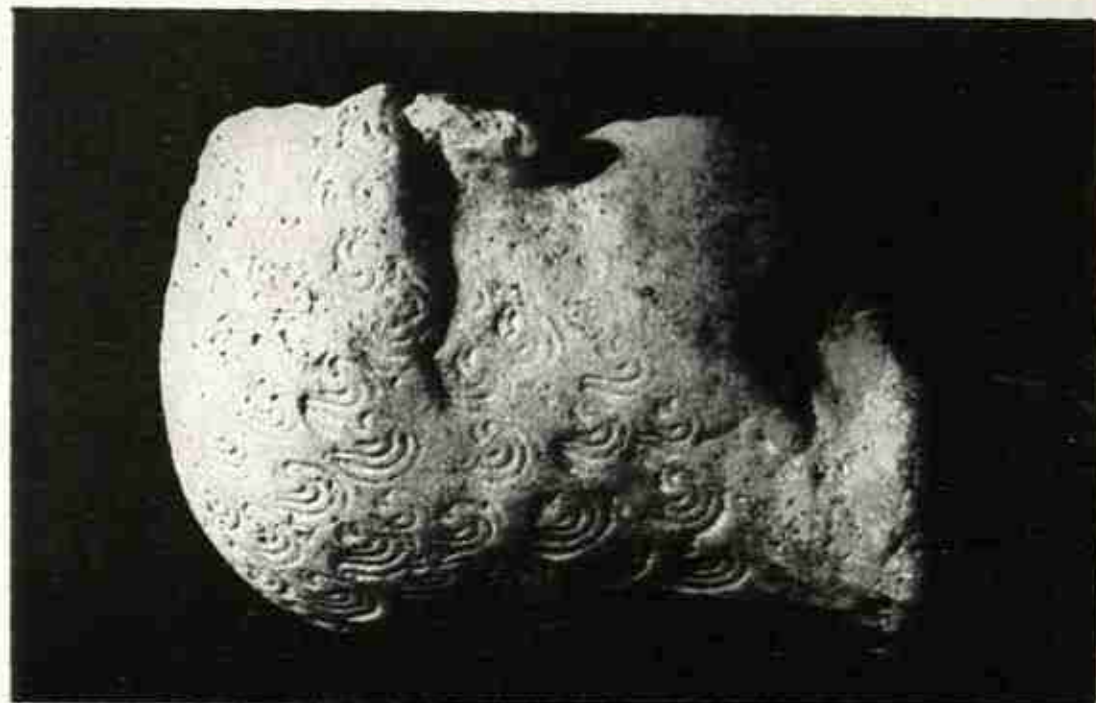


A



B

Parts of a terracotta head. Ht. A, 143 mm; B, 108 mm. See pp. 109 and 129-130

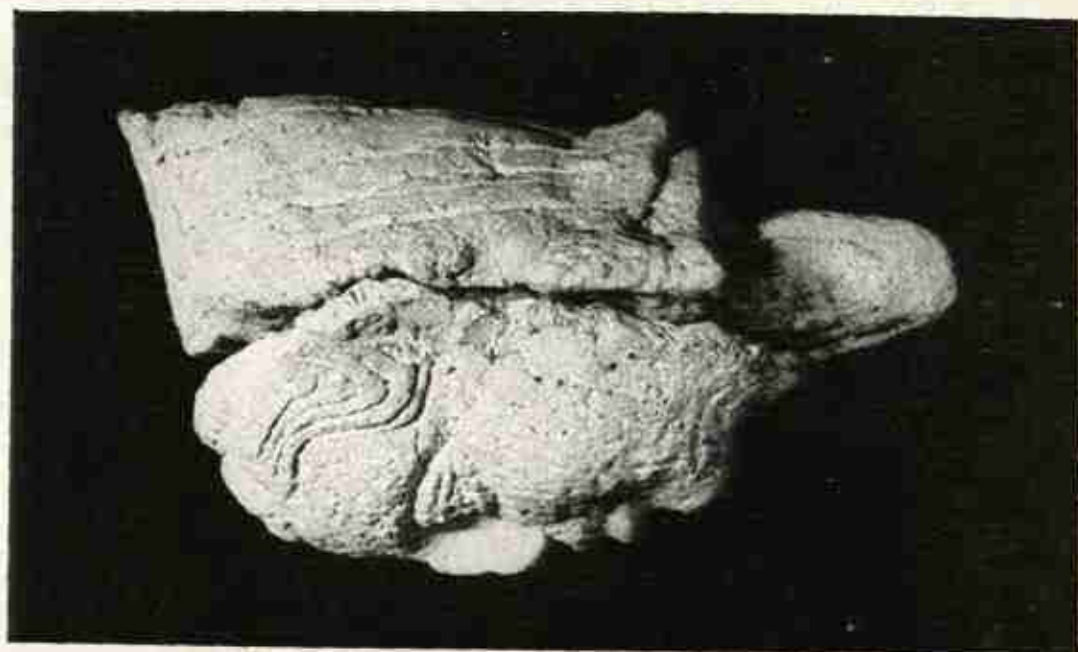


A



B

Two views of a broken terracotta head. Ht. 153 mm. See pp. 109 and 130

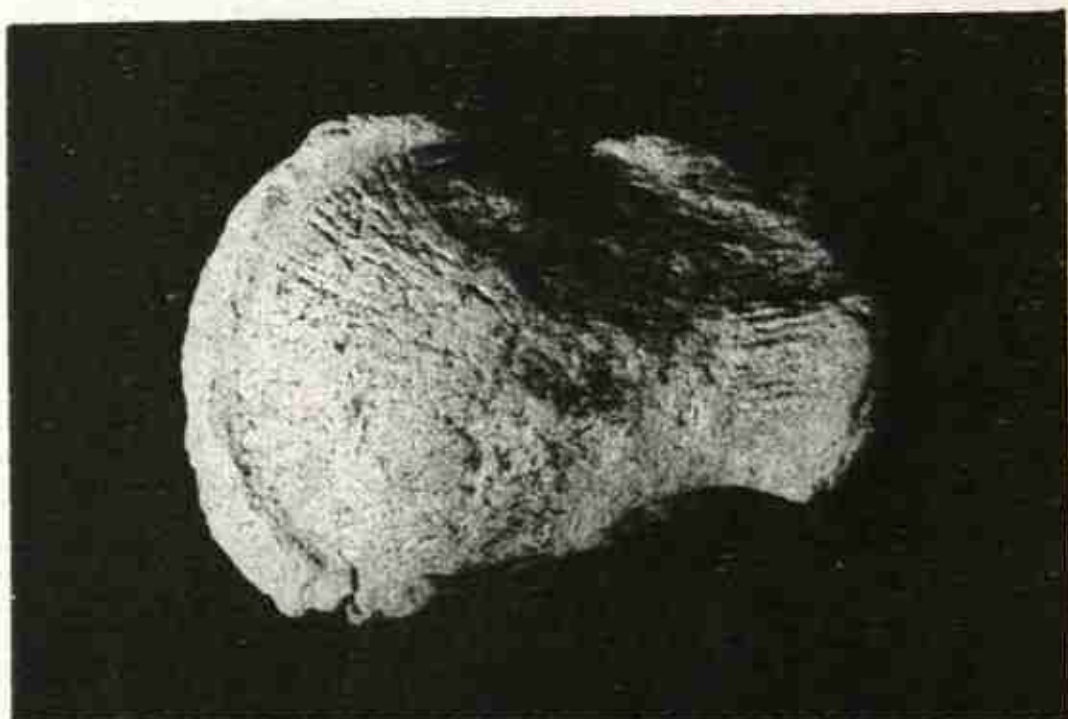


B



A

Front and side views of a terracotta female head. Ht. 144 mm. See p. 130.

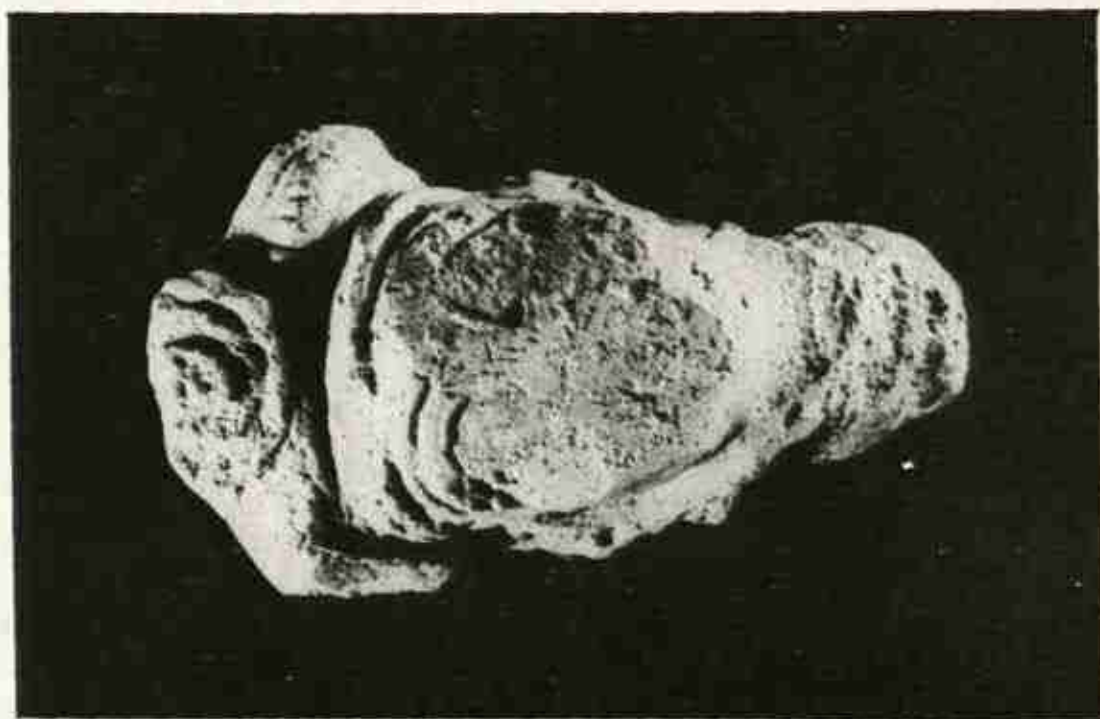


B



A

Front and back views of a terracotta head. Ht. 147 mm. See p. 130.



B



A

Terracotta heads. Ht. A, 90 mm; B, 130 mm. See p. 131



A



B



C

Terracotta heads. Ht. A, 86 mm; B, 67 mm; C, 105 mm. See p. 131



A

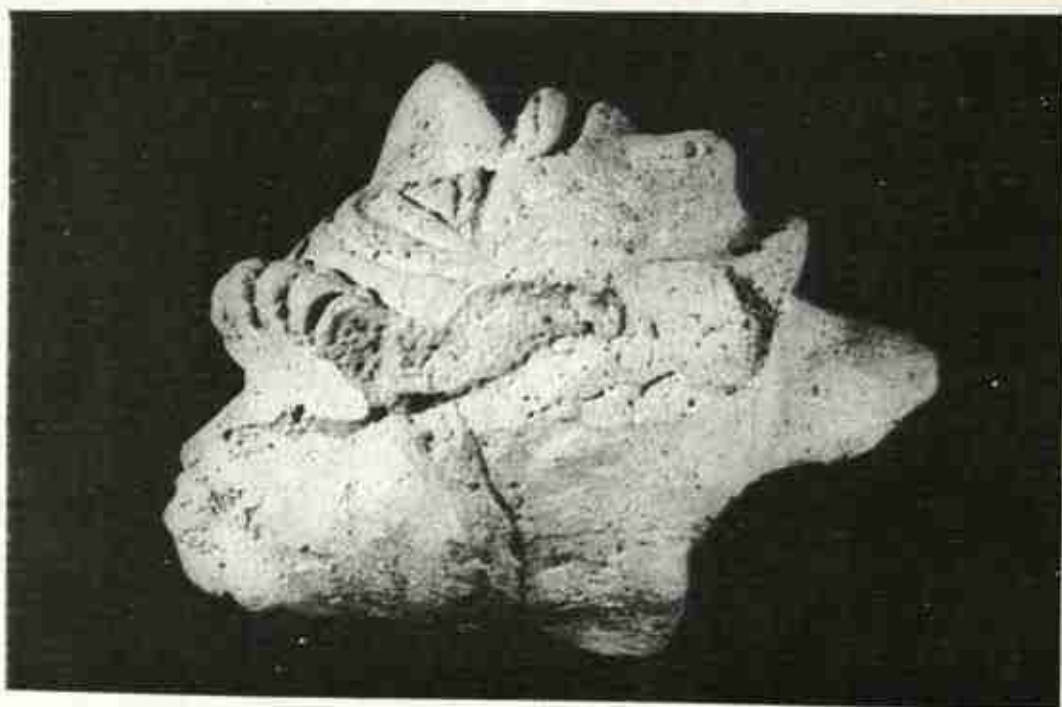


B

Terracotta heads. Ht. A, 78 mm; B, 95 mm. See p. 132



B



A

Side and front views of a terracotta head. Ht. 116 mm. See pp. 109 and 132

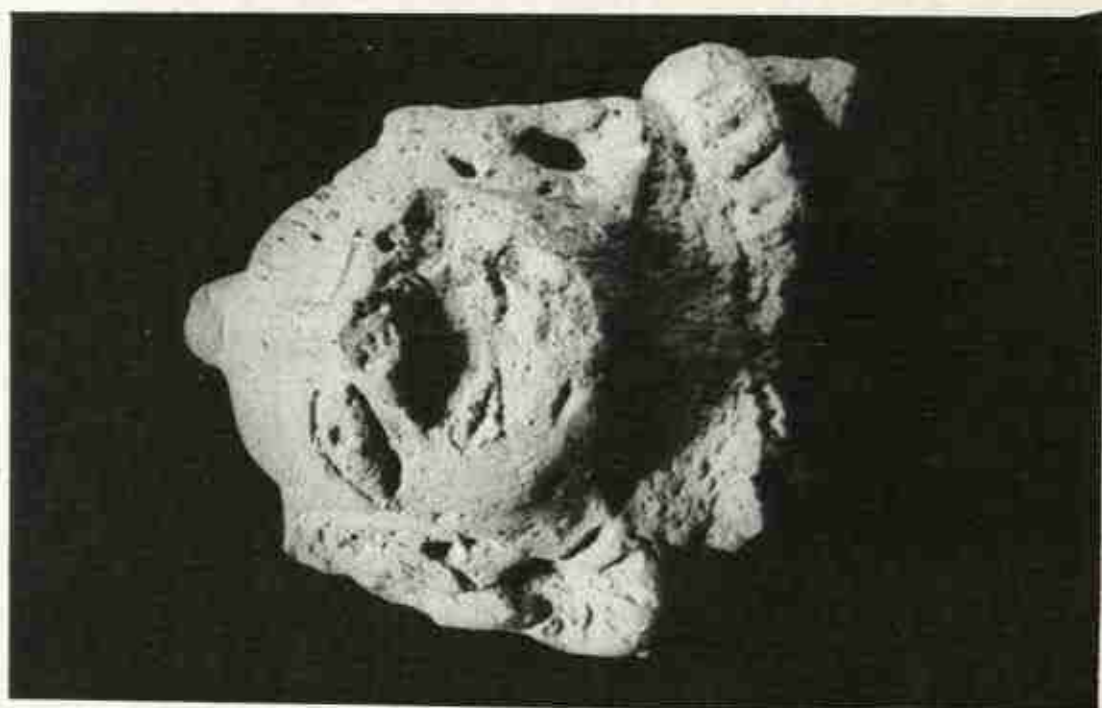


A

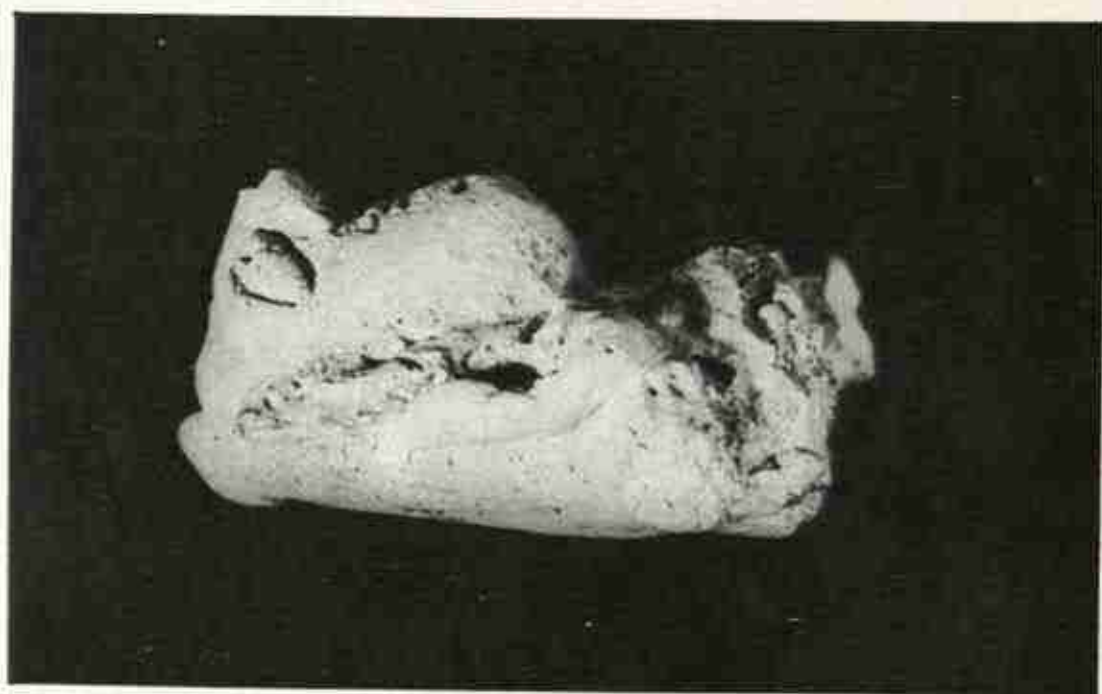


B

Front and side views of a terracotta head. Ht. 83 mm. See p. 132

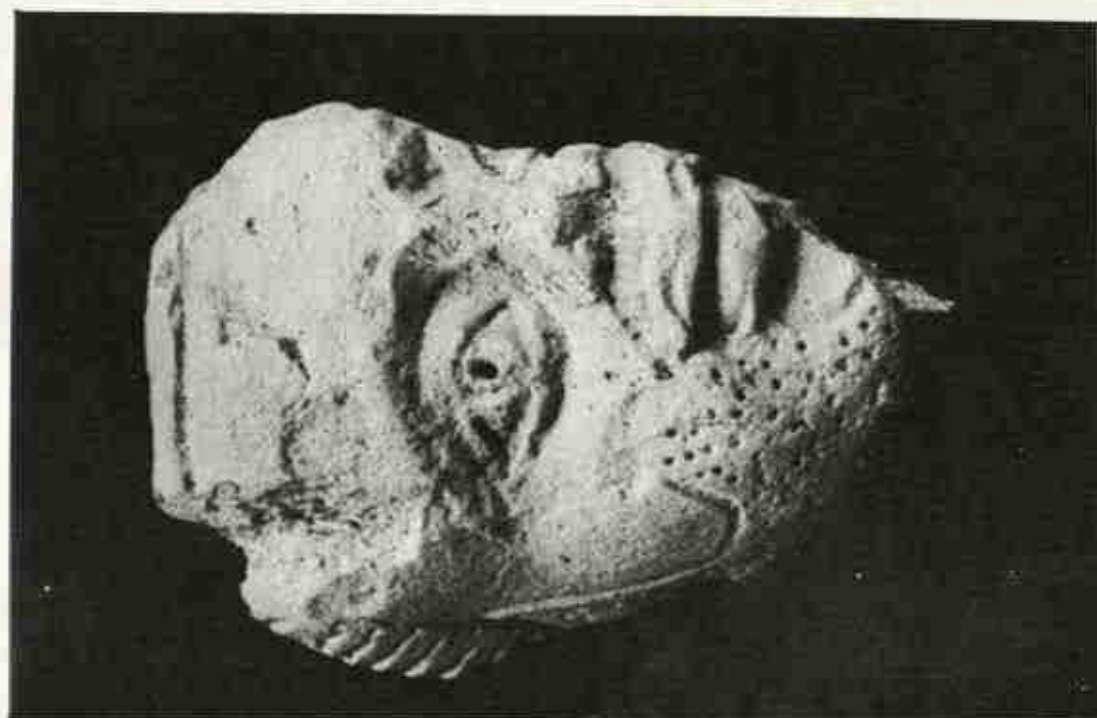


B

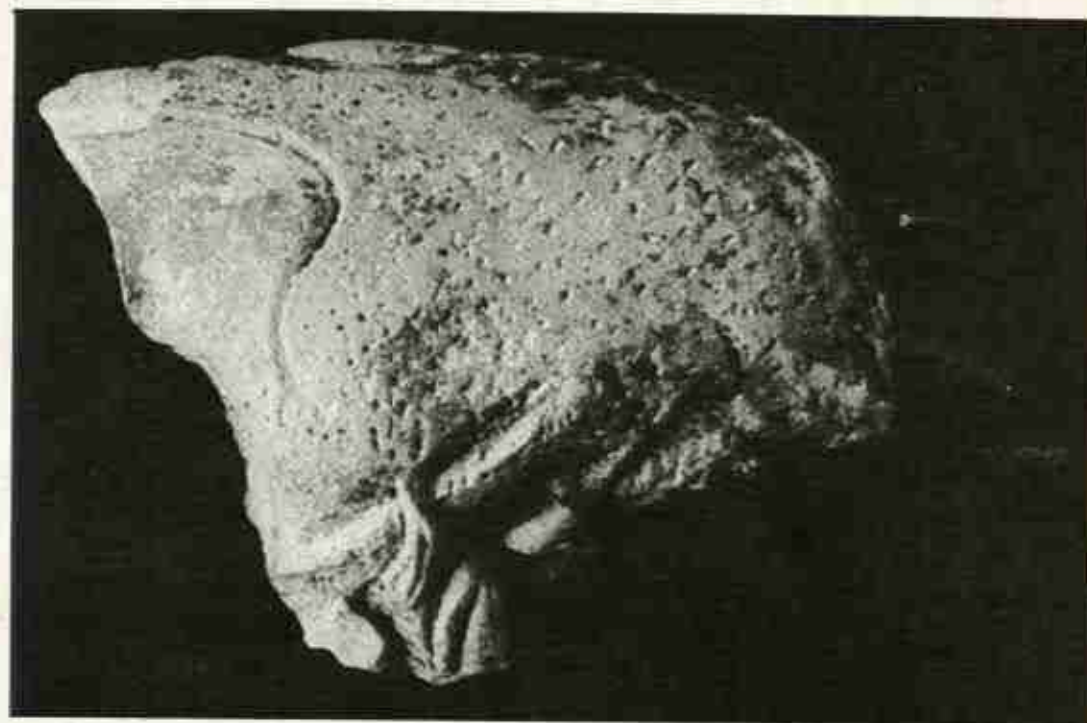


A

Side and front views of a terracotta head. Ht. 107 mm. See p. 133



A



B

A, Terracotta head. Ht. 85 mm; B, Part of the face of a terracotta head. Ht. 120 mm. See pp. 117 and 133



A



B



C

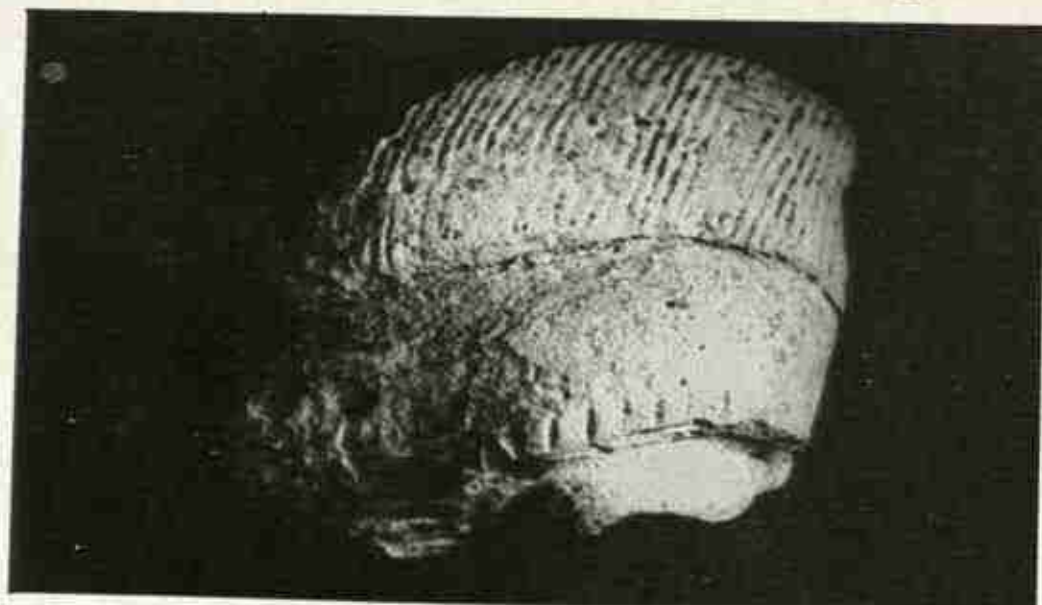
Parts of terracotta faces. Ht. A, 72 mm; B, 70 mm; C, 77 mm. See pp. 133-134



A

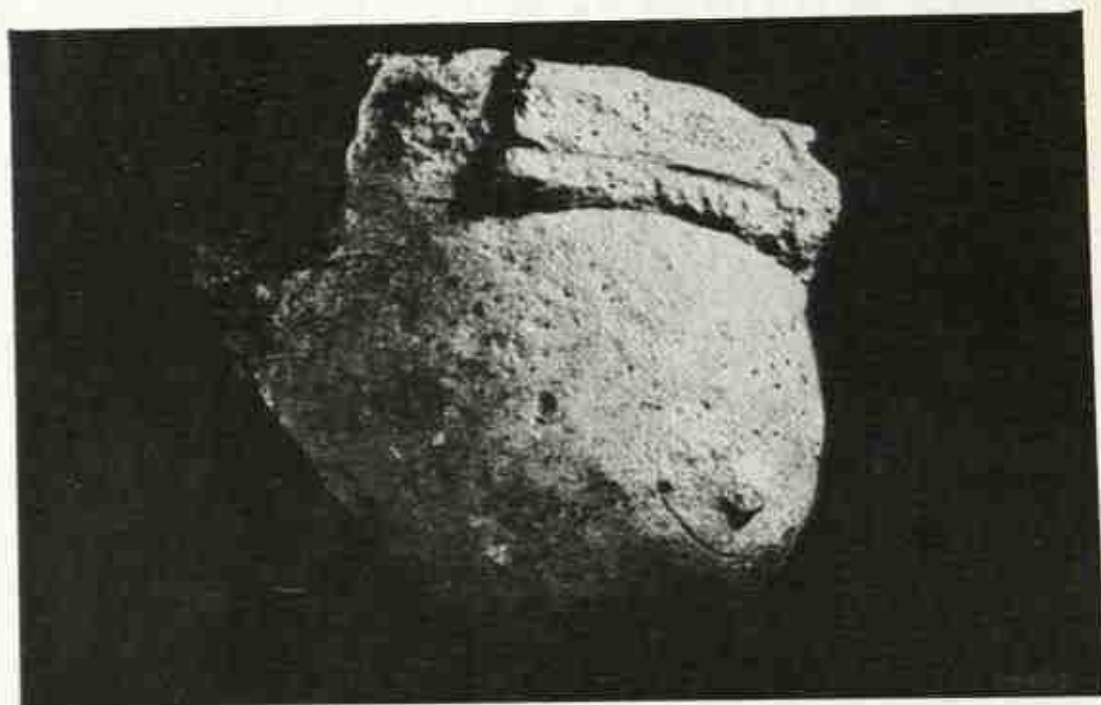


B

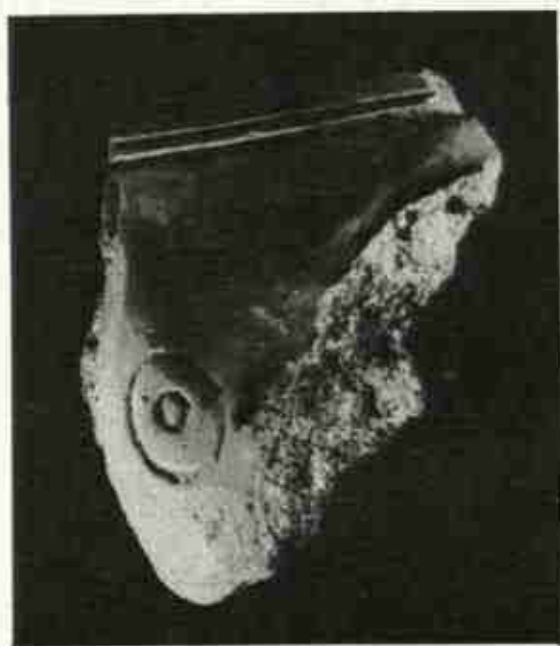


C

Parts of terracotta faces. Ht. A, 65 mm; B, 71 mm; C, 75 mm. See p. 134



A



B

A, Terracotta breast of a female figure. Ht. 123 mm; B, Part of terracotta chest of a male figure. Ht. 98 mm.
See pp. 108 and 134-35

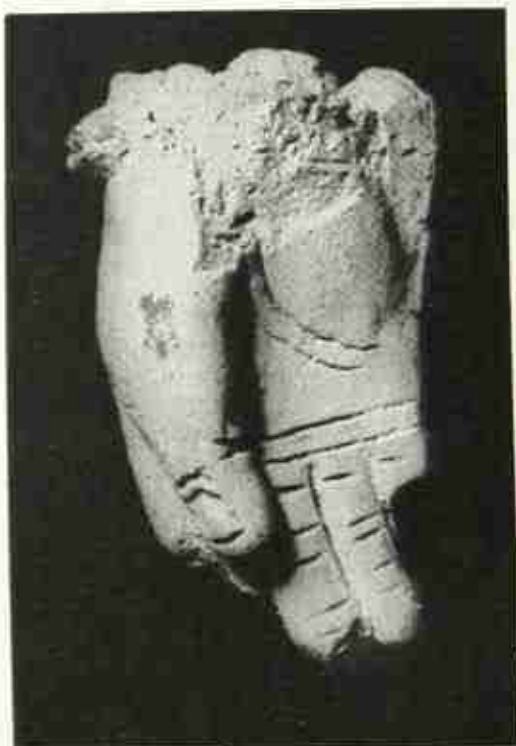


A



B

A, Terracotta, right hand in *abhaya-mudra*. Ht. 100 mm; B, Terracotta, part of an unattached hand. Ht. 97 mm. See p. 135



A



B



C

Terracotta, right hands in *varada-mudra*. Ht. A, 107 mm; B, 151 mm; C, 111 mm. See pp. 108 and 135-136



A



B

Terracotta, respectively right and left hands clasping some cylindrical object. Ht. A, 71 mm; B, 45 mm. See p. 136



B

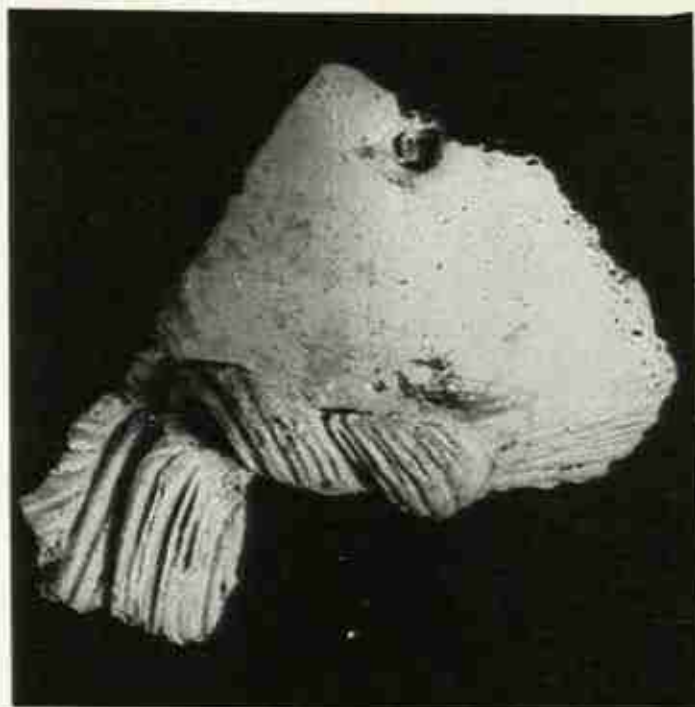


A

Terracotta, parts of arms wearing ornaments. Ht. A, 78 mm; B, 180 mm. See pp. 109 and 136

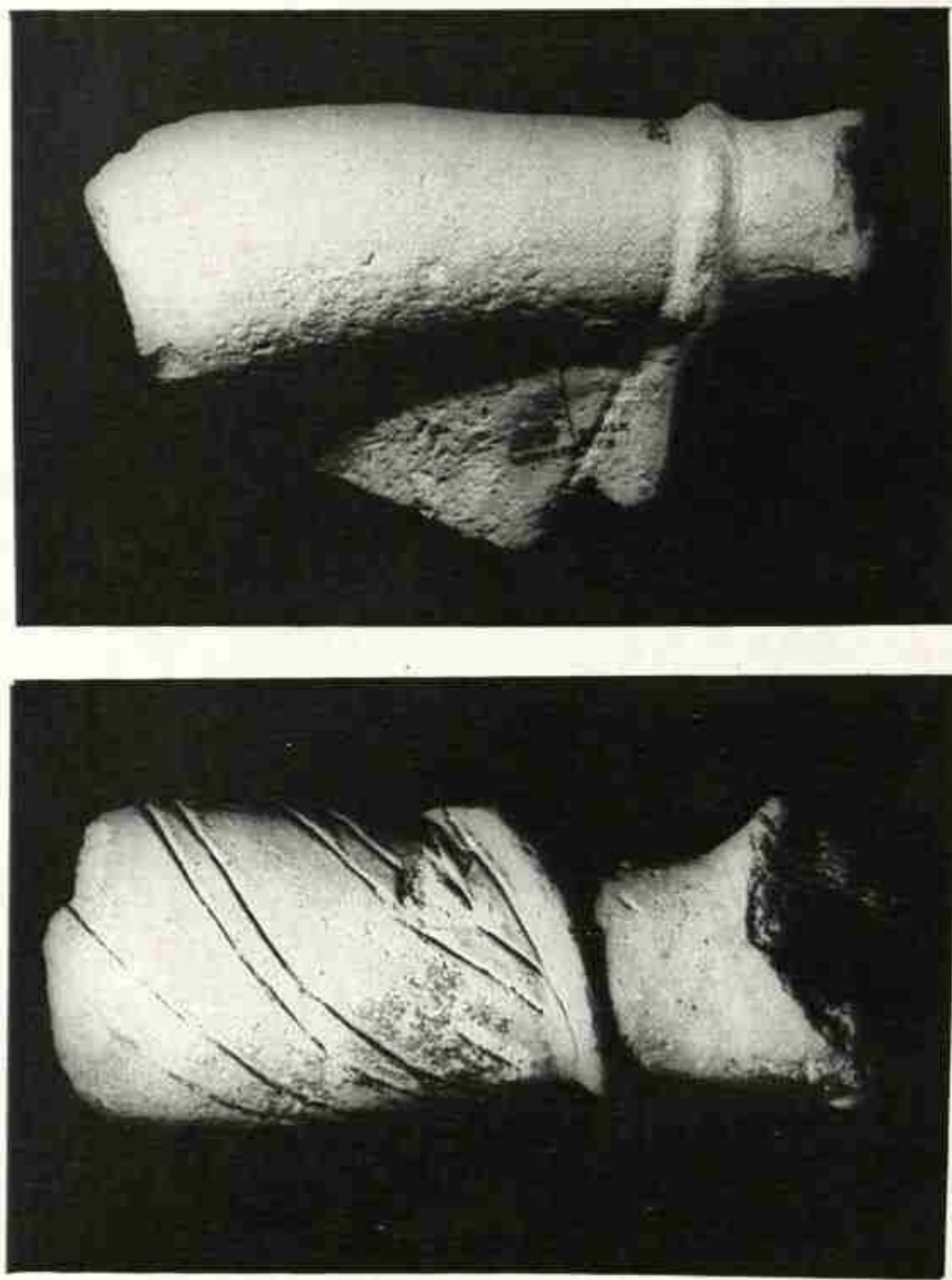


A



B

A, Terracotta, part of waist and hip with ornaments. Ht. 130 mm; B, Terracotta, part of belly and waist, with knotted *dhoti*. Ht. 180 mm. See pp. 136-137



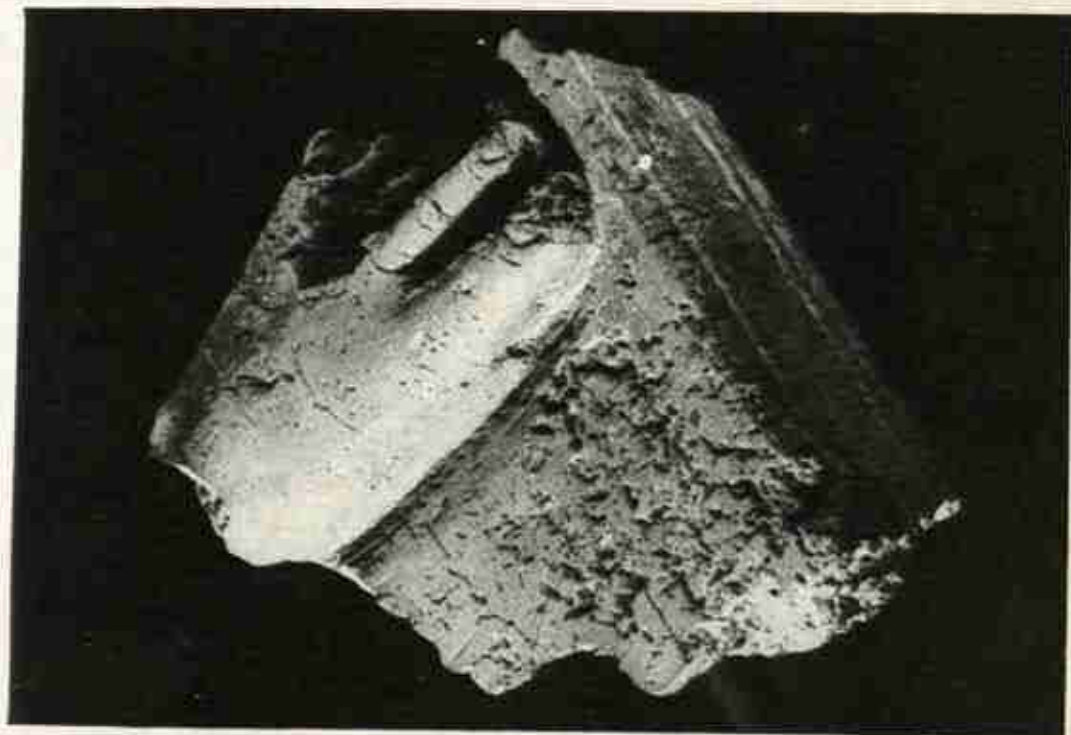
A

B

Terracotta: A, lower part of right leg. Ht. 250 mm; B, lower part of left leg. Ht. 230 mm. See p. 137



A



B

Terracotta: A, right foot, length 149 mm; B, left foot, length 150 mm. See pp. 109 and 137



A



B

Terracotta : A, left foot, length, 145 mm; B, right foot, length 135 mm. See pp. 108, 109 and 138



A

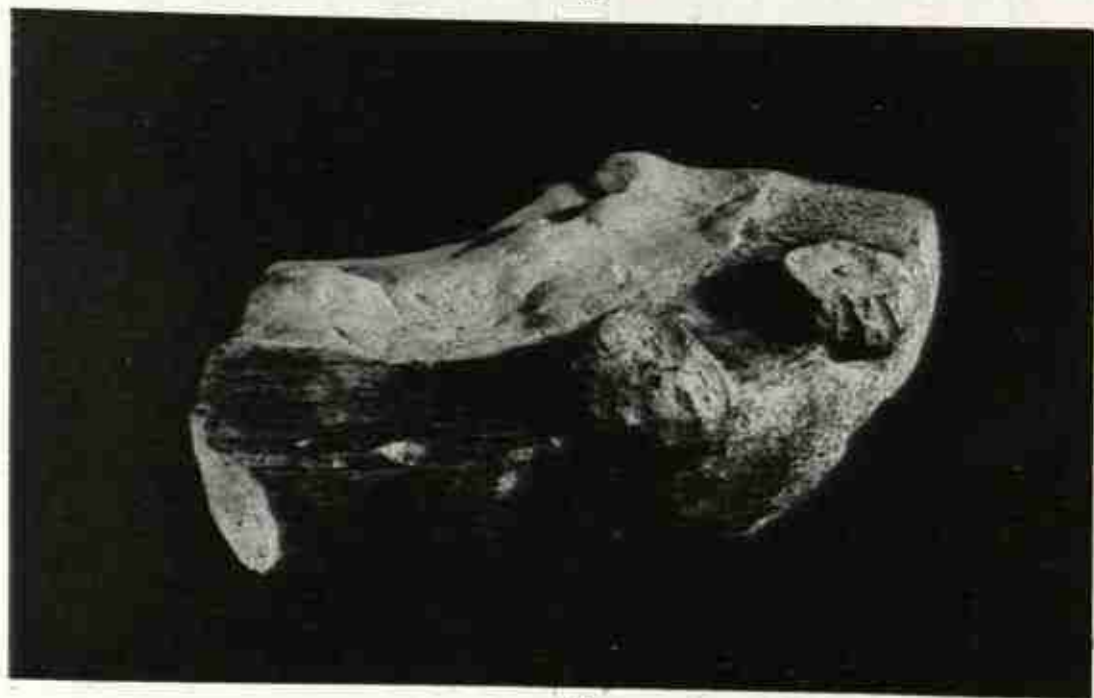


B

Terracotta : A, left foot on high pedestal, length 120 mm; B, left foot, length 125 mm. See pp. 109 and 138

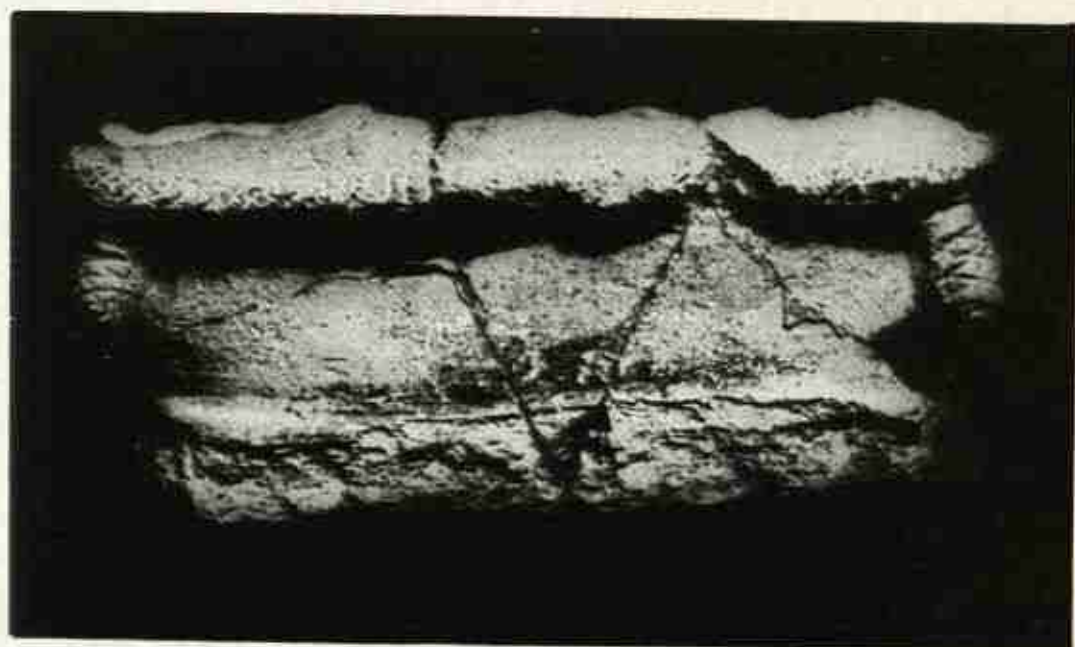


A

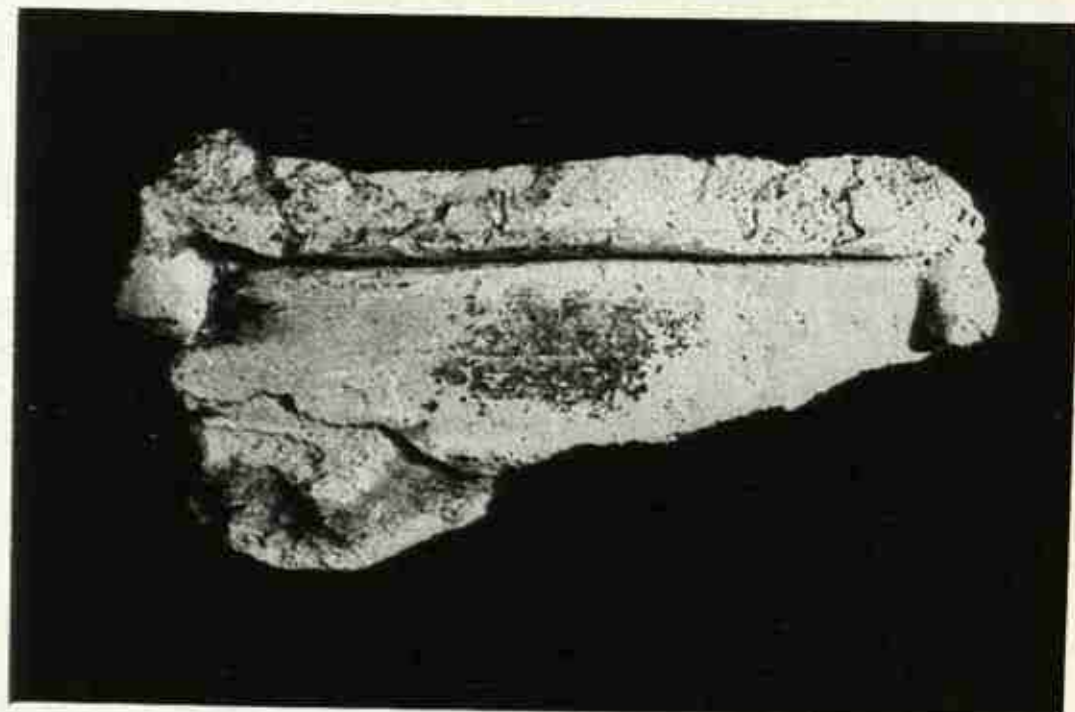


B

A, Terracotta, feet on pedestal, dia. of pedestal 220 mm; B, Terracotta, part of pedestal (?), extant length 155 mm.
See pp. 108, 110 and 138



B

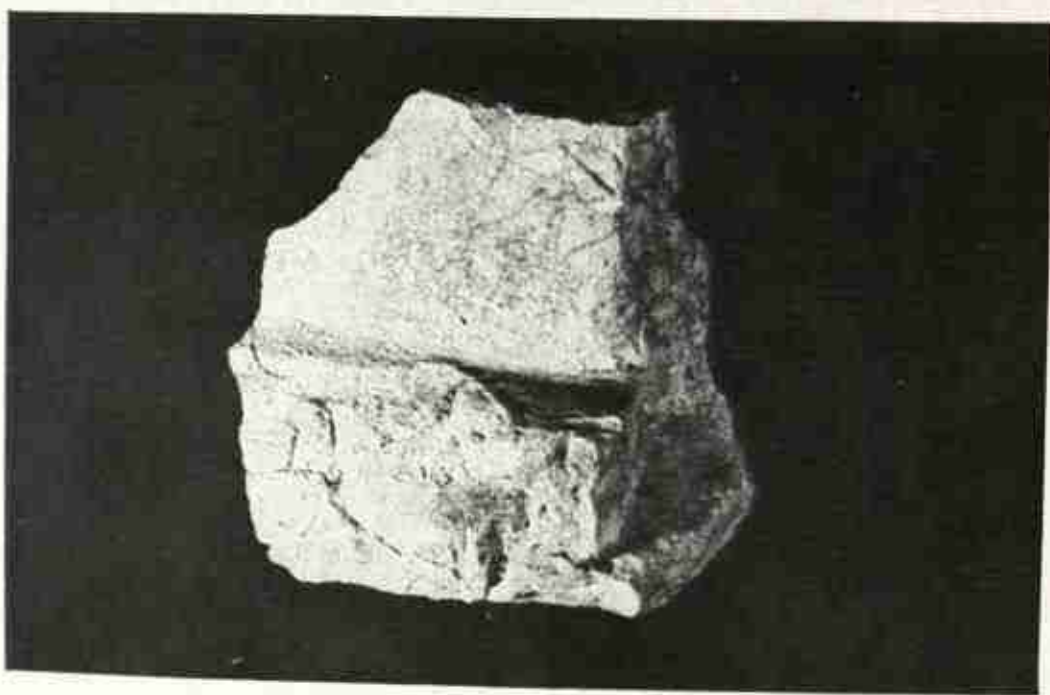


A

Terracotta, parts of pedestals. Length: A, 230 mm; B, 225 mm. See p. 139



A

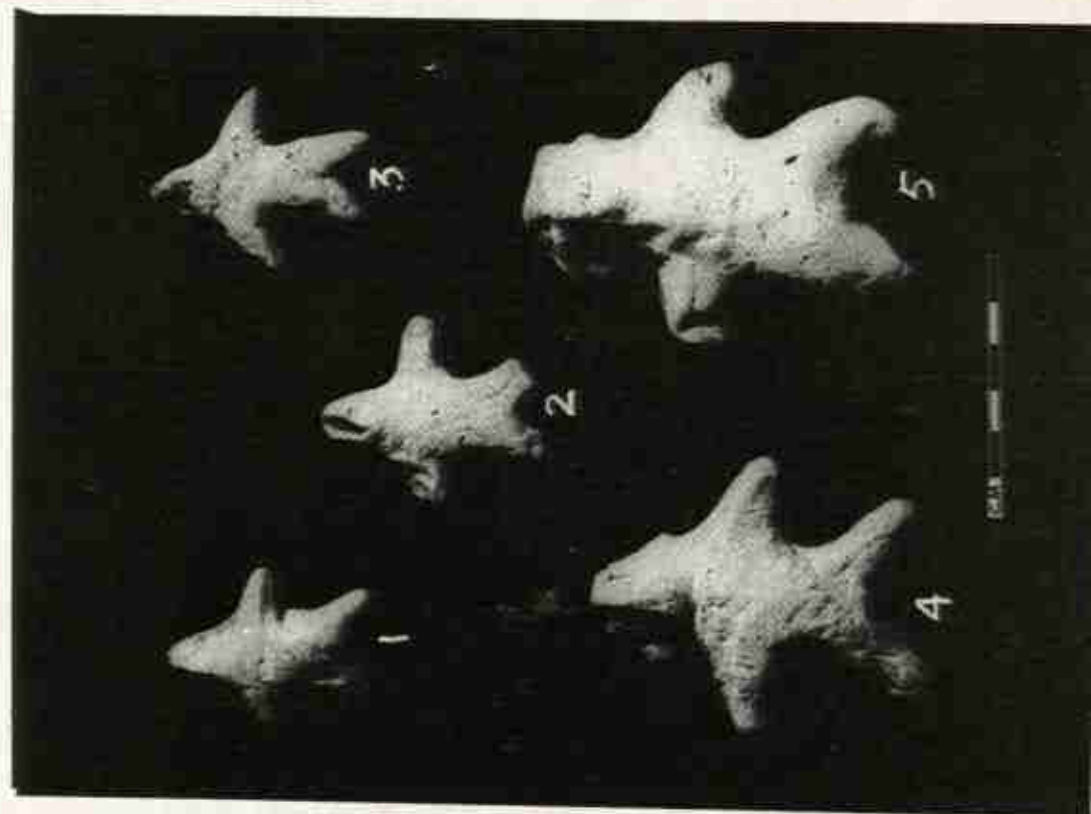


B

Terracotta, parts of pedestals. Ht. A, 200 mm; B, 190 mm. See pp. 139-140



A



B

A, Terracotta human figurines. Ht. 1, 70 mm; 2, 58 mm; B, Terracotta figurines of children. Ht. 1-5, respectively 50, 49, 51, 75 and 85 mm. See p. 140



A



B



C

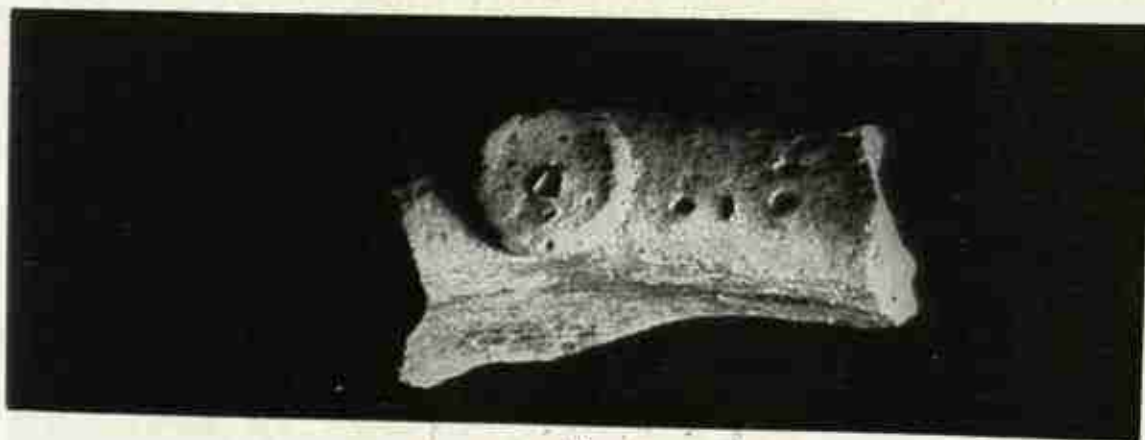
A and B, Front and back views of a terracotta human figure sitting against the wall of a votive tank. Ht. 94 mm; C, Terracotta human figure. Ht. 90 mm. See pp. 141 and 142



A



B



C

Parts of pottery bowls : A and B with bir perched on the rim ; C with an affixed disc. Dia. of bowls : A, B and C respectively 24, 23 and 20 cm. See pp. 141 and 142-143



A



B



C



D

Terracotta, cylindrical pieces with designs on top. A-C, Ht. respectively 85, 85 and 70 mm; D, dia. of rosette, 47 mm. See p. 143.



Terracotta elephant. Length 217 mm. See p. 144



Terracotta head of an elephant. Length 161 mm. See p. 144

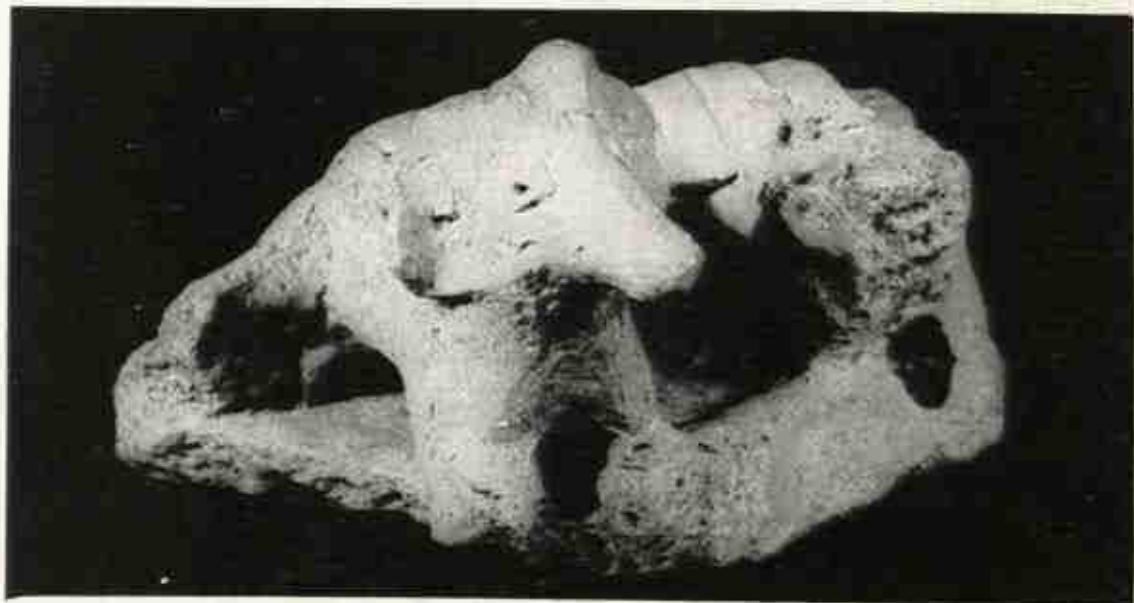


A



B

A, Terracotta trunk of an elephant. Measurement along the curvature of trunk 247 mm;
B, Terracotta elephant (?). Length 104 mm. See pp. 144-145



A



B

A, Terracotta elephants. Length 145 mm; B, Terracotta elephants. Ht. 97 mm. See p. 145



A



B



C

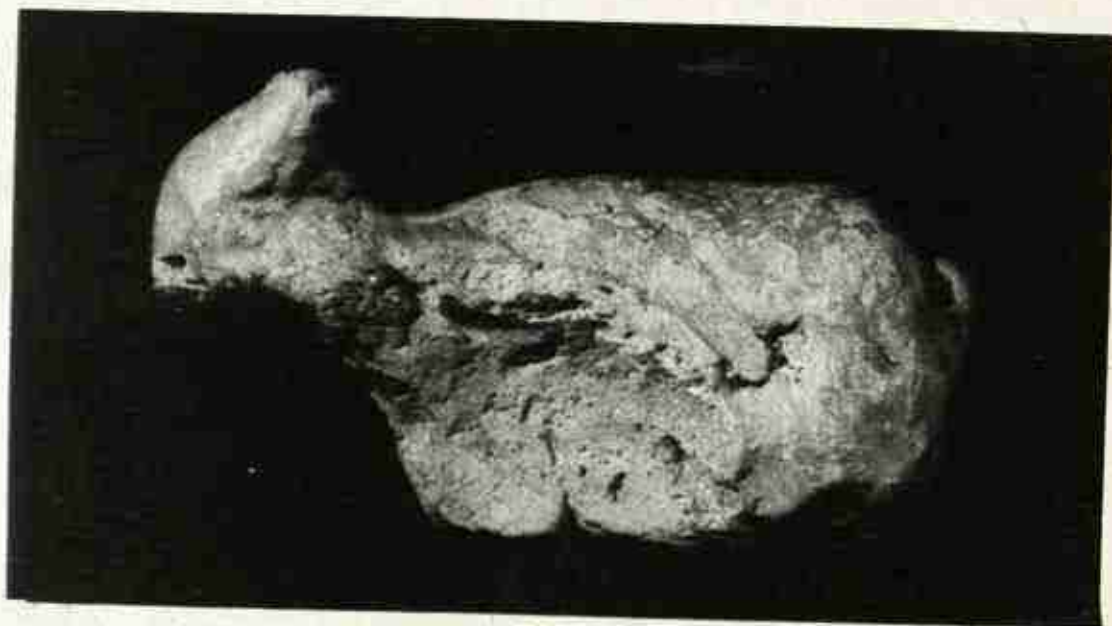


D

Terracotta : A-C, horses ; D, ram. Length A-D respectively 80, 66, 73 and 82 mm. See pp. 145-146



A



B

Two side-views of a terracotta deer. Length 145 mm. See pp. 130 and 146



A



B

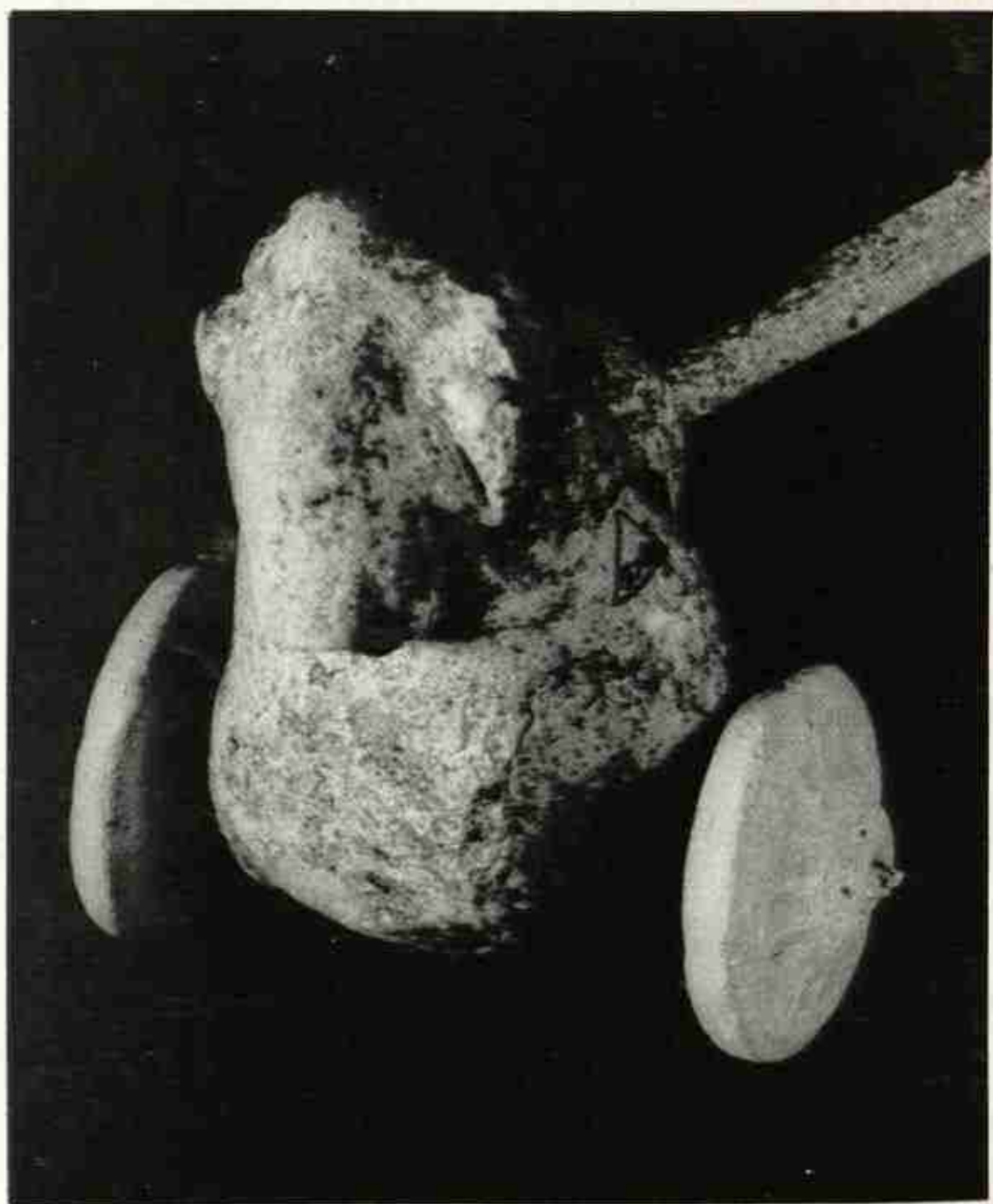


C



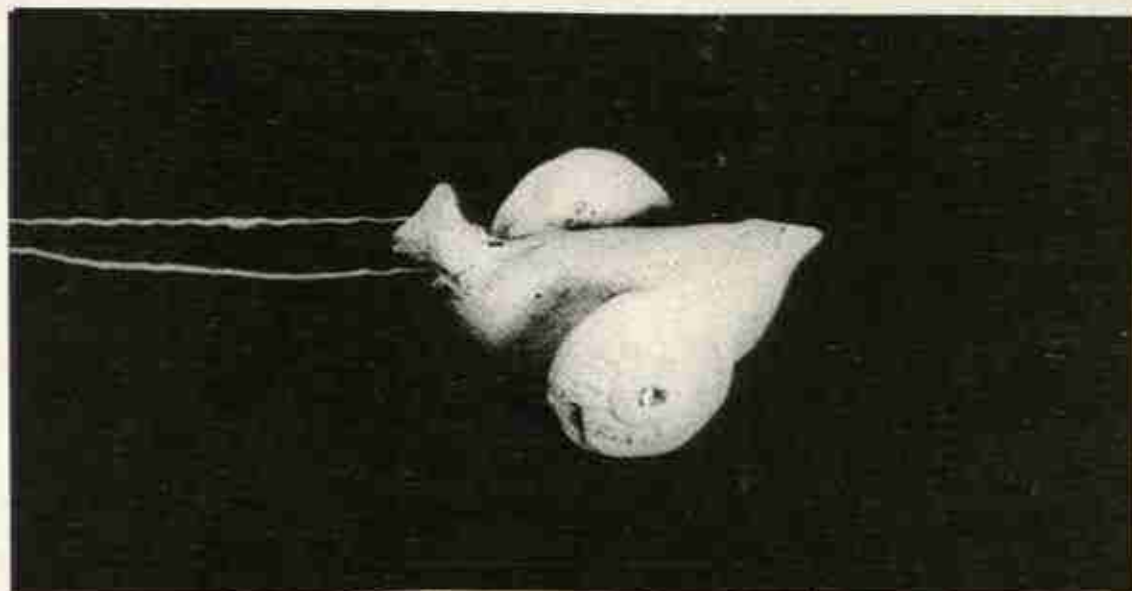
D

A and B, Two views of a terracotta animal. Length 75 mm; C and D, Two views of a terracotta bull
Length 87 mm. See p. 146



Terracotta ram, used as a toy. (The wheels and the wooden rod inserted in the hole behind have been improvised to show the likely manner of use). Extant length of toy 98 mm.

See pp. 144 and 147



A

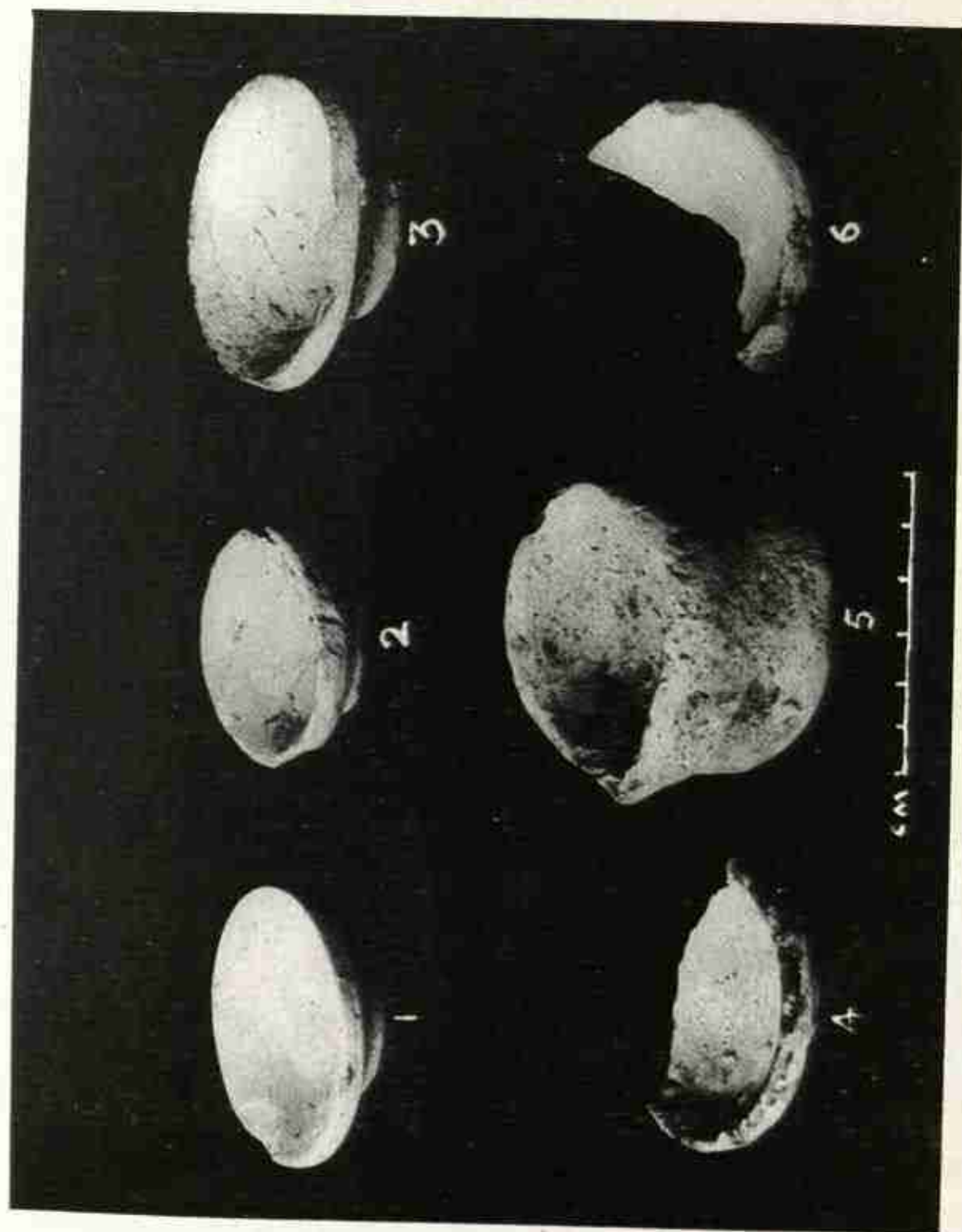


B

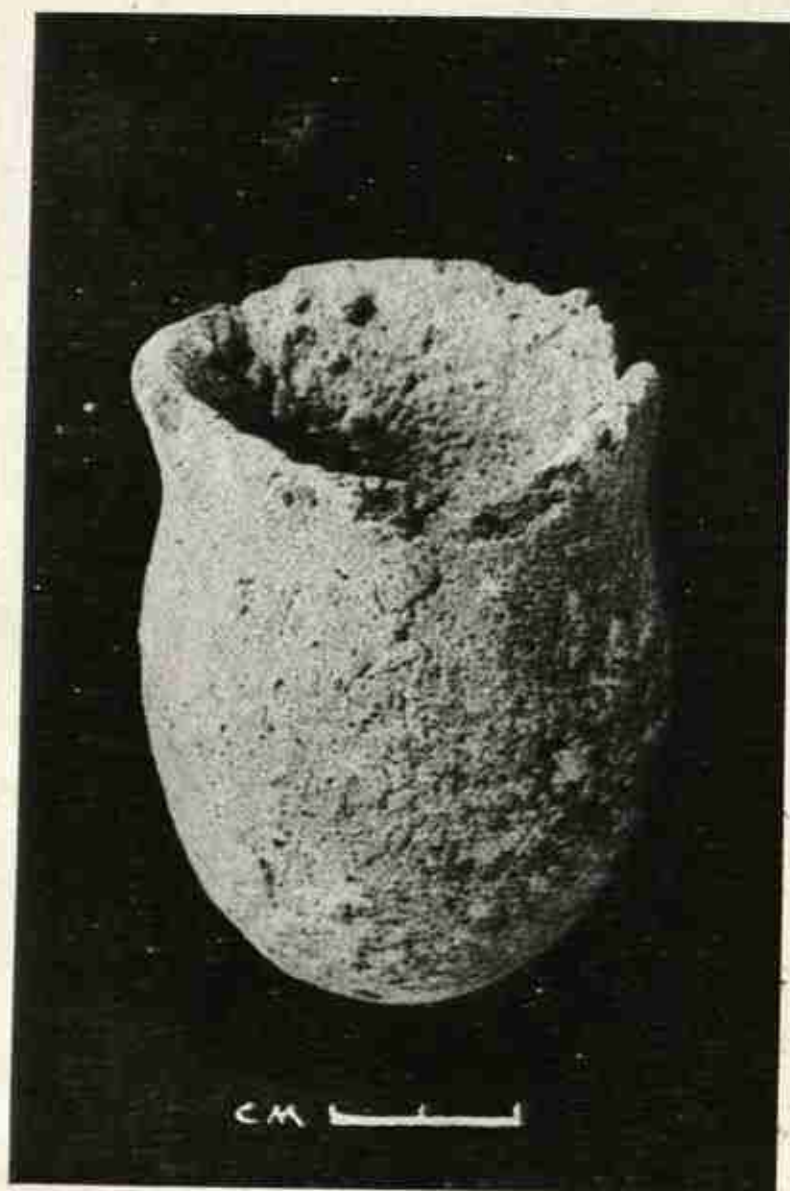


C

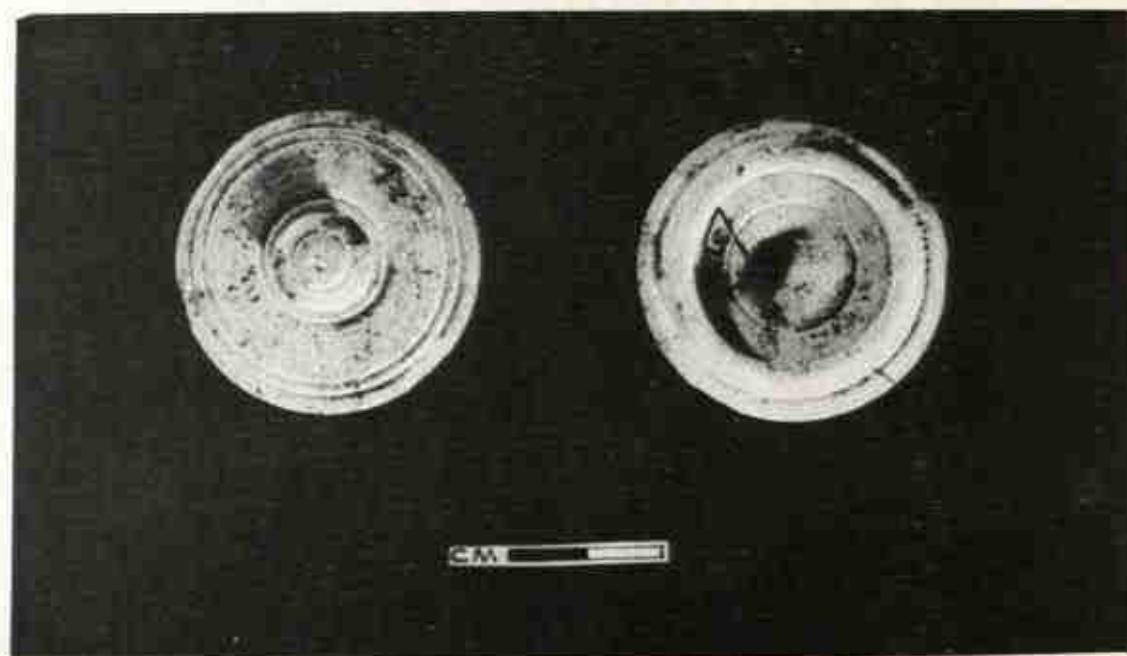
A, Terracotta bird. (The wheels and thread have been improvised to show the probable manner of use). Length 97 mm;
 B, Terracotta duck. Length 85 mm; C, Terracotta bird on pedestal. Length 106 mm. See pp. 144 and 147



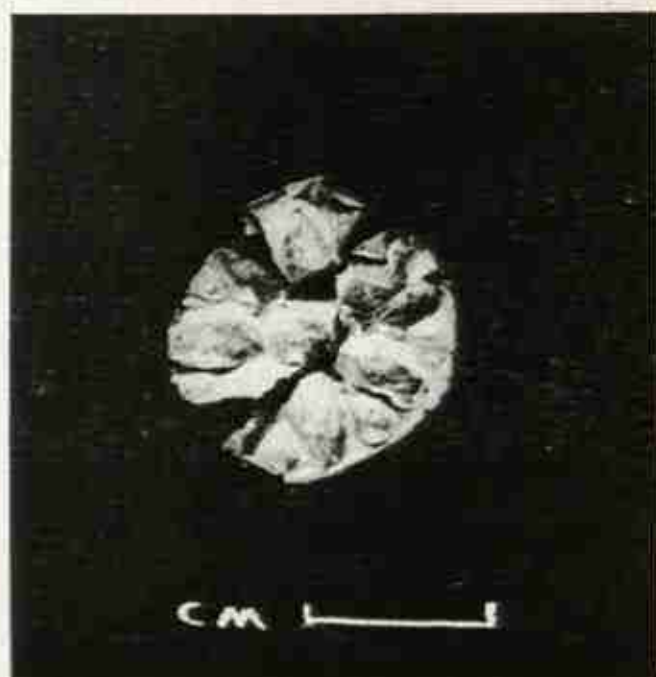
Terracotta lamps. See pp. 108 and 148.



Terracotta crucible. See p. 149

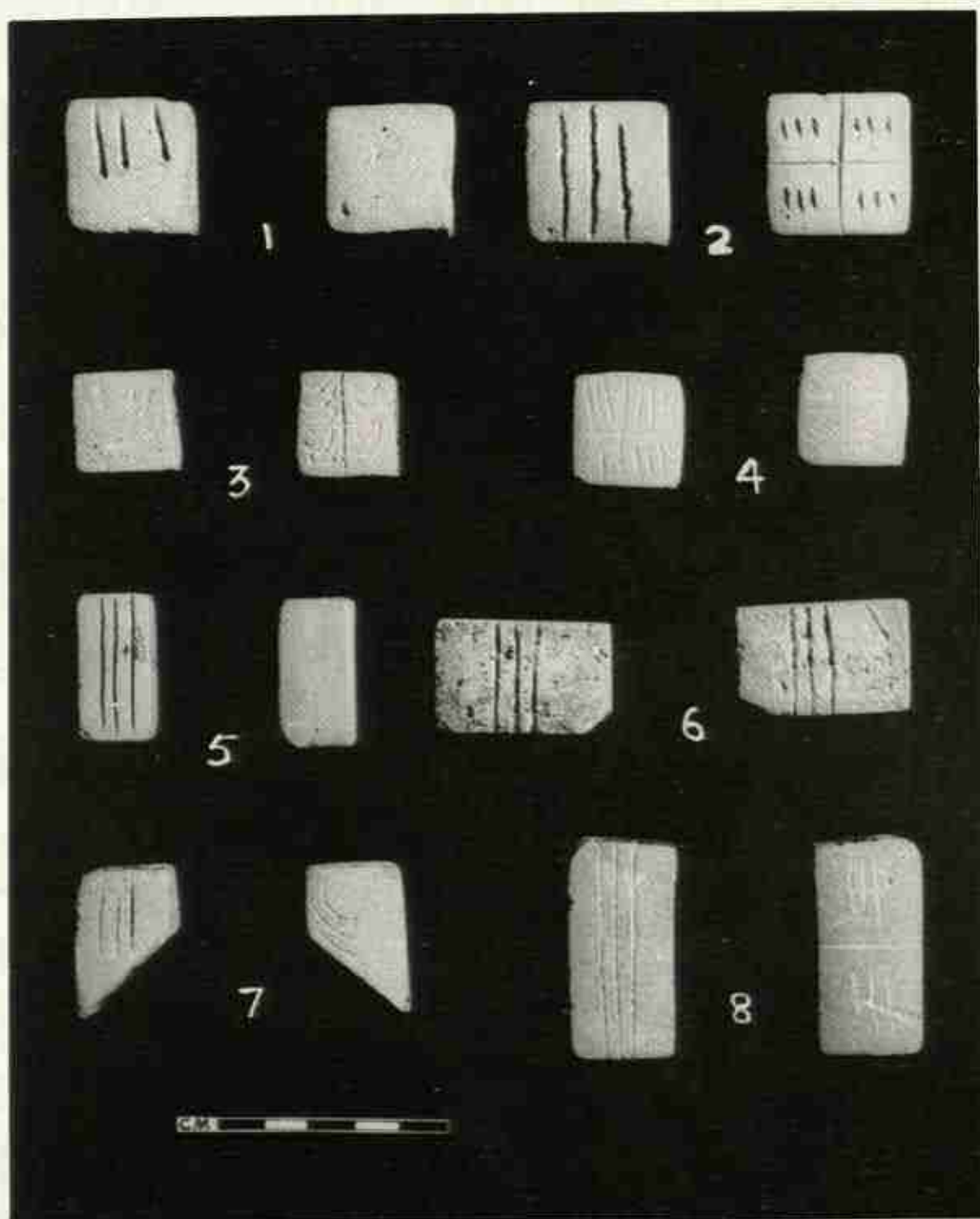


A



B

A, Top and inner views of a soapstone lid; B, gold foil. See p. 121



Incised terracotta tablets. See p. 152



Terracotta figurines of Bodhisattva. Ht. 1, 166 mm; 2, 168 mm. See pp. 109, 152 and 153

१२४३०

CATALOGUE

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