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I hereby recommend that the thesis prepared under my supervision by Jerome Sperling entitled Troy I.

be accepted as fulfilling this part of the requirements for the degree of Ph. D.

Approved by:

Carl W. Blegen

TROY I.

A dissertation submitted to the

Graduate School
Of the University of Cincinnati

in partial fulfillment of the
requirements for the degree of

DOCTOR OF PHILOSOPHY

1937

by

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CHAPTER I.

INTRODUCTION

On a hill just west of the Turkish village of Hisarlik,¹ about four miles southeast of the outlet of the Hellespont into the Aegean Sea, lies the ancient site called Troy.² The importance of this site, its great antiquity,³ and its long-continued use for habitation were first attested in modern times by the excavations of Heinrich Schliemann,⁴ and were confirmed by the work of Professor Wilhelm Dorpfeld.⁴

The complicated series of layers which constitute the unusually deep habitation deposit were found by Professor Dorpfeld to fall into nine major groups, each of which represents a long period of occupation. These nine major

1) The official name of Hisarlik was changed recently to Tefikiye.

2) The fact that the site just west of Hisarlik was a center of population in the Troad has been confirmed by recent investigations. Part of the evidence was reported by me to the convention of the Archaeological Institute of America in December, 1934; a summary of this report appeared in A.J.A. XXXIX (1935), 116. Further evidence was presented in a report in December, 1935, which was summarized in A.J.A. XL (1936), 122-123. Because of the obvious importance of the site near Hisarlik, we continue to identify it as Troy, in conformity with the poetic picture given by Homer. The period with which this dissertation is concerned is, of course, much earlier than that touched by Homer.

3) See Tr.u.II. 31. Professor Dorpfeld suggested 3000 B.C. as the date of the beginning of the settlement. A discussion of chronology is given elsewhere in this dissertation.

4) See Chapter II. for a summary.

periods were designated in chronological order as Troy I., Troy II., etc. For the sake of uniformity, this system has been kept in the recent study.

Beginning in 1932, an expedition representing the University of Cincinnati has been making an independent, careful, and detailed investigation of the entire site. This expedition is sponsored by Professor W. T. Semple, Chairman of the Department of Classics, and by Mrs. Semple. The field director is Professor Carl W. Blegen. The writer has been a member of the staff each year except 1932.

As part of the work of our expedition, a study is being made of Troy I., the earliest of Professor Dorpfeld's nine major periods, and it is the subject of this dissertation. This study is based particularly on the excavations¹ of 1933-1936, inclusive, in sectors² C 2-3 and D 2-3. The writer was in charge of the work in this area, under the guidance of Professor Blegen.

1) See Chapter III. for a summary of our excavations in Troy I.

2) See Tr.u.II., Taf. III. For the sake of uniformity, we have kept Professor Dorpfeld's division of the site into regular sectors.

CHAPTER II.

EXCAVATIONS OF SCHLIEMANN AND DORPFELD IN TROY I.

The principal part¹ of the early excavations in Troy I. was carried out by Schliemann in the campaigns of 1872 and 1879. A little supplementary digging² was done in the campaigns of 1882 and 1890 by Schliemann, and in the campaigns of 1893 and 1894 by Professor Dorpfeld.

In 1872 Schliemann first³ uncovered remains of the earliest settlement. He had begun to dig a tremendous trench,⁴ nearly 80 m. wide, southward from the north side of the hilltop. From its shape, this trench took the name of "the great north platform." Schliemann at first intended to continue digging across the entire hill, in the hope of reaching bedrock everywhere except on the slopes. Before he abandoned this gigantic task, he had actually dug within a large part of sectors C and D 2-3,⁵ and presumably also in E and F 2-3, to a level mostly below Troy II. Later this area was buried under a mass of dump from excavations in other areas, and it was left practically uncharted on Professor Dorpfeld's map of Troy.

1) Tr.u.II. 42.

2) Tr.u.II. 42-43.

3) Troy and Its Remains 96-97, 124, 127-128, 216.

4) Troy and Its Remains 99, 109-110.

5) A.J.A. XXXIX (1935), 22.

After abandoning the great north platform, Schliemann decided to continue digging only a comparatively narrow trench,¹ extending southward from the west end of the platform. This trench was dug down to bedrock, and almost everything was removed except the walls of the lowest stratum. Ultimately a considerable portion of sectors D 4 and D 5 was excavated as part of this trench.

In Dorpfeld's system of nine major periods, Troy II. is distinguished² by a fine fortification wall, various stages of which may be seen in sectors C and D 6, as well as in the adjoining areas in the southern part of the citadel. Troy I. necessarily includes all underlying strata of habitation deposit, with a total thickness of about 4 m. or somewhat more.

Both Schliemann and Dorpfeld recognized the fact that within the time of Troy I. there was a long succession of remains, but they did not make distinctions between the numerous sub-periods other than noting occasionally a general distinction between early and late Troy I.³ The walls of the early period were found on or near bedrock. Those of the late part of Troy I. were found at a higher level, but still below the foundations of Troy II.

1) Ilios 24; also see X-Y on Plan I.

2) Tr.u.II. 32.

3) Tr.u.II. 44-45.

The walls of Troy I. found by Schliemann and Dorpfeld fell into two general classes: (1) house walls, which were upright, but not thick; (2) protective walls, which had a sloping face or batter, and were of pronounced thickness.

The long parallel walls left standing on bedrock in D 4-5 were rightly interpreted¹ as being in the class of house walls. These walls run approximately from east to west. They remain incompletely excavated, and according to Professor Dorpfeld² we have no positive proof that any crosswall assignable to the long walls has been unearthed. It was Professor Dorpfeld's conjecture that all these walls could have belonged to a single complex structure,³ but evidence found in our recent excavations indicates that they possibly belonged to a number of structures of simple plan.⁴

Of a somewhat different character were portions of certain heavy walls with batter, which were interpreted as belonging to protective circuit walls⁵ of various times. Those at the southern end of D 5 are now either in ruins, or lie buried under fallen earth, so that no recent study has been undertaken. A single bit of protective wall in sector D 3, marked "m" in fig. 7, page 43 of Troja und Ilion, is still preserved; although it may have served as

-
- 1) See the discussion of our House 102.
 - 2) Tr.u.II. 44.
 - 3) Tr.u.II. 46.
 - 4) See the discussion of our House 102.
 - 5) Tr.u.II. 44.

fortification, it appears to have been a terrace wall¹ assignable to the later part of Troy I.

The architectural evidence from Troy I. found by Schliemann and Dorpfeld may be summarized in this way: Small portions of what appeared to have been protective walls of various times were found. No complete architectural plans of houses were recovered, but in the lowest stratum, lying on or very near bedrock, a number of long, approximately parallel walls, which probably belonged to dwellings, were partly excavated.

In order to complete the work of the early excavations, a careful study of the pottery was made by Hubert Schmidt.² The pottery comprised the most important non-architectural remains found in Troy I. Fortunately Schliemann's notes on the finding of the important pieces were rather carefully written, and Hubert Schmidt was able to base his study of the pottery of Troy I. upon this information. For Troy I., the work of Hubert Schmidt consisted principally of listing and describing the complete or nearly complete vases which could be assigned with any certainty to this period.

In his admirable study of the pottery of Troy I., Hubert Schmidt was handicapped by the fact that it was

1) Our Wall AB. See the list of walls.

2) Tr.u.II. 244-252. Also the catalogue, Heinrich Schliemann's Sammlung Trojanischer Altertümer.

difficult for him to make comparisons with a number of other early sites which have been excavated since that time. Furthermore, for lack of stratigraphic evidence, it was impossible to make a distinction between the pottery from the earlier and the later sub-periods of Troy I. Thus the ceramic development from the beginning to the end of this period remained an untouched subject.

Dorpfeld's monumental publication, Troja und Ilion, appeared in 1902. It was a comprehensive account summarizing all the work which had been done at Troy. In addition to Professor Dorpfeld's own expert knowledge, this publication embodied the best of Schliemann's observations, as well as supplementary information contributed by Hubert Schmidt and other specialists. Yet Professor Dorpfeld himself realized that there were many gaps¹ in the account of Troy I.

To some extent these gaps may be explained as resulting from the fact that the excavations were limited in area. Excavations over a wider area would have yielded some additional evidence, and might have helped in the interpretation of some of the remains. Some of the gaps in our knowledge as derived from the earlier excavations may also be ascribed to the fact that

1) Tr.u.II. 43 and 48.

no demand had yet arisen for an exact study of facts of detail like stratification, with the help of which a long period like Troy I. can now be divided into numerous sub-periods.

CHAPTER III.

UNIVERSITY OF CINCINNATI EXCAVATIONS IN TROY I.

Five annual campaigns of excavations have been carried on at Troy by the University of Cincinnati, in the years 1932-1936, inclusive. In the first season some sporadic finds were made which could be assigned to the First Settlement, but the study of this period was really begun in 1933.

Along the western scarp of Schliemann's great north-south trench,¹ approximately at the eastern edge of sector Q 4, the deposit of Troy I. was easily accessible. Under the supervision of Professor A. J. B. Wace and of Professor Carl W. Blegen a small force of workmen excavated here from May 15th to June 29th, 1933, and a very careful examination was made of the layers.² Here the deposit belonging to Troy I. was found to be nearly 4 m. thick, including many successive floor levels. These were grouped in six clearly marked layers, of which several could be combined, so that finally four successive chronological stages were recognized in the history of the First Settlement. These stages were designated as Ia, Ib, Ic, and Id. Of the six layers, the

1) See p. 4, first paragraph.
 2) A.J.A. XXXIII (1934), 2-4.
A.J.A. XXXIII (1934), 2-4.

first and second were included under stage Ia, and the fourth and fifth layers were included under stage Ic, because their separation was less sharply indicated than in the other instances.

Toward the end of April, 1933, the digging of a large exploratory trench in sectors D 2-3 was begun under the supervision of the writer. The first object of this work was to clear away the earth dumped by Schliemann when he buried this part of the great north platform.¹ Then it was our intention to determine how much of the ancient deposit had been left undisturbed during Schliemann's excavations, and what the character of this deposit was.

Later the area under investigation was extended westward into G 2-3, to include the entire western end of the great north platform. The task of removing the masses of earth dumped here by the early excavators required the greater part of two campaigns for completion. As re-opened in 1933 and 1934, the west part of the great north platform was found to have an average elevation estimated at 24 to 25 m. above the sea. In the excavation of this platform Schliemann had dug for more than 20 m.

1) See p. 3.

into the hill from the north slope. He had given the bottom of the platform a dip of about 10 degrees as he progressed toward the south, whereas the ancient strata dipped in the opposite direction. Consequently we found nearly all of the layers of Troy I. to be preserved near the edge of the hilltop, although 15 m. farther south less than the lower half of the layers were preserved. Along the southern side of the great platform Schliemann had left a kind of terrace between the level of the platform and the higher level of Troy II. In this terrace all or nearly all of the strata of Troy I. were available for study.

Perhaps of chief importance in the work of 1933 was the uncovering on the north slope in D 2-3 of an enormous mass of fallen stones which we then believed to have come from the collapse of the great wall of Troy II., but which we now believe should rather be assigned to one of the latest stages of Troy I.

The work of 1934 included the digging of a small trial trench near the north edge of the hilltop on the east side of C 2-3, where the ancient strata were tested down to virgin soil. A fairly rich habitation deposit assignable to Troy I. was found at all depths down to hardpan, which lay about 4.5 m. below the level reached by Schliemann.

The series of pottery found here confirmed an observation made in 1933 about the ceramic development¹ in Troy I.

In 1935 and 1936 we carried out the methodical investigation of an extensive area in O 2-3 and D 2-3. Part of the work consisted of exploration along the hillslope in O 2-3; it was revealed that here as in D 2-3 there was ample evidence of a citadel wall belonging to the later part of Troy I.

A good deal of work was done in the nearly horizontal layers which had constituted the hilltop in Troy I.; there we dug by stages below the surface of the Schliemann platform down to bedrock. In one place there came to light the foundations of three houses, which had been built one above the other in successive sub-periods of the earliest part of Troy I. In D 3, in the area of the terrace left by Schliemann south of the platform, we examined the stratification of a deposit more than 4 m. thick, with the particular purpose of gaining more knowledge of the later part of the First Settlement.

During the excavations a detailed record was kept of the evidence from all places. The potsherds and various

1) A.J.A. XXXVIII (1934), 4.

other small objects were systematically collected and labelled according to areas and strata, and were transported to our workrooms for cleaning, restoration so far as possible, and study.

CHAPTER IV

GENERAL REMARKS ON THE SETTLEMENT OF TROY

Nearby antecedent sites. New light was cast upon the origin of human settlement in the Troad by the discovery in 1934 of the site at Kum Tepe only a few kilometers northwest of Troy. During trial excavations at Kum Tepe¹ in May, 1934, it was found that of habitation deposit totalling more than 5 m. in depth, the greater part was antecedent to the occupation of Troy. The very early stratified remains which were unearthed at Kum Tepe were assigned to three successive periods, of which only the latest overlapped the beginning of Troy I. The two earlier periods at Kum Tepe were found to be definitely prior to Troy I. Yet a consistent development was observed in these three periods at Kum Tepe, since the nature of the characteristic finds was fairly homogeneous. There was no cultural break, but rather a gradual transition from one period to another. The conclusion to be derived from this new evidence is that the culture represented by the very first settlers of Troy had already been

1) A.J.A. XXXIX (1935), 33-34.

native in the Troad for a considerable period of time.

Although Kum Tepe is the only antecedent Troadic site whose close relationship to early Troy I. can be demonstrated stratigraphically, several other nearby sites have yielded very early finds. Schliemann excavated a little at Beshik Tepe¹ in the Troad, and among the potsherds from this site now in the Schliemann Collection in Berlin are some which may be compared with characteristic pieces from the earliest period at Kum Tepe. Schliemann also did a little digging at Protesilaos² in Thrace, just north of the Dardanelles, and almost within view of Troy. Some deep and broad trenches were dug at the same site by the French Army of Occupation.³

At least part of the period of habitation at Protesilaos was contemporary with Troy I., as may be seen from Schliemann's and from Demangel's publication. In Demangel's publication it was noted that pottery of the still earlier layers at Protesilaos had some resemblance to that of Troy II.; in the light of the ceramic series from Kum Tepe we may reasonably assume that

1) Ilios 665-669.

2) Troja 254-262.

3) Demangel, Le Tumulus dit de Protesilas.

at Protesilaos Demangel found fragments of bowls like those of the earliest layers at Kum Tepe, with plain upright or rounded rims, in contrast with the angular-rimmed bowls of early Troy I. As has become clear since the recent excavation at Kum Tepe, a plain-rimmed style of bowl was in use both before and after early Troy I.

Unfortunately the collection of potsherds from Protesilaos now available for study in Istanbul is mixed and poor; among the earliest sherds to be identified is one which may be compared with a characteristic type from the second period at Kum Tepe, which is still earlier than Troy I. Because the collection of potsherds from Protesilaos could hardly be called representative, it would be impossible to base upon them a definitive statement about the earliest stages of the settlement.

It is obvious that there was some relationship among these three nearby sites which antedate Troy I. One possibility is that Kum Tepe, Beshik Tepe, and Protesilaos were all occupied at about the same time, subsequent to a wave^{of} migration. Another possibility is that Kum Tepe was the earliest, and that it became a kind of center of further colonisation. The prior existence of either of the other sites could not be maintained on the basis of the present evidence.

In considering the origin of the first-comers at Kum Tepe and the related sites, and the ultimate origin of the people of Troy I., we can only engage in speculations. It appears that the neolithic remains at Kum Tepe, and probably also at the other sites, are unlike those of Greece, at least in the lack of painted pottery. However, these remains must have connections along or across the sea, if we can accept as valid evidence the location of Kum Tepe, Beshik Tepe, and Protesilaos on or very near the sea, in contrast with the absolute lack of such early sites in the interior. Perhaps we should look southward to find the connections, if we may judge from certain points of similarity which have been observed casually in finds or the reports of finds from Egypt and Crete. On the other hand, the connections may have been with northern regions, but since Thrace is practically unexplored for its archaeological remains, there is no evidence to support this hypothesis.

The very first settlers of Troy. It is probably more than a coincidence that habitation at Kum Tepe came to an end early in the time of Troy I. Because of the proximity of the two sites, it is quite possible that people who had resided at Kum Tepe simply moved to the hill of Troy, and in time abandoned the somewhat less desirable earlier site.

Before any settlers had arrived at Troy, this low limestone hill must have been rocky and barren, as are some unoccupied hills in the Troad today. Wherever the bottommost layers of Troy I. have been probed during the excavations, it is clear that the foundations of the first houses were simply laid upon bedrock, or upon only a scanty layer of virgin soil. The modern fertility of the site is due to the deposit which resulted from habitation, and it is in great contrast with the condition of the hill before occupation.

Early in the so-called Bronze Age the very first settlers came to Troy. That they were already familiar with copper may be reasonably presumed from the fact that copper has been found in certified deposit of the very earliest time¹ at Troy. These settlers already had a fairly advanced architecture, and they undoubtedly carried on traditions in the manufacture of pottery, implements, and other objects.

Nearby contemporary sites. Examination of the ground at a number of Troadic sites has given us evidence that, in part, at least, they were contemporary with Troy I. Protesilaos in Thrace, and Hanai Tepe in the Troad were noted in Miss Lamb's recent study of Troadic sites

1) See the list of copper objects, and also A.J.A. XXXVIII (1934), 4.

as falling partly within this period.¹ On the basis of stratigraphic evidence² we may also assign one period at Kum Tepe to this time. Ceramic remains found during recent superficial explorations indicate that Beahik Tepe, Han Tepe on the west coast opposite Tenedos, and Goban Tepe on the Dardanelles north of Troy were inhabited during Troy I. Each of these sites was evidently smaller than Troy. We may conjecture that Troy was a center perhaps of government as well as of defense, and that they were outlying villages.

Stratification. With the passing of time the site used by the very first settlers of Troy underwent certain gradual changes. From the buildings themselves arose a steady accumulation of earth. Besides, the characteristic untidiness of the inhabitants contributed many whole and broken objects to the habitation deposit.

At various times in Troy I. the buildings themselves underwent changes, leaving clear indications in the ever-forming strata. Sometimes a building had to be repaired or remodelled. If a building had to be abandoned, the occupants might build anew in the same spot, or they might turn to another place, possibly near the previous building.

1) Fraehistorische Zeitschrift XXIII (1932), 112.

2) See p. 14.

Thus was formed a stratified deposit containing a long series of structures, each associated with contemporary objects, and all subject to the forces of ruin which explain the succession. In such a series lies the primary basis for the identification of the major strata of Troy I.

In the 1933 excavation of Troy I. conducted by Professor A. J. B. Wace and Professor Carl W. Blegen in sector O 4, it was learned that the strata preserved there could be divided into four groups,¹ each marked by characteristic floor levels. It is still impossible to say whether the very latest part of Troy I. was represented in O 4, since the uppermost layers may have been cut away in a levelling of the hill in the time of Troy II., as some recent evidence seems to indicate in sector E 6. At any rate, the total depth of the deposit assignable to Troy I. in sector O 4 was slightly less than 4 m.

Some distance to the north, in O and D 2-3, where there is a drop of about 2 m. following the contour of bedrock, the depth of the deposit of Troy I. found in our excavations of 1933-1936 was nearly 4.5 m. In O and D 2-3 the deposit representing the later part of Troy I. seemed to be thicker than in O 4, and this greater thickness may

1) A.J.A. XXXVIII (1934), 2.

possibly be explained by a levelling of the higher part of the hilltop in the time of Troy II. Careful study of the stratification in C and D 2-3 has revealed at least 10 major layers representing sub-periods of Troy I. These 10 or more sub-periods may eventually be divided into a number of groups, but further study is necessary to determine how these are related to the four groups found in C 4.

Added to the complication of the stratification in any one place is the fact that a comparison of the strata in several places is difficult. A general correspondence in stratification may be expected, but without absolute identity. Ordinarily the houses of Troy I. were single structures without immediately adjoining buildings. Consequently, in different places different gaps have been disclosed in the architectural series. The associated remains correspond to some degree, since a deeper and richer deposit was ordinarily formed in and near the houses. Since the order of the layers in various places is obviously always the same, a series of characteristic finds from one place may be used to supplement or confirm a similar series from another place.

The study of stratification is especially significant because of the importance of style and tradition in that ancient time in the manufacture and use of pottery and all

other common objects. The vestiges of habitation found in stratified deposit constitute good material for history.

Area of the Settlement. No definitive account of the area of the First Settlement can be given so long as comparatively little of it has been excavated, but a good deal of information may be gleaned from a number of trenches dug down to bedrock on and near the hill in various places.

It had already become clear early in the course of Schliemann's excavations that there was in no sense a "lower city"¹ of the time of Troy I. Although some ceramic evidence recovered in the 1932 campaign from three places not far from the hilltop was assignable to the early part of Troy I., this evidence was too scattered to represent an organized part of the settlement. One place was on the lower southwest slope of the hill, and near the plain; another was in the low-lying level ground near the stage building of the theatre; the third was on the fairly steep hillside east of the citadel and the theatre.

In 1933 rich ceramic remains, possibly including some

1) Ilios 211. In Troja 30 Schliemann contradicted this opinion. Perhaps the contradiction was based upon remains like those found in 1933 on the west slope in the ledge area; see p. 23, first paragraph, of this dissertation.

of late Troy I., were found in a deep deposit apart from any buildings, just below a ledge low on the west hill slope. Further study of these remains and of this area will be undertaken when more has been learned about the ceramic series of late Troy I. and early Troy II.

On the top of the hill it appears that the area occupied by the first settlement was less than that included in the circuit wall of Troy II. So far as the evidence goes, it confirms the belief that the various settlements went through a gradual expansion.

In C 2, at the north edge of the hilltop, stratification indicates that the hill was a little wider in early Troy I. than somewhat later, since the normal course of the strata which were originally at the top of the hill was cut off by some cataclysm, such as a great slide of earth, in which this portion of the north side of the hill was broken away in ancient times.

The 1936 excavation in E 6 showed that the southernmost limit of the town of Troy I. was not so far south as that of Troy II.

Some evidence for the easternmost limit of the town of Troy I. was mentioned to the writer in 1936 during a conversation with Professor Gotze of Berlin, who took part in the 1894 campaign under Professor Dörpfeld. Professor Gotze said that some remains of a large wall with a sloping

face found approximately in G 5 were at first believed to have something to do with Troy I. This may have been part of the same wall of late Troy I., possibly a circuit wall,¹ whose remains were unearthed in C and D 2-3 in the recent excavations.

A westernmost limit of the First Settlement has not been found, but it presumably lay within the bounds of the Troy II. fortification wall on the west side as elsewhere. Excavation in A 3 has brought to light no remains of Troy I., since even on bedrock the earliest deposit was assignable to Troy II.

In connection with the remarks on the area of the settlement it would be well to say that at no time and in no sense could the settlement of Troy I. be called a "city" in the modern sense of the word. If the houses of early Troy I. were all isolated, and also as large as our House 102, it would have been impossible to find space for many more than a dozen houses in the confined area of this community.

Plan of the Settlement. It would obviously be impossible to give a correct description of the plan of the whole settlement, inasmuch as our excavations have taken in only a small part of its area. Yet it is clear from the evidence of the houses and fragments of house walls

1) See pp. 11 and 25.

in C and D 2-3 that there was no lack of space between the buildings of Troy I. No instance has come to light of adjoining houses with party walls. So far as we may judge from the area excavated, the houses were not even close to each other, but were separated by a space at least as great as their width.

In sectors C 2-3 and D 2, on the north slope of the hill, are preserved portions of a protective wall of some kind assignable to the latest part of Troy I. This wall may not have been intended to serve as a real fortification, inasmuch as it followed the natural hillslope, at a gradient of about 45 degrees. The stones of this wall, insofar as they had remained undisturbed, were seen to have been laid in single step-like courses on a bed of earth. This wall is in contrast with the nearly upright thickly constructed fortification wall of the early part of Troy II., which was obviously intended to be a defense for the citadel. It would be premature to say now that the protective wall of the later part of Troy I. made a circuit of the entire hill, although remains of an apparently similar wall of about the same period have been found in sector E 6, which would have been the south side of the citadel.

In our own excavations no evidence of a protective wall

1) A.J.A. XXXIX (1935), 23, and fig. 13 on p. 24; also 553. See Tr.u.II. 55 fig. 11; Professor Dorpfeld was not sure whether this wall belonged to Troy I. or II.

of the earlier part of Troy I. has come to light. However, it is easily possible that any such evidence which might have existed in C 2-3 and D 2 was destroyed in ancient times by the great calamity which obviously affected this part of the north slope of the hill. As was seen in a cross-section of the strata in C 2, the layers which had formed the nearly horizontal hilltop of early Troy I. are now all broken off sharply, and they are not found continuing a normal course down the hillslope.

Professor Dorpfeld interpreted portions of two thick walls¹ of an early stage as belonging to citadel walls.² These walls have not been cleared or studied recently. Possibly helpful evidence will be forthcoming in the 1937 excavations in or near sectors E 5-6. A fragment of another heavy wall³ was interpreted by Professor Dorpfeld as belonging to a fortification wall,⁴ but it may have been a terrace wall, inasmuch as the ground outside this wall was nearly horizontal. The actual fortification wall of that time was probably that whose remains were found farther north, on the hillslope; as stated above, this wall is assignable to the late part of Troy I.

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- 1) Tr.u.II. 43 fig. 7, a and c.
 - 2) Tr.u.II. 44.
 - 3) Tr.u.II. 43 fig. 7, m. Our Wall AB.
 - 4) Tr.u.II. 44.

CHAPTER V.

THE BUILDINGS

General Remarks

Houses. Both large and small houses were constructed during the time of Troy I. The house plans were generally approximately rectangular, but some curving walls were found. However, there was no evidence for a genuine apsidal house. Nor was there evidence for a house of more than one or two rooms.

Walls. The foundations were generally about 0.50 to 0.90 m. thick, and were built of a number of courses of irregular, unworked stones of small to moderate size. These stones were set in yellow clay, which served both to bind the stones and to make a smooth surface. The stones themselves did not show, but were covered by a face of yellow clay plaster. Occasionally we found that the face of the plaster had an added pigment of a ruddy orange or brown color.

In various walls the stone foundations were preserved to a height of about 0.25 to 1 m. Where the foundations were still intact, they had a flat top, prepared to receive the mud bricks of the upper part of the walls. The remains of the bricks were found mostly disintegrated, as a kind of clayey fill both inside and outside the houses, thickest, of

course, nearest the walls. In several places unbaked bricks were found apparently still intact. In cross-section they measured about 0.065 x 0.365 m. They had a brownish color, in contrast with the yellow clay "mortar", which was about 0.02 m. thick.

The source of some of the materials used in the construction of walls can be identified with probability. The yellow clay used as mortar and plaster is so pure that its identity cannot be mistaken. This clay consists of only partially decomposed limestone, and is just like that found in many of the places where excavations have been carried on down to bedrock. This kind of clay keeps its character so long as it is neither completely decomposed, nor mixed with other earth. It is clear that the early builders availed themselves of the plentiful supply of this material without difficulty.

Even after most of the hilltop had been occupied by houses, out-lying ledges must have continued to supply this clay. Good examples of such ledges have been unearthed in several places near the bottom of the west hillslope. Apparently most of these ledges had been exposed, or nearly exposed, in very ancient times, for vestiges of habitation of early periods have been found very near bedrock. Although the strata of bedrock were seen to be uniformly horizontal, they were of varying hardness. It is quite possible that

when yellow clay was dug for use in construction, some rock was removed from the nearby harder strata without the need of extensive quarrying. Some of the blocks used in house walls seemed to betray such an origin.

Yet most of the stones used in the foundations appear to have been field rather than quarry stones. No doubt, many stones were taken from ruined structures, and re-used, since there was probably not a plentiful supply of suitable stones on the surface of the ground in the vicinity. The early builders were certainly not over-particular in their choice of building stones, for we may find built into the walls occasionally both broken and whole pivot stones, which had previously been used elsewhere. The occurrence of re-used pivot stones may possibly be taken as a sign that many other stones as well were simply taken over from ruined structures.

Not infrequently whole and fragmentary grinding stones were inserted as building material in the construction of house walls. Since the grinding stones generally consist of a very hard and strong volcanic rock, each one looks as if it would have lasted for many years. The re-use of a number of grinding stones as building material after they had discharged their original function possibly indicates the passing of a rather long but indefinite period of time.

Roofs. The small houses present no problem in their

roof construction, but wide houses -- like 102, with a total width of a trifle more than 7 m. -- would have been difficult to roof without some interior support. Such support would presumably have been in the form of wooden pillars. Occasional flat stones found in house-floors might have served as bases for pillars, but since they are not arranged according to any system, their use is really unknown. One fairly large block of limestone built into an apparent reconstruction at the west end of House 102, was of striking appearance; although without trace of having been worked, one broad side presented a nearly circular area which may possibly have been intended to hold a fairly heavy wooden column. In some house-floors there were occasional irregular small holes, but there was no evidence that they were post holes.

Presumably the roofs were flat, in a style commonly attributed to this primitive period, but we cannot judge from the evidence available at Troy. It is commonly believed that such flat roofs must have been of fairly heavy construction, containing a good deal of clay so that they would be practically waterproof. However, the roofs may have been of a lighter construction than is usually supposed.

Doorways. Before our recent excavations, no doorways¹

1) Tr.u.II. 48.

had been found in walls of Troy I. Of those found recently, none has been identified as being in the side wall of a room or building, although one was in a short curving wall which adjoined a long side wall. Several doorways were seen to be in about the middle of cross or end walls. The better thresholds was characterized by flat stones, which sometimes extended to either side of the wall to form a small irregular pavement. Evidence of the presence of jambs has not come to light. In a number of places a pivot stone was found in situ at one side of the doorway. In the better preserved structures it was seen that the pivot stones were next to the inner face of the walls. Many pivot stones were found out of place, including a number which had been adopted elsewhere as ordinary building material. In two places two different pivot stones were preserved, both in situ; the second had been placed at a higher level in order to correspond with the rise in the level of the house-floor. A similar adaptation of the threshold was seen in one instance, where there was a later pavement superposed upon an earlier one, but belonging to the same house and doorway.

Interior of Houses. The most nearly complete account of the interior of a house is that given for House 102. In the single long rectangular room of House 102 there was a central hearth, as well as a hearth in the "kitchen" area,

and there were several rectangular stone platforms, which were roughly in the shape of a bed; there were two small pits, of which one may have served some culinary purpose.

Floors. The term "floor level" is applied loosely to the original floor as well as to the deposit which accumulated on it during active use of the house. The floors were not exactly horizontal. They were simply earthen, and they followed the contour of the surface, which had a northward dip of about 10 degrees in the area of Houses 103, 102, and 101. Furthermore, they tended to be higher near the sides, since near the face of the walls the habitation deposit regularly accumulated faster, and thus became higher than in the middle of a room. Possibly dirt and debris were occasionally swept out of the middle of a room, but as the fragmentary remains of all kinds of objects came to light in the excavations, it appeared that they were often lying almost as they had been broken, and that the housekeeping had been essentially untidy.

Fairly uniform, thin layers of yellow clay were apparently spread over the floor from time to time as a kind of carpet, which might have restored superficial tidiness for awhile. The deposit which accumulated upon a floor was predominantly blackish, getting its color from the relatively great amount of carbonized matter in it. Often there was a

pronounced admixture of brownish clay, which probably came from weathering or disintegration of clay bricks, or of clay used in the roof. As may be expected, most of the pottery and other vestiges of habitation have been found in the darker layers.

With careful use of a small digging tool, a floor may generally be recognized by the fact that the superposed or fallen earth is of a less fruitful character, and may be separated from the more compact floor deposit. In our digging, additional help in recognizing floor levels was sometimes obtained by means of small trial trenches, laid across a room at various places in order to reveal the stratification in a vertical section.

Houses

In the excavations in C and D 2-3, the complete architectural plans of two houses of Troy I. were recovered -- the first to be brought to light in any of the excavations. They are described below, along with another house, which was only partially preserved. These three houses form a chronological series in one area, and they represent the earliest three of the ten or more sub-periods of Troy I.

No complete, or even nearly complete houses of the later sub-periods have come to light. Some fragmentary

remains of later houses have been unearthed, and they are described later in this chapter.

House 103, of the first sub-period. Lying upon hardpan at about the middle of sectors C-D 3, a portion of a long building of the earliest sub-period came to light during the excavations of 1935 and 1936. It has been designated as House 103. The axis of this building apparently extended roughly from east to west. The straight south wall, built of somewhat regularly laid field stones of small to moderate size, was preserved for a length of 11 m. within our trench, and continued on westward into the unexcavated section. At a point 0.70 m. from the east end of this wall was a portion of a crosswall extending northward, with a pivot stone and traces of a doorway. East of the crosswall, and joining the southern wall was a narrower, curving wall. It was built of smaller stones in a somewhat different style of construction; in it was a doorway, with two pivot stones of different periods of use still in situ. The curving wall turned northward to meet a more or less straight piece of construction which ran westward, and which may have been part of the north wall. Since the curving wall described only a small arc, and since it may not have formed part of the original plan, the house probably should not be called apsidal.

The north part of this house was in a ruined condition,

and no positive restoration can be made. The only remains which could possibly be assigned to it were the bit of wall mentioned above as running westward from the north end of the curving wall for a distance of 2.05 m., and 1.70 m. of plaster facing discovered 3.15 m. farther west. If these remains really belonged to the north wall of the house, the total width of the structure must have been somewhat more than 5 m. It must have had imposing dimensions, and its plan may have been essentially rectangular.

In the floor deposit of House 103 there came to light the fragments of a number of nearly complete pots, including a small pyxis (35.648) with handsome incised decoration, a small incised lid (36.690) probably belonging to another pyxis, a beautiful black pitcher (35.649) with a cutaway bill-shaped spout, a squat brownish pitcher (36.735), and a miniature high-necked jar (36.686).

A number of small objects were directly associated with the part of House 103 which was preserved. There were several bone awls (36.184 and 36.185), a biconical whorl (36.277) with decorative vertical rows of small holes, a number of querns, which were mostly basalt or limestone, and a stone pestle (35.159).

Sea shells and bones of animals, the remnants of countless meals, formed an important part of the deposit

in this house.

The nature of the floor deposit so far as it was preserved, the character of the walls, and the presence of doorways and pivot stones are convincing evidence that the whole of 103 was a dwelling house of the first settlers.

House 102, of the second sub-period. The complete house designated as 102 was the structure which represented the second sub-period in the area excavated. The axis of House 102 ran approximately from west to east, but it pointed a trifle more to the north of east than the axis of House 103, the earlier building. House 102 occupied most of the east end of the area of House 103, and extended beyond it.

House 102 must have been a very imposing structure. The foundations were well built, on an almost rectangular plan 14 m. long, 7 m. wide at the east end, and 6.80 m. wide at the west end. In the discussion which follows, the part which is completely preserved will be treated first, and thereafter mention will be made of certain architectural complications which appear to be assignable to the very earliest and the very latest stages in the use of the house.

The foundations of the west end wall which may be seen in present photographs were not so thick as those of the other walls of the house, measuring only 0.70 to 0.75 m., in contrast with an average of about 0.80 to 0.90 m. for the other walls.

The doorway in the west wall was not centered perfectly. Its south side was only 1.80 m. from the inside of the south wall, but its north side was approximately 2.75 m. from the inside of the north wall. The doorway had a width of nearly 1 m.

A striking feature seen in places on this west wall was the occasional use of the herring-bone style of masonry, of the kind seen by Schliemann and even now still fairly well preserved on an east-west wall¹ in the sector south of this house. The same style of masonry was also used elsewhere in House 102, but only in small patches.

The north wall of House 102 was found preserved to a distance of nearly 1 m. west of the end wall of the third stage, but beyond this point we have not been able to trace it. Along the large room of House 102 the foundations of the north wall were found to be in a fairly good condition, except for a distance of 2.45 m. between the middle and the east end. The break had apparently occurred in ancient times. Adjoining the gap the wall was preserved to a height of only one or two courses, but near the east and west corners it was preserved to a height of some three to five courses, or a maximum of about 0.70 m.

The east end of the house was, on the whole, the best

1) Tr.u.II. 47 and fig. 9.

preserved. The corners were almost exactly rectangular. The north and south walls joined the east wall, but did not project beyond it. There was no doorway in the east wall. The foundations presented a certain appearance of regularity, since the stones were roughly grouped according to size and shape in five courses, each of a different height. Mostly field stones were used, but many of these were rudely rectangular. The stones of the bottom course were the largest, on the average, and were mostly of a flattish rectangular shape. Those of the second course were moderate in size, and were mostly flattish in shape. With only a few exceptions, the stones of the third course were the smallest, but they were also mostly of a flattish shape. The stones of the fourth course were nearly as large as those of the bottom course, but they were the least rectangular. As placed, they were as high as wide, or even higher. The top of the fourth course was nearly flat, but it was covered by a fifth course, which was little more than a packing to provide a good bed for the clay bricks of the superstructure. In some places where the fifth course was preserved, remains of clay bricks were found apparently intact on top of it.

It was only near the northeast corner that these courses were not followed very carefully by the builders, and it was there that the wall was most poorly preserved. In contrast,

the southeast corner was of durable construction, consisting of large, nearly rectangular stones.

The foundations of the south wall were well preserved, but they were not entirely of stone. Beginning at a point 4.80 m. west of the southeast inside corner was a section where the foundations were made of clay bricks. These bricks were unmistakable, and on the north face was preserved a distinct coating of the same clay plaster which had evidently lined the entire interior of the room. The total length of the clay section was 2.30 m., the width was 0.80 to 0.90 m., and the height about 0.50 m. On top of the clay bricks was a layer of small stones, corresponding with the layer which seems to have been used almost everywhere at the top of the foundation in order to make a level surface to receive the bricks of the superstructure. West of the clay section the south wall continued for 5.65 m. in normal stone construction, meeting the west wall, but not bonded with it; the south wall continued on westward for several meters.

The dimensions of the interior of the house as described above were as follows: length along the north wall, 12.50 m.; length along the south wall, 12.75 m.; width along the east wall, 5.65 m.; width along the west wall, 5.40 m. However, it is probable that originally the interior had been 2.45 m. longer at the west end, as will be seen from the evidence

mentioned below.

Although this structure as a whole is assigned to the second sub-period represented in this area, its history may be divided into several stages on the basis of architectural evidence found in connection with the west end of the house. The west end wall which was previously described, and which is the only one readily visible in photographs of the house, apparently belonged to a late architectural stage, when the length of the house was made shorter than in the original plan. Part of an earlier end wall was preserved 2.45 m. farther west.. The part preserved consisted of a threshold set 2.25 m. from the south wall, and the partially ruined foundations between the threshold and the south wall. As preserved, there were several layers of pavement in and near the threshold, indicating the expedient which was followed in coping with the rise in the level of the floor during the use of this entrance.

In the early southwest corner was a small, shallow refuse pit or retreat, marked off by a narrow curving wall. The earth in this pit was affected by a greenish discoloration, and contained a considerable amount of carbonized matter, but few shells, bones, or potsherds. Following the slight slope to the north, the nearby earth was also discolored, and on some of the paving stones was a pronounced greenish deposit. The very function of the pit had perhaps made the pavement

necessary.

Outside the early west endwall, the southern wall continued on for 2.40 m. toward the west, but it is not clear that this should be considered an essential part of the house. This part of the wall is of a different and cruder type of construction; it may possibly have been an addition, or a repair. Toward the west end it was in a damaged condition, leaning somewhat to the north. This portion was the only part of any of the walls connected with the house in which the stones were found not well packed in the characteristic yellow clay mortar.

In looking for a corresponding section of the north wall, we were stopped by the presence of a retaining wall¹ erected by Schliemann, and by the high unexcavated ancient deposit immediately behind it, rising to the level of Troy II. In the very small area at our disposal just east of the Schliemann retaining wall, it became clear that all construction of the earliest period of House 102 had suffered irreparable damage. However, from the ruined masses of clay and stones, and from the consistency with which symmetry was followed elsewhere in the plan, we can surely conjecture that the northwest corner of the house was approximately rectangular, just like the southwest corner. We have no

1) A.J.A. XXXIX (1935), 22-23.

evidence either to prove or to disprove the extension of the north wall westward from the original northwest corner. But if there was such an extension of the north wall, as of the south wall, the two must have formed a kind of small portico.

It was in the ruined portion that the house was apparently remodelled. The essential feature of the early remodelling was the narrowing of the western end of the house. Replacing the damaged portion of the northern wall was a new wall, parallel to it, but set in about 1.65 m. from it, and running eastward from the north side of the original doorway; the intervening space was filled with a mass of clay and stones. There was another bit of wall set 0.55 m. farther toward the south, and running in the same direction. So far as we can tell, these two walls served as the northern limit of the now much narrowed portico.

The irregularity of the remodelled plan may have been as striking to the occupants of the house as it is to us, for still later in the use of the house the plan was again remodelled. Perhaps it was a new generation, possibly the third or fourth, which made the west end of the house again approximately rectangular, and this is the plan which was found completely preserved. The new western wall was set farther east than the earlier one, shortening the length of the house by 2.45 m. That the western continuation of

the southern wall, and of the secondary wall toward the north served as a kind of enclosure or a portico seems probable.

In the final architectural stage which could be distinguished at this end of the house, a repair was made in the south wall a little more than 0.50 m. outside the late west endwall. The repaired section was slightly more than 2 m. long, and the stones used in it were not laid quite true to the line of the original wall. Probably the ground level had already risen so much that the greater part of the original foundations was no longer visible.

Architectural complications appeared only at the west end of House 102, and they were undoubtedly caused by some damage which occurred there early in the use of the house. Elsewhere the original foundations of the house were found almost intact.

The interior dimensions of the remodelled and nearly rectangular room were 12.50 to 12.75 m. x 5.40 to 5.65 m. There was a single doorway, set approximately in the middle of the west wall. On the interior there were two roughly rectangular stone platforms placed next to the north wall; one was broad enough to have served as a double bed, and the other somewhat narrower. Nearly in the middle of the room was a much used hearth, lined with flat stones. It had probably served mostly to heat the room, since no remains

of cooking were found associated with it.

In the southeast portion of the interior was an area reserved for kitchen use. This was the innermost and snuggest part of the house, where the smells of cooking, and the warmth and smoke could linger longest. In this kitchen area was a hearth with many vestiges of cooking. There was a small low cupboard-like construction of stone near the corner, and not far away some flattish stones apparently forming a little shelf. About 0.65 m. from the south wall and 1.30 m. from the east wall was a small circular pit, or bothros. Its superficial diameter was 0.75 m., and its sides curved in slightly to meet a flattish bottom, which was 0.55 m. wide. As the pit was found, its maximum depth was 0.16 m. The entire pit was lined with pure yellow clay, which averaged about 0.015 m. in thickness. A two-handled cooking pot (36.736) was found crushed in this pit, and there was also a rude fragment of copper. Since there were no traces of ashes or other refuse, this small pit may have been used for some culinary purpose. The Turkish villagers pointed out to us that similar clay-lined pits are used by peasant women today in the kneading of dough. It is said that the yellow clay lining is very important, because any other kind of earth imparts a bad flavor to the bread.

An interesting sidelight upon the practices of the

occupants of House 102 was given by the finding of two infant burials directly beneath the floor. One burial (#1) was simply made under a flat stone in the floor of the south part of the middle of the house. The second burial (#6) was contained in an urn set just beneath the black floor deposit at the edge of the kitchen area in the east end of the house. Approximately contemporary were four infant burials just outside the north wall of the house, one being a simple inhumation, and the other three being urn burials.

Vestiges of habitation were found in the floor deposit throughout this house, but they were especially abundant near the west end, and in the kitchen area at the east end. Animal bones and sea shells were numerous, and there was a good deal of fragmentary pottery. It was possible to restore the following complete pots from the fragments found here; a polished brownish-black bowl (36.685) with angular rim of Schmidt's "type b"; a deep two-handled basin (35.543) with rounded bottom, of fairly coarse dark brownish-grey ware; a deep two-handled pot (36.736) with flattened bottom, of rather coarse blackish ware; a rudely made tannish miniature jar (36.689) with high neck, and four pierced lugs; and a two-handled jar (36.738) with blackish lustrous surface, used as a burial urn.

Among the miscellaneous objects found in the floor

deposit, and presumably used by the occupants of the house, were the following: eight bone pins and awls (35.130, 35.154, 35.178, 35.315, 35.316, 35.320, 36.158, and 36.314); two stone implements (35.119 and 36.310), possibly potters' smoothing or polishing tools; a whetstone (35.118); three spindle whorls (34.367, 36.131, and 36.183); a stone object (35.175) which was possibly a fragment of an idol; and two pierced animal teeth (36.308 and 36.309), which evidently served some ornamental purpose. In the bothros was a rude piece of copper, and on the floor were a number of grinding stones.

All the evidence found in connection with the building designated as House 102 points clearly to the fact that it was a dwelling house. It is possible to make some very interesting conjectures about its relation to the long parallel walls¹ lying on bedrock in D 3-4, and partially excavated by Schliemann. They had nearly the same orientation and spacing as the side walls of House 102, and they were similar in masonry and dimensions. It is probable that they belonged to a number of houses like 102.

A careful examination of the plan of House 102 reveals its likeness to the megaron type. This house was isolated,

1) Tr.u.II. 43, fig. 7, walls e, g, k, and l.

and it comprised a single large rectangular room, with a doorway only at one end. At least in the later stages of use, the side walls extended beyond the endwall to form a little porch at the entrance; it is quite possible that this feature was also part of the original plan. The central hearth in House 102 is another mark of the megaron type. These data suggest the identification of this house as a megaron, and as a forerunner of the megara of Troy II.

House 101, of the third sub-period. Succeeding the fine long house designated as 102, and superposed upon the debris belonging to the second sub-period, were the foundations of House 101, a small structure which marked the third of the ten sub-periods of Troy I. Its maximum dimensions were only 5.3 m. x 4.1 m. It was not exactly rectangular in plan, since the angle at the southeast corner was greater than the angle at the northeast corner, and the west end of the house was slightly wider than the east end.

The north, east, and south foundation walls were preserved for their full length, except for a small portion at the northeast corner which had been disturbed during previous excavations. At the northwest corner a bit of the west wall was preserved; it consisted of small stones laid in yellow clay, adjoining which was a mass of pure yellow clay. From this point to the southwest corner no wall construction was preserved; the gap was about 2.3 m. wide, but some of this distance must have been

taken up by an entrance or doorway.

As usual, the foundations were constructed of irregular local stones of moderate size, held by packing of yellow clay, but the workmanship was less careful than that of the preceding houses. Perhaps the householders were poor people -- a fact which may also be surmised from the small size of the house.

The walls of House 101 were preserved to a height of from one to four courses of stone, reaching a maximum height of slightly more than 0.50 m. The walls of this house were barely 0.60 m. thick, not nearly so substantial as those of the preceding larger houses.

Inside House 101 two floor levels were distinguished. They were characteristically blackish, and contained quantities of shells, bones, and potsherds. They were separated in most places by a layer of yellow clay, which was consistently unproductive of household debris. This layer of yellow clay may have dated from a time of disuse of the house, or it may have come from repair of the walls, or from levelling of the floor. Lying directly on this yellow clay was an unproductive stratum distinguished by striated carbonized matter. These might conceivably have been the remains of a reed flooring similar to the plaited reed mats which are used in the Troad today on earth or even stone floors.

About in the middle of the north part of House 101 was an area which contained ashes and much carbonized matter, and which had probably served as a hearth.

Next to the hearth several small irregular stones and a grinding stone were lying on the floor. Also within the house were the following objects; a bone awl (35.69); seven pierced and beautifully smoothed bones (35.79-85) of different lengths, which had probably been part of a necklace or other ornament; two fine stone celts (35.64 and 35.87); a pierced stone (35.66), which may have served as an amulet; four spindle whorls (35.59, 35.103, 35.104 and 35.182); a stone instrument (35.21), which according to signs of wear may have been a potter's smoothing or polishing tool; a rude fragment of copper (35.107), and some bits of copper slag. When the remains of House 101 were removed in order to facilitate the excavation of the underlying deposit, two small implements were found imbedded in the clay packing of the walls. One of these implements was a bone awl (35.176), and the other was a stone object (35.158) which looks as if it were a smoothing or polishing tool for use in the manufacture of pottery.

Out of the large quantity of potsherds recovered from House 101, the following pieces were restored and catalogued; a large fragment of a lustrous dark grey bowl (35.536) with angular rim of Schmidt's "type b"; a fragment of a tripod

vessel (35.537) of somewhat coarse reddish ware; a deep one-handled cup (35.538) of coarse brownish ware; a small three-legged jar (35.539) with four lugs, of polished brownish grey ware; and a small pitcher (35.540) with lustrous greyish surface.

List of Fragmentary and Partially Excavated Walls

Sub-period 1:

Wall 118. North of the area of the complete houses, lying upon bedrock. Apparently part of a house wall, of which nearly 4.50 m. lay within the bounds of our trench. Nearly parallel to the south wall of the so-called House 103. In Wall 118 was a doorway nearly 0.90 m. wide, with a pivot stone in situ on the north face. The placing of the pivot stone, and the richness of the habitation deposit on the north side of this wall indicated that the wall had probably been the south side or end of a house.

Sub-period 2:

Walls 119. Near the north edge of the hilltop, north of the area of the complete houses. Small portions of several walls, which apparently continued outside the narrow confines of the digging here. These walls were oriented according to the north wall of House 102, which was about 8 m. distant. Walls 119 were built of unusually small stones, packed in clay.

Sub-period 3:

Walls 114. North of House 101, 17th and 18th cuts. Portions of three walls belonging to a small house; very similar,

and approximately contemporary with House 101. Foundations not well constructed; 0.45 m. to 0.55 m. thick; preserved to maximum height of 0.35 m. Width of house was 3.65 m.

Wall 124. Outside the final west wall of House 102, and later than this house, but still earlier than Walls 121 and 120. Parallel to Walls 121 and 120, and nearly beneath 121. Wall 124 was only 0.45 m. thick.

Approximately sub-period 3 or 4:

Wall 121. Outside the final endwall of House 102, and slightly later than it, but somewhat earlier than Wall 120. Parallel to and very near Wall 120, of a similar style of masonry, but only 0.45 to 0.50 m. thick. The break at its south end correspond to that of Wall 120; a north end was not found, since the wall continued on into the unexcavated area. Aside from the fact that this wall was parallel to the west wall of House 102, it apparently had no relationship to that house.

Wall 120. Outside the final west wall of House 102, but in a higher layer. A portion of a north-south wall, built mostly of nearly rectangular stones. Wall 120 was about 0.75 m. wide. It extended for a considerable distance northward along the edge of the unexcavated area,

as was seen in the west scarp of the north part of our trench. It was impossible to judge how far southward the wall had extended; it was preserved to about the middle of the west wall of House 102, and at that point this layer and everything above it had been dug away in an early excavation.

Wall 122. Barely within the west limit of our trench in C 3. Small portion of a curving wall 0.45 m. thick, on the west side of which there was a fairly rich habitation deposit; this wall probably formed the east end of a house.

Walls 115. East area, layer N. Portions of long side walls of a house, similar to the side walls of House 102 in direction, spacing, and dimensions, but of a later sub-period. The walls were substantially constructed, but leaned badly toward the north. This house was just east of the area of House 101, but appeared to have been built slightly later; unfortunately, the relationship could not be determined with absolute exactness, since there was a gap between the two, where some digging had been done in an early campaign. Walls 115 extended eastward beyond the limits of our trench.

Sub-period 4:

Walls 116. At the east edge of our trench in D 3, in the

upper part of layer N. A portion of the corner of a house; perhaps more of this structure remained in the unexcavated area. The foundations were built in the usual manner, and were from 0.60 m. to 0.65 m. thick. The angle of the walls was slightly acute. This corner was especially interesting because some clay bricks had fallen inside, and were apparently preserved intact. In cross-section these bricks measured about 0.065 x 0.365 m., and between them was about 0.02 m. of the same kind of greenish yellow clay as was used to join the stones. The face of the wall made of these bricks consisted of a number of layers; the layer touching the bricks was of greenish yellow clay about 0.02 m. thick; it in turn was covered by a thinner layer of more purely yellow clay, with a thin, soft coating at the very outside; this exterior coating was brownish where it touched the clay, but whitish at the surface.

Walls 117. East area, on the so-called secondary terrace; in upper part of layer N; approximately contemporary with Walls 116, but later than Walls 115. Portion of a rectangular corner, presumably belonging to a house. The walls were 0.65 m. thick; badly constructed, and poorly preserved.

Approximately sub-period 4 or 5:

Walls 113. North of the area of the complete houses, 12th -

14th cuts. Ruined foundations of a house, built on a rectangular plan. The north wall extended beyond the east and west limits of our trench; this wall was 0.75 m. to 0.80 m. thick; one to four courses were preserved, reaching a maximum height of about 0.35 m.; lower courses mostly of somewhat rectangular stones, which were not set tightly together, but had a yellow clay packing. Touching the north wall at a right angle, but not internally joined to it, lay a wall which was only 0.60 m. thick; it was made of rather small stones, and preserved in places to a height of five courses, or a maximum of about 0.60 m.; there was a doorway near the middle, with an irregular pavement. It was impossible to tell whether this had been a cross wall or an end wall.

Approximately sub-period 5 or 6:

Walls 112. North of the area of the complete houses, 9th and 10th cuts. The eastern part of a rectangular house, whose westward continuation remained outside the excavated area. The north wall was unearthed for a length of 5.10 m., the south wall for 3.20 m.; the east wall was slightly more than 5 m. long. The average thickness of the walls was 0.60 m. to 0.65 m. One to five courses of stone were preserved, reaching a maximum height of 0.55 m. The stones

were unworked, but included many which were nearly rectangular; they were in a yellow clay packing.

Sub-period 6:

Wall AB. East area, on the secondary terrace; layer L 2.

A portion of a good terrace wall with a slightly sloping north face. This wall had no south face, but was simply filled in with stones to meet the pre-existent slope. As seen on the east scarp of Schliemann's north-south trench, this fill had a total breadth of as much as 4 or 5 m., but it was deep only near the north face. This is believed to have been a terrace wall rather than a fortification wall, since the layers of deposit at its north face have only a slight slope; furthermore, structures resembling houses (see Walls 111, and possibly 112) were partially preserved in the contemporary or later strata between this area and the north edge of the hill; if there was a fortification wall of the same period, it was presumably at the edge of the hill.

Sub-period 7:

Wall AA. East area, in the so-called secondary terrace; layer L 1. A small portion of a north-south wall, most of which had apparently been removed in an early excavation. Possibly the northward continuation of this wall was identical with a wall fragment preserved near

the north edge of the hill. Wall AA may possibly have belonged to some structure other than a house, since it appeared to have some relationship to the terrace wall AB. Walls AA and BB possibly served the same function, but at different sub-periods.

Sub-period 9:

Wall BB. East area, on the so-called secondary terrace. A portion of a well constructed north-south wall, which lay across Wall AB, and was probably part of the same structure as the 8 m. of wall preserved directly north of Wall BB at the edge of the hill; unfortunately, the intervening area had been excavated in an early campaign. In places, wall BB was preserved to a height of more than 1.50 m. of stone construction, with some clay bricks apparently intact above this. Wall BB was slightly more than 0.75 m. thick.

In late sub-periods:

Wall d. East area, at the north edge of the hill, running between the walls which were presumably northward continuations of Walls AA and BB. Wall d touched, but did not bond with them. Seven courses preserved. Thickness 0.75 m.

Walls 111. North of the area of the complete houses, 2d

cut. Fragments of foundations of house walls; several courses of small irregular stones.

Sub-period 10, or possibly 11:

Wall OB. East area, of the secondary terrace; above layer H. A small portion of a wall, of which only one course of stones was preserved. This wall was slightly more than 0.75 m. thick.

Comparisons

Thermi is really the only closely related site from which detailed evidence has become available for making architectural comparisons with Troy I. A discussion of the relative chronology is undertaken in the chapter on pottery, where an attempt is made to establish the synchronism of Thermi I. with the beginning, and of Thermi V. with the end of Troy I. The architectural evidence mentioned below should be considered only supplementary to the ceramic evidence.

The buildings of Towns I. and II. at Thermi were presumably contemporary with our Houses 103, 102, and 101. Many of the early buildings at Thermi¹ actually had a certain similarity to our House 102. For the most part, they were approximately rectangular, and of imposing dimensions. Several of the largest were nearly of the same size as House 102 at Troy.

Yet the similarity did not hold in all respects. The buildings at Thermi² were not exactly of the megaron type, in that they were ordinarily not isolated structures, but had party walls. Furthermore, many seem to have had more than a single room.

In certain matters of detail it is possible to make

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- 1) Thermi, Plans 1 and 2.
 - 2) Thermi 49-50.

other comparisons in the earliest architecture at the two sites. In addition to a general correspondence in the style of wall construction, one feature was held in common during the earliest stages at both sites -- herring-bone masonry. This style is considered especially characteristic of Thermi I.,¹ and it is certainly a peculiarity of some of the earliest walls of Troy I. A very well known example is the east-west wall² discovered by Schliemann on bedrock in D 4. The same style was used on portions of the walls of House 102, of the second sub-period.

At Thermi there were also occasional instances of rudely rectangular constructions of stone³ in the interior of houses, evidently serving as furniture. Two examples were found in House 102 at Troy.

Many small circular, clay-lined pits corresponding with that in House 102 at Troy were unearthed at Thermi,⁴ but there they were considered characteristic of Towns III and IV. If we are correct in assuming that Thermi III. and the beginning of IV. were approximately contemporary with the middle of Troy I., we cannot help noticing the comparative occurrence of these pits at Thermi. This may have been

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- 1) Thermi 7 and 15.
 - 2) Tr.u.II. 47
 - 3) Thermi 10
 - 4) Thermi 61 ff.

another phenomenon like that observed in the study of the pottery of the middle stages of the two settlements, indicating a closer connection than that of the earlier stage. Perhaps the knowledge of making and using the clay-lined pits was brought to Thermi from Troy during the middle stage; that was also the time of adopting at least one feature¹ of Trojan pottery to Thermi.

No fair comparison can be made now between the architecture of Troy I. and that of any related foreign sites other than Thermi, because of a lack of complete and careful excavations.

Digging at contemporary sites in the Troad has been limited to pits or trial trenches, but at Kum Tepe portions of walls were unearthed which correspond generally with those of Troy I. It is to be hoped that at some time it will be possible to make extensive excavations at one of the antecedent sites near Troy, and to cast some light upon the previous history of the fairly advanced architecture of the first-comers at Troy.

1) I. e. the type of horizontal lugs with slightly enlarged or spreading ends, used on bowls. See the chapter on pottery.

CHAPTER VI

THE POTTERY

General Remarks

The importance of pottery in the study of a long and complicated period like Troy I. cannot be overestimated. The potters were always subject to tradition, but at the same time they followed definite stylistic trends, which were frequently of widespread influence. Therefore, in a chronological series of pottery there is excellent evidence of progress or change, and of foreign connections.

Although other small objects may be so infrequent in their occurrence that they cannot be considered representative, pottery occurs in such large quantities in all habitation deposit that after careful study it is impossible to mistake the positive evidence of characteristic types.

Ceramic evidence also has a certain advantage over architectural evidence. Walls, of course, are useful in the identification of strata, but their character is governed so much by local conditions that they cannot supply the historical context so well as pottery does.

In the great bulk of the pottery of Troy I. which has been unearthed there is convincing evidence that it

was manufactured in the locality. The pottery is so consistent in clay, fabric, surfacing, forms, and designs during the various sub-periods of Troy I. that it must have been a local product. In this connection we must note that a number of stone and bone objects have been discovered which may possibly have been potters' tools. Furthermore, among the many fragments of pottery found in Troy I., there is scarcely a single manifest importation. Therefore our conclusion is that Troy, like many other early settlements, produced its own pottery.

The potter's wheel was unknown in Troy I. Yet the potters were capable, and usually careful in making their wares. In fact, the slight imperfections which characterize hand work generally add a pleasing quality to the pottery of Troy I.

Within certain limits the pottery of Troy I. may be assigned to two principal classes: (1) fine ware; (2) coarse ware. This classification is based primarily upon the quality of the surface, and secondarily upon the natural quality of the clay, and the quality of the fabric as produced by baking. Many variations of these qualities appear, and often in different combinations. The weakness of an absolute classification lies in the fact that any single specimen may possess characteristics of several classes. For example, some vases which would normally have been in

the class of fine ware were actually so carelessly made that they acquired more of the attributes of coarse ware than of their proper class. The reserve is sometimes true of pots which would normally have been in the class of coarse ware.

The outstanding characteristic of pots of fine ware is their polished surface. In most instances the marks of smoothing or of polishing tools are easily visible; they consist of slight, narrow impressions, evidently made by a tool with a blunt, but not a broad end. These impressions extend in short lines in every direction. They may very well have been made by those stone and bone objects which have been tentatively identified as potters' tools on the basis of peculiar signs of wear.

Some pieces of fine ware display a crackled surface. They were probably covered by a slip of refined clay; the slip must have been simply a refined variety of the same kind of clay as was used to form the body, since the slip did not occasion any difference in color. There are only a few exceptional instances of a difference in color produced by a slip which was essentially different from the composition of the body of the vessel. Ordinarily the color of the surface shaded gradually into that of the core.

The universal use of a slip on vessels of fine ware cannot be proved positively, but its possibility must be

admitted. A thin slip would serve to hide the pores in the clay, as well as any coarse particles which might be present at the surface. Many pieces of fine ware appear to have more lustre than could be ascribed to mere use of a smoothing or polishing implement. The use of a slip on fine ware may actually have created the primary difference between the fine and coarse classes, since most pieces of coarse ware have a smoothed surface, but lack lustre.

In the natural quality of the clay there is often little or no difference between the fine and coarse wares of Troy I., since many pots with a fine surface are of fairly coarse clay at the core.

The quality of the biscuit, or fabric as produced by baking, is nearly the same for both fine and coarse ware. In general, the fabric of the pottery of Troy I. is not nearly so hard as that of the later settlements. There is scarcely a single fragment from Troy I. which has the hard metallic ring of the well baked pieces which are numerous in the later periods. The pottery of Troy I. is easily breakable, just as it was in ancient times, for the finds consist mostly of tiny bits. Because of the relative poor quality of the fabric, the ceramic remains from Troy I. offer special difficulties in mending.

One difference which does exist between some fine pieces and the ordinary coarse ware of Troy I. is apparently accidental rather than intentional. Since some pieces of fine ware are relatively small or thin, their core is not so poorly baked as that of ordinary coarse pieces, which are comparatively thick and heavy.

As in the antecedent periods at Kum Tepe, it was ~~the~~ rule in Troy I. that the pottery be **monochrome**. Probably because of the method of firing, the range of colors was limited. The color of the fine ware is generally a dark brownish grey, mostly with a barely perceptible greenish tinge. Some of the very best ware is black and there are examples of very good brown ware, as well as a few of fine yellowish, greyish and reddish. At times it has been said that fine red pottery did not occur in Troy I., but the actual evidence indicates that it was never entirely absent.

The coarse ware is generally reddish or brownish in color, but many pieces are very dark. Some bear traces of blackening from use, since the coarse vessels were usually cooking pots.

Some types of vessels of fine ware were decorated by geometric incisions, in which traces of pure white filler are occasionally preserved. Only in exceptional instances was coarse ware incised. Plastic bosses and ridges, as

well as impressed grooves were occasionally used on vessels of fine ware, and sometimes there were impressed dots or circles. Such decoration as was used on pieces of coarse ware was likely to be plastic, taking the form of bosses or ridges, or to be made by impression.

An unusual kind of decoration, apparently not at home in Troy, was the use of thin lustreless white paint in parallel lines and geometric patterns on a dark polished surface.

Catalogued Pots of Troy I. from C-D 2-3,

Listed According to Inventory Numbers¹

<u>Inventory no.</u>	<u>Shape</u>	<u>Sub-period</u>
35.536	Bowl	3
35.537	Tripod vessel	3
35.538	Cup	3
35.539	Small jar	3
35.540	Small pitcher	3
35.541	Small pitcher	-
35.542	Beaker	4
35.543	Basin	2
35.544	Jug	3
35.641	Pitcher	3
35.642	Lid	2
35.643	Bowl	2
35.644	Tripod vessel	2
35.647	Lid	2
35.648	Pyxis	1

1) This list is intended to aid in easy use of the lists which follow. The first two digits of the inventory numbers indicate the year in which the pots were found. The last three digits of the inventory numbers refer to the order of these pots in the inventory of all the pots found by the University of Cincinnati Expedition.

<u>Inventory no.</u>	<u>Shape</u>	<u>Sub-period</u>
35.649	Pitcher	1
36.676	Small pitcher	1
36.677	Pyxis	2
36.678	Lid	1
36.683	Jar	2
36.684	Bowl	2
36.685	Bowl	2
36.686	Miniature (coarse ware)	1
36.687	Miniature (coarse ware)	2
36.688	Lid	2
36.689	Miniature (coarse ware)	2
36.690	Lid	1
36.691	Miniature (fine ware)	3
36.692	Miniature (fine ware)	3
33.693	Cup	-
36.735	Pitcher	1
36.736	Beaker-like pot	2
36.737	Jar	2
36.738	Jar	2
36.739	Bowl	1
35.743	Jar	2

Catalogued Pots of Troy I. from C-D 2-3,

Classified According to Shape

FINE WARE

Bowls

Type a: ¹ 36.739.

Type b: ¹ 35.536; 35.643; 36.685; 36.684. ²

Jugs

Large Pitcher: 35.544.

Small pitcher: 35.540; 35.641; 35.541; 35.649.

Small pitcher on three legs: 36.676.

Squat pitcher: 36.735.

Jars

Small collar-necked jar on legs: 35.539.

Two-handled jar of medium size: 36.737; 36.738.

Large two-handled jar: 35.734.

Large two-handled jar with small spout in side: 36.683.

Pyxides

Small pyxis with incised and punctured decoration: 35.648.

Small pyxis with incised decoration: 36.677.

1) Tr.u.II. 246.

2) Cf. nos. 24 and 25 in Schliemann's *Sammlung* (and the same numbers in Hubert Schmidt's catalogue).

Lids

Small round lid with conical knob: 36.678.

Small round lid with conical knob, and with incised decoration: 36.690.

Small angular lid with conical knob: 36.688.

Lids with upright sides, and four drawer-pull handles on top: 35.642; 35.647.

Cups

Small one-handled cup: 33.693.

Large one-handled cup: 35.538.

Large two-handled beaker: 35.542.

Miniatures (also see same shape under "Coarse Ware")

Miniature vase in the shape of a jar on a hollow pedestal base, with four pierced lugs: 36.691.

Miniature vase in the shape of a jar on a spreading hollow base, with four pierced lugs: 36.692.

COARSE WARE

Basins and cooking pots

Deep two-handled basin with rounded bottom: 35.543.

Deep two-handled beaker-like pot with flat bottom: 36.736.

Tripod vessels: 35.537; 35.644.¹

1) Cf. nos. 1 and 2 in Schliemann's *Sammlung* (and the same numbers in Hubert Schmidt's catalogue).

Miniatures (also see same shape under "Fine Ware")

Miniature vases in the shape of collar-neck jar, with four pierced lugs: 36.686; 36.689.

Miniature vase in the shape of jar having very low neck or hole-mouth, with four pierced lugs: 36.687.

Catalogued Pots of Troy I. from C-D 2-3,

Classified According to Sub-period

Sub-period 1

From the deposit associated with the so-called House 103:

- 35.648 - small dark grey pyxis, with incised and punctured decoration on a polished surface. Height 0.062 m.
- 35.649 - black pitcher, with cutaway spout; burnished surface. Height 0.148 m.
- 36.686 - small rudely made tannish miniature jar, with high neck, and four pierced lugs. Height 0.032 m.
- 36.690 - small nearly conical blackish lid, with incised decoration. Diameter 0.055 m.
- 36.735 - squat greyish pitcher, with burnished surface. Height 0.165 m.; diameter 0.164 m.

From the contemporary stratum, but not within the so-called house:

- 36.676 - small greyish pitcher, with lustrous surface; three legs. Height preserved 0.117 m.
- 36.678 - small round greyish lid, with conical knob; lustrous surface. Diameter restored 0.076 m.
- 36.739 - small reddish burnished bowl, with incised decoration on the inside of the moulded rim. Diameter 0.136 m.

Sub-period 2

From House 102:

- 35.543 - deep two-handled basin with rounded bottom; dark brownish grey, fairly coarse ware, but with somewhat finished surface. Height 0.273 m.

- 36.685 - bowl with angular rim, of Schmidt's "type b";
a single horizontal tubular lug on outside of
rim; flat bottom, very slightly hollowed.
Brownish black, with lustrous surface.
Diameter 0.231 m.
- 36.689 - tiny rudely made tannish miniature jar, with
high neck, and four pierced lugs. Height 0.028 m.
- 36.736 - deep two-handled beaker-like pot with flat bottom;
rather coarse blackish ware. Height 0.24 m.
- 36.738 - two-handled jar with lustrous blackish surface;
used as a burial urn. Height preserved 0.222 m.

From the contemporary stratum, outside House 102:

- 35.642 - large over-lapping lid with flat top, four
drawer-pull handles, and a middle conical
projection. Diameter 0.175 m.
- 35.643 - fragment of large bowl of Schmidt's "type b";
angular rim; horizontal tubular lug placed
above angle on outside of rim; flat bottom.
Lustrous surface, varying from light brownish
to black. Diameter calculated 0.36 m.
- 35.644 - fragment of tripod vessel; coarse brown ware.
Height 0.22 m.
- 35.647 - large over-lapping lid, with flat top, from
which rise four drawer-pull handles. Lustrous
dark grey surface. Diameter 0.14 m.
- 36.677 - small grey pyxis with incised decoration.
Height 0.057 m.
- 36.683 - two-handled jar having small spout in middle of
side; lustrous dark grey surface; used as a
burial urn. Height 0.37 m.
- 36.684 - fragment of large bowl of Schmidt's "type b";
angular rim; lustrous surface, dark brownish.
Used to cover hole in burial urn 36.683.
Dimensions as preserved 0.19 x 0.155 m.

- 36.687 - tiny miniature jar with four pierced lugs; tannish; unevenly made. Height 0.029 m.
- 36.688 - small four-cornered lid, with conical projection in the middle; grey, evidently of fine ware, but the surface is poorly preserved. Width on diagonal 0.071 m.
- 35.743 - two-handled jar, with lustrous dark greyish surface; used as burial urn. Height preserved 0.315 m.
- 36.737 - two-handled jar of comparatively small size; lustrous surface, greyish brown to blackish; used as burial urn. Height preserved 0.195 m.

Sub-period 3

From House 101:

- 35.536 - fragment of bowl with angular rim of Schmidt's "type b", tubular lugs on outside of rim above angle. Hollow pedestal base. Lustrous grey surface. Diameter calculated more than 0.30 m.
- 35.537 - fragment of tripod vessel, of reddish coarse ware. Height restored 0.175 m.
- 35.538 - deep one-handled cup of brownish coarse ware. Height 0.144 m.
- 35.539 - small three-legged jar with four lugs. Lustrous brownish grey surface. Height preserved 0.097 m.
- 35.540 - small pitcher with lustrous greyish surface. Height restored 0.114 m.

From the contemporary stratum, but outside House 101:

- 35.544 - fragment of lustrous black jug with prominent moulded lip; incised decoration on handle. Possibly imported piece. Diameter of neck 0.057 m.

- 35.641 - pitcher, with lustrous brownish grey surface.
Height restored 0.148 m.
- 36.691 - miniature jar of fine dark grey ware, with
four pierced lugs, and hollow pedestal base.
Height 0.05 m.
- 36.692 - fragment of miniature jar of dark grey fine
ware; four pierced lugs, and hollow spreading
base. Height 0.043 m.

Sub-period 4

- 35.542 - large two-handled beaker with concave collar-
neck. Lustrous blackish surface. Height 0.20 m.

Unclassified

- 35.541 - small pitcher, with lustrous dark brownish
grey surface. Probably of an early sub-
period. Height 0.108 m.
- 33.693 - small one-handled cup of lustrous grey ware.
This is the only pot from the C-D 2-3 ex-
cavations which may possibly have belonged to
a late sub-period of Troy I. Height 0.068 m.

The Ceramic Series for Troy I.

In our excavations in Troy I. all the potsherds have been collected and kept in systematically arranged groups. So far as possible, an effort has been made to join all the fragments which fit together, for the sake of restoration and identification. The study of the ceramic finds is still in progress.

In establishing a ceramic series for Troy I. we cannot depend entirely upon the whole pots which have been recovered. The area excavated has been small, and the number of whole pots is somewhat limited. In contrast, the potsherds are almost unlimited in number; they give information about the occurrence of types which are not represented among the whole pots, and they are useful in a statistical survey of the more common types.

In the discussion of the sub-periods which follows, it will be obvious that for the middle and late stages of Troy I. our material is rather scanty, except in fragments of the very common and characteristic bowls. For the early stage of Troy I. our material is comparatively copious. Similar general observations about our finds have already been made in Chapter III.

Sub-period 1

The most easily identifiable, and by far the most common type of pottery is that of deep bowls. There are a few examples of Schmidt's "type a",¹ with a rim which is moulded on the interior to carry incised decoration. There are very many examples of "type b",¹ with a rim which turns inward from a fairly sharp exterior angle located about 0.01 to 0.02 m. below the top. Bowls of "type b" ordinarily have plain horizontal tubular lugs set between the angle and the top of the rim; bases may be hollow pedestal feet, or slightly hollowed flattish bottoms, or perfectly flat bottoms. Small pitchers like 35.540 are common. The type of pitcher with a cutaway spout (35.649 and sherd) is comparatively rare. The types of lids are well represented among the whole pots, except small overlapping lids with four pierced lugs, which are represented only by fragments. Occasionally geometric incisions serve as decoration on pieces of fine ware, particularly on the interior of the moulded rim of bowls of "type a"; they are also used on small pyxides, on some small jars, on one small round lid, and on several of the hollow pedestal feet of

1) Tr.u.II. 246.

bowls of "type b". Two types of handles in fine ware are fairly characteristic, although they are not very common. One is the so-called "drawer-pull" handle, which is made of a flat band of clay so turned near the middle that it can be grasped from only one side; this kind of handle seems to have been used upon certain jars, as well as upon some of the large overlapping lids. The other characteristic handle has the shape of a sharply bent elbow, and it seems to have been used at the rim of some kind of deep dish.

In coarse ware by far the most common type is that of tripod cooking vessels. In cross-section their legs are generally flat on the outside and semi-oval toward the inside. On the body of these vessels there are often vertical plastic ridges, ending in slight projections above the rim. Jars of coarse ware appear to have had flat bottoms. Several small pieces have come to light which appear to have belonged to pithoi.

Sub-period 2

In general, the same remarks can be made about the pottery of this sub-period as about that of the preceding one. A number of unusual finds are the following: a fragment of a plain deep bowl with a vertical pierced lug; a

fragment of a jug with moulded lip, like 35.544; a fragment of a fine jug with a zigzag plastic ridge; and a fragment of the handle of a small jug, bearing herring-bone incisions on its outside.

Sub-period 3

There is a very strong general resemblance between the pottery of this sub-period and that of the two preceding sub-periods. In bowls of "type a", an unusual feature is seen in several fragments which have faces moulded and incised on the interior where the rim rises to form a kind of grip; a horizontal lug with double vertical piercing is placed below the rim on the outside of such pieces. Among the many rim fragments of bowls of "type b", some are not so extremely angular as in the earliest sub-periods, and several have lugs which are no longer quite plain, but have slightly enlarged ends; such lugs become characteristic of the middle stage of Troy I. Several fragments, presumably of small jars, have vertically pierced wing-like lugs. One sherd with a somewhat lustrous black interior is decorated with dull white paint applied in a lyre-string pattern. There are several fragments of a huge pithos. Tripod vessels are still common.

Sub-period 4

There are a few fragments of bowls of "type a", but some

of these appear without the incisions which were almost invariably used in the earlier sub-periods. One "type a" fragment is like several from sub-period 3 in bearing the representation of a face; in the middle of the face is a large hole through the side of the vessel, serving as mouth for the face and as stringhole for the pot. Among the representative of "type b" bowls there are both truly angular and slightly rounded angular rims, and some pieces approach the truly rounded shape of Schmidt's "type c". In the chronological series, "type c" bowls may be said to be beginning about this time. There are still occasional examples of small pitchers, apparently similar to 35.540, etc. There are some fragments of tripod vessels, but at least one of these is different from the earlier examples in having legs which are nearly round.

Sub-period 5

As in all sub-periods of Troy I., the most characteristic pieces belong to bowls of fine ware. There are numerous fragments from bowls of "type b", including the variants which begin to appear in sub-period 4, but these are outnumbered by genuine representatives of Schmidt's "type c". One unusual fragment is a round leg belonging to some polished vessel.

Sub-period 6

Among the limited number of sherds, "type c" bowls are well represented.

Sub-period 7

"Type c" bowls are again the most characteristic. Some are decorated by a group of vertical incisions on the outside of the rim. A variant occurs of the old "type b", with thin sides, only a slight angle, and a rim which is comparatively high above the angle. There are occasional examples of round legs in polished ware. An increasing number of plate-like vessels has been noted; this tradition continued in the latest sub-periods, and may have gone on in Troy II.

Sub-period 8

In the limited number of sherds, the most characteristic fragments belong to bowls of "type c".

Sub-period 9

"Type c" bowls are very well represented. Some fragments carry small groups of vertical incisions on the outside of the rim, as in sub-period 7; occasionally such groups are imitated in thin plastic ridges. A change with the passing

of time is noted in the shape of the rim, since it no longer has a simple curve, a pronounced bend is appearing a short distance below the rim. From one large fragment of such a bowl it may be seen that the shape is more shallow than that of the various deep bowls which were characteristic in the earlier sub-periods; this same large fragment has a conical leg. Again there are numerous sherds of plate-like vessels.

Sub-period 10

The most characteristic pieces belong to bowls of "type c". Some fragments have small groups of vertical incisions on the exterior of the rim. A few fragments carry thin imitations of lugs; in this connection it is interesting to note that lugs are not usually found on bowls of "type c". Again there are numerous fragments of plate-like vessels.

A suggested grouping of sub-periods

It is evident that absolutely distinct features cannot be found to characterize every single one of the ten sub-periods. In order to make the chronology less complicated, it will be useful eventually to make combinations of sub-periods so far as possible in fairly unified groups. It appears now that sub-periods 1, 2, and 3 may form one such

group. Possibly sub-period 4 and 5 can be considered another such group. Sub-periods 6, 7, 8, 9, and 10 have so many features in common, that they may be considered to form a third group. These groups may be conveniently designated as early I., middle I., and late I.

A system of grouping the sub-periods of Troy I. into three major stages is well suited to a history of the gradual changes in the ceramic tradition. Sherds found at any distance from C-D 2-3 could not be assigned exactly to a particular sub-period, for lack of stratigraphic continuity, but as representatives of a definite major stage they could be identified anywhere.

In early I. the general run of fine ware is better polished than in the other two stages. In late I. the average fine ware is not so well polished as earlier, but occasional brilliant pieces show that the late potters could do surpassingly well.

The common colors of the pottery of early I. are black and various shades of dark grey. Later there is a gradual change to brown of various shades, but in late I. there are several instances of the deepest black found in any stage. Clearly the late potters had made some advance in the technique of firing.

This advance is also apparent in the biscuit of some pieces. Although many pieces of late I. are poorly baked, others are of superior hardness.

In general, the development in ceramic shapes may be studied according to the major stages. However, the study of the sub-periods should not be discontinued entirely in any one area, since certain facts may come to light concerning development within the time of a major stage.

This grouping into three major stages corresponds with the evidence now available. The first stage is approximately the same as Ia and Ib as determined in the 1933 campaign, and as Thermi I. and II.; the second stage is approximately the same as Ic, and as Thermi III and IVa; the third stage includes all of Id, and perhaps a slightly later time as well, and it is approximately contemporary with Thermi IVb and V. This grouping should not be considered final, since further excavating is to be done in Troy I.

Thermi and Troy

Thermi I. As in the early part of Troy I., the most common vase shape in Thermi I. is a deep bowl with an angular rim. At Troy this was designated by Hubert Schmidt as "type b". At Thermi it seems to have been slightly different. The horizontally pierced lugs are not so long as at Troy, nor are they so nearly of tubular shape. Also, at Thermi the lugs on this type of bowl are set at the angle (2, etc.) instead of between the angle and the top of the rim (Troy 36.685 and sherds). As in early Troy I., the Thermi bowls with angular rim have either a flat bottom, a slightly hollowed bottom, or a low pedestal foot. In pedestalled bowls from both sites the foot is regularly hollow, and ordinarily has plain sides; but in some instances the appearance has been changed by a series of holes in the sides of the foot; occasionally there is incised decoration. At least some of the flatbottomed bowls from Thermi (e.g. no. 4) differ from the Trojan examples in the fact that the bottom protrudes below the convex curve of the sides of the vessel. Unlike this, in early Troy I. the bottom of the bowl is given little or no emphasis, unless in the form of the previously mentioned low pedestal foot.

Deep bowls of the type designated by Hubert Schmidt as "type a" at Troy are characteristic of early and middle Troy I.; at Thermi the analagous type has been found in Town I. as well as later. The interior of the rim is emphasized by a kind of moulding, which in early Troy I. almost invariably carries incised decoration, but which appears without incisions in at least a few of the examples from Thermi. The horizontal wing-like lug, no. 4 in fig. 27, p. 77 of Thermi, has some resemblance to a type represented by sherds found in early Troy I. At Troy the analagous lugs also have two vertically pierced stringholes, although a few exceptional examples are unpierced, serving simply as a grip or an imitation of the more common type. Usually the Trojan examples project less, but are somewhat heavier. Their ancestry may be traced in the antecedent periods at Kum Tepe. Of course, it is quite possible that the Thermi lugs have a similar origin.

The type of pitcher with a plain rounded spout (35.540, etc.) which seems to have been very common in the early part of Troy I. does occur in Thermi I., but it is outnumbered by two variant shapes. One is the type of pitcher whose spout is cut away at the back, several examples of which (35.649, and sherds) have recently been identified in early Troy I. Another fairly common type of pitcher in Thermi I. is that

with a moulded protruding lip, like several specimens (35.544 and sherds) from early Troy I. At both sites the pitchers generally have globular bodies.

A type of small pyxis with four small, vertically pierced ear-like lugs and a low pedestal base is represented in both Thermi I. (9, etc.) and early Troy I. (sherds). Another type of pyxis found in Thermi I. may be seen on Plate XL. of Miss Lamb's publication, where it is designated as lid type XIII c. Its identification as a lid is highly questionable, as may be seen from a study of the stringholes, and from comparison with several Trojan examples, which must have been covered by small round lids of the characteristic type (e.g. 36.678), and which show considerable wear from standing on the flat bottom. At Thermi the two vases (40 and 81) which are presumably specimens of this type belong to Town I., and they are without incised decoration. The two catalogued examples from Troy carry incised designs; one (35.648) belongs to sub-period 1, and the other (36.677) to sub-period 2.

Large overlapping lids with flat tops have been found in various layers of habitation at Thermi, but in the publication there is no illustration of the type common in early Troy I., with four upright "drawer-pull" handles (35.642,

35.647, and sherds). Small lids are common in both Thermi I. and early Troy I., but merely a general similarity has been observed.

Thermi II. Although Thermi II. belongs to the same general class of culture as Thermi I., in Miss Lamb's publication several types of vases are assigned to Thermi II. which have not been paralleled by examples from the preceding town. One of these is a small tripod pyxis (114), which is very similar to a small three-legged jar (35.539) found in sub-period 3 of Troy I. Another is a small flat-topped lid with a flange around the upper edge, and several stringholes; one example (151) of this type comes from Thermi II. and two (222 and 237) come from Thermi III.; these are paralleled by sherds from early Troy. Tripod vessels with plastic projections on the rim are common in the early part of Troy I., but according to Miss Lamb's publication the earliest specimen with projections on the rim has been assigned to Thermi II.; the tripod vessels of Thermi I. do not have them, but they are characteristic of the earliest vessels of this type in Troy I. The bosses on the earliest tripod vessels from Thermi are considerably below the rim. Possibly the variant of this type of plastic decoration was originally Trojan, and was

later adopted at Thermi.

Thermi III-V. A thorough-going comparison of these periods at Thermi with Troy I. is impossible at the present time, because the contemporary deposit at Troy has not been studied completely. Yet the fact seems to stand out that the last seven sub-periods of Troy I. are approximately equivalent to Thermi III-V. So far as comparisons can be made between late Troy I. and Thermi, they depend upon fragmentary pottery in several very small areas at Troy where a ~~test~~ of the stratification has been made.

The type of bowl (191) found in Thermi III., with angular rim and horizontal pierced lugs on the outside of the rim above the angle, is like that (sherds) found approximately in the middle of Troy I. At Troy it differs from the earlier examples in the fact that the lug is no longer exactly tubular, but instead has spreading ends, with pinched-out edges. In Thermi III. the position of this kind of lug is so different from that of the lugs on bowls of Towns I-II, that some foreign influence may be indicated, and this may well have come from Troy.

In Thermi III. at least one example (192) of Hubert Schmidt's Trojan "type a" bowl has been found. However, the

incisions on the inside of the rim are carelessly made, and therefore look somewhat similar to the late examples (sherds) of this kind of decoration at Troy, dating to a time near the disuse of this style.

As in about the middle of Troy I., so in the middle period at Therml there appears a tendency to make some bowls with a plainer kind of rim, sometimes nearly straight, and sometimes curving inward without a sharp angle, in a shape approaching Schmidt's "type c".

The so-called "collar-necked" jar (195) from Therml III. almost appears to have been a wide form of a deep two-handled beaker (35.542) found in deposit approximately of sub-period 4 of Troy I.

In Therml III. the type of jug whose spout is cut away at the back still occurs; its use evidently extends over a long period of time.

A kind of bowl (354) with incurving rim, characteristic of Therml IV., is well represented among fragments of pottery found in the deposit of late Troy I. At both Troy and Therml some bowls of this kind are set upon short feet, but at Therml these feet appear to have been blunt (408), while at Troy (sherds) they appear to have been more nearly conical in shape. Here is an indication of the fact that in spite of obvious

relationship, certain local peculiarities persisted.

In Thermi V. some bowls (e.g. 492) of the same general shape as those of IV. just mentioned are decorated by vertical incised lines on the outside of the rim; this style is characteristic of sub-periods 7-10 of Troy I., so far as may be seen at the present time from an incomplete study of the finds.

General Remarks. Thus it appears that some synchronisms may be established between certain stages of Troy I. and Thermi I-V. Certain marked parallels seem to indicate that Thermi I. and the beginning of Troy I. were approximately contemporary. The differences which evidently existed at the beginning of the two settlements were probably due to the fact that the points of immediate origin were different, although the ultimate point of origin was perhaps the same. One possibility is that the settlers of Troy came directly from Kum Tepe, whereas the settlers of Thermi came from some site related to Kum Tepe. Or again, the settlers of Thermi may have come in a second wave of migration directly from the mother site of Kum Tepe.

Although the relationship between Troy and Thermi does not appear to have been extremely close in the early stage, it evidently grew closer toward the middle stage. In certain

ceramic types there arose a more pronounced similarity, and thereafter a close relationship appears to have continued.

It is not necessary to assume that Thermi V. overlapped early Troy II.¹ Evidence which has recently been unearthed indicate that two-handled goblets of the "depas" type, flaring bowls, and wheel-made pottery in general go back to a very early stage of Troy II., but are completely lacking at Thermi. The correspondence now known to have existed between late Troy I. and Thermi V. serve to indicate that the end of Thermi V. should probably be dated earlier than heretofore, since it must have come near the close of Troy I. It is interesting to note that at Thermi the end of the settlement came approximately when huge fortification walls were being built at Troy.

1) Cf. Thermi 209 ff.

Troy and Western Anatolia

Our knowledge of the cultural relationship of Troy I. to many other early sites in western Anatolia is based mainly upon ceramic evidence. This evidence has been discussed frequently, and from many angles, and within the past three years it has twice been treated afresh, first by Dr. Bittel in his Prahistorische Forschung in Kleinasien, and then by Miss Lamb in her Excavations at Thermi. Eventually, when the study of recently discovered Trojan vases is more nearly complete, it will be possible to make many new comparisons.

Unfortunately, other than Thermi there is no related site which has yet been subjected to extensive stratigraphic excavation of the kind which would permit accurate comparisons of more than a general character. For the most part, the numerous finds from the other sites were actually made in unstratified excavations of settlements, or in the digging of tombs. Therefore they do not offer any light in a chronological study of Troy I.

CH. VII. MISCELLANEOUS SMALL OBJECTS

As in the case of the other remains found in the excavations in C-D 2-3, the various small objects for the most part happen to be assignable to the early sub-periods of Troy I. In comparison with potsherds, the miscellaneous small objects are few in number, and their value in a chronological study is correspondingly slight. Yet they are often interesting in themselves as relics which cast a side light upon the life of the early settlers.

Bone

Awls, of thin broad blade-like split bone, possibly from an animal rib; well smoothed or polished on one side, but porous on the other:

No.	Description	Finding place	Sub-period
36.185	Length 0.0585 m. Strong sharp point.	House 103 area.	1.
36.333	Length 0.054 m.	Below east part of House 102.	1.
36.76	Length 0.075 m.	North of houses, 21st cut.	1.
35.520	Point missing. Length preserved 0.065 m.	House 102.	2.
35.178	Length 0.057 m.	House 102.	2.
35.102	Length 0.095 m.	South of House 101	Approx. 3.
35.395	Length 0.055 m.	Above House 102 wall.	Approx. 3.
36.77	Fragment. Length preserved 0.053 m.	East area, layer N3.	Approx. 4.

Awls, of split round animal bone, generally well smoothed near the point and on the outer side of the bone:

36.184	Heavy and rather blunt. Length 0.077 m.	House 103 area.	1.
36.231	Length 0.082 m. Sharp point.	Below east part of House 102.	1.

No.	Description	Finding place	Sub-period
35.154	Length 0.044 m. Fine point.	House 102.	2.
35.522	Length 0.063 m.	East area, -4.30.	Approx. 2.
35.69	Length 0.074 m. Notches at side of head.	House 101	3.
36.45	Point missing. Length preserved 0.071 m.	Near wall 116.	Early 1.
36.47	Length 0.067 m. Strong pen-like point.	East area, layer My.	Approx. 5.
34.341	Point missing. Length preserved 0.067 m.	Trench A2.	Middle I.
34.183	Joint serves as head; worked only near point. Length 0.088 m.	East of wall b.	Late I.

Awls, of crudely cut bone:

36.306	Length 0.062 m.	Below east part of House 102.	1.
35.316	Point missing. Length preserved 0.062 m.	House 102.	2.
36.158	Length 0.075 m.	House 102.	2.
35.114	Fragment. Length preserved 0.038 m.	North of House 101.	3.
35.176	Much worn. Length 0.125 m.	In south wall of House 101.	Approx. 3.
35.346	Partly smoothed. Length 0.066 m.	North of houses, 17th cut.	Approx. 3.
34.342	Roughly rectangular in section. Length 0.084 m.	Trench A2, -4.10.	Early I.
35.68	Heavy. Length 0.067 m.	North of House 101, slightly later.	Approx. 4.

Miscellaneous awls:

35.70	Pointed at both ends. Well smoothed. Length 0.064 m.	North of House 101.	Approx. 3.
36.159	Large joint serves as head. Short and strong. Length 0.058 m.	West of House 102.	Early I.

Tubular bone instruments, cut obliquely at one end to form a
pen-like point:

36.314	Well smoothed. Point strong, but not sharp. Length 0.079 m.	House 102.	2.
35.179	Worn near point. Length 0.055 m.	West of House 102.	Approx. 2.

No.	Description	Finding place	Sub-period
35.77	Worn near point. Length 0.07 m.	West of House 102.	2.
35.105	Length 0.08 m.	North of House 101.	Early I.
35.311	Tubular only near head. Well smoothed. Point blunt. Length 0.089 m.	North of houses, 17th cut.	Approx. 3.

Pins, of round thin and comparatively long animal bones, with small flattish joint serving as head:

36.74	Length 0.055 m.	North of houses, 21st. cut.	1.
36.280	Somewhat irregular in shape. Well smoothed, except at head. Length 0.075 m.	Below east part of House 102.	1.
36.279	Length 0.111 m.	House 102	2.
35.130	Point blunt. Length 0.064 m.	House 102.	2.
35.481	Length 0.113 m.	North of houses, 19th cut.	Approx. 2.
35.521	Piercing through middle of head. Length 0.09 m.	North of houses, 17th cut.	Approx. 3.
35.152	Length 0.065 m.	East area, -3.75.	Early to middle I.
35.430	Length 0.096 m.	In east wall of group 113.	Early to middle I.
36.46	Polished point. Length 0.07 m.	East area, layer M.	Approx. 5.

Headless pins or awls, of round bone:

36.75	Well smoothed. Length 0.0635 m.	North of Wall 118, 22d cut.	1.
35.315	Length 0.061 m.	House 102.	2.
36.44	Length 0.083 m.	East area, layer L1.	Approx. 7.

Bone rings, or short tubes; exterior well smoothed:

36.156	Length 0.02 m. Diameter 0.028 m.	North of Wall 118, 22d cut.	1.
36.79	Length 0.028 m. Diameter 0.031 m.	North of houses, 20th cut.	2.

Miscellaneous bone objects:

35.347	Heavy hollow worked piece. Possibly a handle. Length 0.069 m.	Walls 114	3.
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No.	Description	Finding place	Sub-period
35.423	Joint of large animal leg bone. Smooth, as if used in this form. Length 0.095 m.	Above north wall of House 102.	Approx. 3.
34.452	Thin broad nearly rectangular bone instrument. Pronounced wear near one end. Potter's tool? Length 0.07 m.	Trench A1, -4.30.	Early I.
36.54	Tubular bone object, with a thin fragment of bone inserted at one end. Whistle? Length 0.0565 m.	East area, layer L2.	Approx. 6.
35.79-85	Seven small bones, pierced at one end. Possibly part of necklace. Longest 0.053 m., shortest 0.025 m.	House 101	3.

Animal Teeth

36.308	Nicely drilled hole near point. Similar object at Thermi called a "claw". Our identification not positive. Length 0.036 m.	House 102	2.
36.309	Companion piece of 36.308. Both probably used ornamentally. Length 0.033 m.	House 102.	2.

Copper

36.417	Well made needle, with thin round body, and somewhat flattened eye near one end. Point perhaps missing. Length preserved 0.081 m.	North of Wall 118, 22d cut.	1.
Uncatalogued	Small rough fragments.	House 102 bothros.	2.
35.107	Rude fragment. Length 0.032 m.	House 101.	3.
Uncatalogued	Fragments of copper pin. Length preserved 0.047 m. Thickness less than 0.002 m.	West of House 102.	Early I.
34.502	Pin, with broad disc-like head, and rather good point. Length 0.095 m.	South of Walls 112.	Middle 1.

Lead

No.	Description	Finding place	Sub-period
36.169	Fragment, of twisted wire-like shape. Poor condition.	East area, upper layer N.	Approx. 4.

Stone

Hammer-axe:

36.366	Less than half preserved, in semi-ovoid shape. Hole drilled from one side; diameter of hole ca. 0.023 m., but not perfectly uniform. Length of fragment 0.071 m. Original thickness ca. 0.067 m.	North of houses 22d cut.	1.
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Celts:

36.186	Fragment, probably of so-called "shoe-last" shape. Cutting edge rather blunt. Marks of heavy wear. Length preserved 0.053 m.	South of House 103, on bedrock	1.
36.64	Smoothly surfaced hard bluish grey stone. Oval in section. Good edge, now slightly chipped. Length 0.066 m.	House 101.	3.
35.87	Thin comparatively broad chisel-shaped celt, of serpentine. Fine unchipped edge. Length 0.08 m.	House 101	3.
36.201	Small example of same type as 35.87. Serpentine. Broken across upper corner. Edge shows fine crossmarks of sharpening. Length 0.023 m.	Near Wall 124	Approx. 3

Flint implements and fragments:

No.	Description	Finding place	Sub-period
36.307	Worked fragment. Milky white. Nearby were a dozen chips. Length 0.026 m.	North of Wall 118 22d cut.	1.
35.300	Worked fragment. Length 0.062 m.	North of houses, 19th cut.	Approx. 2.
35.151	Scraper. Length 0.033 m.	Above corner of House 102.	Approx. 3.
35.376	Fragment of saw. Greyish. Length preserved of edge 0.017 m.	North of houses, 17th cut.	Approx. 3
35.115	Scraper with double edge Yellowish. Length 0.032 m.	South of House 102.	Early 1.
36.48	Scraper. Milky white, with some black speckles. Length 0.031 m.	East area, layer M.	Approx. 5.
36.55	Scraper with double edge. Milky, mottled with blackish. Length 0.037 m.	East area, layer Ll.	Approx. 7

Stone implements of somewhat rounded irregular shape, with pronounced signs of wear; possibly smoothing and polishing tools used in the manufacture of pottery:

35.310	Length 0.04 m.	House 103 area.	1.
35.119	Length 0.056 m.	House 102.	2.
35.21	Length 0.078 m.	House 101	3.
35.158	Length 0.04 m.	In north wall of House 101.	Approx. 3.
35.348	Length 0.048 m.	East area, same layer as Walls 114.	Approx. 3.
36.130	Length 0.042 m.	East of House 102, slightly higher stratum.	Approx. 3.
36.69	Length 0.0325 m.	Near Wall 116.	Early I.
36.361	Length 0.035 m.	Walls 115.	Approx. 4.

Whetstone:

35.118	Reddish grey slightly sandy stone. Triangular sides. Flat in section. Width 0.036 m. Thickness 0.021 m.	House 102	2.
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Pounding or grinding implement:

No.	Description	Finding place	Sub-period
35.159	Hard dark grey stone. Nearly conical. Fits a man's hand comfortably. Pronounced signs of wear on flat end. Length 0.103 m.	House 103.	1.

Pierced stones, possibly amulets:

36.160	Light greyish blue. Thin and flattish. Drilling made from both sides. Length 0.0185 m.	North of Wall 118, 22d cut.	1.
35.66	Limestone. Thin and flattish. Hole near one end. Length 0.034 m.	House 101.	3.
35.110	Limestone. Thin and flattish. Hole near one end. Length 0.031 m.	North of House 101.	Early I.

Pellet:

35.120	Light tannish. Diameter 0.02 m.	South of House 102.	Early I.
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Bead:

35.523	Hard green stone. Fairly round. Piercing near one side. Diameter 0.01 m.	East area, same layer as Walls 114.	Approx. 3.
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Idol fragments:

35.175	Flat greyish stone. Head, broken at neck. Width 0.042. Thickness 0.016 m.	House 102.	2.
35.65	Marble. Flat body, round in front view. Broken at neck, which is small and round. Length 0.078 m. Thickness 0.024 m.	House 101.	3.
35.394	Bluish white marble. Head, broken at neck. Length of fragment 0.032 m.	North of houses, 18th cut.	Approx. 3.
36.163	Marble; white, with some pinkish striations and patches. Flat, rudely shaped head, broken at neck. Width 0.032 m. Thickness 0.012 m.	West of House 102, in slightly higher stratum.	Early I.

Terracotta

Idol, modelled to represent a woman. Legs separated slightly; short pinched-out representations of arms; prominent breasts:

No.	Description	Finding place	Sub-period
35.165	Coarse clay, with traces of smoothing on surface; like typical pottery of the period. Head, one breast, and lower legs broken away in ancient times. Length preserved 0.063 m. Width 0.063 m. Thickness 0.019 m.	Walls 112.	Middle 1.

Beads or buttons:

36.161	Crudely made disc, with two small holes opposite each other. Diameter 0.031 m. Thickness 0.003 m.	North of Wall 118, 22d cut.	1.
36.129	In shape of small somewhat rounded biconical whorl. Beautifully polished black surface. Diameter 0.016 m.	East of House 102, slightly higher.	Approx. 3.
36.127	Flat. Pared all around, perhaps from biconical whorl. Diameter 0.027 m. Height 0.011 m.	East of House 102, slightly higher.	Approx. 3.
36.72	Dark grey. Diameter 0.019 m.	Walls 115.	Approx. 4.
36.81	Flat. Pared all around, perhaps from biconical whorl. Diameter 0.027 m.	East area, layer N3.	Approx. 4.
35.149	Thin, disc-like. Polished grey. Diameter 0.034 m.	In one wall of group 112.	Middle 1.

Spindle whorls of shape other than biconical:

36.360	Dark grey, polished. Conical. Diameter 0.051 m.	Beneath south Wall of 115	Approx. 3.
35.196	Coarse dark grey. Conical. Diameter 0.034 m.	In north wall of 112	Middle 1.
35.141	Polished dark grey coarse clay. Rounded shape, of large size. Diameter 0.043 m.	North of houses, 12th cut.	Middle 1.

Biconical spindle whorls; evidently the characteristic type, at least in early Troy I.; similar to typical pottery in fabric and surfacing:

No.	Description	Finding place	Sub-period
36.71	Tannish grey. Diameter 0.0385 m.	North of houses, 22d cut.	1.
36.78	Tannish, polished. Diameter 0.0395 m.	North of houses, 22d cut.	1.
36.80	Tannish black, polished. Diameter 0.026 m.	North of houses, 22d cut.	1.
36.154	Greyish polished Diameter 0.027 m.	North of Wall 118, 22d cut.	1.
36.277	Blackish polished. Decorated with 5 vertical rows of 9 or 10 dots each, punctured. Diameter 0.038 m.	House 103 area.	1.
36.278	Tan, much worn. Diameter 0.022 m.	Below east part of House 102.	1.
35.194	Dark tannish grey. Diameter 0.033 m.	South of houses, near bedrock	Approx. 1.
34.367	Dark grey polished. Diameter 0.033 m.	House 102.	2.
36.131	Brownish grey polished. Diameter 0.029 m.	House 102.	2.
36.162	Tannish grey polished. Diameter 0.022 m.	North of houses, 20th cut.	2.
36.183	Greyish brown. Diameter 0.024 m. Rudely shaped. No trace of polish.	House 102.	2.
36.338	Dark grey polished. Diameter 0.033 m.	House 102.	2.
36.339	Dark grey polished Diameter 0.035 m.	East of House 102.	2.
35.59	Brownish grey, crumbly. Diameter 0.039 m.	House 101.	3.
35.67	Dark greyish. Diameter ca. 0.024 m.	North of House 101.	3.
35.103	Dark brownish. Decorated with groups of five small finger- nail impressions, which are placed one above another. Diameter 0.041 m.	House 101.	3.

No.	Description	Finding place	Sub-period
35.104	Light brown, poorly baked. Diameter 0.044 m.	House 101.	3.
35.182	Brownish, poorly baked. Decorated with 4 rows of 8 small punctures. Diam. 0.041 m.	House 101.	3.
35.308	Dark grey polished. Diameter 0.031 m.	East area, nearly same as 18th cut.	Approx. 3.
35.460	Brownish polished. Diameter 0.024 m.	East area, nearly same as 18th cut.	Approx. 3.
36.128	Blackish polished. Diameter 0.03 m.	East of House 102, slightly higher.	Approx. 3.
35.98	Dark grey. Diameter 0.038 m.	North edge of hilltop, early stratum.	Early I.
35.117	Light brownish polished. Fragment.	South of houses.	Early I.
35.189	Coarse greyish fabric, with some trace of yellow slip and polish.	South of houses.	Early I.
36.223	Blackish polished. Diameter 0.023 m.	West of House 102.	Early I.
36.336	Blackish, much worn. Diameter 0.04 m.	West of House 102.	Early I.
35.454	Buff, poorly baked. Diameter 0.033 m.	North of houses, 16th cut.	Approx. 3 or 4.
35.515	Dark grey polished. Poor fabric. Diameter 0.039 m.	North of houses, 15th cut.	Approx. 3 or 4.
36.73	Dark grey polished. Diameter 0.036 m.	Near walls 115.	Approx. 3 or 4
34.369	Light brown. Diameter 0.026 m.	South of walls 112.	Middle I.
34.404	Tannish grey. Diameter 0.035 m.	Trench A1, -3.10.	Middle I.
34.419	Reddish grey polished. Diameter 0.033 m.	Trench A2, -3.50.	Middle I.
34.503	Tannish grey polished. Diameter 0.03 m.	Trench A2, -2.50.	Middle or late I.

Terracotta weights:

No.	Description	Finding place	Sub-period
36.365	Brownish, slipped and polished. Nearly trapezoidal. Broad, and comparatively thin. Piercing from side to side at the narrow end. Height 0.066 m.	East area, lower than Walls 115.	Approx. 3.
35.458	Brownish, crude. Trapezoidal. Piercing from front to back at narrow end. Height 0.041 m.	North of houses, 17th cut.	Approx. 3.

Unbaked clay

Bead or button:

34.176	Buff clay, in a rude spherical shape. Diameter 0.023 m.	East area, late stratum	Late I.
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CHAPTER VIII.

INFANT BURIALS

Burial 1. In the floor deposit of the south part of the middle of House 102. Infant skeleton, buried under a flattish irregular stone. Extremely small. In very poor condition when found.

Burial 2. At the bottom of the 18th cut, just north of the middle of House 102. Infant skeleton simply inhumed very near Burial 3.

Burial 3. At the bottom of the 18th cut, just north of the middle of House 102. Infant skeleton in an urn, which was found badly crushed. Very near Burial 2. The urn of Burial 3 is pot 35.734.

Burial 4. In 21st cut, 2.25 m. north of the middle of House 102. Infant skeleton in an urn, which was found crushed. The urn lay on its side, apparently as when buried, for there was a fragment of a bowl serving as a lid over a hole in the part of the side which was turned up. Urn is pot 36.683. Bowl fragment is pot 36.684.

Burial 5. In the 22d cut, 1.40 m. north of the middle of House 102. Burials 2 and 3 were on one side, and Burial 4 on the other side of this burial. Infant skeleton in an urn, which was badly squashed when found. The urn is pot 36.737.

Burial 6. Barely beneath the floor of the east part of House 102. Infant skeleton in an urn; the urn was found badly crushed, and the skeleton rather compressed. The urn is pot 36.738.

General Remarks. The only burials which have come to light during our excavations in Troy I. were those of six infants. The evidence of stratification indicated that all six were made approximately during the time of House 102, and that they were placed barely beneath the surface of the ground.

The bones of the tiny skeletons were all preserved in order, in a crouching position, but they had become somewhat crushed because of superposed earth. The skeletons were of varying sizes, and several of the larger ones had a number of teeth. Several of the infants may have died at birth or soon afterwards, and one may have become nearly a year old.

The four urn burials were similar to each other. The vessels used were jars of fine ware (35.734, 36.683, 36.737, and 36.738), varying in diameter from 0.22 m. to 0.337 m. Each of the urns was incomplete, although there was convincing evidence that the burials had been found intact. In two urns much of the upper part was missing, and in the other two a large piece of the side was gone. Since the jars all showed considerable traces of wear, it is probable that they had already become broken before they were converted into

burial urns.

In one case(Burial 4)the infant skeleton was undoubtedly inserted through the large hole in the side of the urn, since the neck of the vessel as preserved is too narrow. In this same burial a large piece of a characteristic bowl with angular rim was set upside down as a kind of cover for the hole.

CHRONOLOGY

It would not be right to conclude this paper without a few remarks on the difficult problem of chronology. Although unable to solve this problem, we can perhaps show the causes of the difficulty, and the line which the solution may take.

Three ways of expressing the date of a settlement like Troy I. are as follows:

- (1) In terms of our calendar.
- (2) In relation to eras, e.g. Neolithic, Early Helladic, etc.
- (3) In relation to known periods of other settlements.

The first way will never be entirely outmoded insofar as it can convey the impression of great antiquity to anyone who does not understand very clearly the names of the eras, or the history of other sites. Besides, it would be unwise to suggest a change at this moment in the conventional system set up by Dorpfeld for Troy I., i.e. 3000-2500 B. C., since the evidence is not yet sufficient. Whether or not an absolute date of Troy I. in terms of our calendar can ever be used for scientific purposes is something which no one can decide now.

The relation of Troy I. to certain eras can be expressed only in a general way. At Troy Early Helladic objects have been found in the Second Settlement, but not in the First. This may mean that Troy I. was earlier than the Early Helladic Period; however, it is also possible that the two were partly contemporary, but that contact had not yet been established between Troy and the Greek mainland.

Occasionally certain types of incised decoration on pottery of an early period in the Cyclades have been taken to indicate a synchronism with Troy I., but again the evidence is not positive.

Certain parallels have been used by Sir Arthur Evans in equating Troy I. to "sub-neolithic" and Early Minoan, but the exact point of correspondence still remains to be determined.

As for the Neolithic Age and the Early Bronze Age in general we can only point out that these terms are not completely satisfactory. The transition between the two eras evidently occupied a long period of time, and we are still in doubt as to how early Troy I. stood in this transition. In the very earliest sub-period of Troy I. copper was already in use, but we cannot tell just when the knowledge of it was acquired. If it is true, as may very well be, that the first-comers at Troy brought this knowledge with them, it would be

necessary to get evidence about the introduction of the metal at some antecedent site.

A further difficulty in establishing the relationship of Troy I. to the introduction of the use of copper is the difference in the date of this event at various places. In Egypt copper was evidently used considerably earlier than in Greece. The earliest sites in the Troad may have been intermediate, but they do not answer for the subsequent period of Troy I.

Therefore we must prefer the third way of expressing the date of Troy I. An attempt to discuss this question has been made at the end of the chapter on pottery, where the general correspondence of Troy I. with Thermi I.-V. is noted. Now it is to be hoped that systematic excavations can be carried out at some other contemporary site, and at some antecedent site, affording a firmer basis for the study of the chronology of Troy I.

APPENDIX A .

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