

PRE-INCAIC HUAMACHUCO

*Survey and Excavations
in the Region of Huamachuco and Cajabamba*

BY

THEODORE D. McCOWN

UNIVERSITY OF CALIFORNIA PUBLICATIONS IN AMERICAN
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EDITORS: A. L. KROEGER, E. W. GIFFORD, R. H. LOWIE, R. L. OLSON

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To DR. JULIO C. TELLO of the Universidad Mayor de San Marcos in Lima and the Museo de Antropología in Magdalena, this monograph is dedicated, in recognition of the fact that the founding of the Institute of Andean Research was the result of stimulation and suggestion by Dr. Tello during his visit to the United States in 1936 ; and in appreciation also of the importance of his decades of archaeological exploration in his native country. These explorations have served as a basis for the archaeological investigations which the Institute of Andean Research, as well as other North American institutions of learning, have been able to provide for a series of younger scholars in recent years, to the mutual enhancement of the intellectual interests and cultural linkage of Peru and the United States.

PREFACE

THE ARCHAEOLOGICAL exploration and excavation described in this paper, the publication of which has been made possible through the generous aid of the Institute of Andean Research, were carried out under the auspices of the Institute, with the coöperation and financial sponsorship of the Office of the Coördinator of Inter-American Affairs of the United States Government. Project Nine-A, under the general direction of Professor A. L. Kroeber, had as its area of investigation the northern part of Peru, especially the sierra. When plans for the project began to take shape, Professor Kroeber suggested to me that I might consider the possibility of realizing an old ambition, several times postponed, of doing field work in the Andean region of ancient high aboriginal culture. To this suggestion I am indebted for eight months of personal pleasure, and it is my hope that the scientific results will be adjudged of some profit. The months from August, 1941, to March, 1942, were spent in Peru, with a little less than half of the total time devoted to field work. The outbreak of hostilities between the United States and Japan and Germany made it seem unlikely that the antiquities, or the part of them which the Peruvian Government might agree to release, could reach the United States in time to be studied adequately before my report was due. In view of this, I decided to study as fully as possible the material then in hand. This proved to be a sufficient task in the time between the first of January and my departure from Peru in March.

An archaeological expedition is a fairly complicated business even though its personnel be limited. Consequently, the number is large of people and institutions whose coöperation, help, and good will played a part in the smooth functioning of Project Nine-A. It is my hope that what value this report may have will be regarded as of some credit to the Institute of Andean Research and to the Office of the Coördinator of Inter-American Affairs for their wisdom and foresight in carrying through a program designed to enlist the mutual aid of scholars in the United States and in the sister countries to the south, at a time when one pattern of human activity was bent on destroying those human values of free and equal coöperation in a common task. Dr. George C. Vaillant as chairman of the executive committee of the Institute carried the greater burden of the administrative arrangements and deserves commensurate credit.

The work of Project Nine-A could not have been carried on without the energetic approval of the Peruvian Government, effected through the Patronato Nacional de Arqueología, the Museo Nacional, and the Museo de Antropología. To the Directors of the latter institutions, Dr. Luis E. Valcárcel and Dr. Julio C. Tello, any expression of my warm appreciation of their help, encouragement, and advice is inadequate. Dr. Valcárcel is remembered especially for his helpfulness to me, not a newcomer to the work of archaeology, but unfamiliar with the rich complexities of the "Egypt" of the New World. Dr. Tello's contributions to the Institute are described elsewhere in this publication, but one special word of thanks is due him for the pleasant and, I hope, fruitful hours which I spent at Magdalena.

To my colleagues and compatriots in Lima I owe much gratitude for advice, help, and above all for the stimulation which comes from the association of a group with common scientific interests: Dr. Marshall T. Newman, Professor William Duncan Strong, Dr. and Mrs. Gordon Willey, Dr. Bernard Mishkin, Dr. John Rowe, Dr. Alfred Kidder II, Mr. and Mrs. John M. Corbett, Mr. and Mrs. Harry Tschopik, and my good friends Mr. and Mrs. John E. Stark. I am also much indebted to Señorita Mercedes Gibson, and to the Señores José Quimper, José Rosas, and Rollin Thorne L. for friendly help which can never be repaid.

My studies and survey in the region of Trujillo were made both profitable and pleasant by several Peruvian colleagues. The privilege of seeing and studying the superb collection of antiquities in the Museo Rafael Larco Herrera at Chiclín I owe to Don Rafael Larco Hoyle, and to Don Constante Larco Hoyle I am deeply obliged for many kindnesses. The Conservator of the Museum of the University of Trujillo, Señor Max R. Diaz, was particularly helpful and to him I am especially grateful for companionship and instruction in the journeys to coastal sites. Señor Eulogio Garrido, editor of *La Industria*, and enthusiast of Chanchan, introduced me to some of the less-known corners of that monstrous dead metropolis. Dr. Hans Horkheimer, Catedrático de Arqueología in the University of Trujillo, was particularly kind and helpful.

Señor Edmundo Paredes, Alcalde of Huamachuco, so greatly facilitated my work in the sierra that I owe him very special thanks for his help and kindness, and to Señor and Señora Alberto N. Flores I am warmly grateful for their kindness in permitting me to make their home my base of operations. My trip to Cajabamba owes much to the generosity of Professor Maximo R. Barrueto through whose efforts it was possible for me to visit the Allangay-Otuto area.

To Dr. John H. Rowe and to the Archaeological Institute of Cuzco are due my special thanks for the photograph of the plan of the inhabited parts of Pikillajta which served as the basis for the schematic diagram which appears as Figure 5.

My assistant Señor Fernando Fuentes A. deserves much of the credit for the success of the smooth working of our traveling arrangements and of the excavation work at the several sites. His cheerfulness at my unpredictable knowledge or lack of knowledge of Spanish is most kindly remembered.

My thanks are gratefully acknowledged to the University of California for granting me a year's leave of absence from my teaching duties to undertake this work in Peru.

THEODORE D. McCOWN

June, 1942.

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MAP

1. Area in northern Peru explored by Project Nine-A, and the locations of sites described in the text.....	<i>facing</i> 225
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BIBLIOGRAPHICAL ABBREVIATIONS USED

AA	American Anthropologist
AMNH-AP	American Museum of Natural History, Anthropological Papers
FMNH-M	Field Museum of Natural History, Memoirs
ICA	International Congress of Americanists (Comptes rendus, Proceedings)
UC-PAAE	University of California Publications in American Archaeology and Ethnology

PRE-INCAIC HUAMACHUCO SURVEY AND EXCAVATIONS IN THE REGION OF HUAMACHUCO AND CAJABAMBA

BY
THEODORE D. McCOWN

I. INTRODUCTION

THE PROGRAM of field work that was planned for Project Nine-A of the Institute of Andean Research was to make a reconnaissance of sites in one section of the northern sierra of Peru, combining it with excavation where time and facilities permitted the latter. The presence in the Museum of Anthropology of the University of California of a collection of antiquities from the region of Huamachuco provided, in no small degree, a starting point in the preliminary plans for the expedition. This collection of archaeological material was obtained, some of it by excavation, by Max Uhle in 1900 as a part of his scientific work in Peru sponsored by Mrs. Phoebe Apperson Hearst for the University of California. The report, which Uhle prepared in the form of a letter to Mrs. Hearst and which was included in the material deposited in the Museum, clearly indicated that the district near Marca Huamachuco, where he spent most of the three months that he was in that part of the sierra, was one of great potential interest. Professor William Duncan Strong had interested himself in the Huamachuco collections, some years previous to the publication of this report, and had planned to describe and to publish them. With characteristic generosity, he abandoned his plan to publish this material, in view of the projected survey to be made under Professor A. L. Kroeber's direction. There was, however, more contemplated in our work than merely a reëxamination of the site of Marca Huamachuco. The fundamental problem of the kind and degree of relationship between the cultures of the highland and those of the coast was uppermost in our minds, and it was hoped that some small contribution to this could be made for one section of Peru. As a result of this interest, we envisaged a first reconnaissance beginning on the coast in the area of the Moche and Chicama valleys and penetrating into the highland by means of the trans-Andine highway which runs from Trujillo to Huamachuco and Cajabamba, with a second survey to extend to Pataz on the far side of the Marañon River. From a geographical standpoint, the drainage system, which coalesces in the Conde bamba Valley, suggested itself as a possible focus of ancient highland culture, particularly in connection with the valley of the Río Cajamarca, which forms a partly separate, partly conjoined area to the north. The uncertainties which attend archaeological exploration in little-known areas made it seem wise to incorporate in our plans some further alternatives to the scheme just outlined, and as a consequence, a second phase of the work, a survey and possible excavation in the area centering about Cajamarca, with a reconnaissance from Cajamarca to the coast, was added.

The part of the program which it was possible to carry out consisted of a survey from Trujillo to Huamachuco and Cajabamba. An intensive examination of sites in the district near Huamachuco was undertaken and included mapping and exploration of the two largest and most important pre-Columbian settlements. A series of excavations was undertaken to obtain a stratigraphy, if such existed, and in any event to give some further clues to the character of the ceramic and other cultural material. An additional survey was made northward to the modern town

of Cajabamba and to sites some distance to the north on the eastern side of the Conde bamba Valley, not far from the point where the river of the same name turns eastward and is called the Río Crisnejas.

A delayed start from Lima, the onset about the middle of December of the heavy rains which mark the winter season in the sierra, and the entry of the United States into hostilities at the end of 1941, combined to curtail somewhat the amount of time spent in the field.

In this and the following four sections I shall present an account of the work of reconnaissance and give extended descriptions of some of the important sites that were examined in detail. Sections VI-IX will be concerned with an account of the excavations and of the archaeological material obtained from them. It seems appropriate in this latter connection to describe fully the material comprised in the Uhle collections, especially the group of stone sculptures. I hope to be able to draw together in the final and concluding section of the report the two bodies of information into what must be mainly a descriptive account of the nature and of the importance of the ancient settlements in this area of Peru.

RECONNAISSANCE

The two coastal river valleys in northern Peru through which flow the Moche and Chicama rivers have long received the attention of collectors and archaeologists. With the exception of the tremendous literature concerning the Incas, this focal area of the ancient Chimú kingdom has had more written about its ruins and its antiquities than any other similar district on the whole west coast of South America. It is certainly no exaggeration to say that among educated people in all parts of the world the visual images which arise of Peruvian antiquities are in three cases out of five those of vases or other antiquities that come from this area. Despite the fact that in the past there has been a tremendous export of antiquities from this coastal area, which extends from the valley of the Santa to that of the Chicama and even farther north, there remains important work to be done. This is perhaps best exemplified by the gradual accumulation of archaeological material by Señor Rafael Larco Hoyle which has made it possible for him to demonstrate and to define the Cupisnique culture.¹ That this is in itself by no means the end of any discoveries to be made in this area is witnessed by the important and as yet unpublished material from other sites in the Chicama Valley now in the Museo Rafael Larco Herrera at Chicián.

The mountainous areas to the east of this coastal region remain little known. The Spanish chroniclers² and the great Peruvian historian Garcilaso de la Vega³ all give accounts of this highland region. It was incorporated in the Inca Empire in the last great drive of expansion. Cajamarca was the background against which was played out the grisly farce that terminated in the murder of Atahualpa. It also served as the base for the first southward journeys of exploration by the conquista-

¹ R. Larco Hoyle, *Los Cupisniques*, Lima, 1942.

² Miguel de Estete, in Francisco de Xerez, *Narrative of the Conquest of Peru*. Translated and edited by Clements R. Markham in *Reports on the Discovery of Peru*, pp. 3-73. Hakluyt Society, Vol. 47, London, 1872. Hereafter referred to as Estete, *Narrative*.

Pedro Sarmiento de Gamboa, *History of the Incas*. Translated and edited by Clements R. Markham. Hakluyt Society, Ser. 2, Vol. 22, London, 1907. Hereafter referred to as Sarmiento, *History*.

Pedro de Cieza de León, *The Travels of Pedro de Cieza de León, A.D. 1532-50*, contained in the First Part of his *Chronicle of Peru*. Translated and edited by Clements R. Markham. Hakluyt Society, Vol. 33, London, 1864. Hereafter referred to as Cieza, *Chronicle*.

³ Garcilaso de la Vega, *El Inca. The First Part of the Royal Commentaries of the Incas*. 2 vols. Translated and edited by Clements R. Markham. Hakluyt Society, London, 1869-71. Hereafter referred to as Garcilaso, *Royal Commentaries*.

dores. The Augustinians began early their missionary labors in this district.⁴ Then there are nineteenth-century accounts written by travelers such as Charles Wiener⁵ and E. W. Middendorf.⁶ It was a region which unfortunately Squier never visited. In more recent years, Dr. Tello has traveled in this area; one result of his explorations being the interesting stone sculptures from Chilia on the eastern side of the Marañón, now in the archaeological museum at the University of San Marcos. Uhle's explorations of forty-two years ago have already been mentioned. Olson made a reconnaissance through this area in 1930.⁷ Bandelier⁸ and Langlois⁹ did exploratory work in the lower Marañón area centering about Chachapoyas. There may have been others but, if so, they have left no record of their observations on archaeological matters.

The following summary of sites that it was possible to locate is more fully understood if reference is made to map 1.

Number 1 is the location of the great *huacas* at the foot of Cerro Blanco, the Pyramid of the Sun, and the Pyramid of the Moon. This is entered merely as a point of reference. No attempt has been made to enter the great number of other ancient structures in the valley of the Río Moche. These are fully entered on the map of this valley in volume 1 of *Los Mochicas*.¹⁰ Site 2 is not far from the small settlement of Poroto. It lies just to the west of the road and is roughly rectangular, made of rubble masonry and appears to have had several rooms in its interior. The few sherds which were obtainable were plain undecorated pieces without any diagnostic value. In the stretch of road between Poroto and the point where a section of it diverges to run to Otusco, the first half climbs rapidly through dry and barren mountains. The vegetation cover is extremely scanty and the smaller *quebradas* which feed into the main stream give no evidence of carrying any amount of water at any time during the year. The combination of climate and terrain are unfavorable for settlement.

Otusco and Motil.—Vegetational and climatic conditions are quite markedly different by the time one has climbed to 2,500 m. or more. The use of the modern highway means that this point is reached some little distance to the west of the general area around Otusco and it is in this district that one begins to see hill and mountaintops with the characteristic terrace profiles that indicate their use as ancient places of settlement. Many of these sites are to be seen at various places along the stretch of highway before and after the point where the lateral road to Otusco leaves it, and in the region near Motil. Most of them lie appreciable distances from the road and the scale of the best maps obtainable did not make it possible to locate them with any certainty, but there are sites at the places indicated by numbers 3 and 4 on the map. Number 3 is on a spur of the southern slope of the Cerro San Francisco and the map also shows ruins not far from the small pueblo of Carata on the other side of the same mountain. Site 4 lies on what I believe is the top of Cerro Pacallo.

Site 5 (see pl. 13, e) lies in the upper end of the drainage of the Río Motil to the south of the neighboring Cerro Campana. The steep sides of the hill which was selected for settlement have been artificially terraced and the result is a large and remarkable pyramidal mound with four well-defined andenes. I was unable either to learn the name of this site or, because of inclement weather, to visit it. My present belief, subject to modification by fuller data, is that the zone between 2,500 m. and 3,700 m. elevation is one in which profitable surveying for ancient sites can be done. A large part of the area between Otusco, Usquil, and the unnamed Site 5 lies in this zone.

As the road continues eastward and climbs toward the great mining settlement of Quiruvilca, any indication of ancient occupation of the district becomes more scant, and in the high pampas

⁴ Juan de San Pedro and Juan del Canto, *Relación de la Religión y ritos del Perú*, hecha por los Primeros Religiosos Agustinos que allí pasaron para la conversión de los naturales. Edited by Horacio H. Urteaga and Carlos H. Romero, in *Informaciones acerca de la Religión y Gobierno de los Incas*, pp. 3-58. Colección de Libros y Documentos referente a la Historia del Perú, vol. 11, Lima, 1918. Hereafter referred to as *Los Primeros Agustinos*.

⁵ Charles Wiener, *Pérou et Bolivie*, Paris, 1880.

⁶ E. W. Middendorf, *Peru*, Vol. 3, *Das Hochland von Peru*, Berlin, 1895.

⁷ Ronald L. Olson, *Old Empires of the Andes*, *Natural History*, 31:3-22, 1931.

⁸ Adolf Bandelier, *The Indians and Aboriginal Ruins near Chachapoyas*, Northern Peru, New York, 1907.

⁹ Louis Langlois, *Uteubamba, Revista del Museo Nacional*, Vol. 8, No. 2, Lima, 1937; Vol. 9, No. 1, Lima, 1938.

¹⁰ R. Larco Hoyle, *Los Mochicas*, Vol. 1, Lima, 1936.

and peaks that form the continental divide there is little evidence of even extensive occupation and certainly none of intensive settlement. The southern tributaries of the Río Chicama have their headwaters in this area and not far from them in an air line are the comparable tributaries that form the southern drainage network of the Río Condebamba. On the eastern side of the continental divide the first sites which were noted were two on the flanks of Cerro Cungallo. These are indicated at 6. Another fine site lies in the upper end of the *quebrada* La Chira, but I was unable to locate it with certainty on the map and consequently have not entered it.

Río Vado.—As the road descends and gradually approaches the wide valley of the Río Vado, which runs along the western side of the pampa of Yamobamba, an increasing number of sites are to be seen. This great pampa lies at the eastern foot of three of the highest mountains in this section of Peru—Cerro Huayllillas, Cerro Huaylas, and Cerro Negro. Site 7 is a small hilltop fort on an eastern shoulder of Cerro Sayabamba. Sites 8 and 9 are fortified settlements, one on a southern shoulder of Cerro Cucuri and another near its top. Number 10 is a site prominently visible from Marca Huamachuco and it lies on an eminence on the northern flank of Cerro Simbal. Site 11 lies on the northern side of the great easterly bend of the Río Vado and flanking it on the opposite side of the river are two sites: 13 and 14. Number 14 lies on a high projecting shoulder of Cerro Negro and has a commanding view southwestward up the valley beyond Yamobamba hacienda and northward to Marca Huamachuco. Site 12 is a well-defined fortified hilltop settlement situated on the eastward projection of Cerro Huaccac. The Río Vado makes a huge curve around the eastern end of this mountain. The site is directly at the midpoint of this curve, the flanks of the mountain form the western and southern boundary of the Urpay section of the valley and lie across and south from Marco Huamachuco.

Huamachuco District.—Reference to the map and particularly to plate 8 will make clear the location of a number of the sites in the district immediately about Huamachuco. The two sites represented by number 15 are separate fortified settlements on opposite ends of Cerro Cacañañ (see pl. 8). This mountain closes in the northwestern end of the valley of Huamachuco and the Río Vado turns against the west face of Cerro Cacañañ to flow west past Urpay toward Sanagorán. Number 16 is the ancient settlement on Cerro Tuscan, described more fully on page 259. Number 17, in the town of Huamachuco, represents ancient remains that underlie the chapel of San José (see p. 256). Number 18 indicates the position of the settlement on Cerro Sazón (see p. 257 and pl. 8). Number 19 is the curious earthwork known as La Cuchilla and is described on page 259. Number 20 refers to Cerro Amaru, discussed on pages 263–265. The sites indicated by number 21 are the various sections of the main ruins of the great site of Marca Huamachuco. Number 22 is the site of Coipín, described on pages 265–266. Number 23 (see also pls. 8 and 15, a) is the ancient town of Viracochapampa, described on pages 267–273. The two sites of number 24 are ancient settlements situated on minor eminences of the Cerro Campana, which forms the western boundary of the valley of Huamachuco. Number 25 is a site lying some distance up the Río Shiramáca on a steep mountain, and appears actually to represent a triple settlement. Numbers 26 and 27 are two much-ruined, small- to medium-sized settlements at the northern and northeastern corner of Cerro Toro on the relatively level land at its foot.

Lake Sausagocha.—Number 28 is Cerro Campana West, a settlement situated at the southwestern corner of Lake Sausagocha (see pl. 13, g). It is described on page 262. Number 29 is a hilltop site on an eminence of Cerro Chamis almost due south of 30, the latter being Cerro Campana East, described on pages 260–261. The sites described on page 262 as existing on the ridgeline above Lake Cahuadan (see pl. 8) are not shown on the map, but they lie between Site 28 and the two hilltop settlements of 31. The hilltop settlements lie not far apart on separate mountaintops on the north side of a small valley that delimits the northern end of the eastern ridge flanking Lake Cahuadan. Numbers 32 and 33 represent two *fortalezas* at the center and at the northern end of Cerro Pajablanca. Cerro Pajablanca lies above and to the east of the junction of the Río Shiramáca with the Río Carabamba. Today a branch of the modern trail from Huamachuco to Marcabalito skirts the western flank of Cerro Pajablanca. Number 34 is a similar site on the summit of a mountain the name of which I was unable to learn but which is directly east of Cerro Chugoloreco.

Marcabalito and Cajabamba.—There are with certainty sites near the village of Marcabalito. At the northwest end of the ridge on which the village stands there is a series of extremely steep peaks which from a distance have contours strongly suggestive of ancient terraces. My plan to visit this village on the return trip from Cajabamba was frustrated because of the lack of any gasoline in the latter town, the supply in our car being just sufficient for a return to Huamachuco without any diversions. Number 35 is a site on the shoulder of Cerro Chochoonday, mentioned on page 274. Number 36 is the curious little rock shelter of La Emina (p. 274). Sites 37–42 are all fully dealt with on pages 274–278. Number 43 is the location of Marcamachay. This district was repeatedly described to me as one in which ruins were abundant and the circum-

stantial accounts of ancient remains, in the vicinity of Marcamachay and on Cerro Huacra and Cerro Yana-orcco immediately north of the village of Sitacocha, convinced me that not only will this region repay investigation but that it will certainly prove to be a district of importance comparable to the area surrounding Marca Huamachuco. A clue to its archaeological importance may possibly be found in Garcilaso's account of the province of Huacrachuccu, the province of the people of the horn headdress.¹¹ Number 44 represents Chichir, properly an extension of the Allangay-Otuto group of remains (p. 277).

Most of the sites noted in the foregoing summary are inaccessible, having been placed on mountaintops or on the ends of ridges or mountain spurs, usually at a considerable elevation above the valley floor. The stone walls of the former buildings have been destroyed down to the level of the foundations, and in consequence the most readily noticeable feature is the system of terracing. This is true in two-thirds of the sites directly visited and examined, and the proportion undoubtedly is no less for the others. The collecting of surface sherd material is frequently hampered by the presence of a close-matted turf, and it is only where some rivulet has cut through and eroded the archaeological deposits that any sherds are to be discovered. The majority of these are abraded, as the result of erosion, and any painted designs are usually destroyed.

¹¹ Garcilaso, Royal Commentaries, 2:322.

II. MARCA HUAMACHUCO

GENERAL DESCRIPTION

THE GREAT city-fortress of Marca Huamachuco lies almost due northwest of the modern town of Huamachuco. It has an elevation of approximately 3,750 m. and stands 400 to 500 m. higher than the present town. The straight-line distance is not over 2 km., but the present trail which climbs along the eastern side of Cacañan and then swings westward and drops down to what is roughly the foot of the southeastern end of Marca Huamachuco is perhaps 3 km. The name Cacañan, meaning "the road of the rock," probably indicates an ancient use of this same method of approach to Marca Huamachuco. Today the trail climbs up and along the southwestern side of Cerro Amaru. This mountain, or considerable hill, is topographically the most southeasterly portion of Marca Huamachuco, but the top of it is several hundred meters lower than the tablelike summit of Marca Huamachuco proper (pl. 9, *a*). It had an extensive and important ancient settlement of its own. This will be considered later in this report for there is no clear evidence that it was an integral part of the extensive settlement on Marca Huamachuco. The course of the trail past Cerro Amaru runs roughly north, making a diagonal across the NW-SE axis of Marca Huamachuco, and climbs rapidly upward along the southwestern corner of Marca Huamachuco proper. This section of the trail follows what is surely an ancient road along the side of the mountain (see pl. 8). There is a series of fragmentary walls forming two types of ruins which are visible on both sides of the trail. The most numerous walls are probably the remnants of ancient terraces or andenes. The other remains consist of badly destroyed houses or buildings, some of which form small clusters whereas others seem to be separate and semi-isolated. The final stretch of the path is at the base of a vertical cliff, on top of which one can see parts of the great outer defense wall, and then after a series of sharp turns one enters through the East Gate.

Reference to figure 6 will make clear the relative positions of the major ruins on Marca Huamachuco. This sketch plan must suffice at present in the ensuing description. The very considerable extent of the ancient remains and the limitations of equipment, personnel, and time made it impossible to effect an accurate survey of the whole mountaintop.

The mountaintop of Marca Huamachuco proper has a total length of approximately 4.5 km. From a distance the top of the mountain has a mesalike character, which is a definite and real feature (see pl. 9, *a*). As one walks across the top of this tablelike area, however, it becomes plain that the detailed topography consists of a series of minor eminences of which the Castillo, Hill 1, and Cerro Viejo form major opposed elements (fig. 6 and pls. 9, *c*, 10, *e*). Between these are lesser eminences, which were selected as sites for several series of structures, but these were less important than those on Cerro del Castillo or on Cerro Viejo.

The Cerro del Castillo takes its name from the great fortress, which is shown in figure 6 and again in figure 9 (see also pls. 9, *b*, 10, *b*, 11, *b*). Cerro de las Monjas takes its name from the double-walled, rounded structures that in popular fancy have long been known as "convents" (see pl. 9, *c*). This appellation follows a persistent pattern in modern Peruvian folklore of calling any peculiar structure a "convent" or "temple of the virgins" in recollection of the stories of the harems that were maintained in different parts of the empire for the benefit and gratification of the Inca. It is hardly necessary to add that in 90 per cent of the cases there is no foundation in fact for names of this character, and the Cerro de las Monjas is

another illustration of this popular fallacy. The Cerro de los Corrales takes its name from the large enclosures bordered by low stone walls. The walls are roughly indicated in figure 1 and can be seen quite clearly in plate 10, *g*. The term "corral" is applied very widely throughout the Andes to all manner of ancient structures, and stems from the popular belief that the ruins are vestiges of the corrals which were built to contain the herds of llamas reserved for the Inca or for the official Sun religion. Cerro Viejo takes its name, according to the information which Uhle was able to obtain, from the fact that the ruins are very much destroyed and in popular belief, therefore, must be of high antiquity.

Neither Uhle nor I was able to obtain from the present-day occupants of Marca Huamachuco any terms that would indicate Quechua names for any of the features on the mountaintop. Uhle believed this was an argument in favor of the high antiquity of the remains and their abandonment in pre-Incaic times. My view is that the second part of this supposition is not a strong one. The Spanish names for the major features of Marca Huamachuco conform to the general language pattern of the modern inhabitants of the whole Huamachuco district. Quechua words are extremely few in the everyday conversation of the peasants. This phenomenon is susceptible of explanation on the basis of the early penetration of the Spaniards into this district, but there may also have been an indifferent acquaintance with Quechua on the part of the ancient inhabitants of the same district. This is strongly suggested in the *Relación* of the Augustinians, various references to words and proper names being prefaced or followed by the explanation "in the language of this district."

THE EAST GATE

I propose now to take the reader on a tour of the major ruins of the Cerro del Castillo, and for this purpose it is perhaps simplest to start with the East Gate. The gate is now much destroyed, and it was not until I had made a careful examination of the walls on either side that I became convinced that there had been anciently a major entrance to the site at this point. The opening lies in an obtuse angle formed by the walls on either side and originally had a width of between 2.5 and 3 m. The clue to the nature of the construction is given by the large blocks, 1.8 m. in length, laid horizontally and forming the sides of the entrances. The upper courses of masonry are completely destroyed and there is not at present any evidence of an original pavement or sill; consequently the precise character of the arrangements for closing the entrance are impossible to determine. Once inside the gate, one makes a quarter turn to the right and climbs sharply upward for about 15 m. to a level area that stands 4 m. higher than the outside base of the wall. Anciently, this ascent may have been effected by a stairway, but erosion has long ago destroyed all traces of such a construction. No traces remain of an internal screening wall, if such existed, and the probabilities are against this. Access to the city was direct, as at the West Gate (see p. 242 ff., and fig. 7, B).

THE DOUBLE DEFENSE WALL

On either side of the gate, running SE and NNW, are the remains of a double defensive wall. This double wall originally surrounded the whole of the Cerro del Castillo and is a remarkable engineering accomplishment. A short distance northwest of the gate proper, the outer wall has a thickness near the base of 1.3 m., the internal passage a width of 2.7 m., and the inner wall a thickness of 80 cm. to 1 m. This great double wall has somewhat varying proportions, but in general the walls are approximately equal in thickness with an average width at the foundations of 1 m. while the passage is 2.3 m. wide. The outer wall is usually, although not con-

sistently, somewhat more massive than the inner one. The total length of this defensive structure is approximately 4 km. It was constructed with the object of making any approach to the main part of the Cerro del Castillo as difficult as possible and at the same time enclosing every terrace and field that was level or not too steeply sloping. The result of this is that the wall follows no fixed level but dips and climbs in its course. The consistent feature in its planning was the utilization of the tops of the vertical cliffs which exist in many places around the periphery of the mountain. Large sections of the wall are now destroyed, especially where the wall's original course carried it across gullies that plunge down the steep mountainside. The wall has disappeared to the greatest extent along the side of the mountain below and west of the great fortress or Castillo.

Another much destroyed section lies south and east of the East Gate. This destruction has come in large part as the result of modern cultivation, because the dotted line in the sketch plan (fig. 6), which indicates what I believe to have been the ancient course of the double wall, follows the lower edge of a series of fairly smooth sloping fields. Below the double wall at this point there exists today the remains of a single wall, which springs away from the great wall 150 m. southeast of the gate itself and follows the contour of the mountain, ultimately terminating on one of the small rounded eminences which form a series of natural steps or terraces leading down to Cerro Amaru. Four of these are indicated at the extreme right of figure 6. All of them had structures and some of them seem to have been both terraced and defended by walls of their own. One hundred meters below the great wall is a lookout station, with a commanding view westward and southward toward Urpay and Sanagoran.

THE RECTANGULAR TOWERS

Let us now turn southward from the East Gate to the structures which are labeled "Towers" in figure 6 and which are shown in detail in figure 7, A, and in plate 10, f.¹² These buildings are situated on what is properly the topographical spine of the Cerro del Castillo, with the ground sloping toward the east, the south, and the west, and rising slightly to the north and northwest. Between the towers and the outer defense wall there are relatively few remains of other buildings. It will be noted in figure 6 that in the bend of the wall where it swings west and northwest there are a few small rectangular or square buildings. The area to the south and west of the towers, between them and the wall, is not cultivated today and seems not to have been cultivated in the recent past, and, in view of the absence of any large walls or other structures, it would appear that this area never was much populated.

The four rectangular towers are surrounded by the remnants of an oval boundary wall (fig. 7, A). Three of them form a row with the fronts facing east and this set of three has outside dimensions of 10 by 6 m. The construction, like that of virtually all other walls on Marca Huamachuco, is of split stone set in a tough clay mortar. The quoins and jambs to doorways indicate a degree of rough smoothing or working but not to the extent that one can legitimately speak of dressed masonry. A fuller discussion of the character of the stone masonry of the Marca Huamachuco buildings is given in pp. 249-251. Here it will suffice to indicate that the prevailing mode of construction was random rubble masonry. The care which was used in building some walls, however, makes it necessary to classify them as of irregular coursed rubble construction. This is emphasized where the packed stone chips or snecks between the large blocks are fitted with great attention. Plate 10, f, shows

¹² Middendorf, Peru, 3:295 facing, shows these towers. This picture appears also in Jorge C. Muelle's brief account, Los Valles de Trujillo, Revista del Museo Nacional, 6:23, Lima, 1937.

clearly the construction of the towers, which are pictured as seen from the back or western side.

The stepped construction shown in the cross-sectional diagram in figure 7, A, is a striking feature and is restricted, out of the hundreds of buildings in the ancient city, to the three east-facing towers. The fourth tower has a single step and a simple internal wall; it is plain and less impressive than the others. It also stands apart and west of the triple set of buildings and appears to be a later addition to the group.

Two of these structures have the remains of entrances situated at the top of a rough and irregular short slope which originally may have consisted of steps or low terraces leading up to the entrance. The middle tower of the three has the entrance blocked by a small, thin rubble wall. Internally, the rectangular chamber is plain, it appears to have lacked any niches or other architectural features, and the present level of fill is at least 1 to 1½ m. higher than the ground outside of the structure and seems to be composed in large part of stone fallen from the upper parts of the walls. No excavations were made in these buildings, although it seemed obvious that they conformed to a widely distributed series of square, rectangular, or round structures that are usually called *chulpas*. The unique character of their plan, in comparison with the usual Marca Huamachuco buildings, and their special situation apart from the main group of buildings on the Cerro del Castillo argue against their being either storehouses or habitations. They have a commanding view over an extensive stretch of territory in the direction of modern Huamachuco and it might be supposed that they were guardhouses. Their pronounced similarity, however, to the square or rectangular variations of the structures that occur in so many places in the Peruvian Andes, from Chachapoyas southward to Lake Titicaca, would seem to be convincing that they constitute the Huamachuco type of *chulpa*.

The curved wall, which diverges on the north side from the boundary wall surrounding the towers, swings northeastward and then is broken, without any sign of either its continuation or its termination. In the angle formed between it and the main boundary wall surrounding the *chulpas* there is a cross wall, and against this is a thin-walled rectangular building in rubble masonry, which appears to be a medium-sized room of later construction, not connected with the rectangular towers.

GALLERY A

Turning northwestward and continuing the survey of the ruins, one comes to a block of buildings centered about a well-preserved gallery. This latter term I have applied as a convenient and accurately descriptive appellation for the high, long, and narrow rectangular buildings that form one of the three major building patterns which prevail throughout the Marca Huamachuco ruins. Gallery A and the structures immediately adjacent to it are shown in detail in figure 8.¹² The description of Gallery A will serve as a convenient standard in describing the other similar structures encountered frequently in Marca Huamachuco. Gallery A contains all the characteristic constructional and architectural features found singly in other galleries both on the Cerro del Castillo and on other parts of the site. It has the further advantage of being fairly well preserved; not only is it a conspicuous landmark today (see pl. 10, a) but it was obviously a building of very great importance in antiquity. It is situated on a minor eminence, which is nearly as high

¹² Wiener's reconstruction of a "palace" on the Cerro del Castillo on p. 510 of his work is based on the southeast façade of Gallery A. As with much else in his book it is partly correct, partly pure imagination.

as that upon which the Castillo was built, and it can be said in general terms to form the southeastern limit of the dense complex of buildings which includes Gallery B, the Great Plaza, the Castillo, and the structures near Gallery D (see fig. 6).

Gallery A is not perfectly rectangular, its northeastern end is slightly oblique to its long axis, but its major internal dimensions have a length of 55 m. and a width of 6.8 m. The walls are damaged in places, but the highest sections existing today stand 7 m. above the level on which the building is placed. Certainly this does not represent the original upper limit of the walls. There is a stout wall 1 m. in width and 2.5 m. in height, which exactly divides the building longitudinally. The two narrow passages left by this septal wall have been subdivided with thick walls, probably coeval with the main skeleton of the building, and with small walls constructed subsequently. There are three entrances leading into the two narrow passages left by the central dividing wall, two on the eastern side and one on the western side (see fig. 8 and pl. 11, c). Both eastern entrances are blocked with thin walls, which have been partly broken through but which originally had a thickness of not more than 40 cm. The doorways open on the ground level adjacent to the eastern side of the building. On the western side the entrance opens on a terrace which extends away from the building for a distance of 5 m. and then drops approximately 4 m. to the ground level, which on this side of the structure slopes rapidly before leveling off in the direction of Gallery C. This western entrance is situated immediately under what was a very large window. Both structures are indicated in figure 8.

The top of the central dividing wall coincides with a series of cantilevered projecting stones that extend in horizontal rows along the two side walls of the gallery. The architectural feature of horizontal rows of stone corbels is one of the distinctive characteristics of many buildings on Marca Huamachuco. In Gallery A the relation of the corbels and of the dividing wall is such that the former patently appear to have served as the lateral supports for plates laid to support floor beams. The central division wall is placed so that the floor beams need not have been more than 3.5 m. in length. The end walls of the gallery carry a regularly constructed groove or inset into the thickness of the wall 1.4 m. above the level of the stone corbels. The side walls appear to lack this feature. The eastern side wall of the gallery contains four niches, 70 by 70 cm. with a depth of approximately 25 cm., and is also pierced with two openings, that may be windows. Similarly, at the southern end of the gallery there is a window piercing the end wall. The western wall, although in a more ruinous condition than the eastern one, contains traces of three windows, one of which has already been mentioned as situated over the west entrance. The other two windows in this western wall are smaller—of the same size as those in the east wall—one placed approximately in the center of the west side and the other toward the northern end. The windows are placed approximately 1.5 m. above the rows of corbels. The height of the windows is impossible to determine because the lintels are gone, but the widths average 80 cm. In this connection it may be well to note the dimensions of the three entrances. The two on the east side of the gallery had widths of 90 and 85 cm., respectively and heights of 1.5 and 1.9 m. The western entrance was somewhat smaller, being 1 m. high and 1.1 m. wide. The over-all smallness of the entrances is striking.

The terrace which runs along the western side of Gallery A has a width of approximately 5 m., and from it one has a full view of the ruined structures that lie between Gallery A, Gallery B, and the buildings surrounding the Great Plaza by the Castillo. At the north end of Gallery A (fig. 8, a) there are two galleries the long axis of which runs NNW. They appear not to have been connected directly

with Gallery A but abut on the curtain wall thrown out at the north end of the terrace to the gallery. The floor of the one nearer to Gallery A is at a higher level than the other. At the south end of Gallery A there are the remains of a square building; its western wall now largely destroyed. This building (fig. 8, b) may have been either an earlier construction or a later addition but it does not lie on the same axis as Gallery A. Immediately beyond this and at a slightly lower level there is the beginning of a series of smaller galleries (fig. 8, c), which form the western boundary of the whole Castillo complex of buildings. Between c and b of figure 8 are two small cross walls, which block an original passage between them. This passage led into a small open space, indicated as a small plaza in figure 8.

To the east and southeast of Gallery A there is a series of structures, which consist essentially of two large galleries, enclosing two sides of an area whose third side is bounded by the eastern wall of Gallery A. Within the galleries and within the enclosed area there is a series of rooms and compartments constructed of thin, small, rubble walls now very much decayed. A central feature of this complex of rooms is a roughly circular structure, the purpose of which remains unknown. Northeast of this complex of buildings there is a level area with remnants of small walls. This area forms a natural terrace that drops abruptly along a line running south from the northeast corner of Gallery A.

Gallery C has been added to figure 8 both because it was a large structure and because its greater squareness in plan distinguished it from the more numerous narrow galleries. Around it there are many ruined walls of large and small rectangular buildings and of small square rooms. Many of the small rooms were built inside the thick-walled, large, rectangular buildings. This entire area is heavily covered with vegetation today. It was impossible to clear all of it; therefore, no exact idea of the disposition of the structures could be obtained.

GALLERY B

North of Gallery C is another group of buildings, which are flanked again on their eastern side by a well-preserved long gallery: Gallery B. This is basically of the same general construction as Gallery A, but my examination of it failed to disclose either entrances, windows, or niches. It has a central dividing wall approximately 2.5 m. in height, and at this level the side walls contain opposed rows of stone corbels. On the western side of Gallery B there may have been originally a terrace similar to the one that flanks the same side in Gallery A, but at present this area is almost entirely occupied by a long narrow room (fig. 8, d), and a shorter one. The details of the construction of these rooms indicate clearly that they are later additions, built against the side of Gallery B; the reutilization of old walls at e in figure 8 is proof of this. In general terms, Gallery B flanks the eastern side of a large open space which has recently been cultivated but which was formerly a plaza. This plaza extends northeast to a series of walls which delimits its northern margin; beyond, the ground drops sharply in a series of partly natural and partly artificial terraces.

The southern side of the plaza has a number of interesting features. First of all, there is a series of three small terraces, now very much ruined. A careful examination of this side of the plaza at the time of mapping these structures convinced me that the essential features had consisted of a series of rooms or buildings at different levels. These are now destroyed and the disintegrated walls form a series of rough terraces. On the lowest level, level 1 in figure 8, there is an interesting construction which clearly was a built tomb. A detailed plan and cross section of this tomb are shown in figure 1. A clearing was made along the northern side and at the north-

eastern corner of the tomb, and it was possible to penetrate into the chamber itself through an old break in the north wall. Nothing was found inside the tomb, but a few objects were recovered from the debris moved during the just-mentioned clearing. The entire structure stands prominently on the edge of the plaza and represents one type of burial structure at Marca Huamachuco. It was rubble built, the entrance closed with a slab of well-cut, soft rock and of exactly the right dimensions to fit into the entrance. This block was found in the debris outside the tomb. Its significance will be mentioned later. It seemed to me that the tomb as a whole must

have been a construction subsequent to the erection of Gallery B and the major structures which bounded the plaza.

There are several thick, almost buried walls along the southern margin of the plaza which may represent the side walls of a long gallery and which in part form level 2. Above these on level 3 is a thin-walled structure built against a thick massive wall, which evidently represents an older series of constructions anciently fallen into decay and reutilized at a later time. This wall is shown at *f* in figure 8. Another heavy massive wall (fig. 8, *g*) lies 10 m. beyond *f*. Between these there lies a long level area, which may have been some sort of passage but both ends of it have been blocked by later walls and it now forms an enclosure with only faint traces of any construction inside. South of *g* in figure 8 there is another level area, which is bounded on its southern side by the edge of still another terrace.

The western corner of this building-complex is enclosed by a curiously constructed, short, rectangular building with four niches in its southern wall. The construction here is an object lesson in the reuse of old walls and the rebuilding which must have been a more or less continuous feature of life in ancient Marca Huamachuco.

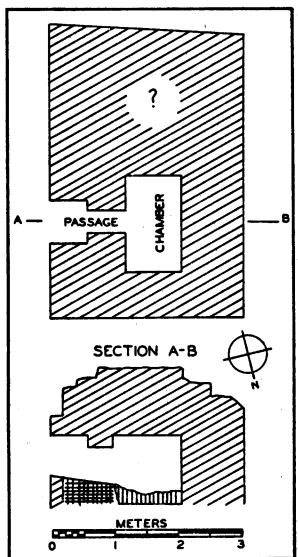
Fig. 1. Marca Huamachuco.

Plan and cross section of tomb, Excavation E

The wall marked *h* in figure 8 is built up to the end of the eastern side wall of the badly ruined long gallery. At first glance it appears to be continuous with it, but the vertically set quoin stones of the original angle of the gallery are visible upon close examination. The wall at *h* turns and continues in a southeasterly direction; its internal face has a series of four small niches, which are situated about a meter above a row of corbels. The complementary walls, marked *j* in figure 8, abut on the side of the long gallery and turn at an angle, but do not run to form a flush join with *h*. Rather, they meet corner to corner, and my examination of this detail convinced me that it was a part of the original scheme of building and not an accident caused by the displacement of the wall through earthquake or sinking.

Gallery B and its plaza form the northeastern margin of the Castillo complex of buildings; a reference to figure 6 will make plain its relationships. Between it and the Gallery D group of buildings there is a series of fragmentary, heavy massive walls, one of which is shown at *a* in figure 6.

The area northwest of Gallery B and northeast of the Great Plaza has been much cultivated and consequently is in an extremely ruinous state, but my impression is quite strong that originally it was thickly built up. This is true also of the area indicated in figure 6, *b*.



THE CASTILLO

The largest single structure on the Cerro del Castillo is the Castillo. A detailed plan of it is shown in figure 9. The curved character of the external walls of this intricate complex of rooms and corridors distinguishes it immediately from all of the other structures on the Cerro del Castillo. It lacks, however, any close resemblance to the rounded fortresses on Cerro de las Monjas, and I believe it is impossible to be certain on strictly architectural grounds either that it is a copy of the so-called "convents" or that it was their prototype. In the first place, it uses a natural eminence as a substructure, and second, the main internal level of the Castillo has been built up artificially, as was attested by a series of several excavations made in different parts of this ancient citadel.

The highest point of the entire structure is indicated in figure 9. This elevated area has been much ruined, partly by a large excavation made on the summit. The examination of the sides of this old excavation convinced me that although part of the material is recent debris, a part also represents artificial fill within a series of retaining walls. An extensive clearance and excavation would be needed to determine the exact character of the structures which once covered this inner eminence. The elevated area lies approximately 3 m. above what I consider was the general level of occupation within the main curved wall of the building and which, incidentally, is strongly suggestive of the keep of a medieval fortress.

Three excavations were made in the Castillo. They are indicated in figure 9. Vegetation was cleared from half the total area and smaller clearances were made in order to determine the exact course of the galleries and passages. There has been much destruction, part of which is a consequence of reuse and rebuilding. For instance, Excavation 2 was made inside a two-roomed house with an inner connecting doorway. The walls of this house were rubble built, but thin in comparison with the massive walls that form the main framework of the Castillo proper. My probings at this spot showed that at least two periods of construction are represented. The earlier period is represented by the massive heavy walls and in a number of instances these have been repaired or buttresses have been built up against them to support sections that became weakened. The second main period in construction is represented by the small, thin walls of less than a meter in width, most of which now attain no great height.

Plates 10, *b*, and 11, *b*, show some of the detail of construction within the Castillo.¹⁴ The rows of corbels are a regular feature of the older series of walls. Often they occur on external wall faces where there is no opposite member; in consequence, any explanation that they must always have served as footings for floor beams seems completely untenable. It is highly probable that in certain examples, such as *a* in figure 9 (see pl. 11, *b*), they have a purely decorative quality.

Another feature of interest is represented in figure 9 by the large "hole" indicated on the plan of the Castillo. Current belief over a fairly wide district surrounding Marca Huamachuco is that this represents the beginning of a subterranean passage which, in certain variations of the tale, ultimately comes out at Cajamarca. I made no attempt to excavate in this hole, but had the vegetation cleared away from it and went down into it. It has a depth of slightly more than 3 m., and my examination of the sides of this cavity convinced me that this section of the Castillo was composed largely of artificial fill. In its present form the hole cuts across and interrupts the foundations of the wall shown at *b* in figure 9. My impression is

¹⁴ J. C. Tello, *Antiguo Perú, Primera Epoca*, p. 35, Lima, 1929, shows a similar view.

definite that as the opening to a built passage the hole is not very convincing. It is possible, however, that slumping and fall of rock have blocked up a passage if one existed. The only evidence for this were statements made by some of my local workmen that formerly the hole was deeper.

Subterranean passages or galleries built in the mass of the structure do exist in the great temple at Chavín, and the construction of a secret underground passageway out of the Castillo was certainly not beyond the capabilities and the ingenious minds of its builders. That this was the sole means of entrance or exit seems to me unlikely, but the fact remains that I was unable to discover a gateway in any section of the existing outer wall of the fortress.

This problem may be linked in part with another which involves the tracing of what should have been the front or northern wall of the Castillo. From the wall marked *c* in figure 9 to the fragment of buried wall at *d* there is a steep slope now covered by vegetation and by large and small blocks of fallen stone. There are a few remnants of walls, such as that indicated at *e*, but none of these are of the size or thickness which might indicate that they formed extensions of the main outer wall. Clearances were made and are indicated as Excavation A and Excavation B in figure 9, in order to trace a possible continuation of the main wall. The wall gave the appearance of having been broken and shattered, and my hope was to find its lower courses intact and running forward so that the probable front line of the fortress could be made out. In neither excavation was any really satisfactory information obtained. I have indicated what I believe to be the possible line of the front wall of the Castillo, but another and equally possible one is a wall which parallels that indicated at *c*, but 2 to 3 m. in advance of it. The outer walls at *f* and *g* in figure 9 are quite high and it is not improbable that the northern face of the Castillo had a similar sheer verticality. At *f* the height from the present top of the wall to the ground level immediately to the east is a little in excess of 9 m. How much is lacking is difficult to determine, perhaps another meter.

A third clearance was made at the point marked Excavation C in figure 9. The wall is much damaged at this point and my preliminary examination led me to think that there had formerly existed an entrance which led into the narrow passage at *h*; but no trace of an entrance was discovered. The clearance effected in Excavation C merely confirmed the fact that the wall makes a sharp curve and abuts on the side wall of the long gallery at *j*.

The internal arrangements of the Castillo seem essentially to have consisted of a number of parallel or nearly parallel narrow galleries. In places where their massive walls stand to any notable height traces of from one to three different levels of corbel rows can still be observed and in these places it is possible that beams of the requisite length may have extended from wall to wall. In some of the galleries this would not have necessitated tree trunks with lengths greater than 2.5 or 3 m. Niches in the original series of walls of the Castillo are rare. The one or two examples appeared to me doubtful and possibly the result of individual stones having fallen out of or been forced out of the wall because of its settling.

The points marked *k* on figure 9 indicate the Small Plaza and the passage which leads into it from the northeast. They lie at least 3 m. below the general level of the Castillo. The passageway runs between the high eastern wall of the Castillo proper and walls which bound a series of structures that partly form a kind of annex to the Castillo and in part connect with the Great Plaza. The western corner of the Small Plaza has a series of terracelike platforms that rise toward the west, but in the main the western and southwestern margins of the plaza are bounded by the two galleries at *j* and *l*. There are three small windows in the gallery at *j* which

pierce an outside wall (pl. 11, e).¹⁵ This is a rare and unusual feature at Marca Huamachuco. The exterior corbels above the windows have now nearly disappeared.

A large, well-built doorway leads out of the southeastern side of the Small Plaza into what at first appears to have been a passage, but which is actually another long narrow gallery. The lintel to this doorway is missing and there is later construction in what was an attempt to block it up. An excavation and clearance was made here and is indicated in figure 9 as Excavation 4. At the points marked *m* in figure 9 are two connecting rooms or large enclosures. There is a long narrow passage at *n* leading out of a square entrance court at *o*. Both the passage and the entrance court have two sets of corbel rows in the wall faces. The passage has been blocked at a later time by thin walls of 3 m. height. The passage does not connect with the Small Plaza (*k*) nor with the Castillo, but with an enclosure (*p*) that is part of the series of structures that bound the Great Plaza. Along the southern side of this enclosure (*p*) is a curious steplike construction which seems clearly to have been a buttress or reinforcement against the end wall of the long gallery at *q*. In this connection it is worth noting that this reinforcement (*r*) contained in it several well-cut and beautifully squared lava blocks.

The gallery at *q* in figure 9 is extremely interesting because its construction is relatively simple. It lacks rows of horizontal corbels and niches and does not have, at the present time, any discoverable entrance. It did contain, however, a whole series of burials in the actual thickness of the wall. The western and southern walls now exhibit ten huge cavities left by the tomb robbers. The holes and the debris from their excavation contain a miscellany of human skull and skeletal fragments. The burials appear to have been placed approximately 1 to 1½ m. above the original floor level of the building and were situated approximately 2 to 2½ m. apart. More than one body might be placed in a tomb. Uhle opened some examples of this type of tomb; their general character is well shown in plate 13, *a*. He describes them as containing from two to eight skeletons, but their other contents as being both meager and disappointing; his collections bear this out.

THE GREAT PLAZA

Immediately to the southeast of this gallery (*q*) and on the same level is a terrace 3.5 m. wide which stands 2 m. above the general level of the Great Plaza. The outer wall of the terrace runs northeast, then turns and forms one side of what must have been the principal entrance passage to the Plaza itself.¹⁶ On the southwestern side of the Great Plaza is one moderately well-preserved long gallery (*s*) with the familiar arrangement of a central division wall flanked by horizontal rows of corbels in the side walls level with the top of the division wall. There is at least one and possibly two entrances into this gallery from the Plaza side, but the preserved parts of the wall on its southwestern flank lack any windows or openings. In the main this gallery at *s* forms a considerable part of the southwestern side of the Great Plaza. Between the gallery and the present edge of the Plaza, is a steep rubble-covered slope at the top of which are the remains of a big thick wall with a row of corbels projecting toward the Plaza. This is shown at *t* and immediately below this, sloping to the Plaza level, is a series of structures that look like terrace platforms, but are of small size and built of thin walls.

The regular symmetry of the Great Plaza on its northwestern, southwestern, and

¹⁵ Wiener, *op cit.*, p. 152, facing, illustrates the exterior aspect of the same windows. This is a more comprehensive view of the south corner of the gallery at *j* than is the picture which Tello shows on p. 34 of *Antiguo Perú*, but the latter is better for detail. Wiener further illustrates on p. 152 a niche from an unspecified part of the Castillo which is of the same form as the windows.

¹⁶ This must be the "entrée latérale du Castillo" which Wiener, *op. cit.*, shows on p. 151.

northeastern sides is in strong contrast to the general appearance of irregularity of the southeastern side and particularly of the southern corner. In this southern corner is a series of structures which mar the general aspect of spaciousness. To be sure, a part of the uncertainty with regard to the original character of this section of the Plaza and its related buildings is due to the extremely ruined condition of all the structures in the area. Excavation 6, (fig. 9) was undertaken to probe the character of the moundlike eminence shown in plate 10, *a*. Extensive clearing was carried out along the sides, on top of, and in this mound and gradually it was possible to make out the shape and some of the relations of the walls (see fig. 2). My original belief had been that I might encounter a large tomb of the same pattern as the one in the plaza connected with Gallery B. This belief rapidly faded and

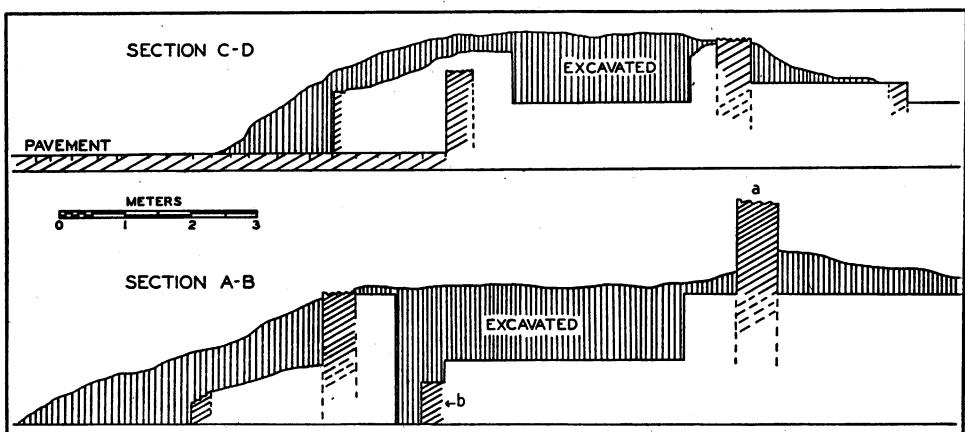


Fig. 2. Marca Huamachuco. Cross sections through the structure cleared in Excavation 6

was replaced by the possibility that the walls might have served as the substructure for a small shrine or altar. When it became apparent that much more extensive and lengthy excavation would be needed to determine not only the immediate character of the structure but to clear up its relationship to all of the surrounding structures, I was obliged to stop without any clear idea of its actual nature. The pottery is described in a separate place in this report, but it is worth noting here that it too was inconclusive in determining the nature of this building or series of buildings. One thing is clear, however, and that concerns the wall (*u*) which contains a row of stone corbels. This obviously has been reused. In addition, a number of finely cut blocks of soft lava were obtained in clearing debris from the building itself and one or two were still in position in the actual walls. They have clearly been reutilized in conjunction with the usual split stone blocks which form the ordinary type of rubble construction. My conclusion was that whatever the original character and purpose may have been, the building had been extensively remodeled at a time when the original functions of the Plaza had undergone some radical change and when the galleries surrounding it may have been already in partly ruinous condition.

The northeastern side and the eastern corner of the Plaza are bounded by a series of long narrow galleries. In these a division wall is lacking and the gallery at *v* is exceptionally massive and architecturally is in harmony with the construction and with the situation of the Castillo. Just beyond the southeast corner of the Plaza

proper is a series of very ruined buildings in which the walls have been destroyed nearly to ground level. Among these is a circular structure shown at *w*. It was impossible to excavate inside this, so its purpose remains uncertain.

GALLERY D

Gallery D and the plazas connected with it form a group of ruins north of and at a considerably lower elevation than the Castillo. Much of the intervening area has been cultivated for a long time and the result is uncertainty of the ancient relationships of this small building complex to the Castillo. Gallery D is of very great interest because in its southern side wall it has the remains of a doorway with long, vertically set stones forming the jambs. It is one of the few galleries which have what one can speak of as a "proper" entrance. The entrance leads from the gallery to an open area which appears never to have had any extensive structures and apparently was a small plaza or court. The masonry indicated at *y* contains a number of square cistlike openings which I was assured had contained both human bones and pottery. These openings represent another form of tomb. A small clearance was made (see fig. 9, Excavation D) in order to determine whether there were any other tombs, but this proved fruitless.

GALLERY E

Gallery E (see figs. 6, 10, A) is situated directly south of the Castillo and downhill from it. The area between Gallery E, the Castillo, and the buildings surrounding the Great Plaza has at one time or another been extensively cultivated and in consequence the relationship of this gallery to the Castillo complex is uncertain. It represents, however, another variant of the common pattern of building in Marca Huamachuco. Excavation 5 was made in the northern half of this structure and was disappointing in that it yielded nothing. Architecturally the building is of some interest because of its extreme length in comparison with its width (pl. 10, c). In plate 12, *a*, is shown the detail of the western wall which has an arrangement of niches placed above a row of corbels. The eastern wall is considerably ruined but probably had a similar arrangement and since the width is only 3.5 m. the presence of at least two floors is certain. The interior cross walls are probably an original part of the construction of this building. A careful search of the walls both internally and externally failed to yield evidence of an entrance or doorway. Investigations of this type are always hampered by the great amount of fallen rock which forms a talus on the inside as well as on the outside of the walls near their bases. With small entrances of the type which have been noted in Gallery A, it is possible that only extensive excavation and clearing would make them visible. However, the absence of obvious or visible entrances to the galleries and other buildings is a persistent feature at Marca Huamachuco.

GALLERY F AND THE NICHE TOMBS

Standing on top of what is now the summit of the western wall of the Castillo and looking northwest, a great number of ruins are visible. Some of these are shown in plate 10, *e*. The nearest group of ruins includes Gallery F and a series of other structures which are shown in detail in figure 10. Gallery F itself is a long gallery, very much ruined, and its description need not detain us longer. More interesting than this gallery is the structure built immediately along part of its northeastern flank. This is indicated in figure 10, *a*, as the Late building with the triple entrance. The rubble construction of the walls of this building is inferior to Gallery F and to the type of construction employed in the main walls of the Castillo and around

the Plaza. Not only are the walls thinner, but the side wall of Gallery F has been used as the back wall of this structure at *a*. The triple entrance is regularly spaced and opens from this very large room on what was certainly an open court or plaza. At the end of this large room with the triple entrance is a series of small rooms at *b* in the same kind of thin, poor construction.

Northwest of Gallery F is a group of walls and fragments of buildings which stand on a considerable elevation. A large part of the area is and has been cultivated for a long time and I was led to examine and to excavate in this area by reports from one of my workmen that tombs had been found below ground. The elevation upon which the buildings and walls stand is largely artificial and was formed by

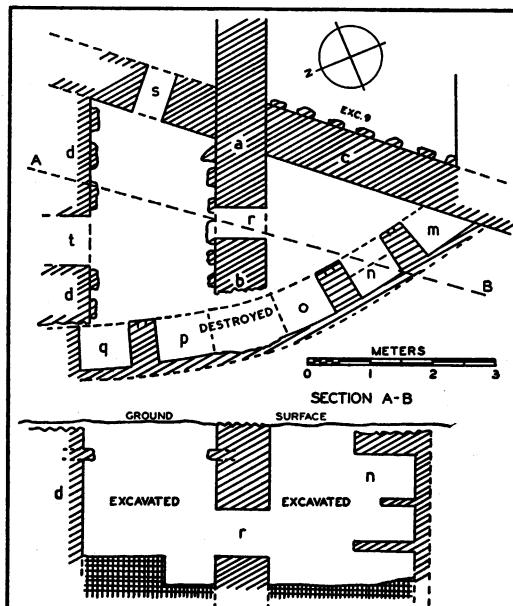


Fig. 3. Marca Huamachuco. Plan and cross section
of Excavation 7

filling in between a series of massive retaining walls, one of which, on the southwest side, is curved. On top of this artificial or partly artificial platform were erected several buildings, one of which was rectangular and is shown at *c*. This is aligned with the western edge of the platform or substructure. The remains of another rectangular building are shown at *d* superimposed on and aligned with the northeastern margin of the platform. In the areas where Excavations 7, 8, and 9 were carried out there is the remnant of a long gallery whose general orientation and axis are not in conformity with the buildings at *c* and *d* but with Gallery F. The southeastern end of this building (*e*) is above ground, but the northwest extension of the wall has been destroyed down to the level of the ground and has been partly covered over and obliterated by the Late building at *f*, which was built of small, thin stone and mortar walls. The orientation of these walls, shown in figure 10, does not conform either to the more ancient long gallery at *e* nor to the buildings indicated at *c* and *d*.

The first excavations were at 7 and uncovered a buried and curved wall containing a series of niches. The detailed plan and cross section of these are shown in

figure 3. Unfortunately, the excavation failed to bring to light any interments and while the yield of sherd material was by no means unsatisfactory, no intact vessels were recovered. It was possible, however, to obtain from one of the workmen three specimens (pls. 18, *q*; 22, *ff*, *gg*) which had been taken from one of the niches (fig. 3, *p*) that had already been destroyed. The niches are of rubble construction, as is apparent in plate 13, *c*. The wall in which they are built is curved and its relation to the other walls shown in the detailed plan in figure 3 is curious. It clearly interrupts and has destroyed the wall at *b*. Its construction at a later period than the gallery is evident. Within the major wall of the gallery at *r* and in the cross wall at *s*, were two small openings which at first I took to be niches, but they penetrated the thickness of the wall and must have served as bolt holes or connecting passages between adjoining rooms. The greatest depth of these excavations was more than 2.5 m. and it is interesting to note that while it was impossible to determine whether any of the pits had reached an original floor level, horizontal rows of corbels were discovered in a number of these completely buried walls. These are shown in figure 10 and also in figure 3. In this area containing the niche tombs, I think it is obvious that at least three former periods of construction were encountered: an original one represented by Gallery F and the gallery at *e* in figure 10; a second in which the buildings at *c* and *d* (fig. 10) and quite possibly the curved wall containing the niches were erected; a third period of construction is represented by the small house at *f* and the larger building with the triple entrance at *a*. The significance of the ceramic material will be dealt with in section VI of this report, but it is worth noting that it in no way contradicts the suggestions made with respect to the different periods of building and construction.

HILL 1 AND GALLERY G

Hill 1, which is indicated in figure 6, has an elevation which is equal to the base elevation of the Castillo-Gallery A eminences. This area seemed to me to have been one of very great importance and the excavations which it was possible to make at one margin of it confirmed by belief. The entire area is much ruined as a consequence of prolonged cultivation and the stone which has been cleared from the fields has been piled into great towers or built into *pirca* walls. In my frequent tours of exploration about this section of the site I noticed a considerable number of the soft tuff or lava ashlar blocks included in or tossed onto the rough walls bounding the *chácara* (plowed fields). Among these were found a number which were of special interest (see pl. 16), and from a peasant's house, at the foot of Hill 1 and a little above the spring on this part of Marca Huamachuco, I was able to obtain for study the carved human head in stone which is shown in plate 16, *b-d*. The nature of the stone is the same as that of many of the beautifully cut ashlars now lying strewn about the margins, particularly the western and southwestern margin of Hill 1.

On the south side of the hill, in an area that had never been cultivated, I came upon a poorly preserved long gallery which is shown in figure 10, C, and which I have called Gallery G. It represented a site which it was possible to work without any objections from the peasants, who protested against having their freshly plowed fields torn up, and the result was that I put in two excavations, numbers 10 and 11, in this site.

Excavation 10 consisted of a pit sunk transversely across the long axis of the gallery. The pit was divided into two sections because of our striking the buried central division wall of the gallery. The southern end of the pit abutted on a wall built across and completely filling what apparently had been an entrance in the

south side of the gallery. The material removed from Excavation 10 consisted largely of compact yellow clay and very large quantities of stones, most of which seemed to have come from the collapse of the side walls of the gallery.

Excavation 11 proved in many ways to be the most interesting of the various tests made into the archaeological deposits of Marca Huamachuco. A fuller description of the exact character of this excavation is given in connection with the discussion of the ceramic and cultural material. It, too, encountered the central division wall, and, as is evident from the plan in figure 10, it passed first through the floor of the building at *h*, whose axis and arrangement is independent of the older gallery and whose superposition made it plain that it represented a later and separate period of construction. This building is of special interest, for in cutting the southern end of pit 11 the workmen undermined part of the wall, and in the process I found incorporated in the wall one block of soft cut stone. There was no well-defined floor to this house at *h*, but below the level of its slight and inconsiderable walls the pit penetrated into very compact clay material with large quantities of rock and ultimately reached an extremely tough layer of yellow clay which quite evidently represented the original floor of the gallery. A little above this floor in the corner of the pit at *j* was found a flat milling or grinding slab and two large round grinding stones in position on top of it. (See pl. 12, *f.*)

There is another well-constructed gateway on the southern side of Gallery G. It, too, has been blocked up with rubble masonry. The western end of the gallery has been destroyed, as is indicated in the plan. To the north and northwest of the gallery are very fragmentary walls which in my view formed parts of similar structures. As I have indicated previously, the greater part of the structures on Hill 1 are in an exceedingly decayed and destroyed condition. It is an area from which casual finds of antiquities (see pl. 21, *e*) are made from time to time. Together with the very large quantities of beautifully cut, soft stone blocks, some of which are decorated, they make this an area of considerable promise for further excavation. Somewhere on this hill was situated a building, or buildings, in ashlar masonry, composed largely, if not entirely, of dressed lava blocks. Inquiry and personal investigation failed to locate any place in the region immediately near Marca Huamachuco which might have served as a source for these cut stone blocks. One thing is certainly clear—rock of this type does not form part of the geological strata composing Marca Huamachuco (see pl. 10, *d*). Consequently, the material was imported and was certainly brought in and used for limited and special purposes at a period anterior in the main to the construction of dwellings such as that in figure 10 at *f*, *h*, and to the principal part of the structure uncovered by Excavation 6 in the Great Plaza.

Hill 2 as indicated in figure 6 is partly an extension from Hill 1, but lies to the west and north and at a slightly lower elevation. On its northwestern margin is clear evidence of a former double wall and within this area are numerous wall foundations belonging to both rectangular and square structures. I was unable to discover any clear evidence of galleries of the size or general character of those connected with the main group of ruins in the Castillo and Plaza complex. Southwest of Hill 2 is a small tower 4 by 5 m. The long axis bears 30 degrees west of north. This, too, may represent a structure similar to the towers at the eastern end of Marca Huamachuco but is much simpler and less ostentatious.

THE WEST GATE

The great West Gate and the adjoining sections of the double defense wall are shown in figure 7, B, while its more general relationships are indicated in figure 1.

The rectangular structure, to the right of the gate (fig. 7, *a*) and abutting against the inside of the inner of the two walls, is composed of walls of the same thickness and construction as the main walls themselves and at present the interior is filled solidly. The immediately adjoining section of the defense wall is also filled and my belief is that this was deliberate and does not represent merely the accretions caused by the crumbling of the walls themselves. The relation of this structure to the gate argues strongly in favor of the supposition that it was a guardhouse. Still farther to the right is a rounded, less well-built rubble structure at *b* with a small low entrance in the inner wall but with none in the outer. A break was made in the inner wall of the double defense wall and an extra compartment was created by building two small cross walls. This whole structure is strongly suggestive of another guardhouse, although it is evident that it is a later addition to the defensive system. It is also possible that its purpose was otherwise and that it served merely for habitation.

The gate proper is illustrated in plates 9, *c*, and 12, *e*, and the impressive character of the stones used in its construction is quite evident. Because of the well-preserved nature of the defense wall, to this day the gate serves as the sole means of ingress and egress on this side of the Cerro del Castillo (see pl. 13, *d*). The details of the paving of the passage and any evidence with respect to the method of securing and closing the entrance have completely disappeared because of erosion and the continued use of the gate. The internal corner on the left side of the gate has been largely destroyed. Outside the gate, toward the west, the ground drops away in a series of small, natural terraces of bare rock. A little to the left of the main axis of the gate is a small building, part of which is of relatively recent construction, but the main section is a rectangular room with a doorway opening into it from the northwestern side. This, too, appears to be a later construction and the character of the wall building is similar to that of the circular construction at *b*. Without the gate are traces of a fairly broad road leading in the direction of Cerro de las Monjas and within the gate are similar remains which climb up the side of Hill 1 in the general direction of the Castillo. The indications of this roadway are a series of stones marking its boundaries and the signs are admittedly not unequivocal. Outside the wall and to the right of the gate is a series of pools which contain a certain amount of water the year round and which are one of the sources of water for both man and animals on Marca Huamachuco.

At the point marked *c* on the outer wall careful measurement of the existing height gave a reading of 8.7 m., and the highest sections of the wall to the right of the gate have an equal or greater outside elevation. My impression was that the wall in its original condition towered at least 9 m. and probably 10 m. above its foundations on the outer side.

Cross walls occur between the double walls at irregular intervals. The interior passage, if such it was, was thus compartmented; but whether the compartmentation was carried out at the time the wall was first erected or whether some of it is of later date is impossible to tell without clearing and excavation. As would be expected, there is a large quantity of fallen stone blocking and choking the gallery and any detailed exploration is difficult on this account, with the added hazards of thick brush and vegetation solidly filling many sections of the 2- to 3-meter-wide passage.

The gallery had two sets of horizontal rows of corbels. This is plainly seen in plate 9, *c*. There is no way of determining whether this was a uniform feature of the entire length of the defense wall or was restricted to the section illustrated and is to be connected with special arrangements related to the gate. It should

be stressed that there are no exterior openings of any kind or shape in the wall except the gateways. The second¹⁷ and third stories could not have been used by a garrison in repelling the attacks of an invader. The probability is that these upper floors were used as living quarters or for storage.

On the inside of the large curve at *d* in figure 7 and with a width of 6 to 8 m. is a level area indicated at *e*. It is demarcated on the south and west by a bank of a meter or more in height. A similar area can be noted inside the preserved parts of the wall shown in figure 6, *c*. At this place the living rock has been quarried away. In both areas it is possible that the leveling was antecedent to, and part of, the wall construction because in other sections of the defense wall the same arrangement is not conspicuous.

Reference to figure 6, *d*, shows a series of many small rectangular and square houses forming what appears to have been a separate colony within the bend of the defense wall at that point. Immediately south and west of this group of houses the ground rises toward Hill 1 and as this entire area has been cultivated extensively, the result is that the ancient character of settlement in this part cannot be made out with certainty.

CERRO DE LAS MONJAS AND THE ROUND FORTS

FORT A

The Cerro de las Monjas presents an imposing array of circular double-walled enclosures, particularly when viewed from the West Gate or from the hill slope inside and above it. The reader will see this quite clearly by referring to plate 9, *c*.¹⁸ The general position of these rounded buildings is indicated in figure 6 and the detail of their plan and character is shown fully in figure 11. There are six of these structures on Cerro de las Monjas. It was possible to make traverse table plans of only three of them, Forts A, B, and D, but sketch plans with measurements were made of Forts C and F. Fort E, which is the largest of this group of structures, was not surveyed because the extremely ruined condition of the numerous rectangular buildings in its central part made even a sketch plan appear to be of doubtful value.

Uhle's examination of these same structures convinced him that they had nothing to do with either the Incas or the Virgins of the Sun and that they represented strong defended settlements. In the main, I think anyone studying figure 11 will agree with this conclusion. I shall point out, in the course of my description of these buildings, a number of characteristics which appear to indicate that probably they were occupied for a long period of time and that more than one period of building is represented.

The best preserved of these fortresses is Fort A. I had all of the vegetation, which was quite dense, cleared from its interior in order to make as exact a plan of it as was possible. The double wall which forms the strong exterior shell of Fort A has walls with thicknesses of 1 m. at a height of a meter above the foundations and the passage internal to this double wall has an average width of 2.5 m. The passage originally had four rows of horizontal corbels. It is also compartmented by twenty-two cross walls. One of these cross walls, that indicated at *a* in figure 11, had a height in excess of 3 m. and suggests that originally some of the cross walls extended above the first floor level. One feature which is most puzzling is the fact that the horizontal rows of corbels do not follow an even and level course around the cir-

¹⁷ The ground floor of a building is synonymous with the first floor in the United States. This differs from Continental and South American usage. Second floor is equivalent to *primero piso*, third floor to *segundo piso*.

¹⁸ Tello, *Antiguo Perú*, p. 33, gives a view taken from near the same place inside the defense wall.

cumference of the gallery but undergo irregular changes of level, as can be seen in plate 12, *d*. The difficulty of obtaining a clear understanding of this is increased by the fact that, except for the very lowest level of corbels (see pl. 12, *b, c*), forming what may be considered the footings for the beams for the first floor, today none of these rows of projecting stones can be followed completely around the circular gallery because of the decay of the walls.

The internal aspect of the inner wall is well preserved at *b* in figure 11 (see also pl. 12, *b*). Here the second level of corbels is surmounted by a series of small niches in precisely the same manner as in the walls of Gallery E (see pl. 12, *a*). It is evident that this arrangement of corbels and niches could not have served as the supports for a floor. One must consider again the probability that corbel rows and niches also had a purely decorative character. Further alternatives are: their use as roof supports or their employment during the process of constructing the wall. In this connection they may have served as supports for scaffolding, but this explanation seems to me somewhat problematical.

The wall shown at *c* in figure 11 closely follows the curvature of the inner wall of the circular gallery but 2.5 m. internal to it. The eastern end of this third curved wall is complete and intact. It gives the appearance of being a curtain wall, but its situation is such that this term seems a misnomer because so far as can be seen it does not screen or protect anything, placed as it is inside the fortress.

The central part of Fort A is about equally divided between an area that appears never to have been built upon and an area which is covered with rectangular buildings. Three excavations (nos. 12-14) were made at different points within the rectangular buildings and are indicated in figure 11. The building at *d* and those at *e* and *f* all have certain peculiarities, notably their stouter and somewhat better construction, which support the view that they were buildings or parts of buildings erected contemporaneously with the main circular gallery. The majority of the other buildings are in very ruinous condition and consist of thin, poorly built rubble masonry rooms whose arrangement and relations both to the buildings at *d, e*, and *f* and to the double-walled gallery convince me that they represent at least one, if not several, later periods of construction.

Nowhere did the excavated deposits in this fort have any considerable depth, the bedrock lying everywhere near the surface. The archaeological material which was obtained supports the suggestion of at least two periods of building and construction.

There are several other points in connection with the construction and architecture of Fort A which must be mentioned before passing on to the description of the other forts. At *g* there is clearly marked evidence that the radius of curvature of the gallery to the north of this point had been taken too small and that a correction had been made south of this point. There is a noticeable change in the line of both the inner and the outer wall. Windows (*w*), niches (*n*), and doorways or entrances all occur. The term "window" is probably a misnomer. Actually the "windows" are openings in the internal gallery wall 70 to 80 cm. wide. None of them now have lintels so the actual height is uncertain but it certainly was not less than 1.5 m. and not more than 1.8 m. They are all placed at a high level, above the first corbel row, and open out of what must have been the second floor of the gallery (pl. 12, *b*). Their occurrence in the plan appears to be irregular, largely because the upper courses of the greater part of the inner wall are much destroyed. I have a strong impression that the original spacing was probably at fairly regular intervals. On the other hand, niches occurred much more irregularly both on a level with the windows and at higher levels. They vary in size from 25 by 25 cm. to 40 by 50

cm. and may or may not pierce the wall. They might be associated with a row of corbels as in *b* or they might be situated independently of this. Doorways in the major walls of the fort are indicated on the plan. There are two in the internal wall of the circular gallery; one of them is shown in plate 11, *b*.¹⁰ At present both of these lead into compartments and have no direct access to the single opening in the outer wall of the gallery. The latter opens on a series of medium-sized terraces roughly bordered with laid stones. This external entrance has a width of 70 cm. and a height of 1.3 m. The two entrances in the internal wall of the gallery have roughly the same proportions but are a little smaller.

FORT B

Fort B is in the same style of architecture and is planned in a manner similar to that of Fort A. It consists of a circular gallery lined with at least two and probably three horizontal rows of stone corbels. It was probably compartmented like the circular gallery of Fort A, but the walls are less complete and there is more fallen stone so that it is impossible to make out with certainty whether some of the piles of stone represent accumulations along cross walls or are merely the accidental deposition of blocks fallen from the main walls. This very much filled condition of the circular gallery may account also for my inability to find any entrance in the outer wall. A second possibility is that such an entrance may have existed in the large ruined section of wall on the north side of the fort. The internal wall of the gallery has two doorways, one on the northwest and the other on the southwest side (see fig. 11, Fort B). Like the doorways in Fort A these are small affairs, 70 cm. wide and between 1.2 and 1.5 m. in height. The southwestern doorway has an arrangement of three small niches placed 2.5 m. above the doorway. These niches pierce the wall; one of them is centered immediately above the door opening and the other two flank it. There are remains of two openings, each a meter wide, which are indicated in figure 11 as windows (*w*). At one side of each of the openings there is a niche or small square opening which pierces the wall at about the same level. These large openings placed above the corbel rows and opening out of the second story are undoubtedly like their counterparts in Fort A and I have the same uncertainty about their original function. Windows, such as those shown in the outer wall of the gallery at *j* in figure 9, are smaller square structures with dimensions of about 50 by 60 cm. (see pl. 11, *e*).

There is a single subrectangular building in the rounded court enclosed by the gallery. The building is much ruined, but the extant parts of the walls appear to be of the same style of construction as the walls of the fort proper. It is not placed in the center of the gallery, and has no peculiarities such as corbels or niches; at least none are preserved, and there is no visible doorway.

FORT C

Abutting on the northern section of the outside wall of Fort B is a long connecting wall which forms the western side of the complex of rectangular rooms and the peculiar curved section of gallery that I call Fort C (fig. 11). The outer or northern wall of the S-shaped gallery is built immediately on the edge of a rock scarp which drops vertically for ten to fifteen meters. The course of the outer wall of the gallery is definitely aligned with and determined by the natural contour of the mountain at this point. The inner wall is built to match the outer wall and the result is the

¹⁰ Wiener, *op. cit.*, p. 152, gives a fanciful reconstruction of the section of wall at *b* in figure 11. He has placed the doorway under a window, an economy of draftsmanship if not of the imagination.

peculiar sigmoid effect shown in figure 11. This gallery certainly had one and probably two horizontal rows of corbels. Neither doorways, niches, nor windows are discoverable at the present time and it is doubtful if niches or windows ever existed. Direct communication is lacking between the gallery and the series of rectangular rooms that lie immediately south. These rooms are not enclosed by a defense wall on the south or the southeast and it is possible that they may represent later additions to the sigmoid gallery but I think this is unlikely.

FORT D

Fort D is connected directly with Fort C by a wall shown at *h* (see fig. 11) which dips down and crosses the very narrow gully that plunges almost vertically downward just north of the course of the wall. This fort is a curious looking structure (pl. 13, *b*) with no discoverable opening in the outer wall of its curved gallery. Three windows (fig. 11, Fort D, *w*), or possibly doorways, opening out of the second floor just above the first level of corbels that line the sides of the gallery are indicated in the plan. In addition there was a row of corbels on the external face of the inner gallery wall. The rooms indicated by *j* are quite obviously of a period of construction later than the original building. A single defense wall at the outer northern corner of the gallery drops steeply down the cliff and then curves northwest along the side of the mountain ultimately joining the outer wall of a seventh gallery. This is located at the northeastern margin of Cerro de los Corrales, and is shown in figure 6 at *e*.

FORT E

There are two other rounded fortresses in the Monjas group. Fort E was the largest but also the most ruined of the forts. It occupies a position that places its northern side immediately above the edge of the cliff. Within the circular gallery, which has the usual arrangement of horizontal rows of corbels and cross walls, is a very large level area which is between two thirds and three fourths filled by rectangular and square rooms of a construction and arrangement analogous to the rooms within Fort A. The decay of these buildings is much greater than is that of their counterparts in Fort A and for this reason I abandoned any attempt to make a plan of Fort E. My inspection of these buildings did not produce any items of special or particular interest that served in any way to distinguish them either in method of construction or in architectural plan from similar structures in the other forts.

FORT F

Fort F is the smallest of the round fortresses and lies southwest and downhill from Fort A. It consists of a circular gallery with cross walls, horizontal rows of corbels, no discoverable entrance in the external wall, but with one well-built doorway on the northern side of the inner wall of the gallery. This entrance had a width of 1 m. and a height of 1.5 m. In the southwestern arc of the inner wall there is another opening, but the fall of stone at this point makes it by no means certain that another doorway existed there. Abutting against the internal wall was a series of curious constructions in the rounded central part of the fort. One of these is shown in fig. 11 at *k*, and others at *l* and *m*. Vegetation was heavy in the interior of the fort and consequently it was not possible to make out all of the details with clarity, but the irregularity of the structures added another item to the gradually accumulating series of facts that so strongly suggest that many of the small rectangular buildings in the centers of the fortresses were constructed later than the galleries.

There is no screen or defense wall connecting Fort F with Fort A, but running south and southwest from Fort F is a single wall which ends in a thick section of

masonry. This wall forms one side of a gateway which is used to the present day. South of the gate is a double defense wall. The walls have an average thickness of 70 cm. and the internal gallery has a width of 2.7 m.; this is slightly larger than the usual arrangement on the Cerro del Castillo. Protected by the double wall are the remains of a number of small and a few somewhat larger buildings. One medium-sized gallery is shown at *n* in figure 11. The double wall lies along the edge of a cliff which increases in height as one approaches the angle of the wall where it turns south and east. In figure 6 in the area marked *f* this wall is destroyed. Its course would have crossed the *quebrada* that runs down the side of the mountain and which separates Cerro de las Monjas from the northwestern end of Cerro del Castillo.

There is a very large canyon whose head extends well up the side of the mountain in the area marked *g* in figure 6. This steep valley lies at the southern foot of Cerro de los Corrales and it is on the far side of this canyon that Uhle reported what he believed to have been the chief source of water for the ancient people of Marca Huamachuco.

CERRO DE LOS CORRALES

One aspect of the Cerro de los Corrales is shown in plate 10, *g*. The ancient structures on this minor elevation are of three distinct types. On the northern margin of the hill is the dilapidated round fort indicated at *e* in figure 6. The dimensions of this round fortress are slightly smaller than Fort E. The round fort is situated on a steeper slope than are the other forts, and the result is that the southern and southwestern half of the interior court is today bare rock. It seems to me problematical whether any great number of structures was ever placed in this section. The northern and northeastern side has remnants of a number of small rectangular or square structures such as occur within the forts on Cerro de las Monjas. The walls of the circular gallery are very much ruined and it is impossible to be certain that horizontal rows of corbels occurred in them as they do in the other forts of this type.

The other principal ruin on Cerro de los Corrales is a rectangular structure which consists of a single wall enclosing a series of medium-sized rooms. The rooms are 6 by 10 m. and 8 by 12 m. These abut on what appears to be a solid, rectangular masonry mound in the center of the whole structure. The existing height of this rectangular mound is approximately 2 m. and the narrow ends have been dug into, possibly in search of treasure. Essentially its interior appears to consist of compacted clay and rock fill and not proper masonry. At the present time its original nature is quite obscure and the probabilities are about equal that it may have served for tombs or that it may have been a substructure for some building erected on its top and now disintegrated. Connected with this complex of rooms, with its solid masonry structure in the center, is a series of large areas bordered by low walls. These are schematically indicated in figure 6 and are shown clearly in plate 10, *g*. These corrals are the reason for the name of this part of Marca Huamachuco. The photograph in plate 10, *g*, was taken by Max Uhle in 1900. The low walls are much less well preserved at the present time. They appear obviously to be enclosures, probably for herds of animals. To the west of the central group of rooms and of the larger of the corrals are the foundations of an isolated small circular structure about 3 m. in diameter, with a small doorway in its northeastern face.

Except for the curious rectangular structure and the corrals which occupy what is the center of the Cerro de los Corrales, there never appear to have been any other structures or buildings in this part of Marca Huamachuco and the subsidiary character of the Cerro de los Corrales is plain to the eye.

Between Cerro de los Corrales and Cerro Viejo, which lies still farther northwest, is the upper part of a valley whose side slopes are gentle. Its course runs approximately north and south with a drop toward the southern end. Following the main axis of this little valley is a ditch or *acequia* that does not appear to have been stone lined, but despite this, gives the appearance of great antiquity. It is impossible to be certain what the original dimensions of the *acequia* were, but it must have been nearly 1 m. wide and probably 25 to 30 cm. deep. It can be traced for a distance of several hundred meters but its southern end fades out. Uhle's view was that this ditch served as the center of catchment for the runoff from both Cerro de los Corrales and Cerro Viejo and that it was the principal source of supply for the springs which lie still farther to the south on the sides of the increasingly steep canyon (fig. 6, g), of which this little valley is the head.

CERRO VIEJO

Cerro Viejo has very nearly the same elevation as the central part of the Cerro del Castillo. It appears to have been cultivated longer and more intensively than any other part of Marca Huamachuco and the result of this is that the once large group of ancient buildings has been much more heavily destroyed than most other sections of Marca Huamachuco. Essentially this settlement can best be compared to the type of settlement on Hill 1 of the Cerro del Castillo. The major type of building appears to have been a long gallery with widths of 3, 4, 5, and 6 m. and lengths varying between 20 and 50 m. These dimensions are uncertain and represent estimates. There was a double defense wall which followed the general contour of the hill and which completely surrounded the series of galleries that crowned its top. No regular system of orientation or arrangement of the galleries could be made out and I was unable to discover intact the foundations of a single complete gallery. Close to the best-preserved sections of the defensive wall, more especially on the northwestern side of Cerro Viejo, are a number of small square or rectangular buildings that appear to be of the same character as the class B structures of the Cerro del Castillo. My examination convinced me that the ancient remains on Cerro Viejo indicate a settlement of size and importance, but there is no visible evidence of any building or group of buildings so impressive as the Castillo. It was a site with large and extremely well-built buildings such as those found on Hill 1 on the Cerro del Castillo, and in addition, there is clear evidence of the later small and less well-built structures. The possibility, however, that Cerro Viejo may have been the initial foundation on Marca Huamachuco, as Uhle thought its name might imply, appears to me to be unlikely. Uhle mentions briefly in his report that four "round enclosures" similar to the six on Cerro de las Monjas were to be seen on Cerro Viejo. I found no evidence of these. The report was written at sea between Trujillo and Lima and apparently without benefit of notes. There is obvious confusion between Cerro Viejo and Cerro de los Corrales in some places and both in the report and in the legends to the photographs directions are usually reversed—north for south and east for west, and so on. I could find a total of only seven of the round fortresses.

ARCHITECTURE AND CONSTRUCTION

Turning now from the systematic consideration of the buildings in the different subdivisions of Marca Huamachuco to more general considerations, let us consider first the subject of construction of walls. There is today no visible ashlar masonry wall—a wall composed of carefully cut and well-finished blocks of stone—on any part of Marca Huamachuco. The ancient method of construction was to use split

stones of varying size and to lay these in a clay mortar. Rubble masonry was the standard construction. The crevices between the large blocks, both on the visible surface of the wall and in its interstices, are filled with small chips or snecks. This general type of construction is old and widespread in many parts of Peru and particularly in the Andes. The rock which was used in construction is local rock and while it has not yet been possible to have a petrographic analysis made, it appears to be a silicified sandstone (Uhle calls it "argillaceous slate"—clearly incorrect) and occurs in horizontal or nearly horizontal beds (see pl. 10, *d*) intercalated with thin seams of gray-black quartzite. Quartzite was used also but not normally in wall construction. It appears rather to have been employed as paving slabs for rooms and, less frequently, for large courts.

The more or less common building and rebuilding which goes on in any large city is a feature which is a commonplace with us today, and has been equally commonplace in the life of urban dwellers in various parts of the world for the past several millennia. In consequence it is no surprise that there appear to be numerous instances of repairs and additions made to the walls and buildings of Marca Huamachuco. As a result of my investigations I think it is possible to indicate four main classes of wall construction on the site. The primary criteria are the qualitative differences of the walls themselves. The first series, which I have called A, are beautifully built walls in which the external surfaces are remarkably regular. The walls are made of what European and American stonemasons call irregular coursed rubble. This is plainly evident in the photographs in plates 10, *b*, *f*, and 11, *a*, *b*, *d*, *e*. Extremely large blocks exceeding 1 m. in length and from 30 to 50 cm. in height and as much in thickness are not at all infrequent. They occur in great numbers in the basal parts of the walls, although they are by no means restricted to what may be considered the foundations in the narrow sense. Generally speaking, the class A walls employ large stones with a consistent gradation of diminishing size as the wall rises.

A second constructional detail is that the quoins of these walls are regularly built with a succession of horizontal and vertically placed blocks of stone. This is a method which was common among Saxon stonemasons and is known as "long and short work." The corners of the rectangular towers as seen in plate 10, *f*, and the corner of the left-hand building shown in plate 11, *a*, are good examples of this technique. There are additional architectural features which also are characteristic of class A walls. These include the use of horizontal rows of stone corbels, of small square or rectangular niches, and of infrequent windows.

After I had surveyed and examined the round fortresses on Cerro de las Monjas and subsequently returned for further work on the structures of Cerro del Castillo, I came to the conclusion that the class A walls could be divided into two sub-categories which for convenience I have called types A-1 and A-2.²⁰ The distinction is based on total size and thickness plus the fact that the A-2 walls consistently have slightly smaller stones used in them. The A-1 walls vary in thickness near their bases, ranging from 90 to 160 cm. They are battered with great regularity, the taper affecting both faces of the wall and in their upper courses the thicknesses range from 60 to 80 cm. The A-2 walls may be as narrow as 50 cm. or as wide as a meter, with a taper toward the top and upper thicknesses of 30 to 60 cm. It is perfectly apparent that there is overlapping in the measurements which I have given as being primarily distinctive of the two types of walls, but repeated inspection and examination of walls in all parts of Marca Huamachuco convinced me that the distinction is a valid one. The A-1 walls are more frequent in outer walls

²⁰ A-2 walls are crosshatched while A-1 walls are unhatched on figures 7, 8, 9, 10, and 11.

of buildings or in purely defensive walls, while the A-2 walls are usually found in smaller buildings or as cross walls within galleries both rectangular and circular. This distinction is not absolute, but it holds with fair consistency.

The walls which I consider as belonging to the second main type, which I call class B,^a are likewise of rubble construction, but without coursing of any kind. Quite striking differences are to be noted, first, with respect to the consistent use of medium-sized or small blocks; second, the less regular and less perfect use of snecks; and third, the thicknesses, which may be as little as 30 cm. and rarely exceed 60 or 70 cm. Not only are the walls thinner, but the actual construction is inferior. The wall shown in plate 11, *f*, is a good example and comparison with *a*, *b*, or *e* of the same plate will make clear the differences. As further evidence there is the fact that few of these small walls have any great height at the present time. Both natural and human destruction have thrown them down. Consequently it is not easy to determine whether these walls were tapered, but my impression is that if such was the case it was very slight and in certain concrete examples the wall thickness appeared to be nearly equal in the existing top sections and in the corresponding basal sections. This type of construction is consistently associated with medium- or small-sized square or rectangular rooms. These rooms, in a very large number of examples, have been built inside galleries, round fortresses, or inside the Castillo and patently represent an occupation of later time. Regular doorways (see pl. 11, *f*) are more commonly associated with this type and size of wall and with this sort of room than they are with the thick-walled galleries. Windows and niches were not discovered, but again their absence may be due to destruction of the walls.

Another distinction between class A and class B walls is in total height. Some of the class A walls certainly were at least 10 m. in height. My impression is that it would have been exceptional for any of the class B walls to have exceeded 5 m. Too much cannot be made of this difference, however, because it is exceedingly difficult to construct a random rubble wall of 8 or 9 m. in height with a base of not more than 70 cm.

There is a third type of wall in Marca Huamachuco. This may be called class C and is of freestone or *pirca* construction—piled stone without mortar. Some of these walls are quite recent and contain immense quantities of stone cleared from the fields by the modern peasants in order to facilitate plowing. Others have every appearance of being old, but it is impossible to be certain that they represent the work of the pre-Columbian inhabitants of Marca Huamachuco.

Class D walls are unrepresented except by individual ashlar blocks (see pl. 16, *k*). These occur sporadically in many parts of the Cerro del Castillo and have been mentioned previously as most abundant on Hill 1. The lithic differences, quite apart from their form, set them apart from all known buildings on Marca Huamachuco.

The preceding discussion of the different types of walls has in part anticipated the discussion of the different types of architecture at Marca Huamachuco. A broad twofold distinction can be made at the outset with regard to the ground plan of the various structures. First of all there are those buildings that are predominantly rectilinear in plan. The second major category includes those buildings that are predominantly circular or round in plan. Within the first major category a number of distinctions can be made, but in view of the ruined condition of many parts of the buildings on Marca Huamachuco too much emphasis cannot be placed on simple differences of size and proportions. It is possible, however, to

^a Class B walls are indicated by solid black where they occur in figures 7, 8, 9, 10, and 11.

characterize the long galleries of which I have previously given descriptions. The lengths are rarely less than six times the width and it is not at all uncommon for them to be eight, nine, or ten times as long as they are wide. Some of them were certainly high enough to have three floors, allowing about 2.5 m. per floor; the result is a building of great narrowness, great height, and very great length. A glance at any one of the plans in figures 8, 9, or 10 will indicate that these galleries are by no means perfect rectangles. The long side walls are regularly parallel to each other, but the end walls may form right angles or they may be set in other angular relations to the side walls so that the resulting structure was a parallelogram or even a trapezoid.

The second class of rectilinear buildings is that in which the length is in normal circumstances not more than five times the width. By far the greater number of this type of building are made with class B walls, but there are a few examples of this general type of structure in class A construction. Gallery C is an example of class A construction.

At first glance the round forts appear to present an entirely different type of architecture. From the purely morphological standpoint the great defense wall encircling Cerro del Castillo is the link between the long rectangular galleries and what I consider to be the circular galleries or round forts. The different geographical situation of the round forts, placed in a separate group by themselves, heightens the contrast with the buildings of Cerro del Castillo, but actually from the standpoint of construction, planning, and the essential purpose which they served, there is no legitimate reason for regarding them as in any way inherently different from the buildings of the Castillo group. As far as it is possible to reconstruct the plan of the Castillo, of the citadel proper, there was no double wall forming a circular gallery. It is perfectly evident that the thick outer wall at the southern side turns back upon itself in a spiral fashion. The end of the wall at *x* in figure 9 is not broken but is a well-finished terminal surface. The arrangement of the long walls within the circular wall forms, however, a series of galleries and these were undoubtedly used in a manner similar to the circular galleries of the round forts.

The Castillo is perhaps the outstanding example of the adaptation of plan to the immediate local configuration of the ground. This feature is one which is characteristic to a very high degree of all of the buildings in all parts of Marca Huamachuco. In figure 6 the representation of the fragmentary groups of the more complete buildings is just sufficient to indicate that the whole plan of the Cerro del Castillo was essentially the result of a process of building by accretion rather than the carrying out of a master plan. This point is worth emphasis because it characterizes by far the greater number of ancient sites all through the Huamachuco region and, in contrast to the site of Viracochapampa, is distinctive of the pre-Incaic settlements.

There are a number of interesting problems to which it is impossible to give any definite answers. The first of these has undoubtedly come to the mind of the reader and that is the great rarity of a means of communication between one building and the next because of the absence of doorways and passages. I have indicated previously that the extant doorways are all small and consequently some of the galleries may possess them, either blocked intentionally with later wall construction or hidden by the debris from the disintegrating walls. Some, if not most of the openings I have called windows, indicated by *w* in the various plans, undoubtedly were entrances to the second stories of the galleries. There are no walls sufficiently well preserved to settle the point whether entrances to the third stories even existed, but I am doubtful that such was the case. Ladders were certainly used

between floors inside the galleries and the same method of access to the second floor openings would not have needed ladders of more than 4 m. in length.

The second problem concerns the method of roofing these large structures. None of the galleries had any indications of gabled ends such as occur in other stone buildings in the central and southern parts of the Sierra. As I have indicated previously, there is no wall in Marca Huamachuco which is intact to its top, but the impression is unavoidable that the buildings were constructed so that the tops of all four walls were level. The amount of debris within the buildings is certainly not great enough to indicate that the roofs were of stone. Further, the problem of covering a span of 5 to 7 m. in some of the galleries would have been a very considerable one if stone was used as roofing material. The result is that any one of a number of hypotheses may be equally probable with regard to this problem of covering the structures. The present method of local peasant construction is to build in uncoursed rubble masonry with gabled ends to the houses. Roofs are of thatch supported by rafters whose upper ends rest against a ridgepole. Purlins are lashed to the outside of the rafters and thatch is in turn lashed to them. The pitch is steep in order to shed the short but heavy thunder showers of spring and summer and the prolonged winter rains. My belief that there is some continuity in methods of construction between the modern and the ancient peoples is partly supported by Cieza's description of the stone buildings of this district which were "... embellished with huge beams over which the straw was laid with much skill."

The large class A buildings had more than two stories. This point I submit is incontrovertible in view of the regular occurrence of the horizontal rows of stone corbels in the galleries and their undoubtedly use as footings for a plate to carry the floor supports. There seems to be no valid reason for constructing a building of 7 or 8 m. in height if you live on the ground floor.

Another interesting problem concerns the question of water supply. In none of the twenty excavations and clearances which I made in different parts of Marca Huamachuco did I come across any stone-built drains. Further, I was unable to find or to learn of any source of water on the highest parts of Marca Huamachuco either in the form of springs or of deep wells. I mention this particularly because of the occurrence on Cerro Amaru of a well to be described in connection with that site. There are many springs on the margins of Marca Huamachuco. One of these has been mentioned in connection with the West Gate and has already been indicated in figures 6 and 7. Turning to figure 6, the reader will note that there are two springs along the northwestern flank of Marca Huamachuco, one of them certainly outside the original line of the double defense wall and the other probably situated just at its foot. On the southwestern flank of Marca Huamachuco southwest of Gallery G, in a steep canyon which cuts into the side of the mountain at that point, are three springs. The course of the outer defense wall has been completely obliterated along this section of the mountain, but again I am certain that the springs were outside and below the defense wall. I used these springs as a source of water for the expedition, and a careful examination of all of them failed to reveal any ancient working in their vicinity. At the present time they consist of shallow natural pools filled by water trickling out of the living rock of the mountain. The peasants dam them up with small mud dikes to increase the depth of water in the pools. During the months of December, January, and February the rainfall in this part of the Sierra is quite heavy and in normal years it is so ample that the water stored in the strata of the Cerro del Castillo percolates out and accumulates in the shallow pools during the remaining months of the year when rain is less frequent and comes in the form of thunderstorms. There remains, however, the very real difficulty of under-

standing how a population as numerous as the one which undoubtedly lived on Marca Huamachuco was able to satisfy its needs of water for human consumption, for beasts, and for culinary and possibly for agricultural purposes. In no part of Marca Huamachuco was I able to discover or to learn of any structures such as cisterns.

The sides of the mountain below the great defense wall are extremely steep and only very small parts of them have been terraced at any time and used for agricultural purposes. The gentler slopes of Cerro de las Monjas, of Cerro de los Corrales, and particularly on the southern, eastern, and northern sides of Cerro Viejo, are possible for an agriculture dependent on the annual rains. In addition, there must have been areas on Cerro del Castillo within the defense wall which were reserved for cultivation; not all of the areas barren of ruins today have been caused by post-Columbian destruction. The amount of labor, however, which went into the construction of the great defense wall, the round fortresses, and of the very large buildings in the Castillo group argues for a large, although not necessarily immense, population resident on Marca Huamachuco. I am, of course, expressly not suggesting that all of these ancient buildings were erected at the same time or within a relatively short space of time. The problems, however, of labor supply, labor control, and the care of labor must have been serious. Even granting that the chiefs or kings resident on Marca Huamachuco controlled the surrounding valleys visible from the mountain and were able to demand the services and time of the peasants living in other settlements in the district, the amount of labor expended on the various buildings and on the defense wall was tremendous.

I have indicated above that the method of construction employed in the erection of the buildings at Marca Huamachuco is not unique, but is a very common method of building in many sections of the Andes. It was certainly used in buildings that were erected in the time of the Inca Empire, although it was not the common method of construction of important buildings in the region of Cuzeo, the many sites in and near Lake Titicaca, and in other parts of the Empire. In comparison with the architecture of the important buildings in Incaic Cuzco, Marca Huamachuco is both provincial and rustic, despite its considerable magnitude. But more than this is the absence of the type of door commonly found in the fine masonry buildings raised by the ancient Cuzceños. Consequently on the basis of architecture alone, there are a minimum number of resemblances between the structures of Marca Huamachuco and those which are both commonly and rightly attributed to Inca architects. This may be stated positively despite the fact that it is becoming increasingly evident that in different times and in different places Inca architects used not only local materials but local methods of construction and even local styles of architecture. This point will be dealt with again in the discussion of the architecture and relationships of Viracochapampa. It is worth anticipating at this point the data from the ceramic material, to say that the vast majority of the large and well-built structures at Marca Huamachuco are quite clearly pre-Incaic. Uhle states this conviction in his report written forty years ago and my own work fully confirms and strengthens it.

Tello classifies the great walls of Marca Huamachuco as of the same style of architecture as the walls at Yayno near Pomabamba.²² The latter site he describes as a typical settlement of the Andean Megalithic culture. Up to the present the fullest account of the Andean Archaic is to be found in Tello's long paper in the Proceedings of the Twenty-third International Congress of Americanists,²³ wherein he

²² J. C. Tello, *Antiguo Perú, Primera Epoca*, pp. 34-35, Lima, 1929.

²³ J. C. Tello, *Andean Civilization: Some Problems of Peruvian Archaeology*. ICA, 23:259-290, New York, 1930.

presents a variety of distinctive criteria by which the fundamental civilization may be known. Before dealing with the possibilities of how far the Huamachuco ruins represent a variant of the basic civilization, it will be necessary to know something about the other ruined settlements of the region and particularly of the sculpture and the pottery.

Addendum: Mention should be made of the photographs of Marca Huamachuco published by Professor Hans Horkheimer in "Vistas Arqueológicas del Noroeste del Perú," pp. 50-52, Trujillo, 1944. His figures show some additional views of the architecture and buildings of Marca Huamachuco, not illustrated in this report, and also present a feline-headed corbel the provenience of which is believed to be Marca Huamachuco. Professor Horkheimer also illustrates on page 53 of his work the two human-headed corbels from Porcón (Prov. of Santiago de Chuco) which are mentioned on page 303 below.

III. LESSER SITES NEAR HUAMACHUCO

HUAMACHUCO TOWN

THE LESSER sites near Huamachuco are shown in the panorama which forms plate 6. This was taken near the East Gate of the Cerro del Castillo and gives the reader a clear idea both of the number of ruined sites and of how Marca Huamachuco dominated them topographically and also, without any question, politically and economically.

The modern town of Huamachuco (map 1) lies at the western end of a broad open valley. This valley is partly delimited at the eastern end by Cerro Toro, at the western end it is enclosed on the north and northwest by Cerro Sazón and Cerro Tuscan, and on the southern and southwestern side by one of the ubiquitous Cerro Campanas and by Cerro Cacañan.

The town in its present form is a Spanish foundation. Antiquities are encountered occasionally, however, in the course of house building and excavation. One such specimen is shown in plate 20, d. In addition to this circumstantial evidence there is the statement by the Augustinians in the *Relación* that their first quarters were in the same plaza where there had been some great buildings of the Incas.²⁴ The chapel of San José (map 1, no. 17), which is at the end of short street leading out of the middle of the north side of the modern plaza, is the oldest building in Huamachuco and was built by the Augustinians *ca.* 1551 or shortly thereafter. The chapel is built upon a mound. Charles Wiener,²⁵ in the course of his travels through this region of the Sierra, mentions this mound as being of artificial construction and suggests that it was probably the site of an ancient palace. Middendorf makes no mention of any antiquities in Huamachuco but considers it to be purely a Spanish settlement. Uhle was thoroughly familiar with Middendorf's work and in his report dogmatically denies that Huamachuco had an important or extensive ancient settlement and assumes that Wiener was guilty of another of his multitudinous inaccuracies. None of these gentlemen were aware of Friars San Pedro and Canto's report, first made generally accessible in the *Colección de documentos inéditos* published by Luis Torres de Mendoza.²⁶

My own examination of the church and particularly of the mound on which the church stands has convinced me that both Middendorf and Uhle were wrong and Wiener was correct. The church itself is built partly of rubble masonry, plastered over, and partly of adobes. It is not now regularly used and I was unable to make an examination of the interior, but from the outside the superstructure, while giving indication of frequent repairing, does not seem to incorporate any ancient walls. The mound itself is a rectangle with the long axis directed a few degrees east of north. At the northwest corner of the church, running out from underneath the main wall, is a very thick rubble wall with a diameter of not less than 85 cm. This turns and runs along the west side of the mound and disappears under the top step of the present western approach to the church. At the southwest corner of the church is a similar wall with a thickness of 1.15 m. This runs underneath the front of the church and serves as a foundation for the front wall.

The mound as a whole has an elevation of between 3 and 3.5 m. above the general level of the ground surrounding it. The massiveness of the exposed sections of the

²⁴ Los Primeros Agustinos, p. 9.

²⁵ Wiener, *op. cit.*, pp. 144-145 gives a fairly good plan of the situation of the chapel as well as a realistic view of it from the south.

²⁶ *Relación*. Edited by Luis Torres de Mendoza. *Colección de documentos inéditos, . . . del real archivo de Indias*. Vol. III, pp. 5-58. Madrid, 1865.

buried walls certainly suggests the type of ancient work which is so abundantly represented in Marca Huamachuco and on Cerro Sazón. To my knowledge this is the only large, raised artificial substructure under any building in modern Huamachuco and there is certainly a reasonable presumption in favor of its antiquity. No pottery was discovered, although Dr. Tello told me of obtaining some sherds at a site close to the mound, one which I never managed to hit upon.

CERRO SAZÓN

The mountains which immediately surround the valley in which Huamachuco lies all have ruins of varying degrees of importance, judging by their size and extent. There is no doubt that Cerro Sazón (map 1, no. 18) had the largest ancient settlement. The buildings occupied a commanding position on the top, on the northern slope, and very slightly on the southern flank of the mountain. The proximity of this site to modern Huamachuco and the repeated cultivation of the open areas once serving as courts and plazas has resulted in very great destruction of the walls for building stone. The total extent of the ruins along the major axis of the site is slightly over a kilometer. In general, the major axis runs east and west. In total area the buildings and courts must have occupied a space about two thirds that of the Cerro del Castillo of Marca Huamachuco. Today, in those parts which are not under cultivation, the vegetation grows densely and in consequence it is difficult to be certain of more than the most general arrangement of the parts of the settlement.

Approaching it from the western end, one climbs for a distance of several hundred meters up what appears to be a partly natural and partly artificial series of very broad levels or terraces. As one approaches the highest part of the settlement and turns to look back (see pl. 14, b), it is perfectly evident that the chief form of construction consisted of long narrow galleries surrounding great courts on three or four sides. The existing walls or their foundations make it equally clear that these major units were built in conformity with the local topography and the result is a strong suggestion of a somewhat haphazard arrangement of the large building units.

On the terrace, just below the crest of the mountain at its western end, is a very curious circular construction of rubble masonry. This has a diameter of 15 m. and in the interior of this round stone wall are two short and extremely massive stone walls forming two sides of what may have been a rectangular building or chamber. These interior walls have diameters of 1.7 m. and lie 1.5 m. apart. What is even more impressive than the massiveness of the walls themselves is the use of a number of tremendous blocks of stone. One of these has dimensions of 115 by 80 by 100+ cm. The exact function of this structure must remain at present a mystery.

The top of the mountain forms a plateau of perhaps four to five acres in area. This is bounded by a wall. The central plateau has not been cultivated for a long time, if at all, and is very thickly overgrown with vegetation. It has a number of walls dividing it into small sections, but it was difficult to make out the exact arrangement and to determine what sort of structures they were originally intended to form. Walking across this central area toward the north and looking down from the edge of the boundary wall, one sees a series of three broad terraces with many wall foundations, suggesting the same type of general arrangement as has been described for the western end of the mountain. The northern side of Cerro Sazón has a moderately gentle slope downward, in contrast to the extremely steep southern side, and this natural feature was fully utilized by the ancient builders. Continuing eastward one reaches the margin of the central plateau and finds that the eastern extent of the settlement, as the mountain drops away, was considerably less than the western extent. However, at the eastern end there is one quite well-preserved

building unit, which is shown in figure 4 and also in plate 14, *a*. It represents one variant of what was apparently the standard type of architecture on Cerro Sazón.

The rather meager collection of sherds is discussed in its appropriate place in the latter part of this report. It is worth mentioning here certain general features which either link Cerro Sazón to Marca Huamachuco or differentiate it from that site. I have already mentioned the massiveness of the walls and the curious structure at the west end just a little below the central occupation area. The massiveness of the walls is exemplified in the foundations of many other structures in all parts of Cerro Sazón. At the same time, there are not nearly so many well-preserved build-

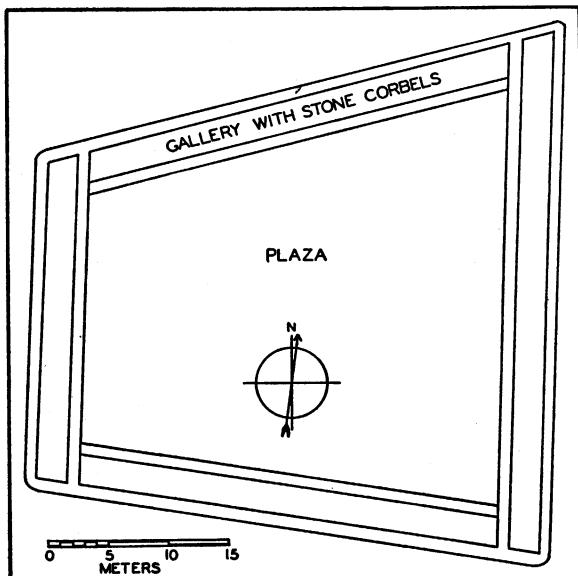


Fig. 4. Cerro Sazón. Plan of galleries surrounding a central court

ings as at Marca Huamachuco (see pl. 14, *b, c*). This is curious in view of the much greater thickness and, presumably, strength of walls. Superficially this would seem to indicate that Cerro Sazón may be older than Marca Huamachuco, but I believe this is not the case; rather, the more ruined condition is due to its greater proximity to modern settlements in the adjacent valleys.

Another feature, which is noteworthy and which will be mentioned later for its bearing on the general history of this region, is the virtual absence of the thin-walled rooms and houses which are found in many sections of Marca Huamachuco.

Two other features were noted. Horizontal rows of stone corbels were not usually composed of the same stone as was used in constructing the walls. Instead, specially selected large, gray-black quartzite cobbles, water smoothed and resembling very large loaves of French bread, were consistently employed (pl. 14, *c*). These were obviously selected for shape and size. In addition to this, in many, but not all, of the better-preserved walls, quartzite chips were used as the snecks between the large blocks. The same type of yellow clay mortar was used as at Marca Huamachuco. The galleting, the contrast of light and dark—the light yellow-brown rock and the gray-black quartzite—forms very pleasing wall surfaces.²⁷

²⁷ Tello, *Antiguo Perú. Primera Epoca*, p. 31, mentions the same contrasted light and dark effect of the walls at Yayne.

The second feature was the absence of any indications of tombs constructed in the interior of the thick walls. My inability to discover them may have been due to the fact that the vast majority of walls are destroyed to ground level and at Marca Huamachuco the tombs usually occur in the thickness of the wall at least a meter above the ground. This would not, however, explain the absence of the holes left by treasure hunters in those thick and massive walls on Cerro Sazón which still stand to a considerable height (see pl. 14, c).

No evidence exists today of any major defense wall around the whole of this site. In particular there is nothing comparable to the great defensive gallery that surrounded the Cerro del Castillo on Marca Huamachuco. Instead, the defensive system which existed at Cerro Sazón must have consisted of the retaining walls used to buttress the partly natural, partly artificial terraces and the outside walls of the buildings erected on these terraces or wide platforms. As I have noted, the southern side of Cerro Sazón is extremely steep and even without man-made defenses is difficult of ascent. This is not so with the other three sides of the mountain, but on these there is no evidence of any major system of defense walls erected specifically for this purpose.

I was unable to learn of or to discover by personal investigation any source of water on the mountain itself, and in consequence I believe that the population must have obtained its water from the streams in the valleys to the south and to the north.

CERRO TUSCAN

Cerro Tuscan (map 1, no. 16) is a small, conical-shaped mountain northwest of modern Huamachuco (pl. 8). It has on its upper levels a series of walls, some of which are unquestionably ancient, others of modern construction, which form a series of andenes. These are seen most clearly on the southwest side of the mountain and all told there are not less than six major terraces, forming two series. Today, and constantly in the past, the sides of the mountain and the terraces are and have been much cultivated with the result that the destruction of the ancient remains has been carried even farther than on Cerro Sazón. Repeated inspection of this mountain from the trail along Cacañan and from the road to Viracochapampa made me postpone an actual visit to it and when I finally took my departure from Huamachuco, two days before the heavy winter rains set in, I abandoned any attempt to make a surface collection of sherds.

LA CUCHILLA

The Cerro Campana, which delimits the southern margin of the valley of Huamachuco, has two ancient habitation sites which are indicated on the map by number 24. In the valley proper is a curious construction known as La Cuchilla (map 1, no. 19). This is situated in the area known as Purubamba or Purrupampa. It consists of a tremendous damlike construction of rock and clay with an elevation of some 6 to 10 m. and a width at the base of approximately 15 m. Today the heavy rainfall in the Sierra has obliterated any ancient traces of an artificial stone or clay surface, if such existed, and in my opinion this is doubtful. The earthwork forms a rounded ridge which does not run directly across the valley but makes two curves. Its general direction is 18 to 20 degrees east of north.

According to local belief the earthwork formed part of an aqueduct to carry water from springs which exist on the northern slope of Cerro Campana. I was not able to observe any evidence of an ancient *acequia* at the southern or the northern end, where it first leaves and then joins the sides of the valley. The belief that it was part of a water system to supply Viracochapampa seems to me to be ill-founded.

The principal defect of the prevailing view is one which I shall consider more fully in connection with the description of the site of Viracochapampa; at that site there is no evidence of the termination of any large *acequia*. With equal probability one might consider this curious structure to have been a dam to prevent the lower part of the valley below Cerro Sazón from being flooded and made extremely swampy. The inundation of the valley occurs today in periods of very heavy rainfall, and certainly occurred more frequently in the past before the construction of the present series of drainage ditches in the floor of the valley. The most probable explanation is that it served as a causeway to cross the valley. Huamachuco was on the main road from Cuzco to Jauja, Cajamarca, and Quito and this earthwork bears a resemblance to other raised roads.

CERRO CAMPANA EAST

A detailed examination, accompanied by excavation, was made at the sites numbered 28 and 30 on the map. Unfortunately it was impossible to learn whether either of the mountains on which the sites were situated had ancient names. Repeated inquiry yielded only the statements that both of these were called Cerro Campana and in consequence, to distinguish them from each other and also from the Cerro Campana which lies behind and south of Huamachuco, I have called them Cerro Campana West and Cerro Campana East, respectively.

The larger of the two sites is number 30, Cerro Campana East. A general view of the mountain is shown in plate 14, *d*, and it is at once evident that it occupies a large part of the eastern margin of Lake Sausagocha. The reader will see by consulting both the photograph of the site in plate 14, *e*, and the sketch plan in figure 12, *A*, that the essential arrangement of the site was a series of steplike terraces following the center of the narrow spine of the mountain. These rise from the north end toward the summit, then gradually descend along the southern section of the ridge. Nine test excavations were made in order to probe the deposits and to see what manner of pottery and other objects were manufactured and used by the original inhabitants. These are discussed on pages 315-318.

The settlement has a commanding position both with respect to the lake and also with respect to the valleys which lie to the east and southeast and which connect with the western and southern tributaries of the Río Chuscon. It is by no means so large nor so impressive as Marca Huamachuco or Cerro Sazón. Yet it is important because it more nearly resembles the common type of settlement in the Huamachuco district. Essentially this consists of a series of terraces, partly natural, partly artificial, with houses and rooms erected on them, forming what must have been a closely packed settlement. These settlements are always on the tops of hills and the retaining walls of the andenes, plus the exterior walls of the houses built on these terraces, form the main units of the defensive system. The vast majority of these settlements, such as Cerro Campana East, have a commanding outlook in at least three and usually four directions. More frequently than not they are situated without any apparent regard to water supply, although it must be borne in mind that the modern inhabitants of the sierra make little of prolonged trips down and up steep slopes to obtain the limited quantities of water needed for drinking and cooking. This feature would seem to have been common also in pre-Columbian times.

There remains today no visible wall at Cerro Campana East which has a height of more than 1.5 m. At least 95 per cent of all walls are nothing more than foundations, partly obliterated by a thick sward which grows up to and sometimes over them. Construction is of split stones of medium or small size, not selected for regularity and not laid with the nicety and precision that was employed in constructing

the walls at Marca Huamachuco. Small stones are used for packing between the larger blocks, but this again is not done with the same attention to detail as at Marca Huamachuco or Cerro Sazón. Mainly because of the less massive and less strong character of the walls, the sites like Cerro Campana East have little remaining above ground. As a consequence it is impossible to determine whether they were characterized by the constructional and architectural features of horizontal rows of stone corbels, of niches, or of windows.

An examination of figure 12, A, is of particular interest because of the fact that at the northern end of Cerro Campana East there is still visible a specific plan which arranges the squares that represent old houses on either side of a fairly broad pathway. This extends a considerable distance beyond the houses to the north. In the other direction it runs southward up the mountain, then swings eastward and ultimately disappears. This must have been the principal means of access to the settlement because there is no equivalent arrangement at the southern end. This may be due in part to the fact that the south slope is much steeper and drops much more abruptly to the level of the lake and to the valley. The plan of Cerro Campana East is simpler and less pretentious than a large site such as Marca Huamachuco. In addition it lacks any indications of what one might expect to find in the way of imitations in plan and architecture of the tremendous urban development that existed on the Cerro del Castillo.

The main group of excavations was made on the highest part of the site, the actual summit being at a point on the heavy cross wall next to Excavation 5. At *a* in figure 12 the retaining wall had a height of 1.5 m. and showed a pronounced batter, this effect being accentuated by the stepped-back construction here employed. Figure 12, *b*, marks an outcrop of rock. The deposit was not very deep in any part of the site tested by excavation. The massive wall at *c* is of piled stone removed in clearing the adjacent fields, but it clearly follows an old wall foundation which anciently must have formed a major division line in the settlement. The narrow transverse passage at *d* is bordered by walls of greater thickness than is usual in most parts of the site. This passage may have connected with the upper end of the roadway. The large squares, at *e* and *f*, with internally rounded corners are unique. Today they appear as sunken courts. Their internal dimensions of 15 by 15 m. and of 12 by 12 m. are too large to regard them as having been rooms. The structure at *g* deserves special comment. It stands upon a small natural eminence with the roadway leading to it and swinging westward to meet the well-defined entrance at the east end. At one side of the entrance is a curious five-sided chamber. Heavy walls border the north side and the west end. On the south they have disappeared. The special situation and the singular plan of this structure argue for its having been something more than an ordinary habitation. Just north of it are old wall foundations bordering what must have been fields and corrals.

The examination of sites such as Cerro Campana East and the placing of them, with respect to other sites of the same general type and to great ruins such as Marca Huamachuco, depends essentially on the examination of the archaeological material that can be obtained in excavation. Cerro Campana East differs from other small sites of the same type in that the eastern side of the mountain is much less steep than the western side and was formerly used for settlement. Today, and for some time past, it has been cultivated; and the result is that because of the plowing of the modern peasants one can make a surface collection of sherds. Many other sites of similar character, however, are extremely disappointing because the grass-covered slopes effectively conceal sherds and at the same time casual excavation is often unrewarding in that it produces extraordinarily little in the way of ceramic material.

CERRO CAMPANA WEST

The companion site, number 28, or Cerro Campana West, is much smaller in size. The photograph in plate 13, *g*, and the sketch plan shown in figure 12, B, will give the reader a clear conception of its general characteristics. The general state of its preservation is closely comparable to that of Cerro Campana East. There is, however, a considerably greater degree of regularity with regard to the arrangement of the extant parts, and in many respects my examination of this and other sites in this section of the Sierra convinced me that Cerro Campana West may be taken as quite typical of the small fortified habitation site utilizing the rounded top of a mountain. Cerro Campana West really consists of three parts, an upper platform, a major andene (*m*) forming the first terrace (counting from above downward), with a second terrace (*n*) at the northwestern end of the site.

The masonry is rubble with clay mortar. The rooms are small and arranged in such a way that they would serve both as habitations or storerooms and at the same time their exterior walls would form part of the defenses of the site. Outer walls have a thickness of 60 cm. while cross walls forming the house partitions are only 45 cm. thick.

The oval interior court of the topmost part of the site appeared to be relatively free of wall foundations which might indicate former constructions. Parts of three walls which extend into this area are shown in the plan (fig. 12, B). At *o* the walls are badly destroyed; there may have been an entrance passage through the gallery. The small doors in the walls of the room at *p* connect with the passage which gives access to the houses which border the sloping area at *l*. These rooms, in one of which Excavation 2 was made, have floor levels each one at an increasingly lower level so that while *l* is 2 m. lower than the oval court, *m* is another 2 m. less, a total difference of 4 m. The terrace *n* is still another 1.5 m. less in elevation than *m*. The wall indicated at *k* is of piled stone but it follows an ancient wall line.

The archaeological material from the excavation and from surface collecting is discussed on pages 318-319. It is much like that from Cerro Campana East with some distinctions that are most intelligible on the basis of the accidental differences that may follow a sampling method of excavation. Present knowledge is too scant to suggest that chronological differences are the cause of the dissimilarities in the cultural material.

THE CAHUADAN SITES

The hills to the west of Cerro Campana West form the southern end of a smooth-sloped rounded ridge that runs north and northwest. This forms the eastern margin of the valley in which lies the shallow water-filled depression known as Lake Cahuadan. The lake is fed mainly by the surface runoff from the surrounding hills and in exceptionally dry seasons disappears completely. Along the top of the southern and eastern side of the Cahuadan area are a number of ancient constructions. The first of these consists of a series of small stony mounds, which proved on examination to be ancient burial places. Some of them are visible in plate 13, *g*, as patches of brush. The form of two of these is shown in figure 12, E. These must have appeared originally as small masonry cubicles partly below ground and partly above. How they were covered or roofed is impossible to determine. One had a pavement of flat stone slabs, the wall standing 60 cm. high on each side (see fig. 12, E, Exc. 1). Another had a fill that was 1 m. deep (fig. 12, E, Exc. 3) but in none of the excavations which I made was any cultural material recovered which would assist in placing these structures chronologically or culturally. All told there are between a dozen and fifteen of these constructions forming a somewhat scattered group on the hill slopes west of the *fortaleza* on Cerro Campana West.

Two hundred meters north of the group of tombs is a very much ruined circular fort. This is the dark circular area to the right in plate 13, g. The brief sketch plan which I was able to make of it is shown in figure 12, C. It has been used recently as a corral for animals and there is a considerable amount of stone piled against and partly covering the foundations of the ancient walls. A test excavation made at the point indicated in figure 12, produced absolutely nothing in the way of ceramic or other material. The main feature of this small *fortaleza* is the massive keep which forms its core. At q the level is more than 1 m. below the present height of the bordering walls. These apparently form the sides of square or rectangular rooms which enclose a large and a small court. The inner corners of these "courts" are square, but the outer corners of the inner fort are neatly rounded off. The position of the inner and of the outer circular walls is interesting, the former joining the east wall of the keep. What may be more than coincidence is that the orientation of the walls of the rectangular inner fort is the same as is the alignment of the masonry tombs on the pampa to the south.

Approximately half a kilometer northwest of this last mentioned fort is an artificial mound, square in plan, with dimensions of 15 m. on a side and standing 1 m. high. It is partly sod-covered, but the external borders are of rubble masonry. No sherds were found on it or in its near vicinity. Still farther northwest along the top of the ridge are irregular piles of stone and two sunken areas. These appear not to be natural depressions but to have been excavated. One of them is quadrangular in form while the other is circular.

Directly east of the lake-bed itself on the top of this eastern boundary ridge is the curious rectangular structure with rounded corners pictured in figure 12, D. It has been destroyed to its foundations but these are readily discernible and form a gallery enclosing three sides of a square. Each gallery is 3 m. wide with stone and mortar walls of 50 cm. in thickness. The long axis of this building is 68 degrees west of north, with the open side of the court facing southeast. Its outside dimensions are 18 by 15 m. In the very near vicinity of this building were the foundations of other walls, but neither their exact relation to the structure itself nor their actual purpose is certain.

CERRO AMARU

Cerro Amaru is topographically the southeastern outlier of Marca Huamachuco (map 1, no. 20 and pl. 8). The top of it lies at least 200 m. lower than the highest parts of Marca Huamachuco and partly because of this it has been continuously and intensively cultivated for many years past. It is also somewhat more accessible to Huamachuco and lies just off the main trail from Huamachuco into the Urpay section of the valley of the Río Vado. This pathway continues on to Sanagoran. I use the name which Uhle gives for this part of Marca Huamachuco and his explanation was that it probably derives from the stone heads, of which he was able to obtain the one which is shown in plate 17, f. Today there is a tendency to speak of it by the same name as the district immediately to its west, namely, Urpay. Whatever may have been its ancient name, it was an important settlement with a very great number of massive buildings. Despite the heavy destruction which has taken place and is going on today, it is possible to obtain some general idea of the ancient character of the site.

I have already mentioned in the description of Marca Huamachuco proper that the path to the Cerro del Castillo runs along the western and southwestern flank of Cerro Amaru. This path is bordered on its upper side by a *pirca* wall that is obviously of modern construction. Repeated journeys along this path and the opportunities which these gave for an examination of the ground have convinced me that

the path runs just below the margin of an ancient andene. This western side of the mountain is steep and along the greater course of the path, which is more or less level for nearly half a kilometer, there is little indication of any structures or buildings on its lower side. There is, however, one place with the same shallow water seepages which I have described in connection with Marca Huamachuco.

The main axis of the top of Cerro Amaru is NNW by SSE. The uppermost parts are really composed of two eminences with a shallow saddle between. The higher of these two is the most southerly one (see pls. 8; 9, *a*). The most practical means of access to Cerro Amaru is from its northern end, where one climbs up from a fairly wide open area that lies at the east foot of Marca Huamachuco and which has numerous ruined buildings that form a northern extension of the inhabited part of Cerro Amaru. The main buildings, however, were concentrated on the summit and to the north and east of the summit of the mountain. Especially on the eastern side is the ground less steep and a series of moderate slopes were anciently converted into a series of very broad terraces on which stood buildings and houses. There are at least four of these broad terraces, best developed as one climbs up to the more northerly of the two minor eminences that crown the hill. Surrounding this hilltop are the remnants of a massive boundary-retaining wall 1.4 m. thick. On the top of this northern eminence is a level area and it is here that I was able to see and to examine one of the wells or "chiles," from which Uhle dredged up an enormous quantity of small stone and shell beads. He found the broken and discarded stone head (see pl. 17, *f*) lying 15 m. distant from this well. The peasant who works the land on Cerro Amaru informed me that there were two other wells but that these have now been abandoned and their entrances blocked up. If there was any superstructure around the mouth of the well I examined, it has long since disappeared. The well itself lies close to what is left of a fairly massive wall of a former gallery. The interior wall of the well is of well-made rubble masonry. The general shape of the structure is that of a cone; the diameter is 2.5 m. wide at the level of the water and the diameter of the well mouth is 50 cm. In December, when I made my examination, the level of the water was 6.5 m. below the opening. Uhle reported that in his dredging operations he reached a depth of something over 7.5 m.

The wells contain water the year round, being more full, of course, during and immediately after the rainy season. They are all situated on the higher parts of Cerro Amaru and are quite clearly not cisterns. There are no traces of drains and no obvious means of filling them with rain water collected in the near vicinity. There is a water-bearing stratum which underlies both the top of Marca Huamachuco and also another which underlies Cerro Amaru. This is evidenced by the seeps which occur at intervals around the margins of these mountains at an average elevation at least 50 m. lower than their summits. The explanation for the wells on Cerro Amaru must involve the existence of an artesian supply which has its origin in the strata of Marca Huamachuco proper.

The main southern eminence of Cerro Amaru has a square plaza with dimensions of 20 by 20 m. The best-preserved wall is on the eastern side and bears 35 degrees east of north. There is some suggestion that the plaza was surrounded by a series of narrow rooms or galleries. In general, the plan of Cerro Amaru, so far as it can be determined, resembles more the type of arrangement that is characteristic of the buildings of Cerro Sazón than it does the galleries on Marca Huamachuco proper.

Like Cerro Sazón there are few, if any, walls which are at all well preserved. There exist one or two parts of walls in which stone corbels appear. These are of the same rock as the wall itself, resembling those of Marca Huamachuco and differing from Cerro Sazón with its selected quartzite cobbles.

One other interesting feature of Cerro Amaru is the traces of a roadway which curves upward and around the southern and southeastern side of the mountain and must have terminated on one of the broad terraces of the eastern side of the hill. This path begins near the modern trail as it ascends Cerro Amaru from the southwest and at a point some one hundred or more meters before this trail levels off to pass along the western side of the hill. The ancient roadway is indicated by stone borders and at one point crosses through what appears to be the remains of a guardhouse. The preserved parts of this roadway extend for perhaps two hundred and fifty meters. The road, plus the fact that on no part of the mountain was I able to discover a series of defense walls, convinced me that like Cerro Sazón it relied for what protection was needed on the andene retaining walls and on the exterior walls of the buildings erected on or near the outer margins of the terraces.

Lacking any evidence from excavations, there are no good reasons for sharply differentiating the main features of Cerro Amaru from Cerro Sazón, and just as the latter site shows resemblances to the buildings of Marca Huamachuco so does Cerro Amaru, independent of its closer geographical situation. The main and striking difference is not so much in either type of construction or of plan, but the fact that neither Cerro Amaru nor Cerro Sazón seem to have needed the tremendous defensive system that is so distinctive of Marca Huamachuco. This is true even when allowances are made for the more ruinous condition of these two sites.

The small collection of sherds which it was possible to make on Cerro Amaru is described on pp. 319-320. The similarities to the ceramics of Marca Huamachuco are sufficient to show that Cerro Amaru was laid out by the same or kindred people. Casual finds of Inca pottery are made from time to time. Uhle reports having heard this and having been shown an "Incaic bottle" (*aryballos*) which came from there. I heard the same and saw a large Cuzco polychrome *aryballos*, said to have come from Cerro Amaru, in a house in Huamachuco.

Coipín

The site at Coipín, indicated on the map by number 22, lies at the northern foot of Marca Huamachuco and is situated on the leveled-off ridgeline that bounds the southern and eastern side of the great *quebrada*, the head of which begins between the end of the Cerro del Castillo and the beginning of the Cerro de las Monjas on Marca Huamachuco. I spent the better part of a day at Coipín, made three trial excavations, and, after examining the whole of the site with great care, came to the conclusion that it represented a small town similar in its construction and plan to the much bigger cities on Cerro Amaru and Cerro Sazón. The settlement appears to have been roughly quadrangular with a series of houses and fields inside a single boundary wall. It measures about 200 m. along the NE-SW axis and 150 m. in a NW-SE direction. In this respect it resembles somewhat the city of Viracochapampa, but all the walls seem to have been quite massive and to have had thicknesses 20 to 30 cm. greater than comparable ones at Viracochapampa. No evidence could be obtained that settled the problem of the exact shape of the houses, whether they were galleries or shorter and broader structures. This is accounted for by the very ruinous condition of the walls and the immense amount of reconstruction that has taken place in post-Columbian times and that is going on today. A considerable part of the site either is or has been recently under cultivation. There are few standing walls of any great height and none of those that do remain have any evidence of horizontal rows of corbels or of niches. One tomb was discovered in the thickness of the wall. This fact tends to link Coipín with Marca Huamachuco rather than with Viracochapampa.

The excavations and the material from them described on page 320 were extremely disappointing. One of my workmen had described to me the glories of this site and had said that tombs with both pots and metal had been found not long previously. The excavation where this discovery had been made was plain to see but my test in the near vicinity of this was fruitless.

Several stone objects of archaeological interest were discovered. Two of them are shown in plate 16, *e*, and they, with others not illustrated, are described and discussed on page 320. The settlement has been occupied for a long time and in the not too distant past was promising enough to warrant the establishment of a chapel, whose gabled ends and plastered walls are still standing. This building seems to have made use of ancient wall lines but whether these represent boundaries between fields or ancient house foundations was impossible to determine. Uhle visited Coipín and was of the opinion that it was of the same age as Viracochapampa.

IV. VIRACOCHAPAMPA

THE RUINS of the important and ancient city of Viracochapampa are given this chapter to themselves. It is essential to know first what are the common types of settlements in the Huamachuco region: those discussed in the section devoted to Marca Huamachuco and the lesser sites described in Section III. The unique character of Viracochapampa may then be fully appreciated. It is for this reason that the study of this site has been delayed until now. Even a hasty glance at the plan as set out in figure 13 will be enough to convince the most casual reader that here is a settlement whose growth and development were the result of a master plan originating in the mind of a single architect.²⁸ At the same time, an examination of the photographs shown in plate 15 will at once reveal that the method of construction and even some details of the buildings are in general like similar structures on Marca Huamachuco, Cerro Sazón, and Cerro Amaru.

Viracochapampa lies almost due north of modern Huamachuco and is separated from that town by what are really western extensions of Cerro Sazón. Today one climbs perhaps 50 m. above the general level of Huamachuco before beginning a long and not too steep descent to the very gently sloping plain on which is situated Viracochapampa. The photograph shown in plate 15, *a*, is taken from the northern flanks of the hills which rise to the south of Viracochapampa. In an air line Viracochapampa lies between 3 and 4 km. from the northern edge of Huamachuco town. The trail which one uses today to approach the site from the south undoubtedly follows the course of an ancient path or roadway and leads directly to the south gate, which gives entrance to the long street (pl. 15, *e*) that runs the length of Viracochapampa. Issuing from the northern gate the trail continues today to Marcabalito and from thence to Cajabamba. This is the most direct route from the Huamachuco district to that of Cajabamba, although it is not used by the modern motor road. There is also another trail to the east of Viracochapampa which follows a slightly different route, because of an easier crossing of the Río Carabamba. The town of Viracochapampa was undoubtedly an important station on the main route to and from Cajabamba and Cajamarca.

The rectangular plan took full advantage of the wide level ridgeline between the Río Shiracmaca and the Río Grande de Huamachuco. The southern side of the city is a few meters higher than the northern side. The difference in elevation is just sufficient so that hill wash has piled stone and dirt against the external surface of the southern city wall to a depth of 2 m. in some places. Further, the water pouring down the gully, which opens out on the pampa, has channeled and eroded the ancient street to a considerable depth below the foundation of its bordering walls and left on the bed of the street a mass of blocks (pl. 15, *c*), some of them fallen from the walls but others undoubtedly representing units of a former pavement. The decay to which the street has now fallen is such that today the peasants use a path which runs across the city to the west of the street proper.

The form of the town is that of a square with the outside dimensions having a width from east to west of 580 m. and a north-south measurement of 565 m. My Brunton compass read to half degrees only so it was impossible for me to check accurately the figures which Uhle gives for the four corners of the main eastern rectangle, namely, $89^{\circ} 52'$, $90^{\circ} 22'$, $90^{\circ} 0'$, $89^{\circ} 46'$. The orientation of the site approximates so closely the cardinal directions that the slight difference manifest in figure 13 may be due to a small error in my survey or to an equally small error on the part of the ancient surveyors who established the base points on which the lines

²⁸ Wiener, *op. cit.*, p. 141, gives a fantastic description and an even more fanciful plan of this site.

of the town were laid out. As has been noted above, the rectangle enclosed by the single boundary wall is divided by a long street which has a width from wall to wall of 5 m. This street divides the town into a western two sevenths and an eastern five sevenths. Two thirds of the western part is occupied by a large field in which there are only small and insignificant traces of any construction whatsoever and it seems to have been either an area reserved for future building or one devoted entirely to crops or to grazing. The remaining one third of the western part of the town has two house complexes. West and south of these groups of buildings are some smaller fields bounding a very large open area that occupies several acres.

To the east of the street the situation is somewhat different. Abutting on the street is a series of large square areas, surrounded by walls, which seem never to have contained other constructions and which may be rightly construed as having been fields. About midway in the course of the street there are three groups of buildings, in one of which four pits were made, those numbered 9 to 12. It soon became apparent to me that the buildings to the east of the street were not related in any primary way to the street itself, but rather bore a definite relationship to the large plaza which is situated very nearly in the geometric center of the town. Consequently, in my description of the site I shall discuss the character of the buildings as they relate to the central plaza.

On the northern side of the plaza is a large building or court (see fig. 13, *a*). Its original character is uncertain. It has internal dimensions of 45 by 19 m. The walls are somewhat more massive than is customary in Viracochapampa and certain parts of the north wall are well preserved and have remaining in them a series of small niches which pierce the thickness of the wall and are situated some 4 to 5 m. above the level of the ground. The southern wall of this building has been much destroyed and is now heaped with stones removed in the clearing of the central plaza to facilitate plowing. Another peculiarity of this building at *a* is the fact that the internal corners are definitely rounded. At its eastern end is a very narrow gallery separate from the large building and with no discoverable entrance either from the large building at *a* or from the adjoining open space to its east. This annex to the central plaza is surrounded on three sides by several walled fields containing no traces of other structures. To the north of these fields is a row of four house complexes indicated by *b*, *b*, *b*, *b*. These consist of a series of large squares approximately 40 m. on a side. Within these squares on the west, south, and east sides are narrow galleries. The disposition of the galleries is not the same in each one of the four units, but the similarity of plan is obvious. Each square has on its northern side a rectangular structure with internal dimensions 26 by 10 m., and walls measuring 1.2 m. in thickness with internally rounded corners. The free space in the center of each unit-square appears never to have had any buildings in it and must have served as an open area or plaza. This group of large building units is delimited on the north by a wall which continues eastward until it reaches the outer boundary wall of the town. The building units appear to be inside of what was a major division line within the town.

The area to the north consists predominantly of open fields that extend onward to the city boundary wall. The land adjacent to the aforementioned east-west division wall, however, has been subdivided into nine parcels by medium-sized walls, eight of the rectangles having approximately the same overall dimensions as do the structure units indicated at *b*. Only at *c* and *d* are there the suggestions of rooms and the latter building (*d*) is flanked on the west by a curious sunken court (*e*). At *f*, *f* are indicated similar sunken courts or rooms the floor levels of which have been excavated 50 cm. or more below the surrounding ground level.

Returning now to the central plaza and commencing an examination of the buildings which lie on its eastern side, one observes first of all a series of structure complexes at *g*, *g*, *g*, consisting of open areas surrounded by narrow galleries. Directly opposite the east margin of the central plaza are two types of buildings. At *h*, *h*, *h*, are one large and two small structures with rounded internal corners and thick walls. Between them and the plaza proper is a group of narrow galleries. Today there are a number of breaks through the walls and the approach to the eastern side of the plaza is quite easy, but repeated examination of the walls or wall foundations in this part of Viracochapampa failed to yield any evidence of an original series of openings or entrances to the plaza on this side. Uhle reports his discovery of traces of only a single doorlike opening giving access from the houses to the plaza and this was 2 m. above the level of the "market place," as he calls it.

West of the central plaza, between it and the street, is a series of structure complexes heavily overgrown and much destroyed. I am convinced as a result of my survey in this section of Viracochapampa that originally the essential form of this part of the city consisted of the standard type of building unit, namely, a central open area surrounded on at least three sides with long narrow galleries. The galleries served as the houses of the people. In some instances these central places or courts were surrounded on four sides by buildings, but the most frequent plan is that in which one side is left free.

Uhle mentions the existence in 1900 of a ramp which led from the northwest corner of the plaza to the ground level outside the plaza and thence for an unspecified distance to the north. He suggests this may have been the principal entrance. The ground outside of the west margin of the plaza is at least 1 m. higher than the plaza level, but all slopes which I observed seemed natural ones. If such a ramp existed it may have been obliterated by cultivation during the forty years intervening between Uhle's visit to this site and my own.

The most complex and intricate area in the whole of Viracochapampa is that to the south of the central plaza. This area consists of what, on first examination, appears to be a maze of walls. Because of its closely built character and the great number of walls, it has been relatively little cultivated and today is heavily overgrown with shrubs and small trees. On the side south of the plaza at *i* is a large building with rounded internal corners. It is a little longer and somewhat narrower than the building at *a*. Like the structure at *a* it does not appear to have had any means of communication with the large plaza. There is one curious feature, however, on its southern side. The south wall either stops or is broken. After a gap, the wall shown at *j* runs southwest with a pronounced angular relationship to all the other walls in its immediate vicinity. This departure from the general rectangular character of building at Viracochapampa is quite striking.

The structure complexes at *k*, *k*, *k* seem at first glance to follow a somewhat different plan from anything which has hitherto been described. In actuality they represent precisely the same type of structure complex as those already described at *b*, *b*, *b*, *b*. The ones at *k* are larger, are somewhat better preserved, and are oriented differently in that the large buildings with rounded internal corners lie on the western side of the major unit square and are related somewhat differently to the galleries. The fundamental plan, however, is strikingly similar to the house-plaza complexes at *b* and this appears to me, as I have indicated earlier, to be the fundamental type of building unit used at Viracochapampa (pl. 15, *c*).

The narrow galleries in this section of the site are fairly well preserved and it is here that one most frequently comes across the traces of certain details of construc-

tion that must be noted. Nearly all of the galleries have at least one horizontal row of stone corbels. These may have small niches above them at 50 cm. intervals (pl. 15, *b*). The corbels are carefully selected gray-black quartzite river cobbles the same as those used at Cerro Sazón. The rows may be situated as little as 2 m. above the ground but the more usual distance is 2.8 or 3 m. In certain instances the row of corbels in one wall may have as its counterpart not an equivalent row of stones, but an offset produced by narrowing the thickness of the wall 10 cm. as it rises upward (pl. 15, *d*, left wall). On the same level with this offset there may be a series of small square niches. The highest piece of wall that I could discover in this particular section of the city had a height of 5.2 m. and is indicated at *l* (pl. 15, *b*). It was also in this section that the only doorways giving access to or egress from the narrow galleries were discovered. These are shown in the most northerly of the house-complexes indicated by *k*. It was this part of the site which I selected for a number of trial excavations and their respective locations are shown by number.

To the west of this group of house complexes is an area which is about equally divided between what appear to have been small fields and a densely built-up area flanking two sides of what is undoubtedly a long passage or street shown at *m*. The arrangement of both the very narrow and the somewhat wider galleries in this section of Viracochapampa does not appear to follow any definite or prescribed plan. The long passage or street at *m* does not appear to connect with either of the two passages at *n* or *o*. These in turn lie between the aforementioned group of galleries and another series still farther to the east. This latter series, with one large structure with rounded internal corners, forms a peculiar extension or prolongation of the built-up area into what is principally a series of huge open fields that separate the inhabited part of the town from the eastern boundary wall. Two more exceptions to the practice of grouping the house complexes together are to be noted at *p* and *q*, the former a two-room building quite isolated from all others and perhaps of later construction, and *q*, a low mound which appeared to consist of rubble walls and perhaps represents the foundations of another building.

Masonry at Viracochapampa is consistently of random rubble type (pl. 15, *b, c*). Wall construction on the whole is of medium- to small-sized blocks packed with snecks of the same material. All walls are less massive and solid than class A walls at Marca Huamachuco, but clearly superior both in finish and strength to the class B walls in that great fortified city. The walls of the narrow galleries vary from 70 to 100 cm. in thickness, while those of the large structures with internally rounded corners vary from 1.2 to 1.3 m. There is a very small double-batter observable in the remaining high-standing sections of walls. The city wall has a thickness of 1.8 m. and the wall which flanks the street has an average width of 80 cm. The narrow galleries have quite variable inner dimensions, some being 1 m. by 50 m., but the most frequent size is one in which the length is ten times the width, numerous examples of the order of 2 by 20 m. and 2.5 by 25 m. being indicated on figure 13. The large galleries in the group of house-units, at *k* in figure 13, follow a proportion which is in the neighborhood of 1 to 7. The thick-walled structures with rounded corners have quite different proportions in which the length may equal the width or, at the upper limit of variation, be three times the width.

Corbels, as I have indicated above, are consistently of quartzite cobbles (compare pl. 15, *b*, with pl. 12, *a*). The ordinary building stone appears to be the same type which occurs in Marca Huamachuco and the quarries which supplied it are quite evident on the hill slopes to the south and above Viracochapampa (pl. 7, *a*, foreground). The smooth cobbles were undoubtedly transported from the river beds which lie east and west of the ridge on which the town is situated. The walls are not

composed of very large blocks of stone and the quality of the clay mortar used to bind the stones together appears to be definitely inferior to that of the great walls of Marca Huamachuco with the result that Viracochapampa gives the impression of being much ruined and dilapidated. I have already mentioned the height of the wall at *l*. At two points along the street the boundary wall is quite well preserved. At *r* it has a height on its external face of 5.25 m. and a comparable height is to be observed at *s*. My general impression is that few, if any, buildings exceeded 6 m. in height. In this connection it is worth mentioning that there was never more than a single horizontal series of stone corbels so that if these were used as the footings for a floor the buildings normally would not have had more than a ground story and an upper one. At Viracochapampa the regularity with which galleries had horizontal rows of corbels suggests that here the purpose may have been predominantly utilitarian. In one or two examples, such as the wall at *t*, their appearance on what seems to be an external wall is due to the fact that the companion wall of a former gallery has been obliterated by plowing and cultivation.

Two other methods of supporting floor beams have been mentioned. Small niches, 15 by 20 cm. on a side, were used to receive the ends of beams, and narrow ledges were constructed by narrowing the thickness of the wall. A row of niches was frequently, although not always, placed just above the level formed by the tops of the corbel rows (pl. 15, *b*). In similar fashion the narrow ledges often had a row of niches built so that the bottoms of the niches were flush with the ledge level. Neither corbels nor ledges were found in the large rooms or courts with rounded corners.

Large openings in the walls which might have served as windows appear to have been nonexistent. This can be stated positively, due allowance being made for the ruinous condition of the walls. Niches which pierce the wall are extremely rare, the best examples are in the building at *a*. Wall tombs are also nonexistent. No old looted examples were discovered and local information seemed to be unanimous that they did not exist, nor was I able to learn that burials and subterranean tombs were known. The absence of wall graves is not a function of the lesser thickness of the walls; rather it is a cultural difference which distinguishes Viracochapampa from Marca Huamachuco.

Entrances are extremely rare and it was a constant source of both interest and irritation in working at the site to be forced to progress either on the tops of walls or through gaps made in them in the course of the last four centuries. There seems to have been no regular and normal system of intercommunication by doorways or passages. This applies to the different units of the house complexes, and also there is today no obvious means of progressing from the built-up parts of Viracochapampa to the main street by any system of doorways or passages.

In the course of the twelve excavations which I made at Viracochapampa I failed to find any evidence of a subterranean system of water channels or drains. Examination, both within the city wall and for considerable distances outside it, failed to yield any evidence of ancient *acequias* which might have supplied the town with water. Within the town I was not able to discover nor to learn of any ancient wells, although there is a source of water in the form of springs beyond and below the northeast corner of the city some distance outside the ancient city wall. The one small *acequia* which has any obvious relationship to the town is a small stone-lined affair not more than 15 cm. wide, traces of which can be observed just outside the south gate of the town, and its course comes from the east and southeast (fig. 13). My attempts to follow the line of this small aqueduct were not successful in that its traces soon disappear some hundred meters from the south gate. If it continued

around the flank of the hill to the south of Viracochapampa, it has long ago been destroyed. It certainly does not give any indication of having been the terminus of the fabled aqueduct whose other end is supposed to be the earthwork of La Cuchilla to the east of Huamachuco at Purubamba.

A distinctive and characteristic feature of Viracochapampa is the general absence of what would seem to be later structures built inside and using parts of the galleries or of the courts. The principal exception to this statement is to be found in the large square in which Excavations 9 to 12 were made. These tests were made for the reason that here there appeared to be a number of small buildings constructed in

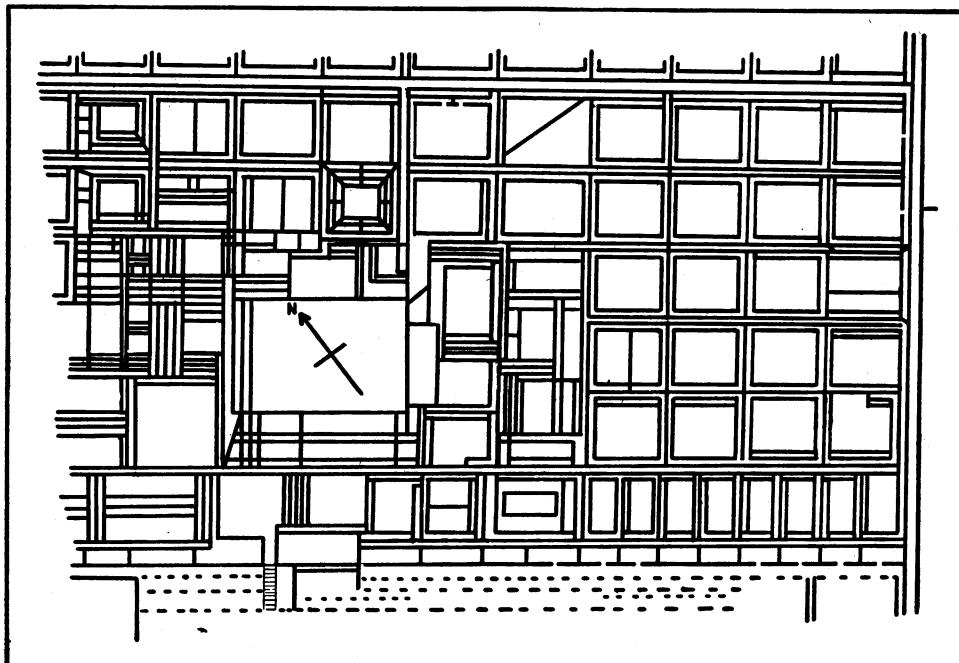


Fig. 5. Plan of the inhabited section of Pikillajta

a way which suggested later occupation of this area. A complete understanding of this section with its small buildings would have required more work and time than it was possible to give and the result was that a final answer to the problem cannot be given. It may be said, however, that there was nothing in the ceramic or other material recovered from the excavations which would indicate that the small square or rectangular buildings within this large unit-square were of different age from other structures in other sections of Viracochapampa.

It should be fully evident to the reader at this point that there are far more fundamental differences between Viracochapampa and all other sites heretofore described than there are resemblances. It is true that because of the similarity in the method of wall construction there is a strong general resemblance, but when allowances are made for the fact that this method of construction is widespread in nearly all parts of the Peruvian Andes and that it unquestionably has a very long history, the strength of one's visual impression can be somewhat discounted. It may be said at this point in anticipation of the description and discussion of the archaeological material recovered from Viracochapampa that the ceramics show both differences

from and resemblances to a particular class of material found at Marca Huamachuco. In general the pottery is primitive looking because of its coarseness and crudity. Qualitatively it is inferior to other ancient wares of the district and even to the modern household ceramics.

An independent line of evidence with regard to the time of foundation and the history of Viracochapampa is afforded by references to the Huamachuco of the time of the Chroniclers. The account of Cieza de León is the most explicit and is given in full on pages 320 ff. In the account of Hernando Pizarro's journey which took him to Pachacamac, the brief description of the town which is called Huamachuco is somewhat suggestive of Viracochapampa, although a positive identification cannot be made. Garcilasso mentions Huamachuco in several places in the Royal Commentaries and from the account in Sarmiento's History of the Incas it would appear certain that the early sixteenth-century town of Huamachuco was visited on a number of occasions by Atahualpa. One of these visits was connected with the murder of the chief priest of the temple at Huamachuco and the desecration of the god and the leveling and destruction of the temple itself. The principal drawback to identifying Viracochapampa with the Incaic city is the absence of ceramic material which is at all suggestive of or which clearly derives from the type of pottery which is both usually and correctly associated with Cuzco and which is best referred to as Cuzco polychrome. In nearly every other respect Viracochapampa in its plan and its general arrangement fulfills all the conditions of what should be an Incaic city of the early sixteenth century. The most persuasive evidence is its very strong resemblance to the section of dwelling houses at Pikillajta. This site is some 30 km. southeast of Cuzco. A very brief account of it is to be found in Luis Pardo's *Ruinas Precolombinas del Cuzco*.²⁹ It is mentioned in Dr. Valcárcel's³⁰ report on archaeological work in the Cuzco region in volume three of the *Revista del Museo Nacional*, and the hoard of turquoise figurines is described at length by the same scholar³¹ in volume two of the same journal. Photographs of the inhabited part of the site and also a copy of the plan of the site made some time ago, and now in the Archaeological Institute of Cuzco, show many points of similarity. The detail of the planning of Pikillajta (fig. 5) is somewhat different from Viracochapampa, but the same general arrangement is evident: central plaza, oblong courts, narrow galleries surrounding open squares. The orientation is somewhat different, the total built-up area is perhaps greater than at Viracochapampa, and the irregular terrain may have been the cause of other modifications. There is, however, strong evidence of architectural kinship between the two towns.

²⁹ Luis A. Pardo, *Ruinas Precolombinas del Cuzco*, pp. 192-198, Cuzco, 1937.

³⁰ Luis E. Valcárcel, *Informe sobre los trabajos del Cuzco*, *Revista del Museo Nacional*, 3:184, Lima, 1934.

³¹ Luis E. Valcárcel, *Esculturas de Pikillajta*, *Revista del Museo Nacional*, 2:19-48, Lima, 1933.

V. SURVEY OF THE CAJABAMBA REGION

CAJABAMBA

EARLY IN December I paid a visit to the modern town of Cajabamba. The town and the surrounding district lie north of Huamachuco, some 200 to 300 m. lower in elevation, and are situated in a system of small valleys which run from east to west and empty into the Conde bamba Valley. During the trip from Huamachuco to Cajabamba a sharp lookout was kept for sites but identifiable ones appear to be relatively few. Two sites close to the village of Marcabalito and a number of other probable locations were entered on my working maps but are not indicated on the sketch map which accompanies this report.

Inquiry in Cajabamba failed to produce information of ancient remains either in the town itself or in its near vicinity, with one exception. This was a small rock shelter on the side of a *quebrada* just to the north and east of Cajabamba; entered as number 36 on the map. As at Huamachuco, antiquities are occasionally found in plowing or in the course of building operations in the fields outside of Cajabamba, but the immediate district does not appear to have been one in which any important series of ancient settlements existed. The probable explanation for this will ultimately be found to exist in an unfavorable combination of terrain, of vegetation, and of climate. High above Cajabamba on a shoulder of Cerro Chococonday, four andenes or terraces of an old settlement are clearly visible when the site is viewed from the north, but their situation is such that from Cajabamba itself they are not visible. This site is marked 35 on the map.

LA EMINA

The site called La Emina (no. 36) is of interest as it illustrates a type of archaeological deposit which is unquestionably abundant and numerous all through the mountains. La Emina is situated on the southern side of a small valley which contains one tributary of the Río Grande de Cajabamba. Anciently the stream had cut down through a partly consolidated conglomerate, leaving a series of moderately high cliffs. A certain amount of undercutting had produced a sort of rock shelter. At the base of this had been made several burials. Fragments of human bones and what appears to be the neck and a handle of a local imitation of an aryballoid vessel were given to me by Professor Maximo Barrueto, to whom I am indebted for telling me of the site and accompanying me to it. This type of deposit unquestionably accounts for the appearance, from time to time, of some of the antiquities from the area adjacent to Cajabamba and to the west.

ALLANGAY-OTUTO AREA

Through the great kindness of Professor Barrueto it was possible to visit a series of sites some distance north of Cajabamba entered on the map as numbers 37 to 42. These lie predominantly on the two ridges that bound the narrow valley of Allangay. The route which we took to reach Allangay hacienda climbed up the side of the main chain of mountains to the east of Cajabamba. It was during this part of the ascent to an elevation of approximately 3,200 m. that I was able to obtain an excellent but distant view of the ancient site on Cerro Chococonday (no. 35) above and behind Cajabamba. Continuing in a general northward direction we passed the site indicated as number 37 on the map. It lies on the shoulders of the mountain east of the village of Cauday. There are visible today at least five distinct sections or parts and there are a number of walls and wall foundations that give some clue to

its ancient character. The group of knolls, marking sections of major importance, undoubtedly form a single complex. On its eastern side there is a fairly large level area which was being plowed, and the western boundary wall of this large plowed field appeared to follow an ancient wall line. I was unable to learn the name of this site.

PAMPA DE LOS QUINUALES

Farther north, near the southern end of the ridge labeled the Cueva de León on the Cajabamba sheet of the Army Geographical Survey Map, is a rolling pampa which contains a number of very large subterranean tombs (map 1, no. 38). This burial area is known as the Pampa de los Quinuales. The tombs lie on the slope of the pampa as it drops away westward and the area commands a wide view of the lower end of the Condebamba Valley and its juncture with the valley of Cajamarca. The slopes are covered with a heavy turf and there is little to mark or to indicate the existence of tombs at this place. Close examination of the surface of the small rolling eminences which constitute the pampa at this point reveals, however, a series of bare spots more or less circular in formation. These are formed by a circle of stones with a diameter of 5 m. Inside the circle of stones the grass is extremely scanty and sometimes is lacking because of the thinness of the gravelly soil which lies on top of immense slabs which form the covers of one or more subterranean chambers. I had no facilities for doing any excavation and therefore it was not possible to determine accurately the dimensions of these slabs because many of them were covered at their margins, but one which was relatively free of any accumulation of dirt or turf had a length of 2.2 m. and a width slightly in excess of 1.5 m. The thickness of these immense capstones varied but was rarely less than 50 cm. They appeared to me to be of the same granite that composed the underlying structure of the pampa at this point. Below the capstones are chambers that have a depth of at least 3.5 m. and some appear to have been much deeper. The chambers vary in size but are predominantly rectangular in plan. One which I was able to measure had a width of 1.5 m. and a length of 1.7 m. The sides of the chambers are composed of well-made random rubble masonry walls. The stone again is granite and in many places the packing of small chips between the larger stones is excellently done. The plan of these subterranean chambers varies. In some, the capstone covers what appears to be a single chamber. In others, the capstone serves to cover a double chamber formed by a division wall which divides the cavity into two parts. Raimondi²² describes a similar group of tombs on a mountain peak not far from the hacienda of Yanacancha, between Cajamarca and Bambamarca. He counted thirteen in a relatively limited area, mentions the square subterranean chambers and reports that some of the capstones showed evidence of human workmanship. He goes on to mention others which he had seen in the province of Pomabamba near the hacienda of Andaymayo.

A single circle of small stones with a diameter of about 50 cm. was noted. Our local guide volunteered the information that it marked a small bottle-shaped chamber, from which fine, thin pottery had been obtained. He was firm in denying that human bones were found in the chambers and pointed out that they were less common than the larger tombs and to his knowledge produced more beautiful *huacos* than the big chambers. Tello mentions types²³ which occur in the Department of Ancash, some of which can be brought into connection with these more northerly examples.

My description of these structures and the fact that it was possible for us to pene-

²² A. Raimondi, *El Perú*, 1:341-342, Lima, 1874.

²³ J. C. Tello, *Antiguo Perú*, Primera Epoca, pp. 36-42, Lima, 1929.

trate into some of them have already made it evident that they had been opened in the past. In the vicinity of some of them I was able to make a surface collection of pottery and fragments of human bones. I noticed no other constructions in the section of the pampa where these tombs occur. The lack of walls, house foundations, or ancient corrals indicated that this area was reserved primarily for burials. In an area of half a square mile we counted fifteen tombs.

The great size of the slabs of rock is a puzzling feature of these sepulchers, because neither in the vicinity of them nor elsewhere on the pampa are there evidences of quarrying operations which would have yielded stones of the dimensions and great weight of the tomb covers. This is true if one overlooks the actual cavities in which the chambers were built. I noted that the granite which forms the basic structure of this section of the cordillera has been fractured and the joint system here has primarily a vertical direction, plunging downward at an acute angle. There are a number of dikelike exposures of granite, particularly on the lower slopes of the pampa as it merges into the end of the Cueva de León. It seems highly probable to me that the excavations needed to produce the cavities in which the masonry rectangles that form the tombs were built, might also have served as the quarries from which the large capstones were taken. The selection of a suitable place would yield a huge flat tablet of stone left standing on edge as excavation proceeded on either side. This could be levered up onto the surface of the pampa beside the large cavity, the rubble walls of the chamber then constructed and finally the capstone slid into place.

CUEVA DE LEÓN AND CERRO CALLANASAY

As I have indicated above, the Pampa de los Quinuales drops downward and merges with the southern end of the long ridge which forms the western boundary of the *quebrada* of Allangay. As we continued northward from the site of these tombs, we encountered the traces of wall foundations in rubble construction and soon we were walking through and over the remains of a very considerable ancient settlement (map 1, no. 39). Altogether there are traces, and in some places very abundant remains, of buildings that extend for a distance of between 3 and 4 km., to end finally on Cerro Callanasay (map 1, no. 40). On the whole, the walls of this settlement or series of settlements are badly destroyed, being preserved to about the same extent as are those on Cerro Campana East near Huamachuco. In places where sections of walls stood some few centimeters above the present ground level, it appeared to me that the type of construction was also similar to that of Cerro Campana East in that the packing of small stones between the larger stone blocks was less consistently and regularly carried out than at Marca Huamachuco. At the southern end of this long ridgeline of dwellings the stone is a grayish color and tends to break in a natural rectangular form with thicknesses of between 10 and 20 cm. Farther north the character of the stone changes and has the yellow-brown color of the same type of stone that is so characteristic of many of the sites in the Huamachuco region. A surface collection of pottery was made which will be described in a later section.

We did not continue as far as Cerro Callanasay, although I was assured that it was a favorite site from which to obtain pots, including very fine thin-walled vessels. Instead we turned down a trail which zigzagged back and forth, descending into the valley just above the hacienda house. On both the right and left hand, up and down the valley, were visible the remains of walls forming the borders of andenes and at certain places where a naturally level place had been converted into a broad and wide terrace there appeared to me to be heavy concentrations of wall foundations, indicating secondary places of settlement. At the same time it

is quite clear that the major concentration of houses was on the ridgetop. The same system of terraces is said to extend down the western side of the ridge toward the hacienda of Otuto and in the direction of Chichir.

CERRO PABELLÓN

The bottom of the valley at Allangay does not appear to have had a site of any extensive size in ancient times, but north and west of the hacienda house at the spot indicated by number 41, on what is called Cerro Pabellón, is a fortified settlement. This hill is the end of a spur which projects westward from the ridge which separates Allangay from Jocos hacienda. The settlement is about 200 m. long and perhaps 50 m. wide, is characterized by at least five terraces, is notably steep-sided, and is higher at both its northwestern and southeastern ends than it is in the middle. Its profile as seen from the western side of the valley is definitely boat-shaped. The foundations of rubble walls were numerous and a considerable number of white paste sherds were collected despite the fact that the surface is in most places covered with dense grass.

QUEBRADA OF ALLANGAY AND THE PEÑA NEGRA

The return journey to Cajabamba was made by following a somewhat different route. This took us up the central part of Allangay Valley for a considerable distance, the trail running southward and rising quite rapidly. As on the previous day, the remains of ancient human activity were abundant, particularly in the shape of walls forming andenes. The trail climbs over an immense number of them. About halfway between the hacienda house and the southern end of the valley we diverged to the left and cut back along the side of the ridge. One stop was made near what is known locally as the Peña Blanca to see if it was possible to obtain either human bones or possibly a few pottery fragments from burial sites situated at the base of some fairly high cliffs at this point. The ancient custom of depositing the dead in crevices or under boulders at the foot of cliffs seems to be widespread; similar occurrences of both human bones and antiquities were reported to me as being common features of this district.

Our luck in finding either skulls or artifacts was meager. So, we continued upward and finally stopped just above the Peña Negra to examine briefly another *fortaleza* (map 1, no. 42) of the same general type as that on the Cerro Pabellón. This is shown in plate 13, f. Actually the fort is a double affair, the main section having four terraced levels and being approximately 150 m. long. It is separated from the smaller southern part by a narrow, natural cleft in the rock. There are some fairly well-preserved sections of random rubble masonry wall in different sections of this site and there are a number of walls or wall foundations which lie below and to the southwest of the *fortaleza* proper on a gently sloping natural terrace.

Following the crest of the ridge in a southerly direction, we reached another series of house foundations situated about half a kilometer from the fort just mentioned on the Peña Negra. These extend southward along the crest of the ridge for perhaps 300 to 400 m.

The ruins on the ridgetops, which lie on either side of the *quebrada* of Allangay, represent a very extensive and interesting concentration of ancient settlements. In my brief examination of them I was able to obtain no evidence which would indicate any marked difference in age between them and it is probable that this area, with similar areas in the direction of Chichir and Otuto, constitutes an important center. However, none of the existing ruins were of the size or of the

importance of those with which I was familiar at Marca Huamachuco. This is certainly not because the ruins north of Cajabamba are more ancient than the ones at Marca Huamachuco because, as an examination of the surface collections indicates, there is as yet no valid reason for considering them either culturally dissimilar or of greater age. The whole district is one that is in need of careful exploration. Particularly is this true of the area between the Condeebamba Valley and the Marañon south of the Crisnejas. The region indicated by number 43 on the map, the district of Marcamachay, Cerro Huacra immediately to the west, Cerro Yana-orcco to the south, and the district around the pueblo of Sitacocha were repeatedly mentioned to me as areas in which ancient settlements were numerous and in some places well preserved.

VI. ARCHAEOLOGICAL MATERIAL FROM MARCA HUAMACHUCO

THE EXCAVATIONS made at Marca Huamachuco were of two kinds. The most numerous, comprising fourteen of the fifteen numbered excavations (see figs. 1-3, 8-11), were made in order to test for a possible stratigraphy. The second type of excavation was a clearance, usually of small extent, undertaken to free and to lay bare certain structures which appeared to be of some importance. My preliminary surveys on the mountain, before excavation was begun, had failed to locate any obvious deposits of rubbish. It became apparent to me that while such may exist in a few especially favored spots, the slopes are steep enough and erosion great enough so that this natural agency, aided by the modern cultivation of many sections of the mountaintop, would destroy and scatter any sizable accumulations of debris from the ancient habitations. It appeared obvious that the only type of debris that was readily available was the accumulation that would be found inside of buildings. A glance at the various plans will quickly reveal that the greater number of the excavations are within buildings, usually galleries.

There are certain inherent difficulties in excavating within a building or a complex of buildings built of baked brick or of stone. There is usually a great amount of fallen stone or brick inextricably mixed with the soil or dirt that has gradually accumulated. This was so at Marca Huamachuco and from all of the excavations the cubic content of stone removed from the pits was equal to or greater than the dirt. The varying sizes of the blocks and their irregular position and distribution in the mass of fill were such that my attempts to excavate the pits by a series of artificial levels of 25 cm. in thickness proved fruitless. With large and small fallen building blocks distributed irregularly through the mass of debris and with a yield of sherds and other material that was steady but never abundant from any given level, the analysis of the resulting ceramic or other material in terms of levels would have been quite frankly a purely formal process without any real meaning. One cannot leave the stones *in situ* and excavate the earth from around them; any movement or dislodging of the larger blocks creates disturbances in the mass of the material that will extend down into the immediately succeeding layer or layers.

Constant attention to the character of the material that was excavated during the course of the digging of the first two or three pits indicated that the loamy, humic character of the topsoil was readily distinguishable from the yellow clay that underlies it in nearly all parts of Marca Huamachuco, both within buildings and outside them. In consequence, for practical purposes I made separations, at the time of the excavation of each pit, of the material which came from the upper dark layer of dirt, and included with this all of the material which came from the contact of the dark layer with the underlying yellow clay. The present topsoil at Marca Huamachuco seldom has a depth of more than 50 cm. and it has usually no greater thickness than 20 cm. The mixture of yellow clay and fallen rock from the buildings has a varying depth, as will be apparent in the discussion of the excavation of the different pits.

TYPES OF WARES

The preceding general discussion of the excavation problems bears directly on the form of the table of sherd percentages. In table 1, column 1, "1-1" means the upper part of excavation 1 including contact material, while in column 2, "1-2" refers to the yellow-brown or yellow clayey material. Where the over-all shallowness of the deposit precluded any obvious separation of the cultural material into these divisions it is analyzed as a unit. The table consists of two main parts: a list of the percentage relations of the different wares, and the absolute incidence of

various categories of decorated sherds. All sherds were first classified according to the nature of the basic fabric; then the decorated pieces were segregated and classified according to the character of the ornamentation.

Terra cotta as here used is an orange color with a quantity of red-brown in it. The color of an ordinary flower pot which has been exposed for several years is what I had in mind. This grades into orange at one end of the range of variation and into brown at the other.

Black ware includes what I believe are in reality two wares which are not always readily distinguishable—the smoked or bucchero ware, black on the surface, but buff or tan inside with a gray or black core, and the wares which are uniformly black or dark gray in section. The bulk of the black pottery listed in the table has little in the way of surface burnishing and smoothing. Where this last occurs the ware is likely to be true bucchero.

Gray ware is given a separate status and refers to sherds that were light gray, some of them having a blue cast and resembling bits of soft steel.

Tan-brown is described more fully in connection with the cooking ware recovered in Excavation 11. Most of it has a large amount of sand as tempering material.

Dark brown ware is by far the commonest category in all sites. This ware varied in color from a genuine brown to a nondescript color which was neither gray, black nor brown. Prolonged secondary heating of terra-cotta ware will produce this dull and unattractive color, but in some examples it was clear that the original firing had produced the same general color effect.

The term buff for the ware of that name needs no special comment except to indicate that it may have an orange, or in some examples a pink flush.

No distinction is made in the table between two kinds of orange ware—the first is gritty with large quantities of sand temper, the second is a nearly temperless paste. The color of both is vivid and while the duller specimens overlap with the terra-cotta category, the orange ware as a whole forms a distinct and separate class.

Polished red ware represents a deviation from the standard of listing only basic fabrics. The fuller discussion given on pages 281 ff. will make clear the chief variations in this ware. The thick red slip may be interpreted as decorative, but the employment of it is mainly restricted to fabrics of light color and in the ready sorting of sherd material it forms a natural and consistent category of its own. The few small sherds in the Uhle collection have been matched against Maerz and Paul's Dictionary of Color²⁴ and the range is between Burnt Sienna (5-F-12) and the group which includes Venetian (6-I-12), Henna (6-J-12), and Morocco (6-K-11).

White paste ware varies from an oyster white to a light cream in one direction and to French gray in the other. Temper is virtually absent and the appearance of the ware in cross section is comparable to unglazed kaolin. Most of the sherds found in the Huamachuco district are soft enough to scratch with one's fingernail, but this clay also stands high temperatures and becomes quite hard. Possibly because of the low temperatures at which I believe it was fired, the painted designs, not having been properly burned into the clay, flake off this ware.

EXCAVATION 1

The first excavation, which is indicated as Excavation 1 on figure 9, was made inside the southwestern section of the Castillo proper. A pit with dimensions of 5 by 3 m. was made in the corner against the high wall marked *a* in figure 9. A small lateral extension to the pit of another meter in width was made at its northeastern corner. The faces and tops of two walls were encountered, neither of them having

²⁴ A. Maerz and M. Rea Paul, *A Dictionary of Color*, New York, 1930.

LEGEND

Modern Towns - MOCHE
 Ancient Sites - CHANCHAN
 " " - ○²³
 Road - - -
 Rivers - - -

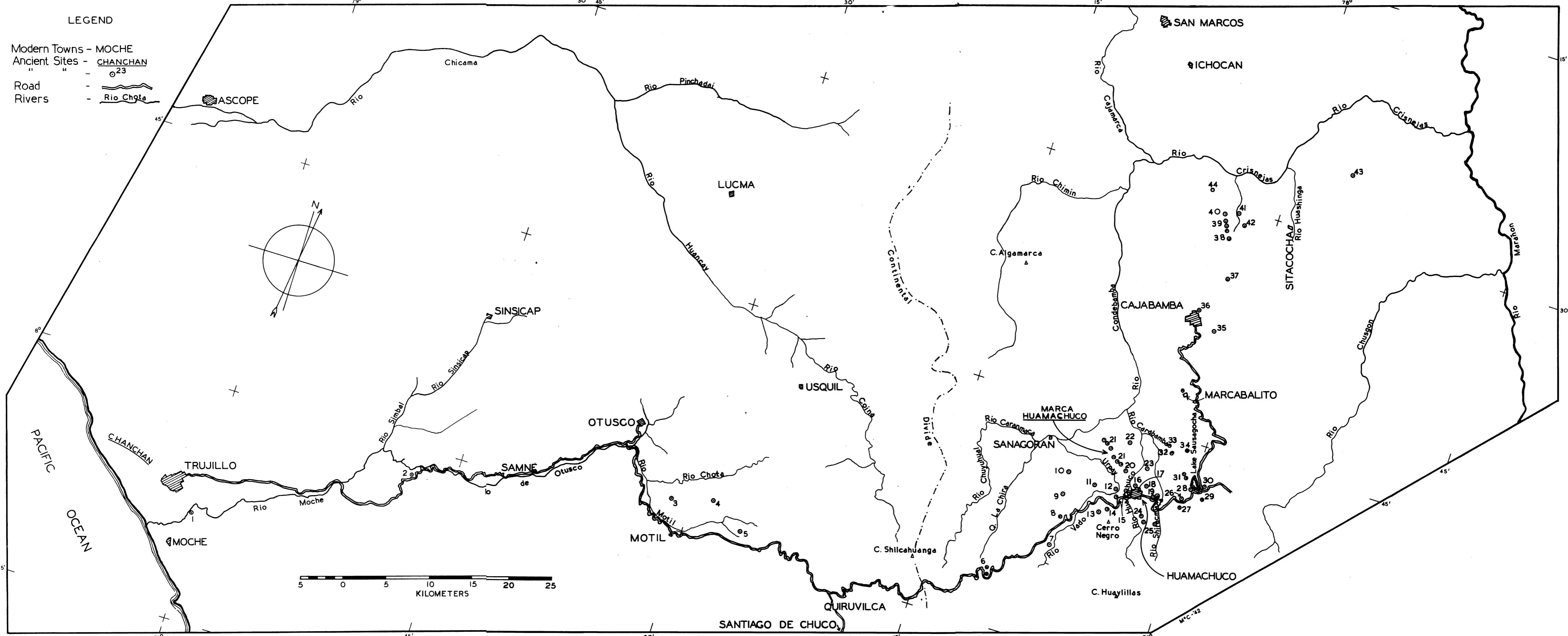


TABLE 1
SHERD COUNT WITH PERCENTAGES FROM EXCAVATIONS AT MARCA HUAMACHUCO, VIRACOCHAPAMPA, CERRO CAMPANA (EAST AND WEST)

	Marca Huamachuco																	Viracochapampa								Cerro Campana East								Cerro Campana West			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
	Excavation and Layer.....	1-1	1-2	2	3	6	7-1	7-2	8	9	10	11-1	11-2	12	13	14	Surface	Cerro Viejo	1	3	4	5	9	10	11	12	1	3	4	5	6	7	8	9	Surface	1	2
Total number of sherds.....	616	42	356	117	1,098	414	213	404	117	262	385	771	844	321	436	183	87	389	173	142	86	510	146	82	81	190	251	71	303	64	179	129	580	271	121	526	
Percentage plain.....	98	93	96	83	99	86	84	95	90	96	94	..	98	96	98	66	73	97	88	99	100	99	100	99	100	94	99	94	97	97	98	99	98	98	100	100	100
Percentage decorated.....	2	7	4	17	1	14	16	5	10	4	6	b	2	4	2	34	27	3	12	1	0	1	0	1	0	6	1	6	3	3	2	1	2	2	0	0	
<i>Wares</i> (figures are percentages)																																					
Terra cotta.....	66	33	55	43	33	40	21	21	38	43	43	10	11	29	8	50	62	25	14	18	21	20	15	28	37	23	6	11	11	18	11	7	12	14	8	2	
Black.....	16	..	22	26	6	20	11	6	25	13	8	18	11	8	6	8	..	20	17	24	15	205	14	15	12	10	4	..	..	..	..	..	..	..	13	6
Gray.....	13	..	20	13	4	2	2	3	2	..	1.5	0.4	1.5	3	..	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tan-brown.....	..	2.3	..	5	1	..	..	1	..	..	..	50	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	75		
Dark brown.....	..	2.3	..	10	20	19	32	47	28	34	41	13	51	31	54	7	33	29	26	37	22	29	20	23	19	35	..	48	47	59	60	62	54	32	53	..	
Buff.....	2	..	1	..	..	2	1	15	3	..	1.5	..	2	9	8	..	2	23	26	21	13	26	49	32	32	..	9	7	2	..	5	7	5	..	14	3
Orange.....	1	2.3	2	3	14	16	4	3	4	6	4	0.6	18	13	4	16	..	2	29	2	..	3	1	2	2
Polished red ware.....	1	60	21	1	25	2	..	4	..	7	4	4	16	6	3	1	17	4.5°	2	2	9	39	17	21	10	22	21	8	37	12	14
White paste.....	1	..	..	..	..	1	..	4	1	..	..	1	1.5	3	4	1	..	..	..	..	..	..	..	..	..	6	..	3	..	4	2	3	1	1	..	..
<i>Decorated Sherds</i> (figures are number of specimens)																																					
White slip.....	4	..	..	6	..	10	2	7	5	4	7	..	2	..	..	12	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Black-and-Red on white slip.....	1	..	..	12	..	4	3	3	1	..	3	..	2	..	..	25	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Red on white slip.....	2	..	12	1	..	31	..	1	..	..	3	..	2	..	..	4	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Black-and-Red on natural ground.....	..	..	..	..	..	5	..	..	1	..	..	..	1	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Black on natural ground.....	..	3	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Red on natural ground.....	1	..	..	..	2	..	1	7	3	5	7	..	1	2	1	..	..	1	20	..	..	..	..	..	..	..	..	1	..	3	..	..	13	..	..	..
Black negative on red slip.....	..	..	..	..	..	..	1	20	..	..	..	..	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cursive black.....	..	..	..	..	..	2	..	5	..	..	..	b	1	3	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cursive red.....	..	..	..	..	..	1	..	3	2	..	..	b	4	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other styles.....	2	..	1	1	..	1	..	..	..	..	..	1	2	..	..	2	8	2	6	1	..	1	1	..	1	..	10	..	4	..	1	1	1	..	..	..
Modeled or Incised.....	2	..	2	..	1	7	1	..	1	..	1	2	2	8	2	6	1	..	1	5	3	1	2	..	2	6

* Sherd from layer 2.

† Decorated ware includes several partly complete bowls not counted as sherds.

‡ Includes 1.5 per cent unpolished red-slipped ware.

been visible on the surface of the deposit. The westernmost of the two walls thus uncovered paralleled the well-preserved section of thick wall to its west. The other wall appears to be a section of the wall indicated at *aa* in figure 9. It was possible to excavate to a depth of 1.2 m. between the faces of the two walls. During the course of the excavation of the fairly compact fill, composed of yellow clay and jumbled blocks, the small sculptured fragment of tufflike rock, which is shown in plate 16, *f*, was recovered. At the southern end of the pit bedrock was encountered, rising in what appears to be an upthrust that underlies the high wall at *a*. Nine square-cut blocks of lava were excavated from the area between the two buried walls. These formed part of the fill of old debris.

The ceramic material from the excavation was abundant. The bulk of it comes from the uppermost layer and a reference to table 1, columns 1 and 2, will indicate the relative proportions of sherd material in both layers and the differences between them. This excavation, like the majority of the others, produced a very large amount of plain undecorated utilitarian ware. Among these were twenty-two fragments of rims of ollas with mouth diameters ranging from 140 to 280 mm. One specimen had a mouth diameter in excess of 400 mm. The forms and the ware are similar to those from Excavation 3, shown in figure 15, *h*, *j*, *m*. There were fragments of five strap handles, one being large and of a size that is usually associated with the large aryballos form. There was one fragment of a clay colander, from a vessel similar to those shown in figure 16, *a-b*, with holes approximately 15 mm. in diameter.

More than half of the decorated fragments consist of various wares with designs in red, or black-and-red on a thin white slip. The sherds shown in plate 22, *d*, *h*, *j*, and *k*, and the small bowl in fig. 15, *g*, are examples of this style. One example of red-slipped ware was found which was the rim of a shallow plate (fig. 18, *m*). This ware is described more fully in connection with layer 2 of this excavation. There were two modeled or incised sherds showing small applied hands and arms which probably came from the same vessel (pl. 22, *l*). These are in an orange ware. In addition, there was a little more than half of a stone star-shaped macehead 90 mm. in diameter, with five preserved points, the original number probably having been eight. The perforation was biconical.

There were a number of human bones encountered in the debris. These include fragments of a skull and of a maxilla of a fourteen-year-old adolescent, a radius, ulna, and several right metacarpals and phalanges of a person approximately seventeen years of age, and a fragment of the diaphysis of a right femur of an adult. There were no indications that these had been burials and the probability is that these fragments were discarded in the looting of a wall grave.

Layer 2 provided the most interesting material. I have previously mentioned the sculptured fragment in lava (pl. 16, *f*) and the cut lava blocks. The ashlar blocks need no further comment at this time. The carved fragment is a species of what might be called negative relief. It strongly suggests a bird's head seen in profile, but this may be an illusion created by the accidents of breakage. There are no comparable stone carvings known to me from Peru.

The ceramic material contained a relatively high proportion of polished red ware sherds. This is an easily recognized and often abundant ware. It is a light tan or yellow-brown, sometimes gray, frequently coarse, with sand grit showing in the cross sections. One or both faces, or parts of them, may have a thick red slip which normally is evenly burnished. In the better specimens the superficial effect is closely comparable to the better provincial imitations of *terra sigillata*. The majority of the red ware sherds probably came from a large bowl with a diameter

of about 260 mm. similar in form to figure 17, *a*. There were fragments of a similar bowl in a brownish terra cotta that had been burnished inside and which has a punched suspension hole 10 mm. below the rim. This vessel had a diameter of 200 mm. The only decorated fragments came from a shallow bowl of a fine terra-cotta colored ware with a diameter between 180 and 200 mm. There was an internal design of black lines painted on the natural ground (pl. 22, *f*).

EXCAVATION 2

Excavation 2 is likewise indicated in figure 9. This was a pit a little over 2 m. wide and 4 m. long which was dug in the angle between the central dividing wall and the western wall of the thin-walled double-roomed house. In excavating this pit the edge and face of another subterranean wall of massive character were encountered about 20 cm. below the surface. The foundations of the central dividing wall at the doorway in the Late house quite clearly did not rest upon an old wall but were built directly on a loose rubble fill and appear to lie in part upon the black dirt and humus of the topsoil of the deposits in this section of the Castillo. The buried wall has a course which is definitely deviant from the line of the central dividing wall of the Late house. It does, however, parallel the right-hand wall of the Late house which here probably rests on an old and massive buried wall. There was one well-cut medium-sized block of the soft lava from the yellow clay and rock fill which began immediately at the level of the top of the thick and massive wall uncovered by the excavations.

All of the sherd material came from the black dirt and humus that lay above the lower deposit of rock and yellow clay (table 1, column 3). The utilitarian ware is coarse and heavy, with many finger marks left on it during smoothing. There were ten fragments of the rims of ollas of the types of figure 20, *a*, *c*, *e*, *g*, with diameters which ranged from 240 to 420 mm. Three medium-sized strap handles were encountered. There was one stone ball slightly oval in shape with a rough groove carried all the way around the shorter axis. The most numerous of the decorated fragments were twelve sherds, probably from the same vessel, in a hard gray ware with a white slip and a bold design in red lines. The two nonpainted fragments bear at the base of the neck the impressed dot and circle type of decoration punched with a reed or bone (pl. 22, *m*, *n*).

No polished red ware was encountered. The absence of any cultural material among the rock and yellow clay is to be noted and my impression is that this fill was a deliberate one and not merely an accumulation of fallen stone from the old walls. Without any question the ceramic and other material belongs to the occupation of this part of the Castillo represented by the double-roomed, thin-walled house.

EXCAVATION 3

Excavation 3 was also made in the Castillo and consisted of a test to see what existed in the deposits that filled the small rectangular, very deep, well-like room just inside the external wall of the Castillo on the southwestern side (fig. 9). The depth from the top of the cross wall to the top of the deposit in this deep, small room was 3.5 m. The cross walls on both sides of this room are thick and very massive; they appear clearly to interrupt the course of two horizontal rows of stone corbels and look like a later modification of the architecture of the gallery.

The relatively high proportion of decorated as against plain ceramic material will be readily seen from table 1, column 4. At first I was somewhat dubious about excavating at this place, but decided upon it because the intact character of the walls argued for a minimum of fallen stone. This proved to be true and in com-

parison with the two previously described excavations there was less rock and a greater amount of dirt. The deposit, however, consisted mostly of black or brown soil; yellow clay was only reached at the very bottom where it appeared to be hard packed and to represent a completely undisturbed layer. A large part of the pottery was sherds that ultimately could be fitted together to reconstruct the three large ollas shown in figure 15, *h, j, m*, and in plate 21, *f*. These types appear to be the common or standard ones, lacking handles and, in most examples, any decoration. In addition to the plain ware in brown or terra cotta, there was a high proportion of black ware sherds. This black ware material ranges from what can be certainly classified as a true bucchero with light-colored cores and a smooth black surface to the black ware of uniform color. The latter was predominant. The most notable of the black ware fragments were well-smoothed and hard sherds that came from what appeared to be a fairly large plain bowl.

The decorated ware contains as its most striking element a number of fragments of at least one large vessel covered by white slip with bold and free-flowing geometric designs painted in red and black. Some of the sherds of this type are shown in plate 22, *c*. Not enough material was recovered to make it possible to reconstruct the form of the vessel and I am by no means certain that the original specimen could have been accurately classified as an aryballos, but the deductions possible from the rim, neck, and body sherds suggest this. The sherd illustrated in plate 22, *e*, has interlocked brown spirals on a bluish-white slip and indicates another design pattern.

The deeply incised bone fragment shown in plate 16, *q*, was also recovered from this excavation. It probably is part of the shaft of a leg bone of a llama. Llama bones were notably abundant and there were also skeletal fragments of at least three human individuals recovered. These represent an adult, a subadolescent of eight years of age, and part of the shaft of a right femur of a very young infant. Again, this human material almost certainly is debris resulting from looted wall graves.

EXCAVATION 4

Excavation 4 was made to clear away and reveal what had happened to the very large entrance in the south wall of the small plaza indicated in figure 9. No great depth of deposit was found here, but a sizable amount of rock was cleared away and in this debris were three or four more of the well-cut lava blocks. It was quite evident that this entrance had been blocked by a thick mass of rubble masonry which was continued in the form of a small wall carried across the width of the gallery. Within this gallery, and to the south of the entrance, was another blocking wall of no great thickness, with a curious irregularly sloping mass of masonry forming a sort of buttress or support for the thin wall. The general disposition and the arrangement of the class B walls certainly seems to suggest that the gate and the immediately adjoining section of the gallery were cut off in order to form a small room used at some later period. The large stones which form the margins of the top of the entrance were long stones laid horizontally. They project slightly beyond both faces of the wall and suggest that the wall never did have a height greater than the tops of these corner blocks.

Excavation 4 yielded only twelve sherds, of which seven were in polished red ware. The only decorated sherds were a thick buff sherd with a stripe of red paint across it and a sherd of gritty yellow-buff ware painted on the outside with rather faint, wavy brown stripes.

EXCAVATION 5

Excavation 5 was a rectangular pit dug into the deposits inside gallery E, which is shown in figure 10, A. This pit was 4 m. long, 1.8 m. wide, and was carried to a maximum depth of 1.5 m. The labor expended here was completely unrewarded because the deposit at this point is completely sterile of any archaeological material.

EXCAVATION 6

Excavation 6 involved both the clearing of the curious structure in the southern corner of the Great Plaza and also a testing of the deposit which covered it and which filled parts of it. The plan of the cleared sections is shown in figure 9 and two cross-sectional diagrams are shown in figure 2. The structure is essentially a large rectangle with two small rectangular projections thrown out to the northwest and to the northeast. The walls are sufficiently ruined so that on first examination there appeared to be a steplike character to the structure. This is a result of the relatively high-standing wall at *a* in figure 2. The exposed sections of well-made pavement, indicated in figures 9 and 2, form a separate and distinct pavement 30 cm. above the general paved level of the plaza proper. This raised pavement extends northwest for about 14 m. and then the edge makes a right-angle turn. There is a fair probability that the pavement and the structure uncovered by Excavation 6 are connected with the series of very much destroyed walls that are shown in figure 9, just below the heavy wall at *t*. These two walls form the leading edges of what appeared to be small terraces or platforms, one above the other.

One edge of a deeply buried wall was uncovered at *b* in figure 2. This, and the wall with the stone corbels shown at *u* in figure 9, appear to represent earlier construction. What seemed to me to be critical and decisive, however, was the occurrence of several cut blocks of the lava rock incorporated in the outside walls of this structure. The absence of ashlar in walls which belong to class A is a consistent feature of Marca Huamachuco while they appear often to have been reused in class B walls. One instance of this has already been mentioned in connection with the discussion of the Late building shown in figure 10, C.

The much ruined condition of the structure which was uncovered in the course of Excavation 6 made it impossible to secure even a purely formal stratigraphy, with the result that after several attempts to separate the material as it came out of the different parts of the excavation, I realized that such a procedure would not give a true result and, in consequence, I have pooled all of the material. Regardless of this, examination of table 1, column 5, will show two significant features. The first is the relatively high percentage of polished red ware; and the second is that in the small quantity of decorated material there is an absence of wares with black-and-red decoration on a white slip. The bulk of the pottery came from the excavations on top and inside the structure (see fig. 2). The talus of debris which extended outward from the margins of this building consisted largely of rock and dirt with little cultural material of any character. On top and inside the structure, however, pottery was considerably more abundant and a high proportion of the material came from the deep cut shown in section A-B of figure 2. It is from this area that the bulk of the polished red ware was obtained and all of the white paste sherds with cursive decoration.

The most numerous sherds of plain ware were those of terra-cotta color. Black and gray sherds together comprised only 10 per cent of the total. Included among the gray ware vessels was a large high-collar olla with an orange slip and on this a geometric (?) design of red lines. Orange, and orange paste wares are numerous; one bowl with traces of an interior design in black is shown in figure 17, *l*.

More than two hundred sherds of polished red-slipped ware were obtained, and among these were the greatest variety of forms found in any one excavation. Eighty per cent of the sherds are slipped on one surface only, the remainder on both surfaces. Sherds with single slip may be grouped in two kinds of ware. First, there is sandy brown-colored pottery with variations toward gray. Sixty per cent of the sherds of this category have a gray core, the remainder are uniform in color as seen in cross section. Second, there are tan-to-sandy-colored sherds with a rough gritty surface. Usually the core is black. These two classes occur in a ratio of 3 to 1 respectively. Sherds with continuous outer and inner slip comprise the remaining 20 per cent, the fabric is a dull red or reddish brown in color and half of them have a gray core.

The forms of this red-slipped pottery fall into two main divisions, bowls and necked jars. It will be well to point out before attempting further description of these types that the sherds were easily classifiable into rim and neck forms and into body sherds. The latter have no additional distinguishing features—there were no handles, bases, foot or tripod supports, not even sherds with marked external carinations. Consequently, one is on certain ground in inferring that jars were primarily globular or spheroidal in body form and that bowls were hemispherical or with very slightly flattened bottoms. Body sherds vary in thickness between 4 and 10 mm. with the majority 5 to 6 mm. thick.

One common bowl form is shown in figure 17, *b*. This has a continuous slip externally, while there is a 17 mm. band of red just inside the rim. This specimen was 300 mm. in diameter. Another frequent type is represented by figure 17, *a*.

Jars with a great variety of neck forms were the most numerous of the polished red ware vessels. In figure 20, *w-hh*, I have depicted the rims and neck profiles of the most usual forms. A particularly common form is *cc*, with mouth diameters ranging from 150 to 220 mm. There are many fragments that have the last-mentioned diameter; however, I do not believe they are all from the same vessel. A closely related form is *bb*, with similar diameters. Another common type is *ff*, while *gg* and *hh* seem always to belong to large, thick pots with mouth diameters of 320 and 380 mm. The sharpness of the internal carinations of many of the necks and the pronounced outward flare form a distinctive combination. If the reader will turn to figure 14 and look at specimens *c-h, j*, or plate 20, he will see jars whose forms are undoubtedly analogous to the red ware vessels. In all other respects they are different.

Excavation 6 was the first place in which the white paste ware was found in any abundance and while it represents only 1 per cent of all sherds recovered, three different vessels are represented. The most complete is the small bowl shown in figure 16, *k*, and in plate 22, *hh*. This bowl had traces of a design in black paint. Two other bowls are represented by rim sherds from specimens which must have had the proportions of *g* in figure 16. One had a diameter of 160 mm. and the other of 180 mm., this last with sure evidence of a cursive-painted design in black.

Two strap handles, one in orange, the other in terra-cotta ware, were found. The former is shown in figure 15, *f*, and is the characteristic type found at Marca Huamachuco. One stubby tripod (?) leg in buff-orange ware was recovered. Another find was the short bone tube, possibly cut from the upper end of the shaft of a llama humerus, shown in plate 16, *r*.

EXCAVATION 7

The general situation of Excavation 7 is shown in figure 10, B. A detailed plan and cross section of the excavation itself is given in figure 3. The massive wall at *a* in figure 3 has a row of projecting corbels on its north face. It is clearly broken at *b*

and this destruction has been caused by the building of the curved wall containing five groups of niches. This curved wall makes an arc between the heavy massive wall at *c* and the section of wall shown at *d*. The last-mentioned walls also have projecting corbels of stone and clearly appear to be parts of the building represented by the main wall indicated at *a*.

The character of the niches, with selected stones set vertically to form the jambs and with heavy stones to form the lintel and the roofs, is quite plainly shown in plate 13, *c*. The niche illustrated is *n* in figure 3. The passages indicated by *r* and *s* in figure 3 pierce the walls, appear never to have had anything deposited in them, and must represent small bolt holes through the thickness of the wall connecting original rooms of the gallery. They are 50 cm. wide and 75 to 80 cm. high. The curving wall with the niches does not appear to have been continued south because it runs against the wall shown at *c*. The wall *d* is much destroyed and there is an opening shown at *t* which may well be the remains of another passageway. It is clear from figure 3 that the curved wall continued on beyond this wall at *d*. At the time I made my excavations the open area inside the remains of the large building, shown at *c* in figure 10 and also the level area at *g*, had been newly planted in potatoes and consequently it was impossible to extend the excavation in search of the wall. The two niches (fig. 3, *o*, *p*) occupying the central position in the curved wall had been previously destroyed by the digging of the peasants who use this property. I was told that the two vessels shown in plate 22, *f*, *gg*, and the tumi knife shown in plate 18, *q*, came from the niche at *p*.

The upper 10 to 25 cm. of deposit consisted of black loam and humus. Below this began the customary debris of large stones packed into a very tough yellow clay. A few fragments of human bones were encountered at varying depths and also there were some fragments of animal bone, including parts of the horn cores of a deer. Aside from the sherd material there was not much else in the deposit and the niches either never had been used or had been opened and the contents removed long ago. The general character of the curved wall does not appear to be of the same massive solid construction as the walls at *a* or at *c* (fig. 3). This may be due in part to the somewhat weaker construction consequent on the large open spaces represented by the niches, but in the main the large blocks did not seem to have been so carefully chinked and packed with small stones. The wall is fairly thick, a feature undoubtedly conditioned by the necessity of giving the niches a depth of at least 70 cm. Whatever the absolute age of the curved wall with the niches, its relative age is clearly established by its relationship to the surrounding walls. These walls clearly belong to the class A group with stone corbels, whereas the niches are of a later period.

The initial excavation was made in the triangular area in front of the niches *m-o* (fig. 3). Later, the quadrangular area on the other side of the wall was excavated. My examination of the material in the field showed that there were no significant qualitative differences and since the total amount of material was not great the finds from both parts of this excavation were pooled. Columns 6 and 7 in table 1 reveal a first and important distinction in comparison with Excavation 1 and Excavation 11: this is the high percentage of decorated sherds. This reflects nothing more than the expectable difference between debris from tombs and debris from houses. It would clearly settle the original nature of the niches, if further evidence were necessary.

The most common type of pottery from layer 1 was terra-cotta-colored ware, mainly large ollas like figure 15, *h*, *j*, and *m*. Some of these are large, one with a rim like figure 20, *b*, and a mouth diameter of 280 mm., others exceeding 300 mm. in this dimension. Plain bowls similar to figure 18, *p*, are small, the diameters are less than 180 mm.

Decorated wares are predominantly like the red, or red-and-black on white slip sherds described for Excavation 3. Indeed, by their appearance, not a few of the sherds might have come from that pit. Two vessels with incised decoration are represented: the first, with a simple band of dots and circles at the juncture of neck and body, and a rim and neck profile like figure 14, *e*, but with a mouth diameter of 270 mm.; the second has the double dot-and-circle with diagonal slashings shown in figure 14, *j*. Handles are of the strap variety, mostly in orange ware; one has painted lines of red and black. A single mold-made fragment in gray-black ware was found. This is part of a conventionalized face with a part of the nose, the upper lip, and teeth; but the fragment is too small to determine whether it represents a human or an animal. Another find was the broken leg to a stone bowl (?). This has a diameter of 40 mm. and a height of 60 mm.

The ceramic material which came from the rock and yellow clay fill is separable into several classes. The most interesting is the white paste ware, some sherds of which bore cursive-painted designs. Two of these are shown in plate 19, *j* and *m*. A fragment of a small spoon in the same ware and with traces of painted decoration is shown in plate 19, *y*. Plate 19, *j*, is the ring base and part of the bottom of a bowl like figure 16, *f* (see also pl. 22, *ee*). The sherd *m* in plate 19 is very hard with a circular band of design in reddish-brown paint. It undoubtedly comes from the bottom of a ring-base bowl. In addition to these specimens there is the end of an undecorated hollow handle in light orange paste the same size as the one on the vessel shown in figure 14, *l*, and in plate 20, *g*.

The polished red ware from this excavation was of special importance. The rim and neck forms shown in figure 20, *u* and *v*, are additions to the ones already described from Excavation 6. In figure 15, *k*, *l*, and in plate 22, *a*, are shown sherds from what is probably a deep, round-bottomed bowl that forms a special type of the polished red ware by virtue of the black negative-painted designs. The panel-like arrangement of the design is reconstructed in figure 14, *k*, and is shown in plate 22, *a*. The use of a resist in true negative painting technique is indicated by the irregular form of the small red-colored spots in the centers of the round medallions. These are most aptly characterized as having the shapes of dividing yeast cells. This is an interesting kind of ware, not abundant but a known and used type in Marca Huamachuco. In the absence of any knowledge of the variations in design of this type of pottery it seems premature to suggest more than the most general resemblances or connections with other negative painted wares in Peru. Its coexistence, however, with cursive painting is clear. The radical difference in both style and technique of the two kinds of pottery raises a new and interesting problem.

The large red ware bowl (diam. 420 mm.) shown in figure 17, *a*, is interesting on two counts. First, it is the most nearly complete example of a very common form, slipped continuously inside with a red band external to the rim. Second, it had been repaired anciently, along at least two major breaks, by having opposed biconical holes drilled to take a lashing. It would appear, therefore, that the economy of the ancient people of Marca Huamachuco was such that so large a bowl in this type of ware was not readily discarded. Added to the fact that nowhere was this pottery greatly abundant in the excavations, it bespeaks a certain importance for it, lifting it out of the strictly utilitarian varieties of ceramics.

Undecorated sherds were of the several kinds shown in column 7 in table 1. A large hemispherical bowl in gritty orange ware is shown in figure 17, *f*. Ollas in the same fabric with simple convex necks like figure 20, *b*, but with the lip thickened and grooved as is the lip of the bowl just mentioned, were well represented.

Several parts of the vessel shown in figure 18, *j*, also came from layer 2. These are

in a pink-orange ware, gritty and with a gray core. The body is globular and the neck flaring but internally concave. It is the most complete of a limited number of examples from Marca Huamachuco, but represents a vessel form which was found more abundantly at Cerro Campana East and which I have called jars with sigmoid necks.

Two other classes of material were found. The metal tumi knife (pl. 18, *q*) has been mentioned before. Two fragments of thin metal laminae, one bent around a piece of string, were found deep in the triangular excavation in front of niche *n*. These have the green color of corroded copper, but with a yellow sheen plainly evident which suggests gold. Until these have been analyzed their exact nature must remain speculative, but they may be gilded copper.

A complete obsidian projectile point and a fragment of another were found in the deep layer. The surface of the adjacent field provided a third. These are smaller than the specimens Uhle collected (see pl. 19, *gg* and *ee*) but of the same form.

Two white-slipped sherds and three of the black-and-red on white slipped pottery came from this layer. They seem out of place and I suspect are the result of the old disturbance which destroyed the niches *o* and *p* (fig. 3). Before passing to the next excavation it may be added that surface collecting in the adjacent fields yielded seventy-five sherds, of which thirty-two were white slipped, red-and-black painted sherds. There were some unpainted sherds with incised decoration, but there were only two white paste and eight red ware sherds.

EXCAVATION 8

Excavation 8 is indicated in figure 10, B. It was sunk across the line of the northeast side of the Late building and continued down between two thick walls, both of which had a horizontal row of stone corbels that came to light at a depth of 70 cm. below the surface. The first 20 cm. of the deposit was black dirt and below that was the fill of rock and yellow clay. At 2.5 m. the yellow clay became darker, was a yellow-brown color, was extremely compact, and appeared to be mixed with small pebbles. At this point I ordered operations terminated because the width of the pit was too narrow to permit further excavation with any degree of safety. The sherd yield was not abundant and the last 30 cm. excavated produced nothing in the way of ceramic or other material.

About 95 per cent of the sherd material came from the 20 cm. of black loam. This represents the debris accumulated on the floors of the class B building. Percentage occurrences of types of wares from the yellow clay based on fifteen to twenty sherds have no real meaning, and, in consequence, I have entered only the decorated ones, combining these in the table (column 8, table 1) with the painted or ornamented sherds from layer 1. The most frequent type of decorated material is white-slipped ware; next are unslipped terra-cotta sherds with red line decoration. A new rim form (fig. 20, *n*) of a large terra-cotta olla with a mouth diameter of 320 mm. was encountered. The other common rim and neck sherds were the standard ones shown in figure 20, *a*, *c-e*, and *g*. The relative abundance of buff ware, gritty, and with a pink cast of color, distinguished this excavation from previous ones. A bowl similar to figure 17, *f*, was made in this material. A single fragmentary, conical tripod leg about 60 mm. high was found.

From the yellow clay came the cursive-painted sherd shown in plate 19, *n*. The design was in reddish brown on a dull white, soft paste. In addition there is a white paste rim fragment, with traces of red-brown paint, from a bowl of the type of figure 16, *c*. Only one small sherd of the polished red ware was found. The fragmentary vessel shown in plate 21, *h*, came from layer 2. The tubular projection is

hollow, composed of two parts which fit along their edges and the tube fits against a prepared edge on the body of the vessel in the same manner as do the parts of a piece-mold. In the same orange paste was a large, flat sherd which probably is the bottom of this jar. No other specimens like it were found and aside from its vague resemblance to a stirrup-mouth jar, no real clue to its shape or function is evident.

One broken obsidian projectile point was recovered. It is slightly larger than the one shown from Excavation 7 (pl. 20, *gg*). A small quantity of animal bones was recovered, mainly from the upper layer. No fragments of human bones were encountered.

EXCAVATION 9

Excavation 9 was a pit 3 m. long and 2 m. wide which was dug on the other side of the main cross wall shown in figure 3, *c*. A horizontal row of corbels was reached only 50 cm. below the surface. As in Excavation 8, there were approximately 20 cm. of black dirt and then fill of yellow clay and rock. This excavation was also carried to a depth of 2.5 m. without striking rock. There did seem to be, however, a compact earth floor at the bottom of the excavation and as in Excavation 8 the yield of any artifact material had terminated some distance before reaching this level.

The only notable item among the sherds from Excavation 9 were fragments of another vessel similar to the one illustrated in plate 22, *c*. However, the design was on the interior of the neck and consisted of horizontal red and brown (black?) stripes on the white slip. One sherd with dot-and-double circle impressed design was recovered. There was no orange paste, polished red, or white paste ware. Plain black or terra-cotta sherds kept turning up from the rock and clay fill but in small quantity. The greatest part of this material can be clearly associated with the black dirt layer and with the small house of class B construction.

EXCAVATION 10

Excavation 10 is shown in figure 10, *C*. An excavation 2 m. wide was run completely across the east half of Gallery G. The pit was divided into two parts because we struck the buried septal wall of the gallery. The northern half of the pit was excavated to a depth of 1 m., striking rock and clay just below the surface. There was an extremely low yield of artifact material. I decided then to dig out the half of the pit abutting on the septal wall of the gallery and the pit was carried down another meter with disappointing results as far as artifact material was concerned. The southern half of the pit was dug out completely to a depth of between 1.5 and 1.6 m. On the west side of this excavation the face of a cross wall was encountered. At the southern end of the excavation the poor rubble masonry, which filled what appears to have been an entrance into the gallery at this point, became clearly visible. Neither bedrock nor an artificial floor level was reached in the course of the excavation. In excavating the fill of rock and clay, my impression was strengthened that this was in part a man-made filling of the interior of the gallery. The blocks of stone were distributed with fair regularity in all sections of the excavation. There was no indication of a talus effect from collapse of either the side or of the central dividing wall with a resultant piling up of rock close to the faces of the wall itself. The blocks of rock were not laid in position but they appeared to me to have been thrown in and earth piled in around them.

There was no bone, neither artifacts nor debris from former meals. The ceramic material entered in column 10, table 1, was undistinguished, most of it being small and nondescript sherds. Rim types of ollas like those in figure 20, *a, c, d, g*, and *k*, were encountered and a new type, *p*, is to be noted. There was a fragment of a ring base and three strap handles in terra-cotta ware. The four white-slipped sherds and

the five with red on the natural ground were the only decorated specimens found. One of the latter was in a thin, but coarse orange ware, had brown (red?) lines and circles on the outer surface and formed part of the bowl shown in figure 18, *n*. A fragment of a thin copper plate that resembles a *repoussé* boss from some larger object was found wedged in between two large stones not quite 50 cm. below the surface. This was one of the very few objects to be found at a depth greater than 25 cm. below the hard-packed present surface.

EXCAVATION 11

Excavation 11 is shown in figure 10, C. The place was selected because of the very evident unconformity of the walls of the Late structure indicated at *h* with respect to the main walls of the gallery. The excavation was planned as a 2 by 2 m. cut but later was extended a meter to the south. At the point chosen there was approximately 20 to 25 cm. of black loam and humus, below that, rock and yellow clay. While there was no obvious and evident floor level to the Late building at *h*, not only did the character of the soil change, but the character of the pottery, as described hereafter, also changed as soon as the yellow clay was reached. In addition, one of the cut lava blocks was encountered in the southern wall of the building at *h* where one of the workmen undermined and collapsed a section of it. The excavation was carried to a depth of 1.25 m., and at this point a very compact floor composed of yellow clay mixed with small pebbles was encountered. In one corner, indicated at *j* on figure 10, a large milling slab with two grinding stones was found (see pl. 12, *f*) and from this part of the excavation came very great quantities of both plain and decorated pottery. In the center of the western half of Excavation 11 a small pit a meter square was carried 50 cm. deeper, at which point bedrock was encountered. From this small test no artifact material was recovered at all. The small section of Excavation 11 to the east of the central dividing wall was not dug to a greater depth than 50 cm. Primarily, this was to obtain more sherd material from layer 1 and a further sample from the yellow clay material underneath. The ceramic material was abundant, particularly from the yellow clay. A large part of the decorated pottery could be reconstructed, and consequently, in table 1, column 12, I have not counted it as sherd material in giving percentages of plain as against decorated wares. The proportion, however, is certainly not less than twenty plain to one decorated sherd.

Ordinary convex-rimmed ollas of the types indicated in figure 20, *a*, *e*, *g*, were quite abundant from layer 1. These have mouth diameters ranging from 200 to 380 mm. One vessel with a neck profile like that in *f* of figure 20 has an exterior white slip, with a band of red on the lip and another red band on the exterior at the base of the neck. There were a number of rim fragments of flare-mouth pots with diameters of 180 mm.

A new type of olla is represented (fig. 20, *i*), one with a high, straight collar and a horizontally flanged rim. At least three specimens of this type are represented by fragments with mouth diameters of 120, 160, and 280 mm. All of these have the lip painted red. A dozen fragments of strap handles are among the material from layer 1. Three of these exhibit red line decorations on an orange slip. Bowl forms are prevailingly simple, of the type of figure 18, *p*. A single detached ring base in terra-cotta ware was found.

Painted sherds are about equally divided between red, or black-and-red on white slip, and red on natural ground. Two black-ware sherds with stripes of red form another category. The prevailing style of decoration and the choice of colors used differ in no significant way from the painted material from Excavation 1, layer 1,

and from Excavation 3. The only modeled fragment is shown in plate 22, *t*, a handle with a monster animal head as a finial.

Stone work is limited. Two fragments of implements in ground slate were recovered. One of them slightly suggests a whetstone. The small, pink and white chalcedony projectile point pictured in plate 19, *f*, came from this layer. A single spindle whorl of stone (steatite?) in the form of a small, flat, perforated disk was found in the eastern extension of the pit. Metal is represented by a 30 mm. section of what may have been a needle or small pin.

Several pottery disks, biconically drilled near or at their centers, were discovered. These probably are spindle whorls. These disks, made from a nearly flat sherd by first breaking off and then grinding the edges, are not abundant but turned up in nearly all the excavations. They also occur on the surface. The proportion of drilled pieces to unperforated ones is five to one. The diameters range from 25 to 50 mm. Stone spindle whorls are infrequently met with and when found are normally flat disks or slightly biconvex. The spheroid-conical, biconical, or spheroidal forms of the Peruvian coast are missing.

Layer 2 yielded not only a quantity of sherds, but a considerable variety of new and interesting forms. Among the plain wares, I may mention first, the pottery colanders, two of which are shown in figure 16, *a* and *b*, and also in plate 22, *jj* and *kk*. Four examples of this type of vessel were found. They represent a new Peruvian vessel form without any parallels so far as I have been able to discover. Perforated vessels which might have served as strainers are not particularly abundant among Peruvian collections. Possible, but distant, relatives to these Huamachuco vessels are the Middle Cañete conical pots which Kroeber excavated at Cerro del Oro.³⁵ A large quantity of thin sherds in a pink terra-cotta ware of coarse texture must come from one or more vessels similar in form to figure 18, *j*. The plain terra-cotta bowl shown in figure 18, *p*, also comes from this layer.

Half of the plain sherds from layer 2 are a light tan-brown in color (table 1, column 12). The outer surface is smooth, because of careful polishing, the inner surface is very gritty and coarse. The bulk of this material comes from a mass of broken cooking pots that were excavated in the immediate vicinity of the milling stone shown in plate 12, *f*. This ware was new in terms of the material from previous excavations. The very slight curvature of the larger sherds appears to indicate that a number of these pots were of great size. It has not yet been possible to reconstruct any of them. However, the general impression is of a large globular jar.

Polished red ware was not particularly abundant, but there are fragments of several large bowls of the type of figure 17, *a*. A variant rim form is represented by figure 17, *c*, in which the exterior is covered by the polished red slip, the interior being smooth and of a yellow color except for a narrow band of red just below the rim. One large fragment of a thin (5 mm.) red ware bowl has a polished red slip on both surfaces. A shallow red ware plate is shown in figure 18, *l*, and also in plate 19, *bb*. This is a unique specimen for the reason that the formal design is in white paint on the polished red surface. The pink paste bowl shown in figure 18, *o*, is interesting because it bears traces of an all-over white slip in the interior, whereas the outer surface was covered with a red slip which appears not to have been polished.

The most interesting specimens from this excavation were found in the general vicinity of the southeast corner and comprise a series of bowls with ring bases in white paste or in smoked-black ware. The more complete specimens are shown in

³⁵ A. L. Kroeber, Archaeological Explorations in Peru, Cañete Valley. FMNH-M, 2: pl. LXX, fig. 1. 1937.

plate 22, *aa* to *ee*. Profiles of the same vessels are shown in figure 16, *c* to *j*. The largest and the most complete of the bowls in white paste is *ee* in plate 22, which shows traces of a design in black in good cursive style. Internally, this bowl has lost all except a few flecks of black paint, but the probability is strong that a bold design comparable to the one pictured in plate 19, *j*, was part of the original scheme of decoration. An example of one type of interior design is well illustrated in plate 22, *dd*. This is the bowl shown in figure 16, *c*, and is in yellow-white paste with the painting done in chocolate-brown. The bowl illustrated in *bb* of plate 22 has faint traces of a fine cursive design, similar to that on the sherd in plate 19, *w*.

The bowl in smoked-black ware shown in plate 22, *aa*, has classic proportions and lacks decoration except for the small applied strip which occurs on opposite sides of the rim. The surface, both inside and out, is dull black but well smoothed. The ware is a true bucchero in that while the core is black it is surrounded by a light zone of rather sandy color and this in turn is covered by a very thin layer of dark black. Where the surface of this type of ware has been abraded the light fabric shows through and there is a strong suggestion that a black slip has been rubbed off. This phenomenon is characteristic of bucchero ware, but the surface appearance is due to firing in a smoky and a reducing atmosphere. Most of the Late Chimú black ware is one color throughout in cross section. Where the surface is worn it looks dull but still black. Fragments of a smaller bowl, in precisely the same type of bucchero ware, decorated with vertical applied fillets, was found in the same layer (fig. 16, *d*). The simple bowl with ring base pictured in plate 22, *cc*, and also in figure 16, *h*, shows quite clearly that this annular support was used for bowls in plain ware. The latter specimen has no decoration and is in chocolate-brown ware, of rather coarse texture.

Stone artifacts were limited to the big milling slab and the two grinders shown in plate 12, *f*. The slab was 1 m. long, 65 cm. wide and 10 cm. thick. The upper surface was quite smooth except along the margins. The mullers were 37 by 30 by 20 cm. and 40 by 35 by 20 cm. These are not pushed, but rocked on the more convex of the two sides. In the photograph this is the surface on which they rest. My workmen had the same apparatus in use in their homes. Since I had no intention of transporting either the slab or the mullers by horse to Huamachuco, I offered them to the workmen who declined, explaining that the ancient people preferred heavier grinders than were found necessary at the present time.

The cultural material from the respective levels of this excavation show more contrasts than resemblances. The "cooking corner" on the yellow clay floor, with the cooking and other domestic pottery near it, represents the original occupation of the gallery. The small house with class B walls represents another and a later period of occupation, one which came after the gallery had been abandoned and had come to serve only as a foundation platform. The occupants of this Late house also show preferences for types of wares, forms of vessels, and styles of ceramic decoration which are very different from those of the people who first occupied the gallery. The evidence brought to light by Excavation 11 combines architectural, ceramic, and stratigraphic data to effectively settle the relative chronological positions of the two major categories of pottery and the chief types of buildings on Marca Huamachuco.

EXCAVATION 12

The first of the four excavations made in the round forts was number 12. Its location in Fort A is indicated in figure 11. This pit was dug in the corner of an open area surrounded by the walls of small rectangular buildings. From its general situation this opening might once have been a small plaza. Originally an area 1 m. wide and

2 m. long was cleared, but bedrock was reached between 40 and 50 cm. Consequently, the area of excavation was broadened and finally became a shallow pit 2 m. wide and 4 m. long. The bedrock was even closer to the surface at the southern edge of the pit than where the sides of the excavation were delimited by the walls of the adjacent buildings. The shallow character of the excavation is responsible for my decision to pool all of the material. The original excavation was dug in levels of 25 cm. depth. When the second level encountered the underlying rock, I examined the material from both levels and could detect no differences that warranted a separation between the two.

More than half of the undecorated sherds were a muddy brown color. This was a striking difference from what had been encountered in previous excavations. I am inclined to think that it is not a significant distinction but was due to some variation in the method of firing the pottery, resulting in a lower degree of oxidation. The most common type of vessels were cooking ollas with the ordinary convex and other types of rims. The most common variations are shown in figure 20, *j-m*. Parts of three plain bowls and the concave rim part of a jar, like that in figure 18, *j*, are to be noted. Three crude ear ornaments (see pl. 21, *a* and *b*) and the nose of a face urn, similar to the one shown in plate 21, *c*, were also found.

Handles exhibit a variety of forms. One flat, strap handle, another, round in cross section, and both lug and ledge handles were obtained. The lug and ledge handles from this excavation are shown in figure 15, *a*, *b*, *d*, *e*. Two fragments of tripod legs were recovered and three parts of ring bases.

A great variety of painted sherds was included. In addition to types which have been described from previous excavations (table 1, column 13), I may mention a sherd of buff ware with an orange-and-black design on a white slip. Another variant style is represented by a sherd of terra-cotta ware with a blue-black outer slip, on which are painted red and black designs.

Polished red ware was represented by only a few sherds, out of the total number excavated, but included among these is the bowl shown in figure 17, *d*. There were four sherds belonging to a vessel closely similar to figure 15, *k*. None of the latter fragments showed the rosettes, but two of them showed the same system of horizontal black bars. Two large vessels, with outward flaring rims, with diameters of 380 and 360 m., are shown in figure 20, *s* and *t*.

Fragments of several bowls in white paste are represented. Altogether, there were five ring bases in this ware. A sherd from the rim of a bowl in white paste of the type of figure 16, *g*, has the lip painted black and traces of a cursive design in the same color on the outside. A fragment of a hemispherical bowl like the one from Excavation 6 (fig. 16, *k*) was also present.

The material from Excavation 12 represents a mixture of the two kinds of material which in Excavation 11 were stratigraphically and in other ways separable. White paste and red ware sherds were present in the first 25 cm. of excavated material and one black-and-red on white slip sherd came from just above the bedrock at the southern edge of the pit.

EXCAVATION 13

Excavation 13 was a clearing effected in a small room just to the northeast of Excavation 12. About 20 cm. was removed from the whole area but the northwestern half was dug out to a depth which fell a little short of a meter before striking the bedrock.

The pottery from Excavation 13 was moderately abundant, including several rim fragments of ordinary convex-rimmed ollas. Fragments of several flare-mouth

pots, in both terra-cotta and buff ware, were recovered. The decorated ware lacks any of the white-slipped pottery with red or black-and-red decoration. Several sherds of the negative-painted red ware were found from a vessel which must have been like the one shown in figure 15, *k*, and in plate 22, *a*.

Six white paste sherds were found, four of them with cursive-painted decoration. The bowl fragments shown in plate 19, *q*, *r*, *s* and *z*, represent examples of cursive decoration on white ware. Fragments of two small spoons in a yellow paste are shown at *u* and *x* on plate 19. The designs are painted in red in a bold and careless manner, the lines are thicker and the total impression is of a style related, but not the same as the painted bowl fragments. The spoon fragment shown in plate 22, *b*, is unique. The bowl was originally about the size of a tablespoon and in the bottom is the remnant of a painted area in black leaving two round spots of the natural gray. The same technique of decoration used for the vessel at *a* in plate 22 has been employed on the spoon.

Two orange ware specimens deserve special comment. One is a bowl shown in figure 18, *k*, made in a gritty, orange clay, painted inside with red. The specimen is considerably worn and the design is not very distinct. The body sherd of a similar bowl in hard, orange paste has traces of an internal decoration of white and red lines.

The third specimen is in fine orange paste, covered with a reddish slip, and forms the rim and part of the side of what may possibly have been a quero-shaped cup. On the outer surface, are the remnants of a design in what appears to be a dark red, bordered in black. The design suggests a variant of the common step-fret motive. No other fragments comparable to this one were found in any of the other excavations; therefore, its real significance is uncertain, but it looks Epigonal.

A small irregular spike of copper was found about 60 cm. below the surface. It was the only metal object to come from the Cerro de las Monjas. Animal bones were encountered in limited quantity including what I believe is the humerus of a bear.

The sherds from this excavation resemble closely the material which comes from the deeper parts of the excavations on the Cerro del Castillo.

EXCAVATION 14

Excavation 14 was a pit with a width of 1.5 m. dug across the long narrow building in type A-1 construction inside Fort A (fig. 11). There was a very great amount of stone here, but the deposit had a depth which varied between 70 and 80 cm. before striking the natural rock floor. The greater part of the pottery from Excavation 14 consisted of plain, smoke-blackened cooking ware. There were a number of red ware sherds, but of the vessel forms it is only possible to isolate one similar to *f* in figure 20. A single sherd with the remains of a strip of applied decoration is shown in plate 22, *g*. Thirteen white paste sherds were recovered, but these are much worn, and two, only, preserve traces of cursive painted decoration in what may have been red. The fragment of the rim and neck of a jar like that shown in figure 18, *j*, was also found in the excavation. There is a part of a stout and heavy, broken leg from a tripod vessel, and there is a fragment of a hollow handle, such as was used on vessels of the type shown in figure 14, *l*. Part of a stone ax of the type shown in plate 16, *o*, was also found in this excavation. There is a very strong similarity between the sherd material from this excavation and that from Excavation 13.

EXCAVATION 15

Excavation 15 consisted of a pit 2 m. in length and 1 m. in width dug against the face of the small rectangular building in the center of Fort D (fig. 11). Between 30 and 40 cm. of deposit was all that was encountered before striking bedrock.

Only eighteen sherds were found in Excavation 15, and of these two were small fragments from a red ware vessel. The only decorated sherds were two ordinary terra-cotta pieces with red lines across them. There was no white paste ware, nor was there any of the white-slipped ware with painted designs.

EXCAVATION A

A series of lesser excavations, conducted primarily to provide information on specific points, was made in different parts of the ruins of the Cerro del Castillo. Excavation A is indicated in figure 9 and was made at the northeastern corner of the front wall of the Castillo. The wall at this point has a high, jagged edge (see pl. 11, *a*). In an attempt to determine what had been the form of the front of the Castillo I dug downward with the hope of ascertaining whether the lower courses of the masonry of the great outer wall continued forward and along what line. The broken edge was followed downward for 1.5 m. and the work was carried forward and outward for 2.5 m. The curve continued forward a short distance, about a meter, and then disappeared. To trace it farther would have meant great labor in moving rock and in digging very much deeper. One thing was clear, however, and that was that the curve of the wall did continue forward and that it was more pronounced than is the curvature of the side where it forms the border to the passage at *k* in figure 9.

EXCAVATION B

Excavation B was a similar test made at the northwestern corner of the Castillo. Here the excavation was 1 m. in depth and 4 m. long. Two large buried stones continued the curved line of the wall. Beyond them there seemed to be nothing. The curvature is very slight here and it is possible that the dotted line in figure 9 should extend forward in a flatter arc. Against this, however, is the general configuration of the ground. In both Excavations A and B large masses of rock and dirt heavily mixed with clay were encountered and little in the way of sherd or other material.

EXCAVATION C

Excavation C was a clearance made to determine the nature of the broken, sharply curved section of the outer wall of the Castillo where it joins the outer wall of the long gallery at *j*. Previously I have mentioned that the possibility of an entrance in this corner of the Castillo had suggested itself to me. The excavation encountered tremendous quantities of fallen stone, and while the curved character of the wall was clearly confirmed, the talus at this point is very thick and to have penetrated anywhere near the foundations of the wall would have meant prolonged excavation with a large crew. In consequence, my belief in the possibility of an entrance having existed at this point is unproven because the excavation did not penetrate deeply enough to settle the question. If the entrance existed, it may well have been one of the small entrances such as penetrate the thick walls of Gallery A. However, the thick and massive cross walls in the narrow passage at *h* give every appearance of having been constructed at the same time as the main walls and they would have effectively impeded the use of the passage as an entryway into the Castillo. I am dubious about the former existence of an entrance at this point.

EXCAVATIONS D AND E

Excavation D has previously been mentioned. It was a small clearance made in and alongside the small rectangular cistlike tombs which lie in the center of the plaza to the south of Gallery D (fig. 9, *y*). No sherd material was recovered. There

were a few fragments of human bones from former burials, but no clue to the age of the tombs was obtained.

Excavation E is shown in figure 8. It has also been mentioned previously. Excavation E involved the clearance of debris from the northern and northeastern corner of the tomb situated on the edge of the plaza. It was the only excavation of this type which produced anything in the way of archaeological material. The interior of the tomb (see fig. 1) sheltered a miscellaneous collection of human bones: part of a skull, two sets of femur shafts, three sections of the shafts of humeri, a part of the diaphysis of a tibia, and some other remnants. Two adults, probably a male and a female, are represented. Neither was very robust, but the man was above medium height.

The dirt and rock piled against the sides of the tomb yielded a handful of sherds. One of these was a stubby tripod leg in a gritty pink ware, another was part of a small bowl similar to the one in plate 22, *k*, and figure 15, *g*. Part of an animal head from a mold-made vase in coarse gray ware was another find. The small black ware theriomorph shown in plate 21, *d*, probably represents a llama. The tubular (?) spout was not joined by a handle to the head.

Six polished red ware sherds are included among this miscellaneous collection. One represents a bowl, like figure 17, *b*, of 200 mm. diameter. Another is a jar rim similar to figure 20, *w*. Another jar neck in red ware has the form of figure 20, *nn*, with a diameter of 300 mm.

A single white paste sherd was found. This belongs to a bowl similar to figure 16, *f*, has a diameter of 220 mm. and exhibits traces of a former painted design (cursive?) in black.

Thin metal laminae of the same character as those described from Excavation 6 were found and there was also a circular copper platelet 13 mm. in diameter with a perforation in the center. A minute, irregularly spherical, turquoise bead was noticed and retrieved by one sharp-eyed workman.

An undecorated ashlar slab of lava was found in the debris at the corner of the tomb. Its form and significance are discussed on pp. 298-299 in connection with the carved slabs shown in plates 16 and 17.

SURFACE COLLECTIONS

The percentages of wares in the sherd collection gathered from the plowed fields of the Cerro del Castillo are shown in column 16 of table 1. The high proportion of decorated material (34 per cent) is a reflection of the natural tendency to pick up material which catches the eye. This selection, however, emphasizes the obvious disparity between sherds with white slip or with black-and-red designs on white slip as against all other painted styles and particularly the sherds in cursive painted style (see pl. 19, *o*, *p*, *t*). The conclusion is inescapable that the common material lying on or just under the surface at Marca Huamachuco is the same as that which comes from what I have called layer 1 in Excavations 1, 7, and 11 and which is so fully represented in Excavation 3.

Among the plain wares the jar neck with conical lug handle shown in figure 15, *c*, is a further variant. The olla rims shown in figure 20, *d* and *o*, are surface specimens, the latter having a yellow-white slip. The specimen shown in figure 16, *e*, was picked up in the field adjacent to Excavations 7-9. It is a bucchero piece with a brown-black smoothed surface.

The poverty of ceramic and other material from Marca Huamachuco, of which Uhle complained, is true but like many other facts it must be judged relatively. The combination of winter and spring rains, plus a familiarity with the rich ceme-

teries of the coast, led Uhle to plaintive disparagement of the prospects of any worth-while excavation at Marca Huamachuco. The bulk of his collection was acquired by purchase or gift and represents objects turned up by the peasant cultivators in plowing the *chácara* or in other daily work. Some of the special pieces which were acquired by Project Nine-A were obtained in the same way. One of these is shown in plate 21, *a* and *b*. It is a section of a large face urn with a mouth diameter of 350 mm. and a rim and neck height of 190 mm. The ware is a gritty pink-orange. On this a cream-buff slip has been applied and over this a broad zone of purplish red, but leaving oval or round areas of buff color. The latter have been filled by red painted circles with a central red dot. A wavy red line has been painted on the buff slip at the base of the neck. The miniature hands hold a small flute to the mouth, the latter an irregular slash. The nasal septum is pierced by a crescentic ornament. The large ear ornament has red bands applied over the buff slip. This ornament was found on the hillslope below and north of the Castillo—an area in which Uhle hunted for tombs. The fragment shown in plate 21, *c*, is from a similar vessel but belongs to a more frequent type which lacks the nose ornament.

These jars of the face-urn type and of the size of the one just described are too small to have served as burial jars for anything larger than an infant. Moreover, I discovered no evidence which would indicate that cremation was ever practiced in the region. Jars of the face-urn type are to be associated with the later pottery of Marca Huamachuco and may represent special storage receptacles. Bennett⁸⁸ describes a "face-collar vessel" of the flute-playing type from the Gallinazo group in Viru Valley.

The three pots shown in plate 21, *e*, are the property of one of the members of the Serna family of Marca Huamachuco. The two cups are black ware and are related both in fabric and in form to similar cups of Late Chimú type. The small flare-mouth jar also shown in figure 15, *n*, is in terra-cotta ware, somewhat mottled from uneven firing. The dot-and-circle impressed design is punched directly into the base of the neck, but on the J-shaped appendage is pressed into an applied fillet of clay. This motif is repeated on the back. The ware, decoration, and form of this flare-mouth jar are duplicated in other specimens, both whole and fragmentary, from Marca Huamachuco. The three specimens were reported to have been "found" in the *chácara* to the southwest of Hill 1. The two black ware cups are the only Chimú-like specimens for whose genuine Andean provenience I was able to obtain even partially satisfactory evidence.

The two pots which were reported to me as having come from the destroyed niche, *p*, in Excavation 7, have already been mentioned in connection with the material from that site. It seems appropriate to include their descriptions with the other material which forms the surface collections from Marca Huamachuco. The small, ring-based, flare-mouth jar shown in plate 22, *gg*, is in a moderately fine orange paste, with traces of red slip over the external surface. It is an interesting form because it combines the ring-base support with the globular or biconical body and flared neck.

The handled dipper shown in plate 22, *ff*, has the remains of an upstanding crest, similar to the well-preserved one on the vessel shown in figure 14, *l*. This smaller example has a hollow handle closed at the end, is more crudely modeled and is in a rather gritty, sandy-buff ware. The sides of the body are channeled both vertically and horizontally and in these channels are traces of red slip. Bennett mentions a handled dipper which he found at the cemetery north of the great Castillo on the

⁸⁸ Wendell C. Bennett, Archaeology of the North Coast of Peru. AMNH-AP, 37:62. New York, 1939.

north side of the Viru Valley. His description²⁷ might well apply to the Huamachuco specimen except for the lack of any vertical flange. His specimen was unique in his fine collection from Viru.

The curious cat-head handle, shown in plate 22, *s*, is one example of the modeled ornaments that were used to decorate various projecting parts of pots. The specimens pictured in plate 22, *o*, *p*, *q*, were collected by Uhle and are further examples of this same type of decoration.

A variety of stone specimens were included in the surface collections apart from the sculptured pieces to be described later. In plate 16, *l*, is a quartzite cobble which has been flaked so that both surfaces are roughly convex. It has the appearance of a very rough tortoise core. Similar specimens of both larger and smaller size are encountered frequently in *chácara* on Marca Huamachuco. They probably represent clod-breakers.

Small grinding stones such as the one shown in plate 16, *m*, were also of frequent occurrence, both on the surface and in the excavations. These are usually in a fine-grained silicified sandstone and they frequently show the effects of use which resulted in battering the rounded ends. The big *chungus* (milling stones) such as were discovered *in situ* in Excavation 11 are also found in the fields; the smaller ones are reclaimed and used for grinding maize, *aji*, and the like by the peasants.

Club and maceheads in stone are of two general types. The common star-shaped stone club head is represented in my collection by a number of incomplete specimens and the usual type has five points. The disk-shaped club head, shown in plate 16, *n*, is the other principal type. This particular specimen is in a light green, fine-grained stone.

Stone axes are of varying types. Two common forms are shown in plate 16, *o* and *p*. The first is a plain, whole-grooved hammer ax, usually shaped by pecking, but with the convex cutting edge polished. The second type is represented by the incomplete specimen shown at *p*, in plate 16. This has pronounced lugs at the butt, the back is round, not flat in cross section, the blade is greatly splayed and the edge forms a flat arc. All of the specimens of this type of ax which I collected appear to have been formed by grinding rather than by pecking, and were made of the common gray quartzite.

STONE SCULPTURE

Several of the most interesting items collected on Marca Huamachuco are shown in plate 16. The square slab (*a*) is made from a hornblende andesite lava. The dimensions are 480 by 450 by 120 mm. The present surface is rough and somewhat weathered although originally it was well polished. The design is a simple one of steps running diagonally across the face and is formed by cutting out a subtriangular area to a depth of 5 mm. The fret is lacking and the step part of the design is the mirror image of the slab shown on plate 17, *c*. The slab was first shown to me in a field northeast of Gallery A. Inquiries as to its original find-spot produced the information that it had been found some years ago in a tomb. The location and the nature of the latter I was not able to ascertain.

During the clearing of the debris from the face of the tomb on the edge of the plaza west of Gallery B (Excavation E) a large square slab came to light. The surface that was first exposed was plain, but it was so nearly the dimensions of the decorated slab just described and of the same rock that I fully expected to find the other face similarly carved. This hope was unfulfilled—it was plain. The measurements were 450 by 500 by 130 mm. Later, when I came to measure the inner entrance to the tomb (fig. 1), I found that the width was 450 mm. and the height 500 mm.

²⁷ Bennett, *op. cit.*, p. 28.

I submit that there is no proof that this well-finished slab was used to seal the inner entrance to the tomb. There is, however, the testimony of Uhle regarding the specimen in plate 17, *b*, the information concerning the stone in plate 16, *a*, and the coincidence, if such it is, of the solitary ashlar slab of Excavation E to support the suggestion that stones of this form and with comparable types of decoration were used in connection with tombs. I might add further that, in my view, such use is probably a reutilization of these stones, the ashlar blocks of the same lithic character being most frequently found unassociated or occasionally incorporated in class B walls.

The lateral and face views of the stone head shown in plate 16, *b-d*, show its chief characteristics. It is also in lava of a light buff color. The head is 260 mm. high and has a maximum width today of 240 mm. The left side exhibits the remains of a projection which was undoubtedly an earplug. With the round tenon the whole has a length of about 450 mm. The headdress is intact and looks like a flat cap, lacking horns or other projections. The general modeling of the face is similar to the heads from Baranchique shown in plate 17, *o-r*, but the treatment of the eyes is different. Two elliptical grooves demarcate eyeball and lids respectively, and in this detail the specimen is the same as the head from Ucros shown in plate 17, *h*.

William Bollaert²⁸ shows two stone heads which he reports as having been brought to England in the 1850's by a Mr. Farris and which came from "the palace of the great chief, Marco Huamachuco." The upper figure in Bollaert's plate has resemblances both to the head here described and to the pair which Uhle obtained (p. 302).

The front and the back of a cut block of lava are shown in plate 16, *g* and *h*. This block was found piled on top of a wall on the southwest side of Hill 1. The designs, if such they can be called, are rather lightly incised with both U-shaped and V-shaped grooves. It has a median width and length of 210 by 250 mm. The central depression seen in *g* is irregular and made later than the radiating lines, the circular boundary groove, and the six small hollows. The significance of the secondary work on this cut lava block is obscure. Perhaps my conjecture that the block has been reused and that the lines are for some die or counter game may ultimately prove to have a foundation in fact.

The cut block shown in *j* of the same plate was found loose on the surface when the preliminary ground clearing was made for Excavation 11 (fig. 10, C). The shallow grooves are U-shaped and are as obscure in purpose and significance as are those on the previously described stone. The dimensions of this stone are 180 by 250 mm.

The two lava blocks shown in plate 16, *k*, have been referred to previously as samples of the numerous ashlar blocks which are to be encountered on Hill 1 and at other places on the Cerro del Castillo. The upper one is 320 by 240 by 140 mm. in size. The upper end of this block has been cut leaving a shoulder. This is a device which was used by Inca masons in what is sometimes called their architectonic masonry and also in plainer varieties of ashlar work. The example shown here is the only specimen I came upon. Beautifully dressed plain blocks of similar dimensions were fairly numerous. A larger cubical block of the same stone in the same ashlar technique is shown in plate 16, *k*, supporting the block just described.

Several other worked or dressed blocks of stone were also gathered from the perimeter of Hill 1. Among these is a shallow mortar made from a fine-grained, lavender-colored boulder. This is 27 by 25 cm. with the grinding depression 7 cm. deep. Another specimen is a long narrow ashlar block 40 by 22 by 20 cm. having

²⁸ William Bollaert, *Antiquarian, Ethnological and Other Researches in New Granada, Ecuador, Peru, and Chile*, pp. 202-204; pl. facing p. 201, London, 1860.

two square-cut socketlike depressions chiseled out of one face. Aside from its obvious architectural character, its special use is not clear. Still another specimen is a long and rather thin dressed block of lava with a rectangular depression in one of the broad faces. It has the appearance of a shallow metate with a slightly raised rim around the edge of the grinding surface.

THE UHLE COLLECTIONS: STONE SCULPTURE

The unique and outstanding part of the Uhle collections is the group of stone sculptures which he obtained from the vicinity of Huamachuco. These are shown in plate 17. The original field catalogue has notations of the places from which nearly all of them came. All of these specimens, except *a* of plate 17, are in the Museum of Anthropology of the University of California.

The photograph of the carved stone slab shown at *a* on plate 17 was taken by Uhle on Marca Huamachuco. The slab had been broken at the top and had been turned over and set up to form part of an altar in a small shrine constructed by one of the peasants on the mountain. I was unable to learn of its whereabouts and possibly it may have been destroyed or removed during the intervening forty years or more between Uhle's visit and my own. Uhle mentions that this slab was too big and heavy for him to carry away, but that it is of the same rock (lava) as the specimen shown in *b* of plate 17. It appeared to him to be a conventionalized cat's head and he remarks that it "is similar in its general shape to weaving ornaments." There is a striking resemblance to the geometric cat on the patchwork shirt, from the Middle period of Supe, described by O'Neale.³⁰ Designs on some of the embroidered Paracas textiles show felines with square eyes, triangular noses, and inwardly bent ears. No sculptures in stone of a similar style are known to me.

The specimen shown at *b* in plate 17 (4-3506),³¹ is the corner of a large slab similar to the example shown at *c* in the same plate. Number 4-3506 is made from a hornblende andesite lava with a vesicular ground mass.³² This was found in a cave tomb on the slope below and to the north of the Castillo. The block measures 320 by 250 by 145 mm. The step-fret design is the mirror image of the design shown on the large slab (pl. 17, *c*).

The complete and well-preserved slab of stone shown in plate 17, *c* (4-3576), is made from a compact hornblende andesite tuff. The dimensions are: 465 mm. in length and 370 mm. in width. The thickness is somewhat irregular although the back of the specimen has been carefully smoothed. The upper edge has a thickness of 120 mm. and the lower edge a thickness of 140 mm. All of the edges are beveled with respect to the face of the slab so that actual contact would have been along only the anterior margin of the block. The depth of the carving to produce the step-fret design is between 4 and 5 mm. Uhle says that the stone had been found, previous to his visit to Marca Huamachuco, about 200 m. to the south of the cave tomb in which number 4-3506 was discovered.

The sculptured head (4-3617) with stone tenon shown in plate 17, *d* and *e*, and the similar head (4-3578) shown at *f* in the same plate are the most remarkable specimens of the whole assemblage of sculptures. The length of the head parts of each are 28 and 50 cm., respectively. Number 4-3578 is made of greenish diabase and was found by Uhle on Cerro Amaru close to the well which he dredged and

³⁰ L. M. O'Neale, A Peruvian Multi-colored Patchwork, AA, 35:92, 1933.

³¹ Numbers such as 4-3506 refer to the specimen numbers of objects in the collections of the Museum of Anthropology of the University of California.

³² I am much indebted to Professor Charles A. Anderson, Department of Geology, University of California, for identifying the several kinds of stone used for the sculptured pieces and for the identification of the material employed in making the blue disk beads.

which is described on page 264. The specimen is weathered and somewhat damaged, but without doubt it is the one which Wiener illustrates on page 155 of his work.⁴² To Wiener must go the credit for having first discovered one of these specimens, but his statement that it formed an important part of the central court of the Castillo is undoubtedly as fictitious as is his plan of Marca Huamachuco. The woman from whom Uhle acquired his specimen assured him that there had been originally three such heads, one for each well (*chile*), and that they were known to be the guardians of the wells. Within her memory, one of the specimens had been taken to Huamachuco town. This is the specimen (no. 4-3617) which Uhle saw there and which he subsequently acquired.

A careful examination of both these specimens shows that the carving is the same. The only difference is one of gross size. Consequently, the description of number 4-3617 will serve to make plain the characters of both. The mouth of the specimen is shown open, with the four canine teeth prominently displayed at the corners of the face. The circular eyes form the most prominent points on the sides of the face. The backward projecting, curved line with a small cut-out subtriangular area represents a stylized ear. On the lower surface, underneath what would be the chin, is a small rectangular area outlined by a heavy incised line. On the top of the head are two backward projecting ornaments composed of three upstanding, triangular projections and terminating in quite recognizable puma heads. Between these ornamental bands and seen only from the front (pl. 17, *d*), is a projecting, triangular, raised piece with two vertical grooves. This represents a stylized treatment of the nostrils of the animal. All of the surfaces and parts just described are carefully smoothed and polished. The long tenon at the back, used for fastening the sculpture to the body of the wall, has a rough surface and the pecking technique used to shape it is clearly evident.

It is plain from his account of these specimens and from his long catalogue entry for each that Uhle believed there was a connection between these heads and the name "Amaru," which means "serpent" in Quechua. The highly conventionalized treatment is such that, superficially, they might be taken for serpent heads. There is no question in my mind, however, that they form one unit in the series of designs and sculptures which are derivable from representations of the jaguar or puma. The triangle-studded, ornamental bands with puma-head finials on top of the heads of these sculptures belong to the forms which Tello has illustrated in his article, "Wira-Kocha."⁴³

The stone head (4-3579) shown in plate 17, *g-h*, was acquired by Uhle who says that it came from the hacienda "Ucros," about a mile to the south of Viracochapampa. It is made of hornblende andesite tuff, is rather roughly worked, and in general is more primitive looking and certainly less sophisticated than are the jaguar heads previously described. The tenon at the back is roughly shaped and while the facial features of the specimen show some polishing, this was not very extensive, and the character of the stone is such that no high polish could have been obtained. From front to back, the whole specimen measures 370 mm., with a height of 300 mm. There is some resemblance to the stone head shown in plate 16, *b-d*.

Bollaert illustrates on the plate which faces page 201 of his book,⁴⁴ two heads which he says were obtained at Huamachuco and brought to England. The lower example on his plate has some degree of resemblance to the specimen which Uhle obtained at Huamachuco. Some of the differences may be due to Bollaert's poor

⁴² Charles Wiener, Pérou et Bolivie, Paris, 1880.

⁴³ J. C. Tello, Wira-Kocha, in Inca, 1:207-234, esp. figs. 35, 37. Lima, 1923.

⁴⁴ Bollaert, *op. cit.*, p. 201 facing.

drawing. His specimen has earplugs while there is no indication that they ever existed on number 4-3579. Bollaert reports that he was told by Farris that this specimen was one of eight which were set into a large pillar in the "palace" on Marca Huamachuco.

The human head in stone (4-3581) shown in plate 17, *j* and *k*, is given no location in the field catalogue. It is made of green-black diabase. The face has been considerably damaged and the details of the nose and mouth are almost obliterated, but the eyes are formed with the same double-incised lines that were used in making those of number 4-3579. The ears are clearly indicated and through the lobes are large cone-shaped earplugs with expanded ends. There is a clearly demarcated line above the forehead and there is also a thick crestlike ridge which runs across the head in a coronal direction. The specimen is now somewhat abraded but originally was well polished. The dimensions are: a height of 210 mm., a front-to-back thickness of 170 mm., and a maximum width of 190 mm. A head nearly the same as the specimen from Huamachuco is preserved in the Museum of the University of San Marcos and comes from near Cabana.

The specimen (4-3580) shown at *l* in plate 17, is part of a large slab of fine-grained granite porphyry which Uhle was told had been found in a ruined house at Purpukala hacienda, east of Huamachuco, not far from the earthwork of La Cuchilla. The human-headed figure in the center wears a large earplug, and what appear to be the fingers of the right hand are to be noted just below the chin. The crouching animal figure alongside the head is that of a puma. The detailed carving to bring out the features in both the human and the animal head is flat, although the major masses stand out in high relief; the whole block has been well polished. The damage to the specimen has been such that a little more than half is missing. The original dimensions must have been 680 by 385 mm. The lower edge appears to me to be an original surface; if the human figure had a body, it was on a separate stone slab.

The specimen has analogues in other sections of Peru. A central human head, or human figure is flanked by two feline figures which face each other. Tello illustrates several of these in "Wira-Kocha,"⁴⁴ where the locations are given as from Aija, Cajamarquilla in Huaras, and Carhuas. The examples which he shows are mainly lintels from above doorways.

Another specimen (4-3577) in the Uhle collections is shown in plate 17, *m-n*. This is a pillarlike stone with two roughly indicated opposed faces. Part of the crudity of the specimen is due undoubtedly to the use of a partly decomposed rhyolite. The catalogue notes that this specimen was found among ruined walls at Urpay at the foot of Cerro Amaru. There are some minor resemblances between this specimen and the stone head discovered at Coipín (pl. 16, *e*). The total height of the specimen is 390 mm.

The two human-headed corbels shown at *o* and *p* in plate 17 are companion pieces and come from Baranchique near Cerro Toro. They are made from the same hornblende andesite lava as number 4-3506, but have a somewhat denser ground mass. The figures *o* and *p* are shown on the same scale, while *q* and *r* are enlargements of *p*.

The essential features are plain to see—a horned headdress with a cat's head projecting above the forehead. Large disk-shaped earplugs pierce the lobes of both ears. The features of the face are somewhat crudely modeled, the nose is thick and also salient. Bollaert illustrates a specimen similar to this: with what was probably a projecting cat's head in front but without the upright horns. His information,

⁴⁴ Tello, *op. cit.*, figs. 33-37.

obtained from Farris, was that the specimen came from above a doorway on Marca Huamachuco. Two companion pieces exist today in Huamachuco that have some similarity to these specimens. They lack the projecting horns and the cat-head decoration, but have extremely large earplugs. These are in the possession of Padre Aguilar, who obtained them from Porcón near Santiago de Chuco. Uhle was struck with the resemblance of this class of heads to some of the fine modeled vases which he found at the Huaca del Sol and suggests that they may be contemporary with what is now called Early Chimú. In my view, they bear an equal or closer resemblance to the standing or seated human figures with elaborate headdresses on Recuay A pottery.

A small human head with stone tenon shown in plate 17, s, is entered in the catalogue without comment, but may well come from Marca Huamachuco. It is made of silicified tuff. It has been considerably battered, but the indications of the facial features point toward its having been well sculptured. There are no certain indications that it possessed either a headdress or earplugs.

STONE AND SHELL ARTIFACTS

The sixty-three catalogue entries for worked stone and shell objects include several thousand items, part of these being great quantities of small stone and shell beads.

There are seven complete or partial star-shaped stone club heads. They fall into two classes, one in which the shaft hole is drilled with what may have been a tubular drill, so nearly straight are the sides of the perforation (nos. 4-3481, 4-3485), while the other class (nos. 4-3482-3483, 4-3486-3487, 4-3608) has a pronounced biconically drilled shaft hole. All have six points and are made of either tough lava or gray quartzite.

Six stone axes belong to two types. There are two small and plump axes, one of diorite, 60 mm. long (4-3487), and the other of diabase, 57 mm. long (4-3488), which belong to the same family as the ax shown in plate 16, p, except that the lugs are reduced to small hooklike projections to hold the lashing. The other type (nos. 4-3489-3490, 4-3606-3607) is like the ax shown in plate 16, o. Number 4-3606 comes from Urpay. The common material is gray quartzite. The preliminary shaping was accomplished by pecking, the groove and the cutting edge were then ground.

Four stone balls are included in the collections. Number 4-3603 is a tuff ball 42 mm. in diameter. Number 4-3497 is slightly larger and is perforated off-center by a biconical drill hole 10 mm. in diameter. This is certainly a weight, perhaps a *bola*. Numbers 4-3479 and 4-3586 are two oval stones grooved around the middle. Number 4-3586 is made of a hard fine-grained stone, has the ends squared off and one of these is heavily battered. It looks like a stone dressing hammer. Number 4-3588 is a large irregular stone, 120 mm. long and 50 mm. thick. It has a 32 mm. hole drilled through the center and is a digging-stick weight.

Stone animal figurines are limited to three. Number 4-3465 is a small yellow-brown pebble 43 mm. in length that has been ground down into a schematized but clearly recognizable llama. Number 4-3494 is a larger figure, unrecognizable as to species. The head has four equally spaced little lumps on the top, and four similar nodules indicate the legs; 65 mm. long by 50 mm. high. A small, polished gray, animal pendant is 24 mm. long and is biconically perforated in a dorsoventral direction (see no. 4-3529).

Seven stone spindle whorls are represented by numbers 4-3501-3502, 4-3504, 4-3570-3571, 4-3601-3602. None of these are decorated, the only specimen having that appearance is a fossil shell of the sand-dollar type. The material is steatite or gray quartzite. In two specimens the sides of the 7 mm.-wide perforation are

vertical, the other specimens have been drilled from both faces and these may be convex, plano-convex, or two parallel planes. Diameters range from 27 to 40 mm. and thicknesses from 6 to 13 mm.

Number 4-3569 is a perforated rectangular stone 29 by 21 mm. with the ends rounded off. It might have served as a whorl. Number 4-3500 is a large whorl (42 mm. diam.) biconically drilled and with a deep-toothed margin.

There are seven stone specimens which have been worked, but their use and function are problematical. All of them are polished, some of them intentionally ground, and one of them has a tubular perforation. (Nos. 4-3463c, 3491, 3503, 3562, 3568, 3610-3611.)

The numbers 4-3463a, 4-3573-3574 include several score chert, jasper, and obsidian flakes. Some of them show bulbs of percussion but most appear to be natural flakes.

Fifty-three obsidian projectile points or fragments are registered under number 4-3531. Their basic form is a long pointed ogive with a squared-off base. Two of these points are shown in plate 19, *ee*. The breadth of base is a little less than the maximum breadth of the blade. Lengths vary between eight and ten times the width. None of the points exceed 62 mm. in length.

Five naturally smoothed odd-shaped stones are in the collections. (Nos. 4-3492, 3495-3496, 3498-3499). These are medium-sized pebbles which occur on the ancient sites and have been brought there by man. During the last part of my stay at Huamachuco I was able to examine a hoard of six curiously shaped stones; four of them showed human workmanship. They came from Cerro Sazón and had been plowed up, their container was a "pot" which had been destroyed. The modern peasants are convinced that these stones, singly or in hoards, are antiquities. How far this is an echo of ancient practice in this district is impossible to say, but reference to Garcilaso's account (see p. 331) of the belief of the ancient people of Huamachuco in charmstones indicates that many of these pebbles were probably of more value in the eyes of their long-dead owners than were the sherds and pots, which the archaeologist considers more interesting and rewarding for his labors.

Two of these stones are of particular interest in view of Cieza's statement that the people of Huamachuco "worshipped certain stones as large as eggs, and others still larger, of different colours, which they kept in their *huacas* in the snowy mountain heights." The egg-shaped stones are undoubtedly connected with the myth of Catequil, in which the maiden Cautaguan conceived and bore to Huamansuri two eggs, which hatched out Catequil and his brother Piguerao. Number 4-3492 is an egg-shaped smooth pebble of yellow travertine, 57 by 31 mm. in size. One of the Cerro Sazón pebbles is a naturally smoothed, chocolate-brown egg-shaped pebble, 58 by 38 mm. It has been perforated equatorially and a second drill hole made obliquely into the broader end.

Uhle collected forty-seven pieces (4-3463f) of small irregular lumps of a soft yellow ochre. Each piece is perforated by a conical drill hole. There is no indication of where they were obtained. They must represent, however, a trader's supply of this common pigment, sold in the ancient plazas just as the modern vendors sell the little heaps of aniline dyes.

The well on Cerro Amaru to which Uhle devoted a week, first in emptying it of water, and then in dredging out the mud in its bottom, yielded several kilograms of small disk beads of stone and shell. In addition, he must have purchased several made-up strings of the same beads. The catalogue numbers under which these are listed are 4-3532-3536, 3537 a-i, 3605.

The most numerous type is a disk bead of violet-blue color made from the hard

mineral Dumortierite. The variation in size ranges in diameter from 8.3 to 3.2 mm., with the most common examples having a diameter of 5.2 mm. All sizes have well smoothed edges and the large specimens have beautifully polished faces. The drill holes were made with a conical drill and may be from both faces or from one face only. There are between 12,000 and 13,000 of these beads.

The next most numerous type are little disks of turquoise or turquoise-like stone varying from a bright blue-green to an off-white, so faint is the green tinge. The largest specimens have a diameter of 7.5 mm., the most common kind, a diameter of 3.3 mm., and the smallest of only 2.0 mm. Normally their thickness, relative to the diameter, is greater than the blue beads. All of them are well polished, even the smallest specimens. The drill holes were regularly made in both faces. There are between 4,500 and 5,000 of these beads.

Shell disk beads number between 2,500 and 3,000. They range in color from orange through pink to white, depending upon whether they are made from the outside, the middle part, or the inside of the shell of *Spondylus pictorum*. The largest specimens have diameters of 10 mm., the most frequent size, 5.1 mm., and the smallest examples are only 2.2 mm. in diameter. To be associated with these are over 500 round or oval flakes of shell, each perforated, and perhaps representing a stage in the manufacture of the finished product. Sarmiento's description (see p. 333) of the aged priest, whom Atahualpa murdered, as "clothed in a dress reaching down to the ground, very woolly, and covered with sea shells" may give a clue to the use of these pierced flakes of shell.

There are also ninety larger fragments of spondylus shell, mostly in the form of narrow rectangular plaques. Similar specimens are common on the coast of Peru, numbers of them are found in the Uhle collections from Moche, and they are common at the shell "factory" of El Castillito at Chanchan. The shell beads and the unfinished shell pieces equal in bulk all the other bead material from the well. The exact source of the marine material is not known, but all the facts point to the northern coast of Ecuador as the nearest area where this shell was obtainable. By what route it reached Huamachuco is also an open question, but the most likely one was via the Chicama Valley and the Río Huancay to Usquid. The latter town is mentioned as being a dependency of Huamachuco.

Disk beads of a light-brown color are represented by only seventy-five specimens. They have the form and size of the green beads and are mentioned here because the change of color probably is due to fire.

In the same green stone from which the little disk beads were made are four cylindrical beads, drilled lengthwise. There are three undrilled cylinders. The longest is 16.5 mm. There is a group of sixteen square or rectangular flat plaques. These range in size from 12 by 9.5 mm. to 10 by 5.6 mm. and have thicknesses varying between 4.3 mm. and 1.6 mm. All of them are beautifully ground, not perforated, and while they might be gaming counters they would serve equally well as units of inlay work. One broken plaque with neatly incised lines has irregular outlines and represents a small animal similar in style to the ones shown by Bingham⁴⁰ in his figure 157. Similar carved plaques are in the University of California Museum's Moche collections. There are also sixteen irregular pieces of the same stone.

Number 4-3605 includes two short strings of disk beads of types previously described, a small pear-shaped lump of rock crystal and a large (22 mm. diameter) blue glass bead with gold speckles on the surface. These are mentioned as having come from Cerro Amaru and have the look of purchases. One of the strings has a long tubular blue-green glass bead and a short tube of purple-black glass.

⁴⁰ Hiram Bingham, Machu Picchu, p. 205, New Haven, 1930.

A barrel-shaped bead of stone (4-3530) with a length of 21 mm. and a width of 15 mm. has one half yellow, the other half a chocolate-brown, so cleverly has the ancient lapidary cut the specimen.

Number 4-3505 is a large three-sided bead or counter with the faces measuring 23 by 21 mm. Each edge is rounded off and the ends are square cut. The perforation has parallel sides as though cut by a tubular drill.

The two specimens (16-1736-1737) shown in plate 19, *cc*, *dd*, are the edge and one face of two steatite cuboids which were probably obtained by Uhle at Huamachuco. They are both perforated with holes of symmetrical diameters, seem too large and heavy to have served as beads and are clearly not pendants. A more probable explanation is that they were gaming counters or dice.

METAL OBJECTS

The metal objects number forty. These are predominantly of copper, silver, or an alloy of copper and silver. With a few exceptions, to be noted below, they were collected by Uhle. They came from the district surrounding Marca Huamachuco. Twelve of the forty specimens have been analyzed, ten spectroscopically and two gravimetrically. For permission to publish these analyses I have to thank Professor William C. Root of Bowdoin College. Professor Root, in an independent study of Pre-Columbian metals and metal working, has examined the Peruvian metal objects in the collections of the University of California Museum of Anthropology and has generously placed at my disposal the facts concerning that part of the collections from Huamachuco.

There are three copper topus (4-3513-3515) of the type shown in plate 18, *p*. The round racket-pin type is the most common form in this collection. Six silver examples are discussed below. Number 4-3514 has been analyzed spectroscopically and is of copper with between 0.01 and 1 per cent of silver, the latter undoubtedly to be regarded as accidental. Copper ores from mines near Huamachuco have varying contents of silver. Two of these pins, each with a punched perforation, have a length of 72 mm. and a width across the plate of 60 mm. The third is 45 by 40 mm.

Three swallowtail forms are exemplified by the specimen (4-3576) shown in plate 18, *f*. These came from Cerro Amaru. The upper edge in the figured specimen is damaged. A smaller example has two concavo-convex edges separated by a small notch placed in line with the pin. Only one of the three is perforated. Number 4-3576 has the same silver impurity (0.01-1 per cent) as did 4-3574. The two measurable specimens are: 4-3516, l, 255 mm., w, 53 mm., length of tail, 43 mm.; 4-3517, l, 227 mm., w, 30 mm., length of tail, 23 mm.

Two examples are included in the collections of the inverted hollow cone form with a perforated, swollen neck. They came from the northwest slope of Marca Huamachuco. One is shown on plate 18, *g* (4-3590). It has a length of 170 mm. The other specimen (4-3591) is the same type but is only 148 mm. long. Spectroscopic analysis shows copper with 0.01 to 1 per cent of silver. These specimens are not cast. The cone has been formed by beating out the end of the copper rod into a thin plate, then bending this so that the side margins overlap about 15 mm. The outer surface of the cone shows no trace of the join and gives every appearance of having been heated, hammered down, and then polished.

Two damaged nail-headed pins (4-3592-3593) have heads about the size of those of a twenty-penny nail, but the pin part is 190 mm. long. These came from the same area on Marca Huamachuco as the cone-headed topus. Both are perforated 20 mm. below the head, but the neck is not swollen. Analysis shows the same silver impurity as mentioned for previous specimens.

The copper topu (4-3595) shown in plate 18, *e*, is 140 mm. long. It is a cast specimen with a perforation in the swollen neck.

The large topu (pl. 18, *m*, 4-3609) is cast, the end is hollow and obviously designed as a receptacle for a wooden, bone, or stone ornament; length, 230 mm.

Three damaged topus (4-3522, 3566-3567) are too fragmentary to be classified according to type. One of the fragments has been analyzed and shows 0.01 to 1 per cent lead in addition to the silver impurity.

Two small copper pins (4-3520-3521)—one of them is shown in plate 18, *o*—are listed as coming from a cave tomb on Marca Huamachuco. Both are perforated through the slightly swollen neck. The illustrated specimen is 105 mm. long, the other 78 mm.

The needle (4-3519), *n* in plate 18, came from a cave tomb on Marca Huamachuco. Its other associations are not given. The specimen is heavy, 135 mm. long and has a median diameter of 3.2 mm. The eye is formed by beating out two flanges 20 mm. below the tip of the rod, bending the end of the rod down and then folding over and beating down the flanges over the bent tip.

The other needle (4-3523) is badly corroded, but its original form was a 75 mm. length of copper wire with a perforation in one end.

The chisel-ended implement, shown in plate 18, *l* (4-3462), is 180 mm. long by 30 mm. wide. The conical socket has diameters of 33 by 30 mm. On the back there is a long slit where the edges of two flanges were bent together. The shank and socket are decorated with incised crosshatched triangles and with rectangles so placed as to leave a plain meander design. Similar tools have been obtained from Chanchan, for example, and are probably the metal shares of the *taccla*.

The specimens shown at *d* and *j* in plate 18 are a massive adz (4-3615) and a large decorated fragment (4-3480) which may be part of an ax. The adz is cast, has a shaft hole placed at right angles to the axis of the splayed edge and the spectroscopic analysis shows copper with from 1 to 10 per cent of silver. Maximum length: 118 mm.; diameters of butt: 60 by 25 mm.; chord of edge: 80 mm.; diameter of shaft hole: 20 mm. The second specimen (4-3480) has been hacked and cut, having been used as scrap metal. The design is duplicated on the back. The two opposed concave margins represent original edges and if projected outward give a profile which strongly suggests the splay-bitted axes carried by the Early Chimú warriors and the demons of the painted vases.

The copper spatula or chisel (pl. 18, *h*; 4-3565a) is 170 mm. long, the blade is 12.5 mm. wide and the rodlike handle is perforated 10 mm. below the upper end. A companion piece (4-3565b) is a thin, flat chisel 67 mm. long with a splayed edge 12.5 mm. wide.

The semilunar copper plate (4-3597) shown in *k* of plate 18 has four perforations along the convex edge, possibly for rivets used in attaching a wooden or bone handle. Its dimensions are 70 by 100 mm. and the thickness is uniformly 1 mm. except along the straight edge which is thinner. It seems both too small and too thin to have been a hoe.

No. 4-3596 is an irregular square sheet of copper which looks hammered. By analysis it contains 0.01 to 1 per cent each of silver and lead in addition to copper.

The tumi knife (4-3466) in plate 18, *r*, has been cut out of a thin, flat plate of copper. It is 86 mm. across the blade and the maximum length is 97 mm. It differs radically from the specimen shown at *q*, which came from one of the looted niches at Excavation 7 on Marca Huamachuco.

Half of a copper tweezers is shown at *s* (4-3525). This is a fairly common type with a perforation in the center of the short rectangular bow.

The unique specimen in the collection of metal objects is the cast copper ornament (4-3589) shown in plate 18, *a* and *b*. The figure is that of a bat suckling two small figures which probably are to be taken as its young. Damage and imperfect casting made it difficult to be sure just what the small figures were meant to represent. The back of the object is hollow with a flanged circular rim which may have served to attach it to the original object of which it formed a part. Spectroscopic analysis shows it to have the same copper content, with a small trace (0.01 to 1 per cent) of silver, as do the copper topus. Uhle reported this specimen as having come from a mine in Cerro Toro near Huamachuco.

The small, cast bat's head (4-3524) shown in plate 18, *c*, is an even finer piece of craftsmanship. The open-work effect of the hollow head of the animal required the use of a *cire perdue* casting technique.

A small cast copper ingot (4-3526; 45 by 25 mm.), shaped like a small cupcake with five irregularly spaced "legs," has the usual silver impurity.

There is an irregular flat disk of a yellow-colored metal (4-3527) bearing numerous irregular chisel marks. On analysis the metal proved to have traces of silver and lead (0.01 to 1 per cent) and a small proportion of tin (1 to 10 per cent). This is the only bronze metal object known to be in the Huamachuco collection.

The two silver topus shown in plate 12, *u* and *v*, represent the extremes of variation within the racket-pin type of which there are six specimens (4-3507-3511, 4-3598). They vary in length from 210 to 155 mm., while the width is usually 8 to 9 mm. more than the height of the plate. All have been perforated with a circular punch, the rough edges are hammered flat. The pin parts of all of these specimens were originally flat strips 6 mm. wide and 3 mm. thick. These strips were hammered along both thin edges, then the beaten-up flanges were hammered over and smoothed down so that now the roughly circular pin has a diameter of 3 mm. Professor Root analyzed number 4-3507 gravimetrically and found it was composed of an alloy of 60 per cent copper and 40 per cent silver. All these specimens were presumably purchased in Huamachuco.

The silver pin (4-3512) shown at *t* in plate 18 has been cut out of a sheet of silver. This may well be of the same alloy as the topus. The length is 130 mm., the width of the plate 78 mm. and the projected height of the plate is 65 mm.

Two small, thin silver disks, one of them perforated, came from Cerro Amaru. Analysis of 4-3604 shows an alloy of equal parts of silver and copper with a trace of lead (0.01 to 1 per cent).

POTTERY

Sixty-eight pottery specimens were excavated or collected by Uhle from Marca Huamachuco and Cerro Amaru. He makes no mention of digging in any other site although he visited Cerro Sazón, Coipín, Viracochapampa, and the Purubamba end of the Huamachuco Valley. More than half the specimens have no locations assigned to them, but it is possible in some cases to infer that the site was either Marca Huamachuco or Cerro Amaru.

The assemblage is a mixed one. There are certain general peculiarities which must be made plain before commencing a description of the vessels. Uhle remarks of the specimens shown in plate 19, *e*, *g*, *h*, and in plate 21, *j*, that "these small fragments were the only remains of the pottery of a civilization older than the Incas met with during excavation in heretofore untouched cave tombs which contained skulls and bones and here and there an insignificant needle of copper. The civilization is unknown in museums and I can bring it in connection only with the fragmentary kinds of pottery, of later date than the civilization of Tiahuanaco and older than the Incas, met with during the excavations on the southern plat-

form⁴⁷ of the *huaca* of the Pyramid of the Sun near Moche." Of the specimens shown in plates 19, *f* and 21, *k* (see also fig. 14, *k*), Uhle says, "painted fragments of a vessel [sic], samples of a style probably the principal and peculiar style of the ancient civilization of Marca Huamachuco, of which no entire vessels have been left." My own excavations show that this cursive-painted ware is usually found associated with the polished red-slipped ware. Two small sherds of the latter kind of pottery are in the collections.

The greater number of whole pots, such as those shown on plate 20, *l-u*, are the fruit of Uhle's explorations in the cave tombs at the foot of the cliffs bordering Marca Huamachuco (see pl. 10, *d*). He makes no comments about them in his epis-tolary report to Mrs. Hearst and the first page of the field catalogue is missing, the duplicate of page 2 having been interchanged with it by mistake. There is no doubt whatever about the general provenience of the specimens—the field cata-logue numbers are consecutive and the style of the vessels is the same as those which are listed on page 2 of the catalogue. Some of these vessels may have come from wall tombs.

The decorated wares fall into two main classes, painted, and incised or punched. The first group is composed of sherds or vessels in several styles. The cursive-painted sherds shown in plate 19, *a-h*, are by no means the same. The specimens lettered *a-d* in the plate are not listed in Uhle's field catalogue and are not now in the Museum collections. Photographic prints of them were mounted on a dummy plate which Uhle prepared for publication about 1905. The negatives are in the Museum files. Specimen *a* has a pattern which is the reverse of *f* in the same plate (4-3653b),⁴⁸ and is a ring-base bowl of the same type as the bowl shown in plate 22, *ee*. Specimens *b* and *e* (4-3572b) may well be fragments from the same type of rim but from another bowl. The specimens *c* and *d* are rim pieces, possibly from the same vessel. The general style is the same as the decoration of the bowl in plate 22, *dd*, but the human figure is an unusual element. It undoubtedly represents an *orejone* and is cousin to the two little, big-eared figures on the only excavated sherd of this kind from Viracochapampa (pl. 19, *k*).

Two fragments of a small white paste spoon (4-3564b) were found on Cerro Amaru. This object belongs clearly to the class of utensils shown in plate 19, *u, x, y*. It has a crudely modeled human face and head with a crescent headdress placed on the inside of the bowl and there are flecks of a red slip which indicate the orig-inal character of the surface decoration.

The design on the large and much curved white paste sherd shown in plate 19, *g*, is so badly worn that it is impossible to make it out. The dark lines are in black, with some areas filled in with red. The form as well as the general technique of decoration seem to me to be transitional to the large sherd (4-3572g, *i*), shown in plate 21, *j*. This specimen is of ordinary terra-cotta ware with a polished dull-red slip, design units are outlined in black and some of them are filled with white. The scheme is black-and-white on red, the previously mentioned sherd, black-and-red on white. Number 4-3572 is, however, a section of the bowl part of a "maize popper" with a mouth diameter of 100 mm. and a maximum body width of 160 mm. The specimen shown in plate 21, *k*, and in figure 14, *k* (4-3563), was recon-structed from several fragments. It is a common form known on the coast (Early Chimú) and from the Callejon de Huaylas and unquestionably has a long history.

⁴⁷ Site A; see A. L. Kroeber, The Uhle Pottery Collections from Moche, UC-PAAE 21:196. Berkeley, 1925. Hereafter referred to as Kroeber, Moche.

⁴⁸ Illustrated in A. L. Kroeber, Archaeological Explorations in Peru, Part I: Ancient Pottery from Trujillo, FMNH-M, 2: pl. 11, fig. 5, Chicago, 1926. Hereafter referred to as Kroeber, Ancient Pottery.

On this specimen the design is plain to see, a zone of repeated step-and-fret units of a degenerate form painted in black, barred triangles in white paint alternating base and apex, two horizontal black lines below the rim and three below the zone of design with white paint filling the space between the central and the lower lines. The ware is a hard red paste with the surface burnished. The handle is solid.

In summary, we have the following facts to consider: the association at Marca Huamachuco of cursive-painted white paste wares with vessels painted in a style which is unquestionably the same as the Epigonal style of painting manifest on vessels from site A at Moche; the imitation in white paste and black and red paint of a form and a design (*g* in plate 19) which for the Huamachuco area is of foreign derivation. A hollow tubular handle (4-3563a) in orange paste ware is also to be associated with 4-3562 and undoubtedly represents another maize popper. Traces of the painted decoration indicate that the scheme was one of red stripes bordered by black lines, both of these being painted on a white ground.

The unique vessel (4-3549) shown in plate 20, *g, h, j*, is described by Uhle as a "painted perfuming pan. . . . By its style apparently very old; found below a stone wall." His report says in another place, "Only one vessel of those which I got upon the hill of Marca Huamachuco may give evidence of belonging to the same period as the sculptures (the heads from Cerro Amaru) mentioned before." Figure 14, *l*, shows the form of the vessel. It is an elaborate form of what Tello calls the "kushuna" type.⁴⁹ The ware is a fine pale-orange paste. The design is of brown lines on a cream-white ground. The zigzag design and the small crosses placed on the white panel and seen on the inner surface of the crest in *j* of plate 20 are filled with orange paint. That part of the flat rim which runs from one edge of the crest to the other, above the handle, has a repeat of the same design. On the outside of the crest (pl. 20, *h*) is another series of designs, barred hourglass elements in red, enclosing between them two concentric circles in brown. These were also enclosed in a panel surrounded by two parallel lines of brown, but the white painted background is absent. The body of the vessel and the handle appear to have been undecorated. The ware and the type of vessel (see pl. 22, *ff*) have analogies among my own collections, but the use of four colors, the form of the design elements, and the style of decoration, are unlike any other vessels which have come from Marca Huamachuco.

The small aryballos (4-3582) shown in plate 20, *d*, was acquired by Uhle in Huamachuco. It came from chance excavation in the court of a house about 250 m. east of the town plaza, probably from Inca graves. It is of terra-cotta ware with a heavy red slip covering the mouth, rim, neck, and the sides down to the carination. The horizontal panel has a design of black lines with white paint filling some of the spaces between them. Four white dots fill the centers of the lozenges.

The painted bottle (4-3539) shown at *f* in plate 20 comes from Cerro Amaru. This is in burnished orange ware and decorated with designs in red, bordered by black lines. Uhle remarks that the style shows Inca influence. The small jug with modeled face (4-3584) shown at *e* is in unpolished orange ware and is mentioned in this context both because of its Late character and because it also was obtained on Cerro Amaru.

The crouching monkey (4-3416) with tubular spout and bridge to head (pl. 21, *k*) is painted in black-on-white. The design motifs and especially the style, black dots filling white strips or zones outlined in black, are Middle period characteristics. The form has parallels on the coast and the pot would not be out of place in a Middle period assemblage.

⁴⁹ Julio C. Tello, *Antiguo Perú. Primera Epoca*. pp. 87-88. Lima, 1929.

A completely different style of painting from those described above is to be seen on the short-necked globular jar with conical lugs (4-3541) shown in plate 20, *l*. The roughly burnished tan surface is divided by crude red lines into a series of irregular metopes which are filled with carelessly painted spirals, circles with radiating lines and central dot, small circles, and irregularly placed dots. These are usually in black, but occasionally a spiral is doubled in red and dots are usually red. This vessel is definitely stated to come from Marca Huamachuco. A related vessel form (4-3544) is shown in figure 14, *c*, and in plate 20, *m*. This has big circles in brown (black?) sweeping around the conical lug handle and pendant from a broad band of the same color at the base of the neck. Inside these circles is a smaller red circle with central dot. The ware is roughly smoothed buff-tan.

The spheroidal face urn (4-3540; pl. 20, *n*) is the only specimen which shows both modeling and painting. There are traces of red paint about the face and there are faint suggestions of sweeping circles like those of number 4-3544 extending to the body of the pot. The ware is coarse, gritty buff-pink.

The small saucer shown in plate 20, *z*, came from a wall tomb on Marca Huamachuco. The smooth terra-cotta surface has been divided into irregular metopes, in the same manner as in pot number 4-3541, and then each of these has been filled by a single scroll figure in red. In form it is the same little curled scroll which occurs on the cursive-painted sherds (pl. 19, *a*).

The fragment of shallow plate (4-3558f) shown on plate 21, *l*, and the sherd (4-3558c) shown on plate 22, *r*, are both painted. The first has irregular, short, gray strokes on a burnished terra-cotta surface, the second is a piece of the white-slipped ware with black and red designs mentioned repeatedly in the description of the material from my excavations on Marca Huamachuco. These fragments were grouped by Uhle with plastic pieces to be described below.

Briefly summarizing this painted material it consists of four main groups: (1) vessels or sherds decorated in cursive-painted style; (2) vessels decorated in styles which relate to the mixed strains present in Middle Chimú; (3) vessels crudely painted in black and red with the surface broken up into irregular areas; (4) vessels influenced by Inca patterns and decorative techniques. The unique hollow-handled paste dipper does not fit readily into any of these categories but fits best into number 2.

The modeled or incised specimens are of three main kinds. The black ware whistling jar (4-3478) shown in plate 20, *c*, is a common Late Chimú form (sea lion). The fragment of a human face (4-3558d) shown in the same plate at *y* is also unmistakably Chimú. Not illustrated are two black ware stirrup spouts of equally certain Late Chimú character and manufacture. None of these specimens have a provenience and I strongly suspect that all except the face fragment were bought. Today it is not difficult to buy Late Chimú pots in the mountains. Some of them are obvious forgeries, others are genuine. That some of the latter do occur in archaeological contexts in the Sierra can hardly be doubted. The only specimens of Late Chimú type about which I have any confidence as having been found in the highland are the two cups mentioned on p. 297 and illustrated in plate 21, *e*.

The only piece of stamped or mold-made ware is the sherd (4-3558g) shown in plate 21, *n*. This is good coastal red ware with a fine micaceous sand temper and with "goose flesh" impressed design. Part of a round medallion is present.

The remaining modeled pieces are heterogeneous. Number 4-3550 is a large ear ornament like that shown in plate 21, *a* and *b*. It is covered with the same red-purple slip. Number 4-3558g is a fragment of a large face urn with a diameter of 180 mm. at the base of the neck. The two hands are holding a flute to the mouth,

which is represented by a horizontal slash (see p. 297). This has a pink-orange slip. The nose and eyes of two orange ware face urns are listed as 16-1491a and b. These are smaller than previously mentioned specimens although of the same style. The urn on plate 20, *n*, is a different type with the treatment of mouth and eyes more in the Inca manner.⁵⁰

Three modeled heads are shown in plate 22, *o-q*. The first of these may have been a deer (4-3557), the top of the head having not only the scars left by the two broken ears but a centrally placed scar as well. The specimen is hollow and on the forehead is a small perforation. The pink-orange ware has traces of a white slip in the grooves which define the mouth and the eyes. I think this may have been part of a whistling jar (see below).

The orange ware animal head at *p* (4-3558c) came from a wall tomb on Marca Huamachuco. It is a two-pronged handle. The charming cat head (4-3599a; *q* in pl. 22) is similar to the one Bingham⁵¹ illustrates in his figure 120, *b*, except that the head is turned away from and not toward the vessel. Number 4-3600 is a small, hollow, orange paste human head wearing a cap. The traces of black paint are too worn to make out how it was decorated.

Three rope nubbins to large ollas or aryballois are numbered 4-3599b, 4-3538b, 4-3558h. The first two are crude but recognizable cat heads, the third, a round nodule which has been quartered by two intersecting slashes.

The two black ware vessels shown in plate 20, *a* and *b*, are exotic. The crude theriomorph (4-3538) comes from Cerro Amaru. It may represent a llama. The other (4-3585) is a beaker form with modeled face and what may be a crown with thin incisions forming a simple decorated band in step pattern. This was reported as having been found on the slope of the mountain east of Viracochapampa (Cerro Sazón?). Uhle thought the style was Tiahuanacoid and it is the only statement he makes concerning Tiahuanaco influences observable in any of the antiquities he collected. To me it looks like a poorly executed and late attempt at representing the cat-headed god. Ware and style point in this direction.

The three whistling jars (4-3546-3548) shown in plate 20, *v-x*, are amusing imitations of a late coastal type—the tubular spout with bridge handle to head. Specimens *v* and *w* have tubular spout and head, no handle. They are in terra-cotta ware, undecorated, the nose and eyes are barely indicated while only *v* has ear flaps. The whistle holes are in the head itself and give the effect of a mouth. The specimen at *x* is more elaborate. This had a bridge handle, is in a sandy-orange ware and originally was covered with a red slip. The whistle holes are in a hollow round nodule which is completely covered by the false head with its headdress, earflaps, pierced eyeholes, and mouth. Two small hands are placed below the face. Examples *v* and *x* give the same high-pitched note, *w*, a shrill but deeper one.

The pots shown on plate 20, *o-q*, *s-t* and in figure 14, *d*, *e*, *g*, *h*, *j*, illustrate the range in the variations of incised or punched decoration. These consist of various patterns of simple incised lines, a series of simple circles may be punched in the soft clay leaving an upstanding central dot, or two concentric punched circles with dot may be made. The former I call dot-and-circle, the latter double circle-and-dot. Any one or several of these devices may be (1) punched directly into the pot surfaces or (2) punched into an applied and partly smoothed down clay strip, fillet, or a clay pellet. There are six decorated vessels (4-3486-3472, 4-3554). Five of these belong to what I have called flare-mouth jars. Essentially the body is biconical, the neck is constricted, and the mouth flares at roughly a right angle to a line

⁵⁰ Bingham, *op. cit.*, fig. 118, *e* and *g*.

⁵¹ *Ibid.*, fig. 120, *b*.

tangent to the midpoint of the upper body curve. The common type of handle is a small pierced lug. Number 4-3469 (pl. 20, *t*; fig. 14, *g*) is intermediate in form between the flare-mouth type and the globular jug shown at *c* in figure 14. All of these jars are of medium or small size. The undecorated flare mouth (4-3542; pl. 20, *r*, and fig. 14, *f*) is stated to have come from a wall tomb, while the decorated specimen (4-3554) is said to resemble in its decoration pots from Usquil. The ware of each of these specimens is a coarse tan terra cotta.

The remaining twenty-two specimens are unornamented. Eight of them are listed under the same number, 4-3474. This means that they probably came from the same place, and I think it likely that it was one of the cave tombs on Marca Huamachuco. One of them (4-3474a) is a small flare-mouth jug like the one in plate 20, *p*. Two others are shown at *aa* (4-3474c) and *cc* (4-3474b) in the same plate. Number 4-3474c has holes pierced in the rim on opposite sides as though for suspension. Numbers 4-3474e and *f* are smaller but similar in shape. Numbers 4-3474d and *h* are similar to 4-3473c (pl. 20, *aa*) but have the rim turned down and outward. Number 4-3474d has pierced lug handles while 4-3474h has the rim pierced with suspension holes. Number 4-3474g is a miniature juglet (diam. 47 mm., height 32 mm.) with pierced lug handles. All of them are indifferently fired, some a muddy brown in color, others a poor terra cotta.

The whole-mouth pot (4-3553) shown at *bb* in plate 20 is in yellow ware with a thin red slip on the outside. The form is unique in the collections. A small bowl (4-3475) is in smoked ware, hemispherical in form with a diameter of 57 mm.

Two ring-based saucers (4-3476a and *b*) are shown in plate 20, *dd*, *ee*. These are in brown ware, roughly burnished. Both have holes pierced in the ring bases and an alternative use is as pot covers, a string is passed through these holes and then through holes in the rim of the pot.

There are six small plates or saucers (4-3477a-d, 4-3551-3552) in brown ware with a single buff example. These are not illustrated, but are concave with very slightly flattened bottoms. The diameters vary from 165 to 65 mm.

The small canteen (4-3545) shown in plate 20, *ff*, is in light-orange paste of the same kind as was used for the handled-dipper (4-3549). Originally it had two pierced-lug handles, but shows no traces of slip or painting. One side is flattened, that facing the reader in the illustration. The vessel was either mold-made or modeled, the main form being shaped and worked through a large oval opening left in what is now the flat side. Then a thin flat plate of clay was placed in such a fashion as to stop up the hole and to form the side wall of the vessel. It has cracked along the lower arc of this join.

The big canteen (4-3555) with the single pierced lug shown at *gg* in plate 20 is in a mottled terra-cotta ware. Both sides are equally convex but are separated by a flat area which runs equatorially around the vessel and in part forms the flat bottom. This is a type which is not uncommon on the coast.

Number 4-3556 is a crude bottlelike small pot with impressions for two pierced-lug handles.

SUMMARY

Before proceeding further let me summarize the evidence to be gleaned from the Uhle collections. The sculptured stone pieces represent several distinct styles. The geometric cat head (pl. 17, *a*) is one. The slabs with step-fret design (pls. 16, *a*; 17, *b*, *c*) I would group stylistically with the cat-headed corbels from Cerro Amaru (pl. 17, *d-f*) into a second style. The human-headed corbels form two types, the head from Marca Huamachuco and that from Ucros (pls. 16, *b-d*; 17, *g*, *h*) forming the first, and the two heads from Baranchique and the fragmentary small corbel prob-

ably from Marca Huamachuco (pl. 17, *o-r*) the second type of style three. The fourth style includes the fine human head (pl. 17, *j* and *k*) and the fragmentary lintel (pl. 17, *l*). A fifth style, which is frankly a residuum, includes the double-faced carving from Urpay and the head from Coipín (pls. 17, *m*, *n*; 16, *e*). The other stones, plate 16, *g*, *h*, *j*, are not taken into account because it is doubtful if the work is primarily decorative in intent.

The fourth style has Highland connections to the south. The beautiful head which Tello illustrates in figure 46 of *Antiguo Perú* is nearly the same as the head on plate 21, *j*. It comes from the ruins of Pashash near Cabana, the latter town lying almost due south of Huamachuco and about seventy kilometers as the crow flies. It lies in the Chuquicara drainage area which connects with the Santa, not the Marañon. Resemblances of the lintel to reliefs from the Callejon proper have been previously mentioned. The second style may prove to be related to this fourth style, but at present I can find no published material to support or affirm such a conclusion. The other styles have even less tangible relations with other Peruvian areas.

Uhle says of the head from Ucros (pl. 17, *h*) that he "claimed it immediately as having belonged to the Incaic civilization" and compares it to the two stone figures in front of the door of the modern church at Tiahuanaco (i.e. in 1900). I fail to see the resemblance, and, as Uhle admits in another connection that the actual traces of the Incas are extraordinarily few near Huamachuco, it seems unlikely that this is Inca work. The two heads from Baranchique he likens to Early Chimú modeled vases. This again is unsupported by any other archaeological evidence.

The utilitarian stone work is not of much help in attempting to trace relationships; the forms and types are so imperfectly known for the Sierra and in great part undescribed for coastal areas. The shell beads demonstrate trade relationships with the coast but whether this was in Early, Middle, or Late times is impossible to determine with finality.

The metal specimens provide no clues to relationships. Individually, some of them can be matched or compared with tools or ornaments of the same shape from the adjacent coast, but there is no accessible data which deals with the problems of the appearance and history of metal forms either on the coast or in the Sierra. The general assumption that metallurgy is more ancient in the highland than on the coast depends on two facts: the sources of metalliferous ores are abundant in the mountains and the "Early" cultures on the coast have no metal or at least there is little evidence of metal working. The metal specimens treated here have few indications of specific locality within the Huamachuco area and no archaeological associations, nor do the few metal objects which I collected shed any light on the problem.

The pottery is a somewhat different problem. Previously I have indicated several groupings for the painted specimens. The modeled specimens give no decisive help in the task of assessing either areal relationships or chronological ones. The vessels with incised decoration belong with the coarse undecorated examples such as 4-3474 a-h. On the basis of my excavations they go with the red or black or red-and-black crudely painted wares, the painting done either on the natural surface of the vessel or on a white slip. Before attempting a final assessment of the evidence let us consider the material from the other sites near Huamachuco.

VII. ARCHAEOLOGICAL MATERIAL FROM LESSER SITES NEAR HUAMACHUCO

EXCAVATIONS MADE at lesser sites near Huamachuco include the two settlements on the east and west side of Lake Sausagocha and sites on the ridge above Lake Cahuanan. Surface material from several of the other localities discussed in Section III will also be considered.

CERRO SAZÓN

The sherd collection which it was possible to make at Cerro Sazón was disappointingly small. Only half a dozen sherds were collected, but among these are a white paste fragment and a polished red ware specimen. A number of the old courts either had been plowed in the past or were under cultivation at the time I made my visit, but sherd material was completely absent in most of them. In another place in this report I have mentioned the six pebbles which were shown to me as coming from this site. One of them was a jadeite cylinder 38 mm. long and 20 mm. in diameter, another was a triangular flat stone which had been perforated, and a third was a chocolate-brown egg-shaped stone which had been pierced through and then been drilled obliquely, although the oblique hole does not intersect the first-mentioned one. The other stones all looked to me like natural forms with possibly some additional smoothing or polish resulting from human handling. As negative evidence it is important to mention that incised or punched ware was not encountered nor was the black-and-red on white-painted ware, which is the common sherd material encountered on the surface at Marca Huamachuco.

CERRO CAMPANA EAST

Cerro Campana East (map 1, no. 30) was tested by nine excavations; the locations are indicated in figure 12, A. It will be well to place before the reader certain general matters before discussing the material from the excavations. First, a glance at table 1 will show that there is little decorated ware. Both painted and incised ware occur, but in none of the styles previously described. Second, there is no cursive-painted ware in either the excavated or the surface material. Polished red ware is present, but pieces covered by a thin red slip and without the high polish are more abundant. Red slip is applied to white paste ware and may be both thick and polished. Further, sherds with edges finished in the same way as the sherds shown in plate 23, o-s, may have a thick red slip. These chief differences must be remembered in interpreting the categories as given in the table.

Excavation 1 was made inside two short stone walls set approximately a meter apart and enclosed by a semicircular row of stones. These abutted on one of the cross walls on the uppermost and central part of the site. Rock was reached after digging 60 cm. No fragments of human bones were recovered, and if this construction had been a tomb it had been rifled long ago.

Table 1 indicates the proportions in which the different wares occur. Seventeen per cent of the light-brown sherds are of two types: the first, a thin, hard, and smooth polished ware, like that of the cooking pots from Excavation 11 on Marca Huamachuco; the second, a thick and coarse sandy ware. One vessel in this material had a flaring rim like the rim of the pot in figure 14, j. A small globular jar is represented by the rim sherd shown in figure 21, gg.

Polished red ware is present in limited quantity. A small bowl (mouth diameter 170 mm.) has a rim like figure 21, xx. White paste ware is relatively abundant. It is worth noting, however, that this ware is more frequently decorated with a reddish-

brown slip (fig. 21, *d*), or with red bands on the rim (fig. 21, *j*), than it is with painted designs. One small sherd of yellow paste ware was decorated with closely spaced parallel bands of alternate black and red lines.

Excavation 2 consisted of the clearance of a previously made pit, which had the appearance of a collapsed tomb entrance, and the excavation of the pit to a somewhat greater depth. The dimensions were 1.2 by 1 m. and the final depth reached was 70 cm. No special features were encountered in clearing it and the superficial suggestion of a border of stones was proved to have been due to rock left on the margins of the former excavation.

Only sixteen sherds were found and two thirds of these were of the coarse sandy tan-brown ware. There was a fragment of a colander in this ware.

Excavation 3 was made on the western side of the central wall of the fourth level below the top of the settlement. It attained a length of 3.2 m. and a width of 1 m. Bedrock was reached at a depth of 30 cm. The excavation obviously penetrated the deposits of a house, for a rough milling slab, a fragment of a mortar in pink rhyolite, and three small mullers were found.

The predominant ware from this excavation was buff or light-brown. A strict separation was impossible. The terra-cotta sherds tend to an orange color and the coarse black ware sherds may all come from the same vessel. The most interesting material from this excavation was a series of rim and neck fragments from ten distinct vessels with what I have called sigmoid necks. The neck and rim profiles shown in figure 18, *a-b*, *d-h*, all came from this pit. The variation in form from a neck with a concave profile to one with an S- or even a Z-bend is plain. The type shown at *d* is the most common one (3 examples). They represent variants of the same type of vessel as the one from Marca Huamachuco shown in figure 18, *j*. Pots were made in orange, orange-pink, buff, or black ware. I was able to satisfy myself that the bodies of these pots were predominantly globular or spheroidal.

The reconstructed bowl shown in figure 19, *a*, comes from this pit. While it is a small-sized specimen it represents the most frequently encountered type of pot in this site, a spheroidal bowl with incurving rim.

The percentage of red ware sherds from this test pit was twice as great as for any other excavation. Three rim types can be identified : the first is like figure 20, *u*, with a mouth diameter of 260 mm.; the second is like figure 20, *v*, with a diameter of 320 mm.; the third is like figure 20, *y*, with a diameter of 240 mm., but lacks the two ridges below the beaded rim. There are no white paste sherds, the nearest to these are some thin sherds, buff-gray in color. One of them has a trace of red paint.

Excavation 4 was a pit 2 m. long and 1 m. wide. It was dug in the narrow room immediately to the east of Excavation 2. The deposit here reached a depth of 1 m. before encountering the bedrock. The most common sherds (table 1, column 28) were a muddy-brown color with some specimens showing a previously unencountered surface treatment. This is shown in plate 23, *ee-gg*. The surface looks as though it had been scratched with a very fine comb or what is more likely, brushed with a moderately stiff fiber brush. The light-brown ware shows this same treatment. In the latter fabric are the two bowl rims shown in figure 21, *cc* and *gg*.

Red ware sherds include a shallow plate like figure 18, *m*, and a bowl with the same profile as figure 20, *mm*. White paste sherds include one hemispherical bowl with a diameter of 100 mm. and a wall thickness of only 2.5 mm.

Excavation 5 was made in the corner between two thick walls. Their thickness is greater than that of the majority of the walls erected on Cerro Campana East, and in addition, they represent the very highest point of the entire settlement. This pit was 2 by 2 m., reaching rock at a depth of 60 cm. It also produced the second largest

number of sherds. The percentages of the different kinds of wares are shown in table 1, column 29. Ten per cent of the tan-brown and dark-brown sherds are brush-marked (pl. 23, *gg*). Painted decoration is simple, consisting of red lines or bands on the natural surface or on a buff slip (one example). A sigmoid-neck jar of the type of figure 18, *e*, is represented. The bowl in figure 19, *c*, is reconstructed from a rim sherd found in this excavation. The thickening at the rim led Uhle to call this rim type comma-shaped. In the specimen under discussion a series of short vertical incisions have been made on the outside of the rim. This, and other equally simple forms of incised decoration are standard for this site. Other rim types of the same kind of vessel are shown in figure 21, *w*, *bb*, *mm*, *nn*, *vv*.

White paste vessels commonly have a red or a burnt-orange slip. Two bowls of this type were found and resemble figure 21, *a*, and figure 20, *mm*, respectively.

Excavation 6 was dug in the large rectangular area immediately to the southeast of Excavation 5 (fig. 12, A). It had dimensions of 2 by 1 m., and as in Excavation 5 reached rock at a depth of 60 cm.

Bowls with incurved rim in dark-brown ware included one like figure 19, *a*, and another like figure 19, *c* (see also fig. 21, *v*, *x*). A third type is shown in plate 23, *p*. This has a milled rim. One thin, simple hemispherical bowl in light-brown ware is represented in figure 21, *a*. This bowl has an exterior red slip while the interior surface is covered with a highly polished orange-brown slip.

Excavation 7 was dug in a corner between two fairly well-preserved walls. It had dimensions of 1.5 by 1.3 m. and attained an average depth, because of the originally sloping surface of the deposit, of 80 cm. The walls are built on a rather thin footing of earth immediately above the bedrock and the highest intact part of the wall at this point was 1.8 m. One rather shallow, very roughly made mortar approximately 26 by 27 cm. in outside dimensions, was recovered.

The dark-brown ware seemed to be mainly from bowls with incurved rims. Two examples of the brush-marked sherds are shown in plate 23, *ff*. Eight per cent of the plain dark-brown sherds are so treated. Figure 21, *kk*, is a new type, others are like figure 21, *gg*, *xx*, *yy*. Open bowls like figure 19, *g*, and figure 21, *a*, were found. One red ware sherd has traces of a black painted design that has as its only recognizable element a small hooked fret. Incising was found on two plain sherds shown in plate 23, *t*, *u*.

Excavation 8 was a very long and narrow pit. Its dimensions were 3.5 by .70 by .50 m. Dark-brown sherds were very abundant, two new rim forms are shown in figures 20, *oo*; 21, *r*. Both belong to open bowls of 200 mm. diameter. About 8 per cent of this ware is brush marked. Red ware sherds, one with doubtful traces of black painted design, are mostly from open bowls such as those shown in figure 21, *e* and *m*. These have diameters of 200 and 240 mm., respectively. A simple undecorated bowl in white paste is shown in figure 19, *f* (see also fig. 21, *h*).

Excavation 9 was dug at the southern end of the ruins. It had a length of 2.3 m. and a width of 1.6 m. There were walls on three sides and the deposit had a thickness of 60 cm. There was an excellent yield of sherd material; over five hundred fragments were recovered. Tan-brown and dark-brown sherds averaged between 30 and 40 per cent brush marked. One large example is shown in plate 23, *ee*. The neck part of a flare-mouth jar like figure 14, *h*, shows this ubiquitous form. The bulk of the sherds, however, are from bowls with incurved rim. These have mouth diameters of 180 or 200 mm. and rims of both the simple comma-shaped type and variants like figure 21, *z*, *dd*, *hh*, *rr*. A large terra-cotta bowl with traces of a red slip is shown in figure 19, *b* (see also fig. 21, *y*). The rim of a deep cooking bowl of smoke-blackened terra-cotta ware is shown in figure 20, *pp*. Most of the sherds with a red slip show

no very high degree of polish; but a white paste cup had a heavily polished thick red slip.

The orange paste bowls with bands of red paint are new forms. These are shown in plate 23, *aa-dd*, and in figure 17, *e, g, h, j, k*. The bowls represented by *h* and *j* in figure 17 have diameters of 180 and 130 mm., respectively, the rim is strengthened by laying on and smoothing down a strip on the inside and this is painted red while a corresponding red band is painted on the outside. The two bowls, *e* and *g* in figure 17, are of related types; one has a notched edge. The shallow bowl (fig. 17, *k*) has the flat top of the rim painted red, the edge notched, a red band painted inside, but no decoration on the outer surface. The repeated association of white paste, orange paste, and red ware vessels with the coarser cooking pottery shows that the former were household fabrics and not restricted to mortuary usage.

The proportions of the different wares in the surface collections from Cerro Campana East are shown in column 34 of table 1. The rims of several large jars with mouth diameters of 200 to 400 mm. are shown in figure 20, *p-r*. These are in terra-cotta or tan-brown ware, *q* having both the inner and the outer surface of the thick lip punctured by a row of coarse, vertical incisions. A variety of rim shapes from enclosed bowls in dark-brown, tan-brown, or orange terra-cotta ware are pictured in figure 21, *aa, ee, ff, jj, ll, oo, pp, ss, tt, uu, ww*. These consistently have mouth diameters of 180 to 200 mm. Open bowls of various sizes, but again with average mouth diameters of approximately 200 mm. are in orange (figs. 20, *kk, mm*; 21, *o, t, u*), red-slipped (fig. 21, *b, c, f, n, q*), and in white paste (fig. 21, *k*) ware. Sherds with incised or modeled edges are illustrated on plate 23, *o* (fig. 20, *ll*), *q* (fig. 21, *mm*), *r* (fig. 21, *l*), *v-x*. The specimens with the rope-finish edge are especially common. Several sherds of large polished red ware jars with rims and necks like figure 20, *dd, ff*, were found.

Two of the chipped quartzite clod-breakers were picked up (see pl. 16, *l*), and a large chipped ax in the same material which looks like a rough ovate Acheulian *coup-de-poing*.

The excavated and the collected material are distinctly different from material described from Marca Huamachuco in one important respect. It is all homogeneous both in pit-to-pit comparisons and as compared with the surface sherds. There are a number of other differences from Marca Huamachuco and also some significant resemblances. These will be discussed when the data from the other sites have been presented.

CERRO CAMPANA WEST

Three excavations were made at this site and are indicated in figure 12, B. Excavation 1 was made in an inner corner of one of the rooms forming the circular row on the upper plateau of this settlement. Its dimensions were 1.6 by .80 m. and the pit went down 1 m. before striking rock. The walls at this point are not built on the bedrock but extend only 50 cm. below the present surface.

In column 35 of table 1 are shown the percentages of the different kinds of wares and it is evident that there is similarity to Cerro Campana East. Sherds which showed form were not very abundant. They included a flaring olla neck like figure 15, *m*, and a hemispherical red ware bowl of 200 mm. diameter. A grooved quartzite ax of the type of plate 16, *o*, was fashioned by flaking and pecking, with the edge ground and polished.

Excavation 2 was carried out in one of the outer rooms of the first terrace. This location was selected because the series of rooms around this curve of the terrace gradually descended and the deposit was thicker against the lower cross walls. This excavation had dimensions of 1.4 by 1.1 m. and at a depth of 1 m. encountered a

floor of broken yellow rock. This was a prepared floor and excavation into it was not only difficult but completely unrewarding so far as archaeological material was concerned. One large grinding stone or *chungu* was obtained in this pit and a very considerable quantity of pottery. Sherd percentages are shown in column 36 of table 1. There were several bowls of the type of figure 18, *p*, and a sigmoid-neck jar in buff ware was found (fig. 18, *c*). Well-polished red ware sherds numbered about one third of the total of this class of ware. In the remainder, the slip was originally thin and has been adversely affected by burial. None of the pottery was decorated and there was surprisingly little that gave any clues to vessel forms.

Excavation 3 was made in the center of a small rectangular structure whose isolated position is shown in figure 12, B. A test pit with dimensions of 1.7 by 1 m. was made inside this small building and reached bedrock at 60 cm. below the surface. It proved to be virtually sterile of sherds, only twelve were found. One of these was red-slipped and polished.

There was not a great deal of surface material. Two more axes were picked up, like the one previously described from Excavation 1, and both polished red ware sherds and one thin white paste sherd were found.

THE CAHUADAN SITES

As I have said in an earlier place in this report, the tombs on the pampa west of Cerro Campana West attracted my attention, and when the third pit at that site provided virtually nothing in the way of cultural material, I shifted the workmen and began to probe the masonry chambers shown in figure 12, E. This proved even less rewarding than what the workmen had been doing previously. Despite a vigilant watch, only four sherds were found in the three excavations.

Two of these were the characteristic polished red ware, one from Excavation 1 and the other from Excavation 3. There were a few very small and much weathered sherds among the heaps of rocks which now mark most of these tombs. Most of these sherds were the common dark-brown or the terra-cotta wares which were the standard household fabrics of antiquity in this part of the Sierra. Red-slipped sherds were few and I found no white paste specimens.

The other tombs on the pampa promised no better luck so I decided to test the deposits in the fort which lay just north of the tombs, on the ridge above Lake Cahuadan. The excavation is shown in figure 12, C. A spot was selected which appeared to be in one of the corner cubicles in the central keep of this settlement and a pit with dimensions of 1.5 by .80 m. was made. Tremendous quantities of fallen stone were encountered. I persisted in carrying the excavation to a depth of 1.25 m. without encountering a floor. This labor was unrewarded—only nine brown or gray indeterminate sherds were found and when one of the workmen just missed smashing his foot in a struggle to hoist a heavy stone out of the four-foot deep pit I stopped the work.

CERRO AMARU

The ceramic material which was collected from Cerro Amaru numbers sixty-four pieces. Repeated plowing makes sherd collecting easy, and in consequence two general features of the lot as a whole are of significance. Red ware and white paste sherds are more readily met with than on Marca Huamachuco; second, I saw no incised pieces and collected none of the coarse wares in brown or gray with black-and-red designs painted on a white slip, or the dull terra-cotta ware with black-and-red designs of spirals or circles painted on the unslipped surface. Sherds of Inca ware of Cuzco polychrome type were not collected either, unless one small sherd of

hard tan ware with a red stripe bordered in black is an exception. Terra-cotta sherds are the most common (43 per cent) while white paste (two cursive-painted fragments) and polished red ware have a frequency of 11 per cent each.

During my examination of the well and its surroundings a few of the tiny turquoise and Dumortierite beads were picked up and I obtained a star-shaped club head which I was told came from the hill. It is the same as one in the Uhle collection.

COIPÍN

The three excavations made at this site were widely spaced in order to get a fair sample of archaeological material and also to lessen the chances of striking a barren area such as a former plaza or court. The pit which was dug near the old huáqueros' excavation produced not a single sherd. The second pit was dug in what I hoped was the corner of a house. It produced about twenty of the twenty-five sherds which were recovered. Among this lot of twenty is one dirty-buff ware jar neck with a diameter of 130 mm., shaped like figure 18, f, but set more vertically and with a slightly obtuse angle between the neck and the jar body. One thick terra-cotta sherd had been covered with a white slip on the outside.

The third pit was also designed to test house refuse. Five dark-brown indeterminate sherds rewarded the labor spent in digging and examining over a cubic meter of dirt and rock.

The stone head shown in plate 16, e, was the principal discovery. It was lying against a wall in a mass of loose rock. It is 33 cm. high, 36 cm. wide across the base and 30 cm. from front to back. A horizontal cross section at the level of the mouth is triangular in shape with the halves of the face arranged symmetrically on either side of the apex of the triangle. There is no tenon and the base is flat. If we make allowances for limitations imposed upon the artist by the shape of the original block, the head is primitive, yet not certainly aboriginal in style.

The stone column base on which the head rests was found close by and was used as a support to photograph the sculptured piece. All the details of the cutting of this block, the three rings at the top, the general proportions, are European in origin. Coipín formerly boasted a chapel with plastered walls and arched niches, and this column base may have served as a pedestal for the font.

Perhaps I am biased in regarding the coexistence of the chapel and this strange head as more than a coincidence, but my first impression on viewing this head, in the bright Andean sunlight, grows stronger with each reexamination of the pictures of it. There is something European about the features—as though some devout native sculptor set about to fashion a saint's head on the basis of his memory of pictures of long-haired saints grouped about the Madonna and the infant Jesus. I doubt that the head is pre-Conquest in date.

There are also two large flat boulders each with well-cut circular depressions in their tops. The holes have straight sides and level bottoms, one is 30 cm. across and approximately 5 cm. deep, the other 40 cm. wide and 10 to 12 cm. deep. Except for the cutting of the holes the rocks are untrimmed. The holes are the wrong shape to have been mortars and too small and shallow to have been rotary mills. There is nothing to indicate either their function or their age.

Apart from these stones, all of which raise questions which cannot be settled, surface collecting for sherd material proved fruitless. A few scraps of terra-cotta ware told nothing as to the nature or the age of this settlement.

SUMMARY

The comparisons which can be made between the material from the Sausagocha sites and others in the area are obviously closer with the material from the second layers of Excavations 7 and 11 on Marca Huamachuco than with material from an excavation such as number 3. The resemblances include the common use of the sandy tan-brown ware with the outer surface well smoothed, the use of white paste, orange paste, and the presence of the polished red-slipped ware. The large shallow colander, jars with sigmoid necks, and similar rim and neck profiles for polished red ware jars and bowls are present in both groups of compared material. The lack of handles is a general similarity. Another point of resemblance is the application of black painted designs on the polished red ware, although at Cerro Campana East there is no evidence of negative painting.

Elements which are distinctive of the Sausagocha sites are brush-marked wares, the greater prevalence of unpolished red-slipped vessels, the use of thick polished red slip on white paste vessels, and incising and modeling the edges of jars and bowls, using techniques quite distinct from those employed at Marca Huamachuco. New and very characteristic vessel forms are the large spheroidal bowls with incurved rims of the comma-shaped and related types. The Campana sites lack certain features highly distinctive of Marca Huamachuco, notably the style of cursive painting, ring-base bowl forms like those in figure 16, *c-k*, and bucchero ware employed for other than utilitarian forms.

Cerro Campana East and the companion site on the other side of the lake clearly belong to the ceramic complex manifest in the lower parts of the deposits at Marca Huamachuco, that which belongs to the galleries and other structures of class A construction. The lack of any connection with the pottery of the small houses of class B construction at Marca Huamachuco is evident and need not be further elaborated. Whether Cerro Campana East represents an antecedent stage of the ceramic complex of the long galleries of Marca Huamachuco, a rural but contemporaneous phase of the same, or an epigonal variant of it is less easily decided. The most unlikely one of the three possibilities is an epigonal or dependent relationship. The absence of ring-base forms and of cursive painting of any sort, degenerate or "pure," makes this alternative seem improbable. The simple answer would seem to lie in the first possibility: an antecedent relationship to the earlier of the two Marca Huamachuco complexes. There is much to recommend this view on the basis of typological and stylistic grounds, but I am hesitant in proposing this without some stratigraphic evidence. My hesitation is based primarily upon the lack of any clear evidence of how far Marca Huamachuco may have been able to draw to itself outside cultural influences and create for itself a partly synthetic culture, one not typical for the region in its larger geographical sense. Consequently, I prefer, at present, to think of the Cerro Campana East complex as an earlier and overlapping phase of a culture which reached its highest degree of development among the builders of the long houses of Marca Huamachuco.

Cerro Sazón and Cerro Amaru are certainly contemporaneous on architectural grounds with the earlier phase at Marca Huamachuco. Only at Cerro Amaru does the surface ceramic material partly confirm this. The absence of any clear evidence of the period of the small class B houses at these sites can be reasonably accounted for in several ways. It is most probable that these walls of inferior construction would be the first to be cleared away by the post-Columbian agriculturalists.

The Cahuadan and Coipín sites did not yield enough evidence to certainly relate them to any others.

VIII. ARCHAEOLOGICAL MATERIAL FROM VIRACOCHAPAMPA

THE VISIT of reconnaissance which I made to Viracochapampa, shortly after first arriving in Huamachuco, showed that sherd and other material was very scant on the surface. This was true despite clear evidence that many parts of the site had been plowed intermittently for a long time and that archaeological evidence was, therefore, not lurking below a compact turf or grass cover. This circumstance taken in combination with a complete absence of any specimens attributed to the site in Uhle's collection, and visual evidence on my survey journey to Marca Huamachuco that surface collecting, at the least, would not be unrewarded at that place, impelled me to postpone immediate work at Viracochapampa. When I did finally set up camp there toward the end of November it was without any very high expectations of finding either abundant or fine material. That this surmise was an accurate one is plainly demonstrated by table 1, columns 18-25. Only those excavations which yielded more than eighty sherds are shown.

Several general statements should be made at this point before plunging into the description of the material from each pit. The dark-brown ware, which I usually referred to in my notes as mud-colored ware, is usually darker colored than at either Marca Huamachuco or Cerro Campana East. When it has been secondarily smoke blackened, as it commonly is, it is impossible to make positive and consistent distinctions between it and real smoke-black pottery. Buff-colored ware is consistently abundant and represents a cultural difference and not the greater availability of the requisite clay. It is a fairly coarse gritty fabric and not to be confused with the white paste ware, some of which is grayish or yellow.

The twelve excavations made to test the archaeological deposits at Viracochapampa are indicated by numbers on the plan of that site in figure 13. In general, the deposits at Viracochapampa have an initial layer of black-colored humus with a thickness of between 10 and 20 cm. Below this is a layer of varying depth that represents a mixture and partial alteration of old humus and of red clay. The bright red clay is the characteristic material that lies above the bedrock of the pampa. This red clay was met in all the excavations and appears to be completely sterile of cultural material. The same difficulties which made a stripping technique useless at Marca Huamachuco were present here. My examination of the material as it came out of the pits gave no hint of stratification, and subsequent analysis of the material bears this out.

The first pit was dug nearly across the width of the most northern gallery of the series which surround the plazas indicated at *k* on the plan. The excavation was 4.5 by 1.6 m. and reached a depth of 1 m. At a depth between 80 and 90 cm. at the southern end, the pit penetrated what was quite certainly a hearth with the brown clay soil becoming very black in color.

The sherd percentages are shown in column 18. The principal vessel forms which could be reconstructed are jars in a coarse-tempered black ware of the type shown in figure 18, *t*, *u*, both with loop handles and without them. Another type is a high-collared jar with slightly flaring mouth—this is a common Late Chimú form. Jars with flared short necks (fig. 20, *cc*) and several types of bowls, hemispherical or with forms like figure 18, *o*, *p* were fairly abundant. Larger ollas with convex rims like those shown in figure 20, *a*, *c*, and *g*, are also present.

Ten tripod legs of various sizes were found. Some of these are shown in plate 23, *g*. The ware is dark brown to dull terra cotta. No hollow examples were found. The type of bowl to which some of the legs were attached is shown in plate 23, *h*. This vessel is reconstructed in figure 18, *s*. The coarse black and thin fabric had been

given a buff slip and a broad red band then painted on the outside just beneath the lip. The horizontally placed lug handle (not a true ledge handle) has four short, jabbed incisions on its upper surface. Handles, whether of the lug or of the broad loop type are frequently jabbed, punctured, or slashed.

Painted sherds were limited to four specimens. Three of these are shown in plate 23, *a-c*. The red, or red-brown on a buff or cream slip creating the formal geometric patterns is markedly different from either the cursive designs of the white paste bowls of Marca Huamachuco or the carelessly executed, but vigorous patterns shown in plates 20, *l*; 22, *c*. One sherd had a line of red painted on the natural terra-cotta surface.

Modeled pieces include the appliqué arm and hand in plate 23, *d*, and the small lime jug at *e* in the same plate. These are in buff ware, the first of good quality, the second with coarse sand temper. The crudely modeled and incised face shown at *f* in plate 23 is from a coarse gray-black jar neck.

A number of fragments of very thin orange paste sherds were found. When they were finally fitted together, they had the form of the four pieces shown in plate 23, *n*. The upper right-hand segment is the convex exterior surface of one section, the other three pieces are presented with their interior surfaces showing. Figure 17, *m*, shows how they fit together at small contact surfaces near the narrow ends. The slots, formed by the edges not in contact, and the round hole at the top, are all a part of the design of these pieces. The parts vaguely suggest sections of a clay envelope used in glue-mold casting, but the fragility of the paste and its thinness make this improbable. They are not themselves mold sections, since plasticene impressions made from them show nothing.

Excavation 2 was a pit 3 m. long and 1.5 m. wide. It was dug at a point near the middle of the north wall of the same gallery as that in which Excavation 1 was made. It too was dug out to a depth of 1 m., but 70 cm. of this depth was in the red clay and produced absolutely nothing in the way of artifact material. There was only 5 cm. of the brown clay material, which appears to be the main culture-bearing stratum in Viracochapampa.

Twenty sherds were found. All except one are undecorated and are in no way different from the terra-cotta, dark-brown, black, or buff sherds from other pits. The one exception to the foregoing is the white paste sherd shown in plate 19, *k*, a section from a rim like that of the bowl in figure 16, *f*. The design is in reddish brown on a cream yellow ground, is painted crisply, but is a variant type of cursive painting. It may be some time before it is possible to adequately establish and define the true cursive style of painting from the Highland areas of north Peru, but the predominant characteristic will be its nonrepresentational character. Consequently, the schematic little *orejones* which appear on this sherd are a witness to its epigonal character.

Excavation 3 was made, on the other side of the north wall of the previously mentioned gallery, in what had been either a passage or a narrow gallery not exceeding 2 m. in width. The pit had dimensions of 2.6 by 1.8 m. and was carried to a mean depth of 90 cm. Only about 20 cm. of the brown clay culture stratum was encountered.

Sherd material was moderately abundant. A large jar with a high (90 mm.) flaring rim like figure 20, *gg*, was found, as were two ring bases in buff ware. A flat, loop handle of terra-cotta ware with an incised X similar to the one in plate 23, *k*, was found. More than a score of sherds with polished red slip were recovered. I suspect that most of these belonged to an olla with short flaring neck of the type of figure 20, *cc*, and with a mouth diameter of 220 mm. A number of sherds with

red lines painted on the natural surface were also recovered. These may belong to a single vessel, but no pattern to the design could be made out.

Excavation 4 was made in a narrow gallery whose internal walls had opposed rows of quartzite corbels and small niches. An excavation, 1.8 m. in length and carried to a depth of 1.3 m., was made across the whole width of the gallery. Red clay represented 90 cm. of the deposit. It is interesting to note that the side walls continued down, and there is the strongest possible suggestion that the red clay soil may have been washed by rain or packed into the bottoms of the galleries to form floors. The alternative is that the bases of the walls were built in trenches excavated in the red clay, but this seems unlikely. As I have previously indicated, only the upper part of the red clay material at its contact with the brown clayey soil yields any archaeological material.

The material from this pit was not very informative. One neck of a buff ware olla (see fig. 20, *a*) had a brown painted lip and a brown line painted across the base of the neck. Two terra-cotta solid tripods were recovered. In the dark-brown ware there were two small loop handles, an impression for a tripod leg, and a lug handle.

The fragmentary skeletal remains of a small woman, twenty-five to thirty years of age, were found scattered through the length and the breadth of the pit 20 cm. to 25 cm. below the surface. The indications were of a previously disturbed burial.

Excavation 5 was dug some meters farther west in the same narrow passage in which Excavation 3 was located. Excavation 5 was a pit 2 m. long by 1.8 m. wide and was carried to a depth of 1.6 m. The only difference between this sherd material and that from the other pits was that all the buff sherds have a distinct orange tone. Half of a ring stand in this material was found. A jar neck of the type shown in figure 18, *u*, was made in terra-cotta ware. The flattened loop handle had a circular impressed pit in the center of its curve, and, where it had been smoothed on the body and against the lip of the jar, a series of three short vertical incisions had been added as decoration. A small well-polished limestone tablet (75 by 50 by 10 mm.) with no signs of use was also among the material recovered from this pit.

Excavation 6 was a pit made in the corner of the most northerly of the plazas at *k* and had dimensions of 1.8 by 1.5 by 1 m. The combined depth of the loam, humus, and brown clayey dirt was again not more than 40 cm. The bottoms of the walls were not reached in the excavation and apparently continue on down into the red clay. Eleven undecorated sherds were found, five black, four terra-cotta, and two buff ware.

Excavations 7 and 8 were made in a small open court. The first of these was 3 by 1 m. and was discontinued after reaching a depth of 60 cm. Excavation 8 was 2.3 by 1.5 m. and was discontinued at a depth of 30 cm. It was apparent from the very small yield of material that this area had not been a zone of habitation. Sixteen sherds were found in the two pits. A fragment of a coarse terra-cotta tripod was found and a section of a hard-baked strap handle. This specimen was unique in being rectangular in cross section, the edges were squared off in the manner of Inca-type handles on handled beakers and bowls.

The excavations made within the large square, just to the east of the great street, both individually and collectively yielded the greatest amount of archaeological material. Their situation in this area of small, much ruined rooms has already been mentioned in Section IV.

Excavation 9 had dimensions of 4 by 1.5 m. and was dug beside a partly exposed section of wall. The pit penetrated the red clay soil at a depth of 45 cm. but was continued downward to 70 cm. and then stopped. Sherds were abundant from the 40 to

45 cm. of cultural deposit, consisting largely of dark-brown, buff, black, and terra-cotta sherds. Decoration is by incising or punching; one ring base in buff ware with a brown slip was the only specimen exhibiting this manner of surface treatment. Convex rims of small and large ollas were numerous. Flare-mouth jars and collared jars with flanged lip were also present. A jar neck with a jab-decorated horizontal lug handle is shown in plate 23, *j*, and in figure 18, *t*. Several ring bases in black ware and a tripod leg of the same were found. Two jar necks with flattened loop handles in terra-cotta ware are shown in plate 23, *k*, *m*, and the latter specimen is also shown in figure 18, *n*. A short tripod (40 mm. high) in the same ware was present.

The buff ware includes several ring bases, a fragment of tripod leg, and two interesting forms shown in figure 18, *q* and *r*. The first is a thick-walled bottle, the second a thin-walled olla form with a flanged lip. This latter feature, in one variant or another, is common in this sherd assemblage. Fragments of some polished red ware jars were found with rims like figure 20, *t*, *w*, and *cc*. An olla with a neck profile like figure 18, *q*, but with thin walls and with a mouth diameter of 200 mm. was covered with an even, unpolished red slip. A number of other sherds with the same surface treatment may belong to this vessel.

Excavation 10 was made in a corner between two walls set at right angles to each other and reached an average depth slightly in excess of 1 m. The last 30 cm. consisted of sterile red clay. The percentage figures of the different classes of wares provide nearly all the information that can be gleaned from the material (table 1, column 23). Three small loop handles, three ring bases, and numerous simple convex olla rims are the only clues to form. The red ware sherds were much worn and abraded.

Excavation 11 was made along the side of still another wall and had a length of 2 m., a width of 1 m., and was discontinued at a depth of 40 cm. Among the black ware sherds was a thin paste sherd not unlike some found on Marca Huamachuco. Two tripod legs of terra-cotta ware were found, one a long specimen (110 mm.), and another large, buff ware tripod leg is present in the material. A gray-colored sherd with an orange slip is the only decorated specimen. Two red ware sherds were found.

Excavation 12 was a small pit 2 by 1 m. and struck the red clay at 30 cm., at which point it was discontinued. One buff olla rim of the simple convex type was the only sherd to show form. The sherds from all of these excavations were small in size and many were abraded. The material from Excavation 12 showed these characteristics to the greatest degree.

The opportunity for surface collecting which my mapping of Viracochapampa gave me was not neglected. A total of eight sherds was gathered. Among these are two tan-ware sherds with red line designs of circles, exactly like sherds of the same ware and decoration collected on Marca Huamachuco. There is also a tripod leg fragment. The most interesting piece is the small, white paste sherd with black painted designs whose two sides are shown in plate 19, *l*. It is the rim part of a bowl of the type of figure 18, *f*. The right-hand picture shows a design similar to that of the large bowl in plate 22, *ee*. The inner surface is cursive in style, but badly done and more akin to the spoon fragment shown in plate 19, *u*. The sherd from Viracochapampa has a hole bored through it, made presumably to aid in mending the bowl.

Before passing on to describe the material from the sites north of Cajabamba it will be well to summarize the information concerning the ceramics of Viracochapampa. The character of the pottery is ill-matched with the appearance of the town.

All wares are coarsely tempered, not well baked, and decorated in the most crudely conceived manner. The two cursive-painted pieces, one from pit 2 and the other from the surface, look strange and out of place in the total assemblage. Polished red-slipped ware does occur but in very limited quantities.

New vessel forms are represented by bowls, and probably other vessel forms, with tripod legs. These occur in some quantity but are either plain or with the most simple kind of decoration. Loop or lug handles set close to the mouth of an olla are another feature not commonly met in previously described pottery collections from the district.

The marked differences between the Viracochapampa ceramics and that found near Lake Sausagocha is too evident to need further comment. The differences between the type of material from the lower part of Excavation 11 on Marca Huamachuco and the Viracochapampa pottery should also be clear. There is at Marca Huamachuco a class of pottery which has some resemblance to the pottery of Viracochapampa. I refer to the vessels, shown in plate 20 and in figure 14, which Uhle found in cave tombs and wall tombs. Painted decoration is crude, and appliqué strips or incising is a frequent decorative device. Flare-mouth vessel forms are unquestionably present at Viracochapampa, but not one sherd with dot-and-circle decoration was found. The only painted material in the style of the pots shown at *l* and *m* in plate 20, was found on the surface. Buff ware was a favorite fabric at Viracochapampa, not very popular on Marca Huamachuco. There are half a dozen fragments of tripod legs in the many thousands of sherds from Marca Huamachuco. At Viracochapampa they are numerous. The result of these considerations impells me to differentiate clearly between all the pottery from Marca Huamachuco and the wares from Viracochapampa, with the reservation that certain vessel forms of common type, cooking ollas, and shallow dishes or plates, are similar. With minor changes they exist today in the same region. To be noted especially is the virtual absence of design motives of Inca type. The two sherds, *a* and *c* in plate 23, are the only ones suggestive of this relationship.

IX. ARCHAEOLOGICAL MATERIAL FROM THE CAJABAMBA REGION

LA EMINA

THE JAR NECK of an aryballoid vessel has been briefly mentioned before (pl. 21, *g*). It is in terra-cotta ware, lacks pierced lugs below the lip, and has alternating red-brown and white horizontal bands on the narrow neck. There is a small, flat strap handle which probably comes from the same vessel and a large body sherd with a streak of red paint across one corner. The material, both in ware and decoration, might well have been collected on the surface at Marca Huamachuco.

PAMPA DE LOS QUINUALES

A collection of seventy-one sherds was made near several of the tombs on the highest part of the pampa. They were picked up from among the gravel and small stones which covered the large cap-stones. There is no reason to question their association with the sepulchers as not one whit of evidence points to this area as having been used for anything but a necropolis, if one excepts the occasional passage of herds of grazing llamas in time gone by and of sheep in the last few centuries.

The sherds are of three kinds: the regular terra cotta (17), a coarse light-gray ware with sand temper (26), and small nondescript gray-brown sherds (28). Two of the terra-cotta sherds are white-slipped with the remnants of red line decoration and six are painted with red lines on the unslipped surface in the same careless bold style that was so frequent at Marca Huamachuco (see pl. 22, *h*). There is a fragment of a strap handle of the type of figure 15, *f*.

The gray ware is like nothing I had encountered previously. Five sherds are orange-slipped. Ten sherds of this same fabric are slipped with a brown color and have remnants of a linear decoration in a reddish-purple color. One sherd exhibits this decorative treatment on both surfaces, the others only on the convex side. The same reddish-purple lines appear on the natural gray surface of eleven sherds. These sherds showed that before being painted the ware was smoothed with the pores filled by the rubbed-up suspension of clay, only the large grits showing through here and there. The peculiar purple paint, in addition to the ware itself, was not noted by me for any of the Huamachuco sites.

The fine white paste, red ware, and bucchero pottery, which conceivably might have been found near these tombs, was conspicuously absent.

CUEVA DE LEÓN

Thirty sherds were gathered along the ridgetop between Otuto and Allangay haciendas. Two thirds were sherds of terra-cotta ware predominantly without decoration and of small size. One decorated specimen is shown in plate 22, *u*, and is the familiar red on natural ground, in this example a tan-brown color. It is a fragment of a jar with the same type of decoration as the sherd in plate 22, *h*. The remaining third of the sherds were a dull-gray or brown color.

CERRO PABELLÓN

Despite the thick grass which covered this site, several places were discovered where the rains had cut into the edges of the terraces, and from these twenty-six sherds were collected. Five terra-cotta sherds included one with a blue-gray slip (?) which can be matched among rarely encountered ware at Marca Huamachuco. Twelve dark-gray or brown sherds tell little. Nine sherds, or more than one third of the

collections, are of white paste. All are weathered, but one still has the remnants of a red slip. Five of these are very smooth and harder than is usually the case farther south, and all are thin (2 to 3 mm.). This sample was not selected, for I gathered everything visible.

THE PEÑA NEGRA

The fort above the Peña Negra (see pl. 13, f) provided sixty-nine sherds. It is an unselected lot because I collected all visible sherds from the few exposed sections left by small rivulets which had cut into the terraces. Eighteen white or light-gray paste sherds which seem to have come from small hemispherical (?) bowls represent 26 per cent of the total. Two of them are not only hard but very thin, resembling Chinese or Indian eggshell ware in this respect. A single orange-slipped and a single red-slipped sherd give the only clue to the mode of decorating this ware. If cursive-painted designs were once present, weathering has long ago destroyed them. Twelve plain terra-cotta sherds give no cause for comment except to mention a flat loop handle in this ware. One dark-gray sherd was an olla neck like figure 20, c. None of the thirty-eight coarse buff-gray sherds reveal any vessel forms, but several have a definite pink flush.

The unprofitable nature of surface collecting on the small long abandoned sites near Huamachuco had prepared me to accept small or insignificant amounts of surface sherds with gratefulness. As a consequence I am conscious that the material from the Cajabamba region is inadequate, yet at the same time it does provide some suggestions when considered with our slightly fuller knowledge of conditions near Huamachuco. Both areas share the use of white paste ware for thin-walled vessels. In both there is the use of sprawling red-painted designs of dots or circles within large circles. The full consideration of the respective relationships of these styles can be postponed for the moment. Nowhere in the Cajabamba region did I find sherds of the polished red-slipped ware. Conversely, I know of no site near Huamachuco which would supply 25 per cent or more of white paste sherds in an unselected sample gathered from the surface. These facts must not be taken as implying a deep and fundamental distinction between the southern and the middle parts of the Condebamba River system. Polished red ware will certainly be found, if it is not already well known in this latter region, and white paste pottery, in certain special situations, will prove to be abundant in the Huamachuco section of the territory. But the distinction does have some meaning and this I propose to examine, along with some other questions, in the following pages.

X. HISTORICAL BACKGROUND AND ARCHAEOLOGICAL INTERPRETATION

THE PRECEDING sections of this report have introduced a minimum of comparisons and of judgments assessing the matter of either intra-areal or of interareal relationships. Where these have been added to the descriptive account the purpose was to make interareal relationships clear to the reader in terms of objects or relationships probably known to him. I propose now to do two things. The first will be to make a digression and look at what history or legend has to say about the Huamachuco region. This should have some bearing upon whatever historical and archaeological judgments it is possible to make. The second will be to summarize and evaluate the archaeological data and to see if a combination of the different kinds of evidence provides an intelligible and not inconsistent whole.

The earliest written account which we have concerning the region of Cajamarca and Huamachuco is found in the record of the journey which Hernando Pizarro made to Pachacamac and which was written by Xeres and by Estete.⁵² Neither of them make any mention of the significance of the name of the district nor is there any reference to the same subject in Garcilaso.⁵³ According to Paz Soldán,⁵⁴ there are at least two alternative meanings. One combines *huamac*, meaning newly invented or made, and *chucu*, meaning headdress. The alternative is the more likely one and uses a combination of the word *huaman*, meaning falcon, and *chucu*, meaning cap or headdress. The word *marca* in Quechua and also in Aymara has the common meaning of town or village, but in Quechua it also has, according to Paz Soldán, the additional meaning of something which is hidden or carefully guarded.

The antiquity of the mound under the church of San José and the statement by the Augustinians mentioned on p. 256 make it certain that modern Huamachuco had some ancient buildings. Which one, then, of the ancient sites in this region was visited by Hernando Pizarro and his company after they left Cajamarca on January 5, 1533?

Miguel Estete says in his Narrative that the party left Cajamarca and spent the first night at an unnamed spot five leagues from Cajamarca. Raimondi⁵⁵ suggests this place was near or at the modern pueblo of Jesús. They stopped for dinner at Ychoca which is the modern Ichocan. The same night they spent at a "small village" called Huancasanga, this place being subject to Huamachuco.

He then says,⁵⁶ "Next morning he (Hernando Pizarro) reached the town of Guamachuco, which is large, and is situated in a valley surrounded by mountains. It has a beautiful view and good lodgings. The lord of the place is called Guamanchoro, by whom the Captain and his companions were well received."

The direct and the most practicable route from Ichocan to Huamachuco is to cross the Río Crisnejas near Puente Malaga and then strike south to Cauday and Cajabamba. It is a reasonable supposition that in January both the mounted Spaniards and the arquebusiers and the Indian guides who went on foot would keep out of the valley bottoms. To reach Huamachuco from Cajabamba in half a day means an early morning start and no dallying. Consequently it seems probable that Huancasanga was situated in the upland east of the Condebamba Valley between the modern pueblos of Cauday and Marcabalito, if not near the latter. The only draw-

⁵² Estete, *op. cit.*

⁵³ Garcilaso, *op. cit.*

⁵⁴ M. F. Paz Soldán, *Diccionario Geográfico Estadístico del Perú*. Lima, 1877. p. 387.

⁵⁵ A. Raimondi, *El Perú*. II:29 ff. Lima, 1874.

⁵⁶ Estete, *op. cit.*, p. 75.

back to this last suggestion is that it makes the journey in one day from Jesús to Huancasanga an extremely long one. At any rate it is worth noting that no large settlement is mentioned between Ichocan and Huamachuco and that the dominion of the latter place extended with all probability as far north as modern Cajabamba.

Estete's brief description of Incaic Huamachuco rules out any possibility of Marca Huamachuco having been the site he visited. The "valley surrounded by mountains" would fit modern Huamachuco except that the latter cannot be said to have "a beautiful view" nor are there the remains of a large Incaic town.

Viracochapampa lies on a small tableland between two valleys (pl. 15, a). The high mass of Marca Huamachuco to the west, and the gradually rising mountains on the eastern side of the Río Shiracmaca, do unquestionably give an impression of the town lying in a valley. At the same time from Viracochapampa one has a magnificent view over the valley of the Río Grande de Huamachuco and beyond into the main valley of the Condebamba River.

Estete gives no further information about Huamachuco, but goes on to say that, on leaving Huamachuco the party went on to a small village called Tambo that was subject to Huamachuco. They spent a night there. Tambo or *tampu* is the common word for resthouse or storehouse. These structures were placed at intervals along the Inca roads and Raimondi reports ruins four leagues to the south of Huamachuco and others five leagues, these last are situated on the crest of the cordillera.

From Tambo they went to Andamarca (modern Mollebamba) which they reached before noon. Mollebamba is within the drainage system of the main eastern affluent of the Chuquicara River, the Río Tablachaca, and the system as a whole unites with the Santa. It was here that Hernando Pizarro was faced with the problem of deciding whether to go toward Cuzco via Conchucos, Huánuco Viejo, and Jauja, or to turn south and west toward the coast and go to Pachacamac. He evidently decided that he could do little at that moment to hasten Atahualpa's ransom and so chose the latter course. Leaving Andamarca the party traveled to a village called Totopampa (Tutupampa). Raimondi believes that the description of the route and the situation of the village on a steep hillside makes modern Pallasca the most likely equivalent. The following day Pizarro marched to Corongo which is taken to be identical with the modern town of the same name. Estete says they were given food and porters and then adds: "This village is subject to Guamachuco." Corongo is situated only 35 km. in an airline due north of Huailas and while it is situated above 3,000 m. in elevation, and is not strictly in the Callejon de Huaylas, it does belong geographically and hydrographically to that area. Unless Estete was misinformed, it is interesting that the hegemony of Huamachuco extended so far south.

The fullest account of Huamachuco and its district is to be found in the first part of the Chronicle of Peru by Pedro de Cieza de León.⁷⁷ He has this to say about the region in chapter 81 :

Eleven leagues beyond Caxamarca there is another large province called Huamachuco, which was once very populous, and half way on the road to it there is a very pleasant and delightful valley. It is surrounded by mountains and is therefore cold, but a beautiful river flows through it, on the banks of which grow wheat, vines, figs, oranges, lemons, and many other plants which have been brought from Spain. In ancient times there were buildings for the chiefs in the meadows and dales of this valley, and many cultivated fields for them and for the temple of the sun. The province of Huamachuco is like that of Caxamarca, and the Indians are of the same race, imitating each other in their religion and sacrifices, as well as in their clothes and head-dress. In times past there were great lords in this province of Huamachuco who were highly favoured by the Yncas. In the principal part of the province there is a great plain, where the *tampus* and royal palaces were built, amongst which there are two the thickness of which was twenty-two feet, and the length as much as a horse's gallop, all made of stone, embellished with

⁷⁷ Cieza, *op. cit.*, pp. 287-290.

huge beams, over which the straw was laid with much skill. Owing to the late troubles the greater part of the population of this province has perished. The climate is good, more cold than hot, and the country abounds in all things necessary for the sustenance of man. Before the Spaniards arrived there were great flocks of sheep [llamas] in the province of Huamachuco, and in the lofty and uninhabited mountains there were other wild kinds, called *guanacos* and *vicuñas*, which resemble those which are domesticated.

They told me that, in this province, the Yncas had a royal chase, and the natives were forbidden to enter it for the purpose of killing the wild animals, on pain of death. It contained some lions, bears, and deer. When the Ynca desired to have a royal hunt, he ordered three thousand, four thousand, ten thousand, or twenty thousand Indians to surround a wide tract of country, and gradually to converge until they could join hands. The game was thus collected in the centre, and it is great fun to see the *guanacos*, how they jump seeking for a way to get out. Another party of Indians then enters the enclosure, armed with clubs, and kills the number of animals that the lord requires, often ten thousand or fifteen thousand head, such was the abundance of these animals. They made very precious cloth from the wool of the *vicuñas*, for the use of the Ynca, his wives, and children, and to ornament the temples. These Indians of Huamachuco are very docile, and have almost always been in close alliance with the Spaniards. In times past they had their religious superstitions, and worshipped certain stones as large as eggs, and others still larger, of different colours, which they kept in their *huacas* in the snowy mountain heights. After they were conquered by the Yncas they worshipped the sun, and became more civilised, both in their government and in their personal habits. In their sacrifices they shed the blood of sheep and lambs, flaying them alive without cutting off their heads, and presently cutting out their hearts and entrails with great rapidity, to search in them for signs and omens; for some of them were sorcerers, who also watched the courses of comets, like other heathens... The royal road of the Yncas goes from the province of Huamachuco to the Conchucos, and in Bombon it joins another road equally large. One of these roads is said to have been made by order of Tupac Ynca Yupanqui, and the other by order of his son Huayna Ceápac.

The specific reference to the principal settlement in the district of Huamachuco is equivocal. It is so vague that it might well apply to the great city of Marca Huamachuco, particularly in respect to the very large buildings with massive walls. Against this, however, is the fact that I think hardly anyone would describe the lofty and commanding elevation of Marca Huamachuco as a "great plain." Some of the galleries at Viracochapampa are very long indeed and others are well over twenty-two feet in width, although I know of no one in which the two features are combined. The phrase "length of a horse's gallop" evidently means a recognized distance of length, but I have been unable to find any explanation of it. Markham gives none.

Neither Garcilaso nor Sarmiento make any statements that can be construed as a description of the ancient city of Huamachuco. Garcilaso has the following to say about the province of Huamachuco in chapter 14 of the sixth book of the Royal Commentaries of the Incas:⁵⁸

The Ynca, (Tupac) passing onwards in his conquest, arrived on the confines of the great province called Huamachuco, where there was a great lord of the same name, who had the fame of being very wise and prudent. The usual messages offering him peace and friendship, and better laws and customs, were sent to him. It is the truth that his people were barbarous and cruel, and that their sacrifices were most savage. They worshipped stones that they found on the river banks, of different colours, such as jasper, thinking that the two colours, combined in one stone, could only be caused by a great deity residing in it. They carried this folly so far as to keep stones in their houses, treating them as gods, and sacrificing human flesh and blood to them. These people had no villages, but lived in scattered huts in the fields, without any order or social rules, like beasts. All this the good Huamachuco desired to reform, but he did not dare to attempt it, lest they should kill his followers, saying that they wanted to change their way of living, insult their religion, and the habits of their ancestors. This fear forced him to repress his good intentions, and he, naturally, received the message of the Ynca with much satisfaction.

Using his own good judgment, he replied that he rejoiced greatly to find that the empire of the Yncas, and their banners, were extended to the borders of his land; that the news he had

⁵⁸ Garcilaso, *op. cit.*, 2:137-140.

heard respecting their religion and good government had led him to desire, during many years past, to have the Ynca for his lord and king; that the enemies that intervened, and the duty of not abandoning his government, had alone prevented him from going in search of the Ynca, to offer him obedience, and to worship the child of the Sun; and that, his desires being at length accomplished, he would receive the Yncas with joy, and he trusted he would himself be admitted as a vassal, and that his people would receive the same favours from the Ynca as had been conferred upon other provinces.

On receiving the cordial invitation of the great Huamachuco, the prince Ynca Yupanqui, and the general his uncle, entered the province. The Curacas came forth to meet them with presents of all there was in the country, and placing the gifts before them, worshipped them with great reverence. The general received them with much kindness, and in the name of the Ynca his brother, promised the chief both the love and good will of his new lord. The young prince then ordered much cloth from the stores of his father, to be given as well to the Curaca as to his relations, and to the chief men of the country. Besides this favour, which the Indians valued highly, they received favours and privileges as a reward for the love they had shown for the service of the Ynca. The Ynca Pachacutec, and his successors, made a great favourite of this Huamachuco and his descendants, and ennobled his province because it had been annexed to the empire in the way that has been described.

At the end of the festivals in honour of having received the Ynca as his lord, the great Curaca Huamachuco prayed the captain general that he would at once take order for the reduction of his people to a better way of life, by improving their religion, laws, and customs. He said that he well understood how bestial and ridiculous were those which his ancestors had left him, that he had long desired to reform them; but that he had not dared to do so, lest his own followers should be killed for contemning the laws of his predecessors. He explained that his people had been contented to live like brutes, but now that by good fortune the children of the Sun had reached his land, he prayed that reforms might be introduced, as those people were now the Ynca's vassals.

The Ynca was pleased at hearing this speech. He gave orders that, instead of scattered huts, the people should collect in villages built in streets, on the best sites that could be found. He commanded that they should have no other god than the Sun, and that they should throw away the painted stones which they kept in their houses as idols, saying they were more fitted for boys to play with, than for men to worship. He directed them to comply with the laws and customs of the Yncas, and provided officials to teach the new order of things in each village.

There are several points which require comment. First, is the assertion that the people had no villages but lived in huts in the fields. Whatever may have been the true state of affairs it is clear that the great city fortress of Marca Huamachuco put up no resistance. The absence of any mention of it cannot be surely construed that it was an abandoned ruin at the time of Tupac's conquest, but it is true that other fortresses of comparable size are often mentioned as having been taken by, or to have yielded to the Inca armies. If we make allowances for the exaggeration of alien barbarity inherent in any propagandist rationalization of an expanding imperialism, it cannot be overlooked that the prince of Huamachuco's "surrender" indicates a weak state and a period of retrogression. This seems evident in view of the undoubtedly high degree of political and economic organization needed to build the defenses and the great buildings of Marca Huamachuco.

Garcilaso's statement that the Incas favored the province of Huamachuco and collected the people into towns provided with streets on the best sites that could be found can be used rightly to account for the building of Viracochapampa and perhaps for other settlements in the district. In the troubled days on the eve of the Spaniards' advent in Peru Huamachuco was a place of some importance.

References to Huamachuco in Sarmiento's History of the Incas are scant. He tells at some length of the raid which Ccápac Yupanqui made into the Cajamarca district in the time of Pachacutec, where he defeated the combined forces of the chief of Cajamarca and the chief of Chanchan. This foray exceeded the orders of the Inca, which were to conquer to a point that lay somewhere in the northern end of the Santa Valley, and Ccápac lost his life as punishment. One can infer from this

that it was probably on this occasion that the Huamachuco district first became acquainted with the imperial raiders from Cuzco.

Somewhat later Tupac, at the behest of his father, pushed the limits of Inca expansion as far as Chachapoyas and also reconquered the district between Trujillo and Pacasmayo. However, one of the early events in Tupac's own reign was to crush a rebellion in Chachapoyas and in a number of provinces which lay on the way to that place. None of these references to Incaic expansion in the above-mentioned districts refer especially to Huamachuco, but on at least one of these occasions, if not upon all of them, it must have been included in the area of Incaic military operations. The first definite mention of Huamachuco comes in Sarmiento's account of the reign of Huayna Ceápac, when one of his generals took Catequil, the *huaca* of Huamachuco and Cajamarca, to Cuzco. This was in preparation for an expedition against the Chirihuana and probably means that the good behavior of the Cajamarca and Huamachuco districts was thus enforced by having the image of their chief deity held in bondage.

The fullest account in Sarmiento⁵⁰ concerns the events that took place at Huamachuco in the time of Atahualpa and is given below:

When Atahualpa arrived at Huamachuco, two principal lords of his house came to offer sacrifice to the *huaca* of Huamachuco for the success that had attended their cause. These *orejones* went, made the sacrifice, and consulted the oracle. They received an answer that Atahualpa would have an unfortunate end, because he was such a cruel tyrant and shedder of so much human blood. They delivered this reply of the devil to Atahualpa. It enraged him against the oracle, so he called out his guards and went to where the *huaca* was kept. Having surrounded the place, he took a halberd of gold in his hand, and was accompanied by the two officers of his household who had made the sacrifice. When he came to where the idol was, an old man aged a hundred years came out, clothed in a dress reaching down to the ground, very woolly and covered with sea shells. He was the priest of the oracle who had made the reply. When Atahualpa knew who he was, he raised the halberd and gave him a blow which cut off his head. Atahualpa then entered the house of the idol, and cut off its head also with many blows, though it was made of stone. He then ordered the old man's body, the idol, and its house to be burnt, and the cinders to be scattered in the air. He then levelled the hill, though it was very large, where that oracle, idol or *huaca* of the devil stood.

The Augustinian friars, who established a convent in Huamachuco only twenty years after Pizarro's landing in Peru have left an interesting account of their labors in extirpating native superstition and idolatry. This record is of more value from the standpoint of folklore than from the point of view of archaeology, but there are, however, a number of points which have some bearing on the ancient history of the Huamachuco district. In the beginning of this account the author makes the statement that the monastery was set up in the same pampa or plaza where there had been some of the great buildings of the Inca.⁵¹ This point has been dealt with in connection with the mound under the Chapel of San José in Huamachuco town.

Nowhere in the account is there any description of the size, construction, or form of the native buildings, most of the references being to *huacas* or holy places. They are usually called "corrals" by the author, and he mentions in this connection that parts of the walls were very high. Again, there are references to numbers of small holes in the walls which contained objects of value or of sacred character. It is possible that this reference may refer to the built niches or it may be a misapprehension on the part of the Fathers because of the great numbers of holes that have been made in the walls in the course of looting the wall burials.

A considerable part of the account concerns naming and characterizing various native deities, among these Ataguju and Catequil. The legend of Huamansiri, Cautahuan, and Apo-Catequil which is contained in this account has been treated

⁵⁰ Sarmiento, History, p. 176.

⁵¹ Los Primeros Agustinos, p. 9.

by Tello in Wira-Kocha⁶¹ and by Means.⁶² It is perfectly apparent that a number of the deities were represented by figures in stone, but these are never described so that it is impossible to gain any conception of what these idols looked like. In this connection it may be mentioned that a number of deities have names that are not Quechua and that there are repeated references in the account which indicate that the aboriginal language of Huamachuco differed from Quechua, the latter having been acquired fairly recently. The author of the account further distinguished between what he considers to have been the native deities and a number which were new in the sense that their temples had been set up after the Inca conquest. Most of these latter religious foundations are credited to the Inca Huayna Ccápac.

There are a number of references to *huacas* having existed in caves or on the tops of high mountains, but the location of these is given as being so many leagues from Huamachuco without any indication of direction.

One further item of interest concerns the standing stone pillar which guarded each village and its fields. These stones were regarded as the "eyes" of the village and were correspondingly worshiped. The author of the *Relación* mentions in passing that more than three hundred of these were destroyed by the friars. Perhaps the double-face stone from Urpay is one of these.

The date of the Inca conquest of Huamachuco is impossible to determine with accuracy, partly because there is no specific reference in any of the Chroniclers and partly because of discordant opinion with regard to the chronology of the Inca kings. The relative time, however, can be established with some certainty. Garcilaso specifically attributes it to the campaign which Tupac carried on at the behest of his father Pachacutec. By inference from Sarmiento's account of the wars in this northern region, one can reach the same conclusion on the basis of his statements. Using the chronology of Gonzales de la Rosa and that of Means, which the latter gives in his article in the Proceedings of the Nineteenth International Congress of Americanists,⁶³ the conquest probably took place a few years anterior to 1478, perhaps in the late 'sixties of the fifteenth century. The chronology⁶⁴ which Means now favors would move this date back about a generation, perhaps to the late 'thirties or early 'forties of the fifteenth century. In any event, the Incaic conquest of the Huamachuco district did not take place more than a century before the coming of the Spaniards and the probabilities favor its having been considerably less than one hundred years.

The list of dates for important events in the Inca dynasty which Rafinesque set out, and which Means has published,⁶⁵ gives 1388 A.D. as the year of the conquest of Cajamarca. No one knows on what evidence Rafinesque made his judgments, but his chronology of the Incas cannot be dismissed as guesswork. It seems to me, however, that 1388 would represent the extreme of the range on the early side for the conquest of the Conde bamba-Cajamarca area.

The bearing this has on the archaeological problem is in connection with the paucity of Inca ceramic or other material in the district. A relatively brief period of Inca domination for the area harmonizes quite well with the observed archaeological facts. The pre-Incaic period in this region, then, in the narrower sense ends about the middle of the fifteenth century A.D. From what is known of the general

⁶¹ J. C. Tello, *Wira-Kocha. Inca*, 1:142-147. Lima, 1923.

⁶² P. A. Means, *Ancient Civilizations of the Andes*, pp. 429-431. New York, 1936.

⁶³ P. A. Means, *An Outline of Culture Sequence in the Andean Area*. ICA, 19:236-252. Washington, 1917.

⁶⁴ *Idem.*, *Ancient Civilizations of the Andes*, pp. 237-279. New York, 1936.

⁶⁵ P. A. Means, *Aspectos estético-cronológicos de las civilizaciones Andinas*. Boletín de la Academia Nacional de Historia [Quito], 1:223. Quito, 1921.

pattern and course of Inca imperial expansion it may also be reasonably inferred that Inca cultural influence may have made itself felt somewhat before this time, but from a liberal view probably not before the beginning of the fifteenth century.

The archaeological data to be considered now, in the light of the foregoing evidence, is by no means complete enough so that more than a skeleton outline of relationships is possible. Marca Huamachuco requires our first consideration. It is the most important site in the region. The evidence which I have presented in section II concerning the different classes and types of buildings can be summarized in the following manner. The buildings in class A construction represent an older series, perhaps not the original or earliest, but certainly antedating the smaller houses and buildings with class B walls. For convenience I shall refer to the first group as Middle Huamachuco and the second series as Late Huamachuco. The reasons for this will be more fully evident in the discussion of the ceramic material.

The buildings belonging to the earlier periods conform to a basic pattern—the long gallery. The gallery may have the form of a narrow rectangle or it may be circular. It had at least two floors and usually three, the upper ones supported by floor beams carried on horizontal rows of corbels, or set in niches, or a combination of both types of support. Entrance to the ground floor was by small doorways. There might be separate entrances from the outside to the second floor, and in some cases these elevated entrances may have been the sole means of ingress to or egress from the buildings. Genuine windows were few and roofs were of thatch, not stone. These structures may well be variants of the *wairona* or communal house, sheltering a number of biological family units. I hesitate to use that much discussed word *ayllu* in connection with the galleries, but I estimate that a building such as Gallery E, by no means a large one, could have easily accommodated ten to twelve family groups, say fifty to sixty individuals.

Several questions can be fairly raised at this point. Are not the great galleries the "palaces" of the "good Prince Huamachucu"? Why not consider the galleries and the round fortresses as the houses of the wealthy and the smaller class B houses as the houses of the poor? These questions and others like them are based upon a romantic misconception, which grew out of an attempt by feudal Europeans to explain to themselves a type of society that had developed from quite different antecedents. In Peru, to be sure, between the twelfth and sixteenth centuries an oligarchy centered in Cuzco had slowly achieved a combination of religious, political, and economic domination which in the high degree of its integration was to have no parallel in Europe until the third decade of the twentieth century. It is not surprising that the Spaniards did not understand it. There is, however, no ground for supposing that pre-Incaic political organization was merely an incipient stage of the Inca form of national socialism, or a pale reflection of it. Marca Huamachuco during its Middle and "Great" period had attained a level of development not unlike that which was achieved during the "Great" period in the Anasazi area of the Southwestern United States. There were chiefs, priests, shamans, and other individuals with special social and religious status in Marca Huamachuco; but as in the Southwest, they did not dwell in "palaces." The differences in material things between the humblest and the most important individuals were probably not great. Certainly Spanish testimony bears witness to the absence of well-developed native ideas of personal wealth in the sixteenth century. This attitude is one which the Cuzco oligarchy found useful, rather than created and enforced.

The archaeological evidence supports the purely logical arguments in this case. It is true that the class B buildings were the houses of poor people, but not the poor and living kinsmen of the dwellers in the great houses. The evidence from Excava-

tions 2 and 11, and from numbers 7, 8, and 9 combines architectural and ceramic data to demonstrate beyond question that the small houses were built on ruined and abandoned galleries by a people with different traditions and preferences in pottery decoration. There is also the frequent evidence of thin walls blocking doorways or cutting off passages (see fig. 9, *n*, *o*). As I explored Marca Huamachuco, and then visited and revisited certain sections of it in the course of my work, it became more and more evident that the people of the small houses were fearful. They were anxious to protect themselves from enemies, no less than were their predecessors, but lacked the power, the imagination, and the organization to repair the great walls or to build comparable defenses.

One small but significant additional piece of evidence is provided by eleven sherds pried out of the clay mortar of the quoin which forms the northeastern corner of the passage at *k* in figure 9 (see pl. 11, *a*). Six are of the polished red ware, one with black lines painted on it. Three are gray-brown, hard and smooth surfaced. There is one orange ware sherd and one gray sherd with what seems to be the fragment of a red-and-cream design. The ware and the decoration belong to the Middle Huamachuco ceramic complex (see below). The significant thing is that I kept a constant watch for sherd material from the mortar of the walls and this was the only occasion on which I found anything. The class B houses yielded nothing. This find, in a class A wall, shows that sherds of Middle Huamachuco style were present and could be accidentally included in the mortar as were these specimens.

Let me summarize briefly the results of the different excavations on Marca Huamachuco. Number 1 gave the first clue that the deeper deposits of Marca Huamachuco might contain cultural material which differed from the pottery and other artifacts found in the topsoil. Number 2 provided a glimpse of the pottery used by the people of the two-roomed houses, walls of which were built on top of, but without regard to, the old walls underneath. I interpret Excavation 3 as a refuse dump of the people who lived in the small houses. Excavations 4 and 5 tell us little or nothing.

Excavation 6 is puzzling. The majority of the walls are of class B type and have built into them several ashlar of lava, yet the pottery is predominantly of the varieties associated with the yellow clay fill of the galleries. The fragment of wall with stone corbels is in class A construction. The sherd percentages of plain wares are like the upper part of Excavation 7 except for the high incidence of polished red ware and the absence of white-slipped pottery with red and black designs. As I have said before, to have solved the problems raised by this excavation would have required more time and greater facilities than were available.

Excavation 7 gives satisfactory evidence from the ceramic standpoint of the contrasted differences between layer 1 and layer 2. The relative age of the various walls is also certain. The small building whose foundations lie on the surface represents the endpoint of the series (see fig. 10, *B*, *f*). The curved wall with the niches is later than the class A walls which it intersects (see fig. 3). My conclusion is that the curved wall belongs to the Middle Huamachuco period, but was built after the gallery was no longer in use. Were the niches below ground when they were used for interments or did the lower floor of the gallery provide access to them? The excavation did not produce the data to settle this question.

Excavations 8 and 9 provide more evidence of the character of the pottery of the small-house people. They contribute little to the data needed to understand the culture of the people of the long galleries. It is clear, however, that the fill of clay and rock in the gallery has associated with it the cursive-painted pottery.

Excavation 10 again is meager in specific data. With Excavation 11 we have evi-

dence in which the character and situation of the two buildings (see fig. 10, C) and the ceramic and other material associated with each provide clear distinctions. Let us examine, therefore, the artifact material which belongs to the two types of architecture.

Among the distinctive characteristics of the pottery from layer 1 are the high proportions of coarse undecorated wares. The decorated pottery is characterized by a white slip upon which are painted predominantly linear geometric designs in red or black-and-red. A second common style consists of the same kind of designs, but in red on the natural smoothed but otherwise untreated surface of the vessel.

Layer 2 has plenty of plain ware but it differs from the undecorated wares of layer 1 (table 1, cols. 11, 12). The diagnostic features are the fine pottery with the polished red slip and the white paste vessels with cursive decoration. There is also a fundamental difference in vessel forms between the two layers. Quantitatively and aesthetically the pottery from these two levels is unlike.

The three excavations (nos. 12-14) in Fort A show two things. Both pottery complexes occur, but either the shallowness of the deposit or limitations of excavation technique show them mixed. This is certainly true in pit 12. Pits 13 and 14 are predominantly, though by no means wholly, like layer 2 of Excavation 11.

The common and distinctive features of the cultural material for the Late Huamachuco period, using all the evidence available, are as follows. The plain wares are terra cotta, black, and dark brown. Gray and a bright orange are less favored, but are usually present in small quantities in any given excavation. Buff ware is variable in its occurrence. Vessel forms in these plain wares, particularly the first three, tend to be medium or large ollas of the types shown in figure 15, *h*, *j*, *m*, or to be small and simple bowls. Handles are not abundant, but large and medium-sized strap forms are present. Another class of jars is that which I call the flare-mouth type (fig. 14 and pl. 20). Their handles are mainly of the pierced-lug type. Ring or annular bases seem to be as common as tripod legs. Neither are abundant and the majority of all pots were round-bottomed.

Decorated vessels are normally either painted or incised-modeled. Some examples of a combination of these techniques do occur but not with regularity. The painted wares are about equally divided between those in which the design is superimposed on a white slip and those in which the smooth natural surface of the vessel forms the ground. Red or black-and-red designs on the white slip comprise one style, while red, black, or a combination of these on the natural ground is the other chief style. Not a sufficient number of whole vessels were found to make any characterization of the design forms more than a suggestion. Plates 20, *l*, *m*; 21, *a-b*; 22, *c, d, e, h, j, k, r, u, v*, show a variety of patterns in both styles, the common design repertoire being a strong point of relationship.

The incised decoration is made by punching with the tip of a reed or a bone to form a circle and dot, or by slashing or jabbing with a sharp-pointed tool. Modeling may be nothing more than applying a strip of clay to the surface and smoothing it down, or it may be more elaborate and result in face urns (pl. 21, *a*) or whistling jars (pl. 20, *v-x*).

Associated with the pottery described above are certain exotic pieces such as the two black ware cups in plate 21, *e*. By inference it is possible to include specimens such as the double black ware jar with sea lion head, plate 20, *c*, the modeled monkey figure, plate 20, *k*, and the mold-made face, plate 20, *y*. All these indicate Late Chimú contacts.

Metal pieces certainly associated with or belonging to the Late Huamachuco culture are few. The needle and pin (pl. 18, *n* and *o*), in the present state of our

knowledge of Peruvian metallurgy, tell us little. Stone work, either of artifacts or of sculpture, is in a similar position.

What influences from other known Peruvian cultures can be detected in this complex? The influence of forms, of designs, or general style which might be derivable from Cuzco Polychrome (Inca) seem to me not to be in evidence. Late Chimú influence may be responsible for the whistling jars, and it accounts for the imported or trade pieces. This evidence is neither strong nor conclusive but it cannot be overlooked.

The incised and modeled pieces are related in style of decoration and even in form to one class of pottery which Bennett described from the Gallinazo group in Viru Valley.⁶⁶ This is the unpainted pottery with incised, punched, modeled, and appliqué strips. The biconical jars with flaring rims are similar in form to what I have called flare-mouth jars.

The painted style, especially the substyle black-and-red on white, has most resemblance to what Kroeber⁶⁷ calls Three-color Geometric. The relationship, if such it is, is not close, the principal points of comparison being the use of black-and-red on a white ground and the careless vigor of the design layout. Resemblances to the Red-white-black Recuoid style seem to me to be even less than the Three-color Geometric. Fundamentally all the non-highland connections are either to the Middle or to the Late periods on the coast, with the best evidence pointing to contemporaneity with the Late Chimú.

Middle Huamachuco uses terra-cotta, black, and dark-brown wares, but a tan-brown ware is also as popular or more popular than these other fabrics. The basic forms of utilitarian vessels exhibit no radical differences from those of the Late Huamachuco period, but tripod legs are not certainly represented and handles of any type are rare. The outstanding new addition to the ordinary types of pottery is the abundance of the polished red ware.

The decorated wares show the most striking differences from the Late Huamachuco styles. First, there is an absence of punched (dot-and-circle) or incised design. Appliqué strips are simple and applied with restraint and modeled forms are rare. The painted wares are of two principal kinds: black-painted red ware in negative technique (pl. 22, *a* and fig. 15, *k*, *l*), and cursive-painted paste wares (pls. 19; 22, *dd*, *ee*). The white, gray, or orange paste vessels are not certainly present in Late Huamachuco and the style in which they are decorated, employing a technique that involved the use of a fine-pointed brush, is a far cry from the broad brush used to apply the red and black lines on the sleazy white slip favored by the small-house potters.

The differences between the Middle and Late periods are genuine enough but there are resemblances, especially in the use of the spiral. Whatever may be the origin of this form, it was a favorite "filler" in one variant of the cursive style at Huamachuco (pls. 19, *a*, *f*, *z*; 22, *ee*), and it was commonly employed in the Late period (pl. 20, *l*, *z*). The brush tip describes approximately a revolution and a half either clockwise or counterclockwise. There are other points of resemblance between the two periods, so that while it is apparent that Late Huamachuco is inferior to the Middle period in nearly all respects, it is in part a result of degeneration hastened by new influences external to the culture.

The cursive style of painting was first defined by Kroeber⁶⁸ over fifteen years ago. The evidence upon which he based his statements consisted of a series of bowls

⁶⁶ W. C. Bennett, Archaeology of the North Coast of Peru. AMNH-AP, 37:55-78. New York, 1939.

⁶⁷ Kroeber, Moche, pp. 206-207.

⁶⁸ *Ibid.*, pp. 212-213.

with tripod legs found by Uhle in Site A at Moche. I have reconstructed two of the type specimens. These are shown in plate 21, *o-r*, and in figure 14, *a* and *b*. Sherds from two other bowls in the same style are shown at *v* and *w* in plate 21. At Moche there seems to be a consistent association between this style of painting and the tripod bowl form, hence Kroeber's use of the phrase Cursive-Tripod style.⁶⁹ This pottery is associated with certain "non-Tiahuanaco" material like the sherds *m*, *s*, *t*, in plate 21. The first of these, *m*, comes from a bowl like the "non-Tiahuanaco" bowl in plate 62, *h*, of Kroeber's Moche paper. This bowl has a simple ring base.

Another cursive style is the Cursive Modeled style.⁷⁰ The specimens which Kroeber used as the basis for his analysis came from Chanchan, but the style has a wider distribution, particularly southward toward the valley of the Santa. As Kroeber points out, the resemblance of this style to the previous one "is chiefly in the rapid stroking," and I might add, in the use of a fine-pointed brush. Design forms are usually different.

The cursive style of Huamachuco has an obvious kinship with that of the three-legged bowls from Moche, but any relationship with the Cursive Modeled style is faint. The Huamachuco cursive sherds, I may add, are crude and barbarous in comparison with the rich and beautiful material which Tello has collected from the vicinity of Cajamarca and which he generously allowed me to examine.⁷¹ As a consequence, it is evident to me that "cursive" means several things at the moment, both descriptively and historically. Middle Huamachuco has a conspicuously negative association between cursive style designs and tripod vessel forms. The National Museum in Lima has several cursive-painted tripod bowls⁷² from Cajamarca but it is doubtful if this vessel form will prove to be more abundant than other Highland bowl forms, particularly the ring-base types with angular sides.

The chronological position of this style of painting is placed in the Middle Chimú period as far as Moche is concerned.⁷³ The evidence for Marca Huamachuco rests essentially on the sherd groups in the Uhle collections. The "maize poppers" in Epigonal style provide a similar if not so well defined a relationship between the Middle Huamachuco cursive and a Tiahuanaco-influenced style as do the cursive bowls of Site A at Moche and the Tiahuanaco-derived *queros* of the same site.

The evidence of another style of painting using a resist technique is too scant to use in assessing areal or chronological relationships. The fundamental difference between the two techniques, "cursive" and "negative," and the quite marked disimilarities in the end products, which resulted both from the application of the technique and the artistic conception which was employed, are evident. Believing as I do that Huamachuco is on the southern periphery of the Highland region of cursive painting, it seems logical to suggest that it lies north of a Highland region of negative painting. The known center for the latter, in the Callejon de Huaylas, was without doubt the stimulus for the Huamachuco development, but the way in which the southern center effected this influence cannot even be suggested now. There is certainly a much greater difference between Huamachuco negative-painted red ware and that of the Callejon than there is between Bennett's Gallinazo negative ware and Recuay.

The result of these several pieces of evidence is that the non-Andean relations of the pre-Late Huamachuco material are essentially with Middle period styles on

⁶⁹ *Idem.*, Ancient Pottery, pp. 31-32.

⁷⁰ *Ibid.*, pp. 32-33.

⁷¹ A few sherds from this Cajamarca collection are illustrated in A. L. Kroeber, Peruvian Archaeology in 1942, Viking Fund Publications in Anthropology, No. 4, pl. 35. New York, 1944.

⁷² Jorge C. Muelle and Canilio Blas, Muestrario de Peruano Precolombino, Revista del Museo Nacional, 7:201 and pl. 72. Lima, 1938; Kroeber, *op. cit.*, n. 71, pl. 34.

⁷³ Kroeber, Moche, 215-224.

the Coast. Whether it is all post-Tiahuanaco or not is impossible to answer. Neither Uhle's work nor mine produced any pottery of Tiahuanaco or Epigonal character that cannot be reasonably ascribed to influences from the coast. Certainly there seems to be nothing which is both Tiahuanaco derived and pure Highland at the same time. If anyone should have been able to note this it was Uhle. Consequently I am extremely skeptical of the sweeping statements that the Tiahuanaco civilization spread far and wide over the Andes. Unfortunately Bennett's work in the Callejon and at Chavín has not been published at the time of writing this report so that comparisons with that important area cannot be drawn.

The ceramic material from the Sausagocha sites is of importance in several ways. It is entirely free of any of the characteristic designs and decorative styles of the Late period at Marca Huamachuco. It shares with Middle Huamachuco the use of white paste ware for fine vessels, the polished red ware and the tan-brown ware for more common pottery. It has a number of features which are peculiar to itself, notably the prevalence of large- and medium-sized bowls with incurved, comma-shaped rims. This is an old and unquestionably widespread form, occurring in the shell midden material at both Ancon and Supe. The brush-marked sherds represent a technique not noted at Marca Huamachuco. The form of incised decoration employed is absent in Middle Huamachuco and is unlike the prevailing style in Late Huamachuco. On the other hand, the jars with sigmoid necks are a feature common to both Cerro Campana East and the Middle Huamachuco culture and a number of the red ware vessel forms are also shared. The Sausagocha sites lack any suggestion of cursive painting on any kind of ware, nor did they yield any evidence of negative painted designs; painted designs of any kind seem to be few. Tripods are absent and so are ring bases, but the large colander was known.

Close comparison of the material from Cerro Campana East with the characteristic elements that form the Middle Huamachuco period on Marca Huamachuco leaves me hesitant to postulate the cultural complex of Cerro Campana East as the antecedent of Middle Huamachuco. Yet, to regard the Cerro Campana East settlement as contemporary with the Middle period of Marca Huamachuco and as only a rural settlement lacking the refinements of the political or religious capital is a view that is equally difficult to accept. Believing as I do that ultimately clear proof will be obtained of Huamachuco's peripheral situation with respect to the main Peruvian center of the distinctive style of cursive painting, it may be that the cursive painted ring-base bowls were a luxury reserved for the powerful group that lived on Marca Huamachuco. There is, however, nothing in the material from Cerro Campana East which provides even the few clues that are present in Middle Huamachuco and which connect the latter with the mixed stylistic strains of the Middle period on the adjacent coast. Until we know more, Cerro Campana East looks "pure" Highland. My present view is to regard it as contemporary with the earlier stages of the Middle Huamachuco period as represented on Marca Huamachuco and superseded by the full flowering of that center and its culture. As a classificatory expedient the Cerro Campana phase may be called Middle Huamachuco I, and the Marca Huamachuco phase, Middle Huamachuco II.

The culture of Viracochapampa is in some respects the most curious of all those encountered in the Huamachuco region. If it represents a sample of the cultural benefits conferred by the Incas on those subjects who coöperated fully in the New Order, it makes one wonder what was the fate of the tribes who resisted or rebelled. The lack of Cuzco-imitated pottery has been mentioned before. What is equally strange is the negligible number of traits which the Viracochapampa ceramics share with Late Huamachuco. The characteristic punched dot-and-circle design is absent

as is the bold painted style of black-and-red on a white slip. Tripod vessels are common as compared to their infrequent incidence in Late Huamachuco and their absence in Middle Huamachuco. It seems clear that the tripod vessels of Middle Chimú did not come from the Huamachuco area.

If it were not for the historical evidence one might almost conclude that Viracochapampa was a settlement of a group of *mitimaes*, since its pottery is so unlike that of other sites in the district.

Let me now sum up what I believe can be said of the history of the Huamachuco region. The earliest known settlements were semifortified hilltop villages like Cerro Campana East. Well-built houses, consisting of small rectangular or square rooms, formed solid pueblos from which the people went down to cultivate the fields. Large, thick-walled courts with internally rounded corners were constructed. In the absence of excavation, their purpose is unknown. Pottery making had reached an excellent degree of development, wares of white and orange paste with microscopically fine temper being successfully baked. Forms are not elaborate but neither are they primitive or unsophisticated. Painted designs are simple, red being the favorite color and used in bands or as a complete polished slip, especially on the white paste cups and bowls. Handles or supports such as tripod legs or ring bases are absent and most vessels were round-bottomed. Utilitarian pottery shows a preference for dark brown with considerable sand temper, but a light tan-brown is also in use as well as the ordinary terra-cotta ware. Polished red-slipped ware forms a class intermediate between the cooking ware and the paste vessels. Stone mortars, hand mullers, and the bigger *chungus* (rocker-grinders) were in use, and at least one kind of ax, the whole-grooved type with ground edge, was employed. Spindle whorls, either of stone or of pottery, in familiar forms are not known and metallurgy is unattested, but in neither case is the information sufficient to settle the point. In like manner the relations of these villages with other areas in Peru are not clear.

It was a group of this type that must have settled on Marca Huamachuco. What the factors were that impelled or forced it to dominate its neighbors we shall probably never know. At any rate in the course of several centuries an astounding amount of construction was carried on at Marca Huamachuco, on Cerro Amaru, and on Cerro Sazón. The basic unit of building was a long, narrow gallery, of two to three floors in height. These might be arranged around the side of an open square or courtyard as on Cerro Sazón, or they might exist in irregular groups (Cerro Viejo?), or singly. Circular galleries were also constructed, their proximity to each other suggesting that either their function or their inhabitants were somehow different from the other gallery dwellers. A long gallery was built around the perimeter of the Cerro del Castillo making of this part of Marca Huamachuco a huge round fortress. Inside was a special circular-walled citadel forming the center of a complex of rectangular buildings which mainly clustered on the very spine of the mountaintop and stretched away from it to the northwest and the southeast.

These people discarded some of the ceramic characteristics of their kinsmen on Cerro Campana East and adopted others, notably the style of cursive painting in black, or red, on white paste bowls with ring bases. They must have adopted the style and the form from neighbors to the north, either by borrowing or by ethnic assimilation. The style underwent some modifications, notably in the direction of simplification both in the number of design elements and in the more limited choice of colors. The polished red ware was occasionally embellished with designs in black, so applied that the underlying deep red showed through according to a deliberately chosen scheme in which definite areas of the red surface were treated to "resist"

the black color and prevent its being burned into the clay during the firing.⁷⁴ The stimulus to embellish their great buildings with stone sculptures of both animal and human deities probably came to them from the south. To the west they may have had occasional contacts with the valley agriculturists busy with their irrigation canals. In the mountains, however, they depended upon the winter rains plus the spring and summer thunder storms to water the potatoes, oca, and maize in the *chácara*. Flocks of llamas and alpacas undoubtedly were cared for, but their wool must have been more important than their meat because only small numbers of the bones of these animals were found in the house debris. Deer and bear were also slain, but the probabilities are that guinea pigs were the main source of meat.

As architects, engineers, and efficient agriculturists these people command our admiration. They probably were good metallurgists too, and if the Incaic limits of the district reflect in any measure a pre-Incaic situation they must have been effective warriors. The comparisons we can make between their way of life and their achievements with those of other ancient Peruvian peoples are limited to a considerable extent: on the coast we know best the material which was placed with the dead in their tombs and not a great deal about the ordinary materials of their daily life. My excavations did not uncover the tombs of the people of Middle Huamachuco time and Uhle's work included only the investigation of the burial places of the Late Huamachuco people. It is fair to say, however, that there is nothing which produces an impression of the richness and elaboration of culture which characterizes Early Chimú or Chavín.

The reasons which account for the decline that is so evident in Late Huamachuco times are matters which our present knowledge of this culture cannot fully explain. There were radical changes in culture but they cannot be understood, in my opinion, simply by suggesting that a new people invaded and subjugated the older ones. The actual conditions at Marca Huamachuco are better interpreted by a suggestion that the old population was reduced numerically and weakened and that the remnants of it were mixed with newcomers, the result being the small houses, inferior ceramics, and generally impoverished culture of the Late Huamachuco period. To what cause can one assign this disintegration? I suspect that a major factor may have been a prolonged period of drought or an irregular but repeated series of "bad" (i.e., rainless) years. Today there are many parts of the area which are definitely marginal in terms of productive agriculture. The soil is by no means rich and I saw virtually nothing which led me to believe that a system of irrigated terraces was ever maintained in this district. One witness to the uncertainties of an agricultural economy is the paucity today of large haciendas. Three dry years in succession would bring the region to and past the edge of starvation, or a succession of dry and wet years, with the arid ones outnumbering the wet ones, could easily dislocate the economy. Economic stringency would exacerbate both intratribal as well as intertribal jealousies and hatreds.

When the Incas came each family was living in a small house by itself. The old discipline and the old religious customs had broken down and there was a lack of willingness to channel the community energy, so that "public works" of the size of those of the "Great" period on Marca Huamachuco were unthinkable. Under the Incas the Huamachuco people were not permitted to live as free men, although poor ones. Their "good Prince" set about constructing a town which is a faint reflection of the many-storyed communal houses of his ancestors, adapted to the

⁷⁴ The similarity of fabric, surface finish and decoration, plus the forms of Collier and Murra's Cañar Polished pottery strongly suggest northern connections for this ware and style of the Middle Huamachuco period. See Donald Collier and John V. Murra, Survey and Excavations in Southern Ecuador, Field Museum of Natural History, Anthro. Series, vol. 35. Chicago, 1943.

political exigencies imposed upon him by the imperial governors from Cuzco. The narrow, two-storied galleries of Viracochapampa follow a pattern which was well and imposingly developed on Cerro Sazón and Cerro Amaru. The rectangular plan and the concentrated grouping of these units is an Incaic feature, an arrangement whereby the population was more easily controlled than if it were allowed to live in detached houses here and there about the countryside. Control, both for internal security and for taxation, was essential. The result of this policy was that the chief may have fancied himself as an equal to his ancestors but the population took it ill. There were no revolts that we know of, but if the decline in taste and in the quality of the domestic arts is any criterion of the social health of a community, then the people of Huamachuco were mortally sick.

Today the living habits of the country people of the area are much like those of the people of Late Huamachuco times. One, two, or perhaps three families may have houses close together and then there will be none for some distance. Springs, not used for irrigation, but for drinking water, are frequently the deciding factor in determining the place of settlement. Agriculture, mainly wheat and potatoes, with maize a poor third, are the basic crops. Varying numbers of pigs, sheep, and cattle are usually kept, but are not quite equal in importance to the crops. The soil and climatic factors allow this pattern to be most effectively carried out.

It is doubtful if the greater prosperity and magnificence of Marca Huamachuco in Middle period times was due to a more benign climate. Rather the factors were purely social ones—a willingness to participate in collective activity. What lies behind this willingness is hard to see and the motives were probably mixed ones. Be this as it may, the ancient engineers on Marca Huamachuco undertook and carried through some tremendous tasks, such as the great defensive gallery around the Cerro del Castillo. As one follows it on foot the magnitude of the work seems enormous. Perhaps the high altitude and the difficulty of climbing small slopes makes a lowlander unnecessarily exaggerate the labor involved. Truly, it was not built in a day, but a little sober reflection after one has got one's breath makes it evident that a defense wall, if it is needed by a community, is of no value to them if it takes ten years to complete. The great wall of the Cerro del Castillo probably represented two years' work for a population of ten thousand people. Several assumptions lie behind this. The first is that Marca Huamachuco had a population of two to three thousand. This is conservative in terms of the inhabited area and the number of galleries. The second assumption is that the Cerro del Castillo was a sanctuary as well as a fortress and could demand as well as expect the labor of communities on Cerro Viejo, Cerro Amaru, Cerro Sazón, and others. This being so, the time factor involved in any estimate of dates need not and should not be extravagantly great, and we come to the final matter which every archaeologist has to consider, usually with reluctance, namely the matter of the length of time and the dates for his periods.

Viracochapampa, as the chief Incaic center of the district, may have had a life of about a century. This is accepting the longer chronology and assigning the date of the Inca conquest to the third decade of the fifteenth century. The Late Huamachuco period, therefore, would mainly have come to an end about this time although it seems unlikely that it disappeared as a cultural entity, and I suspect the occasional appearance of Inca-type antiquities on sites such as Cerro Amaru is an indication that not everyone went to live in Viracochapampa. The somewhat tentative connections which one can make between Late Huamachuco and what Bennett calls Late Chimú I harmonize perfectly with the arrangement here suggested.

The first great difficulty comes in assessing the length of the Late Huamachuco

period. For the coast, it is the current fashion⁷⁶ to carry the late cultures back to the beginning of the twelfth century (1400–1100 A.D.). At Huamachuco, I think that two centuries would be ample to account for the Late period. This would mean that Middle Huamachuco was declining at the end of the twelfth and the beginning of the thirteenth century. The relative positions of the two parts of Middle Huamachuco I believe are substantially correct. The probable changes will be those which will push the earlier phase away from the later one into a clearly antecedent position. Lacking any abundant evidence for a Tiahuanaco-influenced horizon in this area, the date for the beginning of the period must be left an open question.

The architecture and certain pieces of the stone sculptures fit reasonably well into the present definition of the Andean Archaic, but the ceramic evidence and most of the other cultural evidence seems mainly unrelated to what so far has been posited as being characteristic either of the basic substratum or the specific regional manifestations of this widespread ancient archaic culture.

⁷⁶ G. C. Vaillant, *et al.*, *The Maya and Their Neighbors*, pp. 488–489. New York, 1940.

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- 2a) Kelly, Isabel, The Archaeology of the Autlán-Tuxcacuesco Area of Jalisco: Part I (University of California Publications, Ibero-Americana, no. 26).

Project 3. Central Coast of Peru

- 3a) Strong, William Duncan, and Gordon R. Willey, "Archeological Notes on the Central Coast" (in: Archeological Studies in Peru, 1941-1942, Columbia Studies in Archeology and Ethnology, 1:1, 1943).
3b) Strong, William Duncan, and John M. Corbett, "A Ceramic Sequence at Pachacamac" (in: Archeological Studies in Peru, 1941-1942, Columbia Studies in Archeology and Ethnology, 1:2, 1943).
3c) Willey, Gordon R., "Excavations in the Chancay Valley" (in: Archeological Studies in Peru, 1941-1942, Columbia Studies in Archeology and Ethnology, 1:3, 1943).
3d) Willey, Gordon R., "A Supplement to the Pottery Sequence at Ancon" (in: Archeological Studies in Peru, 1941-1942, Columbia Studies in Archeology and Ethnology, 1:4, 1943).

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- 4a) Bird, Junius, Excavations in Northern Chile (Anthropological Papers of the American Museum of Natural History, vol. 38, part 4, 1943).

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5d) Osgood, Cornelius, and George D. Howard, An Archeological Survey of Venezuela (Yale University Publications in Anthropology, no. 27, 1943).
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Project 6. Colombia

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6b) Ford, James A., Excavations in the Vicinity of Cali, Colombia (Yale University Publications in Anthropology, no. 31, 1944).

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- 8a) Newman, Marshall T., Some Indian Skeletal Material from the Central Coast of Peru (Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, 28:1).
8b) Tello, Julio C., Paracas (University of San Marcos, Lima).

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- 9a) McCown, Theodore D., Pre-Incaic Huamachuco: Survey and Excavations in the Region of Huamachuco and Cajabamba (*University of California Publications in American Archaeology and Ethnology*, 39:4, 1945).
- 9b) Collier, Donald, and John V. Murra, Survey and Excavations in Southern Ecuador (Field Museum of Natural History, *Anthropological Series*, vol. 35, 1943).

Project 10. Central America

- 10a) Longyear, John, Archaeological Excavations in El Salvador (*Memoirs of the Peabody Museum of Archaeology and Ethnology*, Harvard University, 9:2, 1944).

FIGURES 6–13

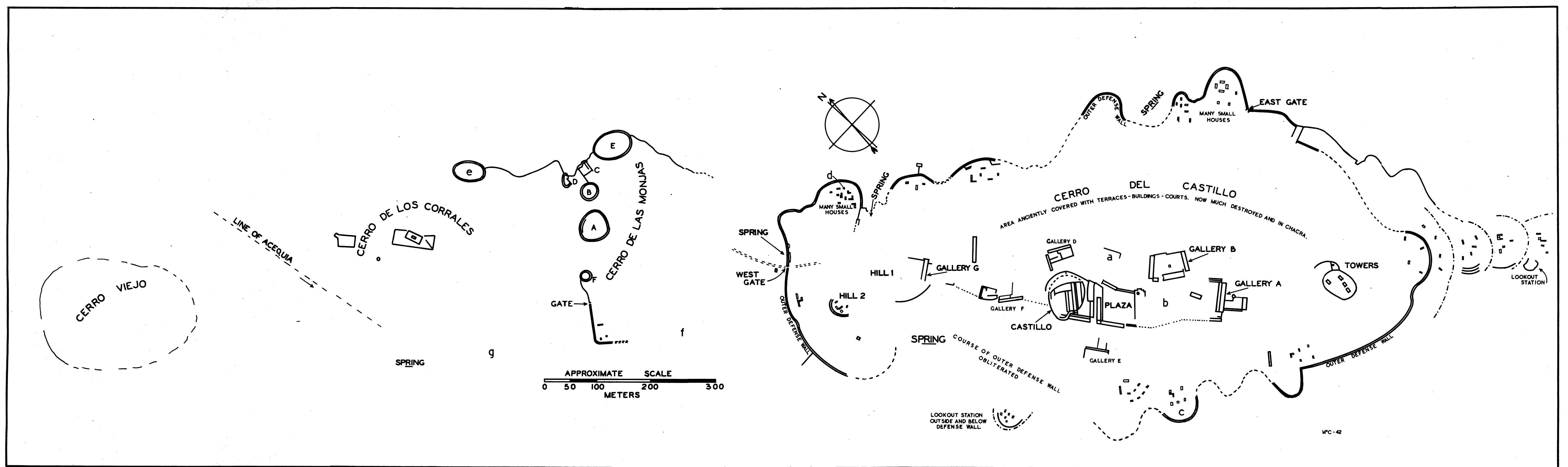


Fig. 6. Diagram of the principal ruins of Marca Huamachuco.

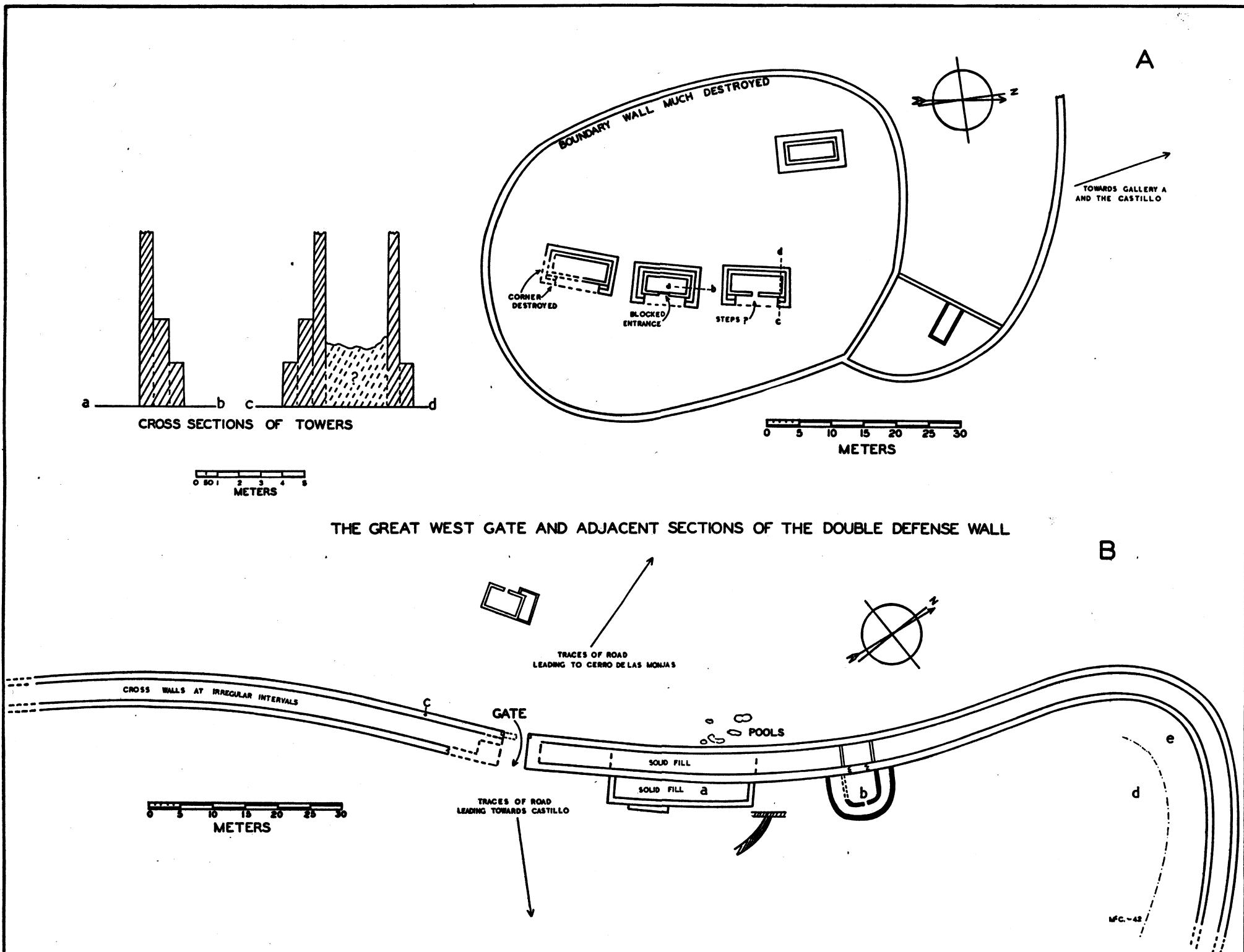


Fig. 7. Marca Huamachuco. A, plan and cross sections of the rectangular towers. B, the West Gate and adjacent sections of the double defense wall

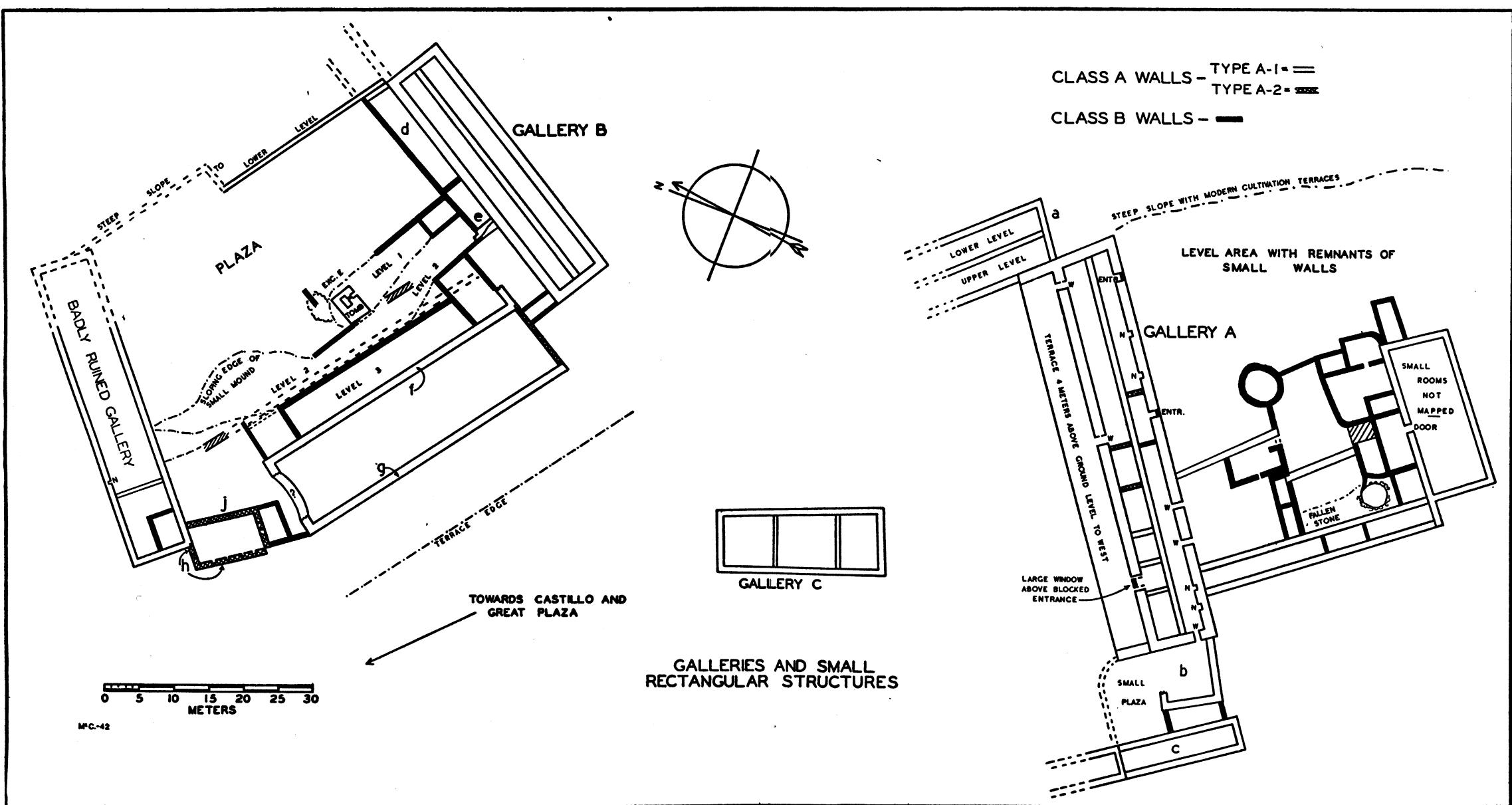


Fig. 8. Marca Huamachuco. Galleries A and B and related structures

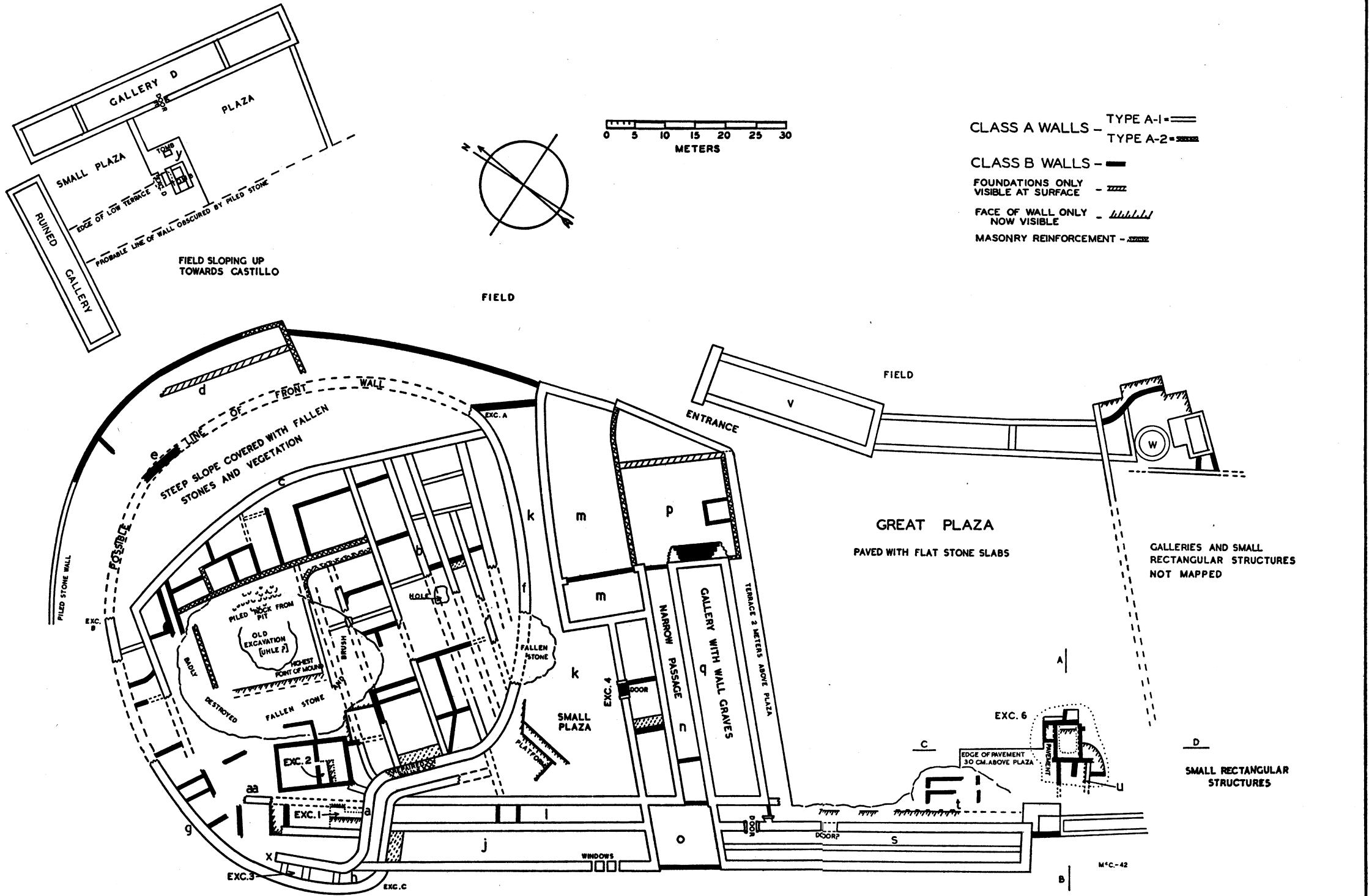


Fig. 9. Marca Huamachuco. The Castillo, the Great Plaza, and related structures

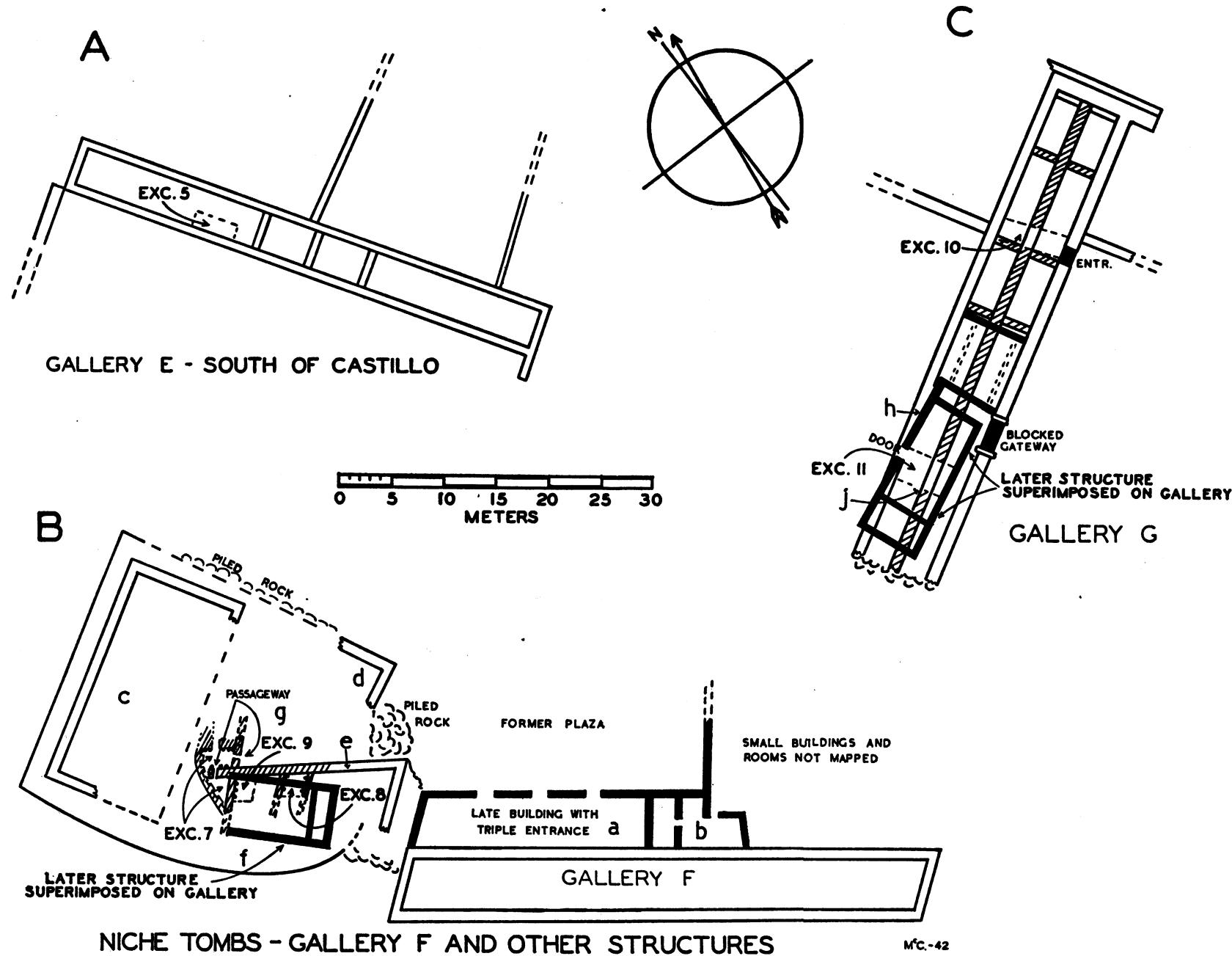
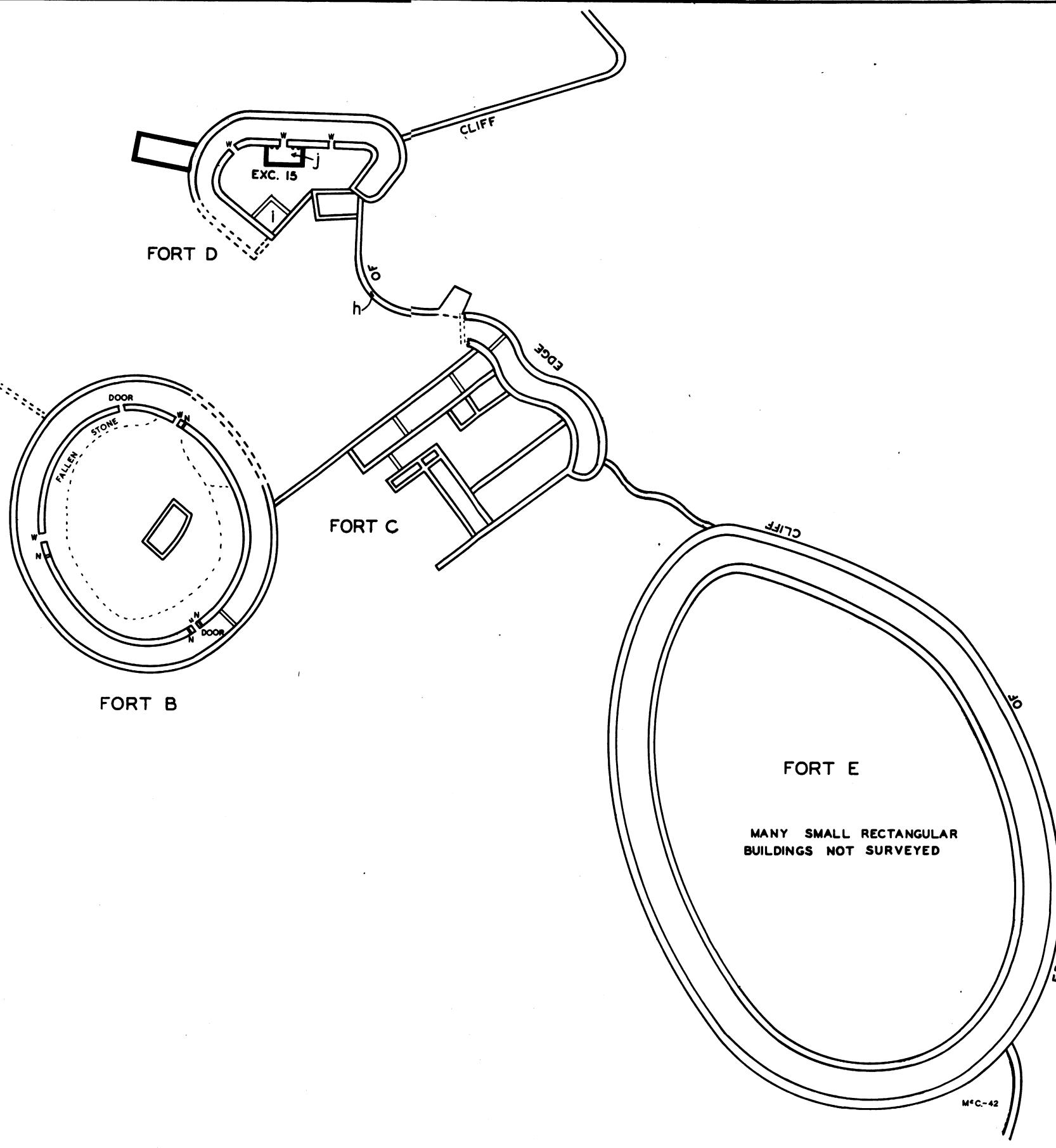
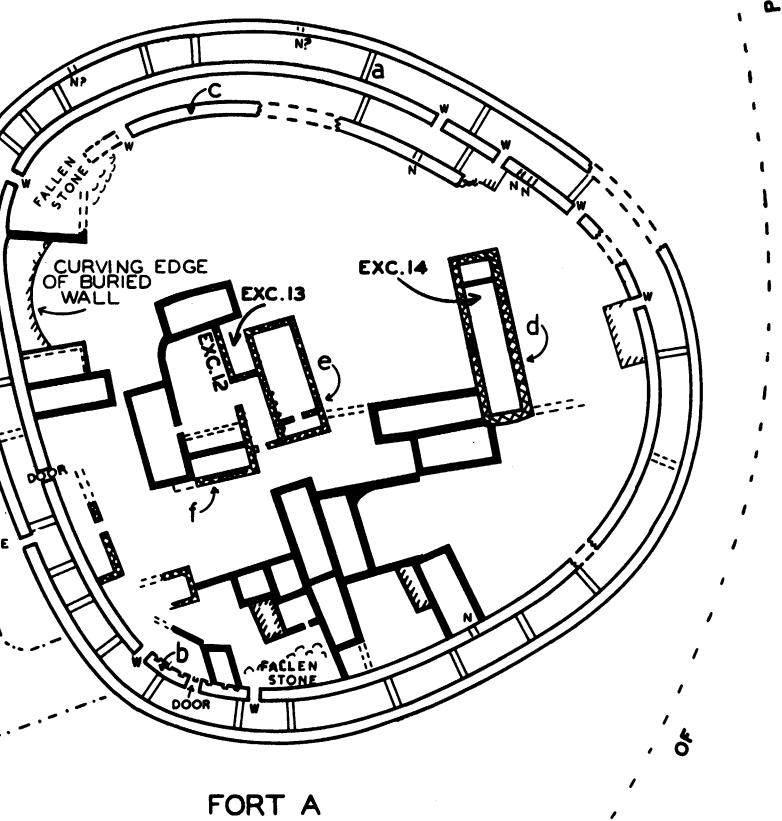
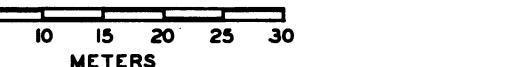
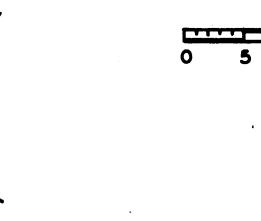
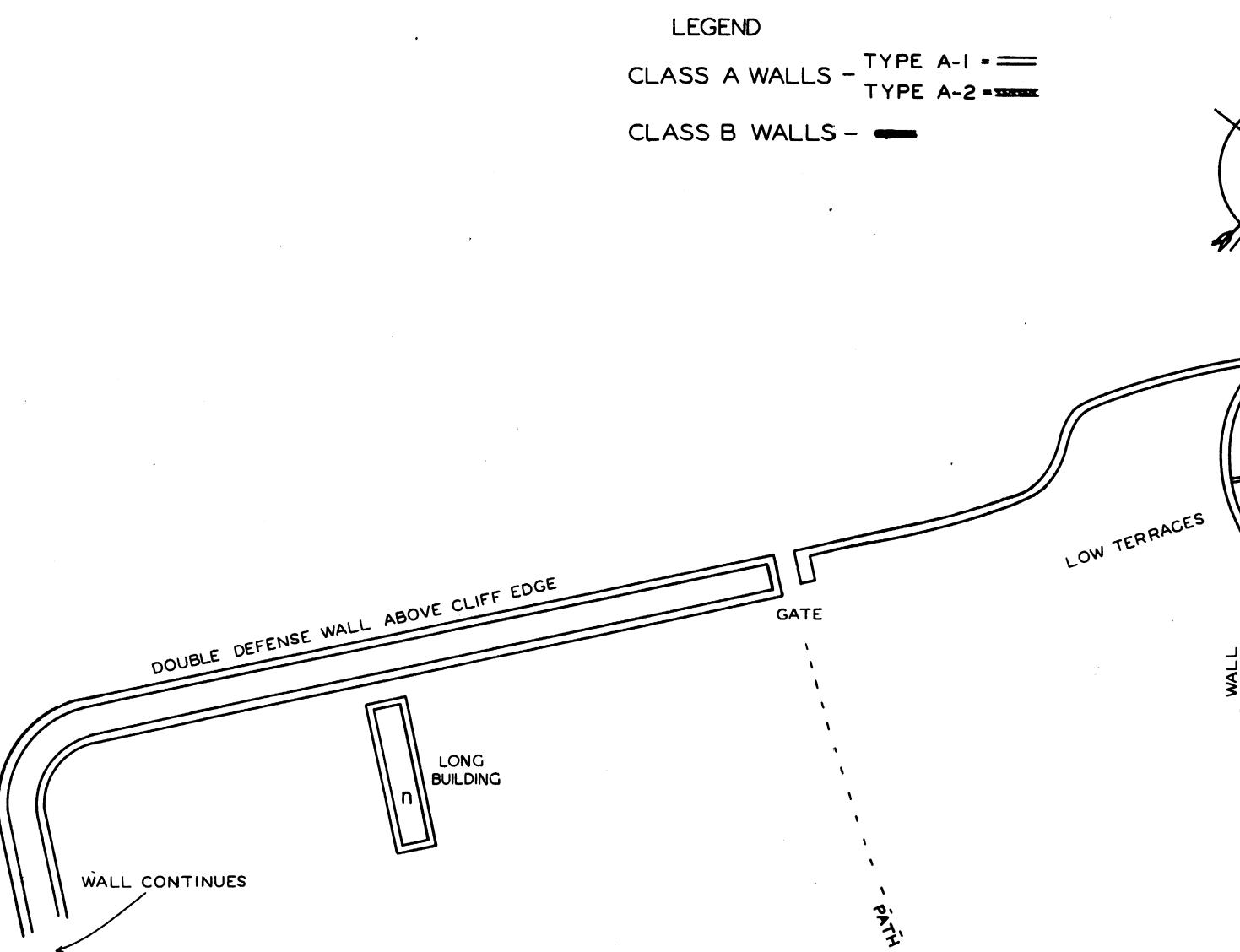
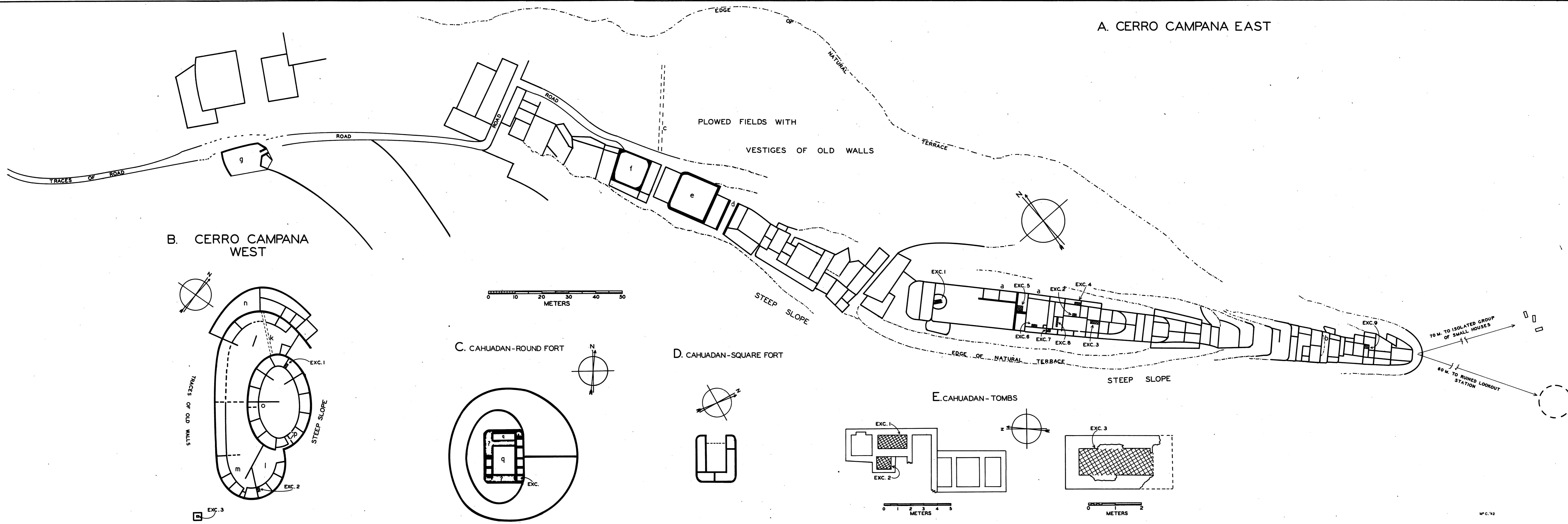


Fig. 10. Marca Huamachuco. A, Gallery E. B, Gallery F and the niche tombs of Excavation 7. C, Gallery G

HUAMACHUCO

TORTRESSES (CONVENTS) ERO DE LAS MONJAS





To accompany T. D. McCown, "Pre-Incaic Huamachuco Survey and Excavations in the Region of Huamachuco and Cajabamba," Univ. Calif. Publ. Am. Arch. & Ethn., Vol. 39, No. 4

agocha (A, B) and southeast of Lake Cahuadan (C, D, E).

VIRACOCHAPAMPA

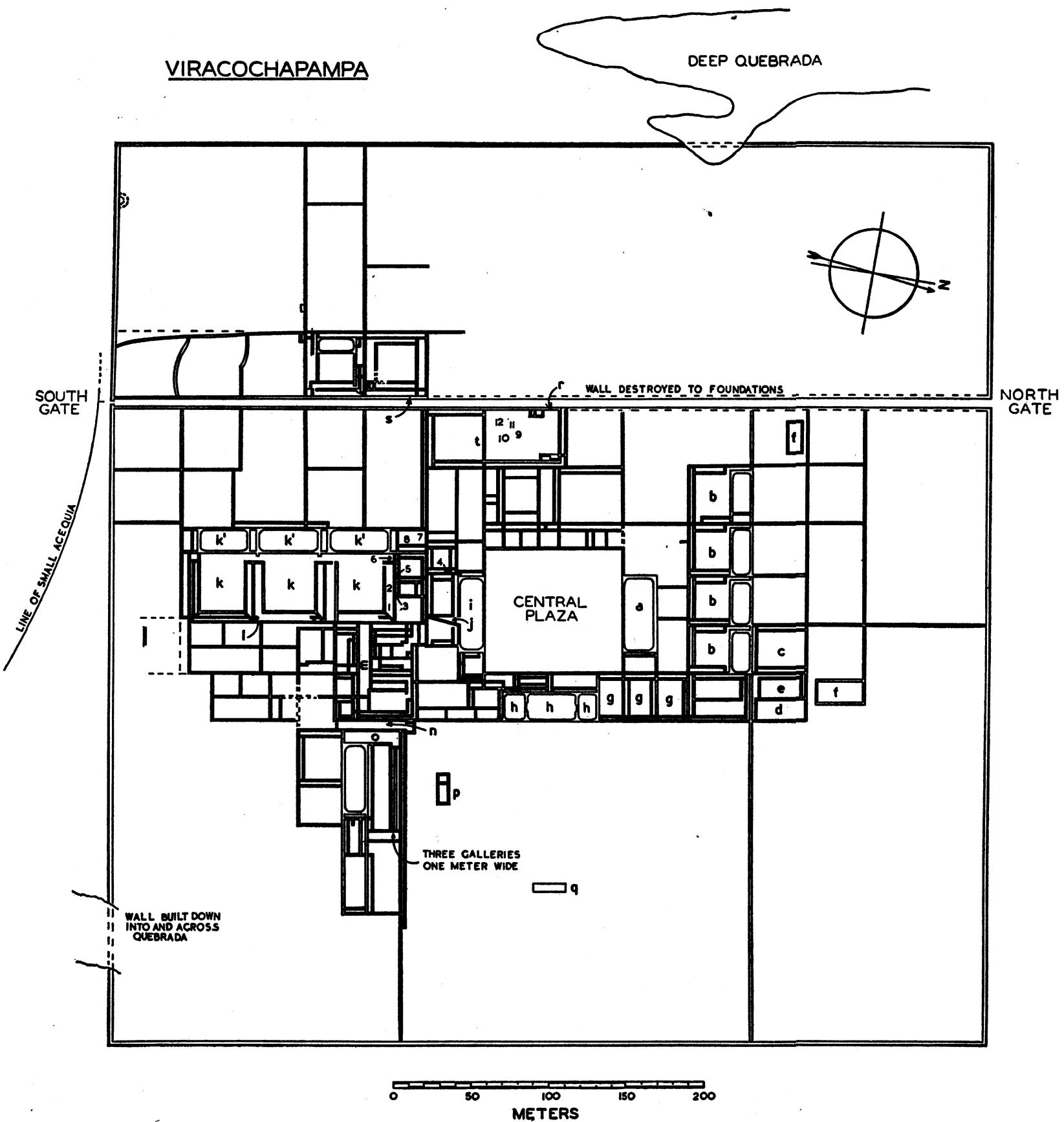


Fig. 13. Plan of the city of Viracochapampa

FIGURES 14–21

FIGURE 14

Pottery from Huamachuco and Moche. *a–b*, Reconstructed tripod bowls from site A, Moche, 2565, 2567c; *c–l*, Huamachuco district. *c*, Brown paint on buff ground, 3544. *d*, 3472. *e*, 3468. *f*, From a wall tomb, Marca Huamachuco, 3542. *g*, 3469. *h*, 3554. *j*, 3471. *k*, Marca Huamachuco, black-and-white on red vessel, 3563. *l*, Probably Marca Huamachuco, painted, handled vessel, light-orange paste, 3549. Each vessel form is represented so that the right half of the figure shows the cross section of the wall and any internal decoration. The left side of the figure shows the profile of the vessel with any existing external decoration. Broken lines indicate reconstructed sections. All figures $\frac{1}{4}$ nat. size.

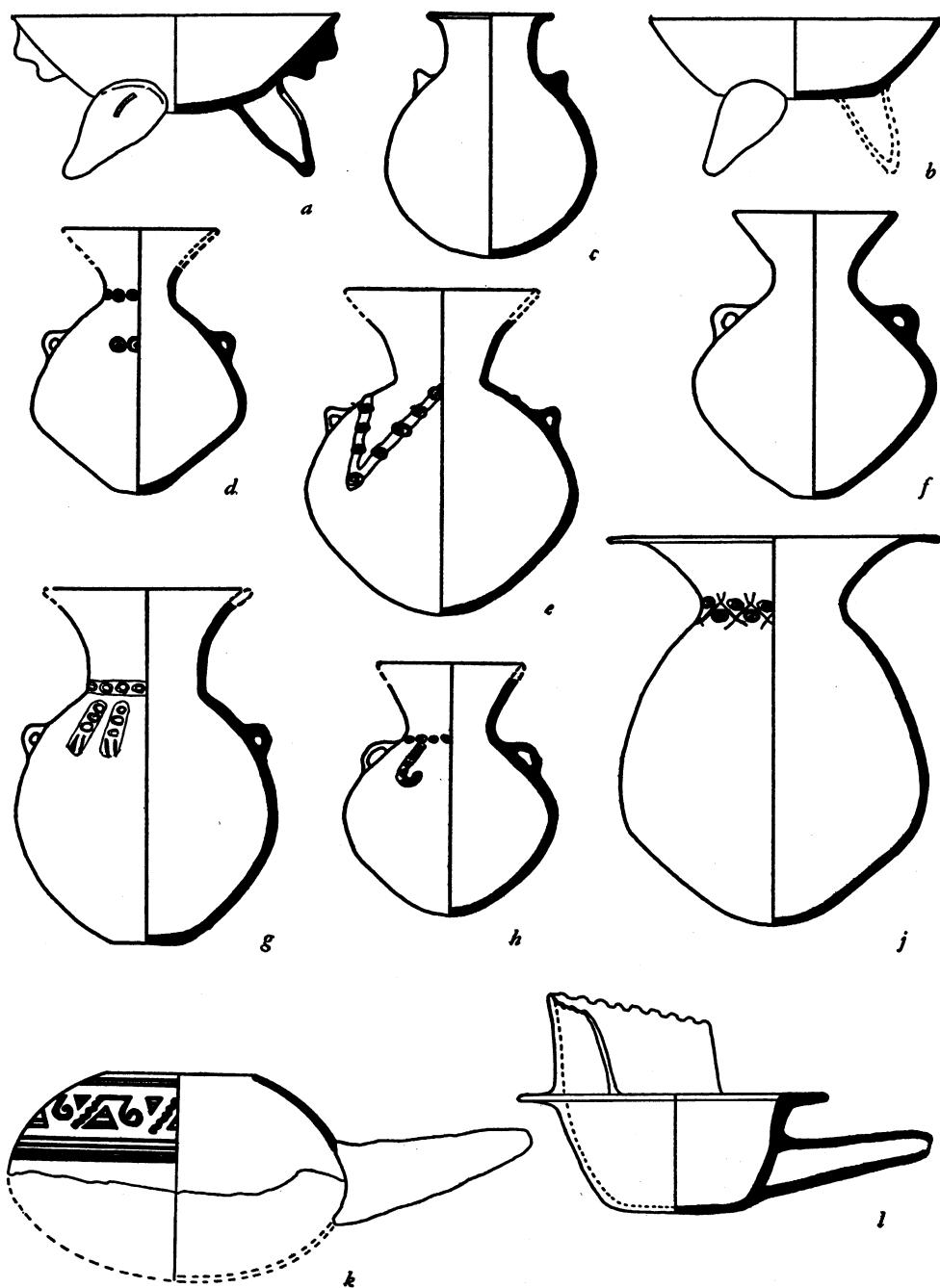


Fig. 14. Pottery from Huamachuco and Moche

FIGURE 15

Pottery from Marca Huamachuco. *a-b*, Lug handles; Exc. 12. *c*, Lug handle; surface. *d-e*, Ledge handles; Exc. 12. *f*, Strap handle; Exc. 6. *g*, Small bowl with black-and-red design on white slip; Exc. 1, layer 1. *h, j, m*, Large cooking ollas; Exc. 3. *k*, Upper part of vessel, polished red-slipped ware with black negative design; Exc. 7, layer 2. *l*, Sherds from same vessel (*k*). *n*, flared-neck jar, from a previously rifled tomb; Exc. 7. *a-f, k, n, 1/4; g, l, 1/2; h, j, m, 1/6*.

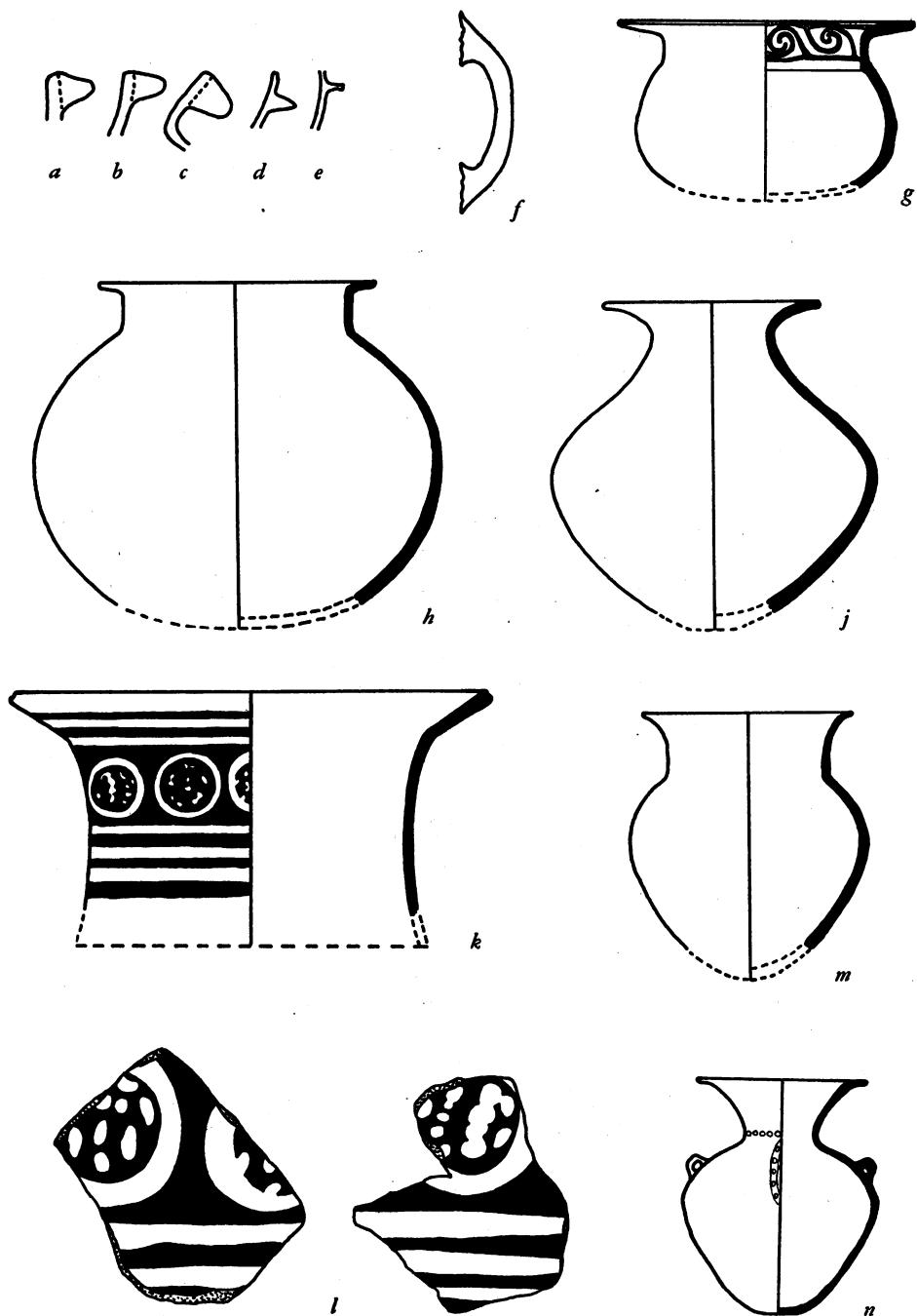


Fig. 15. Pottery from Marca Huamachuco

FIGURE 16

Pottery from Marca Huamachuco. *a-b*, Pottery colanders; Exc. 11, layer 2. *c*, Footed bowl, yellow-white paste, cursive painted design in brown; Exc. 11, layer 2. *d*, Footed bowl, black ware; Exc. 11, layer 2. *e*, Footed bowl, brown-black polished slip; surface near Exc. 7. *f*, Footed bowl, white paste, black cursive-painted design; Exc. 11, layer 2. *g*, Footed bowl, yellow-white paste, traces of cursive painting; Exc. 11, layer 2. *h*, Footed bowl, chocolate-brown ware; Exc. 11, layer 2. *j*, Footed bowl, black ware with applied decoration; Exc. 11, layer 2. *k*, Footed hemispherical bowl, white paste; Exc. 6. *c*, $\frac{1}{2}$; remainder, all $\frac{1}{4}$.

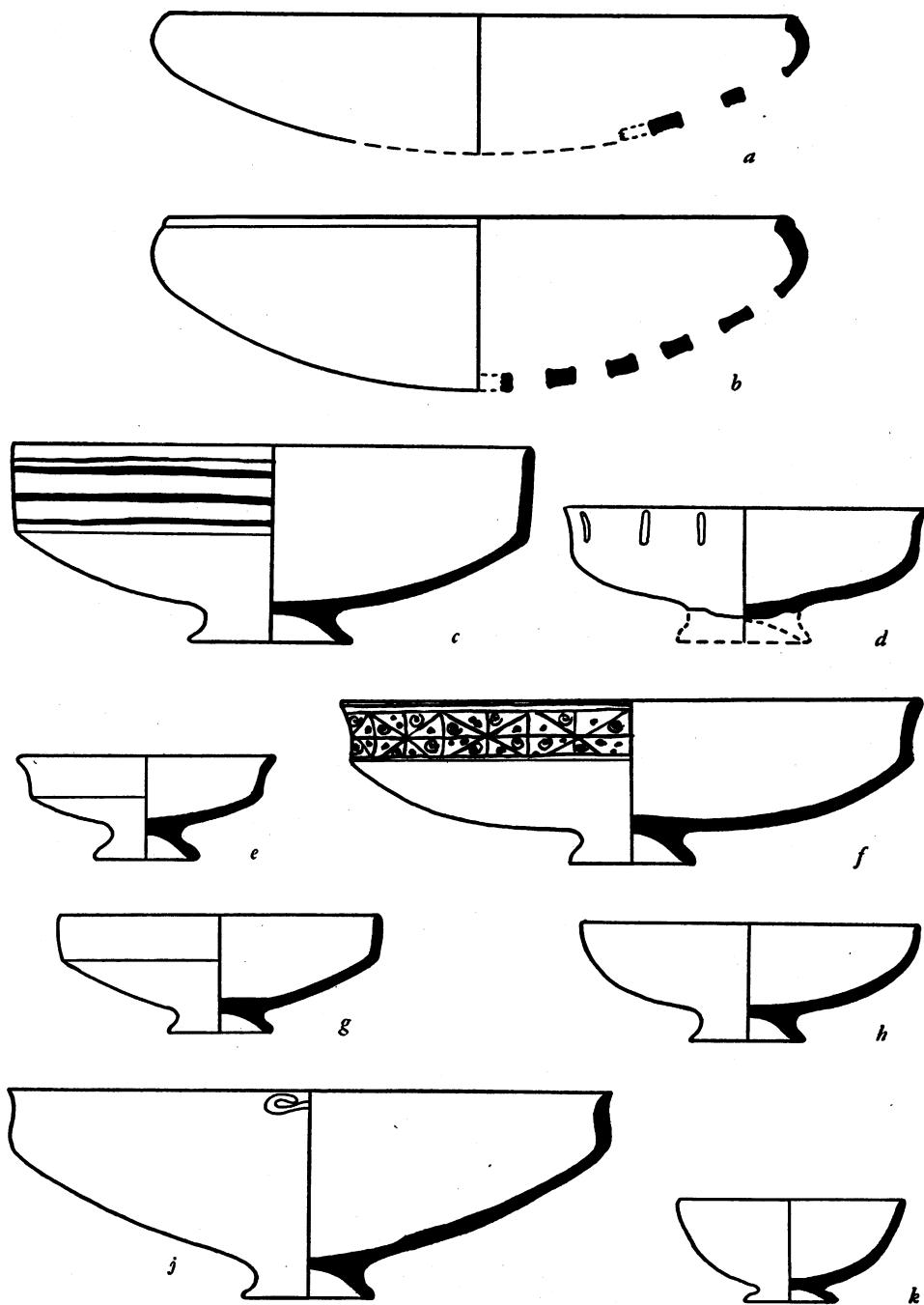


Fig. 16. Pottery from Marca Huamachuco

FIGURE 17

Pottery from Marca Huamachuco, Cerro Campana East, and Viracochapampa. *a-d, f, l*, Marca Huamachuco; *e, g, h, j, k*, Cerro Campana East. *a*, Polished red slip interior, red band exterior; Exc. 7, layer 2. *b*, Polished red slip exterior, red band interior; Exc. 6. *c*, Similar to *a*; Exc. 11, layer 2. *d*, Similar to *a* and *c*; Exc. 12. *e*, Orange paste with painted bands of red; Exc. 9. *f*, Unpainted coarse orange ware; Exc. 7, layer 2. *g*, Orange paste with notched edge and painted red bands; Exc. 9. *h*, Orange paste with painted red bands; Exc. 9. *j*, Orange paste with painted red bands; Exc. 9. *k*, Orange paste, notched edge, and narrow painted red band interior and on top of rim; Exc. 9. *l*, Orange paste, traces of black painted interior design; Exc. 6. *m*, Orange paste mold (?), Viracochapampa. *a, b, f, $\frac{3}{16}$; c, d, $\frac{1}{8}$; e, g, h, j, k, l, m, $\frac{5}{8}$* .

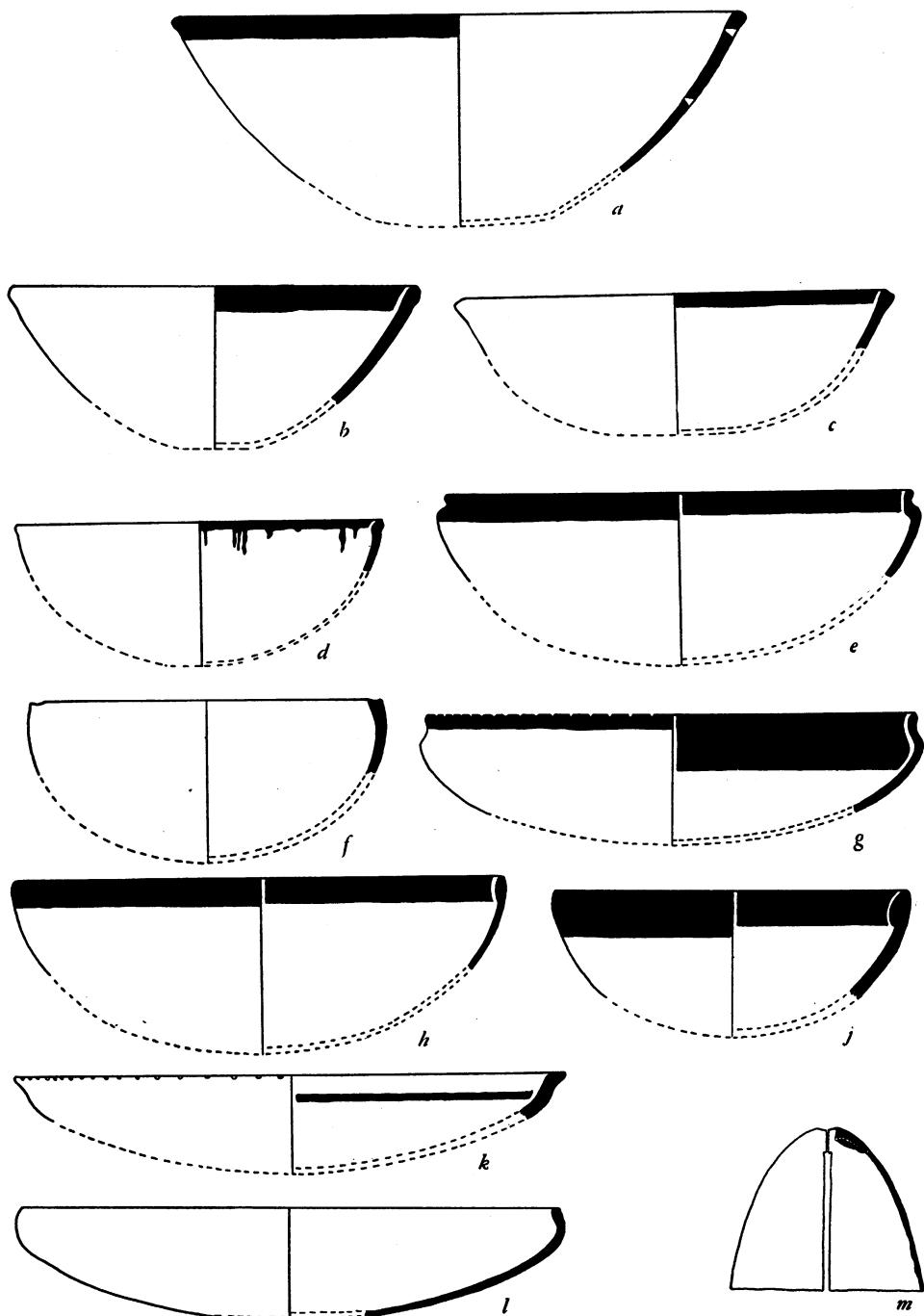


Fig. 17. Pottery from Marca Huamachuco, Cerro Campana East, and Viracochapampa

FIGURE 18

Pottery from Marca Huamachuco and Viracochapampa. *a-b, d-h*, Rims of sigmoid-neck jars, Cerro Campana East; Exc. 3. *c*, Same from Cerro Campana West; Exc. 2. *j*, Sigmoid-neck jar, Marca Huamachuco; Exc. 7, layer 2. *k*, Bowl, coarse orange ware, interior design in red, Marca Huamachuco; Exc. 13. *l*, Shallow bowl, orange paste with polished red slip and interior design in white, Marca Huamachuco; Exc. 11, layer 2. *m*, Plate, polished red-slipped ware, Marca Huamachuco; Exc. 1, layer 1. *n*, Bowl, orange ware with brown (black?) exterior design, Marca Huamachuco; Exc. 10. *o*, Shallow bowl, pink paste with interior white-slipped, exterior red-slipped, Marca Huamachuco; Exc. 11, layer 2. *p*, Bowl, terra-cotta ware, Marca Huamachuco; Exc. 11, layer 2. *q-u*, Viracochapampa. *q*, Neck of bottle, buff ware with buff slip; Exc. 9. *r*, Wide-mouth jar, buff ware; Exc. 9. *s*, Tripod vessel, black ware with buff slip and exterior band of red; Exc. 1. *t-u*, Jar necks with lug and loop handles; Exc. 9. *a-h, l-p, r, t, u, 1/4; k, q, 1/2; j, 3/10; s, 3/8*.

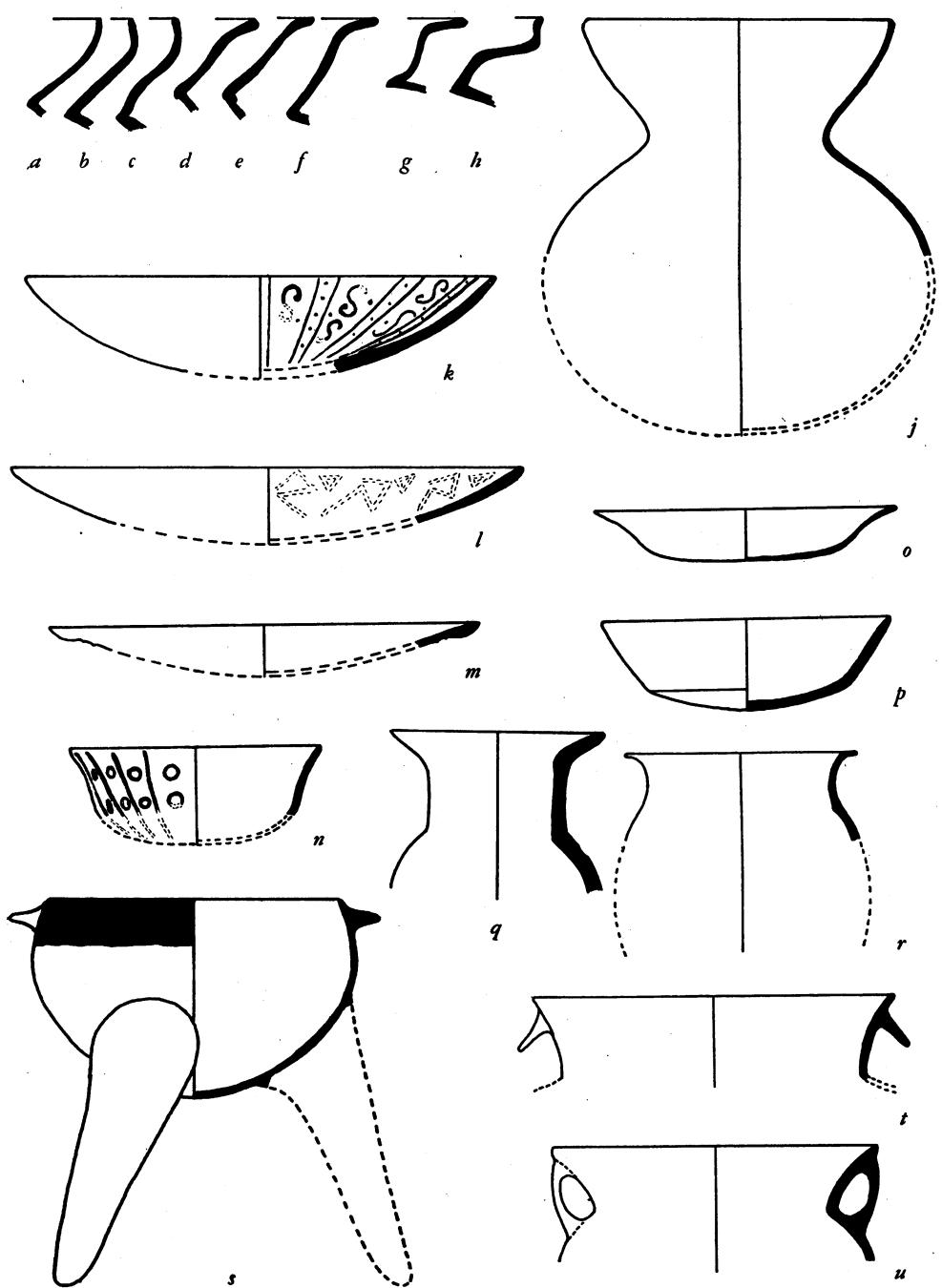


Fig. 18. Pottery from Marca Huamachuco and Viracochapampa

FIGURE 19

Bowls from Cerro Campana East. *a-c*, With incurved rim; *d-g*, open. *a*, Exc. 3. *b*, Exc. 9. *c*, Exc. 5. *d*, Buff-orange ware, red bands on margin; Exc. 1. *e*, Orange paste ware, allover red slip; surface. *f*, White paste ware, Exc. 8. *g*, Brown ware, Exc. 7. *a*, $\frac{1}{4}$; *b-c*, $\frac{1}{6}$; *d-g*, $\frac{1}{8}$ natural size.

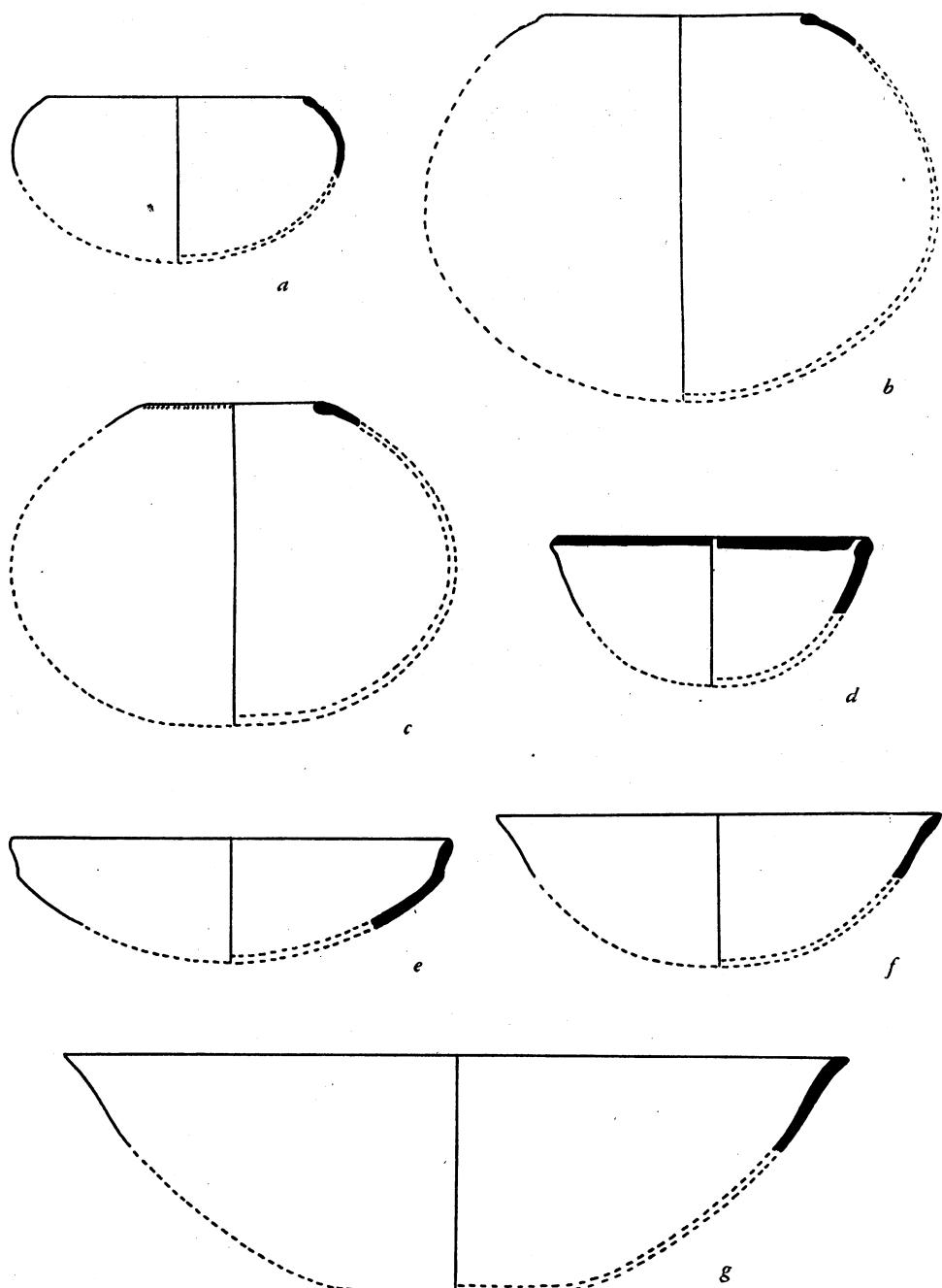


Fig. 19. Bowls from Cerro Campana East

FIGURE 20

Rim profiles of pottery vessels. *a-o*, Olla neck and rim profiles from Marca Huamachuco. *p-r*, From Cerro Campana East. *s-hh*, Neck and rim profiles of vessels with polished red slip from Marca Huamachuco. *jj-qq*, Profiles of rims of plates and bowls from Cerro Campana East. *p-r*, $\frac{1}{3}$; all others $\frac{1}{8}$ nat. size.

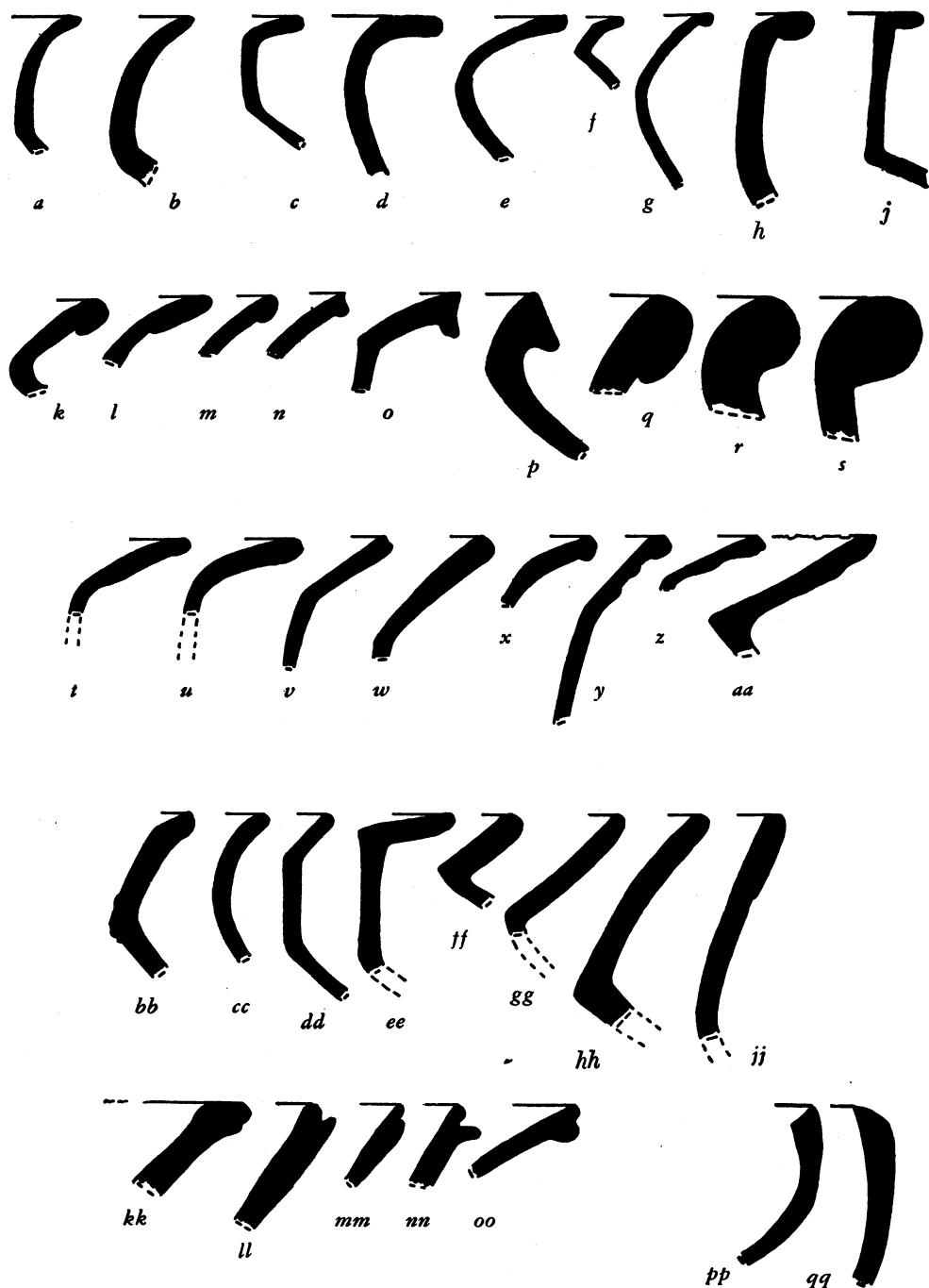


Fig. 20. Rim profiles of pottery vessels

FIGURE 21

Rim profiles of pottery vessels from Cerro Campana East. *a-u*, Open bowls; red-slipped ware, *a-e, l-n, p-q*; white paste ware, *h, k, v-yy*, Bowls with in-curving rim, mostly in plain ware. All $\frac{2}{3}$ nat. size.

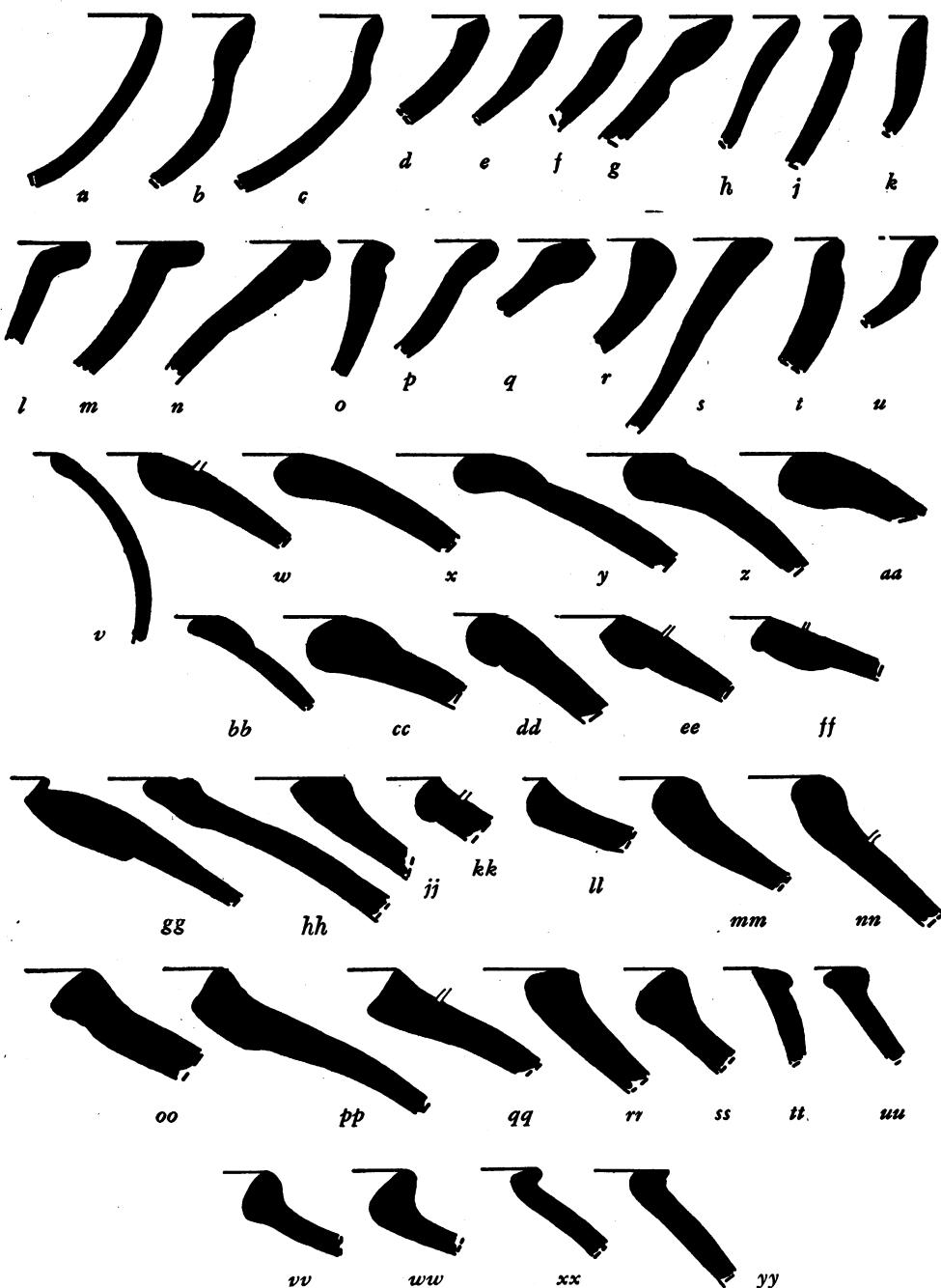


Fig. 21. Rim profiles of pottery vessels from Cerro Campana East

PLATES

PLATE 8

General view of the archaeological region surrounding Huamachuco, taken from the East Gate of Marca Huamachuco looking southeast.

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[MCCOWN] PLATE 8

CERRO CAMPANA EAST (30)
LAKE CAHUADAN
VIRACOCHAPAMPA (23)

CERRO TORO
CERRO SAZÓN (18)
CERRO CAMPANA (24)
CERRO TUSCAN (16)
HUAUCHUCO

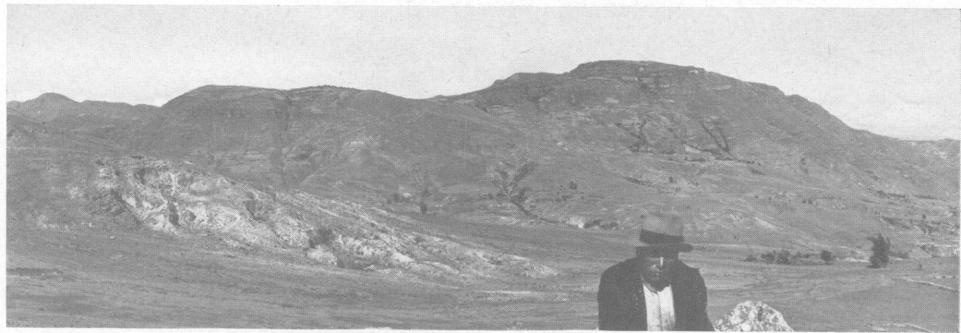
CACAÑÁN (15)
CERRO AMARU (20)



Archaeological region surrounding Huamachuco

PLATE 9-

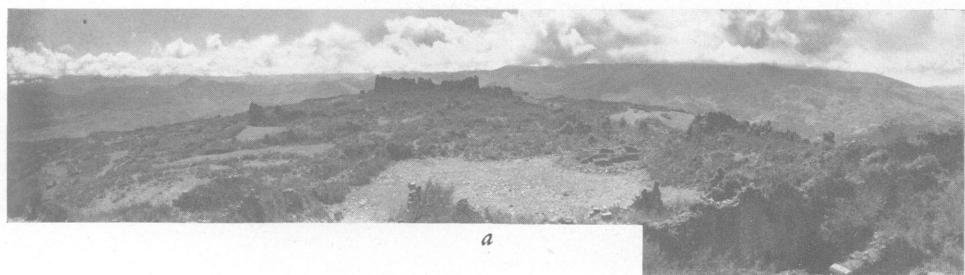
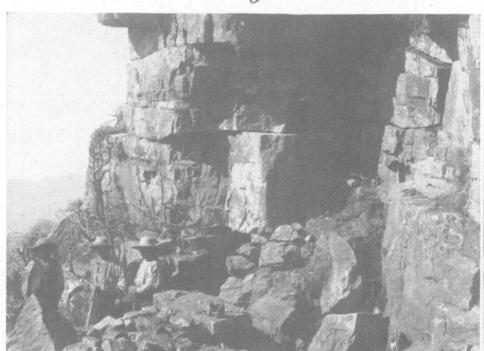
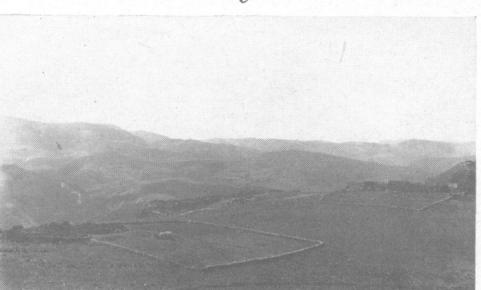
Ruins of Marca Huamachuco. *a*, Cerro Amaru and Marca Huamachuco seen from the east. View taken from above and to the south of Viracochapampa. *b*, The Castillo, Gallery E (to the right), and other structures, seen from the northwest from Hill 1. *c*, Panoramic view looking north-northwest, showing the inner side of the gate in the northwest section of the double defense wall. Cerro Viejo is the high hill to the left, Cerro de los Corrales lies above and a little to the right of the gate, and five of the six round fortresses on Cerro de las Monjas are visible.

*a**b**c*

Ruins of Marca Huamachuco

PLATE 10

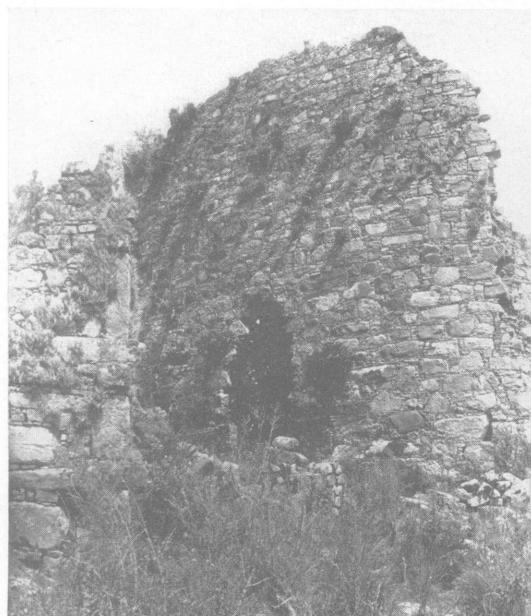
Ruins of Marca Huamachuco. *a*, Panorama of the ancient structures southeast of the Castillo. The Great Plaza is in the foreground with Excavation 6 in the upper right-hand corner. Beyond is the mass of Gallery A and to the left of it, bounding a smaller plaza, is Gallery B and related buildings. *b*, Interior view of the Castillo showing the high wall indicated at *a* in figure 9. *c*, The interior of Gallery E, seen from its northern end. *d*, One of the so-called "cave tombs" excavated by Uhle outside and below the defense wall. This shows the character of the natural rock of Marca Huamachuco. *e*, Ancient structures northwest of the Castillo. In the foreground is Gallery F and the structures shown in figure 10, B. Beyond is Hill 1. *f*, Two of the rectangular stone towers at the southeastern end of the Cerro del Castillo. *g*, Cerro de los Corrales as it appeared in 1900, seen from Cerro Viejo.

*a**b**c**d**e**f**g*

Ruins of Marca Huamachuco

PLATE 11

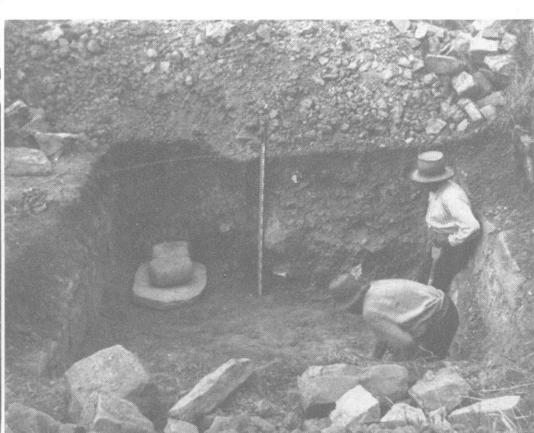
Ruins of Marca Huamachuco. *a*, A well-preserved section of the high outer wall of the Castillo. The corner of the structure at the left is the right-hand corner of the building on the east side of the passage shown at *k* in figure 9. Both of these buildings are splendid examples of class A construction. *b*, The internal aspect of the Castillo as it appeared after clearing and some excavation. (Compare plate 10, *b*). *c*, A blocked entrance in Gallery A. This is the more centrally placed of the two entrances on the southeastern side of the gallery. *d*, The westernmost of the two entrances in the inner wall of Fort A. Note the massive lintel and above it three stone corbels. *e*, Two of the square windows in the outer wall of the gallery at *j* in figure 9. *f*, Doorway photographed by Uhle. This is an excellent example of class B rubble construction.

*a**b**c**d**e**f*

Ruins of Marca Huamachuco

PLATE 12

Ruins of Marca Huamachuco. *a*, Stone corbels and niches in the west wall of Gallery E. *b*, Interior of the round Fort A. This view looks toward the high section of the internal gallery wall indicated at *b* in figure 11. *c*, View of the circular gallery on the southwestern side of Fort A. *d*, Well-preserved section of the circular gallery on the north side of Fort A with the horizontal rows of corbels and their changes in level clearly seen. *e*, The great gate in the western defense wall, seen from the outside. The red and white pole is two meters in length. *f*, Excavation 11 in Gallery G showing the grinding slab and two milling stones in position.

*a**b**c**d**e**f*

Ruins of Marca Huamachuco

PLATE 13

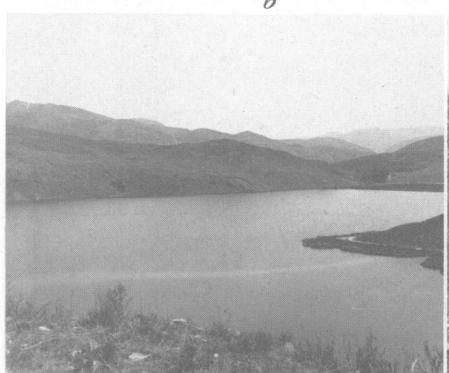
Marca Huamachuco and other Highland sites. *a*, Looted wall grave with a human skull among the debris. *b*, Southeastern aspect of Fort D on Cerro de las Monjas. *c*, One of the niche tombs in Excavation 7. *d*, View of the well-preserved western section of the defense wall around the Cerro del Castillo, seen from Fort A on Cerro de las Monjas. *e*, Terraced pyramidal mound toward the upper end of the Río Motil. This is Site 5 on the map. *f*, Terraced fortified hill site above the Peña Negra on the east side of Allangay Valley. This is Site 42 on the map. *g*, Panorama from the southern end of the ridge above Lake Cahuadan, looking south towards Cerro Campana West (no. 28), the conical mound with traces of walls. The dark brush-covered mass of the round fort shown in figure 12, C, is to the right.

*a**b**c**d**e**f**g*

Marca Huamachuco and other Highland sites

PLATE 14

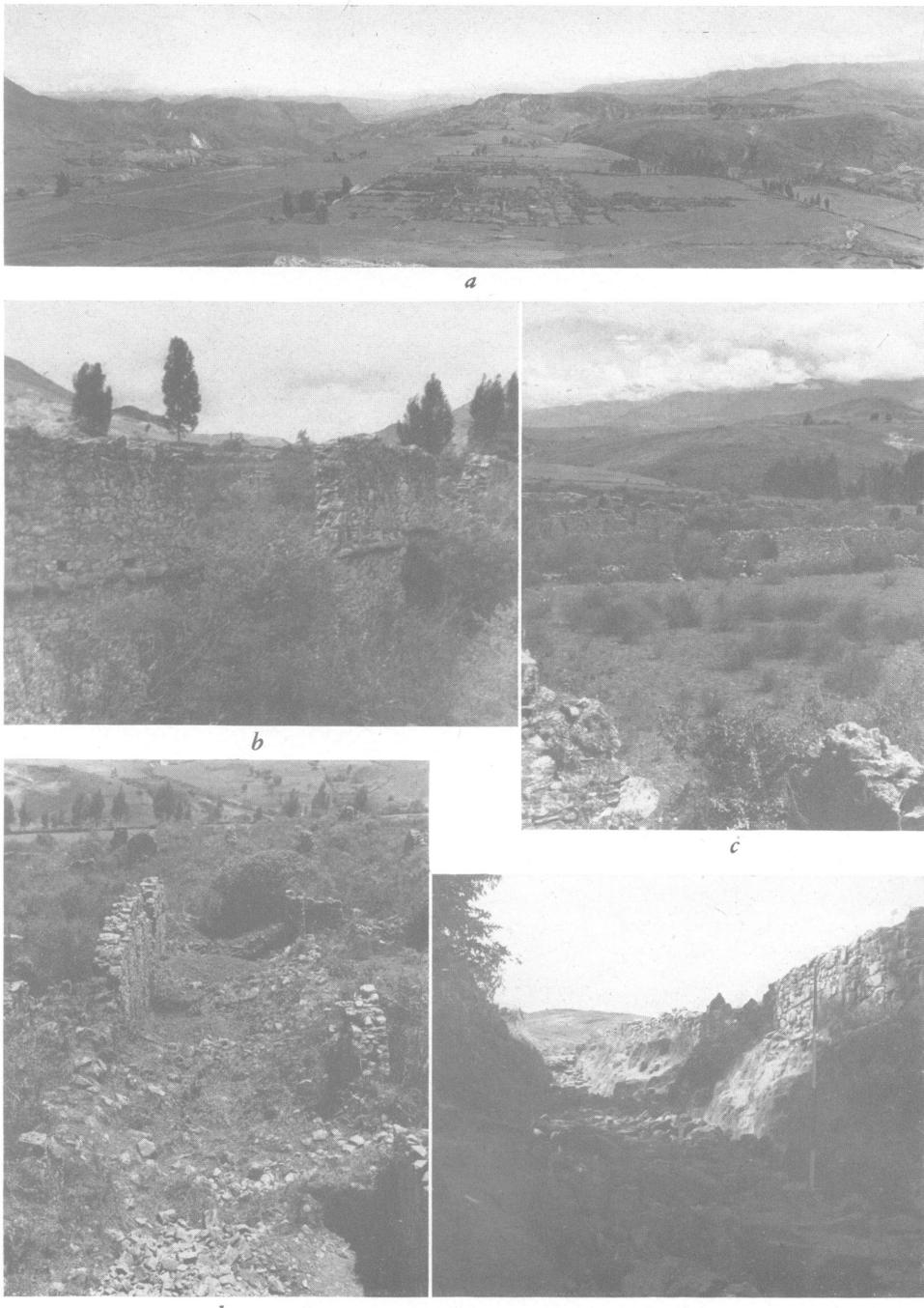
Cerro Sazón and Cerro Campana East. *a*, The well-preserved gallery and plaza complex at the eastern end of Cerro Sazón. *b*, The western end of Cerro Sazón, with remnants of high walls. *c*, Well-preserved section of wall on Cerro Sazón, showing stone corbels and square windows. *d*, Cerro Campana East as seen from Cerro Campana West across Lake Sausagocha. *e*, Northern end of Cerro Campana East with wall foundations and traces of the ancient roadway.

*a**b**c**d**e*

Cerro Sazón and Cerro Campana East

PLATE 15

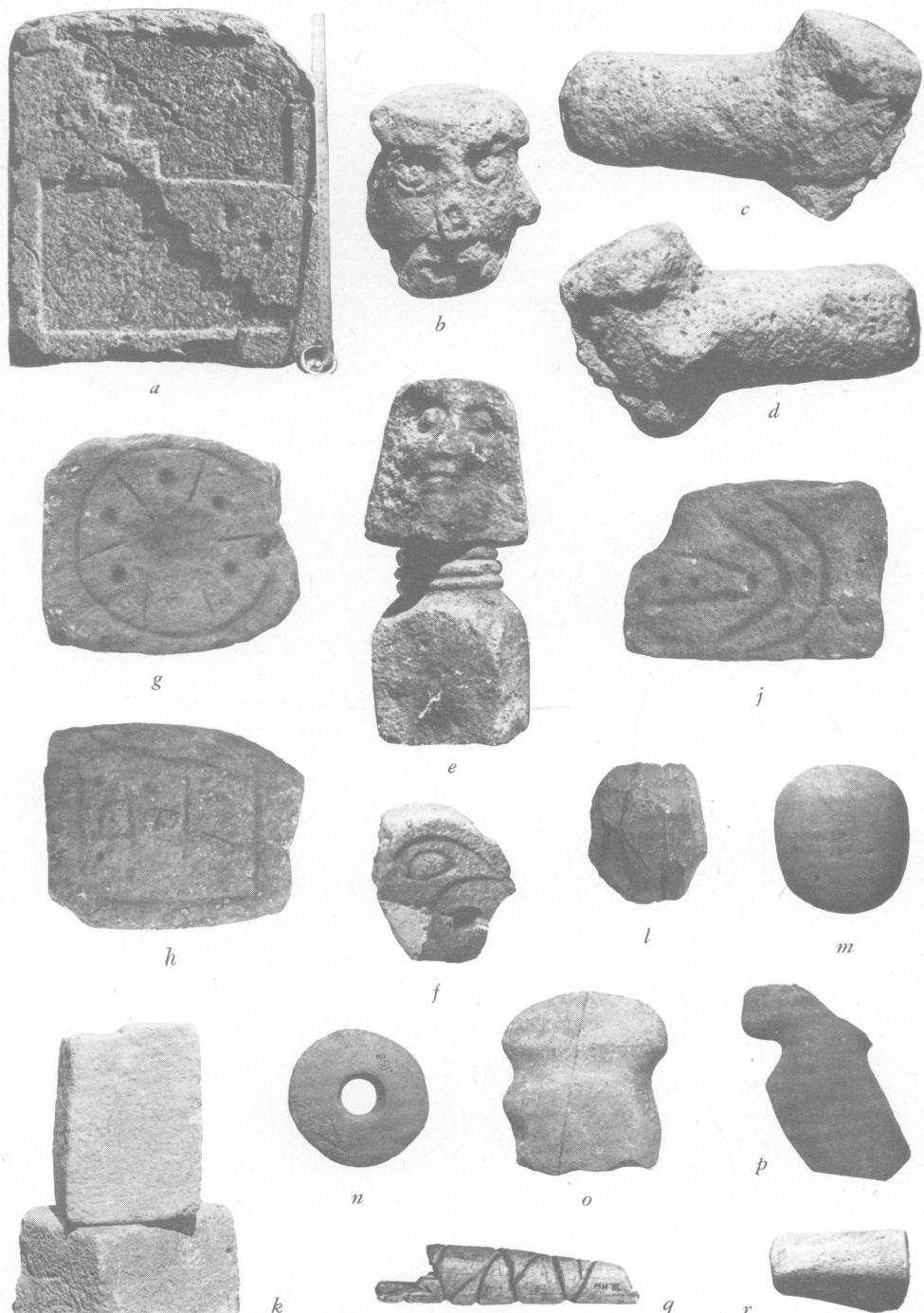
Viracochapampa. *a*, Panorama of Viracochapampa as seen from the hill to the south. *b*, High wall in Viracochapampa showing the stone corbels and small niches. *c*, View looking north across the central plaza of the plaza and gallery complexes indicated at *k* in figure 13. *d*, Long gallery after clearance of vegetation and during the process of excavating pits 1 and 2. *e*, The main street of Viracochapampa looking toward the south gate.

*d**e*

Viracochapampa

PLATE 16

Stone and bone objects from Marca Huamachuco and Coipín. *a*, Carved stone slab found in a field and said to have come from a tomb. *b-d*, Front and side views of a carved human head in stone, found at Marca Huamachuco. *e*, Carved stone head set upon a column base, both discovered at Coipín. The column base probably comes from the now ruined chapel at this site. *f*, Carved fragment in lava rock recovered from layer 2 of Excavation 1 in the Castillo of Marca Huamachuco. *g-h*, Obverse and reverse of a carved block of lava from Marca Huamachuco. *j*, A similar block of stone with a different type of design, from Marca Huamachuco. *k*, Two well-cut lava blocks recovered from the surface of Hill 1, Marca Huamachuco. The upper one has a neatly cut inset at the corner. *l*, Chipped quartzite clod-breaker from the surface of Marca Huamachuco. *m*, Water-smoothed quartzite boulder used as a grinding stone, Marca Huamachuco, surface. *n*, Disk-shaped macehead in fine-grained stone, biconically perforated. Surface of Marca Huamachuco. *o*, Fragment of a grooved ax-hammer in gray quartzite. Surface of Marca Huamachuco. *p*, Splayed blade and T-butted ground quartzite ax. Surface of Marca Huamachuco. *q*, Fragment of carved bone object from Excavation 3 in the Castillo. *r*, Short bone tube from Excavation 6, Marca Huamachuco. *a-d*, $\frac{1}{10}$; *e*, $\frac{1}{15}$; *f-j*, $\frac{2}{15}$; *l-p*, $\frac{1}{6}$; *q-r*, $\frac{1}{3}$.



Stone and bone objects from Marca Huamachuco and Coipín

PLATE 17

Stone sculptures from Huamachuco in the Uhle collections. *a*, Stone sculpture photographed by Max Uhle in the house of a peasant on Marea Huamachuco. Represents a much stylized cat's head. *b*, Fragment of a stone slab with step-fret design found in a tomb at Marea Huamachuco. 4-3506.* *c*, Complete slab with step-fret design. Marea Huamachuco. 4-3576. *d-e*, Three-quarter and lateral view of a carved stone head of a stylized feline, purchased at Huamachuco. 4-3617. *f*, Lateral aspect of the head of a similar carving, found by Uhle near the wells on Cerro Amaru. 4-3578. *g-h*, Human head in stone obtained at the Hacienda Ueros east of Marea Huamachuco not far from Viracochapampa. 4-3579. *j-k*, Human head in greenish-black diabase. Huamachuco district, no location. 4-3581. *l*, Carved stone block, originally found east of Huamachuco at Purpukala Hacienda. 4-3580. *m-n*, Stone head with two faces, originally found at Urpay west of Cerro Amaru. 4-3577. *o-r*, Stone heads recovered from Baranchique near Cerro Toro. *o*, 4-9371; *p-r*, 4-9370. *s*, Small stone head with tenon, probably found at Marea Huamachuco. 4-3493. *b, d, e, g, h, k-n*, $\frac{3}{2}$; *c, o, p*, $\frac{1}{12}$; *f*, $\frac{1}{16}$; *j*, $\frac{1}{6}$; *q, r*, $\frac{5}{32}$; *s*, $\frac{1}{8}$.

* Numbers refer to specimens in the Uhle collection as catalogued in the University of California, Museum of Anthropology. The Peruvian collections bear the generic numerals 4- or 16-.



Stone sculptures from Huamachuco in the Uhle collections

PLATE 18

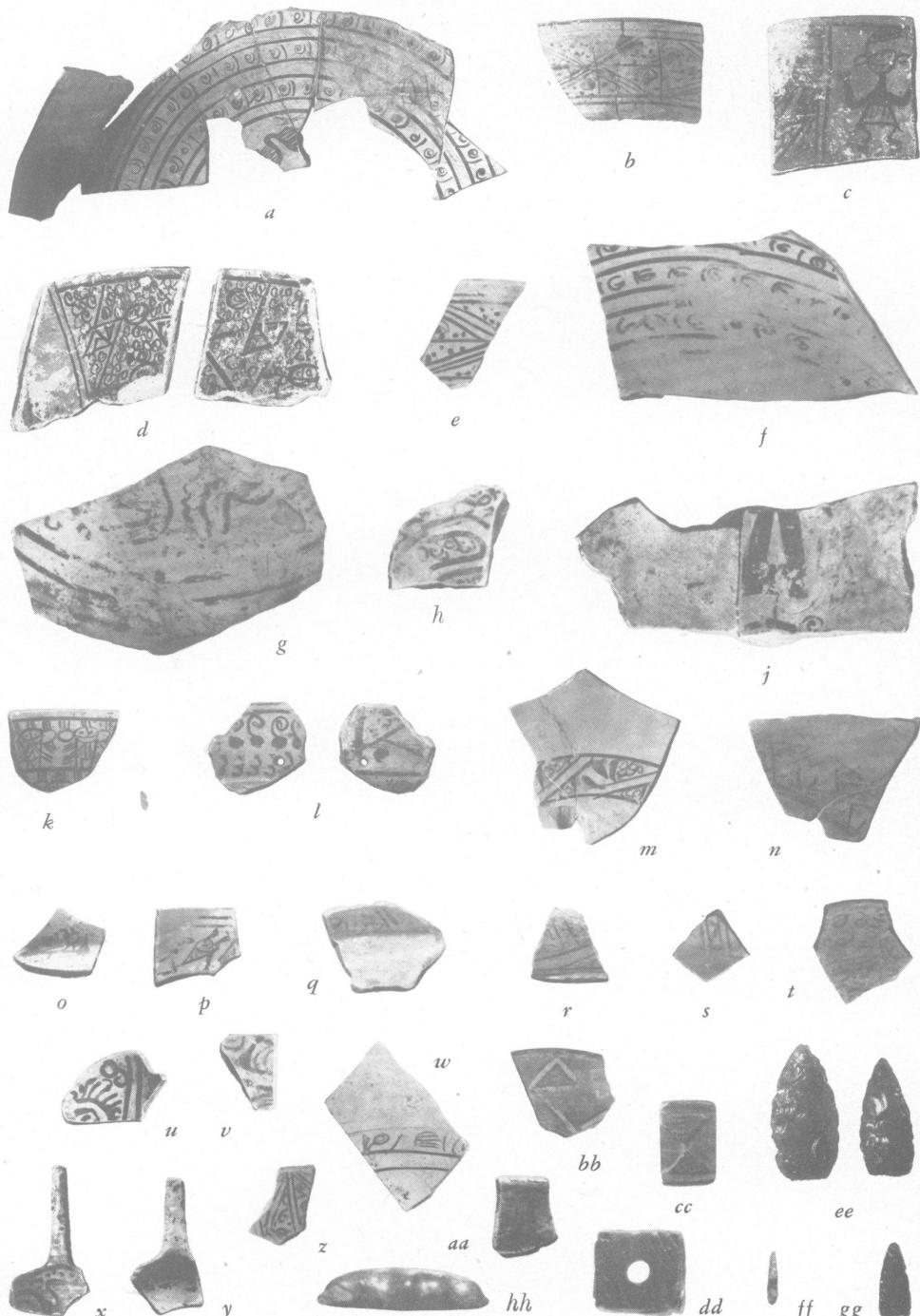
Copper and silver specimens from the Huamachuco district. *a–b*, Front and back views of cast copper figure of a bat feeding two young. 4-3589. *c*, Cast copper bat's head. 4-3524. *d*, Massive copper adz. 4-3615. *e*, Perforated copper pin. 4-3595. *f*, Copper topu from Cerro Amaru. 4-3516. *g*, Conical hollow-head copper topu. Marca Huamachuco. 4-3590. *h*, Copper spatula. 4-3565a. *j*, Massive fragment of copper with incised decoration. 4-3480. *k*, Semilunar copper knife. 4-3597. *l*, Incised copper chisel-like implement with conical socket. 4-3462. *m*, Copper topu with hollow end. 4-3609. *n*, Copper needle from a cave tomb at Marca Huamachuco. 4-3519. *o*, Square-ended perforated copper pin, from a cave tomb at Marca Huamachuco. 4-3520. *p*, Copper topu. 4-3514. *q*, Copper tumi knife from niche tomb near Excavation 7, Marca Huamachuco. *r*, Copper tumi knife. 4-3466. *s*, Copper tweezers. 4-3525. *t*, Crescent-shaped silver ornament. 4-3512. *u*, Silver topu. 4-3511. *v*, Silver topu. 4-3507. *c*, $\frac{2}{3}$; *q*, $\frac{2}{3}$; all others $\frac{1}{3}$ nat. size.



Copper and silver specimens, Huamachuco district

PLATE 19

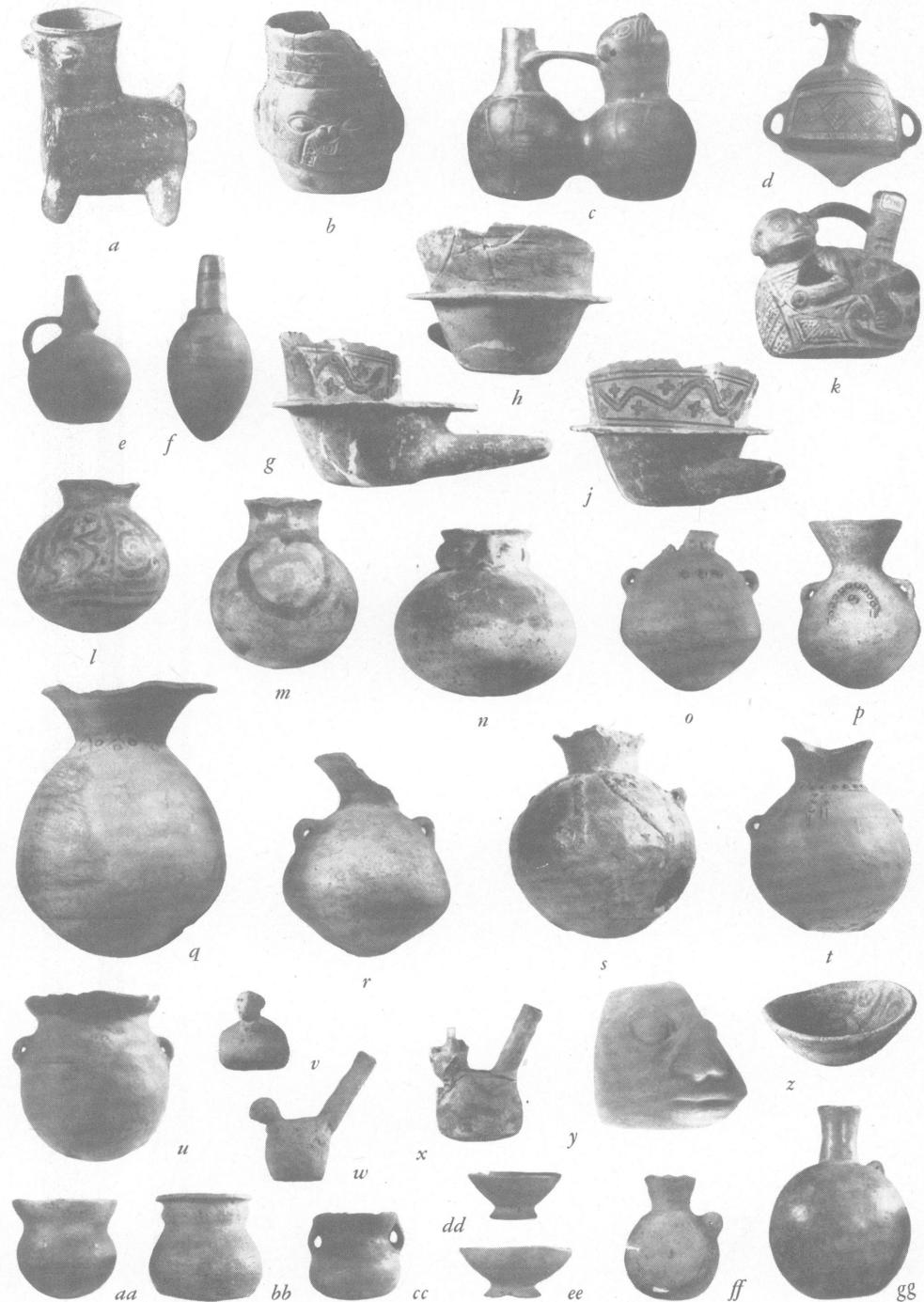
Cursive-painted sherds from the Huamachuco district and miscellaneous stone artifacts. *a-h*, Uhle collections. *e*, 4-3572b. *f*, 4-3563b. *g*, 4-3572f. *h*, 4-3572c. *j, m, y, aa, gg*, Marca Huamachuco, Exc. 7, layer 2. *k*, Viracochapampa, Exc. 2. *l*, Viracochapampa, surface. *n*, Marca Huamachuco, Exc. 8. *o, p, t*, Marea Huamachuco, surface. *q, r, s, u, x, z*, Marea Huamachuco, Exc. 13. *v, w, bb, ff*, Marca Huamachuco, Exc. 11, layer 2. *cc, dd*, Face and lateral aspects of carved and perforated steatite blocks. 16-1737-1738. *ee*, Obsidian projectile points, 4-3551. *hh*, Polished pebble in the form of a frijole pod, Otuto. *e-h, cc, dd, 1/2; j, l-n, y, aa, hh, 3/8; k, o-t, a, bb, ee, 1/3; ff, gg, 2/9; cc, dd, 3/5*.



Cursive-painted sherds and miscellaneous stone artifacts

PLATE 20

Pottery vessels from Huamachuco in the Uhle collections. *a*, 4-3538. *b*, 4-3585. *c*, 4-3478. *d*, 4-3582. *e*, 4-3584. *f*, 4-3539. *g*, *h*, *j*, 4-3549. *k*, 4-3461. *l*, 4-3541. *m*, 4-3544. *n*, 4-3540. *o*, 4-3472. *p*, 4-3470. *q*, 4-3471. *r*, 4-3542. *s*, 4-3468. *t*, 4-3469. *u*, 4-3473. *v*, 4-3548. *w*, 4-3547. *x*, 4-3546. *y*, 4-3558-d. *z*, 4-3543. *aa*, 4-3474. *bb*, 4-3553. *cc*, 4-3474b. *dd*, 4-3476a. *ee*, 4-3476b. *ff*, 4-3545. *gg*, 4-3555. *a*, *b*, *z*, $\frac{1}{4}$; *d-f*, *l-x*, *aa-gg*, $\frac{1}{5}$; *c*, *g*, *h*, *j*, *k*, $\frac{1}{6}$; *y*, $\frac{1}{3}$.



Pottery vessels from Huamachuco in the Uhle collections

PLATE 21

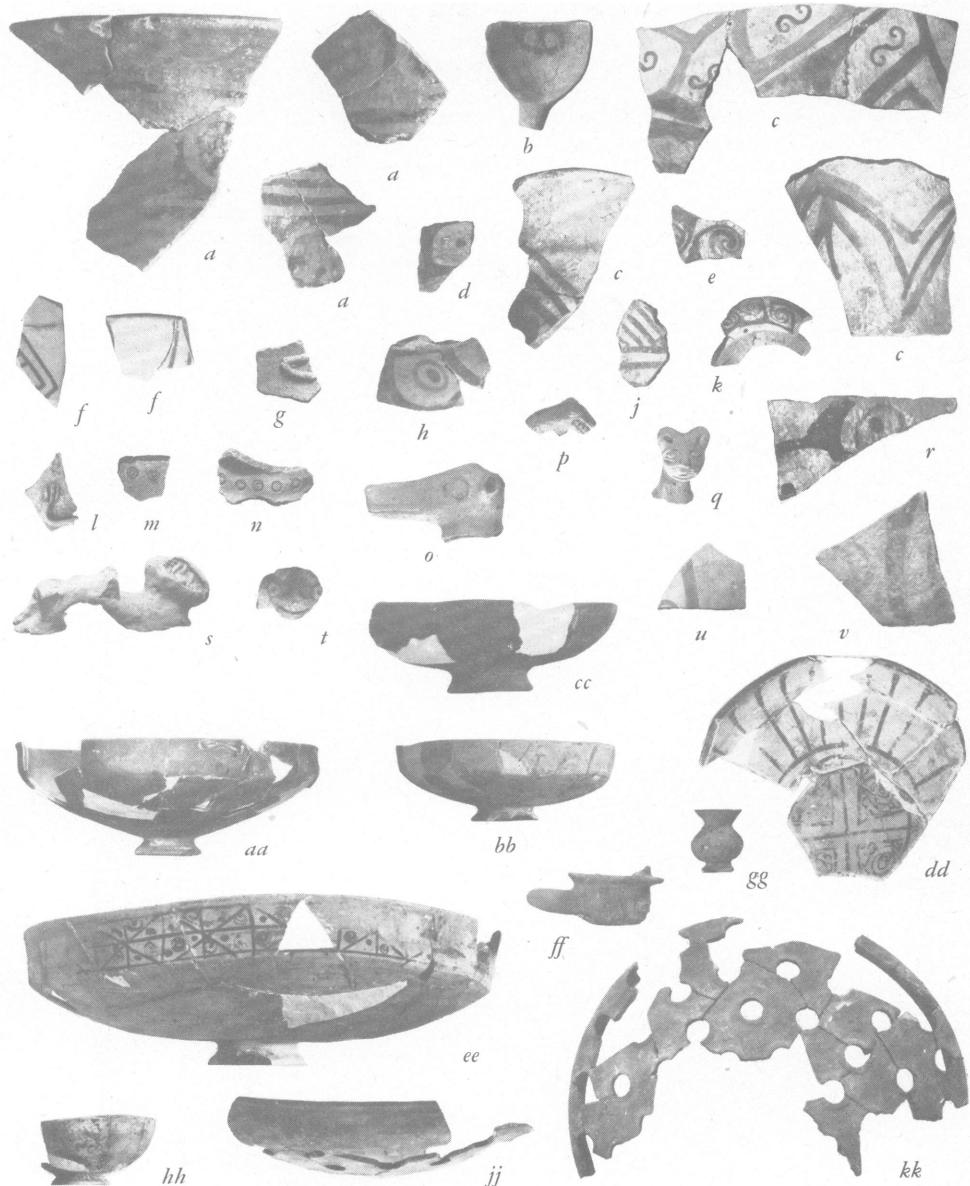
Pottery from Huamachuco, Cajabamba, and Moche. *a–c*, Marca Huamachuco, surface. *d*, Marca Huamachuco, Exc. E. *e*, Marca Huamachuco, Hill 1. *f*, Marca Huamachuco, Exc. 3. *g*, La Emina, near Cajabamba. *h*, Marca Huamachuco, Exc. 8. *j–l*, Marca Huamachuco. *j*, 4–3572i. *k*, 4–3563. *l*, 4–3558f. *m–w*, Moche, Cite A. *m*, 4–2567a. *n*, 4–3558g. *o*, 4–2565. *p*, 4–2565. *q*, 4–2567e. *r*, 4–2567e. *s*, 4–2567a. *t–u*, 4–2567e. *v–w*, 4–2567b. *c*, *d*, *e*, $\frac{1}{3}$; *n*, *p*, *r*, $\frac{1}{4}$; *g*, *k*, *s*, *t*, *u*, $\frac{1}{5}$; *o*, *q*, $\frac{1}{6}$; *a*, *b*, $\frac{1}{7}$; *f*, *h*, $\frac{1}{8}$; *m*, *r*, *w*, $\frac{2}{5}$; *j*, *l*, $\frac{3}{8}$.



Pottery from Huamachuco, Cajabamba, and Moche

PLATE 22

Pottery from Marca Huamachuco. *a*, Black on red negative-painted ware, Exc. 7, layer 2. *b*, Black on gray negative-painted spoon, Exc. 13. *c*, Black-and-red on white slip sherds, Exc. 3. *d*, Red on white slip, Exc. 1, layer 1. *e*, Brown [black?] on white slip, Exc. 3. *f*, Black on tan, Exc. 1, layer 2. *g*, Plastic decoration, Exc. 14. *h*, Black-and-red on orange slip, Exc. 1, layer 1. *j*, Red on white slip, Exc. 1, layer 1. *k*, Small bowl, black-and-red on white slip, Exc. 1, layer 1. *l*, Plastic and incised decoration, Exc. 1, layer 1; *m*, *n*, Exc. 2. *o*, *p*, *q*, Modeled animal heads, 4-3557, 4-3558e. *r*, Black-and-red on white slip, 4-3558e. *s*, Zoömorphic handle, Marca Huamachuco, surface. *t*, Two-pronged lug, Exc. 11, layer 1. *u*, Black-and-red on tan, Allangay. *v*, Black-and-red on white slip, Exc. 7, layer 2. *aa*, Footed bowl, bucchero ware, Exc. 11, layer 2. *bb*, Footed bowl, yellow-white paste, Exc. 11, layer 2. *cc*, Footed bowl, coarse chocolate-brown ware, Exc. 11, layer 2. *dd*, Footed bowl in yellow-white paste with brown cursive design, Exc. 11, layer 2. *ee*, Footed bowl, white paste, cursive design in black, Exc. 11, layer 2. *ff*, Handled vessel, channeled design with red slip, Exc. 7. *gg*, Footed vase, flare neck, Exc. 7. *hh*, Footed bowl, white paste, Exc. 6. *jj*, *kk*, Side and bottom view of colander, Exc. 11, layer 2. *a*, *b*, *o*, *p*, *q*, *r*, *s*, *dd*, $\frac{1}{4}$; *c*, *d*, *e*, *f*, *h*, *j*, *k*, *l*, *m*, *n*, *cc*, $\frac{1}{2}$; *g*, *t*, *bb*, *hh*, $\frac{1}{6}$; *u*, *v*, *ee*, $\frac{3}{8}$; *aa*, *ff*, *jj*, *kk*, $\frac{1}{8}$; *qq*, $\frac{1}{16}$.



Pottery from Marca Huamachuco

PLATE 23

Pottery from Viracochapampa and Cerro Campana East. *a-n*, Viracochapampa. *a-c*, Painted sherd, Exc. 1. *d*, Plastic decoration, Exc. 1. *e*, Lime juglet, Exc. 1. *f*, Modeled head, Exc. 1. *g*, Tripod legs of various sizes, Exc. 1. *h*, Hemispherical bowl with impressions for tripod legs, Exc. 1. *j*, Lug handle with incisions, Exc. 9. *k, m*, Loop handles, Exc. 9. *l*, Loop handle, Exc. 1. *n*, Sections of small mold [?], orange paste, Exc. 1. *o-gg*, Cerro Campana East. *o-x*, Sherds with incised or plastic decoration, *p*, Exc. 6. *t-u*, Exc. 7. *o, q-s, v-x*, Surface. *aa-dd*, Open bowls, orange paste with painted bands of red, Exc. 9. *ee-gg*, Brush- or comb-marked sherd, *ee*, Exc. 9. *ff*, Exc. 7. *gg*, Exc. 5. *a, b, c, e, f, 1/3*; *d, g, 2/3*; *h, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, aa, bb, cc, dd, ee, 1/4; ff, gg, 2/3*.



Pottery from Viracochapampa and Cerro Campana East