1985

Recent Studies in Andean Prehistory and Protohistory: Papers from the Second Annual Northeast Conference on Andean Archaeology and Ethnohistory

D. Peter Kvietok
Markham College, kvietokp@academic.markham.edu

Daniel H. Sandweiss
University of Maine, dan_sandweiss@umit.maine.edu

Michael A. Malpass
Ithaca College, malpass@ithaca.edu

Richard E. Daggett
University of Massachusetts, Amherst, rdaggett@library.umass.edu

Dwight T. Wallace
cwallace66@aol.com

See last page for additional authors

Authors
D. Peter Kvietok, Daniel H. Sandweiss, Michael A. Malpass, Richard E. Daggett, Dwight T. Wallace, Anne-Louise Schaffer, Elizabeth P. Benson, Charles S. Spencer, Elsa M. Redmond, Gordon C. Pollard, and George Kubler

LATIN AMERICAN
STUDIES PROGRAM

CORNELL UNIVERSITY

RECENT STUDIES IN ANDEAN PREHISTORY AND PROTOHISTORY

Papers from the Second Annual Northeast Conference on
Andean Archaeology and Ethnohistory

Edited by D. Peter Kvietok and Daniel H. Sandweiss

RECENT STUDIES IN ANDEAN PREHISTORY AND PROTOHISTORY

Papers from the
Second Annual Northeast Conference on Andean Archaeology and Ethnohistory

Edited by
D. Peter Kvietok and Daniel H. Sandweiss

Preface

The contributions in this volume represent nine of the twenty-three papers presented at the Second Annual Northeast Conference on Andean Archaeology and Ethnohistory (NCAAE), held at the American Museum of Natural History (AMNH) on November 19-20, 1983. The Conference is a continuing annual event designed to provide an opportunity for Andean scholars in northeast North America to present current research in an informal setting. The Publication Series, of which this is the second volume (see Sandweiss, editor 1983), gives us the unique opportunity to distribute these reports relatively quickly to a wider audience of Andeanists and other interested scholars. The third NCAAE was held in 1984 at the University of Massachusetts at Amherst, and the 1985 version is scheduled to take place at the State University of New York (SUNY) in Albany.

The Junius Bird Memorial lecture series was initiated by Craig Morris (AMNH) in 1982; Gordon Willey (Harvard) presented the first address that year at the Center for Inter-American Relations in New York City. The Second Annual NCAAE was fortunate in coinciding with the Second Junius Bird Memorial Lecture, held at the American Museum of Natural History on November 18, 1983. Special Guest Speaker Alberto Rex Gonzalez delivered the annual address. Gonzalez was a professional associate and close personal friend of Junius Bird, and his talk effectively highlighted the contributions and recollections of this fruitful association. Dr. Gonzalez' synopsis of archaeological research conducted in the southern Andean region provided a valuable summary of major research trends in

Northwestern Argentina and Northern Chile.

The assistance of a number of individuals and institutions were instrumental in the overall organization of the Conference and the preparation of this volume. The American Museum of Natural History provided the facilities and financial support for the Conference; Dr. Craig Morris, Curator of South American Archaeology and Chairman of the Anthropology Department at the Museum, gave invaluable help in the planning and functioning of all Conference proceedings, as well as advice on the manuscript preparations. A special debt is owed to the Cornell Latin American Studies Program and its Director, Dr. Thomas H. Holloway, for continuing to publish the NCAAE proceedings. We would especially like to thank Patricia Bramwell of the AMNH Anthropology Department for her patience and assistance in manuscript preparation. Lastly, we very much appreciate the participation of the twenty-four speakers at the Second Annual Northeast Conference on Andean Archaeology and Ethnohistory and in particular the efforts and patience of the ten authors who provided manuscripts for this volume.

D. Peter Kvietok
American Museum of Natural
History and Columbia University

Daniel H. Sandweiss
Cornell University

Reference

Sandweiss, Daniel H., editor
1983 Investigations of the Andean Past. Papers from the First Annual Northeast Conference on Andean Archaeology and Ethnohistory. Ithaca, N.Y.: Cornell Latin American Studies Program. viii + 293 pp.

RECENT STUDIES IN ANDEAN PREHISTORY AND PROTOHISTORY

Papers from the Second Annual Northeast Conference on Andean Archaeology and Ethnohistory

Edited by D. Peter Kvietok and Daniel H. Sandweiss

TABLE OF CONTENTS

General Introduction

Daniel H. Sandweiss
Cornell University

D. Peter Kvietok
American Museum of Natural
History and Columbia University

Both the pleasure and the difficulty in editing a set of papers from a conference like the NCAAE lie in the breadth of the contributions. The Conference invited papers using archaeological and ethnohistoric data covering the entire Andean region and the full temporal span of indigenous Andean culture. The response was a series of reports that range temporally from the Early Preceramic Period to the Early Colonial Period and spatially from Venezuela to Argentina, while simultaneously employing a wide variety of methodological approaches. We view this fact as a positive reflection on the current state of research into the Andean past; nevertheless, on reviewing the collection of papers submitted for publication in this volume, we were faced with the classic archaeological problem of classification. Several organizational schemes were considered, but we finally chose approximate chronological order as the most universal (and traditional) criterion. It soon became apparent that the broad scope of the Conference had attracted a set of studies that could be classified in two major categories: Prehistory and Protohistory. These categories are the logical outcome of the chronological ordering of the papers in the context of the relevant data bases. Other organizational schemes would have produced different kinds of groupings (e.g. organization strictly by methodological approach would have created categories such as Art History, Archaeology,

Ethnohistory, and Archaeology/Ethnohistory; organization by culture area would have created categories such as Northern, Central and Southern Andean regions).

Ethnohistory is an approach to the anthropology of preliterate peoples that employs documents produced as a result of contact with literate societies. In the same way, archaeology is an approach to the anthropology of prehistoric (and historic) peoples that relies on the study of their material remains. The results of archaeological investigations of preliterate people are referred to as Prehistory; we have so classified six of the papers in this volume (Malpass, Daggett, Wallace, Benson, Schaffer, and Spencer and Redmond). The results of the investigation of peoples who existed just prior to and at the time of the introduction of writing can best be termed Protohistory,[1] especially when ethnohistoric evidence is combined with archaeological work. In the Andes, Protohistoric groups would include all those peoples encountered by the Spaniards on their arrival in the region, such as the Inca and the ethnic groups subjugated by them but still maintaining some degree of cultural identity. As the three papers included in the Protohistory section of this volume indicate (Patterson, Pollard, and Kubler), there is a growing emphasis on studies of this kind in the Andes. The number of recent field projects which use ethnohistoric data as a source of hypotheses for archaeological testing show that this trend in Andean studies is continuing.[2] Therefore, although the term Protohistory is not current in the Andean literature, there is a growing body of work on late prehispanic Andean civilization that calls for such a classification.

The first three papers in the volume (Malpass, Daggett, and Wallace) cover the time span from the Early Preceramic to the Early Intermediate Period. All three approach the problem of intra-regional interaction and variation in different parts of the central Andes by using traditional archaeological techniques such as stratigraphic excavation, synchronic comparison of artifact types (including architecture and settlement pattern), and seriation. In a study which sheds light on the early utilization of the north Peruvian highlands and on coast-highland interaction, Michael Malpass presents the results of his excavations in two rockshelters in the Cordillera Negra of Peru: Huachanmanmachay and Tecliomachay. The former site had evidence of intermittent occupation from the Early Preceramic Period (Paijan, 8000-9000 B.P.) through the Early Intermediate Period (Recuay, 100 B.C. to 600 A.D.), while at the latter site, the same time span is indicated though the principal occupation appears to have taken place during the Late Initial Period (ca. 1000 B.C.). Malpass suggests that the lack of post-Early Intermediate Period remains in the Ancash _puna_ where these sites are located may reflect abandonment of that zone, perhaps due to regional conflicts. For the earlier periods, the discovery of Paijan points, previously unknown in the highlands, suggested brief visits to the _puna_ by the earliest coast-dwellers. Malpass interprets the faunal remains from the sites as evidence of hunting of wild cervids and camelids in the earlier periods, with a shift to llama herding and cervid hunting by the Initial Period; this view accords with recent findings by Wheeler (Lavallee _et al_. 1982).

In a broad sense, Richard Daggett's study of the transition from the Early Horizon to the Early Intermediate Period on the north coast of

Peru also concerns coast/highland interactions. At the end of the Early Horizon, Daggett shows that both the Nepeña and Viru valleys shared pattern burnished pottery, megalithic architecture, and an emphasis on upper valley settlement; the first two elements are also found in the adjacent highlands in the same period. Daggett interprets this fact, along with the upper valley emphasis, as evidence of strong highland influence. Immediately afterwards, at the beginning of the Early Intermediate Period, Nepeña and Viru show very different settlement pattern, architecture, and ceramic types. Daggett reports on the early Early Intermediate Period upper valley Nepeña sites of Cerro Chacuascucho East and Cerro Chacuascucho West. The sites' location and material remains indicate that Nepeña continued to maintain its highland connections during this period. At the same time, Viru has a renewed emphasis on lower valley settlement and associated architectural and ceramic types that show it to be affiliated with a coastal culture centered in the Moche valley. Daggett's results provide strong, local-level support for the traditional interpretation of the Early Horizon/Early Intermediate Period transition as a shift from a time of widespread cultural unity to one of marked regional diversity.

Dwight Wallace provides an important critique of the Paracas pottery sequence (Menzel et al. 1964) by utilizing additional field data and examining the implicit assumptions of stylistic seriation. Stylistic comparison of ceramic collections from the upper Chincha, upper Pisco, and lower and upper Ica valleys suggests non-contemporaneity for these areally distinct units. Temporally heterogeneous phase traits are observed within one areally distinct unit in Chincha, which Wallace interprets as an indication of directionality of influence. Using the

frequency of a red slipped bowl form in the Chincha (Pinta) lot and the same form's intrusiveness in Ica, Wallace argues for the temporal priority of this stylistic innovation in Chincha, with a later spread to Ica.

The basic issue under investigation by Wallace is the equation of stylistic change with temporal change in seriations and the apparent omission of areal variation in the Paracas study. Contrasting humanistic and scientific studies, Wallace employs several quantitative methods to re-analyze the proposed seriation. Indices of similarity are computed for paired phases, with control factors for unique traits and major thematic trait clusters. The values are presented in a common correlation matrix form and a three dimensional plot; both representations demonstrate the complex interrelationships of space, time, and relative rate of change.

In conclusion, Wallace offers an alternative for the Early Horizon pottery sequence of the south coast. Phases 4 and 5 are lumped together because of an inadaquate sample size for temporal differentiation. More importantly, Wallace proposes an earlier placement of the northern Topara influence in the abrupt innovations of phase 8, followed by technological onslaught in phase 10. The implications of these results provide new working hypotheses for south coastal interactions during the Early Horizon and Early Intermediate Period and a reconsideration of the assumptions and limitations of existing seriations.

The following papers illustrate two different approaches to the study of museum collections: inspection of the physical condition of the artifacts themselves and analysis of their iconographic content. In her

contribution, Anne-Louise Schaffer examines a series of looted metal objects in museum collections from the Loma Negra cemetery (Moche I-II, early Early Intermediate Period) in far northern Peru. Most of these objects were personal adornments. By studying the remnant bits of original material and the impressions of completely decayed items in the corrosion products on the metal artifacts, Schaffer was able to identify missing objects such as textiles, shell beads, and feathers that were originally buried with the metal. Careful matching of the corrosion patinas also revealed several cases of stacked, serial objects. Compared with coastal Moche burials, Loma Negra dead seem to have been accompanied by more elaborate personal adornments; Schaffer suggests that metalwork was made specifically for funeral purposes, a role filled by pottery in the coastal Moche case and by fine textiles in the Paracas culture.

Elizabeth Benson evaluates the iconographic evidence for lunar imagery in Early Intermediate Period Moche pottery from the Peruvian north coast. After treating the figure known as the "moon animal," Benson devotes the better part of her paper to an analysis of the two standard late Moche representations which have been called "moon gods." Both are radiant beings but otherwise dissimilar. The first of these figures travels on a supernatural raft or a radiant crescent and is identified as female. The second figure appears in the Presentation Theme (Donnan 1975) as a radiant male warrior. Benson sees both as celestial beings associated with different points in the ritual calendar, but she feels that the raft-crescent figure is more likely to be the moon (or possibly the Pleiades), while the radiant warrior may be related to the sun.

The paper by Charles Spencer and Elsa Redmond offers new archaeological data on two previously uninvestigated zones in western Venezuela. The piedmont, between about 250 and 800 m above sea level, shows no discernible site size hierarchy; monumental sites are not present. Two ceramic complexes were defined for this zone: Curbati, which dates to around 500 to 200 B.C. by association with similar pottery from neighboring areas, and Caño Seco, which was found in association with Colonial sherds and therefore dates to the Protohistoric Period. Caño Seco pottery may have been produced by the Jirijara ethnic group known from early documents. In the high llanos, between about 180 and 240 m above sea level, Spencer and Redmond found a two-tiered site hierarchy, with one monumental site over 60 ha and the rest of the sites under 10 ha. The associated Gavan ceramic complex is broadly similar to the Osoid series from further east in the Venezuelan llanos.

The three studies placed in the Protohistory section make varying use of archaeological and ethnohistorical data. Thomas Patterson discusses the effects of the Inca custom of split inheritance on the relations between the Cuzco rulers and the caretakers of the principal coastal shrine at Pachacamac. According to this custom (see also Conrad 1981, 1982 and comments by Paulsen 1981 and Isbell 1981), the designated successor of the royal Inca inherited his predecessor's throne but not his lands or other property, which included rights to labor tribute. Instead, the Inca's property went to his other descendents to support themselves and the deceased ruler's cult, while the new Inca had to acquire his own lands, servants, etc.. Patterson shows how this system eventually forced Topa 'Inca (the son of Inca Pachacuti) to seek

alliances outside of the Cuzco region, principally with the shrine at Pachacamac on the central coast. Patterson uses archaeological data to support the ethnohistoric evidence for the nature and timing of the Inca connection with the coastal shrine and to show the variable nature of this connection at branch oracles established by the Pachacamac caretakers at different points relative to the imperial boundaries. The branch oracles outside of the Empire were useful to the Inca as sources of information and as a means to influence events in those areas, and the archaeological evidence supports a stronger Inca/Pachacamac linkage at extra-imperial oracles than at those established within the boundaries of the Empire. Patterson concludes with observations on the development and structure of Pre-Columbian states drawn from his analysis of the causes and nature of the relationship between Pachacamac and the Inca.

Toponymy, archaeology, and ethnohistory all contribute to Gordon Pollard's effort to quantify the distance represented by the Spanish league. Pollard began with an early document which lists Indian villages and Inca tambos and the distances between them in leagues for a route followed through northwestern Argentina by an early Spanish traveller, Juan de Matienzo. By matching toponyms and archaeological data with the places in the itinerary, the original route was reconstructed and an average value of 6.8 km per league was calculated. The point-to-point values, however, ranged from 6.0 to 7.5 km per league, with the higher values correlating with the flattest terrain. Pollard infers from these data that the league was a variable measurement at least partly conditioned by a time factor, probably an hour's walking time. A final section to the paper explains Pollard's

reasons for altering the earlier interpretations of Matienzo's route into the Calchaqui valley and makes several suggestions about the nature of the Inca infrastructure in northwestern Argentina.

In the volume's final paper, George Kubler relies on ethnohistoric sources to review prehispanic Andean creation myths and compare them with Mesoamerican cosmogonies. Multiple creations are a feature common to all versions in both areas. For the Andes, out of sixteen cronicas, an earlier group of seven accounts mentions only two creations. A later group of nine accounts refers to as many as five creations, probably the result of an increasing mixture of Mesoamerican and Andean sources. Kubler finds such a merging curiously appropriate, given the common palaeolithic origins of the two traditions and their Post-Columbian historical linkages.

In summary, the papers in this volume demonstrate a variety of strategies for obtaining information about the Andean Past. Several major research trends are apparent; though not representing radically new approaches, they do reflect shifting emphases and priorities in Andean research. We have already discussed the use of ethnohistoric data as a source for hypotheses to be tested against the archaeological record. Another important trend is the innovative use of pre-existing collections and field data instead of or in conjunction with new archaeological fieldwork. The papers by Wallace, Schaffer, and Benson stand out in this regard. It is encouraging that in the current times of reduced financial resources and difficult political conditions in Latin America, Andeanists are successfully turning to alternative research strategies, as well as continuing to carry out important new

fieldwork.

Footnotes

1. Protohistory has been defined variously in different parts of the world. Our usage derives from the term's employment in the New World. In southwestern North America, the Protohistoric Period is defined as a "time of transition" "between prehistory and the ethnographic present" (Wilcox and Masse 1981:1), while in Mesoamerica, one schema uses the same term to cover the final prehispanic epoch, equivalent in usage to the Andean Late Intermediate Period and Late Horizon (Adams 1977:13, 261-294). More generally, Rouse (1972:289) defines protohistory as "the transitional zone between prehistory and history." It is in this rather open-ended sense that we mean it: not as a replacement for terms in current usage such as Late Horizon or Colonial Period, but rather as a cross-cutting category which includes the immediately pre-Conquest and surviving post-Conquest elements of indigenous Andean society. Spatial and temporal boundaries vary in accordance with the nature and kinds of available data. Schaedel and Shimada (1982:363, 365) contextually define protohistory in a similar way, as the archaeological validation of ethnohistoric documents and models.

2. The concept of the vertical archipelago formulated by Murra (1972) is perhaps the best known example of a conceptual framework derived from ethnohistorical research which has been adopted as an productive research paradigm for archaeological investigation in the Andes. Applications include the work of Morris (1974, 1978, 1981, 1982) and Thompson (1967) in the Huanuco region, and Hyslop (1976, 1984) in the Lupaka area around Lake Titicaca and on the Inka road system. Among similar studies are those of Morris and Sandweiss at Chincha (Sandweiss 1983), Marcus at Cerro Azul, Earle et al. (1980; D'Altroy and Hastorf 1984) in Jauja, Netherly on the North Coast (1978, 1984) and Shimada et al. (1981) in the Lambayeque Valley. A recent analysis by Ana Maria Lorandi (1980) has elaborated upon the theoretical implications which this collabarative effort may have for future research in the Andes.

References

Adams, Richard E. W.
1977 Prehistoric Mesoamerica. Boston: Little, Brown and Co..

Conrad, Geoffrey W.
1981 Cultural Materialism, Split Inheritance, and the Expansion of Ancient Peruvian Empires. American Antiquity 46:3-26.

1982 The Burial Platforms of Chan Chan: Some Social and Political Implications. In Chan Chan: Andean Desert City, edited by

Michael E. Moseley and Kent C. Day, pp. 87-118. Albuquerque: University of New Mexico Press.

D'Altroy, Terence N. and Christine A. Hastorf
1984 The Distribution and Contents of Inca State Storehouses in the Xauxa Region of Peru. American Antiquity 49: 334-349.

Donnan, Christopher B.
1975 The Thematic Approach to Moche Iconography. Journal of Latin American Lore 1: 147-162.

Earle, Timothy K., Terence N. D'Altroy, Catherine J. LeBlanc, Christine A. Hastorf, and Terry Y. LeVine
1980 Changing Settlement Patterns in the Upper Mantaro Valley, Peru, Preliminary Report for the 1977, 1978, and 1979 Seasons of the Upper Mantaro Archaeological Research Project. Journal of New World Archaeology IV(1): 1-49.

Hyslop, John
1976 An Archaeological Investigation of the Lupaqa Kingdom and its Origin. Ph.D. Dissertation, Columbia University. Ann Arbor, Michigan: University Microfilms International.

1984 The Inka Road System. New York: Academic Press.

Isbell, William
1981 Comment on Conrad. American Antiquity 46:27-30.

Lavallee, Daniele, Michele Julien, and Jane Wheeler
1982 Telarmachay: niveles preceramicos de ocupacion. Revista del Museo Nacional XLVI: 65-127. Lima, 1984.

Lorandi, Ana Maria
1980 Arqueologia y economia: Hacia una vision totalizadora del Mundo Andina. Obra del Centenario 2:27-50. La Plata, Argentina: Museo de la Plata.

Menzel, Dorothy, John H. Rowe, and Lawrence E. Dawson
1964 The Paracas Pottery of Ica: A Study in Style and Time. University of California Publications in American Archaeology nd Ethnology 50.

Morris, Craig
1974 Non-Agricultural Production in the Inka Economy: An Institutional Analysis. In Reconstructing Complex Societies, edited by Charlotte Moore, pp. 49-60. Cambridge, Massachusetts: American School of Oriental Research.

1978 Maize Beer in the Economics, Politics and Religion of the Inka State. In The Role of Fermented Food Beverages in Nutrition, edited by Clifford Gastineau, William T. Darby, and Thomas B. Turner, pp. 21-34. New York: Academic Press.

1981 Tecnologia y organizacion Inca del almacenamiento de viveres en

la sierra. In Runakunap Kawsayinkupaq Rurusqankunaqa, Vol. 1, edited by Heather Lechtman and Ana Maria Soldi, pp. 327-75. Mexico: Universidad Nacional Autonoma.

1982 The Infrastructure of Inka Control in the Peruvian Central Highlands. In The Inka and Aztec States 1400-1800: Anthropology and History, edited by George A. Collier, Renato I. Rosaldo, and John D. Worth, pp.153-71. New York: Academic Press.

Murra, John V.
1972 El control vertical de un maximo de pisos ecologicas en la economia de las sociedades andinas. In Visita de la Provincia de Leon de Huanuco en 1562, Tomo 2, Iñigo Ortiz de Zuñiga. Ediciona cargo de J.V. Murra, pp. 429-468. Huanuco, Peru: Universidad Nacional Hermillio Valdizan.

Netherly, Patricia
1978 Local level Lords on the North Coast of Peru. Ph.D. dissertation, Cornell University. Ann Arbor: University Microfilms International.

1984 The Management of Late Andean Irrigation Systems on the North Coast of Peru. American Antiquity 49:227-54.

Paulsen, Allison
1981 The Archaeology of the Absurd: Comments on "Cultural Materialism, Split Inheritance, and the Expansion of Ancient Peruvian Empires." American Antiquity 46:31-37.

Rouse, Irving B.
1972 Introduction to Prehistory: A Systematic Approach. New York: McGraw-Hill.

Sandweiss, Daniel H.
1983 Estudio arqueologico de los pescadores de Chincha: Informe preliminar de la primera temporada. Boletin 8: 39-40. Museo Nacional de Antropologia y Arqueologia, Lima, 1984.

Schaedel, Richard P. and Izumi Shimada
1982 Peruvian Archaeology, 1946-1980: An Analytic Overview. World Archaeology 13:359-371.

Shimada, Izumi
1981 The Batan Grande-La Leche Archaeological Project: The First two Seasons. Journal of Field Archaeology 8:405-46.

Thompson, Donald E.
1967 Investigaciones arqueologicas en las aldeas Chupachu de Ichu y Auquimarca. In Visita de la Provincia de Leon de Huanuco en 1562, Tomo I, Iñigo Ortiz de Zuñiga. Edicion a cargo de J.V. Murra, pp.359-62. Huanuco, Peru: Universidad Nacional Hermillio Valdizan.

Wilcox, David R. and W. Bruce Masse
1981 A History of Protohistoric Studies in the North American Southwest. In The Protohistoric Period in the North American Southwest, AD 1450-1700, edited by David R. Wilcox and W. Bruce Masse, pp. 1-27. Arizona State University Anthropological Research Papers$ No. 24.

PREHISTORY

Two Preceramic and Formative Period Occupations in the Cordillera Negra: Preliminary Report

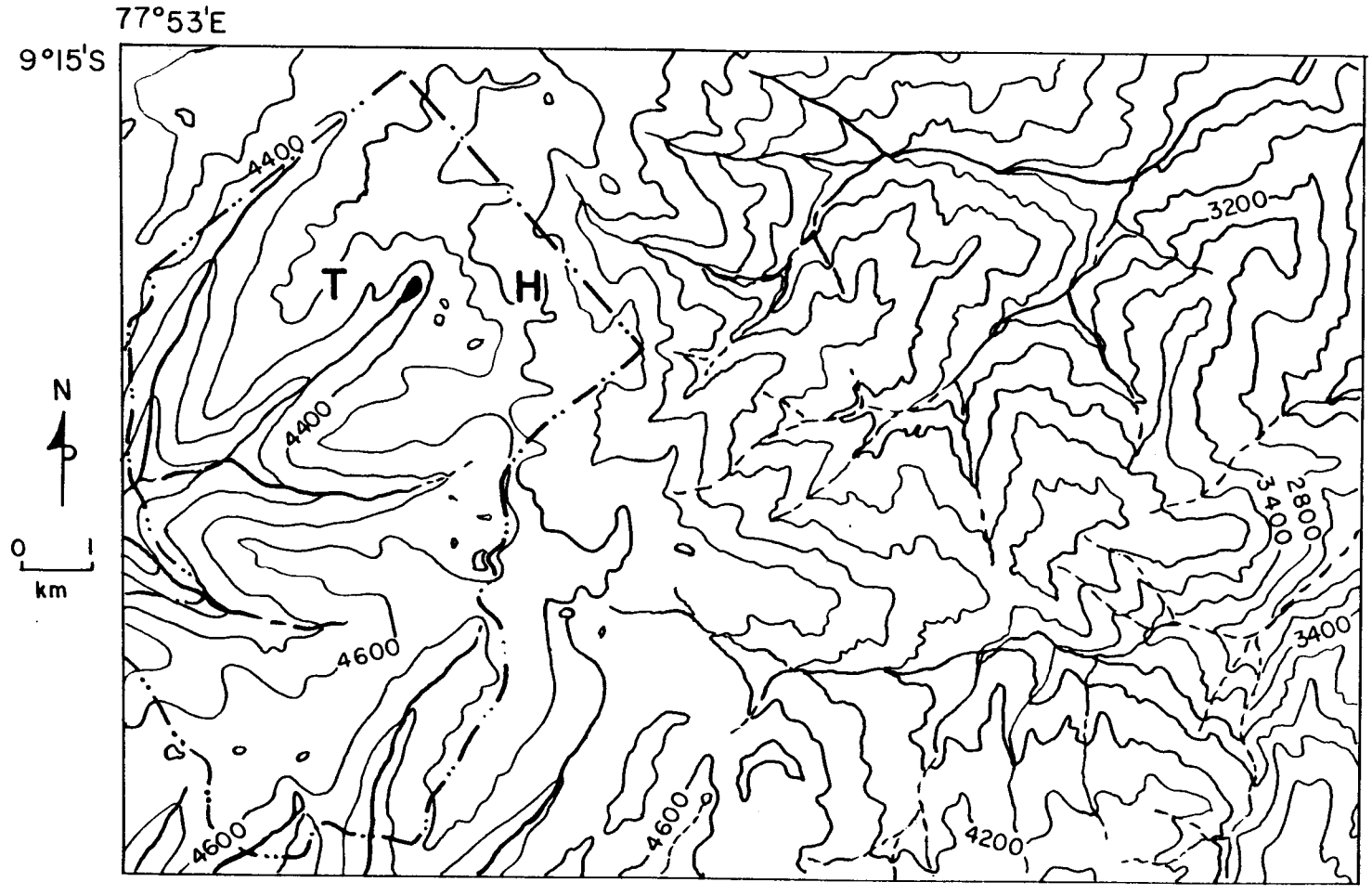
Michael A. Malpass
St. Lawrence University

General Introduction

This report presents the preliminary results of text excavations carried out in two rockshelters located in the Cordillera Negra, Peru. These rockshelters were located during a survey of the summit region carried out in 1981 as part of more general research concerning highland-coastal interactions. The two rockshelters, Huachanmanmachay and Tecliomachay, lie on opposite sides of the summit, the former in the drainage of the Callejon de Huaylas, the latter in the upper Sechin River drainage. Both are located in the puna zone at altitudes above 4500 m above sea level (Map 1).

Vegetation in the area of the two rockshelters today consists almost entirely of ichu grass, with scattered small shrubs in protected areas. This zone is presently unoccupied, and is only used seasonally for herding sheep, cattle and horses by members of the community of Pucapo, a small hamlet located farther down the eastern side of the mountains. Water resources are available year round in several lakes in the region. Potential wild food resources include deer, vizcacha, foxes, several species of birds and formerly camelids.

Huachanmanmachay is located at 4500 m above sea level overlooking a high meadow formed by the intersection of Huachanman Punta, the ridge from which the site gets its name, and the main crest of the Cordillera Negra. It is approximately four linear kilometers from Tecliomachay, and almost directly above Guitarrero Cave, which can be reached easily in a several hour walk.


77°53'E
9°15'S
4400
4400
4600
4600
4600
3200
3400
2800
3400
4200
T
H
N
0
km
Boundary of survey area
H HUACHANMANMACHAY
T TECLIOMACHAY

Tecliomachay is located in the Cercocancha Quebrada overlooking Laguna Teclio (Tecllo), which on Instituto Geografico Militar maps is called Canchiscocha. This lake forms the headwaters of the Sechin River, which drops rapidly in altitude until it reaches Quillo on the coastal plain. The rockshelter is approximately 4650 m above sea level.

Stone tools and ceramics from several periods were identified. In addition, both of these rockshelters yielded quantities of camelid and cervid bones, which have been identified by Alfredo Altamirano E. of the Paleoethnozoology Laboratory of San Marcos University. His analyses indicate heavy reliance on camelids, presumably domesticated llamas for the most part, although hunting of deer was also carried out. Archaeobotanical analyses are in progress.

Huachanmanmachay

Huachanmanmachay is long and narrow, being roughly 22 m wide at the mouth, but only four meters deep at its greatest point. It is divided into two discrete areas, an upper shelter, which is mostly in steep slope and affords little protection from rain, and a lower shelter, which is only 16 m^2 in area, but flat-lying and well-protected. The two are divided by a large bedrock outcrop.

A 2x1 meter test pit was laid out roughly in the center of the lower shelter. The pit was excavated using a combination of natural and arbitrary levels. The upper levels were naturally discrete, due to mixing of various modern and prehistoric deposits. Below roughly 35 cm, the deposits became a uniform black color and loamy texture, and hence were excavated in arbitrary levels. Excavations were done

by trowelling, and all levels with cultural remains were sifted through a quarter-inch mesh screen. Depth of excavation was reached at 105 cm in the rear of the test pit and at 135 cm in the front.

Stratigraphically, the first two levels of the deposits were mixed dung and soil. These contained few artifacts. A large disturbance was noted at the rear of the test pit. This disturbance extended to 80 cm below the surface. Below these mixed levels, the soil matrix was a gray to black loam, with abundant coarse rock fragments and burned grass concentrations. The difference between the gray and black strata in the profiles is due to the lower levels being saturated with water (Figure 1). This difference was first noticed during excavations when the soil below this level became markedly wetter and more difficult to screen.

As the excavation approached bedrock, the number of angular rocks increased in the soil matrix. A light tan and culturally sterile sand rested on the bedrock in the west and deepest part of the test pit.

Throughout the excavation, small patches of burned ichu grass and shrubs appeared. These were neither horizontally contiguous nor vertically discrete enough to classify as significant features. While they probably represent human activities, the nature and significance of these activities are uncertain.

Because there was no natural stratigraphy, the presence and absence of temporally discrete occupations were identified on the basis of the pottery and stone tools present in the arbitrary levels. Steve Wegner and Richard and Lucy Burger tentatively identified Recuay, White-on-Red, Early Horizon and Late Initial Period pottery among the sherds. These were frequently found in the same levels, indicating the deposits had

been mixed prehistorically. However, there was a general trend discernible from the lower to the upper levels: Recuay pottery was only found in the levels above 85 cm, whereas ceramics tentatively assigned to the Initial Period were restricted to the levels below 50 cm. Thus, the archaeological sequence in general appears to be preserved, but the specifics have been lost due to human and other disturbances.

The stone tools also support this conclusion. All the ground stone projectile points were found in the levels above 100 cm, whereas thirteen of the nineteen chipped stone points from stratigraphic contexts were from deeper than 100 cm (Table 1). In addition, lithic chipping debris increased dramatically toward the bottom of the test pit as pottery decreased.

Concerning the chipped stone projectile points, virtually all of the specimens from the lowest levels were of a single large-stemmed type. These points are very similar to the Paijan points found in the lower Casma valley (Malpass 1983a, 1983b). They also bear resemblances to the Paijan points from the North Coast (Ossa 1973). Both the patterns of breakage and the general shapes of these examples mirror those of the Casma tools (Figures 2-7). While the raw materials used for each are different, this is seen as due to the utilization of local materials in each area. Elsewhere (Malpass 1984), I have suggested the presence of these points indicates short term occupations of the puna by hunting groups from the lower valley. The lack of such points at other highland sites (Lynch 1970, 1980) supports such a suggestion as well.

Other tools were scarce in the excavated levels of the rockshelter. Two or three willow leaf projectile points suggest later preceramic occupations of Huachanmanmachay. Some beaked tools, gravers, burins

	projectile points	
provenience	chipped stone	ground stone
Level 4	3	3
Level 5, 70-85 cm	0	7
Level 5, 85-90 cm	0	1
Level 5, 90-95 cm	1	0
Level 5, 95-100 cm	2	2
Level 6, 100-105 cm	2	0
Level 6, 105-110 cm	2	0
Level 6, 110-115 cm	0	0
Level 6, 115-120 cm	3	0
Level 7	6	0
total	19	13

-Table 1-

and unifaces were recovered, but relatively few in relation to the number of projectile points. While chipping debris was common, no cores or large bifaces were found, suggesting that the preliminary work of roughing out the projectile points was done elsewhere. It is also possible that such specimens might have been recovered with a larger excavation.

The ground stone projectile points are of types found at other Formative sites in the Callejon de Huaylas (Lynch 1970; Wegner, personal communication). There are three basic types, divided on the basis of the kind of bevelling present along the edges. The first type has a single medial ridge down both faces of the tool, which creates a diamond-shaped cross section (Figure 8). A second type has two lateral ridges on either side (Figure 9). The third type may be viewed as a combination of the others: a single medial ridge starts at the tip, but bifurcates several centimeters posteriorly into two lateral ridges. Combinations of these basic forms on the obverse and reverse sides of the same tool are also found. It is uncertain whether these variations are functional, stylistic or temporal.

The majority of the ground stone points from Huachanmanmachay have the two lateral ridges, although the other two types are found as well. All of the points were broken, although two were nearly complete (Figure 9).

Of the 441 bones recovered, only 81, or 18.4%, were identifiable. Of those, 66 (82%) were camelid and 15 (18%) were cervid. While it is uncertain whether the camelids were wild or domestic, it seems likely that the majority of the bones, which came from the middle to upper levels, were from domesticated llamas. The region around Huachanmanmachay today is used for dry season herding, and it seems likely that earlier

groups used it for similar purposes. That some hunting was done is attested to by the cervid remains.

Summary

Huachanmanmachay appears to have been occupied briefly over a period of several thousand years. The earliest occupants are suggested as having belonged to a Paijan group who came up from the lower valley. It is probable that that occupation was of brief duration, perhaps a single season. Occupations by later preceramic groups are also indicated by the presence of a few willow leaf points. The purpose of these visits was probably to hunt the wild cervids and camelids that roamed in the area.

Later occupations by Initial Period, Early Horizon and Early Intermediate Period groups are indicated by the presence of the pottery of each. In addition, ground stone projectile points are associated with these later occupations. These groups were probably herding domesticated llamas and hunting wild deer. If the numbers of ceramics are any indication of the relative intensity of occupation, then it is suggested that Recuay groups used Huachanmanmachay more often than earlier groups. No Middle Horizon, Late Intermediate Period or Late Horizon cultural remains were found at this site.

Tecliomachay

Tecliomachay is located approximately halfway up the north slope of the Cercocancha Quebrada at an elevation of 4650 m above sea level.

Its location affords both good protection from the wind and a good view of the surrounding countryside. There is roughly 20 m^2 under the dripline, and the present floor is level. Rock paintings are found on the roof of the rockshelter in the form of a red cross and several red and green fingerswipes and smudges.

A 2x1 m test pit was excavated in the center of Tecliomachay using the same techniques that were employed in Huachanmanmachay. Excavations were carried out using natural features of the stratigraphy. These included color and texture of the soil and the relative amounts of rock in the strata. Below the first levels of mixed cowdung and soil, the matrix color became a uniform black, and remained so from the top of the column to the bottom (Figure 10). In the upper levels, abundant inclusions of lighter soil were originally used to differentiate strata, but these were subsequently found to be filled rodent burrows. Toward the bottom of the deposits, the number of angular rocks increased due to the proximity of bedrock. The soil descriptions and profiles suggest that all differences in the strata identified during excavations are due to natural events rather than cultural activities. Depth of excavation was reached at approximately 115 cm.

Two features were identified. The first is a rock-lined hearth that was located in the southwest corner of the unit between 32-64 cm. The internal stratigraphy of the hearth suggested at least two and possibly four distinct burning events took place (Figure 10). A radiocarbon sample from the lowest level of the hearth gave a date of 2310±60 year BP (B-8556) indicating a late Early Horizon or early Early Intermediate Period occupation.

The second feature of the test pit was an ashy layer located in the south quarter of the unit, between 15-30 cm below the surface. There are three reasons for believing this layer is distinct from the hearth below it. One, there appears to be a thin layer of black soil separating the two in the south profile drawing (Figure 10). Two, The upper ash layer is much more extensive, covering an area considerably greater than the hearth. Three, a charcoal sample gave a radiocarbon date of 1750±60 year BP (B-8555). This evidence suggests a later, temporary occupation of this site by an Early Intermediate Period group.

The artifacts from Tecliomachay support the idea of a principal occupation by Late Initial Period people. The six diagnostic sherds found are all of types found in Late Initial Period occupations in the Callejon de Huaylas (Burger, personal communication). Of particular interest are two Huaricoto sherds of kinds found at the site of Huaricoto itself (Burger and Burger 1980 and personal communication).

The stone tool industry consists of 71 simple flake tools and 25 ground stone projectile point or knife fragments. Two chipped stone projectile points were also recovered. Beaked tools, gravers, notches, burins and utilized flakes make up the basic flake tool industry. A few bone tools were also found. The most common type of ground stone projectile point was the single medial ridge variety. These points were almost twice as common at the other two types (Figure 9).

The two chipped stone projectile points are of the same form, size and material and exhibit the same breakage pattern as the stemmed points from Huachanmanmachay (Figure 2A). On this basis, they are also identified as Paijan. Both points were found in the deepest levels of

the deposits, close to bedrock. One was found below the hearth. As at Huachanmanmachay, these points were found in the levels in which there is an increase in the chipping debris. It is suggested that these points represent a brief, earlier occupation of Tecliomachay by preceramic hunters and gatherers who came up from the lower Casma valley. They may well have been the same group responsible for the points at Huachanmanmachay (Malpass 1984).

1,576 bone fragments were recovered from the excavations at Tecliomachay, of which 434 (27.5%) were identifiable. Of the identifiable remains, 91% were camelid, presumably domesticated, and 9% were cervids. One human bone was recovered.

Summary

The ceramic and stone tools, faunal remains and site stratigraphy suport the view of an occupation of Tecliomachay principally by Late Initial Period groups from the Callejon de Huaylas who were engaged in domesticated llama herding, with some subsidiary hunting of wild deer. Paijan points in the lower levels of the rockshelter indicate earlier occupations by preceramic groups from the lower Casma valley. Finally, radiocarbon dates suggest brief occupations by Early Intermediate Period groups as well.

Conclusions

The results of these excavations, while admittedly tentative, do provide some information concerning the utilization of the high

altitude grasslands of the Cordillera Negra. Of some importance because of its uniqueness is the recovery of Paijan points in both of these rockshelters. This suggests that groups from the lower Casma valley did occasionally exploit the high puna for its game resources during preceramic times. The similarities between the points in both rockshelters suggest that the same group may have been responsible for all of them. A date of 9000-8000 yr BP has been estimated for the Casma Paijan occupations (Malpass 1983b), which might then apply to these sites as well. Because of the poverty of cultural remains and the small size of these rockshelters, it is suggested that the group responsible only consisted of three to four hunters, rather than a whole band (Malpass 1984). Occasional visits to Huachanmanmachay were made by later preceramic groups as well, as indicated by the presence of willow leaf projectile points in the middle levels of that rockshelter.

The next occupations noted in these rockshelters were by Late Initial Period groups. It has been suggested that the majority of the cultural remains at Tecliomachay reflect occupations by those people, owing to the absence of other pottery types. While Late Initial Period remains have also been identified at Huachanmanmachay, they do not appear to be as extensive. Perhaps these people, at least some of whom were affiliated with Huaricoto groups in the Callejon de Huaylas, preferred the more abundant water resources of the Laguna Teclio area and thus camped more frequently on the west side of the Cordillera Negra summit.

Subsequent to the Initial Period, Tecliomachay appears to have been reoccupied briefly by Early Intermediate Period people. Later White-on-Red and Recuay pottery appears at Huachanmanmachay, indicating that occupations continued on the eastern side of the summit as well.

After the Early Intermediate Period, occupation of the puna rockshelter seems to have drawn to a close. Whether this indicates abandonment of the puna as a resource zone or simply occupation of different areas is unknown. Several other small rockshelters were located in the vicinity, but only a single ground stone projectile point was recovered from any of them. There is a large, walled site at the peak of Cerro Huachuchuarmi overlooking the main pass between the Sechin valley and the Callejon. While the site is undated, I would guess it is probably Early Intermediate Period in age or later. This site suggests that conflicts between groups in the lower Casma valley and in the Callejon de Huaylas might have caused an abandonment of this zone. Some hilltop sites were located lower down on the ridges descending to the Santa River as well.

Besides the conflicts that may have occurred, it is probable that later occupations simply did not use rockshelters to the same degree as earlier groups did. This is supported by modern uses of the puna zone. Present day herders prefer to live lower down and bring their herds up daily.

The pattern of seasonal hunting or herding on the high puna recognized in other areas of Peru thus is also indicated for the study zone here. While the presence of coastal groups in this region is heretofore unreported, we may assume these groups occupied this area for the purpose of hunting wild deer and camelids. These occupations were probably for a few days or weeks only, after which the people returned to the lower valley, possibly with a supply of charqui (dried meat) made from the game killed. Later preceramic groups also hunted in this area, as they did along the crest of the Cordilla Negra farther south (Lynch 1971).

We may also assume that the later Formative groups probably came to these rockshelters with herds of domesticated llamas to take advantage of the water supply and pasture during the dry season. However, hunting was also practiced, as evidence by the deer remains found. This pattern of herding continued sporadically for several hundred years, probably until sometime during the Early Intermediate Period. Subsequent to this, occupations were either located in other areas of the puna, or more probably lower down on the slopes of the Cordillera Negra.

Acknowledgments

Fieldwork on which this paper is based was carried out under a grant from the former Department of Health, Education and Welfare (HEW), administered by the Comisión Fulbright in Lima, Peru. My thanks go to the staff of the Comisión Fulbright for all their help. I would also like to thank Steve Wegner for all his help, not only in identifying various potsherds, but for accompanying me not once, but twice to the puna, and helping with the profile drawings in Tecliomachay. Richard and Lucy Burger deserve credit for identifying several pottery types unfamiliar to me. Finally, I would like to thank Laura Hacker of St. Lawrence University for her redrawings of the profiles and artifacts for this paper. All mistakes of interpretation are of course solely my own.

References Cited

Burger, R. and L. Salazar Burger
1980 Ritual and religion at Huaricoto. Archaeology 33(6):26-32.

Lynch, T.
1970 Excavations at Quishqui Puncu in the Callejon de Huaylas, Peru. Occasional Papers of the Idaho State University Museum No. 26.

1971 Preceramic Transhumance in the Callejon de Huaylas, Peru. American Antiquity 36 (2):139-148.

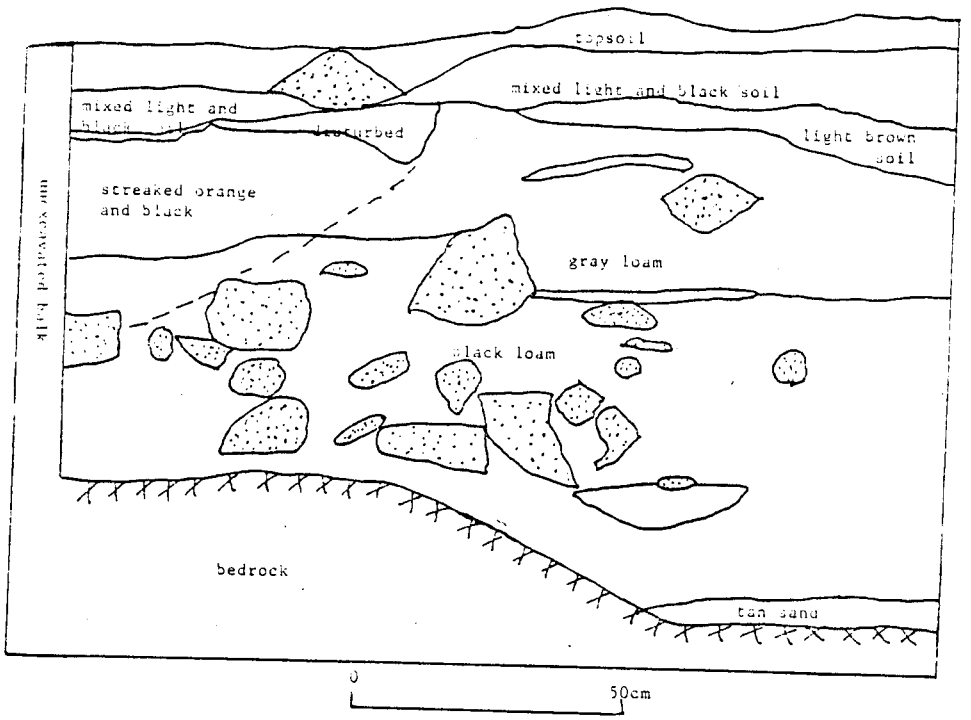
1980 Guitarrero Cave. Early Man in the Andes. New York: Academic Press.

Malpass, M.
1983a The preceramic occupations of Casma, Peru. In Investigations of the Andean Past, D. Sandweiss, ed., Cornell University Latin American Studies Program. Pp. 1-20.

1983b The preceramic occupations of Casma Peru. Unpublished doctoral dissertation, Department of Anthropology, University of Wisconsin, Madison.

1984 Huachanmanmachay and Tecliomachay: Preceramic and Formative utilization of the puna zone in the Cordillera Negra, Peru. Research report presented at 49th annual meeting of the Society for American Archaeology, Portland, Oregon, April 11-14.

Ossa, P.
1973 A survey of the lithic preceramic occupation of the Moche valley, north coastal Peru. Unpublished doctoral dissertation, Department of Anthropology, Harvard University.



HUACHANYANNACHAY

SOUTH WALL PROFILE

Figure 1.

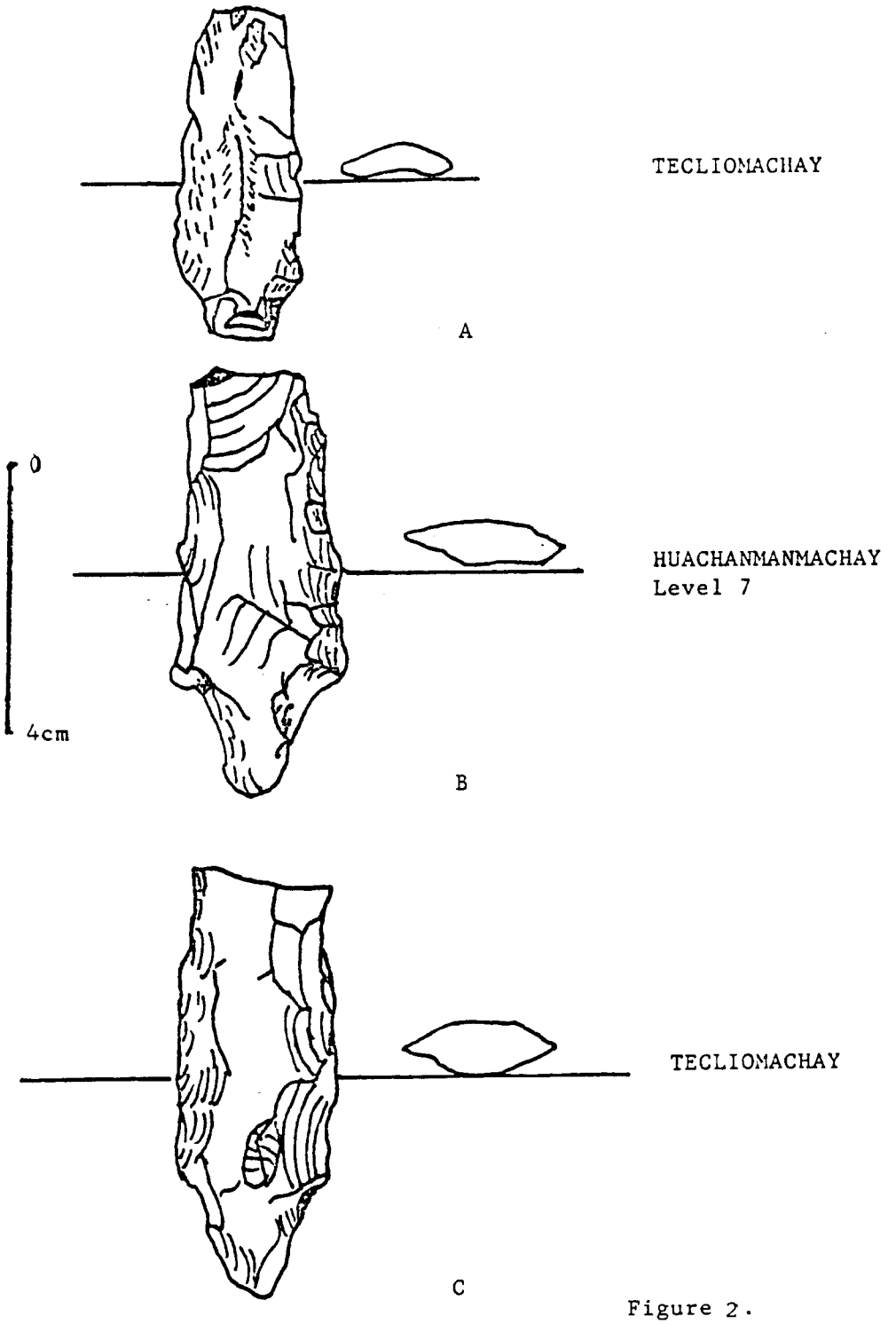
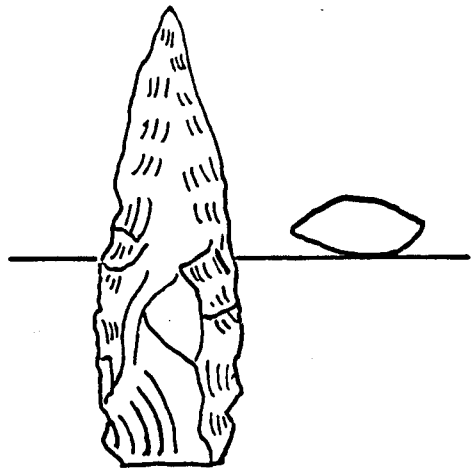
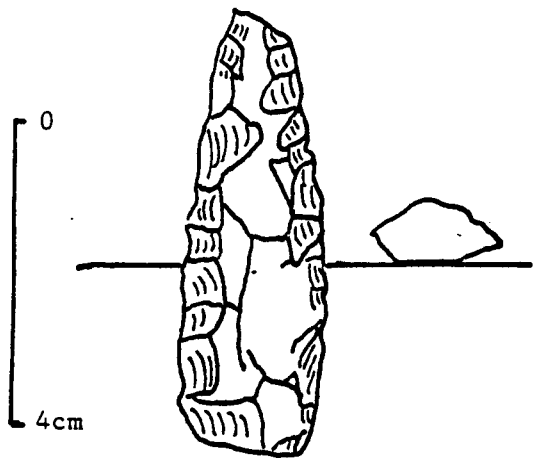

TECLIOMACHAY
A
0
4cm
HUACHANMANMACHAY
Level 7
B
TECLIOMACHAY
C

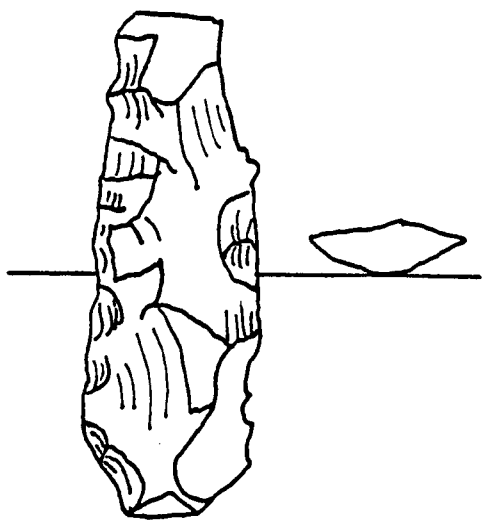
Figure 2.



Lower Casma Valley



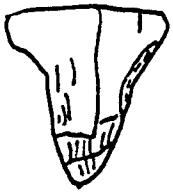
HUACHANMANMACHAY
Level 6



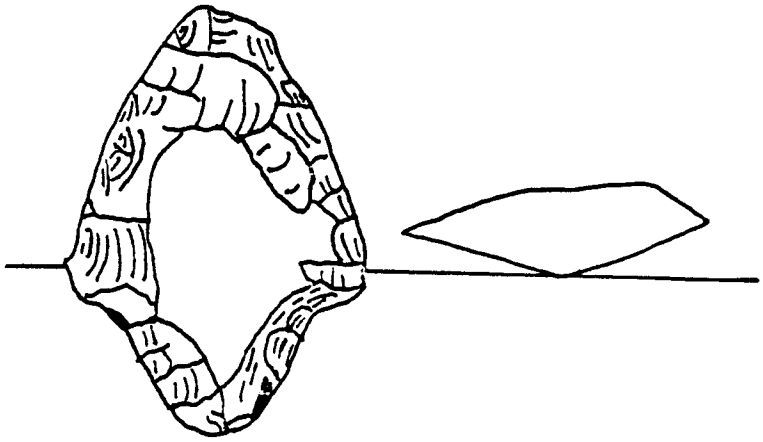
HUACHANMANMACHAY
Level 6

Figure 3

HUACHANMANMACHAY
Level 7



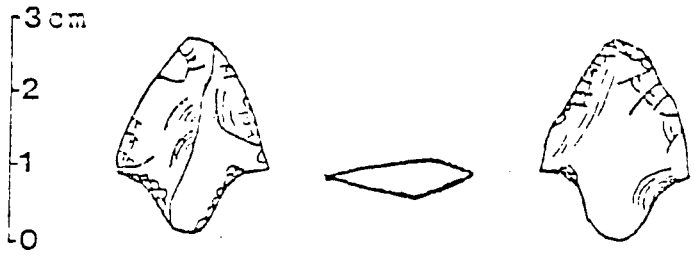
HUACHANMANMACHAY
Level 7



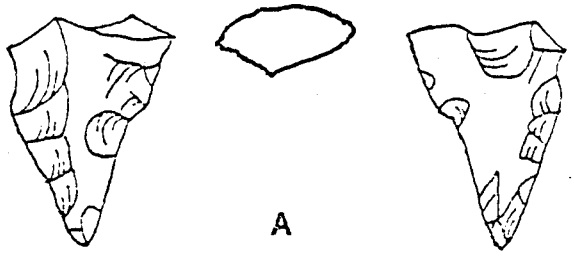
HUACHANMANMACHAY
Level 6

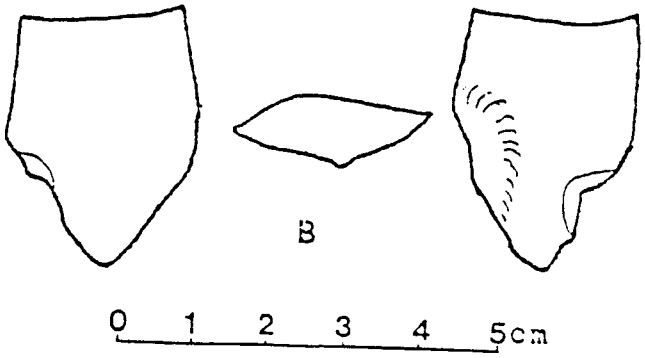
0 4cm

Figure 4

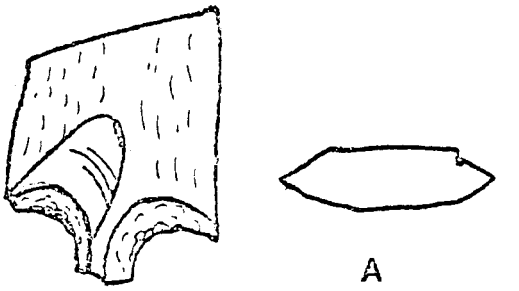


Lower Casma valley

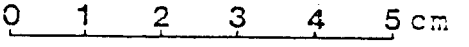


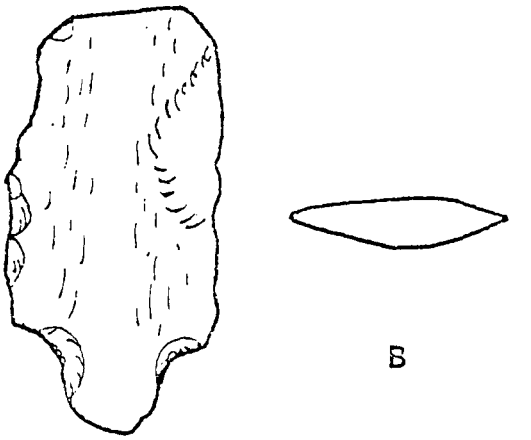


Lower Casma valley
Figure 5



A





B

Lower Casma valley

Figure 6

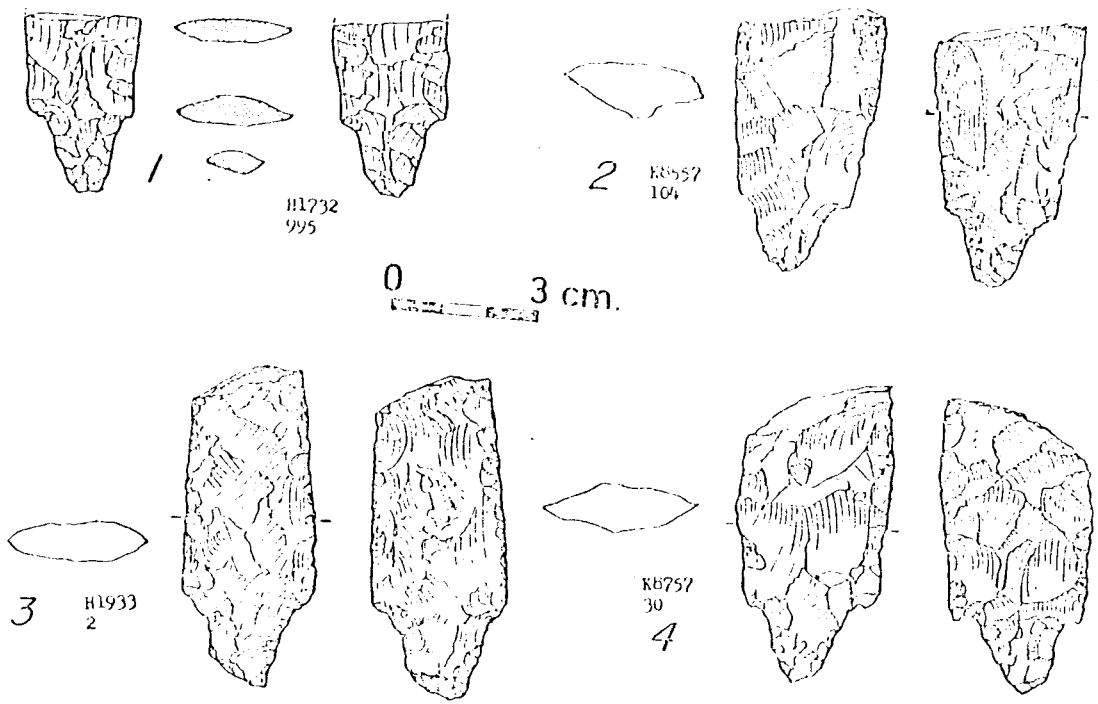
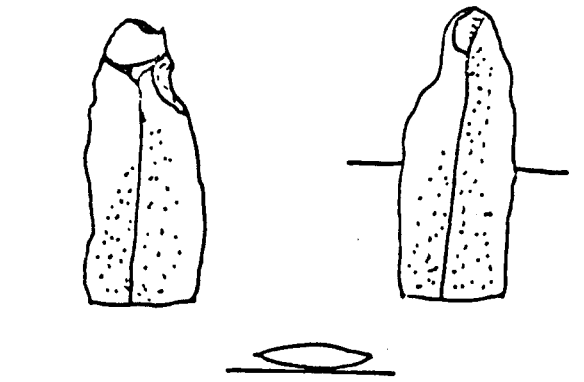
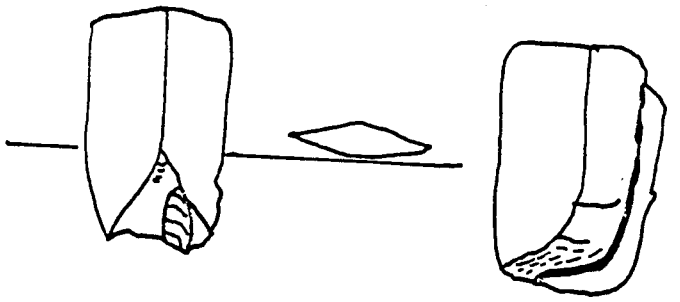


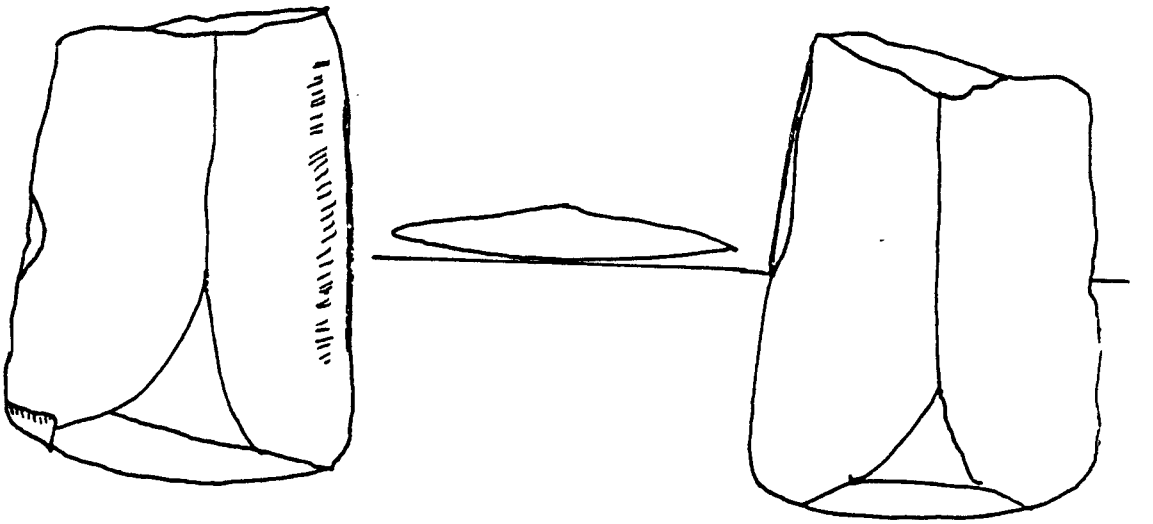
Figure 7. Moche valley Paijan points (from Ossa 1973)



TECLIOMACHAY



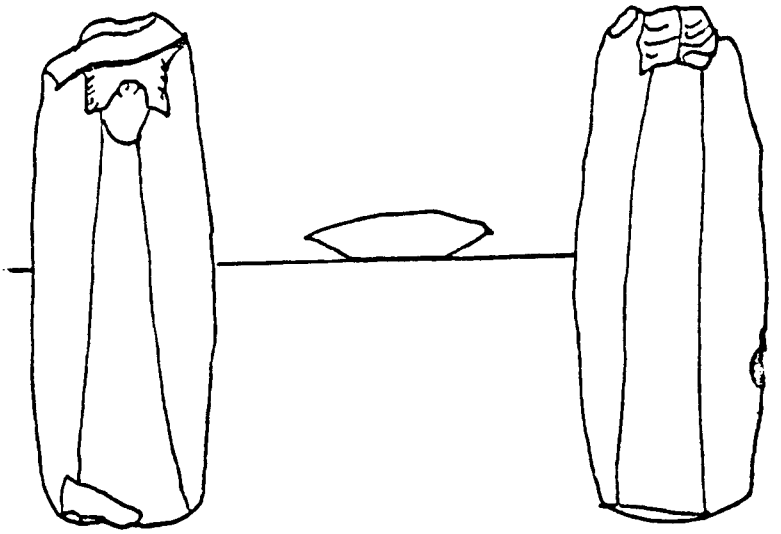
TECLIOMACHAY



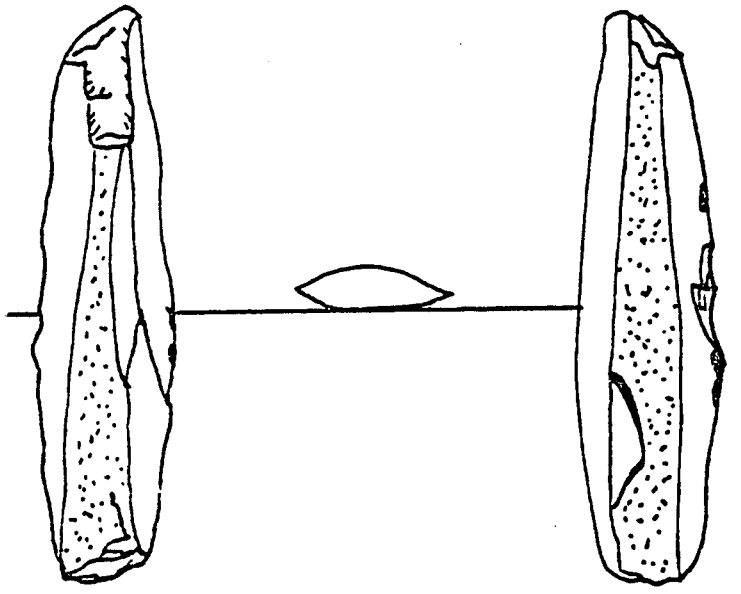
TECLIOMACHAY

0 3cm

Figure 8

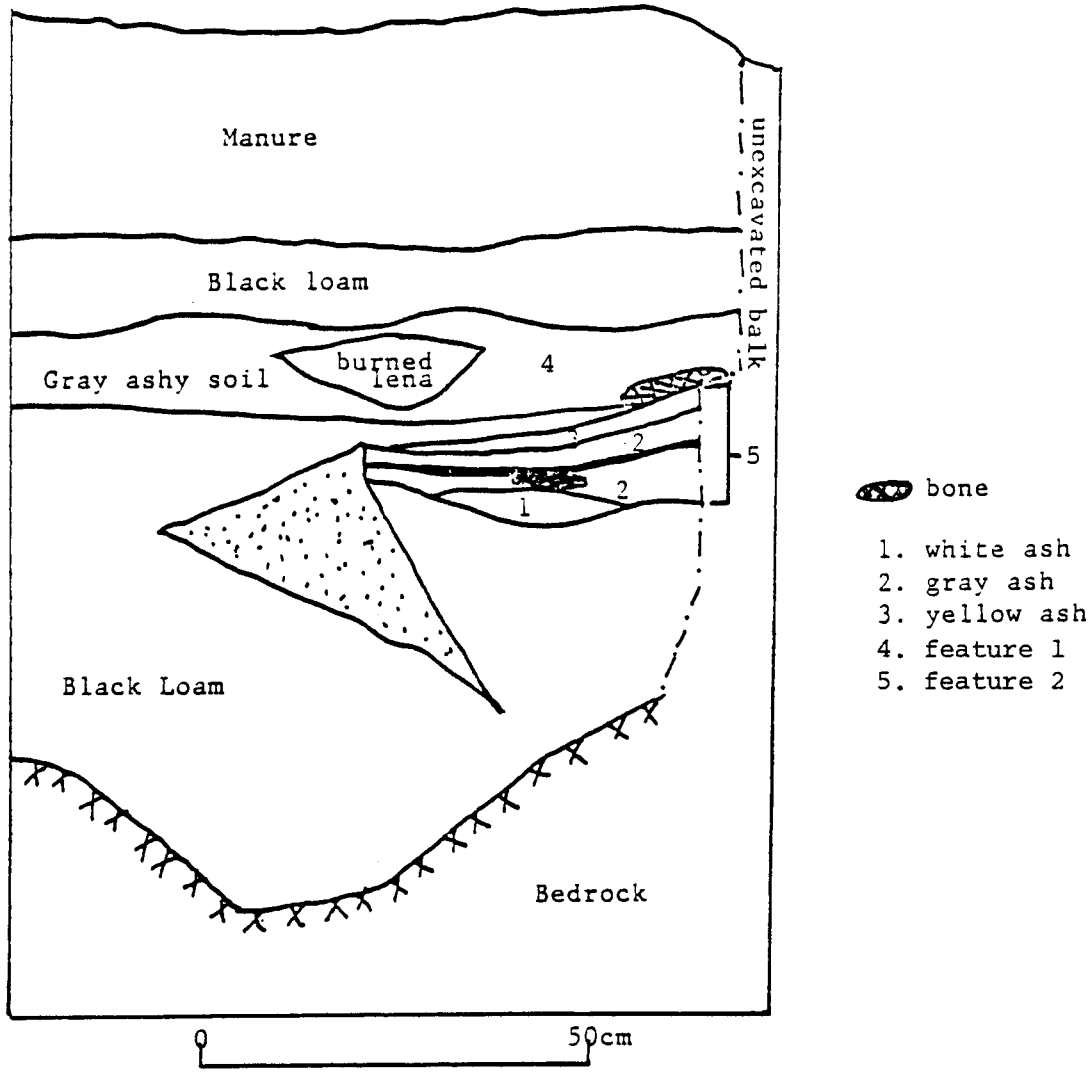


HUACHANMANMACHAY
Level 5, 70-85cm



HUACHANMANMACHAY
Level 4

Figure 9



TECLIOMACHAY

SOUTH WALL PROFILE

Figure 10

The Early Horizon-Early Intermediate Period Transition: A View from the Nepeña and Viru Valleys

Richard E. Daggett
Massachusetts

On the basis of research conducted recently in Nepeña (Daggett 1984), a new perspective regarding the nature of the settlement of the Viru Valley at the end of the Early Horizon and the nature of the settlement of the Nepeña Valley at the start of the Early Intermediate Period will be offered. It will be noted that the occupations of these valleys during these distinct periods of time were at first markedly similar and then strikingly dissimilar. For each period conclusions will be supported by information drawn from published sources concerning work done elsewhere. In part, then, new information relevant to the settlement of the Nepeña Valley will be provided. More importantly, however, for this time frame a new perception of the settlement of the north to north central coast and highlands will be offered; one which more clearly defines the temporal and spatial parameters of distinct cultural phenomena.

The End of the Early Horizon

The nature and extent of the occupation of the Nepeña Valley at the close of the Early Horizon has been discussed (Daggett 1982, 1983, 1984). The settlement at that time was heaviest in the upper valley (400-1500 m.) and particularly in what may be designated the Moro Pocket (Figure 1). In this pocket of prime agricultural land the remains of a number of centers characterized by spatially distinct megalithic compounds and aligned stone-faced platforms or platform mounds have been identified (Figure 2). In part, because of their relatively

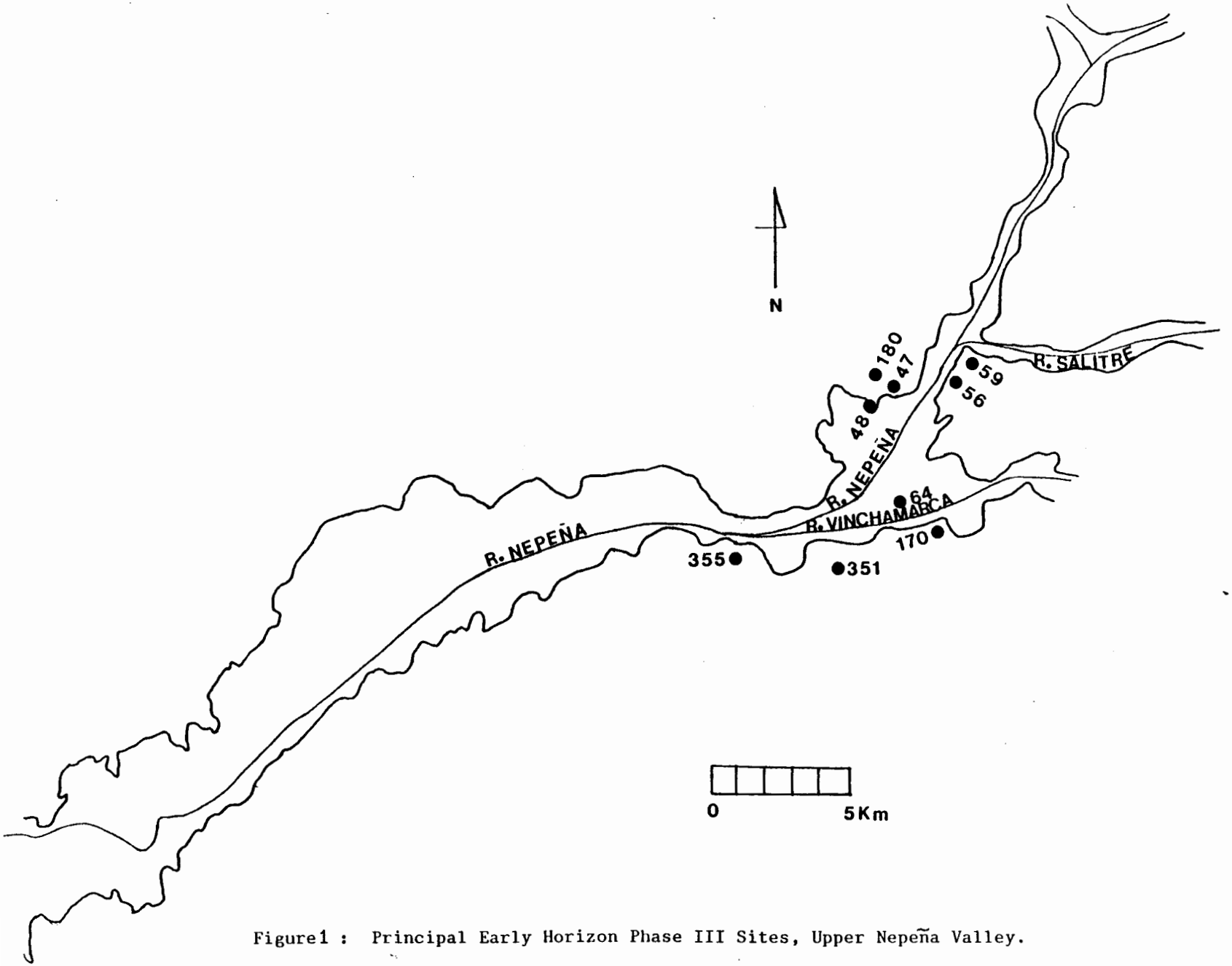


Figure1 : Principal Early Horizon Phase III Sites, Upper Nepeña Valley.

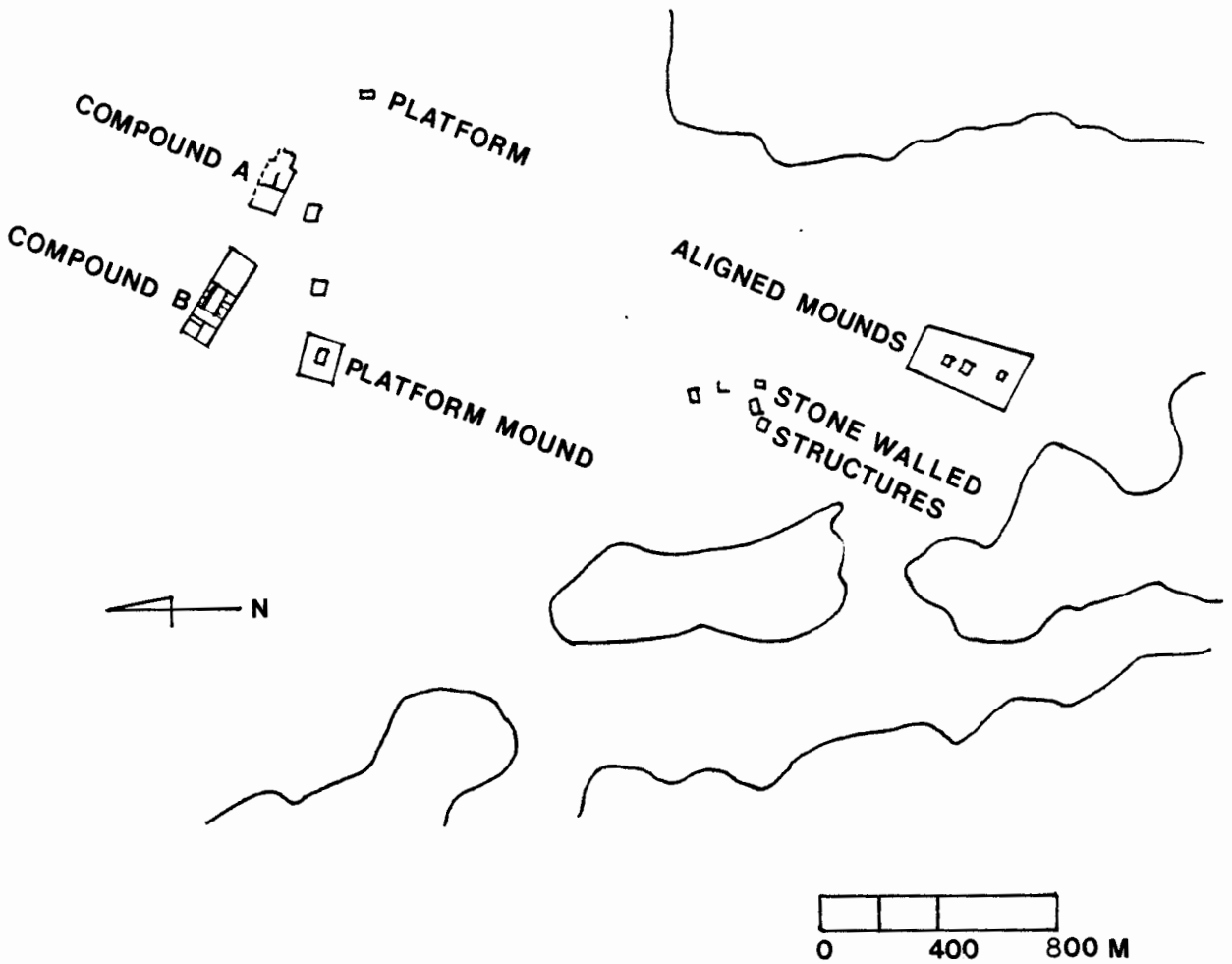


Figure 2: Virahuanca Bajo (PV31-351), Upper Nepeña Valley.

isolated setting and, in part, because of the presence of stone-lined cists atop them, it has been argued that the aligned mounds or platforms had a ritual function. Finally, the settlement of the valley at this time was marked by the use of such things as pattern burnished bowls, ground stone blades, neckless jars, large underground storage jars, and polished stone, donut-shaped club heads.

A comparative analysis of information recovered from the Viru Valley (Collier 1955; Ford 1949; Strong and Evans 1952; Willey 1953) with that which has been briefly summarized above for the Nepeña Valley leads to the conclusion that the period comparable to the end of the Early Horizon in Nepeña is Early Puerto Moorin in Viru (Table 1). Huacapongo Polished Plain is the dominant type for this phase in Viru and it is characterized by marked pebble striations or polishing which may be related in general technology to pattern burnishing (Gordon Willey, personal communication). In addition, there are reports of the discovery in Early Puerto Moorin context of neckless jars, large underground storage jars, ground stone blades, and polished stone, donut-shaped club heads. Of greater significance, however, is the heavy emphasis on upper valley settlement at this time, a settlement characterized by cyclopean compounds or enclosures and stone-faced platform mounds with stone-lined "cist tombs" atop. That these cists were indeed used for the interment of the dead was made obvious by the presence in and around them of human remains and grave goods.

The patterning of platform mounds and compounds in the upper Viru Valley is highly suggestive of the patterning of centers reported for the Moro Pocket of the Nepeña Valley (Figure 3). There appear to have been at least four centers in Viru, each of which may be identified by

	NORTH COAST		NORTH CENTRAL COAST	SOUTH COAST	NORTH CENTRAL HIGHLANDS		NORTH HIGHLANDS
	MOCHE VALLEY	VIRU VALLEY	NEPEÑA VALLEY	ICA VALLEY	KOTOSH and SHILLACOTO	CALLEJON DE HUAYLAS	HUACALOMA
EARLY INTERMEDIATE PERIOD	GALLINAZO	LATE GALLINAZO	PHASE III	NAZCA	HIGUERAS	MIDDLE HUARAS	LAYZON
		EARLY GALLINAZO	PHASE II				
	SALINAR	LATE PUERTO MOORIN	PHASE I				
EARLY HORIZON		EARLY PUERTO MOORIN	PHASE III	OCUCAJE 9-10		EARLY HUARAS	

Table 1: Correlation of Transitional Early Horizon - Early Intermediate Period Sequences.

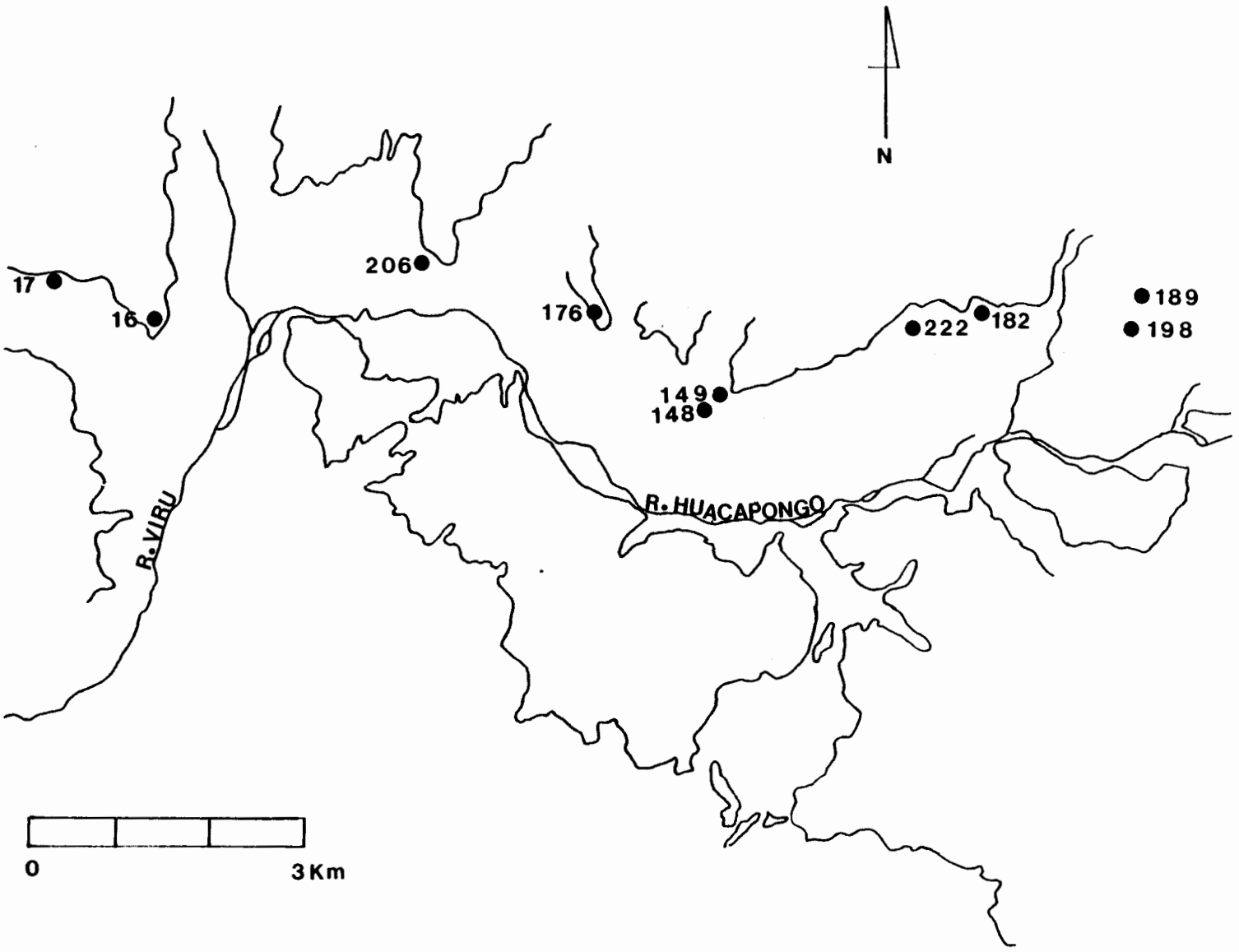


Figure 3: Principal Early Puerto Moorin Sites, Upper Viru Valley.

a name reflective of its valley location. Accordingly, the Queneto center consists principally of the so-called Queneto Temple (V-17) and a nearby cyclopean enclosure (V-16) while the Tomaval center may be perceived as being comprised of a small platform mound with "cist tombs" atop (V-206) and a small cyclopean enclosure (V-176).

Between these first two centers and the remaining two, another small platform mound with "cist tombs" atop (V-148) and a larger platform mound (V-149) may be seen. The major features of the third center, Huacapongo North 1, may be viewed as consisting of a rock-covered mound set within a rock-walled compound (V-182) and a rectangular enclosure compound (V-222). Finally, the center of Huacapongo North 2 may be conceived of as having included, first, two platform mounds fifteen meters apart and connected by a massive rock wall (V-198) and, second, a rectangular enclosure with four principal and four "bin-like" rooms (V-189).

On the basis of research conducted in Nepeña, then, it may be argued that the Early Puerto Moorin settlement of Viru was characterized by a number of upper valley centers similar to those identified as dating to the close of the Early Horizon in Nepeña. However, because Early Puerto Moorin is usually equated with the beginning of the Early Intermediate Period (e.g. Willey 1971:132), it becomes necessary to demonstrate how it more appropriately equates with the end of the Early Horizon.

The Early Horizon starts with the introduction of the Chavin style; its end, in the south coast Ica Valley, has been arbitrarily linked with the switch from resin painting to polychrome slip painting (Menzel et al. 1964:4; Rowe 1962:49). By the Chavin style is meant the style

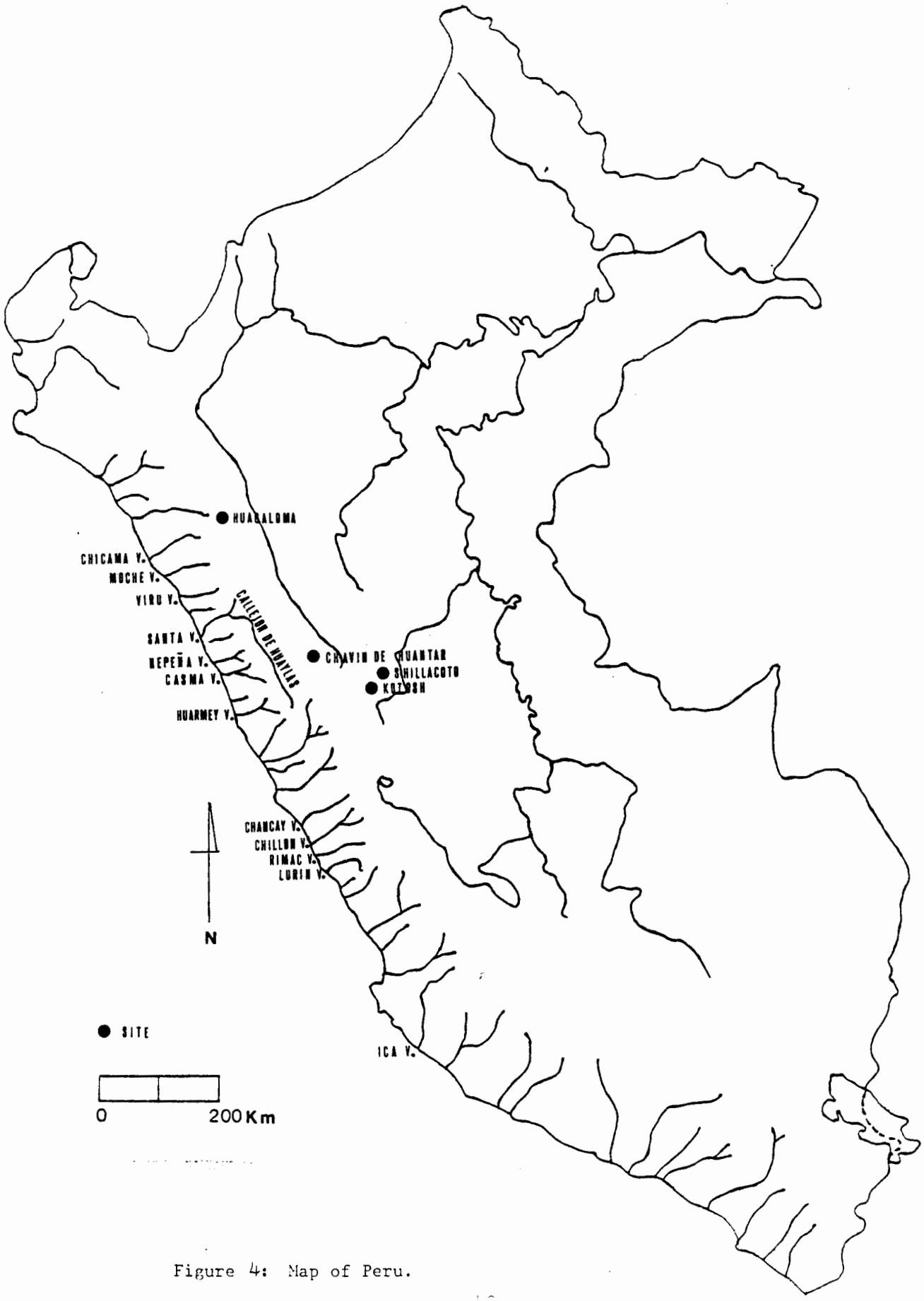


Figure 4: Map of Peru.

carved in stone at Chavin de Huantar in the North Central Highlands (Rowe 1950:171; Willey 1951:109) and, it should be noted, the end of the Early Horizon sequence in Ica (Ocucaje 9-10) is characterized by the presence of pattern burnished ware (Menzel et al. 1964:192, 230).

Recently a sequence of three phases of Early Horizon occupation has been stratigraphically derived for Chavin de Huantar (Burger 1978). The last of these three phases, the Huaras, has been linked with the last four phases of the Ica Ocucaje sequence (Burger 1979:138). The Huaras Phase at Chavin derives from the Huaras (Lumbreras 1974b:39) or Huaylas Period (Lanning 1965:140), which was originally defined for the Callejon de Huaylas, an intermontane valley in north central Peru. This period has been divided into early, middle, and late phases, the first of which dates to the end of the Early Horizon and the latter two of which date to the Early Intermediate Period. The early phase is marked in the Callejon by "simple stone cyst graves" (ibid.), pattern burnished pottery (Lynch 1980:230), ground stone blades (Lumbreras 1947b:39, 50), and white-on-red pottery (Lanning 1965:140). Actually, this latter decorated ware is more diagnostic of the middle phase during which time it enjoyed great popularity (Lumbreras 1974b:51).

In order to complete the connection between late Early Horizon and Early Puerto Moorin it is necessary to consider information about the Salinar Period occupation of the Moche Valley situated just north of Viru. Salinar and Puerto Moorin are periods commonly equated in the literature (e.g. Lumbreras 1974a:81; Willey 1971:190, Note 187) and as such it is interesting to note that the major Salinar site of Cerro Arena in Moche is distinguished by megalithic architecture, pattern burnished pottery (Brennan 1978), and ground stone blades (Curtiss

Brennan, personal communication). In fact, pattern burnishing has also been reported to date to late pre-Salinar times in the Chicama Valley (Lanning 1960:306), while the equivalent of the Salinar and Puerto Moorin periods in the Santa Valley, the Cayhuamarca Period, is said to be marked by pattern burnished pottery and megalithic architecture (Wilson 1981:41-45).

In addition, it should also be pointed out that megalithic architecture, and particularly the construction of compounds, characterizes the late Early Horizon occupation of the Casma Valley (Pozorski and Pozorski 1981:84). Not surprisingly, given its proximity to Nepeña, pattern burnished pottery like that found in Nepeña has been found in Casma at the upper valley site of Rumipallana (Fung P. y Williams L. 1977, Lámina 1n, o). Further south, in the Huarmey Valley, pattern burnished pottery has been found at the late Early Horizon stone fortress of Aiguay (Tabio E. 1977:110-111) while, in the Chillon, Rimac and Lurin valleys of the Central Coast, the initial phase of the Miramar style (Base Aérea) is characterized by neckless jars and the decorative technique of pattern burnishing (Patterson 1966:5, 14-15). Given evidence now available for the coast and highlands farther north, this initial phase is now thought to date to the end of the Early Horizon (Thomas Patterson, personal communication). This phase of the Miramar style has been compared favorably with the Baños de Boza style of the Chancay Valley (Patterson 1966:98-99) and, as such, a link between the megalithic architecture already discussed and that of Cerro de Trinidad in Chancay (Willey 1943) may be suggested.

Finally, the coastal distribution of this distinctive late Early Horizon cultural manifestation appears to be equalled by its sierran

distribution. Megalithic architecture and pattern burnishing characterize the Layzon Period or late Early Horizon occupation of Huacaloma in the North Highlands (Terada and Onuki 1982:122, 262; Plate 26) while, at Shillacoto in the North Central Highlands, rock-lined cyst tombs are reported to date to the Higueras or "post-Chavin" Period (Izumi et al. 1972:49-50, 80; Kano 1971:34). Not only is it possible, then, to link Early Puerto Moorin with the end of the Early Horizon by way of the Salinar, Huaylas, and Ocucaje periods, but it is also possible to begin to identify the spatial parameters of what seems to have been a highland oriented/derived megalithic culture.

The Beginning of the Early Intermediate Period

The clear bias toward upper valley settlement in the Viru and Nepeña valleys at the end of the Early Horizon and the stark difference in the settlement of the Viru Valley and its north coast neighbors before and after this period combine to suggest a strong highland influence on the north to north central coast in late Early Horizon times. The Guañape Period precedes the Puerto Moorin Period in Viru and the settlement at this earlier time was heaviest in the lower valley (Willey 1953:44). During the Gallinazo Period, which follows that of Puerto Moorin, there was a return to a lower valley emphasis in settlement (ibid:102). Artifacts diagnostic of this later period are easy to distinguish from those of Puerto Moorin and they include face-necked jars, pedestal-based bowls, corn poppers, stirrup-spouted and stirrup-bridge-and-spout bottles, as well as such decorative techniques as incision, triangular punctation or stamping, and both anthropomorphic and zoomorphic modeling (Ford 1949). In addition, white-on-red pottery

continued in use during Gallinazo times (ibid.).

At the same time, adobe became a principal building material while pyramids and platforms became primary architectural forms. A total of fourteen "pyramid-dwelling-construction complexes" were built in Viru at this time, most in the lower valley (Willey 1953:109). These complexes have been assigned to two categories: "One is a Pyramid or Pyramids built as part of, or upon, platforms which were composed of abandoned houses and served as bases for occupied houses ... The other variety is the Pyramid around which have been clustered a group of attached dwellings" (ibid:111). The best known of these complexes is that of the Gallinazo Group for which the period was named (Bennett 1950).

Furthermore "... there are no Early Gallinazo sites in the Huacapongo or the upper portions of the Middle Valley ... We can fairly conclude that the Huacapongo, Upper Viru, Queneto, and immediately surrounding areas were deserted throughout the Late Puerto Moorin and Early Gallinazo sub-periods. Late Puerto Moorin sites were found mostly in the Lower Valley and, as Early Gallinazo sites are mainly confined to the Lower Valley, there is a continuity of distribution here between Late Puerto Moorin and Early Gallinazo" (Willey 1953:105).

Given that Early Puerto Moorin marks the end of the Early Horizon in Viru, then Late Puerto Moorin marks the beginning of the Early Intermediate Period there. It follows that Gallinazo falls within the latter period and, in addition to Viru, a Gallinazo "culture" may be identified for a number of North Coast valleys. In the Chicama Valley the Salinar Period was followed by one comparable to that of Gallinazo in Viru (Ford 1949:66). The same is true for the Moche Valley where

plastic decoration and thicker-walled vessels become popular and where settlement at that later time was essentially confined to the middle valley (200-1200 m) (Topic and Topic 1982:4-5). In the Moche Valley, naturalistic modeling was practiced more commonly during Gallinazo times than during Salinar, while stirrup-spouted, figure-spout-and-bridge, and spout-and-handle bottles come into fashion at this later time (Donnan and Mackey 1978:53). Finally, the large Moche Valley site of Cerro Orejas, with its agglutinated masonry rooms and two large mud brick corporate labor platforms (ibid.) compares favorably with sites like the Gallinazo Group in Viru.

In Santa, to the south of Viru, the Suchimancillo Period corresponds to the Gallinazo Period (Wilson 1981:47-52), and at this time a reduction in the use of pattern burnished ware was offset by the use of Gallinazo-related wares such as Castillo White-Red-Orange and neckless jars decorated with triangular punctation. Among the sites dated to the Suchimancillo Period are a number of adobe mounds. That the Santa Valley came under the influence of what may be loosely referred to as a Gallinazo culture may be demonstrated, then; but what about the Nepeña Valley?

Although a few Gallinazo pieces have been reported to be included in pottery collections held by residents of the Nepeña Valley (Proulx 1973:31-32), the fact that extensive survey has failed in the discovery of comparable surface sherds leads to the strong suspicion that the pieces in question were found outside Nepeña. In addition, though rare triangular-punctated body sherds have been surface-collected in Nepeña, all were discovered in Moche period contexts. The fact of the matter is, no Gallinazo artifact assemblage can be identified for Nepeña and there are simply no Gallinazo architectural complexes to

be found there. This being the case, is anything known about the settlement of this valley at this time?

The answer lies in the recent documentation of two sites located on Cerro Chacuascucho near where the Rio Vinchamarca empties into the Moro Pocket. The first of these sites, Cerro Chacuascucho West (PV31-184) is complex and is best perceived as having four parts, A-D (Figure 5). Part A consists of what appears to have been an eastern habitation sector arranged in step-like fashion on a ridge leading up to Part B. There are at least five levels to Part A, only the central one of which lacks evidence of fieldstone architecture. Part B may be seen on the summit of the ridge. Seemingly ceremonial in function, it includes three earthen mounds separated by plazas and it is aligned approximately north-south. The southern-most mound is quite narrow with short projecting arms while the northern-most plaza is sunken. A fieldstone wall extends from an open space at the rear of the northern mound.

As for parts C and D of Cerro Chacuascucho West, they are situated on a lower approach ridge to the south of Part B. Part C may be described as a large stone-walled enclosure with a stepped entryway while Part D is a stone-faced platform mound lacking evidence of summit architecture. Surface collections suggest that this mound dates to the Early Horizon while the remaining parts of the site date to the beginning of the Early Intermediate Period. Pottery decorated with stamped circle and dot, a diagnostic of Early Horizon Phases I and II in Nepeña (Daggett 1984:134, 258), was found only on and in the vicinity of the platform mound while elsewhere the site was littered with fragments of pattern burnished bowls and necked jars occasionally evidencing strap handles. The absence of neckless jars in the collections from

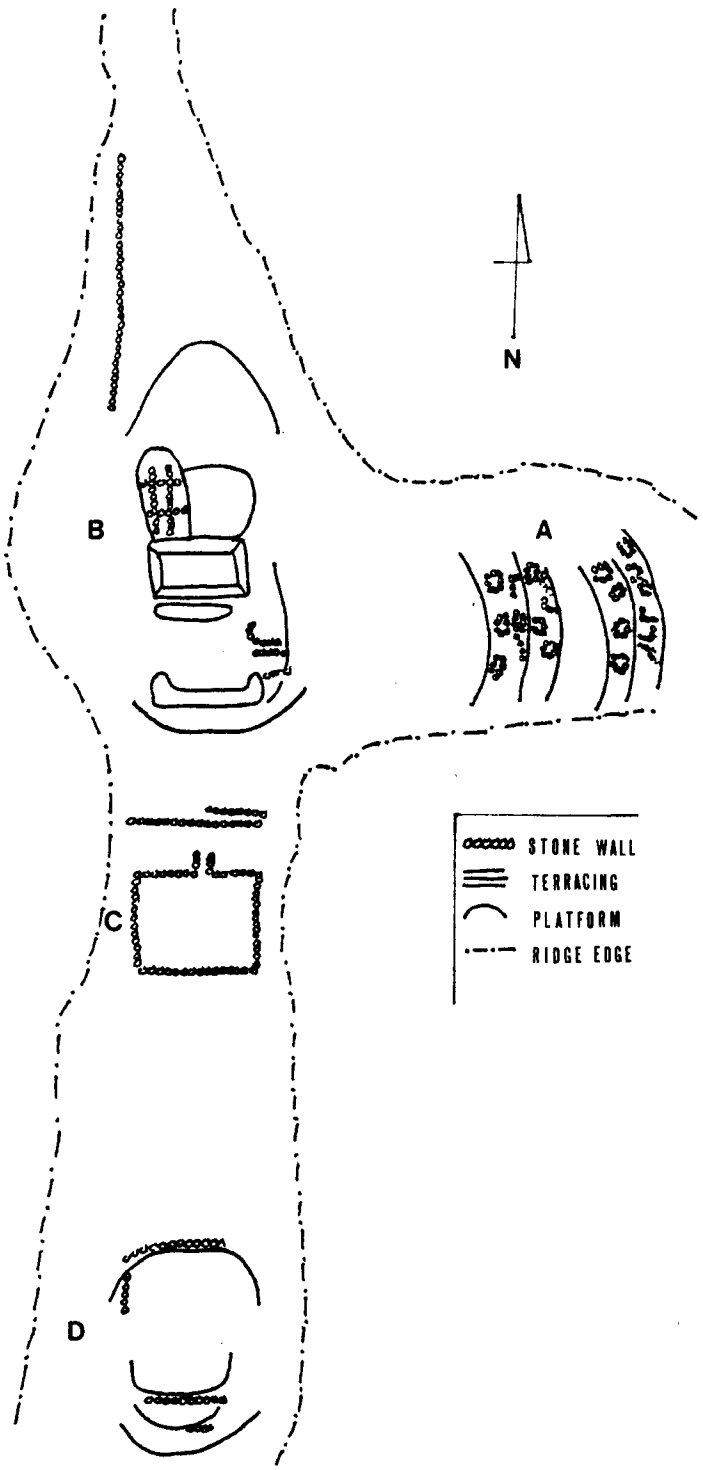


Figure 5: Cerro Chacuascucho West (PV31-184), Upper Nepeña Valley. Not drawn to scale.

Parts A-C is significant because such jars enjoy markedly reduced popularity at the start of the Early Intermediate Period (e.g. Patterson 1966:31).

Separated from its neighbor by a few hundred meters and a deep saddle in the ridge, Cerro Chacuascucho East (PV31-185) is also best discussed in terms of four principal parts (Figure 6). Part D is a stone-faced platform mound with surface remains of fieldstone architecture. The ridge that continues to the east forks and Part C is to be found on the southern arm overlooking the Rio Vinchamarca. This part of the site consists of a number of flattened areas of ridge arranged in step-like fashion. It is on the highest such step closest to the platform mound that a complex of stone-walled structures and boulders worn smooth on their tops are situated. A number of large stone pestles are to be seen on the ground near these boulders and they evidence the fact that the boulders had provided surfaces for grinding activities.

The remaining two parts of Cerro Chacuascucho East are to be found on the northern arm of the forked ridge. Part B is situated closest to the platform mound and appears to have been a terraced slope which functioned, in part, as a cemetery. A line of natural boulders faces a wall of well-cut blocks of stone there and the opening between these natural and worked stones suggests an entryway or corridor. The end of this area of ridge is marked by retaining walls and terracing below a stepped entry. These features plus the remains of fieldstone structures even further below make up Part A.

Surface collections at Cerro Chacuascucho East indicate that there had been an Early Horizon occupation there. There is no doubt, however,

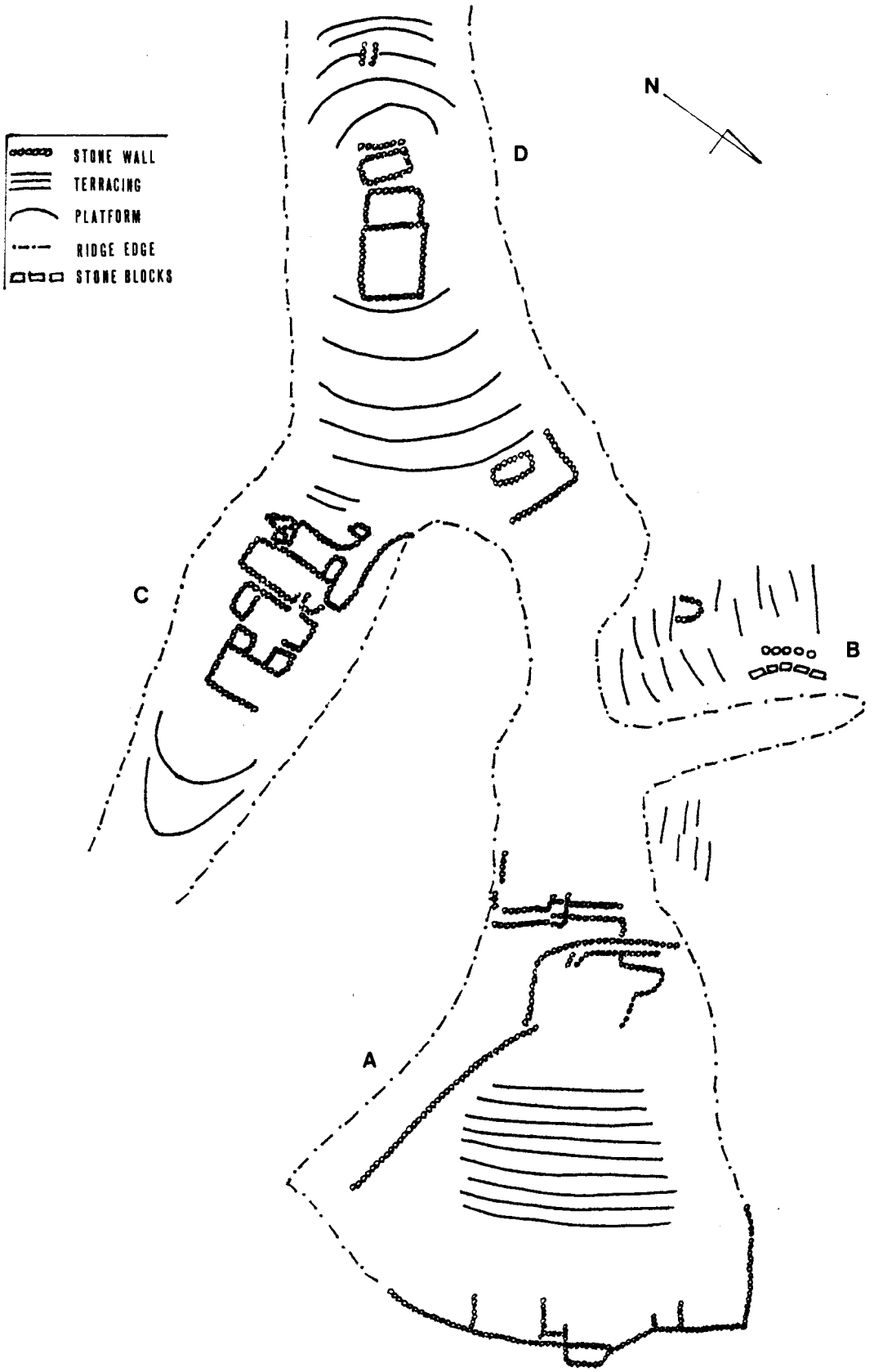


Figure 6: Cerro Chacuascucho East (PV31-185), Upper Nepeña Valley. Not drawn to scale.

that the most intensive occupation of the site took place at the start of the Early Intermediate Period. In addition to the grinding implements mentioned above, artifacts distinctive of this later time period include shallow bowls decorated with white-on-red, red-on-white or white-on-orange geometric designs; squared-off ceramic vessels; and ceramic spoons and dippers. In addition, at this time it was very common to append strap handles to necked jars, kaolin pottery was probably in use, and neckless jars had fallen into complete disuse.

Preliminary analysis suggests at least two and, perhaps, three phases of Early Intermediate Period occupation of Cerro Chacuascucho. By virtue of its configuration, Cerro Chacuascucho West seems best interpreted as having been constructed at the very beginning of this time period. In terms of architectural tenets and ceramic practices, this site logically follows the centers described as dating to the end of the Early Horizon in Nepeña. The degree of overlap in the occupation of this site and its neighbor, Cerro Chacuascucho East, is unknown but it does seem clear that this latter site assumed greater importance with the passage of time. One question that remains is whether there was a distinct Recuay-related phase distinguished by the use of kaolin pottery.

Be this as it may, it is known that the Early Intermediate Period occupation described for Cerro Chacuascucho East was mirrored in its essentials at two other upper valley locations. Such an occupation has been documented on Cerro Siete Huacas (PV31-59 and PV31-159) and on Cerro Ichihuanca (PV31-267 and PV31-297) (Figure 7). Strikingly, all three of these ridgetop settlements were so situated as to have been able to monitor natural highways to the highlands. This leads

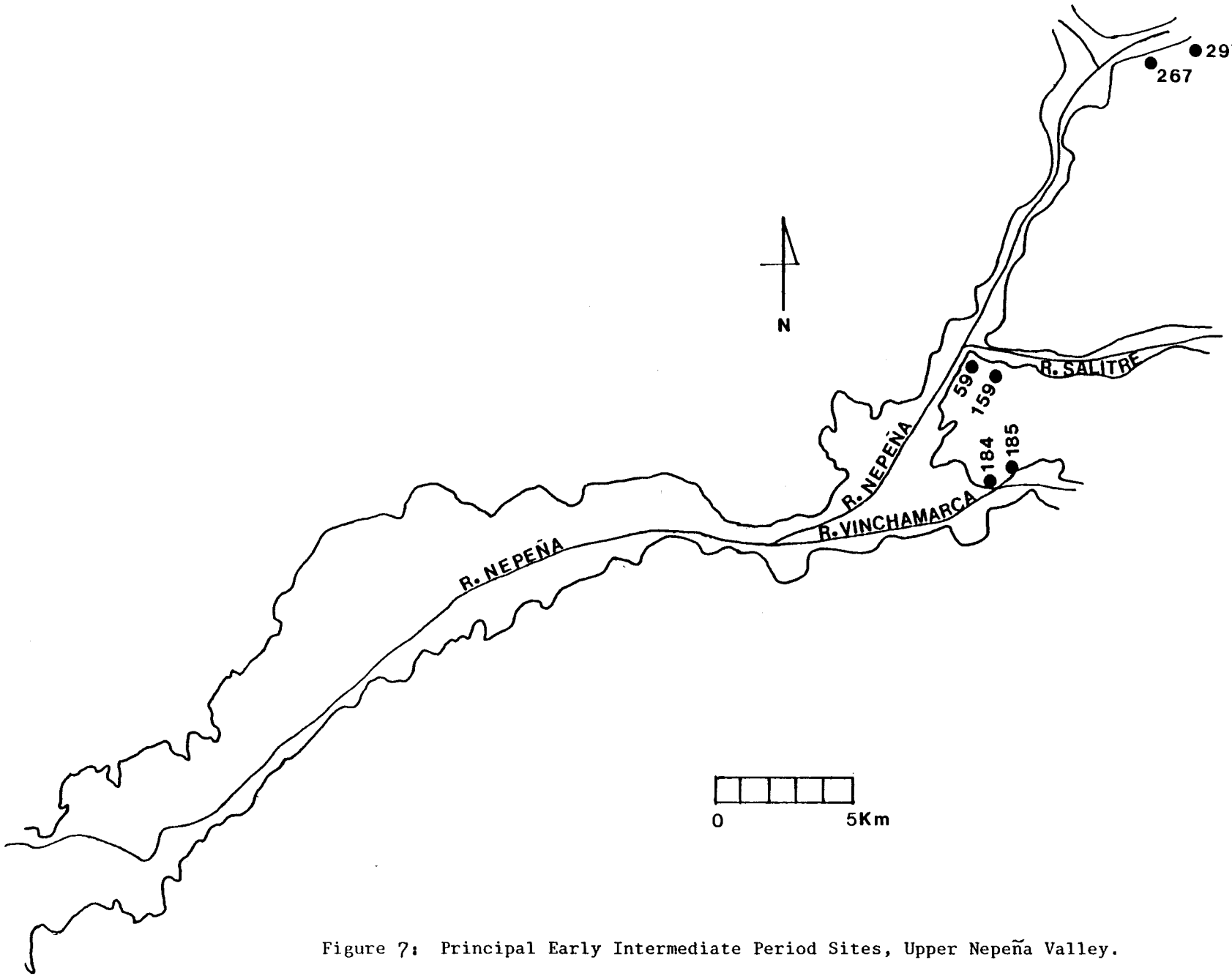


Figure 7: Principal Early Intermediate Period Sites, Upper Nepeña Valley.

to the question of whether or not artifacts similar to those found in Nepeña have been found in the Callejon de Huaylas or elsewhere in the North Central Highlands.

The Higueras Period occupation of Kotosh is reported to have been characterized by very large mortars, ceramic spoons, and necked jars with strap handles (Izumi and Sono 1963:106; Izumi and Terada 1972:67; Plates 98, 126-13). In fact, some of the necked jars with strap handles found on Cerro Chacuascucho compare very favorably with those found at Kotosh. As for the Callejon de Huaylas, the Middle Huaylas phase was characterized by white-on-red pottery as well as pottery decorated in other two-color combinations (Lanning 1965:140), while undecorated handled jars discovered in the Callejon are said to compare favorably with those of the Higueras style of Huanuco (Kotosh and Shillacoto) and the Callejon style of Chavin de Huantar (Lynch 1979:619).

On the Central Coast funerary pottery found at Villa Salvador near the ocean and on a desert pampa between the Rimac and Lurin valleys is dated to the beginning of the Early Intermediate Period (Stothert 1980; Stothert and Ravines 1979). This pottery is distinguished by bichrome painting and necked jars with strap handles and, while difficult to compare with Miramar style sherds, this pottery compares favorably with the white-on-red pottery found at the sites of Baños de Boza and Cerro de Trinidad in the Chancay Valley (Stothert 1980:288). This Chancay pottery is characterized by necked jars with strap handles (Willey 1943, Plate 1) which, in turn, compare nicely with some of the jars found at Cerro Chacuascucho East in Nepeña. It seems clear, then, that, on the basis of comparative analysis, the assemblage of artifacts recovered from Cerro Chacuascucho may be dated with some

confidence to the beginning of the Early Intermediate Period.

Concluding Remarks

It has been argued that a megalithic culture stretching over much of the north to north central highlands and coast dates to the end of the Early Horizon. On the coast, where settlement practices are best understood, occupation was heaviest in the upper parts of valleys while, on the basis of settlement patterns derived for Nepeña, it has been argued that Early Puerto Moorin sites in the upper Viru Valley may be sorted into a number of centers. This marked shift toward a highland orientation was briefly manifested in Viru as it was followed there by a return to a lower valley and, presumably, coastal orientation at the start of the Early Intermediate Period. This change is reflected as well in the Chicama, Moche, and Santa valleys but not in Nepeña which maintained its highland orientation while at the same time sharing cultural ties with valleys on the Central Coast.

It becomes necessary to make this leap from Nepeña to the Central Coast because so little is known about the settlement of the intervening valleys at this time (Collier 1960:415; Thompson 1962:297; 1966:544-546). Based upon what is now known about the settlement of Nepeña, it may be postulated that similar occupations will become known for these other valleys. In such an event it will become even more apparant that there existed distinct cultural traditions on the north and central coasts and that they were separated by a shifting frontier which included the Nepeña Valley.[1]

Footnote

1. Funding for field research was provided by a Fulbright-Hays grant

for graduate study abroad administered through the Institute of International Education in Washington, D.C. and the Commission for Educational Exhcange between the United States and Peru (Fulbright Commission) which has its office in Lima, Peru. A Grant-in-Aid of Research was also received from Sigma Xi, The Scientific Research Society. I would like to acknowledge my gratitude for this financial assistance.

References

Bennett, Wendell C.
1950 The Gallinazo Group, Viru Valley, Peru. Yale University Publications in Anthropology 43. New Haven.

Brennan, Curtiss T.
1978 Investigations at Cerro Arena, Peru: Incipient Urbanism on the Peruvian North Coast. Ph.D. dissertation, University of Arizona, Tucson. University Microfilms, Ann Arbor.

Burger, Richard L.
1978 The Occupation of Chavin, Ancash, in the Initial Period and the Early Horizon. Ph.D. dissertation, University of California, Berkeley. University Microfilms, Ann Arbor.

1979 Resultados preliminares de excavaciones en los Distritos de Chavín de Huantar y San Marcos, Perú. In Arqueología Peruana: investigaciones arqueológicas en el Perú en 1976, edited by Ramiro Matos Mendieta, pp. 133-135. Lima.

Collier, Donald
1955 Cultural Chronology and Change as Reflected in the Ceramics of the Viru Valley, Peru. Fieldiana: Anthropology 43. Chicago Museum of Natural History.

1960 Archaeological Investigations in the Casma Valley, Peru. Proceedings of the 34th International Congress of Americanists 2: 411-417. Vienna, 1958.

Daggett, Richard E.
1982 Virahuanca Bajo: On Understanding Megalithic Sites in the Nepeña Valley. Paper presented at the First Annual Conference on Andean Archaeology and Ethnohistory, November 13-14, Cornell University, Ithaca, New York.

1983 Megalithic Sites in the Nepena Valley, Peru. In Investigations of the Andean Past, edited by Daniel H. Sandweiss, pp. 75-97. Cornell Latin American Studies Program, Ithaca, New York.

1984 The Early Horizon Occupation of the Nepeña Valley, North Central Coast of Peru. Ph.D. dissertation, University of Massachusetts, Amherst. University Microfilms, Ann Arbor.

Donnan, Christopher and Carol J. Mackey
1978 Ancient Burial Patterns in the Moche Valley, Peru. University of Texas Press, Austin.

Ford, James A.
1949 Surface Survey of the Viru Valley, Peru: Cultural Dating of Prehistoric Sites in Viru Valley, Peru. Anthropological Papers 43(1):29-87. American Museum of Natural History, New York.

Fung Pineda, Rosa y Carlos Williams León
1977 Exploraciones y excavaciones en el Valle de Sechín, Casma. Revista del Museo Nacional XLIII:111-155. Lima.

Izumi, Seiichi and Toshihiko Sono
1963 Andes 2: Excavations at Kotosh, Peru 1960. The University of Tokyo Scientific Expedition to the Andes, 1960. Kadokawa Publishing Co., Tokyo.

Izumi, Seiichi and Kazuo Terada
1972 Excavations at Kotosh, Peru: A Report on the Third and Fourth Expeditions. University of Tokyo Press.

Izumi, Seiichi, Pedro J. Cuculiza and Chiaki Kano
1972 Excavations at Shillacoto, Huanuco, Peru. Bulletin No. 3 The University of Tokyo Museum.

Kano, Chiaki
1971 Excavaciones en Shillacoto, Huanuco. Actas y Memorias del XXXIX Congreso Internacional de Americanistas 3:52-62. Lima, 1970.

Lanning, Edward P.
1960 Chronological and Cultural Relationships of Early Pottery Styles in Ancient Peru. Unpublished Ph.D. dissertation, University of California, Berkeley.

1965 Current Research: Highland South America. American Antiquity 31:139-140.

Lavallée, Danièle
1970 Industrias líticas del Período Huaras: procedentes de Chavín de Huantar. Revista del Museo Nacional XXXVI (1969-1970):193-233. Lima.

Lumbreras, Luis G.
1974a The Peoples and Cultures of Ancient Peru, translated by Betty J. Meggers. Smithsonian Institution Press, Washington, D.C.

1974b Informe de labores de proyecto Chavín. Arqueológicas 15:37-56. Lima.

Lynch, Thomas F.
1979 Current Research: Andean South America. American Antiquity 44: 618-622.

Lynch, Thomas F., Editor
1980 Guitarrero Cave: Early Man in the Andes. Academic Press, New York.

Menzel, Dorothy, John H. Rowe and Lawrence E. Dawson
1964 The Paracas Pottery of Ica: A Study in Style and Time. University of California Publications in American Archaeology and Ethnology 50. Berkeley.

Patterson, Thomas C.
1966 Pattern and Process in the Early Intermediate Period Pottery of the Central Coast of Peru. University of California Publications in Anthropology 3. Berkeley.

Pozorski, Shelia G. and Thomas G. Pozorski
1981 Preliminary Results of Investigations in the Casma Valley, Peru. Ms. in possession of the authors.

Proulx, Donald A.
1973 Archaeological Investigations in the Nepeña Valley, Peru. Research Report 13, Department of Anthropology, University of Massachusetts, Amherst.

Rowe, John H.
1950 Review of Andean Culture History, by Wendell C. Bennett and Junius B. Bird. American Antiquity 16:170-172.

1962 Chavin Art: An Inquiry into Its Form and Meaning. The Museum of Primitive Art, New York.

Stothert, Karen E.
1980 The Villa El Salvador Site and the Beginning of the Early Intermediate Period in the Lurin Valley, Peru. Journal of Field Archaeology 7:279-295.

Stothert, Karen E. y Rogger Ravines
1979 Investigaciones arqueológicas en Villa El Salvador. Revista del Museo Nacional XLIII (1977):157-225. Lima.

Strong, William D. and Clifford Evans, Jr.
1952 Cultural Stratigraphy in the Viru Valley, Northern Peru: The Formative and Florescent Epochs. Columbia University Press, New York.

Tabio E., Ernesto
1977 Prehistoria de la costa del Perú. Instituto de Ciencias Sociales de la Academia de Ciencias de Cuba. La Habana.

Terada, Kazuo and Yoshio Onuki
1982 Excavations at Huacaloma in the Cajamarca Valley, Peru, 1979: Report 2 of the Japanese Scientific Expedition to Nuclear America. University of Tokyo Press.

Thompson, Donald E.
1962 The Problem of Dating Certain Stone-Faced Stepped Pyramids on the North Coast of Peru. Southwestern Journal of Anthropology 18:291-301.

1966 Archaeological Investigations in the Huarmey Valley, Peru. Actas y Memorias del XXXVI Congreso Internacional de Americanistas 1:541-548. Spain, 1964.

Topic, Theresa Lange and John R. TOpic
1982 Prehistoric Fortification Systems of Northern Peru. Preliminary Report on the Final Season, January-December 1980. Ms., Department of Anthropology, Trent University, Peterburough, Ontario.

Willey, Gordon R.
1943 Excavations in the Chancay Valley. In Archeological Studies in Peru, edited by William D. Strong, Gordon R. Willey, and John M. Corbett. Columbia Studies in Archeology and Ethnology 1(3):123-196. Columbia University Press, New York.

1951 The Chavin Problem: A Review and Critique. Southwestern Journal of Anthropology 7:103-144.

1953 Prehistoric Settlement Patterns in the Viru Valley, Peru. Bureau of American Ethnology, Bulletin 155, Smithsonian Institution, Washington, D.C.

1971 An Introduction to American Archaeology, Volume Two: South America. Prentice-Hall, Englewood Cliffs, New Jersey.

Wilson, David J.
1981 Prehispanic Settlement Patterns and Defensive Systems in the Lower Santa Valley Region, Peru: Preliminary Report of the 1979-1980 Santa Valley Project. Ms. in possession of the author.

Paracas in Chincha and Pisco: a Reappraisal of the Ocucaje Sequence

Dwight T. Wallace
State University of New York
at Albany

Introduction

The 1964 publication by Menzel, Rowe, and Dawson of the Paracas style sequence of Ica had been long awaited, particularly as an article in 1958 by Rowe had outlined the 4 phase seriation arrived at earlier by Lawrence Dawson. The result was a sequence of 10 phases, extending the earlier seriation and making some corrections based on excavations done in Ica in 1958 (Wallace 1962). The sequence was named after one subarea of Ica, although covering the whole valley; it was also presented as defining the temporal period termed the Early Horizon (Menzel, Rowe, and Dawson 1964, p. 4; hereafter referred to as "MRD").

My own interest in using the Ica sequence was considerable, as I had made a number of collections of Paracas style materials during a site survey of Chincha and Pisco (Wallace 1971). The authors had recognized areal variations in the broader Paracas style distribution in these valleys as well as in Nasca to the south. Despite this range of temporal and areal differences, the Paracas style is quite distinct and readily identifiable; the distribution of the style is moderately wide, but the main area covers coastal zones quite accesible to each other. The authors also recognized areal variation within the valley of Ica itself; this is unusual since areal variation had often been considered too complicating a factor to permit good seriations.

Comparatively little fieldwork has been done on the south coast since 1960, and there has been no new field data to measure or test the success of the Ica sequence. The style sequence, based largely on whole

plots from looted graves, is very difficult to apply to sherd collections because the style traits unique to single phases are somewhat limited in number and can easily be missing from even large field collections. In any case, it is certainly timely to discuss Paracas style materials from outside Ica in light of the published Ica sequence.

When the comparison between the Paracas materials from Chincha, Pisco and Ica was made, it was apparent that similarities fell between Ica phases 7 and 9. However, some confusing differences were noted. Areal variation was to be expected, but cross-dating between specific forms of style traits should be possible, given the direct, historical contact expectable in this restricted area. One relatively large collection from Chincha, with internal consistencies like those used to establish contemporaneity in the Ica Paracas sequence, had ties with both the upper and lower Ica varieties of Paracas style, as well as specific similarities with traits of phase 7 and of phases 8 and 9. One other small collection is from the upper Pisco valley, and there are also the original Cavernas lots from the Paracas area. These two latter collections show some interesting differences, which can be assumed to be at least of areal significance, if not also temporal.

The inter-valley comparisons set the scene for a discussion of the Ocucaje sequence itself. This discussion will cover methodological factors, most specifically the relationship of style and temporal factors. The effect of operating with certain assumptions concerning the sources of change will also be examined, and an alternative arrangement based on different assumptions will be presented.

Paracas in Chincha and Pisco

Paracas style sherds were found at various sites in Pisco and Chincha during reconnaisance work in 1957 (Wallace 1971). Midden of the Topara style tradition commonly covers the Paracas remains, so the sherd collections are small. These sherds are clearly dated within the Paracas tradition and in the Ica Phases 6 to 9 range. There were 2 additional lots, mainly of whole pots: one grave lot of 9 pots plus some sherds from the upper Pisco valley, near Tambo Colorado (Engel 1956), and also the graves from the type site, Paracas Cavernas (Tello 1959). A third lot comes from the Chincha survey (PV57-63; Wallace 1971). These collections show a reasonable stylistic consistency, but are easily distinguishable from each other. Temporal differences are probably not very great within any of the lots.

A lot from the upper Chincha valley was found in what can be best described as a crater in a miniature pyramid; it consists of 302 well preserved sherds, of which 78% were fine ware sherds with incised-painted, red slip, or polished smudging, 7% were graters, and only 18% were utilitarian ware. This collection, termed Pinta, will be treated as equivalent to a grave lot or cache, assumed to represent a fairly limited time period. It is technologically an excellent ware--thin, well polished and evenly fired, with even black smudging and small evenly formed and spaced negative spots, equal to the upper range of Ocucaje pottery.

A comparison between these three lots (Pinta, Pisco, and Paracas Cavernas) and the Ica sequence is given in Table 1. As an overview of the comparison, perhaps the most obvious result is the large number of traits shared by the 3 northern lots and the Upper Valley Phases 7 and 8.

Figure 1. Comparison of Paracas Style Areal Variants

		Pinta	Pisco	Cavernas	Ica
Inc-pt. designs, no red slip			X	X	All
Inc-pt. bowls, interior red slip	1.8	X	X		U7, U8
Same, concave-sided outflared bowl		X			
Bowl, red slip interior only		X	X		U7, U8
Bowl, red slip interior and exterior			X		
Concave-sided outflared bowl		X	X		U7, U8
Same, as base of 2-spout bottle				X	U8, C8
Negative dots + inc-pt. designs	2.1.2	X	X	X	U7, U8
Neg. dots + isolated design panels		X		X	
Neg. dots between design panel ends			X	X	U7, U8
Small painted dots as main design			X		O8
Same, combined with other designs		X			O8,(C8)
Isolated design panels + red slip			X		
Open design grounds, usually yellow		X	(X)	X	O8, 9
Diag. 1-step motif fret w/dots	15.12.5	X			U7
Diag. 2-ply twined fret	15.13.4	X	X	X	U8,O8,9
Incomplete 2-ply twined fret	15.13.9	X	X	X	9
1-step element in bands	5.12.1	X	X		U7,U8,9
Ang. geom.--diamonds, tri-band rhomboids		X	X		O8, 9
Gliding bird	3.5.2.1.1		X		U7, U8
Oculate being	3.3	X		X	O8, 9-10
Eccentric eye as separate motif	4.1	X	X		O6, U6-8
Serpentine semi-representational motif (Assoc. with Oculate Being)			X		U9
Graters: red slip rim band		X	X	X	3-8, 10
Graters: incised parallel short lines		X	X	X	
Graters: starfish motif		X		X	9
Graters: fishbones motif			X		O8

Numbers indicate traits specified in the Ocucaje report (Menzel, Rowe and Dawson 1964, Table 1, pp. 267-289). Parentheses indicate presence in variant form. 'U' = Upper Valley; 'C' = Callango; 'O' = Ocucaje.

The main cluster of traits that set off this grouping includes ones that are not simply incidental or minor traits. They include the common use of red slipped interiors, both on bowls with exterior incised-painted decoration and ones with no other decoration; negative dots combined with incised-painted decoration; two types of the 2-ply twined fret design as well as some generic angular motifs; and graters with interior red slipped rim bands. Pigmented slipping is more than just an esthetic feature; it also represents an economic and technological choice.

The Upper Pisco and Cavernas lots share traits of both Upper Valley Phases 7 (U7) and 8 (U8), so they could be cross-dated with either or both. The Pinta lot, however, has a quite specific type of fret with angular twined elements and dot fillers that occurs only on Phase U7. In addition, still another type of geometric design cross-dates to either U8, O8, or Ica 9, but not earlier. The situation may well arise from a moderate degree of temporal spread in the Upper Pisco and Cavernas lots, but I consider it highly unlikely that the Pinta unit could have been formed during more than one phase. It is, of course, possible that the motif lasted longer in upper valley Ica than was thought.

The situation suggests that the Pinta lot may well be earlier than either the Upper Pisco or Cavernas lots. Also, the ties with the rather distinctive Upper Valley Ica style are strongest with the Upper Pisco lot, still quite strong with the Pinta lot, but not particularly extensive with the Cavernas lot. Interestingly enough, the Upper Pisco valley is quite accessible from upper Ica via a road across the pampa along the base of the Andean foothills, while upper Chincha, where the Pinta site is located, is accessible by a continuation of that road from Pisco. Contact between the Paracas area and Ica would not necessarily avoid

upper Ica, but there are various alternative routes, including that of the modern Panamerican highway.

A distinctive feature of the innovative Ocucaje 8 and subsequent Ica 9 phases are open or empty backgrounds, normally yellow, around motifs within a design panel; a few cases also occur in U8 as part of what is interpreted as heavy influence from the O8 style, but the Pisco and Cavernas cases are much closer to the supposed proto-type. In addition, all 3 of the non-Ica lots have a number of cases of the "incomplete" twine motif, one or more diamond figures linked by extensions of the diamond outlines; this motif is restricted to Ica 9.

While cross-dating to temporally different units may result from temporally mixed data, a unit with evidence of traits from two areally distinct units can not be explained so easily, assuming there is no question about true provenience. Since this mixture is found in all 3 non-Ica units, it is quite difficult to ignore.

The 3 non-Ica lots also share many other features, but are quite distinguishable. The frequent occurrence of the concave-sided outflared bowl with a red slip interior and with or without exterior incised-painted decoration, sets the Pinta lot apart. In the Upper Valley Ica sequence (MRD, p. 80), the occurrence of this bowl form with red slipping as the sole decorative treatment is rather foreign in that sequence and in some ways to the whole Paracas style tradition, since neither the use of red slipping alone nor of undecorated fineware bowl forms is at all common. This vessel form, also slipped red, does occur outside U7 and U8, but only as the lower part of the base of double spout bottles (MRD, Figs. 15,g and 18,b) in Callango and Upper valley phases 8. The Upper Pisco lot has a bowl with red slip interior and exterior plus small isolated rim panel

with incised decoration, unique to this lot.

The occurrences of part of the modeled eye of the Oculate Being in the Pinta lot and of a serpentine figure often associated with the Oculate Being in the Upper Pisco lot are worth noting.

As an overview, these similarities definitely suggest fairly close interaction between the bearers of the Paracas style. Difficulties in the cross-dating of some traits should not overwhelm the many cases where there are no problems. Borrowings between areas should not be expected to be mechanical or from only one source. Nevertheless, the pattern of cross-dating either with Upper Valley phases 7 and 8 or else with lower valley phases 8 and 9 is a rather consistent feature of the comparisons. Some time differences within what are treated here as one lot should not be ruled out. Another possibility is that the traits in question may not be temporally distinct outside of Ica.

For the Pisco and Cavernas lots, no direction of influence is as yet suggested. However, the case is not the same for the Pinta lot. If Ica were proposed as the source of borrowing, it would be necessary to explain why the Pinta artisans would pick a few specific geometric designs and one unusual bowl form and decoration; the concave sided widely outflared bowl with the unique red-slip-only decoration, from the many elements they might have borrowed from the Upper Valley sub-units. They would then have to convert this bowl form into their most common decorated one. At the same time, they would have had to borrow the open, yellow grounds, the use of diamond and tri-band rhomboid elements, the incomplete twined fret design, and the Oculate Being from the Lower Valley sub-style.

Quite aside from any temporal problems between the style units, this scenario makes little sense. However, if the direction of influence is

assumed to be from Chincha to Ica, there would then have been a borrowing by upper valley inhabitants of a technologically more complex production of red slipped interiors, as well as the undecorated red slipped bowl of specific Chincha form. The technological excellence of the Pinta ceramics fit this interpretation. At the same time, there could well have been influence going in a more westerly path, between Chincha, the Paracas area, possibly more southerly sites in the Tablazo de Ica, and the southern part of the Ica valley. The temporal relationship here could be even more complex, given the possibilities of some lag in diffusion.

Whatever the case, it is clear that a great deal more data must be gathered about areal variations of the Paracas Style Tradition before these questions can be answered. At this point, the frequency of one bowl form in the Pinta lot and the intrusiveness of the specific red-slipped concave-sided bowl in U7 argues for direct contact, with influences going from Chincha to Ica. However, the similarities in the non-Ica lots between both Upper Valley 7 and 8 and Ocucaje 8 and Ica 9 are still to be explained.

Seriational Methodology and the Ocucaje Seriation

The Ica Paracas seriation by Menzel, Rowe, and Dawson is ostensibly a fairly straightforward one in which objective identification of a very large number of shared, formal artifact traits and trait clusters or patterns were used to group individual pots or gravelots into a series of stylistic groupings, and then to order these groupings into a series which maximized the continuity of trait distributions. Seriations have usually been relatively simple unilinear ones with the changes interpreted as representing change through time.

A tabulation (MRD, Table 2, p. 290) gives the maximized seriational order for the presence or absence of 461 traits. All the traits noted as present for any given seriational unit, termed a phase, represent a complex linkage or combining of the many traits associated on single pots, in a grave lot, or otherwise judged to be equatable on stylistic grounds. However, this tabulation is stated as being a "selected sample of contrasting stylistic features....that serve to distinguish single phases or groups of phases from each other" and which "illustrate [the sequence] in abbreviated form" (MRD, p. 263). In addition "contrasts in context and patterning....usually require more involved descriptions than are convenient in an abbreviated tabulation, and so are treated in the text" (MRD, p. 263).

Methodologically, the procedure for preparing the one tabulation of style traits is an a posteriori recording of the attributes on which the groupings of pots had previously been based. There are illustrations of the vessel shapes, as well as the design elements, in the phases of the proposed ordering, but the associations of traits on individual pots or in grave lots is not given, except for some statements to be gleaned from the text. The heart of the presentation is the highly detailed prose descriptions and interpretative art historical analyses in the lengthy section of text.

This approach is a classic example of humanistic scholarship. It is basically a detailed interpretation of stylistic development in the Paracas pottery of Ica. An underlying premise is that the patterns on which this development is based are highly complex, so that no description of the data would do justice to this complexity. Therefore, the elements on which the seriation is built, the traits or features

can be listed, but they can not "prove" the seriation. The essential result is that the ultimate proof of the correctness of the seriation lies in the trust extended to the authors.

One feature that distinguishes humanistic and scientific studies is how explicitly the weighting of explanatory factors must be expressed. The scientific approach demands that such decisions be stated decisively and be verifiable. The humanist would answer that such decisiveness can be restrictive, can mask real problems, and not do justice to complex arguments. A scientist would reply that all conclusions and interpretations are based on weighting of evidence and that expressing these weightings may be difficult, but that there is no reason or excuse for not presenting them.

This is not the place for a discussion of theory, so the subject can be dropped after pointing out that weighting can be done in various ways, one of which is to have relative weight expressed by the relative number of traits recognized. In this way, the importance of the feline representation in the Ocucaje seriation is more or less accurately reflected by having 179 out of 461 traits to describing the different decorative elements and their variants that are found associated as parts of the representation of the feline itself. In short, the authors did put a great deal of weight on the feline in arriving at their sequence. This emphasis is due to the complexity of the feline motif, which in turn reflects its importance in the Paracas style. A way of pinpointing this importance is to state it as 179/461. Unfortunately, such precision would be ridiculed by both sides, with fairly good reason. However, if we feel compelled to make any statements concerning the relative importance of features of the sequence,"about 179/461" is not much different from "very

important" in describing the role of the feline in the Ica Paracas style.

To turn to a direct discussion of quantification, the authors state that formal statistical analyses were not used "because the traits recorded were not equivalent to one another for counting purposes" (MRD, p. 265). While there is no question that the range of quantitative methods would be limited, a great deal of research in the social sciences is done with nominal variables, the type of trait used in the Ocucaje study. Analyses of these types do not deal with the equivalence of traits, but with their associations, such as that of the various features associated on pots or in graves. "Patterns" are basically associational phenomena, emphasizing the nature of the associations and not merely the type or number of elements involved.

The question is not one of simply equating 10 felines with curly eyebrows and 10 cases of gliding birds with clothespin beaks, but of recognizing both cases as equally significant by establishing that they are not idiosyncratic or stylistically minor associations. The equating of rare associations and frequent ones by classing both as "present" misses a great deal of significant data. It is unfortunate that the authors did not present this data, as it would have been important in any future attempt to re-align any of the data. It would not have been necessary to use counts; a ranking from rare to very common, using any scale, would be sufficient.

Lack of proper sampling has been claimed for data from grave lots, particularly with grave lots of doubtful associations. In fact, the adequacy of any sample depends on the questions that are asked of the sample; all bias is relative. Since the Ocucaje study does not attempt to make statements about the full range of ceramic output, using grave

wares is no problem. Similarly, the obvious reliance on "fancy ware" is not a restriction for a study which emphasizes elaborate decoration, an obvious focus in an art historical study which makes no claims about a full range of designs. The only serious problem would be if pots existed elsewhere showing stylistic associations contrary to those of the study. The possibility of bias in collecting the pots is high; however, the probability that certain types of complex design were sorted out of the sample is too low to seriously consider. Questions concerning the validity of the phases as distinct time periods is quite another problem; the final seriation is a sequence of style variations--how valid it is as a temporal sequence is quite another question.

A more serious question of sampling is the low number of pots or even sherds that represent some of the phases. The authors note that the first two phases are not well represented: 6 pots for Phase 1, 2 for Phase 2, and 3 as transitional between Phases 2 and 3 (MRD, p. 9). In addition, the Callango 7 phase is represented by 5 sherds, Upper Valley 9 by 20 pots "probably" assignable to this phase, and no sherds or pots are assignable to Phase 10 in the upper valley. Phases 4 and 5 are represented by 12 pots and 18 pots respectively, Phases 3, Callango 6, and Upper Valley 6 are all represented by between 34 and 38 pots. In the latter cases, any statements concerning what is absent would be inadvisable. Turning back to some general methodological features, the recognition that the presence of the areal substyles during the course of style development immediately makes the seriation more complex is obvious. When space and time are both factors, applying the seriational method is complicated in that temporal and spatial differences can not be separated without a great deal of supporting evidence. On top of this,

the presence of a number of innovations immediately injects discontinuities into the problem, and these are anathema to a clear-cut seriation. In addition, continuities and discontinuities are not, in fact, givens in the data as much as they are the results of the seriation, at least in the seriation of single pots or gravelots. The most successful seriations, from the methodological viewpoint, are those with a balance of continuities and discontinuities and involving one major dimension, whether time, space, style, or some other factor.

The resulting multilinearity of the Ocucaje sequence emphasizes the point concerning the dimensions represented in a seriation. There are a number of possible dimensions, of which space and time are probably the most usual. There are other possibilities, however, and my main point here is that style is one of them; it is not to be confused with time, however common their association may be. Especially when dealing with short and/or conservative style units, stylistic differences may well represent coeval substyles, and the presence of different areal styles in one time period immediately raises the possibility of conservative and foreign-influenced styles in one time and place. Such differences could even be reflected in differing gravelots. A major point here is that the Ocucaje seriation should be interpreted as a stylistic one first; only then can the interpretation of time differences be attempted.

The necessity for distinguishing between stylistic and temporal changes is also true when interpreting the tempo of change. Stylistic trait seriations, when successful, give stylistic sequences, and any translation into time units must assume some type of equation between stylistic and temporal change. None, in fact, is generally agreed upon. The argument becomes entirely circular if similar degrees of style change

are also used as time measures, and these time units are then used to interpret the tempo of stylistic change.

A Plot of Similarity:

The essence of all seriational methods is one of identifying relative similarity between some objectively defined groupings. A basic difficulty is that "similarity" is not a closely defined condition, in either humanistic or scientific terms. There is little problem in identifying shared attributes--beyond questions of the validity of attribute identification. Problems arise mainly from the common desire to assign relative importance or weights to the variables exhibited by the entities being compared; there is also the problem of what relative importance to assign those traits shared vs. those not shared. The problem is not solved by dealing just with traits that are easily measured: would a tall narrow jar be more like a tall broad one than like a short narrow one?

There is one type of quantitative analysis that can be done with the data presented in the Ocucaje study. Frequency counts can be made of the number of traits or features shared by any given pair of groupings or, in the authors' term, any pair of phases. Such data would simply reveal more easily what is already contained in the existing tabular presentation. Stated another way, the resulting frequencies are a straight count of the number of times any two phases share X's (i.e., presences) in Table 2 of the Ocucaje report (MRD, pp. 290-303).

To convert the frequency counts into a form suitable for comparisons, two forumlas for similarity indices were used. They are fairly simple ones, both based on the number of shared attributes divided by the number of those not shared in a given pair of phases. The formulas are:

$SI.1 = Ns / (Na + Nb - Ns)$ and $SI.2 = 2Ns / (Na + Nb)$

where SI is an index of similarity, Ns is the number of traits shared, while Na and Nb are the total number of traits recorded for two different lots. Many similarity indices weight the variables, usually so that the proportion of shared traits is emphasized. However, both of the above formulas are direct expressions of the proportion of shared to unshared traits; each shared or unshared trait has the same effect on the numerical value of the resultant index. Index #1 is the proportion of shared traits to the total of the unshared (or unique) traits in the two entities compared. Index #2 is essentially an average of the proportions of shared to total traits in each of the entities compared. In no case did the results of using one or the other index change the general pattern of similarities between all pairs of units.

In addition, calculations were made for each formula that both included and excluded the unique traits. Excluding unique attributes gives an artificial, but interesting picture of the traits shared when the "weighting" of the attributes not shared is removed from the pair of units under comparison. In essence, it gives a picture of how many traits are shared which are also shared by previous ("earlier") units and subsequent ("later") ones in the sequential arrangement of units. The value of this approach would be especially great when a large number of traits briefly flood a particular temporal or sub-areal unit.

An additional way in which similarity indices can be used with the Ocucaje study is to make separate matrices using traits only of certain sub-groups of traits. The obvious ones in the present case are each type of representational "theme" used in the study for which a quantity of traits have been identified; these would include representations of

felines, mythical feline-humans, the Oculate BEing, humans, birds, and broad band and/or narrow band geometric motifs. By comparing these plots with each other and with that for all traits combined, it is possible to see the roles played by each in the total seriation. For example, the feline representations play by far the greatest role of all motifs, since they contribute the largest number of traits and cover more of the sequence than almost any other type of motif. The fact that there are two distinct sequences, the upper valley and lower valley, is still one further basis for setting up distinct matrices.

Since a large number of tables could have been presented, the ones in figures 2 and 3 are selected to show some of the variety of possible comparisons as well as ones which illustrate a major point that will be made later. The frequency counts on which the indices were based could be used directly; the indices simply take into account the varying numbers of cases for each unit.

The tables shown here are in the common correlation matrix form. This form of presentation serves other purposes than the straightforward, feature by feature presentation in the Ocucaje report. But the data on which the tables are constructed should be recognized as simply another method of presenting the same data. One of the advantages of the use of such a matrix is that it can be used to arrive at and also demonstrate the validity of a unilinear seriation; if phases (or "units", as I prefer to call them) can be successfully arranged, the higher counts of shared attributes will occur on the diagonal.

The purpose for the use of the similarity indices in this paper was not to re-examine the sequence in detail, but to assess any problems in its use for cross-dating with other areas. The many possible tables

UPPER VALLEY: ALL ATTRIBUTES

UNIT	3	4	5	U6	U7	U8	9
4	40						
5	27	62					
U6	16	31	45				
U7	12	21	29	46			
U8	14	18	24	32	54		
9	2	6	8	7	8	11	
10	1	3	3	5	5	5	40

UPPER VALLEY: FELINE-MYTHIC

UNIT	3	4	5	U6	U7	U8	9
4	36						
5	25	59					
U6	19	35	56				
U7	14	21	34	49			
U8	20	21	31	37	61		
9	2	5	8	8	11	10	
10	2	2	3	3	3	4	27

UPPER VALLEY: HUMAN ATTRIBUTES

UNIT	3	4	5	U6	U7	U8	9
4	83						
5	62	71					
U6	20	22	30				
U7	11	12	10	25			
U8	12	14	11	12	75		
9	0	0	7	0	0	0	
10	0	0	0	0	0	9	42

UPPER VALLEY: GLIDING BIRD

UNIT	3	4	5	U6	U7	U8	9
4	0						
5	0	85					
U6	0	33	30				
U7	0	29	26	37			
U8	0	16	15	27	52		
9	0	19	17	19	15	22	
10	0	24	21	23	18	13	60

UPPER VALLEY: GEOMETRIC

UNIT	3	4	5	U6	U7	U8	9
4	50						
5	27	55					
U6	20	25	43				
U7	12	16	23	39			
U8	7	6	14	22	26		
9	0	0	0	5	7	18	
10	0	0	0	11	6	8	8

UPPER VALLEY: VESSEL SHAPES

UNIT	3	4	5	U6	U7	U8	9
4	60						
5	42	70					
U6	23	23	42				
U7	29	29	36	64			
U8	15	15	26	35	56		
9	4	4	4	9	8	7	
10	0	0	0	0	0	0	44

LOWER VALLEY: ALL ATTRIBUTES

UNIT	3	4	5	C67	C8	08	L9
4	40						
5	27	62					
C67	13	30	48				
C8	14	17	25	38			
08	8	12	13	17	42		
L9	2	6	8	8	21	26	
10	1	3	3	6	9	13	40

LOWER VALLEY: FELINE-MYTHIC

UNIT	3	4	5	C67	C8	08	L9
4	36						
5	25	59					
C67	17	33	53				
C8	21	18	29	48			
08	13	20	20	30	48		
L9	2	5	8	13	19	36	
10	2	2	3	4	9	12	27

LOWER VALLEY: HUMAN ATTRIBUTES

UNIT	3	4	5	C67	C8	08	L9
4	83						
5	62	71					
C67	20	22	44				
C8	18	20	17	30			
08	14	17	12	14	12		
L9	0	0	7	8	7	0	
10	0	0	0	0	0	0	42

LOWER VALLEY: GLIDING BIRD

UNIT	3	4	5	C67	C8	08	L9
4	0						
5	0	85					
C67	0	39	50				
C8	0	25	32	58			
08	0	22	20	19	46		
L9	0	19	17	22	46	47	
10	0	24	21	26	31	40	60

LOWER VALLEY: GEOMETRIC

UNIT	3	4	5	C67	C8	08	L9
4	50						
5	27	55					
C67	20	36	43				
C8	5	21	27	30			
08	0	0	6	6	39		
L9	0	0	0	0	15	31	
10	0	0	0	0	6	0	8

LOWER VALLEY: VESSEL SHAPES

UNIT	3	4	5	C67	C8	08	L9
4	60						
5	42	70					
C67	8	18	40				
C8	5	5	5	6			
08	0	0	0	0	64		
L9	4	4	4	0	35	30	
10	0	0	0	0	10	12	44

FIGURE 2. Similarity indices [Ns/Na+Nb-Ns] for the distinguishable Ica Paracas sequences for the upper and lower valley, with breakdown into the component attribute categories. The Oculate Being and Other Representations are not included, being limited in extent or small in number. Callango 6 has 34 pots, C7 only 5 sherds, so are combined. Unit 9 is best considered as lower valley; only 20 "probable" upper valley specimens exist.

ALL ATTRIBUTES (N = 1065)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	100	58	42	23	24	14	29	1
4	58	100	76	47	30	22	11	7
5	42	76	100	64	40	23	14	7
U6	27	48	62	76	41	27	13	10
U7	22	35	45	61	46	31	15	9
U8	25	31	38	46	57	39	19	10
9	29	11	14	14	35	41	100	57
10	1	7	7	10	17	24	57	100

FELINE-MYTHIC ATTRIBUTES (N = 438)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	100	53	40	29	34	23	4	5
4	53	100	75	50	31	34	9	3
5	40	75	100	69	44	33	15	6
U6	31	52	72	78	48	37	14	6
U7	24	34	50	71	61	45	20	6
U8	33	34	48	58	63	43	18	8
9	4	9	15	23	32	53	100	43
10	5	3	6	7	17	22	43	100

HUMAN ATTRIBUTES (N = 59)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	100	91	77	33	31	25	0	0
4	91	100	83	36	33	29	0	0
5	77	83	100	62	29	22	13	0
U6	33	36	46	83	15	25	0	0
U7	20	22	18	40	18	33	0	0
U8	22	25	20	22	40	40	0	17
9	0	0	13	14	13	0	100	59
10	0	0	0	0	0	0	59	100

GLIDING BIRD ATTRIBUTES (N = 152)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	0	0	0	0	0	0	0	0
4	0	100	92	56	40	36	32	38
5	0	92	100	67	49	33	30	35
U6	0	50	47	71	54	29	32	37
U7	0	44	41	47	45	37	27	31
U8	0	28	26	36	49	44	36	23
9	0	32	30	36	63	64	100	75
10	0	38	35	42	47	57	75	100

GEOMETRIC ATTRIBUTES (N = 110)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	100	67	43	33	10	0	0	0
4	67	100	71	53	35	0	0	0
5	43	71	100	60	43	11	0	0
U6	33	40	60	67	38	24	9	20
U7	21	27	37	56	36	25	14	12
U8	0	11	17	36	60	57	31	14
9	0	0	0	0	27	48	100	14
10	0	0	0	20	11	0	14	100

VESSEL SHAPE ATTRIBUTES (N = 109)

Upper Valley \ Lower Valley	3	4	5	C6-7	C8	08	9	10
3	100	75	59	15	9	0	8	0
4	75	100	82	31	9	0	8	0
5	59	82	100	57	9	0	1	0
U6	37	37	59	77	18	12	16	0
U7	44	44	53	53	33	11	15	0
U8	26	26	42	40	55	33	12	0
9	8	8	8	0	52	48	100	59
10	0	0	0	0	17	21	59	100

FIGURE 3. Similarity indices [Ns/(Na/2+Nb/2)] comparing the sequences of the upper (U) and lower valley (C = Callango, O = Ocucaje). The number of attributes (N) in the analyses of all or any one category of attributes helps in assessing the reliability of the indices and the weightings for the attribute categories; the feline-mythic motif obviously dominates. Contouring (lower right) emphasizes degree of asymmetry, in this case the greater similarities between upper valley vessel shapes in units 3 through 8.

that could have been presented do have bearing on this question, but the general results have upheld the claims made in the informal type of presentation of the original sequence. For this reason, only a few of the tables have been presented here.

What the use of the indices and their presentation in matrices has accomplished here is to point out weaknesses in the sequence more clearly than was apparent in the original publication. The method used here is different in that each trait is given the same weighting. The similarity between the results here and in the original publication is not so great; this situation can be explained fairly simply by noting that there was an inherent weighting in the original tabular presentation, given by the differing number of traits noted as associated with the different "themes" in that study.

While the values in the matrices do show certain important patterns, the complex interrelationships between the degrees of similarity shown between all unit pairs are even more clearly seen in a three-dimensional plotting of these indices, as shown in Fig. 4. The quantities by which similarity indices differ is not automatically translatable into Euclidean distances. Nevertheless, an attempt to construct a model was made, and it was found to be possible to create one in which the "distances" between all pairs of units could be plotted within 5 points of their similarity indices. Feline figures were noted earlier as entailing most traits and being represented in all the units, more than any other set of traits; therefore they were used for the model. Callango Phase 7 was combined with 6, as it had only 5 sherds. Constructing the model was possible only for the phases between 4 and 8, but did include all areal substyles. The reason for this limitation is that there were a

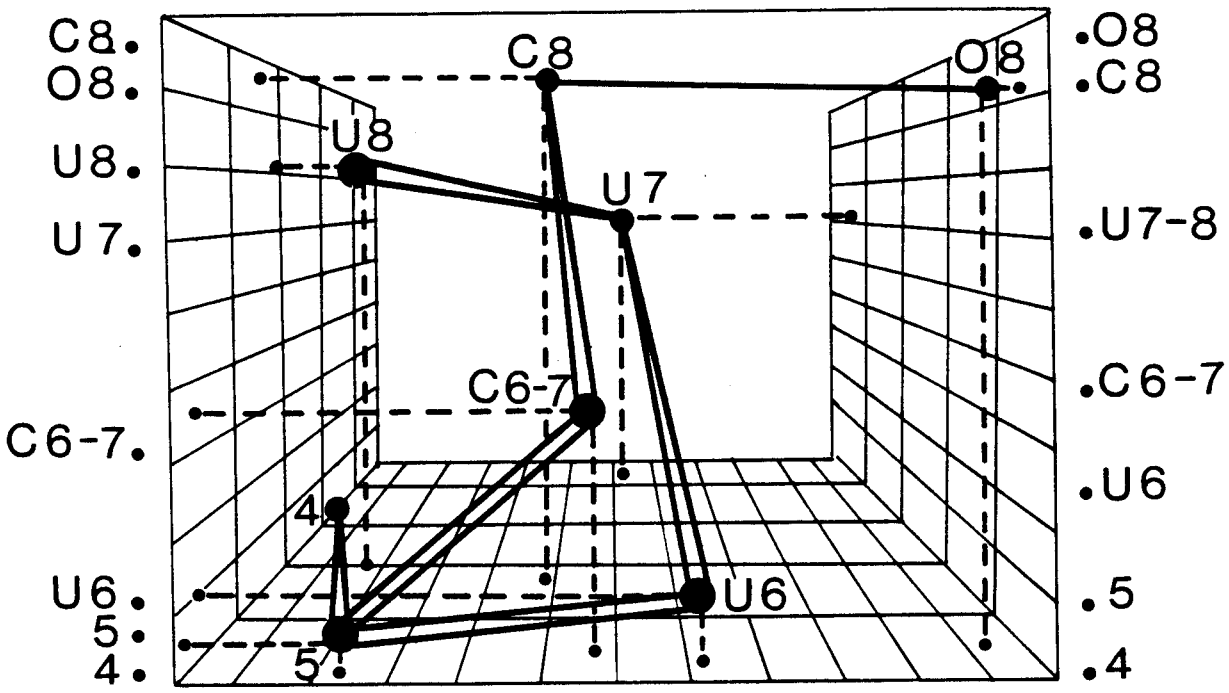


FIGURE 4. INVERSE SIMILARITY INDICES FOR OCUCAJE FELINE DESIGN DATA FROM MENZEL, ROWE, AND DAWSON 1964.

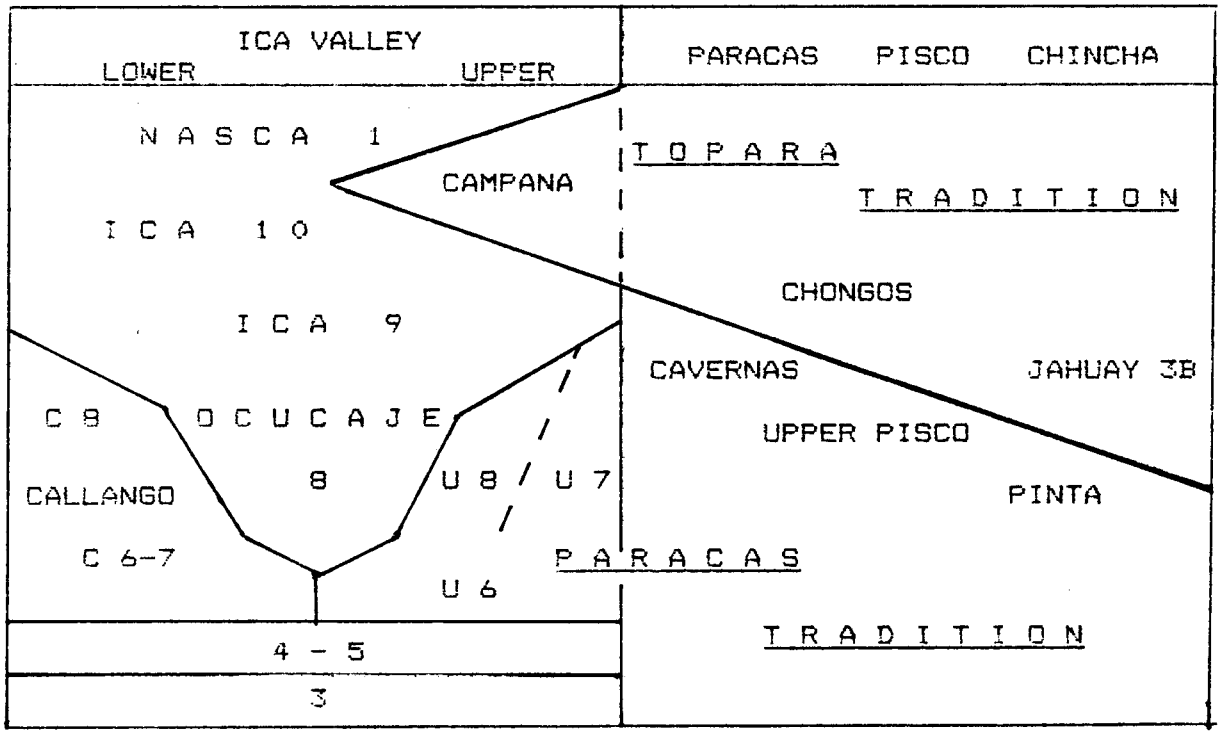


FIG. 5 REVISED CHRONOLOGICAL CHART FOR ICA, PISCO, AND CHINCHA

large number of traits for comparing Phase 3 with Phases 6 and later, but few for Phases 4 and 5 with the same later phases. At the other end, the innovations marking the phases after Phase 8 introduce distortions that simply do not permit this type of plotting.

Fig. 4 gives the placement of each proposed temporal and sub-areal variant identified in the Ocucaje report. Lines connect these points in the graph to show the temporal order which has been proposed, but it should be realized that each point was placed in space according to its similarities with each and every one of the other points. One sequence runs from Phase 4 through Callango 8, the other through Upper Valley 8, with Ocucaje 8 as the unit with a particularly large number of innovations.

In the manner of all seriations, the identification of the nature of the changes that create the series must be supplied in part by the types of variables used, as well as by external data. One of the intriguing and useful things about this plot (Fig. 4) is that if any temporal and sub-areal variability are represented, it must be possible to turn the model in such a way that, for example, the temporal axis will be vertical and the spatial axis horizontal. If it is impossible to find some orientation that will align the units in one plane so that the proposed temporal order is achieved, then that order is not upheld.

The model has been positioned in Fig. 4 in such a way that the best possible order of the phase units as given in the Ocucaje report is on the vertical plane. Presenting the 3-dimensional quality of the plot makes use of perspective viewing, but also distorts the distributions on the individual planes; therefore, the heights of the units above the base plane are given at the side of the 3-dimensional plot without any other dimensions shown.

The results show some quite interesting features. For example, the Upper Valley and Callango sequences, after diverging during Phase 6, do move off in separate directions, thus fitting the picture of areal variation. However, Callango 8 is pulled forward almost into the area occupied by the Upper Valley sequence on the horizontal plane. This situation fits the interpretation that the two are areally separate but, as might be expected of local developments with continuing ties, they do not continue to diverge; some degree of continual cross-influencing is suggested.

The same general type of situation occurs within each localized sequence. The distance between units in each sequence is roughly the same, indicating a reasonable amount of continuing change. But both create spiraling figures, indicating that there is a core of traits that are maintained throughout much of the sequence, so that the later units are all drawn toward their antecedent units. This type of change can be contrasted with another type of "good" seriation that entails few or no discontinuities and a good balance between traits shared and not shared by any two subsequent units or phases, but few cases of long persistences of traits. A good contrast to these patterns is shown by the Ocucaje 8 unit, which simply goes off by itself, increasingly further from the proposed earlier units. In fact, the "distances" between the Ocucaje 8 unit and the increasingly "older" ones does show this pattern.

The claim for conservatism in the Upper Valley developmental sequence is upheld by the fact that each subsequent unit in the sequence remains relatively closer to Phases 4 and 5 than do the Callango units, which are interpreted as being coeval and also developing from the same source.

The use of this 3-dimensional plot does fit to a fair degree the spatial and temporal interpretations of the sequence that were presented in the Ocucaje study. But there were difficulties: while the proposed temporal order can be attained, it was just barely possible to do so. If an attempt to move the 3 phases closer to each other by 8 units on the vertical plane, the Upper Valley 6 unit ends up in a lower position than the Phase 5 unit. Removing the Ocucaje 8 units, the obvious odd man out, does not appreciably improve the ability to manipulate the model to give a better arrangement in the proposed temporal order. There is only one way to do this and that is to place the Upper Valley Phases 7 and 8 at the same horizontal level; then the various phases appear at more evenly spaced intervals on the vertical scale. If one mentally tips Fig. 4 so that Upper Valley 7 and 8 are aligned horizontally, the spacing to the right of the plot shows the vertical spacing that results from this rotation.

An Alternate Sequence

To examine the results of what seemed to be a confusing attempt to cross-date some collections from Chincha, Pisco and Paracas, I tried to test the possibilities for alternative interpretations of the Ica data. Using the data available resulted in a limited number of possibilities, which not surprisingly are similar to those of the original study. Similarity indices were calculated for all pairs of units in the study, both the spatially and temporally diferentiated ones, based on counts of cases of shared and unique traits, that is, the number of "X's" denoting presence of a trait, when shared by each pair of units. The results seemed to be rather close to those of the original study. This fact should not be surprising, as the same type of implicit weighting of traits

and trait clusters results from larger numbers of traits defined for given "themes", such as the feline representation or the Oculate Being. The emphasis on details of design, as opposed to features of form or technology, is shown by the fact that over 400 of the total of 461 traits used were design elements.

The type of problem identified in the discussion of methodology was well illustrated by the results of using the similarity indices. To take an obvious case, the innovative Ocucaje 8 lot was found to be quite "distant" (i.e., with low similarity index) from the two other variants interpreted as coeval in the original study. However, it was not much further from the Upper Valley and Callango 6 or 7 units than from the other Phase 8 lots, and even from the earlier phases. This situation is exactly what was interpreted as conservatism especially in the upper valley sequence; however, it indicated a particular type of conservatism, in which a core of traits generic to the upper valley substyle were found among the Ocucaje 8 traits, rather than mainly traits of the kind that distinguished the different upper valley temporal phases.

This situation illustrates clearly the point made above, namely that stylistic difference need not be interpreted as temporal, and that it is continuities rather than discontinuities that result in clear cut seriations. As a result, the Ocucaje unit, recognized as very innovative, was temporally aligned with two units with which it did not share many traits, few more in fact, than it shared with other units. The authors were clearly aware of the problem, but did not attempt alternative interpretations.

In order to present what would be a fairly drastic extreme from the alignment given in the original study, the scheme shown in Fig. 5

was formulated. There was a conscious attempt not to horizontally align units any more than necessary, a distinct contrast from most chronological charts; this fits an assumption of normal lags in style diffusion.

The basic assumption required of the arrangement in Fig. 5 is that the innovations associated with the Ocucaje 8 substyle were introduced into Ica very abruptly, with no or very few earlier precedents. If it is interpreted as the force which resulted in the split of the Ica style into upper and lower valley substyles, the intrusion of the Ocucaje substyle makes a great deal of sense. An allied assumption is that the source of this intrusion was one or a set of areal substyles in the Paracas, Pisco, and Chincha areas to the north, and also that these northern substyles were rather different in style and fairly advanced technologically. The fact that there are access routes between the Ocucaje and Paracas areas that do not pass through the rest of the valley upholds this interpretation.

One of the major features of this particular scheme is that the Upper Valley Phases 7 and 8 are recombined, much as they were in Dawson's original seriation into 4 phases. Support for this combination comes from what can otherwise be interpreted as the conservatism of the Upper Valley substyle. Here, the traits associated with the Phase 8 unit which seemed closer to earlier units than might have been expected, and therefore suggested conservatism, are now interpreted as due to the simple fact that the Phase 8 unit represents the influence from the Ocucaje 8 style on the coeval style of the Upper Valley 7 units, rather than differences of dating. Such influence could also have reached the upper valley from Pisco or Chincha, since many of the same traits

occurred there; this interpretation fits well with the closer access of upper valley Ica with parts of Pisco and Chincha, routes over which other similarities between the northern outside sources and the upper valley area have been noted.

The rest of the sequence as presented here follows the original one fairly closely. Phases 4 and 5 have been combined, mainly as a reminder that they are based on few pots and, even though logical as separate stylistic units, their temporal distinctiveness remains to be shown. Since Callango 7 is represented by only 5 surface sherds, it was combined to arrive at the indices. Here also, the early influence of Ocucaje 8 on the Callango style may have resulted in an acceleration of normal style change so that there is no Callango 7 as a temporal phase.

An additional assumption fits the lack of Phase 9 and 10 ceramics in the upper valley; the Topara Style Tradition to the north is here cross-dated earlier than previously and is interpreted as swamping the upper valley with direct occupation during Phases 9 and 10. The fortified towns in middle Ica during Phase 9 would reflect these pressures. The Topara pottery of the period strongly influenced Ica 10, but showed little interest in Paracas Style decoration. Without this decoration, it is impossible to cross-date accurately, particularly as exact copying was not done. The alignment with Topara phases is also facilitated by the earlier dating of the Pinta style.

These various assumptions and interpretations also fit into a logical whole, as did the original overview. The main feature is the earlier placement of the spread of the Topara Tradition southwards through Chincha, Pisco, Paracas, and upper Ica. This dating fits an

interpretation that ties the innovations of style phase 8 to those of phase 10. If the obviously devastating effect of the Topara advance is dated earlier, it can be seen as exerting pressures on the people of Chincha, Pisco and Paracas, resulting in an actual intrusion into Ica. Phase 9 can be seen as a breathing period before the onslaught, during which there was little further direct contact. Finally the direct influence of the Topara Tradition, now no longer buffered by intervening Paracas Tradition substyles, results in a spate of innovations especially in ceramic technology. What graphic style influences it may have had are obscured by the lack of representational decoration in the Topara Tradition. But it can be assumed that the Oculate Being was introduced quite early into the Ica sequence from the northern variants of the Paracas styles, if not from the Topara Tradition itself.

This concluding section has largely concerned itself with describing an alternate temporal sequence. That, however, is exactly what the original study was aimed at and what derives from the various discussions and reviews of data in the body of this paper. If any truly concluding--but not conclusive--statements can be made, they would include the recognition that the course of developments in the Ica valley during the Early Horizon are very complicated and not easily amenable to the application of normal archaeological approaches short of a massive attack on a whole series of field projects in all parts of the Ica, Nasca, Pisco, and Chincha valleys and especially Paracas and the Tablazo de Ica.

References

Engel, Frederic
1956 Early Sites in the Pisco Valley of Peru: Tambo Colorado. American Antiquity, vol. 23, pp. 54-68.

Menzel, Dorothy, John H. Rowe and Lawrence E. Dawson
1964 The Paracas Pottery of Ica; A Study in Style and Time. University of California Publications in American Archaeology and Ethnology, vol. 50, Berkeley.

Rowe, John H.
1958 La seriación cronológica de la cerámica de Paracas elaborada por Lawrence E. Dawson. Revista del Museo Regional de Ica, año IX, no. 10, pp. 9-21. Ica.

Tello, Julio C.
1959 Paracas, Primera Parte. Lima.

Wallace, Dwight T.
1962 Cerrillos, an Early Paracas Site in Ica, Peru. American Antiquity, vol. 27, pp. 303-314. Salt Lake City.

1971 Sitios Arqueológicos del Perú; Valles de Chincha y de Pisco. Arqueológicas, No. 13. Lima.

Impressions in Metal: Reconstructing Burial Context at Loma Negra, Peru

Anne-Louise Schaffer
New York City

Most Pre-Columbian objects in museums and collections have no archaeological context attached to them, having arrived at their resting places through the art market. Whereas they are still valuable to art historians for stylistic and iconographic studies, their value to archaeologists is far less, for only when the burial context of these pieces are known can a good overall picture of an ancient society's social and economic structure be reconstructed.

In certain rare instances, information regarding burial context for non-provenienced objects can be gleaned from a close study of the objects themselves. Such is the case with metal objects, particularly silver and copper ones. The nature of these metals is such that, as they corrode, the impressions of objects in contact with them are left on the corrosion products, even if those neighboring objects disintegrate over the ensuing years.

The large number of metal objects from Loma Negra, a Moche site in the Department of Piura in far northern Peru, offers a rare opportunity to apply this methodology in an effort to formulate a better picture of their original burial context. These objects consist primarily of face and body ornaments such as earplugs, nose ornaments, necklace beads, headdress ornaments, and masks. Most of the rest decorated staffs and probably walls, doorways, thrones, daises, litters, and possibly shields. The metals used are gold, silver, copper, gilded copper, and silvered copper. Briefly, what is known of the provenience of these objects is as follows.[1]

The Loma Negra Find

The site of Loma Negra is on a low sand hill of the same name (but also called Pampa de los Ovejeros) in the semi-desert region of the Piura River Valley. It is located about 3 km southeast of Cerro Vicús and occupies an area of at least 50 m by 300 m. The site is said to have been discovered by two huaqueros in early January of 1969, and soon thereafter hundreds of them are said to have worked simultaneously in broad daylight at digging out the objects buried beneath the sandy soil. The surface of the hillside shows no apparent signs of a cemetery beneath, nor is there in the vicinity evidence of ancient habitation, subsistence, or monumental architecture that can be directly linked to the site.

Several hundred shaft tombs were uncovered here, and many of these were 10 to 12 m in depth. Both the testimonies of huaqueros here and the findings of scientific excavators working at Moche sites elsewhere agree that the deeper the tomb shaft and the larger the chamber at its base, the richer the tomb contents and, thus, the more important is presumed to be the individual buried therein.

The bulk of the metal objects from these tombs was brought out by huaqueros and marketed within a relatively short span of time, and at last count these numbered over 700. This makes the cemetery of Loma Negra one of the most important ones in Peru and the group of objects, which have a coherent style and iconography, one of the most comprehensive mortuary collections.

In contrast to the richness of the metal finds, the ceramic finds from Loma Negra number only a few, and these are not indisputably from the site. These all have the Moche I-II stirrup-spout shape, but a

definitive placement in standard Moche chronology is still uncertain. This lack of ceramic material could be due either to its actual scarcity in the tombs or to its destruction by huaqueros as a result of either its poor quality or its lesser importance in the face of so many metal objects.

Equally scarce at the site is evidence of skeletal material. Two possibilities have been suggested: (1) that preservation here is not as complete as in the coastal areas due to somewhat moister conditions (which were not, however, so moist as to destroy the copper or silver), resulting in the disintegration of the bodies; or (2) that the burials are secondary or cremated (which is the pattern in Ecuador and Colombia just to the north), resulting in very few remains to begin with. This question will have to await an answer in future controlled excavations in the area.

Having reviewed the little that is known of the context in which these Loma Negra metal objects were found, let us now turn for more information to the objects themselves and the stories that their surfaces reveal.

Missing Objects: Textiles, Feathered Objects, and Beaded Objects

The first thing one notices about the copper, gilded copper, and silvered copper objects from Loma Negra is the blue-green layer of corrosion products that covers all of their surfaces.[2] The next thing one notices is the frequency of textile impressions on these surfaces. An estimated 95% of these "copper" objects show textile impressions of some sort, though in most cases these textiles have now disintegrated. This high level of frequency dispels any likelihood that textiles were just casually thrown in on top of metal objects or vice versa. On the

contrary, instead of being an accident, this juxtaposition of the two types of objects appears to have been a common practice deliberately carried out. As the textile remains appear on all sides of an object, it seems that these objects were either wrapped in cloth or that cloth was put between them, possibly to protect them from neighboring objects.[3]

These textile remains vary greatly in their state of preservation. In a few instances actual fragments still remain stuck to the "copper" object. In the remaining majority either enough remains of the threads to distinguish them clearly as textile elements (see for example Lapiner 1976:149) or regularly spaced knobs of extra-bright blue-green residue indicate the last vestiges of a textile (ibid.:156, Fig. 379, the scorpion in the center of the back row).

Except in the latter cases it is possible to distinguish the spin and weave of these textile remains. All but one of the examples examined utilize threads of S-spun single-plied cotton. The exception is a warp- or weft-faced textile found on the pair of objects in Figure 2; the fine, tightly packed warp or weft threads are single and S-spun, but the threads going at right angles to these consist of two threads Z-plied together. This textile may originally have been tapestry weave, but no color remains on the threads and the fine single threads are too far gone to discern slits or doubling-back, either occurrence of which would offer proof.

The bulk of the textiles are 1:1 plain weave with the weave varying widely in evenness and tightness. Less prevalent, but not uncommon, is basket weave (2:2 plain weave). Asymmetrical plain weaves are rare; there are only a few examples of 1:2 or 2:1 and only one example of a

3:2 or 2:3. Most interesting is a 3:2 twill, found on both sides of a fragmentary headdress ornament of once-large size. Not only is the presence of twill unusual in this sampling, but the fabric is woven with paired warps and wefts as well. Also interesting is a tiny fragment of what looks like supplemental weft used with paired ground warps and wefts, but this fragment is so small the identification should be held in question.

Textiles are not the only now-missing objects to have left their impressions on the Loma Negra objects, though they are the most numerous. Feather impressions are found on an estimated 5%. This relative infrequency implies that feather objects were rarer in the burials (and presumably in real life) than were textiles. This corresponds well with the relative frequency of these two kinds of objects in scientifically excavated Moche burials at other sites.

No actual feathers have been preserved on these objects, but clear and not-so-clear impressions remain on their surfaces. These impressions show two different kinds of feather patterning. The first consists of many small feathers in an overall arrangement all facing more or less in the same direction (see Lapiner 1976:156, Fig. 377). The implication is that small feathers were sewn in many rows onto a base fabric to make an especially decorative textile. This technique is the more common of the two kinds of patterning. The second--much rarer--consists of a few long feathers again facing all in the same direction but in only one clearly discernible row. Whereas these long feathers could again have been sewn onto a base fabric to cover part of the surface of the textile, they could also have been sewn onto a band to form, say, a headdress ornament. The one example that shows the attachment point of

a row of such feathers (Figure 6) is not clear enough to indicate what the resulting object looked like.

Fabrics with feathers sewn onto them could have been used, as were plain fabrics, to wrap the metal objects or to pad them in some way. However, the preciousness of feather objects in general would seem to make this use rather inappropriate, though not impossible. Most likely the juxtaposition of feathers and metal was more accidental than purposeful. It should be noted, though, that the three examples of long feathers all occur on the backs of gold or silver nose ornaments, which hardly seems coincidental.

The rarest kind of missing object to have left traces of its existence behind on the metal surfaces is that of beaded objects. Only three Loma Negra objects have beads stuck to their surfaces. This roughly .3% frequency would seem to reflect an extreme rarity of beaded objects in general in Moche burials, but such is not the case (see Summary below); they apparently did not usually come into contact with metal. The three objects in question are all large, elaborate discs.[4] As the patinas on two of these discs match, and as the beads stuck to them are identical in size and shape, it is likely that these two were buried together in close proximity to one another and in contact with some beaded object or group of matching beaded objects.

The existing beads are of white and pink shell and turquoise stone. On one of the discs (Figure 1) a good number of these beads are still stuck together in clumps in adjacent rows: seven rows on the front and six on the back. Fragments of string still exist in several places, including through the centers of many of the beads; these strings all consist of two thin threads of cotton Z-plied together for greater

strength. The existing rows of beads form diagonals across the front and back of the disk, leading to the speculation that either one beaded object (perhaps a wide necklace or collar) was draped diagonally around the disc on both sides or that two similar ones were in contact with it both above and below. To my knowledge, this pattern has never been encountered before in a Moche burial. Without more evidence it would be impossible to say whether this juxtaposition of beaded and metal objects was a deliberate and meaningful one or merely an accidental one.

Relationships between Metal Objects: Proximity, Direction, and Stacking

One of the main features of the Loma Negra group of objects is its seriality; that is, a large percentage of the objects come in matched pairs or series of identical objects (see for example Lapiner 1976: Figs. 369, 376, 378, 379 and Disselhoff 1972:Abb. 1, 2, 20, 22). Objects within each pair or series usually show identical color and texture on their surfaces. While this is most evident in the case of "copper" objects (Lapiner 1976:loc. cit.), it is also true of gold and silver ones. This similarity of patina amongst closely related objects makes sense, as they were probably displayed, worn, or used together originally and thus buried together at the same time. When the patinas on the front differ slightly from those on the back, it can be safely assumed that they were all laid down facing in the same direction--either face up or face down--and in close proximity to one another. As most of the "copper" surfaces show textile impressions, this implies that series of identical objects were wrapped up together in a cloth or laid down together, perhaps side-by-side, between layers of cloth.

Three special cases of this situation can be singled out. The first involves a pair of gold and silver condor earplugs published in

Lapiner (1976:159, Fig. 389). These exhibited identical patinas before cleaning, implying close proximity and same direction. As earplugs, when encountered, are usually found in male burials flanking the head, indicating that the deceased was buried wearing them,[5] it is possible that this pair of earplugs was also originally in situ on the corpse.

Another special case involves a series of seven small crescent ornaments.[6] Usually crescent ornaments are unique--that is, not one of a pair or series--and usually they are much larger. All but two of these small serial ones have remains of string in their attachment hole, whereas normally with the larger ones there is no trace of string at all. A likely explanation for this is that these small crescent ornaments were still attached to their base object (a fabric?) when buried, whereas the larger unique ones were taken off their base object (a necklace?) prior to burial.

The third special case involves a pair of three-dimensional monster heads (Figure 2). The sides illustrated in the drawing show the remains of a warp- or weft-faced textile, whereas the sides not illustrated show those of a balanced plain weave textile. Thus, the two heads were buried resting on opposite sides. As I have reason to believe that these heads were used to decorate the ends of a litter pole, it is possible that they were buried intact with the pole. However, though litter sections from the Chimú culture have been found buried, I know of none from the Moche culture. More likely such metal decorations were removed from their base objects prior to burial, particularly if the latter were large in size.

The stacking of metal objects on top of each other with nothing in between is another relationship that can be discerned from the impres-

sions on the surfaces of these objects. In some cases this appears to be accidental, as in cases involving two dissimilar types of objects. For example, the back of the disc in Figure 1 has stuck to it a small tumi-shaped piece of metal. The smaller piece seems to be intact--that is, not broken off anything else--but nothing else quite like it exists in the Loma Negra corpus. How it came to be buried next to the disc and the beaded object(s) is a mystery.

Another case of seemingly accidental stacking of metal-on-metal is seen on the front surface of an elaborate silver and gold nose ornament (Figure 3).[7] An object with a right-angled corner and at least three rows of paired elements has left an impression on the silver surface. The paired elements are clearly the markings left by the wires that hold dangles to the front side of an object. There are three nearly identical gold objects still extant which could have made this impression. Each is a roughly rectangular sheet of gold decorated with five rows of six gold dangles each; their use is unknown. If one of these did make the impression in question, its back surface would have been resting on the front surface of the nose ornament. Though this match looks likely, it can be certified only by bringing the objects physically together and seeing if all of the elements coincide. In any case, it does not seem as if the juxtaposition of these two objects has any real significance.

In contrast, the stacking of <u>similar</u> objects on top of each other would seem to indicate a deliberate attempt to keep together objects that were probably displayed, worn, or used together before burial. These could have belonged to either an individual, family, clan, or cult. Huaqueros did report a case of such stacking which involved two sets of kneeling warrior figures (see Disselhoff 1972:Abb. 1, 2). There

are eight figures in all: six large ones and two small. It was reported that these were found layered together like sandwiches, piled upon one another as in a warehouse (op. cit.:46).[8] The similar surface texture and color of these figures bears out this report, though in this case textiles must have separated the figures, as their remains are on both sides of each piece.

Many of the large silver and gold crescent-shaped nose ornaments supply direct, rather than heresay, evidence for deliberate stacking of similar objects. These nose ornaments are slightly convex and made of very thin metal. This curvature would normally limit the way these objects were stacked--that is, all facing up or all down--but the metal was more pliant originally, making it possible for a piece to be "popped" into its opposite shape, as if it were being turned inside out. This, indeed, occured in one instance (see the third example below and Figure 6). Another peculiarity of these nose ornaments is that most of their septum prongs show no bends or wrinkles. Considering how thin the metal is, this would seem to indicate that they were never worn; possibly they were made exclusively for show and/or burial.[9] The rather frequent incidence of stacking, particularly amongst the plain nose ornaments, lends some credibility to this theory.

Four existing nose ornaments (two silver, two gold) bear the imprint of another nose ornament on one of their surfaces, but no extant piece seems to match up to these imprints. There are three cases, though, where two existing nose ornaments do have matching imprints, indicating that they were buried in direct contact with each other. The first (Figure 4) involves a plain silver nose ornament and a silver one

with an attached gold rim decorated with 10 repoussé snails (see Lapiner 1976:161, Fig. 392). The front of the plain nose ornament bears the imprint of a rim which seems to match up with that on the snail nose ornament. But, as with the pieces in Figure 3, a sure identification can only be made if and when the two objects are physically brought together.

The second example of direct stacking involves three plain, square-pointed nose ornaments (Figure 5), two of which are silver and still extant. The corrosion products on the back of 1978.412.244 match up with those on the front of 1978.412.243, indicating that they were stacked in the same direction and with 1978.412.244 on top. The imprint on the front of 1978.412.244, which unfortunately does not match up with any existing piece, gives evidence that there was a third such nose ornament on top of it.

The third and last example of the stacking of nose ornaments is the most complicated and interesting (Figure 6). The distinctive and colorful corrosion products present on the fronts of the two extant silver nose ornaments match, indicating that one was placed face down in the burial (in the diagram Cat. No. 92 is arbitrarily indicated as facing downwards). To rest comfortably this way and be in contact at all points of their surfaces, one of them would have had to have been "popped" as described above. The back of Cat. No. 90 bears clear remains of a row of long feathers, possibly attached to a band; the feathers have now degenerated to a purple and green mass. As was mentioned previously, it is unclear to what type of object the feathers were originally attached. The back of Cat. No. 92--i.e., its "top"--bears the imprint of another object whose identification is not positive but which could have been another nose ornament. Thus, with these two objects alone a series of

four objects, two now missing, can be reconstructed.

A few crescent ornaments bear impressions on their lower--i.e., crescentic--halves which indicate stacking similar to that of the nose ornaments just described (see Lapiner 1976:148, Fig. 347). Stacking them would be easy to do, since they are flat except for the very slight repoussé bumps in their top halves. These instances of stacking occur on the normal-sized, unique crescent ornaments rather than on the small serial ones. As was mentioned previously, since strings almost never remain in their attachment holes, they seem to have been removed from their base objects (most likely necklaces) prior to burial; some of them also seem to have been stacked on top of each other. In no case, though, can any of these impressions be matched up with extant objects. This is mostly because the corrosion products of copper are much coarser than those of silver, making positive identification through matching details impossible. The impressions on crescent ornaments are also not as numerous as those on nose ornaments, this lower frequency possibly indicating that the practice of stacking was not as widespread amongst them.

Controlled Excavations of Moche Burials

Having seen the main types of context that can be gleaned from a close study of the surfaces of the Loma Negra metal objects, let us now compare this information to what is known about metal objects found in controlled and published excavations of Moche burials.[10] The following is a synopsis of general Moche burial practices on the coast synthesized from data spanning 76 years: from the first excavations of Max Uhle in the Moche Valley (1899-1905) to the more recent ones of Christopher Donnan and Carol Mackey also in the Moche Valley (1969-1975).

The Moche usually buried their dead in rectangular shaft graves;

the richer the grave, the deeper it tended to be. Rich graves also tended to have adobe-lined tomb chambers and to have a cane coffin for the body of the important deceased. This cane coffin seems to have been lowered into the deep shaft by means of ropes.[11] Grave goods--especially pottery--were heaped up around the body and coffin in a seemingly random way.[12] The amount of these goods tended to be higher for adult males. In a particularly rich grave subsidiary human burials and/or sacrificial llama burials could be placed outside or inside the coffin.

The body of the dead person was usually laid out extended on its back (see Strong and Evans 1952:Pl. XXII). The head most often faced south, but the direction depended to a great extent on the site. Textiles were used to wrap the coffin, body, and head, in the latter case often serving to keep an inverted gourd bowl or metal disk or mask in place over the face of the deceased. Symmetrical plain weave fabrics were the most common textiles, and these were used for the inner wrappings; stronger twill weave fabrics were less common and used for wrapping the coffin or cane-stiffened bundle. Spun yarns might also be used to wrap the hands (Ubbelohde-Doering 1966:76-77). Feathered objects--especially fans and fan-like plumes of feathers--were only rarely put into the grave. Necklaces and wristlets of beads were sometimes put around the neck and wrists of the deceased. Occasionally a wooden staff, often having attached metal parts such as sheathing or a point, was interred also, lying to one side of the body (see Donnan and Mackey 1978:154-155 and Strong and Evans 1952:153, Pl. XXI).

When metal objects were placed in burials, they were most often of copper and rarely of gold or silver. They were usually placed in the mouth, in the hands, near the feet, on the face, or near the head. Ob-

jects in the mouth and near the four extremities were usually amorphous lumps of metal or deformed objects such as folded sheets of metal or broken or bent functional implements (e.g., chisels or needles). Those in the mouth were further wrapped in a textile or a wad of unspun cotton. Undeformed objects were put into graves less frequently and tended to be put near the head and on the face; these were usually headdress ornaments, face masks (crude and otherwise), and earplugs. Earplugs were worn by their male owners to their graves. Occasionally a tweezer or bell was put near the head or hand. Other metal items put into burials ranged from clubs and rattles to small discs for decorating a helmet to soles of sandals.

Summary

How well does the information gleaned from the Loma Negra objects compare with the above burial evidence? The direct association of textiles with metal and the frequency of this occurrence are well documented in the literature, particularly in Donnan and Mackey (1978).[13] The S-spin of the threads and the predominance of symmetrical plain weaves is likewise consistent with known excavated examples.[14] The rarity of twill weave in the Loma Negra sample is logical, considering that twill was usually reserved for the outer wrappings in a burial and would very infrequently come into contact with the metal objects inside it.

Feather objects are much less frequent in Moche burials than are textiles. As they were precious objects put near the body of the deceased, though, there was a chance that they would come into contact with metal objects put there also, but I know of none so far that have been used to wrap or pad metal pieces. The types of feather objects reconstructed from impressions on the Loma Negra metal pieces correspond

to some degree to those found. Excavated objects covered all over with small feathers include a bird headdress and a cone (Strong and Evans 1952:159, 166, Pl. XXVc, d) and a blue feathered cape (Ubbelohde-Doering 1966:76-77). Excavated objects made of long feathers include two yellow feather plumes mounted on copper handles and a green parrot feather fan (Strong and Evans 1952:166). I know of no excavated Moche object, however, that has long feathers in a single row.

Shell and stone beaded necklaces and wristlets are sometimes found in place on bodies in Moche burials.[15] More often, though, large numbers of beads are found in piles near the neck and wrists instead.[16]

The scant evidence for beads in the Loma Negra group of objects implies that metal objects did not normally come into direct contact with beaded objects in burials, even though both would normally have been put on the inside of a coffin or bundle near the body.

In any event, as was stated previously, the Loma Negra discs provide the only examples of this juxtaposition in a Moche burial of which I know. With regard to the type of beaded object(s) reconstructible from one of these discs, multi-strand necklaces are known from burials (witness the twelve-strand necklace in Strong and Evans 1952:142), whereas beaded collars such as those of the later Chimú culture are not.

The seriality of the Loma Negra metal pieces is paralleled by only four cases from controlled excavations. A set of 34 copper bells in the shape of human heads was found by Max Uhle in 1899 at Moche, Site F, at the foot of the main terrace of Huaca de la Luna (Kroeber 1944:130, 150, Pl. 47A, B, C). It is unknown whether these came from a tomb or a cache, however. Uhle also found a set of matched gold and turquoise

jewelry at Site A, on the south platform of Huaca del Sol, which included three matching hollow figurines (and the head of a fourth) that were meant to be strung together as a necklace (Menzel 1977:38-39, Figs. 87-88; Kroeber 1944:132-133, Pl. 44). This was not a tomb burial but a small offering cache, and very likely this jewelry all belonged to one individual. Ubbelohde-Doering (1966:81) found three large copper rattles with wedge-shaped handles on the right shoulder of a man (burial a) in Chamber Grave M XII at Pacatnamú. And in coffin h of Grave E I at Huaca 31 he found four rectangular copper sheets mounted on a reed backing, which he interpreted as a shield since the object lay over the left hand (ibid.:30).

Two other parallels involving objects in series do not come from scientific excavations. The first is a cache of copper rattles (8) and goblets (21), 26 of which were acquired by the American Museum of Natural History in 1961[17] (see Donnan 1976:125-127, Fig. 113, Pl. 12). This set is said to have come from a tomb, but its provenience is unknown. The objects were undoubtedly used together in some ceremony, perhaps by a cult or sect, and then buried together. The second parallel is a set of nine large gold necklace beads decorated with frogs and snakes in repoussé (Jones 1979:60-61), which has no provenience either but clearly belonged to one individual.

From this small sample of six occurrences, it seems that objects in series either (1) formed one larger object (such as a necklace) that belonged to a single individual or (2) formed a set of objects (such as rattles) that belonged to one individual or a group of several individuals. In all cases these objects were worn or held by people; this is in direct contrast to most of the Loma Negra serial objects (see Final

Observations below). Except for the two examples given by Ubbelohde-Doering, none of these six include evidence of the details of their burial, such as how close the pieces were to each other and in what direction they were facing. In addition, none of the six say whether there was evidence of textiles below, above, around, or on the metal pieces.

The deliberate stacking of similar metal objects on each other is documented in only one case--in Donnan's excavation of Burial 17 at the Pyramids of Moche in 1972 (Donnan and Mackey 1978:180 and 182, Fig. A). Three copper discs were found covering the face of the deceased. The upper one "had traces of red pigment and was covered with textile impressions. ... On the lower side of the bottom disc were traces of red pigment, textile fragments of plain-weave (with S-twist yarns), and an unwoven felted textile" (ibid.:180). Since textile impressions were on both sides of this "sandwich," it is possible that these three discs were wrapped in one cloth before being laid on the face. This being the only instance of stacking reported from controlled excavations, there is obviously no case of nose ornaments being found stacked together as they were at Loma Negra.

It should be noted that deformed bits of copper normally found in coastal Moche burials are lacking from the Loma Negra group of objects. This is to be expected, though, since the huaqueros would not have bothered to have saved them. Most of the Loma Negra objects are in reasonably good condition considering the brittle nature of copper, and none show deliberate bending, folding, or other deformation.

Final Observations

We have seen that the burial practices of the Moche of the Loma Negra area did not vary drastically from those of the coastal Moche,

though some differences did indeed exist. The nature of the metal objects found in the burials of these two areas, however, do differ significantly in two ways.

First, over half of the 700-plus objects from Loma Negra are elaborate personal adornments of the sort that have been found in controlled excavations but not in such large numbers. The high concentration of so much metal in such a small area is one of the unusual aspects of the Loma Negra site.[18] As with the site of Batan Grande and the entire Lambayeque Valley, metal seems to have been the favored mortuary furniture. It is possible that metalwork was made in these areas largely for burial, just as textiles seem to have been in the Paracas culture and fine pottery amongst the coastal Moche.[19] That many of the nose ornaments show no signs of wear around the septum prongs lends some credence to this theory. These areas were obviously very rich in metal, and the cultures occupying them chose to put a sizeable percentage of it out of circulation through burial.

The remaining number of Loma Negra metal objects are discs and two- and three-dimensional animal, human, and deity figures. Nothing like these have been found before in Moche excavations or, indeed, from the coast at all. As they are generally of medium size and made to be fastened onto a flat vertical surface, they most likely decorated litters, daises, thrones, doorways, or walls. Warriors, trophy-head taking, and predatory animals dominate the subject matter of these pieces (as well as the items of personal adornment). These facts seem to point to a warrior society, or perhaps cult, with furniture or architecture decorated with rows of identical figures. For some reason these were stripped from their bases and buried in a cemetery populated partially or

wholly by a select group of high-ranking individuals.[20] Whether this was done to save them in the face of some catastrophic event, to mark the natural demise of the society or cult, or to honor the death of an important member of this society or cult is open to speculation. We should be thankful, though, for whatever caused it, for it allowed us many centuries later to admire the workmanship of their culture and to puzzle over its many mysteries.

Footnotes

1. The data given in the following section comes primarily from Alan Lapiner, who visited the site in 1969, and James M. Vreeland, in a letter to the author written in 1981.

2. For photographs of Loma Negra objects in color see Lapiner (1976: 134, 137, 149-154, 156, 158-161) and Disselhoff (1972:47). These two sources, plus Jones (1979), are the three best published references for photographs of and information on these objects.

3. Disselhoff (1972:46, 48) also mentions that textile impressions often exist on metal objects found at Vicús, leading him to the conclusion that they were either wrapped in cloth or were laid on top of the clothing of the deceased.

4. A "disc" is a flat circular piece of sheet metal ranging in diameter from 26.5 to 29.0 cm with one hole at top center for attachment and usually some kind of decoration on the front side. The use for these discs, which are relatively rare, is unknown, but it is possible that they were used as heraldic devices on thrones, daises, or walls. They are known only from the Vicús area.

5. See Donnan (1976:71, Pl. 6a) and Ubbelohde-Doering (1966:81, 93) for two particularly clear examples of this. Donnan and Mackey (1978:132-133, 180-181) describe two other burials showing the same situation, and Jones (1979:59-60) mentions several other pairs found in situ.

6. A "crescent ornament" is a flat piece of sheet metal with a cut-out figure or figures on the upper half and a crescent shape on the lower half. It has one hole for attachment at top center and ranges from 10.0 to 12.5 cm in width. The exact use for these ornaments is not known, but they were probably used as the central element of a necklace. Like discs, they are known only from the Vicús area.

7. This nose ornament is the most often illustrated object from Loma Negra. The impression of the rectangular element is seen clearly

in photographs, both black-and-white and color. See any of the following references: Boltin and Newton (1978:202-203), Donnan (1978:16), Jones (1979:100), Lapiner (1976:160, Fig. 390).

8. "...die Figuren wie Sandwiches aneinanderhaftend gefunden wurden ...als Depot aufeinandergestapelt..."

9. Jones (1979:75, 78) also suggests that the large Moche fox headdresses may never have been meant to be worn, but may have been "made for some specific purpose, such as burial, where great size could be impressive but would not render the object unusable."

10. The statements made in this section are based on data from the following references for the sites indicated:

    Menzel 1977 and Kroeber 1944 (for Max Uhle's excavations at Moche and Cerro Blanco in the Moche Valley from 1899 to 1905);

    Ubbelohde-Doering 1966 (for his excavations at Pacatnamú in the Jequetepeque Valley from 1937-1939, 1953-1954, and 1962-1963);

    Strong and Evans 1952 (for their excavations in the central part of the Virú Valley in 1946);

    Donnan 1973 (for his excavations in the Santa Valley from 1965 to 1967); and

    Donnan and Mackey 1978 (for their excavations at the Pyramids of Moche and nearby sites in the Moche Valley from 1969 to 1975).

    Jones (1979) was also consulted for an overall view of metal found in these excavations and Donnan (1976) for scattered bits of general information. Not included in this section is the newest (unpublished) data from Donnan's excavations at Chotuna in the Lambayeque Valley from 1979 to 1981 and at Pacatnamú from 1983 to the present.

11. This has been depicted by the Moche themselves in fineline drawing on several ceramic pots illustrating a burial scene (see Donnan and McClelland 1979:Fig. 13 and elsewhere).

12. See Ubbelohde-Doering (1966:62, 64, 65) and Strong and Evans (1952: Pls. XIX-XXI) for good clear photographs of this.

13. "The copper objects provide further evidence that a variety of perishable materials was originally placed in some of the Moche IV graves. Many of the copper objects have textile fragments adhering to them or exhibit textile impressions on their corroded surfaces, suggesting that they were buried in direct contact with textile materials" (Donnan and Mackey 1978:209).

14. See Kroeber (1944:127) for the site of Moche, Disselhoff (1971: 51-53) for Vicús, and Donnan (1973:108-111) for the Santa Valley.

15. See for example the two-strand necklace in Donnan and Mackey (1978:

180), the wristlets and necklace also in Donnan and Mackey (1978: 132-133), the multi-strand necklace in Ubbelohde-Doering (1966:81), and the two-strand necklace in Strong and Evans (1952:147).

16. See Kroeber (1944:125, 134, 136), Donnan and Mackey (1978:66-68, 150-151), and Strong and Evans (1952:156, 166).

17. The accession numbers are 41.2/5409 through 41.2/5431.

18. On the other hand, "This wealth of material may, in part, be an accident of archaeological preservation...[since] the graves at Vicús were deeply buried and had escaped detection for many years..." (Jones 1979:91), whereas those on the coast had been plundered for centuries, with the result that metal objects, when found, were usually melted down and thus destroyed.

19. James M. Vreeland in a letter to the author written in 1981.

20. Donnan and Mackey (1978:208) excavated an area between the two pyramids at Moche which seemed to be reserved for the burials of high-status adult males, many of whom had large copper disc headdresses of a type know from Moche pottery designs. They suggest that these males "shared an affiliation to a specific Moche ceremony."

References

Boltin, Lee (photographs), and Douglas Newton (text)
1978 The Nelson A. Rockefeller Collection: Masterpieces of Primitive Art. Alfred A. Knopf, New York.

Disselhoff, Hans-Dietrich
1971 Vicús: eine neu entdeckte altperuanische Kultur. Monumenta Americana, VII. Gebr. Mann, Berlin.

1972 Metallschmuck aus der Loma Negra, Vicús (Nord-Peru). Antike Welt 3(2):43-53.

Donnan, Christopher B.
1973 Moche Occupation of the Santa Valley, Peru. University of California Publications in Anthropology, Volume 8.

1976 Moche Art and Iconography. UCLA Latin American Studies, Volume 33.

1978 Moche Art of Peru: Pre-Columbian Symbolic Communication. Museum of Cultural History, University of California, Los Angeles.

Donnan, Christopher B., and Carol J. Mackey
1978 Ancient burial patterns of the Moche Valley, Peru. University of Texas, Austin & London.

Donnan, Christopher B., and Donna McClelland
1979 The Burial Theme in Moche Iconography. Studies in Pre-Columbian Art & Archaeology, Number 21.

Jones, Julie
1979 Mochica Works of Art in Metal: A Review. In Pre-Columbian Metallurgy of South America, edited by Elizabeth P. Benson, pp. 53-104. Dumbarton Oaks Research Library and Collections, Trustees for Harvard University, Washington.

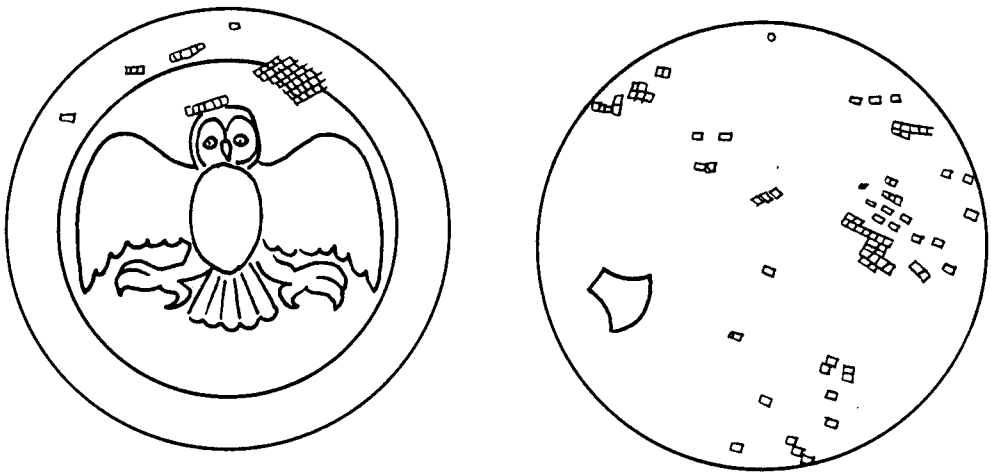
Kroeber, A. L.
1944 Peruvian Archeology in 1942. Viking Fund Publications in Anthropology, Number 4.

Lapiner, Alan
1976 Pre-Columbian Art of South America. Harry N. Abrams, New York.

Menzel, Dorothy
1977 The Archaeology of Ancient Peru and the Work of Max Uhle. R. H. Lowie Museum of Anthropology, University of California, Berkeley.

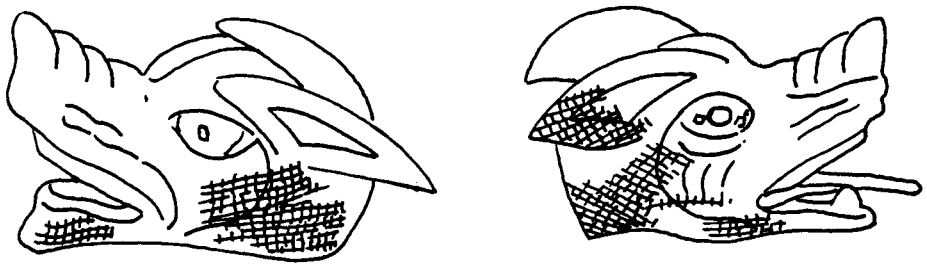
Strong, William Duncan, and Clifford Evans, Jr.
1952 Cultural Stratigraphy in the Virú Valley, Northern Peru: The Formative and Florescent Epochs. Columbia Studies in Archeology and Ethnology, Volume IV.

Ubbelohde-Doering, Heinrich
1966 On the Royal Highways of the Inca: Archaeological Treasures of Ancient Peru. Frederick A. Praeger, New York & Washington.



Front view Back view

Figure 1. Gold and silver disc with frontal owl. Diam. 26.4 cm. Arnold I. Goldberg Collection, New York City, Cat. No. 121.



1982.392.7 1982.392.6

Figure 2. Profile views of a pair of three-dimensional copper monster heads. H. 6.0 cm, L. 9.9-10.8 cm, W. 7.4-8.6 cm. Metropolitan Museum of Art, New York City, Gifts of Jane Costello Goldberg from the Collection of Arnold I. Goldberg.

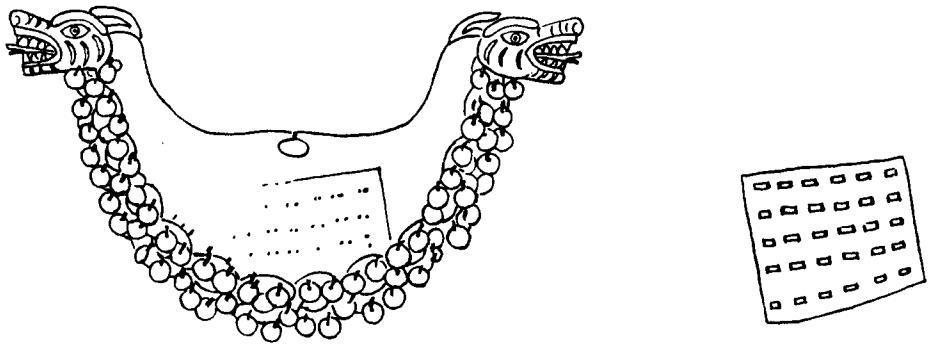


Figure 3.

Front view of gold and silver nose ornament with double-headed serpent. W. 20.8 cm, H. 12.3 cm. Metropolitan Museum of Art, New York City, Cat. No. 1979.206.1225, The Michael C. Rockefeller Collection, Bequest of Nelson A. Rockefeller.

Back view of one of three gold rectangles with 30 dangles on the front. W. 5.6 cm, H. 6.2 cm. Private Collection, USA, Cat. No. P-164.3.

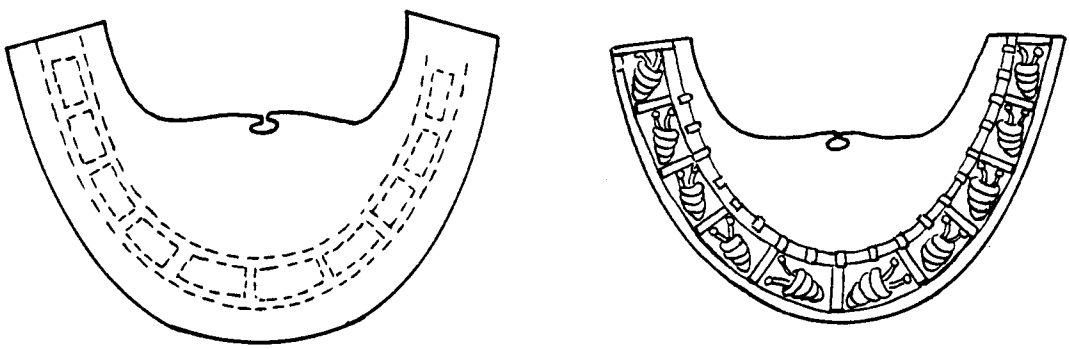


Figure 4.

Front view of plain silver nose ornament. W. 21.4 cm, H. 13.3 cm. American Museum of Natural History, New York City, Cat. No. 41.2/6739.

Back view of gold and silver nose ornament with snails. W. 19.9 cm, H. 12.6 cm. Metropolitan Museum of Art, New York City, Cat. No. 1979.206.1228, The Michael C. Rockefeller Collection, Bequest of Nelson A. Rockefeller.

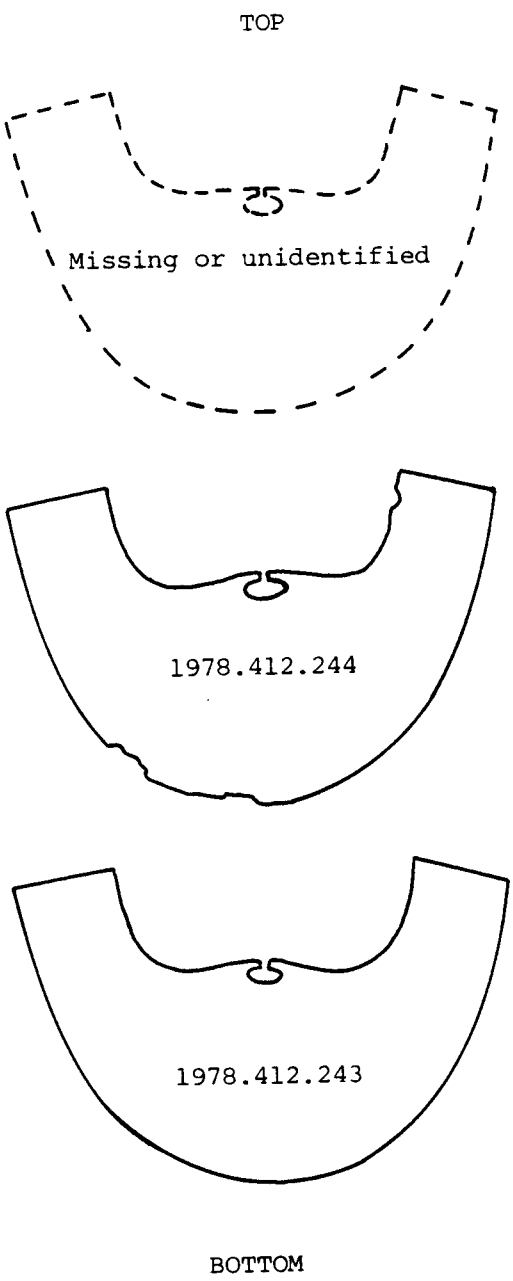


Figure 5. Reconstructed relationship between one missing nose ornament and two extant plain silver ones. W. 21.4-21.8 cm, H. 14.0 cm. Metropolitan Museum of Art, New York City, The Michael C. Rockefeller Collection, Bequest of Nelson A. Rockefeller.

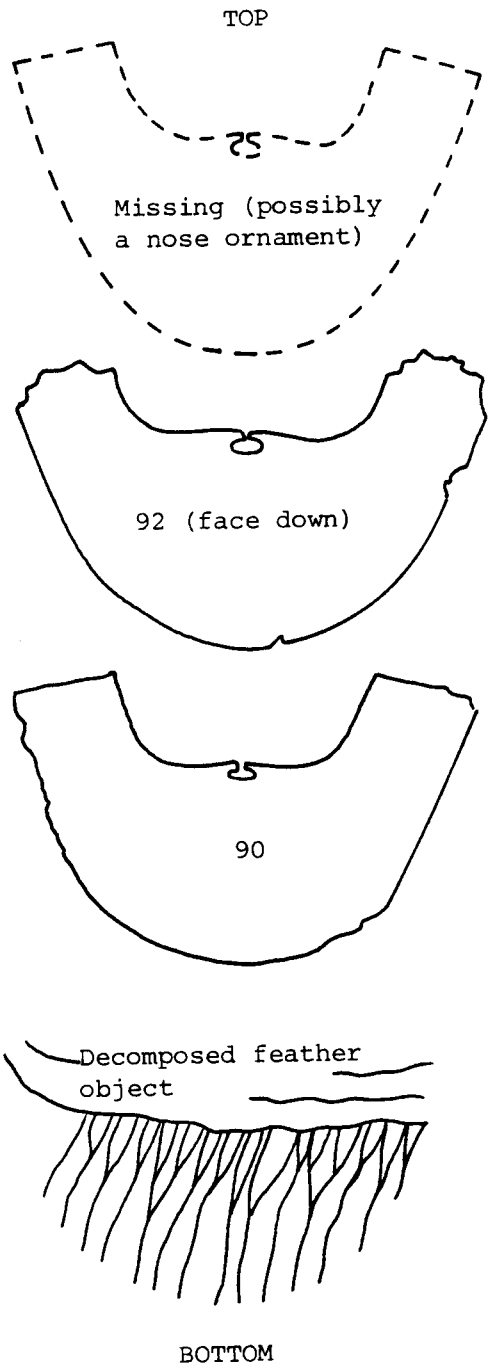


Figure 6. Reconstructed relationship between two plain silver nose ornaments, one other missing metal object, and one missing feather object. W. 20.0-23.2 cm, H. 12.9-14.8 cm. Private Collection, New York City.

The Moche Moon

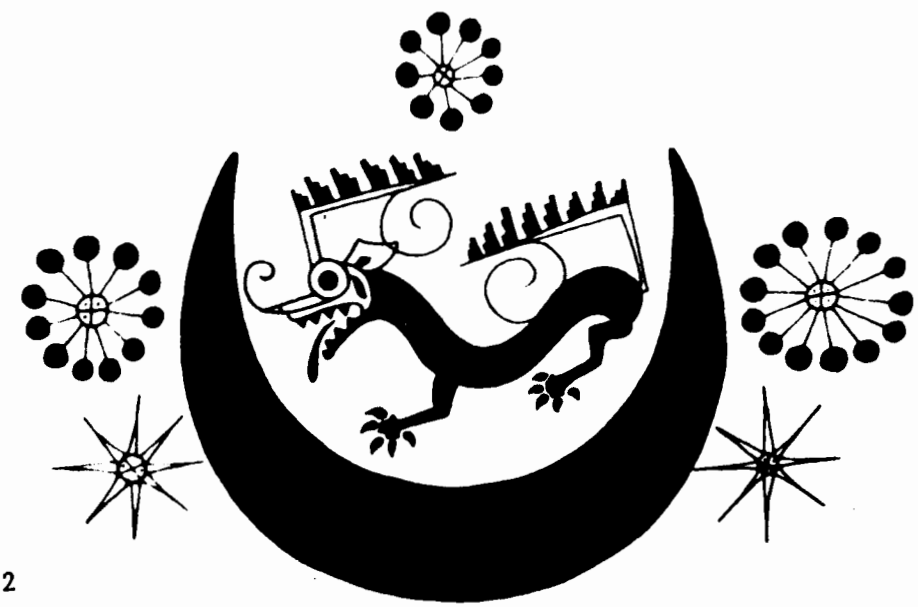
Elizabeth P. Benson
Institute of Andean Studies

There is obvious astronomical information in the ceramic depictions of the Moche people on the north coast of Peru in the early centuries of the Christian era, and some figures must be sky gods, but, in the small amount of work that has been published on this subject, there is controversy and contradiction; no one seems to have a firm grip on any identification. I have no positive conclusions or even strong hypotheses; I am simply trying to gather helpful material and to air some ideas in an effort to get feedback. The moon seems a good place to start, for more has been written about possible moon gods than about any other deity.

The so-called moon animal, moon-eater, moon monster, or crested animal often appears in Moche art in a crescent that looks very moonlike; there are sometimes starry shapes around it (Figure 1). Kutscher (1950: 57) identified this creature as the "animal in the moon." Karen Bruhns (1976), in a paper dedicated to the moon animal, notes that it is not one of the major Moche motifs, but that it had remarkable longevity, that the animal persists from Moche I into Chimu art, and that it is first clearly associated with lunar or astral symbols in Moche III. Positing the possibility that the moon association may have been introduced later than the motif itself, Bruhns notes that depictions of the creature with and without the crescent overlap temporally, once the crescent appears.

The style of drawing of the animal is usually not characteristic of Moche art, but it is consonant with the Recuay style of the adjacent highlands, and the figure does appear most frequently in Recuay art, where it seen, virtually always, as a filler, border, or garment design, usually a repeated pattern. Bruhns states:

1



2

Figure 1. Two drawings of moon animals from Moche III-IV vases (after Bruhns [1976: figs. 1, 2]).

> There is no denying the association of the Moon Animal with the moon from Moche III on. Arguments for the same interpretation of this figure in Recuay art are not so convincing...[although] we can probably assume...that there was an association with the moon in the Recuay culture, too [Bruhns 1976: 34].

The crescent does not appear in Recuay art, however, and Raphael Reichert (1979 and personal communication), does not find evidence for a moon association for the animal in Recuay occurrences. Reichert, noting that Moche art tends to isolate the creature more than Recuay does, points out that Moche depictions are closest to those of Recuay during the early Moche phases; the animal changes in Moche III (when, as Bruhns notes, it becomes associated with crescent and astral symbols). Reichert observes that the motif also appears on Salinar, Gallinazo, and northern Huari ceramics.

Whereas Bruhns sees the Moche depictions of the creature as very similar to each other, Anne-Louise Schaffer (1981) has pointed out the considerable variation. Schaffer, however, focuses on examples from Loma Negra, which Bruhns does not include. Schaffer notes that a primary distinguishing feature of the Loma Negra metal moon animals is that they have bird talons in place of the clawed feline or fox paws usually found on pottery examples (including those from Vicús, near Loma Negra). She also finds that the main imagery associated with the moon animal is lunar or astral; at Loma Negra, the animal shows up most frequently on crescent ornaments. If the Moche I and II dating for the Loma Negra metalwork is correct, then the moon association is earlier in the northern area than in the central Moche area. Schaffer observes in the north a strong association of the moon animal with a sacrificial trophy-head cult, noting that the animal is never seen as the sacrificer, but does hold a trophy head.

There are a few examples of the animal with a trophy head in the central Moche region, but the proportion at Loma Negra is much higher. This sacrificial aspect does not seem to be present at Recuay.

The sickle moon and the relation to sacrifice suggest that this may be the moon of a specific time, phase, and/or ritual. There is also the possibility of interpreting the animal as eating the moon during an eclipse (Valcárcel 1958: 577); this is a prevalent mythic concept in Latin America. It might also be that this creature was a parallel to the Mesoamerican concept of a rabbit in the moon; Kutscher (1950: 57) suggested something like this. Mesoamerican peoples did not--and still do not--see a man in the moon; they see a rabbit. The animal may, of course, depict a constellation seen with the moon at a certain time.

I believe that no one calls this a "moon god"; the animal is not elevated to godly status. Is there a moon god at all, and, if so, who is it? Only figures from late Moche art (phases IV and V) have been referred to as "moon gods," and there are two very different so-called moon gods, both depicted with radiances.

One is a Moche V figure traveling through water on a supernatural, double-headed raft, with a fish-monster head or heads (sometimes they are snake heads) at either end (Figure 2). Kutscher (1950: 85) titled his illustration of an example "The Moon God in the Heavenly Raft." He wrote further: "The celestial god uses the large reed raft like a litter to traverse the night sky, which seems to be changed into the dark depths of the sea" (author's translation). Noting the row of thick-bellied jugs on the raft, Kutscher interpreted the scene as showing the moon god as the lord of fertility and moisture, with the jugs containing the night dew that the plant growth demands. Sometimes there are prisoners or sacrificial victims in the raft, along with the jugs.

Figure 2. Moche V vessel showing a figure in a supernatural raft. The figure has snake-headed rays and leans over an open bag (courtesy of the Museum für Völkerkunde, Munich).

The raft figure is also seen in a radiant crescent that resembles a boat, but does not have the attributes of the raft (Cordy-Collins 1977); it is, infact, very like the crescent in which the moon animal appears, and Danièlle Lavallée (1970: pl. 82) publishes one of these figures as an example of "the feline in the moon," equating it with the moon animal. The two kinds of depiction--the figure in the raft and in the crescent--are contemporary (Cordy-Collins 1977: 433). The figures in both kinds of vehicles have a supernatural mouth. There is usually a small, open bag in front of the radiant figure, and the attention of the figure seems to be directed to opening or tying up the bag. (Bags appear in many of the most highly charged ritual or mythic scenes [see Benson 1978, 1982].) Kutscher (1950: 89) equates the raft with the moon.

Alana Cordy-Collins, however, takes Lavallée to task for reading the crescent as the moon and interprets this theme the other way around:

> Certainly the crescent shape does remind <u>us</u> of a crescent moon, but there is no cultural basis whatsoever for believing that the Moche artist intended nor that the Moche citizen perceived the shape as a crescent <u>moon</u>. In fact, the Moche artist intended the crescent shape to represent something quite different [Cordy-Collins 1977: 422].

She goes on to say that "the crescent <u>represents</u> the boat" (Cordy-Collins 1977: 430), arguing that motifs in Moche V tend to be simplified, and that, therefore, the crescent is a simplified boat.

It would seem that she could equally well--or better--say that the boat represents the crescent. Double entendre, I believe, is as likely as simplification. The interchangeability with the raft even enhances the argument for the crescent as a moon. This sort of punning goes with transformation themes, one of the primary aspects of Indian thought.

Moreover, the radiance of the figure and of the crescent certainly seems to define them as celestial objects or beings, and the raft is double-headed like the motif that is commonly considered to be a "skyband" (see Carlson 1982). Precolumbian deities usually have some sky association, and the moon in South American myth is generally associated with water and with fishing. As for the specific cultural basis, the crescent is seen with astral motifs in earlier Moche art, as noted above in the discussion of the moon animal; no one has questioned the "moonness" of that crescent. The moon does travel across the sea on the north coast of Peru, and north-coast fishermen still go out at night, as, we are told, they did at least as far back as the 16th century (Gillin 1947: 33-34), so a moon-raft would not be mythically unlikely. There seem to be many more reasons to say that the raft is a moon than there are to say that the crescent is a raft--at least, the moon and the boat are the same thing, a "heavenly raft," as Kutscher called it.

The motif becomes so simplified that, in the later stages, both raft and crescent are omitted, and the vessel itself becomes the vessel, so to speak. A projecting angle in the chamber wall provides a three-dimensional seat for the painted, radiant figure (Cordy-Collins 1977: figs. 16-18).

On the side of the pot opposite the radiant figure in the raft, there is another kind--or kinds--of raft figure; sometimes there are two figures, one of which can be bird-headed, with a curving beak or a duck bill (Hocquenghem and Lyon 1980: fig. 6). These figures are usually accompanied by "weapons bundles" or war clubs. Other supernatural figures appear in double-headed rafts in earlier Moche art (Kutscher 1950: fig. 17); sometimes the raft is a giant fish (Hocquenghem 1979: fig. 4). Non-supernatural figures are also seen in natural rafts (Kutscher 1950:

pl. 44, upper). All of these figures are nonradiant; they do not appear in a crescent, only in a raft; and they do not have a bag. They paddle and are usually fishing or have fishing gear aboard, whereas the radiant figure rarely paddles or fishes, although there are fish in the scenes. The figure in the crescent is repeated on the other side of the vessel; as far as I know, no examples show an alternative figure, which may give the crescent figure a temporal or ritual meaning different from that of the raft scenes with a radiant figure on one side and another type of figure or figures on the other side.

Anne Marie Hocquenghem (1979) has written on raft figures as participating in ceremonies making offerings and sacrifices to ancestors. She uses an Inca parallel to interpret the Moche raft scenes, citing Cristóbal de Molina: On the day of the new moon after the summer solstice, in January, the Inca fought the ritual combat of Camay, and on the 20th day of that month began to celebrate Mayocati, when they gathered the remains of everything that had been offered in the past year, together with new offerings, and constructed dams to hold the waters that flowed past Cuzco; just before sunset, they threw all the offerings and sacrifices into the river, breaking the first dam. The strong, rainy-season current of the river, augmented by the bursting dam, carried the offerings toward the sea, where they were destined for the Creator.

Of the raft representations, Hocquenghem writes that the captives, together with offerings of the products of the earth, are transported to the guano islands and offered to the sea, which carries them toward mythical ancestors. In exchange, the ancestors give the offerers the fertilizers and the products of the sea. I do not see the products of the earth in these scenes, unless they are the contents of the jugs.

Hocquenghem brings in the offering and sacrificial rituals on the

guano islands; but the iconography associated with those islands is not that of the raft-crescent figure. I believe that there are at least two --and probably three-occasions or clusters associated with rafts.

Kutscher (1950), Lavallée (1970), and Cordy-Collins (1977) describe the figure in the raft or the crescent as a man. However, Hocquenghem and Patricia Lyon (1980) have, more accurately, I think, described it as a woman. Although noncommittal about the "moonness" of this female figure, these authors refer to it as the occupant of a "Moon/Boat." In most raft depictions, the figure wears a net garment or dress, usually belted--a belted "dress" is typical Moche female clothing. Sometimes there is a mantle, an optional garment for Moche women, and some figures clearly have long braids that end in snakeheads. There is a distinctive headdress with vertical elements that tend to flop or curve over at the sides; this is specific to this character, not a general female trait.

One unusual version of the net-garment figure has dragonfly wings instead of radiances--another pun?--and this figure holds up a goblet (Donnan and McClelland 1979: fig. 28). She has a snake-headed braid, a belt, the distinctive headdress, and a bag. Hocquenghem and Lyon (1980) propose that the supernatural woman in the raft and one of the figures in Christopher Donnan's Presentation Theme (1975) belong to the same "class," but are not necessarily the same character. The woman in the Presentation Theme depictions usually holds a goblet, as this raft figure does, and wears a similar floppy-element headdress; but she does not wear a net garment. Moreover, the raft figure holds the goblet toward her mouth, whereas the Presentation Theme figure holds the goblet, indeed in presentation.

The Presentation Theme--and related scenes (I think that the complex is larger than that described by Donnan)--is the other cluster that has

been said, by Kutscher (1950: 72-73), to include the moon god. Kutscher's moon god in this scene, however, is not the woman, whose equivalent he referred to elsewhere as the moon, but the radiant figure, a male warrior (Figure 3). (The woman, whom Kutscher took to be a vegetation deity, is never radiant in the Presentation Theme scenes, but is a fairly regular participant there.)

Kutscher cites Calancha as saying that "the Chimu of the late period had as their highest god, not the sun, but the moon....The moon was not held to be more powerful than the burning day star, but they saw him as the sender of moisture and fertility" (Kutscher 1950: 88; author's translation). Kutscher seems to have identified the warrior figure as the moon on the basis of prominence, as the Chimú god; on the basis of the radiances; and as the receiver of offerings.

The basic problem here is that the two figures identified as moon gods are wearing totally different clothing and accessories--important diagnostic elements in Moche iconography--and are of different sexes. The moon does change sex in some South American myths, but this is a total change of character. Moreover, the raft figure--or a very similar figure--appears in the Presentation Theme with the warrior figure.

I feel that the two types of radiant figure are two different celestial beings and that the scene clusters depict different moments in the calendar (different rites or myths). But who are the radiant figures; is either of them the moon?

The raft and the crescent certainly suggest the shape of the new moon, which is thought, on the north coast, to be good for fishing (Gillin 1947: 34). The figure accompanying this motif, however, need not necessarily be the moon; possibly two celestial bodies are depicted. The fact that a similar raft can be occupied by figures other than the one dis-

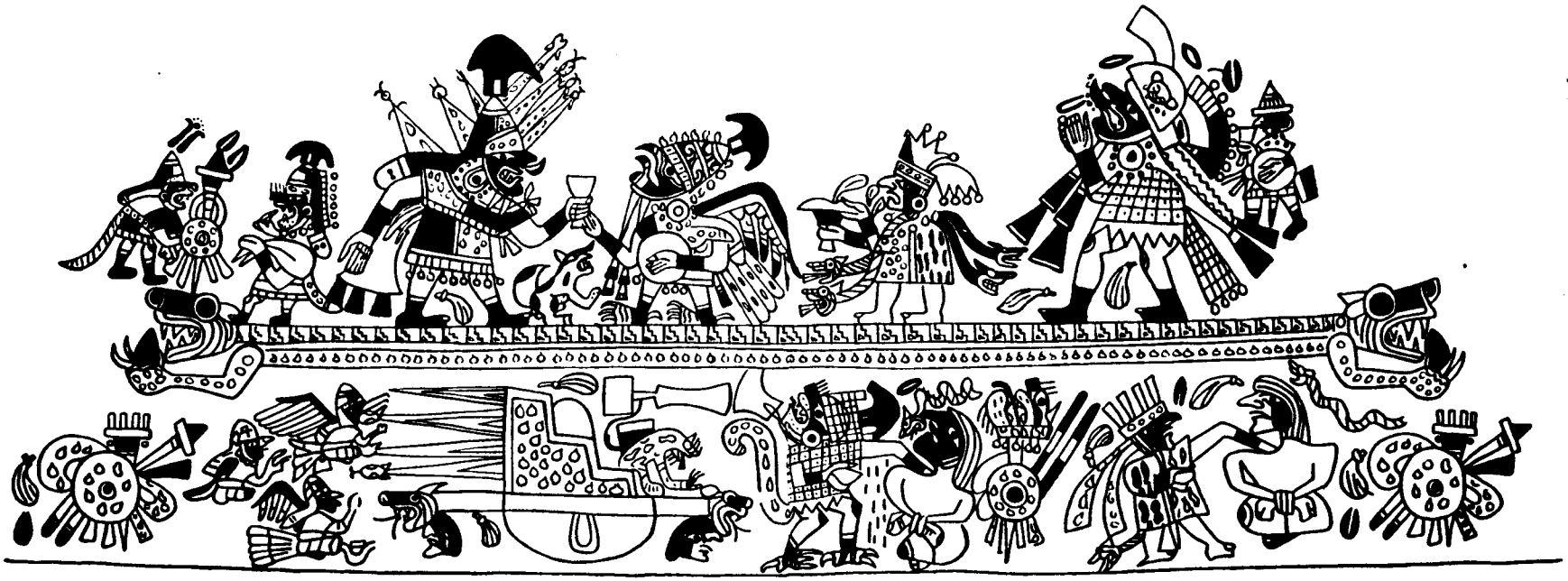


Figure 3. A Presentation Theme scene with the radiant warrior figure at the upper left. The female figure appears, second from the right, on the upper and lower registers (after Kutscher [1950: fig. 62]; Museum für Völkerkunde, Munich).

cussed here argues the likelihood of the occupant's being separate from the raft. We are told of the importance of the Southern Cross to coastal fishermen. Gary Urton (1982), who has investigated these problems, has proposed that the "mother of fishes" in the Avila legend (1975) is not the moon, but the Southern Cross. This is one possible interpretation.

A perhaps stronger possibility is the Pleiades constellation, generally an important season-marker in the Tropics. Urton (1982) has noted that the dusk rise of the Pleiades marks the beginning of the good fishing season on the north coast. Various 16th-century sources mention the heliacal rise of the Pleiades as marking the beginning of the year (Calancha, in Means 1931: 62; Zuidema 1982: 215). R. T. Zuidema (1982: 216-217, 225), citing Cobo and Pérez Bocanegra, finds evidence that, in Inca times, the Pleiades were female and associated with water. María Rostworowski (1981: 134), on the other hand, sees the Pleiades and the sun as related to agriculture, whereas fishermen venerated the moon for its influence on the tides. I find no obvious agricultural symbolism--that is, vegetation--in the Moche raft scenes; but plant life is depicted in the Presentation Theme scenes. I would say that one Moche ceramic cluster probably related to the fishing calendar and the other to the agricultural calendar, but the problem of astronomical identification remains.

With the slender evidence available, the raft-crescent figure would seem to be the likelier candidate for the moon or the Pleiades. The radiant warrior has fewer qualifications for these roles. (I find some evidence for a sun identification for this figure.) As in a good detective story, however, a case can be built on various sorts of evidence for any case one wishes to make (everyone is a suspect with some motivation and opportunity), but which one is really the murderer--or, rather, which one is the sacrificer or the one to whom sacrifice is made?

As for interpretation on the basis of 16th-century evidence, yes, we need all the help we can get; but it is evident that there are shifts in important subject matter even during the Moche period. Both of these radiant figures come in late; the radiant warrior arrives in Moche IV, the radiant raft figure in Moche V. This argues against precise continuity even within the Moche period; interpretations on the basis of later material should be made with the greatest caution. There are widespread customs and long-lasting substrata for beliefs, but deities tend to get manipulated for political purposes, and, while their basic associations may remain the same, prominence, specific attributes, activities, powers, and style of depiction can change fairly drastically, according to the source of power and how that power is to be manifested.

Of basic importance is the consideration of what ancient peoples chose for iconographic depiction: the most important calendar-markers or the showiest, most symbolic bodies in the sky? It seems possible to rely on one astral body or constellation for a vital time count and yet put another one on funerary or ritual pottery.[1]

Footnote

1. I am grateful for the help and encouragement of John B. Carlson, Gary Urton, and Anthony F. Aveni.

References

Avila, Francisco de
1975 Dioses y Hombres de Huarochiri. Siglo Veintiuno, Mexico. (2nd edition.

Benson, Elizabeth P.
1978 The Bag with the Ruffled Top: Some Problems of Identification in Moche Art. Journal of Latin American Lore 4(1): 29-47.

1982 The Well-dressed Captives: Some Observations on Moche Iconography. Baessler-Archiv 30: 181-222.

Bruhns, Karen Olsen
1976 The Moon Animal in Northern Peruvian Art and Culture. Ñawpa Pacha 14: 21-39.

Carlson, John B.
1982 The Double-Headed Dragon and the Sky: A Pervasive Cosmological Symbol. In Ethnoastronomy and Archaeoastronomy in the American Tropics. edited by Anthony F. Aveni and Gary Urton, pp. 135-163. Annals of the New York Academy of Sciences, vol. 385.

Cordy-Collins, Alana
1977 The Moon Is a Boat!: A Study in Iconographic Methodology. In Pre-Columbian Art History: Selected Readings, edited by Alana Cordy-Collins and Jean Stern, pp. 421-434. Peek Publications, Palo Alto.

Donnan, Christopher B.
1975 The Thematic Approach to Moche Iconography. Journal of Latin American Lore 1 (2): 147-162.

Donnan, Christopher B., and Donna McClelland
1979 The Burial Theme in Moche Iconography. Studies in Pre-Columbian Art & Archaeology No. 21. Dumbarton Oaks, Washington, D.C.

Gillen, John
1947 Moche: A Peruvian Coastal Community. Institute of Social Anthropology Publication No. 3. Smithsonian Institution, Washington, D.C.

Hocquenghem, Anne Marie
1979 L'iconographie mochica et les rites andins: Les scènes en relations avec l'océan. Cahiers des Amériques Latines 20: 113-129.

Hocquenghem, Anne Marie, and Patricia J. Lyon
1980 A Class of Anthropomorphic Supernatural Females in Moche Iconography. Ñawpa Pacha 18: 27-48.

Kutscher, Gerdt
1950 Chimu: Eine altindianische Hochkultur. Gebr. Mann, Berlin.

Lavallée, Danièlle
1970 Les représentations animales dans la céramique mochica. Université de Paris, Mémoires de l'Institut d'Ethnologie IV. Musée de l'Homme, Paris.

Means, Philip Ainsworth
1931 Ancient Civilizations of the Andes. Charles Scribner's Sons, New York and London.

Reichert, Raphael X.
1979 Moche Iconography--The Highland Connection. Paper presented at the XLIII International Congress of Americanists, Vancouver.

Rostworowski de Diez Canseco, María
1981 Recursos naturales renovables y pesca, siglos XVI y XVII. Instituto de Estudios Peruanos, Lima.

Schaffer, Anne-Louise
1981 A Monster-headed Complex of Mythical Creatures in the Loma Negra Metalwork. Paper presented at the 21st Annual Meeting of the Institute of Andean Studies, Berkeley.

Urton, Gary
1982 Astronomy and Calendrics on the Coast of Peru. In Ethnoastronomy and Archaeoastronomy in the American Tropics, edited by Anthony F. Aveni and Gary Urton, pp. 231-247. Annals of the New York Academy of Sciences, vol. 385.

Valcárcel, Luis E.
1958 Símbolos mágico-religiosos en la culture andina. In Miscellanea P. Rivet Octogenario Dicata, pp. 563-581. XXXI Congreso Internacional de Americanistas. Universidad Nacional Autónoma de México.

Zuidema, R. T.
1982 Catachillay: The Role of the Pleiades and of the Southern Cross and α and β Centauri in the Calendar of the Incas. In Ethnoastronomy and Archaeoastronomy in the American Tropics, edited by Anthony F. Aveni and Gary Urton, pp. 203-229. Annals of the New York Academy of Sciences, vol. 385.

Archaeological Investigations in the Andean Piedmont and High Llanos of Western Venezuela: A Preliminary Report

Charles S. Spencer
Elsa M. Redmond
Anthropology Dept.
University of
Connecticut

In July 1983 we began a research project in the high llanos and Andean piedmont near Ciudad Bolivia, in the Pedraza District of the state of Barinas, Venezuela (Figure 1). The region's tropical climate consists of a dry season from December through March, followed by an 8-month long rainy season during which 90% of the yearly 1100-1800 mm of rain falls. In contrast to other parts of the western Venezuelan llanos, the high llanos and the adjacent piedmont experience a two-month dry spell during July and August, a time called the veranillo by the region's inhabitants (Vila 1960:226; Atlas de Venezuela 1969).

The high llanos, a zone of flat savanna grasslands that extend over elevations between 180 m and 240 m, are free from the seasonal inundations that plague the lower-lying llanos. The adjacent piedmont rises to approximately 800 m, and constitutes a transitional zone between the llanos and the Andean Cordillera, whose tallest point (Pico Bolívar) reaches over 5000 m. The Acequia, Canaguá, and Curbatí rivers originate in the high Andes and traverse the piedmont in steep, narrow valleys before emptying onto the high llanos. Together with a series of tributary streams (called caños), these rivers cross the llanos on their way to the Apure river, which in turn flows into the Orinoco

river (Figure 1).

In the piedmont, relatively well-drained, mineral-rich soils support a tropical forest vegetation (including Jacaranda superba, Ficus sp., Parinarium sp., and Calocarpum sp.). Here, prime agricultural land is limited to stretches of low alluvial soils along rivers, which are highly fertile, friable, and which can be cleared for cultivation and easily tilled with hand tools. The inhabitants of the piedmont today build their small farmsteads on piedmont spurs or remnant river terraces immediately overlooking these productive pockets of alluvium (called vega) where they cultivate maize, beans, sweet manioc, plantains, bananas, coffee, and sugar cane.

The adjacent high llanos are covered with dry savanna grasses (principally Trachypogon montufari and Paspalum carinatum), punctuated by occasional stands of Mauritia palms or small clumps of forest (called matas). Otherwise, tree growth on the high llanos is limited to the gallery forests (including Pithecollium saman, Ceiba pentandra, Luehuea ferruginea) that line the rivers and caños (Sarmiento and Monasterio 1969:580-581; Sarmiento et al. 1971:Table 1). The gray, clayey savanna soils are relatively fertile, but they do not drain well, and they are difficult to till with hand tools. The present inhabitants of the high llanos concentrate their agricultural efforts in the gallery forests, which offer narrow strips of fertile, better-drained, and friable soils. Here, in their traditional conuco plots, farmers plant maize, beans, sweet manioc, plantains, and bananas (Zucchi and Denevan 1979:20; Tamayo 1972:89-94).

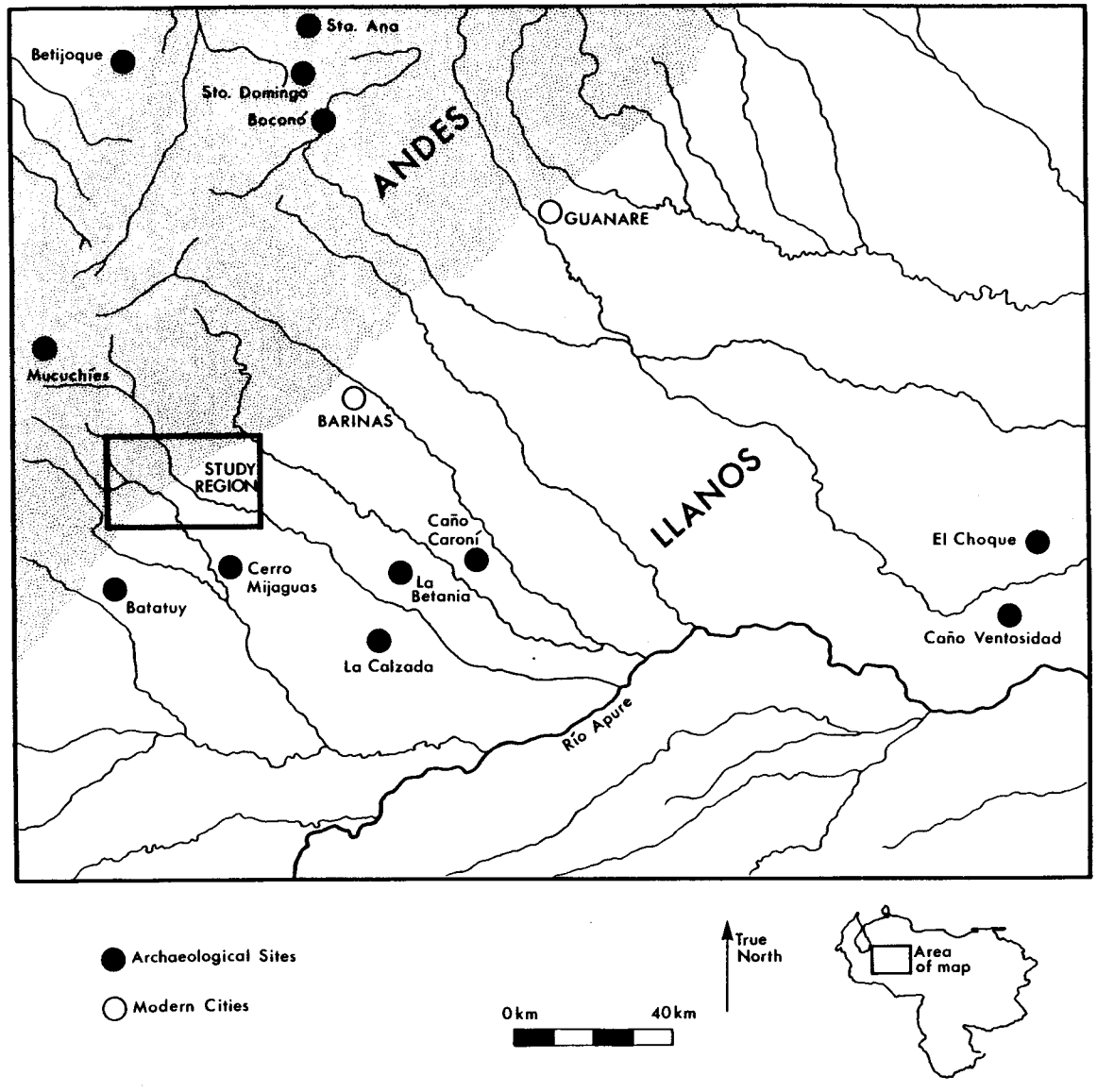


Figure 1. Western Venezuela, showing the location of the study region in relation to the Andes, the llanos, and various previously-investigated archaeological sites.

INDIGENOUS SOCIETIES OF THE SIXTEENTH CENTURY

When European explorers first penetrated the western Venezuelan llanos in the early sixteenth century, they encountered indigenous societies of varying size and complexity. The Jirajara occupied the southern slopes of the Andean Cordillera along the piedmont as far south as the Apure river (See fold-out map in Jahn 1927). Their small, scattered villages usually consisted of a single communal long house (maloca), which according to one source, measured some 200 feet long and 30 feet wide, with a low entrance at each end.

These Jirajara communities united primarily for the purpose of conducting warfare. Groups of villages were under the leadership of a principal chief, who was advised by a council of elders. Prominent Jirajara leaders were entitled to sumptuary privileges, and they enhanced their prestige further by acquiring many wives, often through strategic marriage alliances.

The Jirajara are known to have subsisted primarily upon manioc and plantains. In addition to these two staple crops, they also cultivated maize, and they engaged in hunting and fishing. Entire villages participated in communal fishing expeditions on the major rivers during the dry season. The Jirajara also maintained exchange relationships with neighboring groups, including the groups that inhabited the llanos, from whom they received a variety of tierra caliente (hot country) products.[1]

The high llanos, and for that matter, much of the western Venezuelan llanos formed part of the territory of the Caquetío. The Caquetío occupied large villages located out on the savanna, usually near a

river or caño. Villages were politically united under the leadership of one paramount chief. For example, the early German explorer Nicolaus Federmann noted that 23 villages along one river were united under a paramount chief. One of the member villages contained some 4000 inhabitants, and Federmann estimated that this paramount chief could easily raise a fighting force of 30,000 men. Two other such polities on the llanos could count on 16,000 and 8,500 fighting men to defend their territories (Federmann 1962:191-192; Morey 1975:96).

Caquetío villages were made up of multiple extended family residences. One Caquetío chief is described sitting in a spacious structure, which might have been his residence or perhaps a public building where he carried out his chiefly duties. Status differences in Caquetío society were marked not only by the size of one's house, but also by the number of wives one had (some particularly important men had a dozen or more wives whom they secured through marriage alliances), and the quantity of shell necklaces one wore.

The Caquetío supported their populations by cultivating plots of maize, squash, manioc, and sweet potatoes in the gallery forests along rivers and caños, and on fields out in moist areas of the savannas as well. They also hunted and fished, especially during the dry season when rainfall agriculture was not possible and when the rivers were low.

The Caquetío's relationships with neighboring groups can be characterized as a pattern of trading and raiding. They maintained extensive trade networks both with other groups inhabiting the llanos and with groups outside the llanos, by means of which the Caquetío exchanged and received pottery, fresh-water snail shell disks, palm products,

vegetable dyes, and salt and gold from the Andes. Aside from trading, the Caquetío were involved in almost continual warfare with certain neighboring groups. Consequently, the Caquetío fortified their villages and were prepared to muster a fighting force on short notice. In general, most warfare took the form of surprise raids on villages for the purposes of looting and taking captives (Morey 1975:257-269,282-283).

ARCHAEOLOGICAL CONTEXT OF THE STUDY REGION

Our study region is located between two zones, the Andean Cordillera and the middle and low llanos, which fortunately have received some archaeological attention (see Figure 1). José M. Cruxent's program of survey and test excavations in a number of Andean regions (including the sites of Betijoque, Santa Ana, and Santo Domingo) during the late 1940s and 1950s resulted in the first systematic regional chronology for western Venezuela, extending from approximately 250 B.C. to A.D. 1500 (Cruxent and Rouse 1958-1959:247-260). Erika Wagner has contributed detailed occupational chronologies (ranging from ca. A.D. 300 - 1500) for several Andean river valleys, including the Boconó and Mucuchíes regions (Wagner 1967, 1972, 1973a, 1973b, 1979).[2] More recently, Wagner's excavations at Lagunillas, on the eastern shore of Lake Maracaibo have yielded evidence of an earlier occupation that includes the remains of pile dwellings, manos and metates, and ceramics decorated with broad-line incising and applique (designated the Lagunillas complex), with associated radiocarbon dates that range between 480 and 210 B.C. (Wagner and Tarble de Ruíz 1975; Wagner 1980).

The prehistoric mounds, causeways, and ridged fields of the western Venezuelan llanos have long intrigued explorers and archaeologists.

Systematic archaeological research had to wait until the late 1940s, when Cruxent and his associates began surveying the llanos and conducting test excavations at certain mound sites. With the ceramics from these excavations, Cruxent and Rouse established the first regional chronology for the llanos.[3]

In 1964, Alberta Zucchi began a long-term program of archaeological research in the western Venezuelan llanos. Her first excavations at the mound site of Hato La Betania (Figure 1) led to a detailed ceramic analysis which expanded upon Cruxent and Rouse's sequence by establishing three subphases of their Caño del Oso complex. Zucchi called the subphases Caño del Oso A, B, and C (ca. 230 B.C. - A.D. 650), and she added the succeeding La Betania complex (ca. A.D. 650 - 1200), naming the entire sequence the Osoid series (Zucchi 1967:151-156).

Subsequent excavations by Zucchi at the Hato de La Calzada site (Figure 1) produced a complete stratigraphic cross-section of the main mound and 29 radiocarbon dates (Zucchi 1973:Table 1). Twenty-six of these dates fell within the 230 B.C. - A.D. 600 range. Of the three outlying dates, one was modern, one was colonial (A.D. 1610), and one was 920 B.C. Accordingly, Zucchi extended the Osoid series back to 1000 B.C. (Zucchi 1972). Other researchers, however, have suggested that additional radiocarbon dates are needed to support that claim (Garson 1980:62,295-296; Wagner n.d.). As for the mound itself, there is little doubt that it was raised over a relatively short time during the Caño del Oso C phase, since charcoal samples from hearths located at its base and top dated between A.D 540 - 550 (Zucchi 1973:186, Table 1). Zucchi has characterized the Caño del Oso complex by its

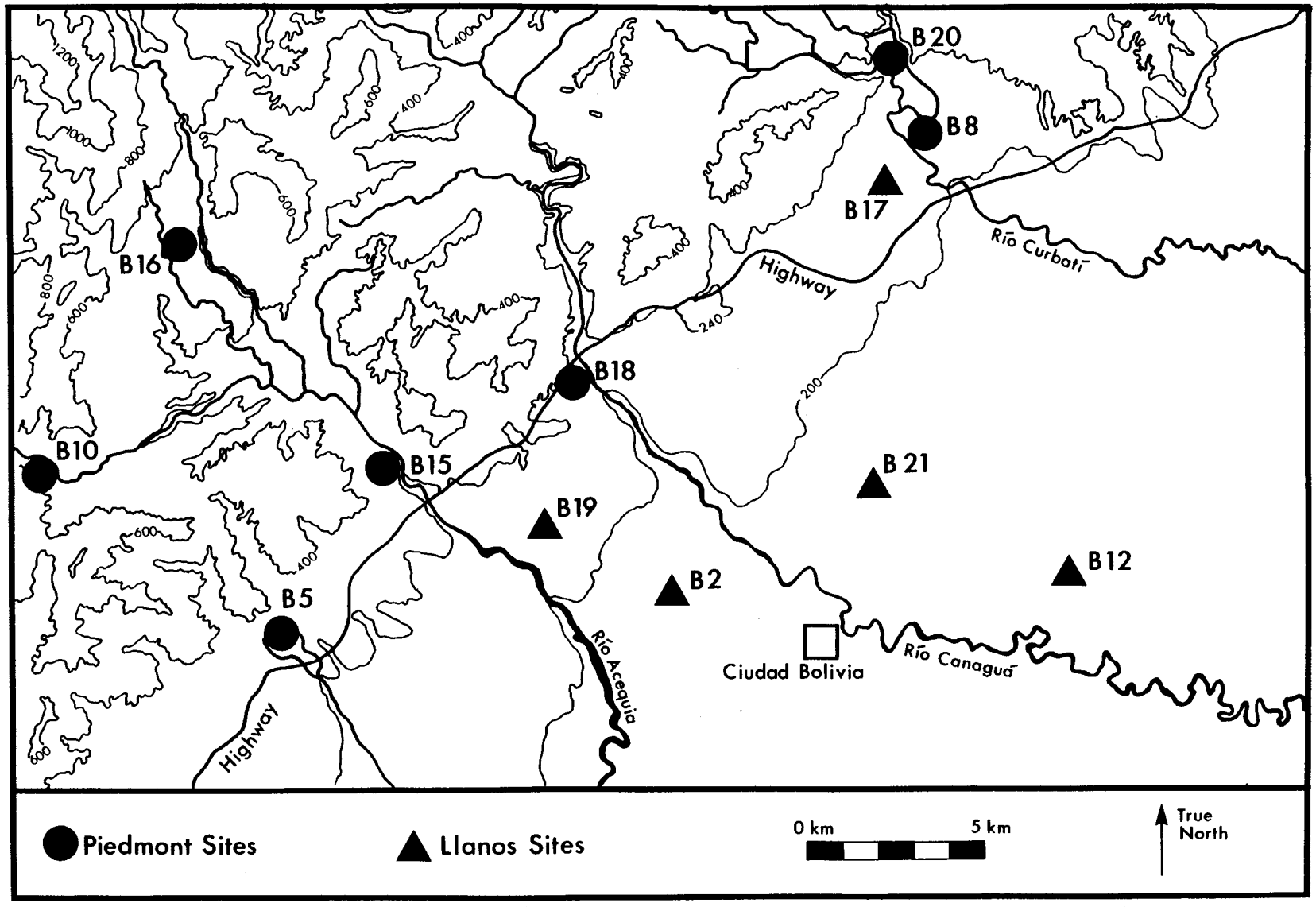


Figure 2. The study region in the vicinity of Ciudad Bolivia, Venezuela, showing sites located during the 1983 field season.

elaborate polychrome ceramics, primary burials, maize agriculture, hunting, fishing, and construction of mounds and causeways. The La Betania complex apparently witnessed the addition of manioc cultivation and the production of cotton.

More recently, Zucchi has established the Caño Caroní complex (ca. A.D. 1000 - 1400), based on her excavations at a small non-mound site located in the gallery forest along the Caño Caroní and at similar sites in the vicinity of Caño Ventosidad (Figure 1). She characterizes these complexes as simple tropical forest adaptations, marked by manioc agriculture, hunting, fishing, secondary urn burials, and perhaps the building of ridged fields as well (Zucchi 1975; Zucchi and Denevan 1979).[4]

The only archaeological reconnaissance in the high llanos and adjacent piedmont of Barinas has been carried out by a local group of amateur archaeologists whose main interest has been to record an assortment of petroglyphs in the piedmont, though in one instance they conducted salvage excavations in a burial mound at the site of Cerro Mijaguas (see Figure 1).[5] Otherwise, the archaeology of the high llanos is limited to Jorge Armand's brief excavations at the small mound site of Batatuy, southwest of our study region, where he recovered radiocarbon dates of A.D. 220 and A.D. 510 associated with Osoid ceramics (Armand 1975).

THE 1983 FIELD SEASON

During the summer of 1983, we undertook a preliminary season of fieldwork in the study region. Over a period of about six weeks, we conducted a regional survey, made topographic maps of six sites, and

carried out test excavations at two sites.

In our regional survey we used the following techniques: 1) systematic field-by-field survey of selected zones; 2) systematic examination of road cuts, river banks, drainage ditches, construction sites, and other places where sub-surface deposits were exposed; and 3) informant survey. All three techniques resulted in the discovery of archaeological sites, both in the Andean piedmont and in the high llanos (see Figure 2). These sites were all located on 1:25,000 aerial photographs and on 1:100,000 topographic maps of the region.

A second phase of our 1983 research involved topographic mapping of individual sites, using alidade and plane table as well as Brunton compass and tape measure. Topographic maps were made of the following sites: B2, B5, B8 (see Figure 3), B17, and B21; the topographic map of B12 is still in progress (see Figure 5).

The third and final phase of our 1983 field season consisted of test excavations at B8, a piedmont site, and at B12, a llanos site. The locations of these test excavations are indicated in Figures 3 and 5. The purpose of the test excavations was to recover systematic, stratigraphically-controlled samples of ceramics from these two representative sites.

As a result of our regional survey, we can state with confidence that both the Andean piedmont and the high llanos contain a number of prehistoric sites (Figure 2). Yet, it is also the case that the sites of the two zones differ significantly in terms of their size range, architectural complexity, and associated ceramics.

The piedmont sites are typically situated on piedmont spurs or

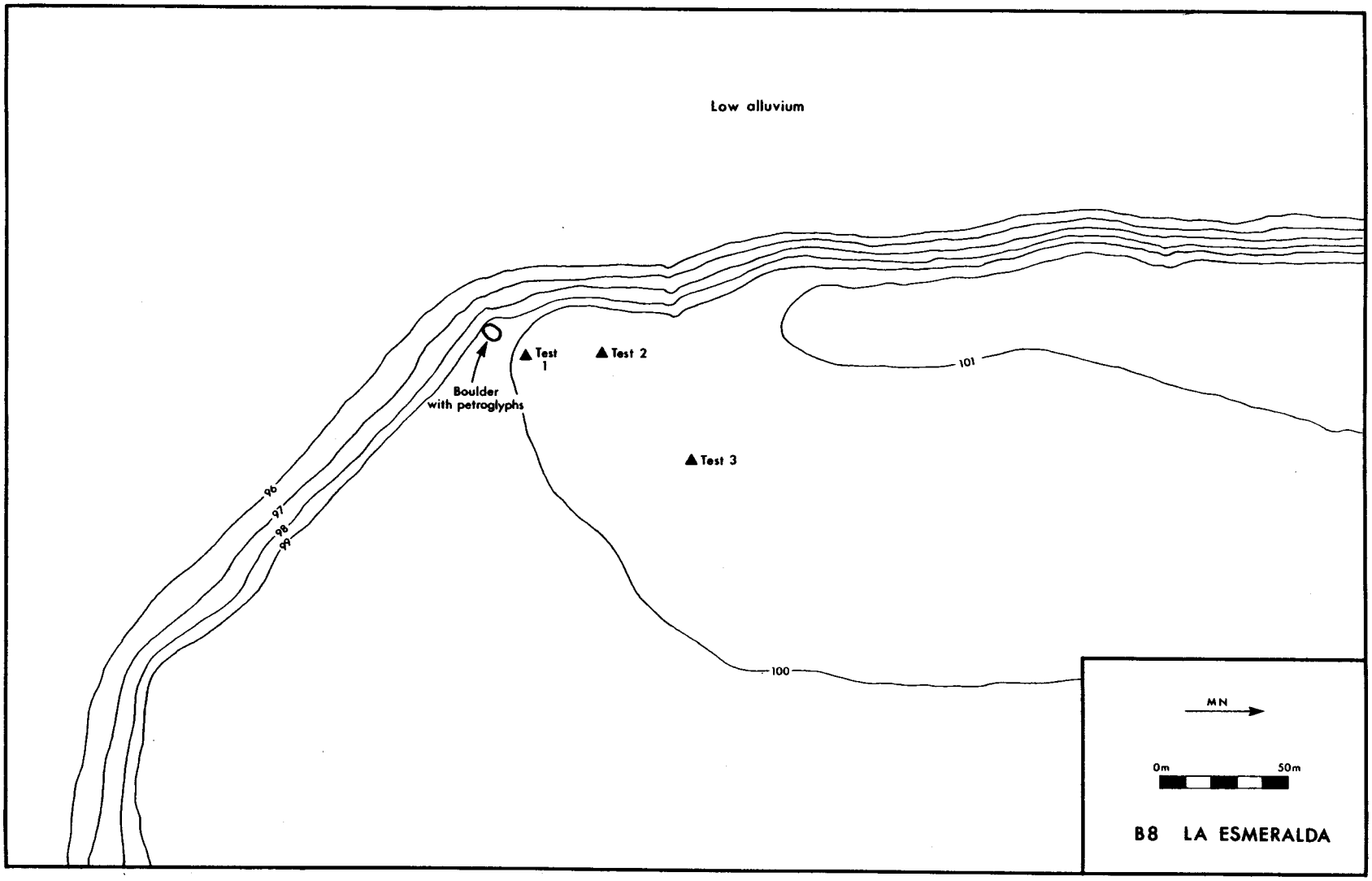


Figure 3. Topographic map of the archaeological site of La Esmeralda (B8), showing location of inscribed boulder and test excavations conducted during the 1983 field season.

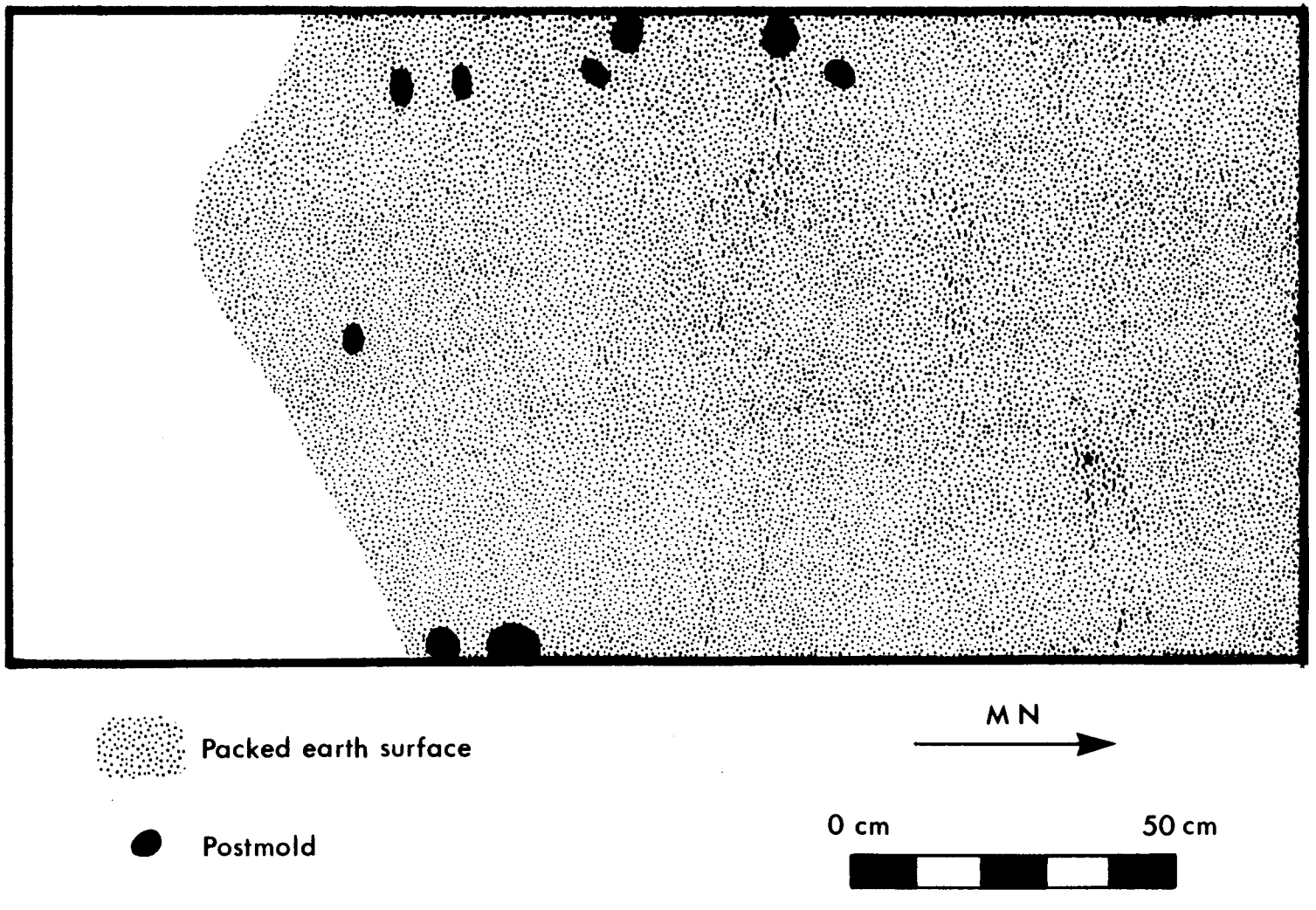


Figure 4. Plan of possible housefloor with postmolds, at a depth of approximately 80 cm in Test 1 excavation at La Esmeralda (B8); exposed during the 1983 field season.

remnant river terraces overlooking zones of low alluvium (vega) alongside rivers that bring run-off from the Andes down to the llanos. No discernible settlement hierarchy was manifested by the piedmont sites that we located during the 1983 survey; all range from 3 to 5 hectares in size. No artificial mounds or causeways were found at any piedmont sites, but large boulders with petroglyphs occurred at most of these sites. For example, Figure 3 shows the location of a large boulder with petroglyphs at the site of La Esmeralda, or B8, where we conducted test excavations. The only architectural remains we found at any piedmont site were recovered during our excavations at B8. At a depth of 80 cm in Test 1, we exposed a hard-packed earthen surface and a series of postmolds (see Figure 4). We have interpreted this deposit as the partial remains of a wattle and daub structure, a form of construction (called bahareque) still commonly seen in the region.

At most of the piedmont sites we found ceramics of a distinctive style that we have called the Curbatí complex. This pottery is relatively thin-walled (usually less than 8 mm thick), coarse-tempered, well-burnished, and often decorated with deep grooves and incisions. Modelling and appliqué are also common decorative techniques. Painting is infrequent and is restricted to monochrome applications, usually red in color. Vessel shapes include hemispherical bowls, composite silhouette bowls, and ollas. Most of our samples of Curbatí complex pottery came from disturbed surfaces (eroded river banks, drainage ditch profiles) or from the excavations at site B8, where the pottery began to appear at a depth of 30-40 cm below the surface. In terms of stylistic

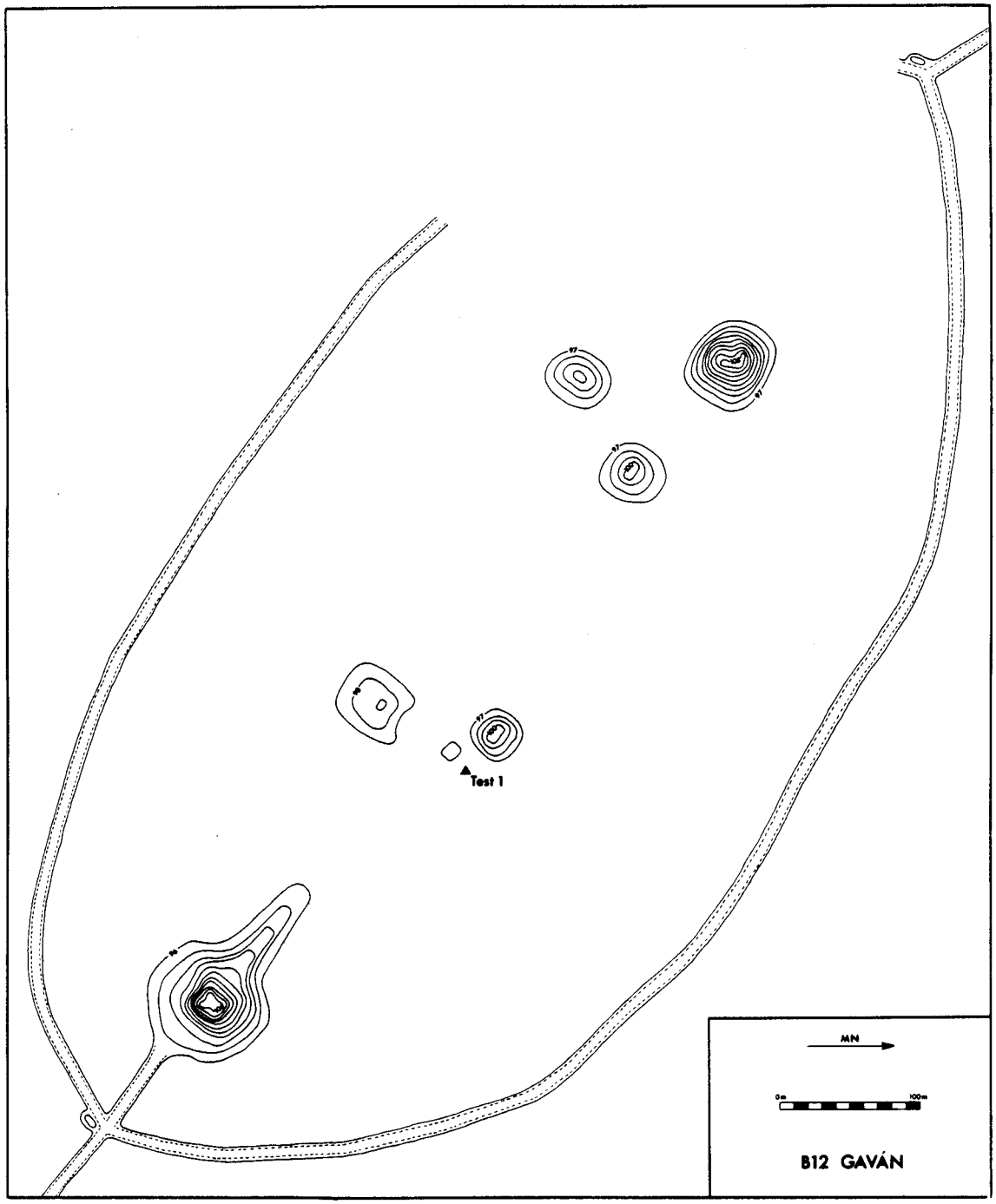


Figure 5. Topographic map of the central part of the archaeological site of Gaván (B12), showing the location of major artificial mounds, causeways, and the test excavation conducted during the 1983 field season (map in progress).

affinities, Curbatí complex pottery is similar in some respects to that of the Lagunillas complex (ca. 500 - 200 B.C.), and it is also stylistically similar to the Santa Ana complex (Wagner and Tarble de Ruíz 1957: 109-117; Tarble 1977). Such stylistic similarities could indicate that the Curbatí complex pottery is broadly contemporaneous with these previously-excavated ceramics, a possibility which we plan to investigate in future seasons.

We also found material pertaining to a protohistoric or historic period at two locations in the piedmont. This pottery is relatively thick-walled (usually over 8 mm), fine-tempered, usually smoothed and not burnished, and undecorated. The predominant vessel forms appear to be utilitarian ollas and bowls. We have tentatively labelled this pottery the Caño Seco complex, and we consider it to be stylistically similar to the thick-walled undecorated pottery (San Nicolás Simple) of the protohistoric San Nicolás phase, recovered by Wagner near Boconó in the Andes (Figure 1) (Wagner 1972:44-46). We found Caño Seco pottery on the surface at sites B15 and B20 in the piedmont (Figure 2); at B15, Caño Seco ceramics were associated with glazed pottery of the Colonial period. Our preliminary interpretation of the Cano Seco complex is that it might be a manifestation of the ethnohistorically-reported Jirajara occupations of the Andean piedmont; we will explore this possibility further in future seasons.

A different archaeological picture is presented by the sites on the high llanos. First of all, there is a clear two-level settlement hierarchy here; most sites assume sizes of less than 10 ha, but one site, Gaván or B12, covers an area of at least 60 ha. No boulders with

petroglyphs were found at the high llanos sites, but all except B17 contained artificial mounds, and an extensive causeway network was associated with B12. B12 also had more mounds, and larger mounds, than the smaller sites on the high llanos. In Figure 5 we present a topographic map, still in progress, of the central part of B12. Shown in the map is an 80 percent complete oval causeway (the missing 20 percent may have been destroyed by a caño that passes just to the northwest of the site). The oval measures some 950 meters long by 460 meters wide, circumscribing an area of roughly 30 ha. The site extends in a southwesterly direction from this central plaza area. The largest mound here, on the southeast side of the plaza, attains a height of 10 m and measures 90 m by 70 m at its base. It was apparently ascended by a ramp, 80 m long, that protruded into the central part of the plaza. By contrast, the second largest site we found, B2, had only 3 mounds, the tallest of which reached 6 m, arranged around a 150 m-long plaza.

It is likely that the six large mounds at B12 (Figure 5) represent ceremonial structures and/or elite residences. We also noted (but lacked time to map in 1983) many smaller mounds at B12, both within and outside the area defined by the oval causeway. These small mounds (most reaching heights of one meter or less) were probably residential in function; even today, the inhabitants of the llanos build their houses upon low natural elevations (bancos) or artificial rises.

The pottery that we recovered from our test excavations at B12, and indeed the pottery that we collected from all the high llanos sites, differed from both the Curbatí complex and the Caño Seco complex. This material, which we have designated the Gaván complex, is coarse-tempered,

with wall thicknesses ranging from approximately 6 mm to 10 mm. Incised decoration is present, but rare. Painting appears to be the most common decorative technique. Representative vessel shapes include wide-mouthed, S-shaped, and hemispherical bowls, composite silhouette bowls, and shallow bowls, many supported on solid and hollow feet, along with a variety of ollas. In general, we feel that the Gaván complex is stylistically similar to, and hence perhaps broadly contemporaneous with, the Osoid series defined for the middle and low llanos by Zucchi (Zucchi 1967, 1972).

The ceramic complexes defined for the study region as a result of our 1983 fieldwork provide us with a preliminary chronological framework. In future seasons we intend to collect additional samples in order to define better these ceramic complexes and to determine the chronological relationships between them. Radiocarbon dating, thermoluminescence dating, stratigraphy, seriation, and stylistic cross-dating will be among the techniques employed for this purpose.

CONCLUSION

Although our study region is virtually terra incognita, it is strategically situated between areas that have seen considerable archaeological research: the Andean Cordillera and the middle and low llanos (see Figure 1). Our project aims to provide a linkage between the developmental sequences of these better-known regions and thus contribute to a broader understanding of western Venezuelan culture history. Among the specific contributions we hope to make will be an assessment of the chronological placement of the petroglyphs found at piedmont sites. While petroglyphs have been reported in various parts of

Venezuela (see, for example, Sujo Volsky 1975; Delgado 1976; Huizi and de Valencia 1982), the chronology of Venezuelan petroglyphs is still undetermined. The temporal placement of the initial occupation of the llanos is another problem that our work should help clarify (see Zucchi 1972, 1973; cf. Garson 1980:62,295-296; cf. Wagner n.d.).

A further goal of our research will be to document the relationships, if any, that may have existed between the prehistoric occupations of the Andean piedmont and the high llanos. Were the two zones inhabited contemporaneously by ethnically distinct peoples? If so, did they interact with one another through exchange and/or warfare? On the other hand, might the Curbatí and Gaván ceramic complexes pertain to successive chronological periods? If so, could the observed differences in settlement patterns and architecture associated with the two complexes reflect important organization differences representing processes of regional cultural evolution (or decline)? As we continue our research in Barinas, we will endeavor to address questions such as these, thus bringing our archaeological data to bear on issues of general anthropological concern.

Footnotes

1. Major sources of information about the Jirajara can be found in the bibliography of Morey 1975.

2. Mario Sanoja and Iraida Vargas have contributed a complementary chronological sequence for the Chama river valley (see Sanoja and Vargas 1967; Vargas 1969).

3. The Caño del Oso complex (see Cruxent and Rouse 1958-1959:185-187).

4. Jointly with William Denevan, Zucchi undertook the first systematic survey and excavation of ridged fields along Caño Ventosidad (see Denevan and Zucchi 1978).

5. The Centro Arqueológico Kuayú of Barinas (see Kuayú 1981).

6. We would like to acknowledge the support of the Connecticut Research Foundation (grant # 1171-000-22-00220-35-220). Our studies have been conducted in close collaboration with the Department of Anthropology, Instituto Venezolano de Investigaciones Científicas (IVIC). We are grateful for the warm encouragement extended to us by Dr. Erika Wagner and Dr. Alberta Zucchi. We also thank Pablo Novoa Lavarez and María Andueza Guttierrez.

References

Armand, Jorge
1975 Batatuy. Ediciones del Museo Arqueológico, No. 1. Universidad de los Andes. Mérida.

Atlas de Venezuela
1969 Ministerio de Obras Públicas. Primera Edición. Caracas.

Cruxent, José M. and Irving B. Rouse
1958-1959 An Archaeological Chronology of Venezuela. Two volumes. Pan American Union, Social Science Monographs, No. 6.

Delgado, Rafael
1976 Los Petroglifos Venezolanos. Monte Avila Editores. Caracas.

Denevan, William M. and Alberta Zucchi
1978 "Ridged-Field Excavations in the Central Orinoco Llanos, Venezuela." In Advances in Andean Archaeology. Edited by David L. Browman. Mouton Publishers. The Hague.

Federmann, Nicolas
1962 Historia Indiana o Primer Viaje de Nicolas Federmann. In Descubrimiento y Conquista de Venezuela: Textos Históricos Contemporáneos y Documentos Fundamentales. Tomo II. Cubagua y la empresa de los Belzares. Biblioteca de la Academia Nacional de la Historia, No. 55. Fuentes para la Historia Colonial de Venezuela. Italgráfica C.A. Caracas. (Originally published in 1557).

Garson, Adam G.
1980 Prehistory, Settlement and Food Production in the Savanna Region of La Calzada de Paez, Venezuela. Unpublished Ph.D. dissertation. Yale University. University Microfilms. Ann Arbor.

Huizi, Isabel and Ruby de Valencia
1982 El Diseño de los Petroglifos Venezolanos. Editorial Arte Montana Gráfica. Caracas.

Jahn, Alfredo
1972 Los Aborígenes del Occidente de Venezuela. Litografía y Tipografía del Comercio. Caracas.

Kuayú, Centro Arqueológico
1981 Arqueológia del Estado Barinas. Talleres de la Imprenta Municipal de Caracas. Dirección de Información y Relaciones. Publicaciones de la Gobernación del Distrito Federal. Caracas.

Morey, Nancy C.
1975 Ethnohistory of the Colombian and Venezuelan Llanos. Unpublished Ph.D. dissertation. University of Utah. University Microfilms. Ann Arbor.

Sanoja, Mario, and Iraida Vargas
1967 "Proyecto: Arqueología del Occidente de Venezuela. Primer Informe General." Economía y Ciencias Sociales 9(2):25-60.

Sarmiento, G., and M. Monasterio
1969 "Studies on the Savanna Vegetation of the Venezuelan Llanos I. The Use of Association Analysis." Journal of Ecology 57:579-598.

Sarmiento, G., M. Monasterio, and J. Silva
1971 "Reconocimiento Ecológico de los Llanos Occidentales: I. Las Unidades Ecológicas; II. El Norte del Estado Barinas." Acta Científica Venezolana 22:52-71.

Sujo Volsky, Jeanine
1975 "El Estudio del Arte Rupestre en Venezuela." Montalbán 4:709. Universidad Católica Andres Bello, Instituto de Investigaciones Históricas, Centro de Lenguas Indígenas. Caracas.

Tamayo, F.
1972 Los Llanos de Venezuela. Two volumes. Colección Científica 3-4. Monte Avila Editores. Caracas.

Tarble, Kay
1977 Comparación Estilística de Dos Colecciones del Noroeste de Venezuela: Una Nueva Metodología. IVIC, CEA. Ernesto Armitano, Editor. Caracas.

Vargas Arenas, Iraida
1969 La Fase San Gerónimo: Investigaciones Arqueológicas en el Alto Chama. Instituto de Investigaciones Económicas y Sociales, Colección Antropológica, No. 1. Universidad Central de Venezuela. Caracas.

Vila, P.
1960 Geografía de Venezuela. Vol. I. Ministerio de Educación. Caracas.

Wagner, Erika

1967 The Prehistory and Ethnohistory of the Carache Area in Western Venezuela. Yale University Publications in Anthropology, No. 71. New Haven.

1972 "La Protohistoria e Historia Inicial de Boconó, Estado Trujillo." Antropológica 33:39-60.

1973a "The Mucuchíes Phase: An Extension of the Andean Cultural Pattern into Western Venezuela." American Anthropologist 75:195-213.

1973b "Chronology and Cultural Relationships of the Betijoque Phase in Western Venezuela." Relaciones Antropológicas: A Newsletter Bulletin on South American Anthropology I(1):13-17.

1979 "Arqueología de los Andes Venezolanos: Los Páramos y la Tierra Fría." In El Medio Ambiente Páramo. Edited by M. L. Salgado-Labouriau. Ediciones CEA-IVIC, UNESCO, CIFA. Caracas.

1980 Los Pobladores Palafíticos de la Cuenca de Maracaibo. Cuadernos Lagoven. Caracas.

n.d. "Central and Western Venezuela." In Chronologies in South American Archaeology. Edited by C. Meighan. Academic Press. New York.

Wagner, Erika, and Kay Tarble de Ruíz

1975 "Lagunillas: A New Archaeological Phase for the Lake Maracaibo Basin, Venezuela." Journal of Field Archaeology 2:105-118.

Zucchi, Alberta

1967 La Betania: Un Yacimiento Arqueológico del Occidente de Venezuela. Two volumes. Unpublished Ph.D. dissertation. Universidad Central de Venezuela. Caracas.

1972 "New Data on the Antiquity of Polychrome Painting from Venezuela." American Antiquity 37:439-446.

1973 "Prehistoric Human Occupations of the Western Venezuelan Llanos." American Antiquity 38:182-190.

1975 Caño Caroní. Facultad de Ciencias Económicas y Sociales. División de Publicaciones. Universidad Central de Venezuela. Caracas.

Zucchi, Alberta, and William M. Denevan

1979 Campos Elevados e Historia Cultural Prehispánica en los Llanos Occidentales de Venezuela. Universidad Católica Andres Bello. Caracas.

PROTOHISTORY

Pachacamac--An Andean Oracle Under Inca Rule

Thomas C. Patterson
Department of Anthropology
Temple University

Pachacamac, the creator of the world and the earth shaker, was one of the most influential and powerful wak'as in the central Andes when the Spaniards invaded the Inca Empire in 1532 (Calancha 1638:92). Under the Incas, this oracle established a sphere of influence that was simultaneously linked with that of the imperial state and separate from it (Estete 1947:339). Inca rulers and claimants to the throne, from Topa 'Inka Yupanki onwards, sought its counsel on matters of state (Santillan 1927:29-31; Pizarro 1965:181-183; Cabello Valboa 1951:397-398). At the same time, Pachacamac collected tribute from as far north as Esmeraldas, which was effectively beyond the imperial frontiers, and founded a series of branch oracles throughout the central part of the empire (Estete 1947:339; Santillan 1927:29-31; Davila Brizeño 1965:163; Dioses y Hombres 1966:113-119; Albornoz 1967:33-35; Netherly 1977:321). At first sight, the influence of the oracle seems almost paradoxical, for the oracle was not an Inca wak'a and the priests and spokesmen of its principle shrine on the coast near Lima were not Incas but came instead from an ethnic group known as the Ichma (Rostworowski 1972a). Furthermore, it was not the only wak'a in Ichma, for Albornoz (1967:33-35) mentions several others, including the talking one called Rimaq. If we can account for this seeming incongruity in terms of the kinds of relationships that developed between the oracle, on the one hand, and the Incas and other polities and communities, on the other, we can gain a clear understanding of the formation and structure of pre-Columbian states in the Andes.

When the Spaniards arrived, competition, rivalries, conspiracies and plots--not harmony and tranquility--characterized the Andean world. A civil war raged between two brothers over succession to the throne. Both had forged alliances with royal kinsmen and with members of other ethnic groups, and both had sought the support of wak'as including Pachacamac. Struggle and conflict were not the exclusive domain of the Incas, for neighboring ethnic groups in central Peru--traditional rivals from time immemorial--went to court to settle a dispute in which all of the parties concerned claimed ownership of the same rich farmlands near Quives (Rostworowski 1972b).

One of the peculiarities of Inca social structure was that no emperor could inherit the property of his predecessor. The throne passed to one of his sons--all of whom, at least theoretically, had the same rights and could aspire equally to the royal tassel (Rostworowski 1960). The remainder of the property passed to his other descendants who formed a corporate landholding group called a panaqa; they used it to support themselves and the mummy bundle of the founder and to maintain a cult in his honor (Rowe 1967:60-61, 67-68). Upon ascending to the throne, the new ruler had to establish his own corporation by securing lands and servants to support his wives and their children. The early emperors had estates in Cuzco and its environs; however, Pachakuti 'Inka Yupanki and his successors had lands in the provincial areas of the empire (Patterson 1984). This continual demand for land and labor by the Inca rulers placed a growing burden on the Andean peoples. It was the food that nourished conflict, rivalries, and revolts against the state.

The panaqas wielded considerable power in the empire. Their members held important positions in the state apparatus; they were generals,

administrators of the highest ranks, and influential priests in the state religious cult (Murra 1980). Their women were often the wives of the ruler and, as a result, frequently the mothers of potential heirs to the Inca throne. The influence of the corporations and the potential for conflict between them seem to have been heightened during times of succession. This is particularly evident in accounts of the deteriorating relations that developed between the panaqas of Pachakuti and Topa 'Inka during the period when the latter co-reigned with his father and after he ultimately succeeded him. Pachakuti became concerned over the exploits of his son and named two of his brothers to inspect conditions in the newly conquered lands (Sarmiento de Gamboa 1960:249-252). Subsequently, he had his brothers killed for disobeying orders; the brothers, who belonged to the panaqa founded by Pachakuti's father, had been close allies of Topa 'Inka during the conquest of chinchaysuyu--the northern quarter of the empire (Sarmiento de Gamboa 1960:250-252). Royal counselors--quite probably members of Pachakuti's corporation and their allies--prevented one of Topa 'Inka's sons from taking lands north of Lake Titicaca--an area incorporated into the imperial state by Pachakuti himself (Cobo 1956, vol. 2:86-88; Rowe 1945:270 and fig. 20). Topa 'Inka killed an inspector for fomenting a rebellion among his servants; the man was his brother and belonged to the panaqa of Pachakuti (Sarmiento de Gamboa 1960:256). Finally, the old, retired emperor wanted Wayna Qhapaq--his favorite grandson, the son of his daughter--to succeed Topa 'Inka on the throne, while the latter apparently wanted to name a son by another woman (Sarmiento de Gamboa 1960:252-253). Topa 'Inka died under mysterious circumstances and may have been killed by his father's descendants, for Wayna Qhapaq eventually succeeded him to the throne (Rost-

worowski 1960).

Another way the panaqa of a new ruler could gain wealth, power, and prestige--besides acquiring new lands and servants--was to take over the care and maintenance of a wak'a in order to ensure that the appropriate ceremonies were performed. Pachakuti, who initiated the wars of conquest leading to the formation of the imperial state and who had one of the wealthiest corporations as a result, is said to have created nearly a dozen new wak'as in the Cuzco area, to have rebuilt and endowed the Temple of the Sun, the most important Inca shrine in Cuzco, and to have organized the entire system of Inca state shrines, alienating lands and assigning servants for their maintenance (Cobo 1956, vol. 2:169-185; Rowe 1979:10). There was a close relationship between Pachakuti and the state-sponsored Sun Cult (Patterson 1984). In spite of this, the Son of the Sun, as the ruler was sometimes called, was not the principal spokesman of the state cult. Instead, the top of the imperial religious hierarchy was occupied by a royal or noble kinsman, a collateral relative of the emperor who belonged to a different panaqa or noble ayllu (Murra 1980:161).

Topa 'Inka seems to have had a very different relationship from that of his father with the wak'as of Cuzco and with at least some of the shrines in chinchaysuyu--an area that was largely incorporated into the imperial state under his leadership or rule. He apparently neither created nor maintained new wak'as in the Cuzco area as his father, his brother, and his son who followed him to the throne had done (Rowe 1979:10). He is also said to have been very critical and demanding of the wak'as, holding them in strict account for what happened (Huaman Poma de Ayala 1936:261; Pachakuti 1879:283-284). According to one story,

after much fighting in which he could not defeat his enemies, Topa 'Inka called together all of the wak'as he had served with gold, silver, cloth, and food and asked for their help. When none responded, he became furious and threatened to burn all of their possessions. Finally, one of them-Macahuisa, the son of Pariacaca, a famous wak'a in the mountains of Huarochirí--vowed to help the Inca ruler. After the wak'a helped him destroy the enemy, Topa 'Inka revered Pariacaca even more, giving him fifty servants, and asked what more he could offer the shrine (Dioses y Hombres 1966:131-135). In other words, Topa 'Inka established an alliance or working relationship with a wak'a that apparently did not have close ties with the panaqa of his father.

Topa 'Inka developed an especially close relationship with at least one wak'a in chinchaysuyu--Pachacamac--which was located in the land of the Ichma. The chroniclers suggest two reasons why this happened. One is that the Inca leader who was attacking the Chimu armies from the north and east, made an alliance with the Ichma, an enemy of the Chanchan rulers who lived on the southern edge of that coastal state. This was a seasoned Inca battle tactic (Calancha 1638:549-551; Cieza de León 1967:194-197; Bram 1941). The Incas and the Ichma probably saw themselves as allies fighting a common enemy. After Chimor was defeated, the two remained allies. Topa 'Inka incorporated Ichma into the imperial state, establishing a provincial capital at Pachacamac, which included the construction of a shrine dedicated to the Sun cult.[1]

The other reason has more to do with the political intrigues of the royal corporations, their noble kinsmen, and their neighbors in Cuzco. More specifically, it focuses attention on the role women played in these intrigues and on the ways they maintained their interests and

those of their kin in these situations.[2] One account indicates that Topa 'Inka's mother--Mama Anahuarque, who was from Choco and, thus, not a member of a panaqa--had a revelation while she was pregnant with her son, the future ruler (Santillan 1927:29-31; Sarmiento de Gamboa 1960:238-239; Cobo 1956, vol. 2:77; Cabello Valboa 1951:303). She learned that Pachacamac was the creator of the world. After Topa 'Inka was born, his mother told him of the vision, and he was determined to seek out this wak'a in the land of the Ichma. The Inca leader and his retinue spent many days at the site of Pachacamac. They sacrificed llamas and burned many shirts to thank the oracle for his assistance. After fasting for forty days, Topa 'Inka spoke with the wak'a and asked him what else he could offer. Pachacamac responded that he had a wife and children and that the Incas could build them a house--i.e., enlarge the Temple of Pachacamac.[3] The oracle also told the Inca leader that he had four sons and that the Incas should also build houses for them.

The sons of Pachacamac were branch oracles. Building shrines for them outside the land of the Ichma permitted the caretakers of the principal shrine to extend their influence into other areas. The wak'a specifically requested that the Inca leader build a house for one son in Mala and another in Chincha. These were coastal valleys south of Ichma, and, at the time the branch oracles were established, neither had been conquered or incorporated into the imperial state (Santillan 1927:29-31; Menzel 1959; Menzel and Rowe 1966). The third son had a house built in the sierra, either at Andahuaylas near the oracle of Apurimac or at Andahuaylillas near the shrine dedicated to Teqzi Wiracocha, an important Inca deity closely related to the panaqa of Pachakuti's father.[4] The fourth branch oracle would travel with Topa 'Inka to protect him and

answer any questions he might have.

The location of the branch oracles mentioned in this account provides some information about the kinds of relationships that were developing between the guardians of Pachacamac's shrine and the Incas. Two of them were established beyond the imperial frontiers in lands the Incas coveted and planned to conquer in the near future (Menzel and Rowe 1966). These shrines permitted the priests to gather information about the social conditions that existed among the peoples of those lands. They could not only provide the Inca ruler with information about those peoples but also begin to play an increasingly important role in what was happening in the frontier areas of the empire. The branch oracle established in the sierra provided them with the opportunity to learn about the activities and intentions of groups who controlled powerful shrines that were not part of the state cult. The travelling branch oracle who accompanied the emperor was in a position not only to collect information about matters of state but also to advise the Inca leader on the course of action he should follow.

These were not the only kinsmen of Pachacamac--i.e., branch oracles--who had houses outside of Ichma. He had wives in Chincha and Mamaq, sons in Huarochirí, and a house near Chanchan (Albornoz 1967:33-35; Davila Brizeño 1965:163; Dioses y Hombres 1966:113-119; Netherly 1977:321). One account relates how these branch oracles were established and how they operated in areas that had already been incorporated into the Inca state (Dioses y Hombres 1966:113-119). According to this story, a woman from Huarochirí found an object in a field. Thinking it might be important, she took it home and showed it to her parents and neighbors. The object identified himself as the son of Pachacamac and said that his

father had sent him to protect the people of Huarochirí. They built a shrine and set aside one month each year when they honored him with sacrifices and gifts. After many years, the branch oracle disappeared and the people were saddened. They went to Pachacamac with gifts of llamas, guinea pigs, and fine cloth and begged him to have his son return to their community. Pachacamac consented and the branch oracle returned. The people were elated and gave Pachacamac more llamas and pasture to graze them. From then on, they made sacrifices and gave gifts to the branch oracle on one day and to Pachacamac on the next.

This account is a thinly veiled description of how the caretakers of the principal shrine at Pachacamac and one of the branch oracles began to appropriate the surplus labor and social product of others. A kin group from Huarochirí built a shrine dedicated to Pachacamac's son and assumed responsibility for its maintenance and for the performance of the appropriate ceremonies. This enhanced the prestige of the group, because its members were associating themselves with a wak'a whose fortunes were rising in the Andean world. Some of the surplus labor and gifts they received were undoubtedly used to maintain the local shrine and its staff; others may have been used to support the Temple of Pachacamac. After a period when no harm befell the peoples of Huarochirí, during which their gifts to Pachacamac's son prevented the earthquakes which the wak'a could bring, the caretakers of the principal shrine removed the branch oracle and demanded larger payments for their continued protection and prosperity.[5] The people of Huarochirí met these demands, and their surplus social production was appropriated by both the principal shrine and the local branch.

In 1968, Karen Spalding and I investigated what was probably the

site of one of the branch oracles. It was located at Mamaq in the Rimac Valley and was dedicated to the wife of Pachacamac (Davila Brizeño 1965:163).[6] The shrine consisted of low platform mounds around three sides of a plaza. The pottery fragments from the site indicate that the structures were built and used after the area was incorporated into the Inca state. Virtually all of the several thousand sherds we examined we made in the local style (Feltham 1983:393-703). About half a dozen fragments came from vessels that were made on the coast in the fancy style of the Ichma potters; they constitute the major evidence for Pachacamac influence at the site. There were no fragments of Inca style vessels around the structures, in spite of the fact that there was a small Inca installation located within shouting distance of the shrine.

The patterns of pottery associations at the site indicate that the branch oracle was controlled and primarily used by local peoples. The presence of a few fancy coastal vessels suggests some connection with the Temple of Pachacamac. The absence of Inca pottery vessels or local imitations of them indicates that the branch oracle was not closely tied to the Inca state apparatus. This also suggests that Pachacamac and the Incas were not seen as being closely linked in this province; this is substantiated by the fact that an Inca inspector in Huarochirí did not know the identity of Pachacamac's son (Dioses y Hombres 1966:113-119).

A different situation prevailed in the Chincha Valley where other branch oracles were located and where Pachacamac held lands (Menzel and Rowe 1966:68). Here, the pottery associations that occur at a number of sites around La Centinela, the local and Inca administrative center of the valley, indicate that there was a very close linkage between Pachacamac and the Incas. Furthermore, it has been argued that Chincha was

subordinate to both in Inca times, because the imitation Inca and central coast pottery types constituted more than three quarters of the pottery vessels found in the graves of the cemetery associated with La Centinela (Menzel and Rowe 1966:68-69; Menzel 1966). In other words, the prestige of the local pottery tradition and its use by the local elite diminished dramatically after the arrival of the branch oracles and the Incas.

It appears that the caretakers of Pachacamac and the Incas were closely linked in those areas which were beyond the imperial frontiers when the branch oracles were established in them. They seem to have been less closely linked with each other in those areas where the branch oracles were established after their peoples had already been incorporated into the imperial state. At Pachacamac, the site of the principal shrine dedicated to the oracle and an Inca provincial capital as well, the patterns of pottery associations do not indicate a particularly close relationship between the Incas and the Ichma caretakers of the shrine. Most of the Inca pottery and local imitations of it are concentrated around the Temple of the Sun and other structures at the northern end of the site that were apparently part of the provincial capital; vessels manufactured in the local pottery style were also used at the Sun temple (Strong and Corbett 1943). Inca pottery and its local imitations were not common in the refuse around the Temple of Pachacamac, and they were very rare among the grave goods of individuals who were buried in front of the shrine after it was enlarged.[7] Inca and the local imitative wares were also uncommon in the walled compounds located near the shrine of the oracle (McDougle, personal communication).

When the Spaniards arrived, Pachacamac's influence was greatest in

the northern and central parts of the empire--the area that was incorporated by the oracle's ally, Topa 'Inka. The oracle was worshipped by coastal peoples from Huarura to Arica, and origin myths in which he was depicted as the creator of the world were known as far north as Piura (Calancha 1638:92, 234-236, 407-410). Pilgrims bearing gifts of gold, silver, and cloth journeyed distances of 300 leagues to consult the oracle at his principal shrine (Estete 1947:339). Traditional leaders from the polities of Mala, Hoar, Gualco, Chincha, Guarva (Cañete), Colixa, Sallicaimarca, and others brought gifts of gold and silver to Pachacamac after the Spaniards arrived at the site (Estete 1947:340).

The ailing emperor, Wayna Qhapaq, consulted Pachacamac about his failing health shortly before he died (Pizarro 1965:181). Furthermore, the oracle supported Washkar in the struggle that followed over succession to the throne. Both Washkar and his mother are said to have made sacrifices and presented offerings to Pachacamac (Cabello Valboa 1951:397-398; Pizarro 1965:181-183; Gutierrez de Santa Clara 1963, vol. 3:226-228). That Washkar's mother belonged to the corporation founded by Topa 'Inka suggests that the alliance between the Ichma caretakers of the oracle and this panaqa persisted for several generations (Sarmiento de Gamboa 1960:265, 271).

What does this tell us about the development and structure of pre-Columbian states in the Andes? First, it suggests that the Inca political system was not a stable, fixed structure constructed from the bottom up by builders following the plans of some distant architect. Instead, the Inca state apparatus was like a growth that developed from the continually changing relationships between different groups in Inca society and shifts in their alliances and rivalries with the members of

other Andean polities. It was the product of rough agreements between the rulers and the ruled that were continually tested against what was actually happening and that were modified to bring them into accord with existing practices and conditions.

Second, the power of Pachacamac was based on its alliances with the Inca royalty, especially with the panaqa of Topa 'Inka, and on its control of ideology which was the cement that held Andean societies together. There were two components to this ideology. One consisted of a set of myths that defined the limits of social units through the idiom of descent, that prescribed correct or appropriate behavior toward kinsmen as well as the members of other groups, and defined hierarchical relationships between groups which were expressed in terms of separate origins or genealogical proximity to the founder of a kindred. The other component consisted of a set of ceremonies or rituals. These were celebrations in which all the members of a community participated, and the squabbling, petty rivalries, and competition that characterized the day-to-day relations of a people were either set aside or channeled into directions that were acceptable to all concerned. The control of ideology--the content of the myths and the performance of the ceremonies--allowed the spokesmen of Pachacamac to appropriate, either directly or through intermediaries, the surplus labor and social product of others.

Third, the alliance of the Incas, especially the panaqa of Topa 'Inka, and the Ichma caretakers of the oracle and their policies toward each other and toward other polities and communities in the Andes effectively precluded the formation of an imperial state in which all power emanated from the Inca ruling elite. They undermined any tendencies in this direction by creating the conditions for the transformation

of hierarchically arranged social categories--defined in ideological terms, like descent or separate creation--into social classes that were based on and reflected differential access to surplus social product. At the time of the Spanish invasion, the class structure that was emerging was still seen largely in ideological terms that masked and obscured the true nature of the relations of exploitation that had developed since the empire was formed. As the real nature of these relations was gradually exposed, the Inca state began to appear increasingly more fragile, since its legitimacy and power rested on control of ideological symbols--a control that was slipping away as new forms of exploitation emerged and the composition of the dominant class was transformed (Patterson 1984).

Footnotes

1. Cieza de León (1967:195-196). Strong and Corbett (1943) show that the Temple of the Sun at Pachacamac was built after the inhabitants of the area were incorporated into the Inca state. Eugene McDougle (personal communication) indicates that the refuse which accumulated next to the Temple of the Sun contains pottery types that occur only in the middle and later parts of the Late Horizon. This suggests that the shrine was built immediately after the area was incorporated into the imperial state and that refuse began to accumulate next to the Temple of the Sun toward the end of Topa 'Inka's reign--ca. 1493 according to the dates provided by Cabello Valboa.

2. Irene Silverblatt (1976, 1980, 1981) provides the most extensive and insightful analysis of gender relations in the Inca state.

3. Uhle (1903) provides archaeological evidence indicating that the Temple of Pachacamac was enlarged during the Late Horizon after the area was incorporated into the Inca state. See also Dioses y Hombres (1966:127).

4. John H. Rowe (personal communication) has argued that the branch oracle was built near Andahuaylillas, while R. Tom Zuidema (personal communication) has suggested that the third branch oracle was established at Andahuaylas on the road from the coast to Cuzco. For the purpose of this paper, the location of the third branch oracle is not as important as its existence.

comarcanos se governavan . . . [1558]. Studien zur Kulturkünde, dritter Band, Quellan zur Kulturgeschichte des prakolumbischen Amerika, edited by Herman Trimborn: 217-246. Frankfurt.

Cieza de León, Pedro
1967 El señorío de los Incas [1554]. Instituto de Estudios Peruanos, Lima.

Cobo, Bernabé
1956 Historia del Nuevo Mundo [1653]. Biblioteca de Autores Españoles 91-92. Ediciones Atlas, Madrid.

Davila Brizeño, Diego
1965 Descripción y relación de la provincia de los Yauyos toda, anan Yauyos, y lorin Yauyos . . . [1586]. Relaciones geográficas de las indias, edited by Don Marcos Jímenez de la Espada. Biblioteca de Autores Españoles 183:155-165. Ediciones Atlas, Madrid.

Dioses y Hombres
1966 Dioses y hombres de Huarochirí [1592]. Museo Nacional de Historia y Instituto de Estudios Peruanos, Lima.

Estete, Miguel de
1947 La relación del viaje que hizo en Señor Capitan Hernando Pizarro por mandado del Señor Gobernador, su hermano, desde el pueblo de Caxamlaca á Parcama, y allí á Jauja [1534]. Historiadores primitivas de indias, tomo 2. Biblioteca de Autores Españoles 26:338-343. Ediciones Atlas, Madrid.

Feltham, Jane Patricia
1983 The Lurín Valley, Peru, A.D. 1000-1532. Unpublished Ph.D. Dissertation in Anthropology, Institute of Archaeology, University of London, London.

Gutierrez de Santa Clara, Pedro
1963 Historia de las guerras civiles del Perú [1548]. Cronicas del Perú. Biblioteca de Autores Españoles 166. Ediciones Atlas, Madrid.

Huaman Poma de Ayala, Felipe
1936 Nueva corónica y buen gobierno [1615]. Travaux et Mémoires de l'Institut d'Ethnologie 23. Paris.

Menzel, Dorothy
1959 The Inca occupation of the south coast of Peru. Southwestern Journal of Anthropology 15:125-142.

1966 The pottery of Chincha. Ñawpa Pacha 4:77-144.

Menzel, Dorothy and John H. Rowe
1966 The role of Chincha in late pre-Spanish Peru. Ñawpa Pacha 4:63-76.

5. Castro and Ortega (1936) indiacte that wak'as whose predicitions were accurate could ask for larger offerings and sacrifices.

6. This wak'a may well have been identified with a highland wak'a known as Chaupiñamca, the daughter of Pariacaca (Dioses y Hombres 1966:73-75).

7. This statement is based on an analysis of the gravelots excavated in front of the Temple of Pachacamac by Uhle (1903). The materials are located in the University Museum, University of Pennsylvania, Philadelphia. The gravelot associations were reconstructed in 1966 by Nicholas Hellmuth and me.

Acknowledgements. The impetus for this paper was provided by an invitation to bring together historical and archaeological information dealing with the processes of class formation in the Andes. Earlier versions of it were presented at the annual Chacmool Conference of the University of Calgary, Calgary, November 1983, and at the annual meeting of the American Anthropological Association, Chicago, November 1983. It has profitted from the encouragement and constructive criticisms of Christine Gailey, Irene Silverblatt, Karen Spalding, and Jeter Gran. It has also profitted from the comments and writings of Billie Jean Isbell, Eugene McDougle, Dorothy Menzel, John V. Murra, John H. Rowe, and R. Tom Zuidema. I thank all of them for their help and absolve them of any responsibility for my errors of judgement or interpretation. I also want to acknowlege the support of the National Science Foundation and Temple University, which have provided the funding and the time that have allowed me to carry out the research on which this inquiry is based.

References

Albornoz, Cristobal de
1967 Instrucción para descubrir todas las guacas del Pirú y sus camayos y haziendas [1580]. Journal de la Société des Américanistes LVI-1:17-39.

Bram, Joseph
1941 An analysis of Inca militarism. American Ethnological Society Monograph 4. New York.

Cabello Valboa, Miguel
1951 Miscelánea antártica; una historia del Perú antiguo [1586]. Instituto de Etnología, Facultad de Letras, Universidad Nacional Mayor de San Marcos, Lima.

Calancha, Antonio de
1638 Corónica moralizada del orden de San Agustín en el Perú, con successors egenplares en esta monarquia. Pedro Lacavalleria, Barcelona.

Castro Cristobal de and Diego de Ortega Morejon
1936 Relacion y declaracion del modo que este valle de chincha y sus

Murra, John V.
1980 The economic organization of the Inka state. Research in Economic Anthropology Supplement 1. JAI Press, Greenwich.

Netherly, Patricia J.
1977 Local level lords on the north coast of Peru. Ph.D. Dissertation in Anthropology, Cornell University, Ithaca.

Pachakuti, Juan de Santa Cruz
1879 Relacion de antigüedades deste reyno del Pirú [early 17th century]. Tres relaciones de antigüedades peruanas 229-328. Publícalas el Ministerio de Fomento, Madrid.

Patterson, Thomas C.
1984 Exploitation and class formation in the Inca state. Manuscript in possession of the author.

Pizzaro, Pedro
1965 Relación del descubrimiento y conquista de los reinos del Perú, y del gobierno y orden que los naturales tenian, y tesoros que se en ella se hallaron ...[1571]. Crónicas del Perú, tomo 5. Biblioteca de Autores Españoles 168:167-242. Ediciones Atlas, Madrid.

Rostworowski de Diez Canseco, María
1960 Succession, coöption to kingship, and royal incest among the Inca. Southwestern Journal of Anthropology 16:417-427.

1972a Breve informe sobre el señorío de Ychma or Ychima. Boletín Seminario de Arqueología 13:37-51.

1972b Las etnías del valle de Chillón. Revista del Museo Nacional 38:250-314.

Rowe, John H.
1945 Absolute chronology in the Andean area. American Antiquity 10:265-384.

1967 What kind of settlement was Inca Cuzco? Ñawpa Pacha 5:59-76.

1979 An account of the shrines of ancient Cuzco. Ñawpa Pacha 17:1-80.

Santillan, Fernando de
1927 Relación del orígen, descendencia, y política y gobierno de los Incas [1563-1564]. Colección de libros y documentos referentes a la historia del Perú 9:1-124. Imprenta y Libreria Sanmartin y Ca., Lima.

Sarmiento de Gamboa, Pedro de
1960 Historia de los incas [1572]. Biblioteca de Autores Españoles 135:189-279. Ediciones Atlas, Madrid.

Silverblatt, Irene
1976 Principios de organización femenina en el Tahuantinsuyu. Revista del Museo Nacional 42:299-340.

1980 Andean women in the Inca empire. Feminist Studies 4:36-61.

1981 Moon, sun, and devil: Inca and colonial transformation of Andean gender relations. Ph.D. Dissertation in Anthropology, University of Michigan, Ann Arbor.

Strong, William D. and John M. Corbett
1943 A ceramic sequence at Pachacamac. Archeological studies in Peru 1941-1942, by William Duncan Strong, Gordon R. Willey, and John M. Corbett. Columbia Studies in Archeology and Ethnology 1:27-122. Columbia University Press, New York.

Uhle, Max
1903 Pachacamac; report of the William L. Pepper, M.D.,LL.D., Peruvian expedition of 1896. Department of Anthropology, University of Pennsylvania, Philadelphia.

The Spanish League and Inca Sites: A Reassessment of the 1566 Itinerary of Juan de Matienzo through N.W. Argentina

Gordon C. Pollard
State University of New York
Plattsburgh, New York

One source of ethnohistoric information that has long been recognized for its relevance to the Argentine northwest is the itinerary of the Spanish oidor Juan de Matienzo, initially written in 1566 (Jiménez de la Espada 1965: 70-74). This important document describes a route, with stopping points and league distances, from Charcas (La Plata), Bolivia, through highland N.W. Argentina, to Santiago del Estero east of the Andes, and on to the port of Buenos Aires. The document and portions of it have been published several times (see Krapovickas 1978: 80 for a review of these), and its incorporation in Matienzo's 1567 Gobierno del Perú includes slight variations in some wording and details (Lohmann Villena 1967: 278-289).

One of the enticing features of the 1566 document (which was a letter to the king of Spain) is that it was written close to the time of initial Spanish penetration into N.W. Argentina. Diego de Almagro had first entered the region early in 1536 as part of the conquest of Chile, having started southward from Cuzco in 1535 (Lizondo Borda 1942: 83-85; 1943: 29; Reyes Gajardo 1957: 29; Strube E. 1958; Pocock 1967: 22). The first major incursion, however, was to occur late in 1543, when Diego de Rojas proceeded southeastward out of the highlands and into Tucumán (Lizondo Borda 1942: 85-91; Levillier 1927: 102-106; Reyes Gajardo 1957: 29). Subsequent governors attempted to establish a Spanish settlement in the region, including Barco I (1550) near present Monteros, Tucumán; moved to become Barco II (1551) at or near present San Carlos in the Calchaquí Valley; then Barco III (1552) near present Santiago del Estero; and finally Córdoba del Calchaquí (1559) at present San Carlos (see Levillier 1927: 168, 181-183; Reyes Gajardo

1938: 18-20, 25; Pocock 1967: 191). Notably, Córdoba del Calchaquí was the only Spanish settlement to be mentioned by Juan de Matienzo in the 27 stopping points of his itinerary from Charcas to the Andes of Tucumán.

Matienzo's highland itinerary from Bolivia through N.W. Argentina can thus be viewed as a primary source of several kinds of information: (1) it is primarily a list of specific Indian settlements and Inca tambos along a specific pre-Spanish road or trailway; Matienzo's brief description of each stopping point clearly distinguishes between Indian villages ("pueblos") and Inca "tambos." When coupled with archaeological data, one can attempt to verify the location of sites, as well as to attempt reconstruction of 16th century Indian "tribal" distributions (e.g., Krapovickas 1978, Gonzales 1981). By extension, with the frequent reference to tambos, we can assume we are also dealing with a route intimately linked to previous Inca domination, with its state controlled flow of goods and people (cf., Zapater Equioiz 1981). If verified archaeologically, the route could therefore reflect some aspects of the cultural geography of Inca presence in the region; (2) since Matienzo gives league distances between stopping points, a basis is provided for determining the degree of corrrespondence between Spanish leagues and current kilometers, and as well a basis for assessing the utility of league figures for predicting the location of specific sites mentioned in the itinerary. These potential applications of Matienzo's account have long been recognized (e.g., Boman 1908: 705; Lizondo Borda 1943: 75-87), but a lack of systematic survey and of relatively accurate intersite distances for known points have precluded such potential from being realized until the present. The purpose of this paper is to explore and reexamine several facets of Matienzo's itinerary along these lines.

Matienzo's League

Part of the problem of utilizing the league distances given by Matienzo

is that the league is known to have varied from country to country (Levillier 1927: 24), and to have had different lengths for different purposes. For example, the geographer Chardon describes a "legua legal" (statute league) equivalent to 4.19 km., and a "legua común" (common league) equal to 5.57km., the latter generally used for calculating travel distances (Chardon 1980: 295). While the current usage of the league in South America is equal to 5 km. (Levillier 1927: 24), there are several 16th century documents from Peru and Tucumán which suggest the league had been standardized at 17½ leagues to one geographic degree (see Levillier 1927: 22-24, note 28; Lizondo Borda 1943: 75, note 1). Thus, by modern calculations, if one geographic degree equals ca. 111 km. (69 miles), then one league would equal 6.34 km. (cf. Levillier 1927: 24, note 28).

The problem is exacerbated, however, in that the league is also known to have varied in actual distance depending on the degree of ruggedness of the terrain being traversed, since the league was also defined as the distance one could walk in one hour (Diccionario de Autoridades (1726-37) 1963 II: 380). The league was thus as much a reflection of time as of distance (cf. Raimondi 1874 I: 68, quoted in Rostworowski 1981: 386). This could well result in apparent inconsistencies in kilometer per league correspondences when different intersite correlations are compared.

In an early attempt to trace Matienzo's itinerary from the Bolivia/Argentine border southward to the lower Calchaquí Valley in Salta Province, Boman (1908: 705) estimated a distance of 500 km. for the 12 day/journeys from Calahoyo to Angastaco, which Matienzo says involved 66 leagues. This gave an average kilometer per league correspondence reasonably close to Boman's assumption that a colonial league was approximately 8 km.

Lizondo Borda, in a later attempt to reconstruct Matienzo's route through Argentina (1943: 73-87), assumed the accuracy of a 6.4 km. league,

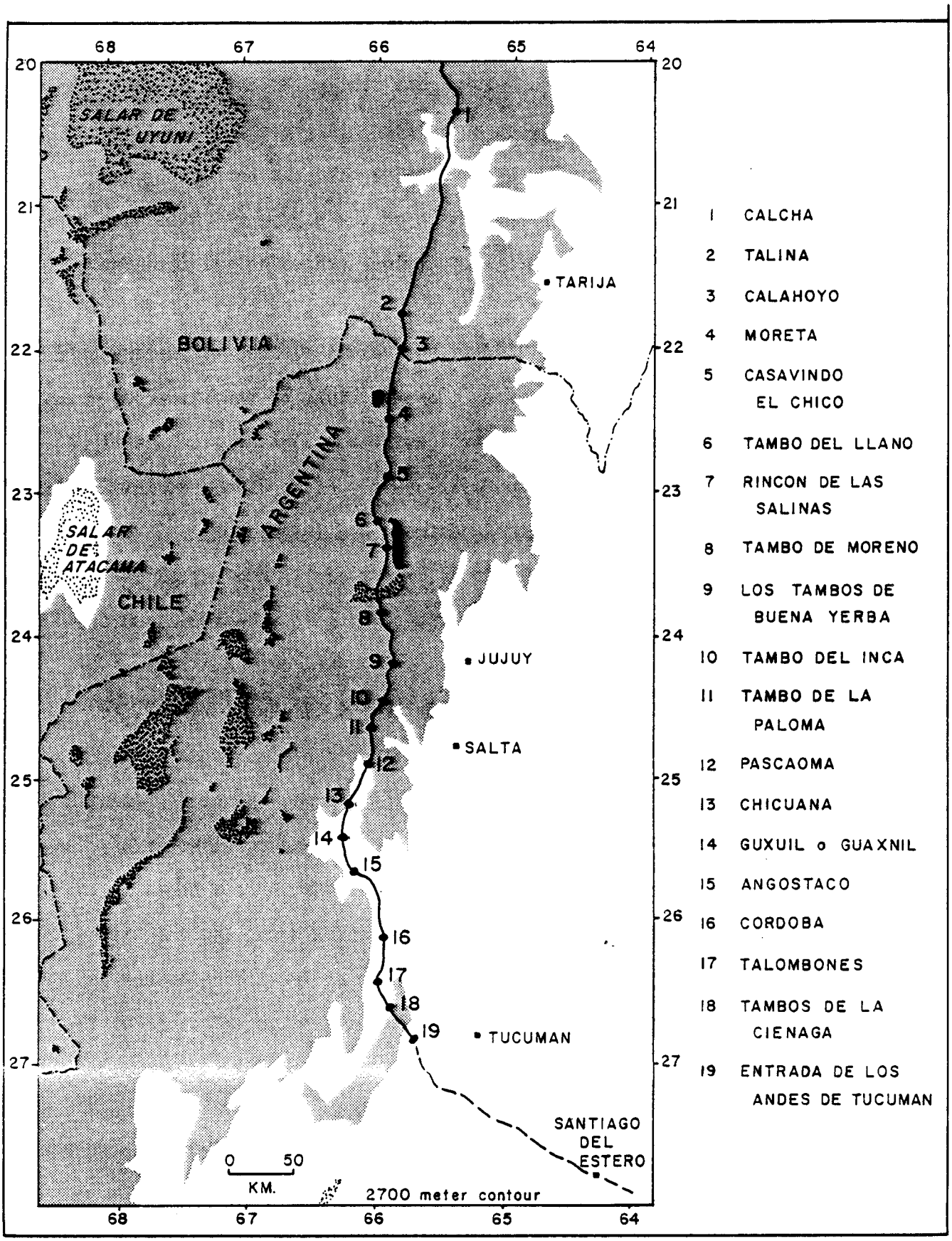
but did not employ such a calculation in trying to plot or identify specific points on the itinerary, even though he did utilize modern maps of the region as an aid in deducing probable route segments.

With more complete archaeological data and improved geographical maps for N.W. Argentina, it now appears appropriate to attempt a more systematic analysis of that portion of Matienzo's itinerary. Modern photogrammetric maps not only depict topography and place names with great detail and accuracy, but also show the location of both major and minor roads and trails throughout the region. Using a series of Argentine maps varying in scale from 1: 100,000 to 1: 1,000,000 (see list of maps at the end of this paper), a cartographer's rolling-wheel map-measure instrument was employed to calculate the kilometer distance between known points of Matienzo's itinerary, following existing trails and roads. Like Boman and Lizondo Borda previously, I have attempted to estimate the location of all stopping points on the itinerary between Calahoyo and the Andes of Tucuman, but I have also made distance calculations between each point. Where not confirmed by the continued use of original place names, my estimates of specific locations are based where possible on (1) known archaeological sites which may coincide with Matienzo's descriptions, (2) the known distribution of locations with adequate water and pasturage to serve as provisioning posts, and (3) an assumption that Matienzo's route reflects a sequence of points which form as direct and linear a progression as topography and existing trails provided. By taking such a large section of Matienzo's itinerary, a reasonable basis is provided for comparing kilometer/league correspondences between stoppping points.

Initial results of this attempt are given in the appendix to this paper, which gives comments on each stopping point, as well as kilometer per league calculations. In addition, the reconstructed route is plotted on the map of figure 1.

Figure 1

A RECONSTRUCTION OF MATIENZO'S 1566 ROUTE FROM CALCHA TO TUCUMAN



The section of Matienzo's itinerary considered here comprised a total of 122 leagues, and an estimated 832 kilometers as reconstructed. This gives an average of 6.8 kilometers per league, which is within 7% of the "precise" 6.34 kilometers per league calculated above on the basis of 16th century documentation.[1] Perhaps more importantly, however, is that the 18 calculations for the distances between points yielded a range of 6.0 to 7.5 kilometers per league. While such variation might easily seem attributable to the relative imprecision of the way in which leagues were originally measured, or of the inadequacy of archaeological data for confirming several of Matienzo's itinerary points, another pattern can be seen to emerge from the data. The higher values for the kilometers per league between points correspond to those sections of the itinerary which are flattest in terrain, such as portions of the puna or along gently sloped river valleys (e.g., Calahoyo to Casavindo el Chico; Rincón de las Salinas to Tambo del Moreno; Chicuana to Angastaco; and Tolombones to Tambos de la Ciénaga). Conversely, the lower kilometer per league values correspond to those sections which involve traversing the more mountainous or circuitous roads (e.g., Tambo de Moreno to Los Tambos de Buena Yerba; and Inca tambo at the foot of the pass to enter the Calchaquí Valley, to Pascaoma). In other words, it appears that Matienzo's league distances may well have been based on one-hour's walking time. Since the terrain of the itinerary varied considerably, we should expect kilometer per league values to vary as well. As reconstructed here, Matienzo's route is logical and compatible with present archaeo-environmental data, and the league distances can be seen as reasonably accurate, at least for the way in which the league seems to have been operationalized in this area of the Andes in the 16th century.[2]

Matienzo's route into the Calchaquí Valley

One aspect of Matienzo's route, as reconstructed here, deserves special discussion. It has been assumed by virtually all researchers that the entrance to the Calchaquí Valley was at or near the Cuesta del Acay (ca. 5000 meters elevation) at the extreme northern end of the valley (Boman 1908: 698-706; Levillier 1927: 105; Lizondo Borda 1943: 80; Strube E. 1958: 273; 1963: 46,87). Until now, this assumption has seemed warranted, particularly because in historic times the Acay pass has been the primary route communicating the valley with the puna and other areas of the Andes (cf., Bowman 1924: 202; Santillán de Andres 1982: 108). However, that interpretation of the itinerary has posed serious difficulties in terms of trying to identify appropriate sites, with reasonable spacing, which would be compatible with Matienzo's description of the several stopping points on either side of the pass into the valley. Boman (1908: 704) recognized this difficulty, but seeing no alternative, proposed a rather circuitous route from El Moreno (interpreted by him as "Tambo de Moreno" southeast of Salinas Grandes on the puna), westward and southward to San Antonio de los Cobres, and hence into the Calchaquí Valley. Lizondo Borda (1943: 78-80) disagreed with a portion of Boman's reconstruction, and proposed that the route had continued southward from El Moreno to the point where the Arroyo Punta Ciénaga enters the Quebrada del Toro (that point being interpreted by Lizondo Borda as "Tambos de Buena Yerba"), then turning westward through or near Incahuasi, and eventually past the Cuesta del Acay and into the Calchaquí Valley.

It is my belief that Lizondo Borda was correct in interpreting Punta Ciénaga, with its extensive natural pasturage, as the "Tambos de Buena Yerba." Indeed, subsequent archaeological work has confirmed an Inca tambo at that precise location (Raffino 1969, 198]: 234). However, it

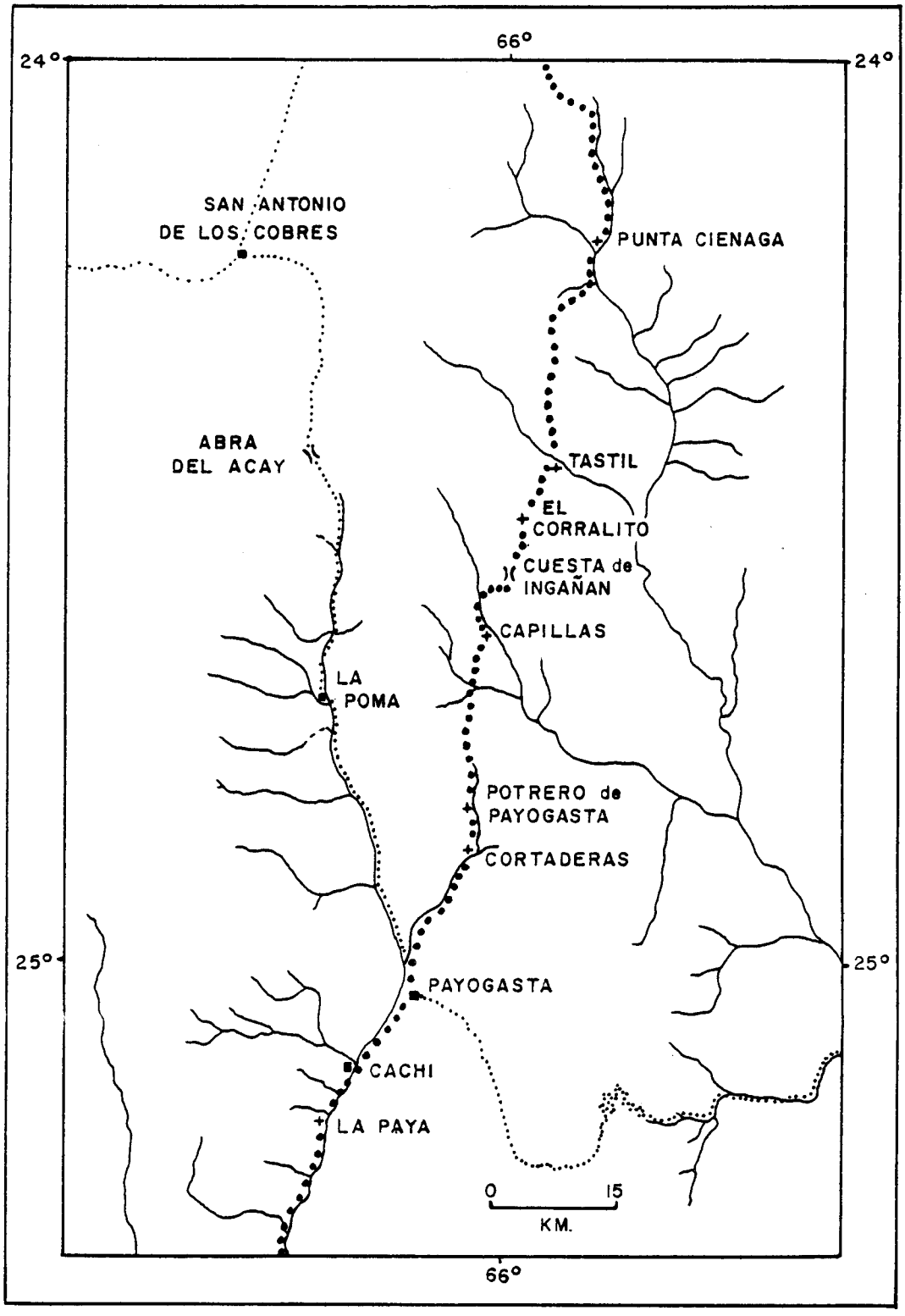
is my further belief that the route southward into Punta Ciénaga had come from Moreno Chico rather than from El Moreno, which in turn had been approached from the north by a road actually traversing Salinas Grandes from Rinconadillas (Matienzo's "Rincón de las Salinas") rather than turning between the Salinas and the Laguna de Guayatayoc. Such an interpretation as offered here precludes hypothesizing rather irregular deviations from what is easily a more direct north-south route.

The question then becomes one of the continuation from Punta Ciénaga ("Tambos de Buena Yerba") onward to the approach to the Calchaquí Valley. Here I suggest that the recent archaeological survey of Pío Pablo Díaz (Director of the Museo Arqueológico de Cachi), and John Hyslop (New York) provides the answer. Their survey was of an Inca road which runs from Cortaderas in the Calchaquí Valley northeastward across the Cuesta de Ingañan and on past Tastil in the Quebrada de las Cuevas. The study documented an exceptionally large number of sites of indisputable Inca affiliation along the route (Hyslop and Pablo Díaz 1983), as well as three large apachetas, or stone piles, at the cuesta, or pass. Notably, comparable sites have not been found for the northern section of the Calchaquí Valley above La Poma or just north of the Abra del Acay (cf., Lorenzi and Pablo Díaz 1976), and recent study of archaeological sites in the La Poma vicinity shows that late Prehispanic occupation of the northern end of the valley was minimal (Pollard 1983). It thus seems unlikely that Matienzo's route into the valley was through the Acay pass. The Cuesta de Ingañan route, with its sequence of Inca tambos, and lying in a north-south line from Punta Ciénaga in the Quebrada del Toro, offers a more logical and consistent alternative.[3]

Of the sites found by Hyslop and Pablo Díaz, the site of El Corralito could well be the tambo "al pie del puerto que se pasa para entrar en el

Figure 2

ROUTE PROPOSED FOR THE ENTRANCE INTO THE CALCHAQUI VALLEY AS DESCRIBED BY MATIENZO
(heavy dotted line)



valle de Calchaquí" described by Matienzo. From there to the Cuesta de Ingañan is 9 km., and the next Inca site en route is the one at Capillas, with its ruins of a large platform/plaza and double gabled structure. I suggest that Capillas is Matienzo's site of "Tambo de la Paloma." From there to the next stopping point, "Pascaoma," is a distance of 6 leagues, which fits well with the location of the known Inca site of Cortaderas. At this point one is well within the geographic basin of the Calchaquí Valley (see figure 2).

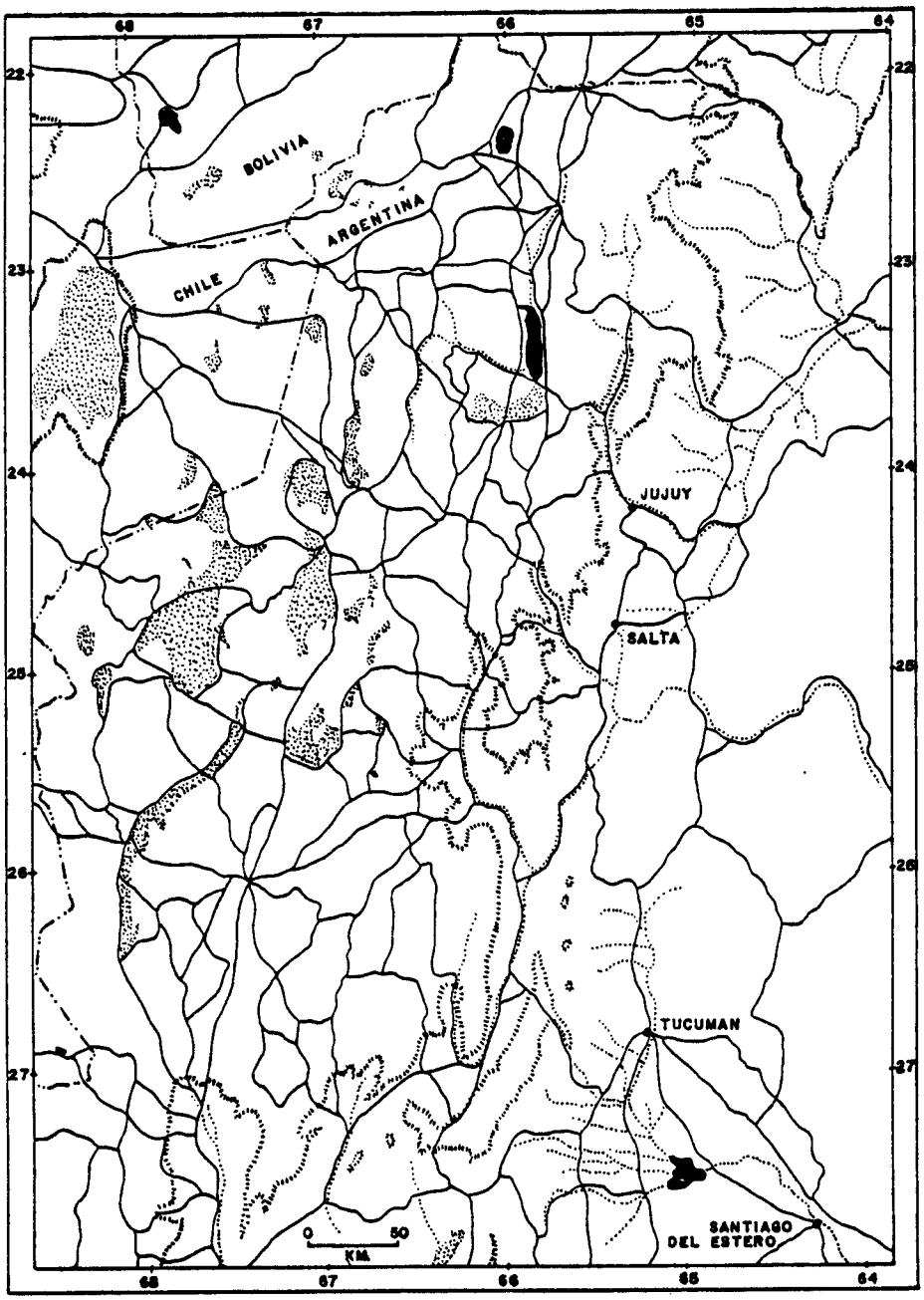
Conclusions

It is my hope that these observations and analyses give greater meaning and understanding to this classic 16th century document. At the same time, we should keep Matienzo's itinerary in its full context.

Dating to relatively early in the Spanish conquest period, and with its numerous references to Inca tambos, Matienzo's description clearly reflects a route which had been important in the prior Inca conquest and control of N.W. Argentina. From Talina in southern Bolivia to the eastern entrance to the Andes de Tucumán in Argentina, Matienzo's stopping points included 8 tambos, 7 pueblos, 1 tambo/pueblo combination and 3 despoblado (or abandoned) sites. And as an increasing number of studies are demonstrating, Inca presence was manifested throughout the diverse geographic zones of N.W. Argentina, and by a variety of site types which ranged from pure Inca installations to sites with Inca architectural or other artifactual intrusions (cf., Raffino 1978, 1981; Gonzales 1980, 1983; Lorandi 1980, 1982; Madrazo and Ottonello 1966). Accordingly it is to be expected that there were in fact numerous roads and trails, most if not all pre-Inca in origin, which the Inca utilized. By plotting even the major roads and trails found on modern maps (figure 3), one begins to appreciate the potential complexity of the past highland network of

Figure 3

MAJOR ROADS AND TRAILS OF NORTHWEST ARGENTINA



Legend

present roads and trails

rivers

2700 meter contour level

dry salt lakes (salares)

lakes

N.W. Argentina. This network undoubtedly involved what to the Inca were primary, secondary, or even tertiary routes depending upon the status and function of specific sites within the system, as well as upon changes in those statuses and functions through time. As we move toward larger syntheses of archaeological data, the study of the relationships of sites to actual trails will undoubtedly help reveal the structure of Inca culture in its various facets as a centralized state level society and as an empire with peripheral zones and frontiers (e.g., Santoro Vargas 1983).

The Spanish, in seizing this empire, clearly used the prior communication network in pursuing their own conquest goals (e.g., Zapater Equioiz 1981). To that extent, Matienzo's 1566 itinerary is an example of but one route the Spanish explored and utilized in their southward push from the Inca heartland in Peru. As such, it gives us a tantalizing yet limited glimpse of what had been a uniquely Andean power, and of what was to become part of an emerging world system.

Footnotes

1. It is further noted that map-based calculations such as these, particularly on variable-elevation terrain, and at the map scales available, could involve an error of as much as ± 10%.

2. Interestingly, the attempt by Chardon (1980) to calculate kilometer-league correspondence for a late 1580's Spanish itinerary for northern Yucután, Mexico, resulted in a greater range variation (3.5 to 7.0 kilometers per league) than that reported here. The geography of Chardon's study area is seemingly more consistently flat than is Matienzo's route through N.W. Argentina, yet Chardon's source refers to both long ("largas") and short ("pequeñas") leagues in its itinerary descriptions. Also, Chardon only calculated straight-line kilometer distances between settlements of the itinerary he analyzed, rather than actual road and trail distances as utilized here.

3. Raffino (1981: 235) generally poses this as one of several possibilities, but makes no corroborating calculations between specific sites.

Appendix

Matienzo's 1566 Route from Calcha to the Andes of Tucumán

Route segment	leagues	km.	km. per league	observations
Calcha ("pueblo de indios Chichas") to Talina ("pueblo de Chichas")	27	180	6.7	There are 5 stopping points from Calcha to Talina; present towns preserve the Calcha and Talina names.
Talina to Calahoyo ("tambo real de Inga despoblado... indios Chichas bien cerca")	5	35	7.0	The name and town of Calahoyo are found on modern maps (IGM 2366-2166); tambo not verified archaeologically.
Calahoyo to Moreta ("pueblo de indios Chichas y tambo del Inga")	7	50	7.1	There is an arroyo, a village which still carry the name Moreta (map SNMG-3c), but they are found to the east of the main north-south road in that locality, along the road to Abra Pampa. The Moreta of Matienzo may thus be a general locality, and I have placed it at the junction of roads at 22 ° 19' south latitude. Tambo not verified archaeologically.
Moreta to Casavindo el Chico ("tambo del Inga")	6.5	49	7.5	I suggest that Casavindo el Chico lies at "Tambillos," very close to the point proposed by Boman (1908, carte archéologique) for this stopping point.
Casavindo el Chico to Tambo del Llano ("despoblado ...hay jagueyes de buena agua y mucha...queden en medio Los Tambos Grandes de Casavindo")	5.5	38	6.9	By the description, Tambo del Llano has to lie south of the present archaeological zone of Casabindo, and I agree with Boman (1908) and Lizondo Borda (1943: 77) that this tambo should lie on the Río Tusaquilla, possibly at the spot called "Agua Chica" (IGM 2366-2166).

Route segment	leagues	km.	km. per league	observations
Tambo del Llano to Rincón de las Salinas ("despoblado")	4	28	7.0	Rincón de las Salinas is highly probably the present town of Rinconadillas, as indicated by Boman (1908: 701) and Lizondo Borda (1943: 78). Inca construction is noted by Raffino (1981: 59).
Rincón de las Salinas to Tambo de Moreno ("es por un llano de salinas, buen camino, está despoblado y cerca indios")	8	60	7.5	As an alternative to the interpretation of Boman (1908: 702), I suggest that Tambo de Moreno lies at the locality of Moreno Chico, which is directly south of Rinconadillas on a trail which crosses the salinas. There are archaeological remains at Moreno Chico according to Boman (1908).
Tambo de Moreno to Los Tambo de Buena Yerba ("que por otro nombre llaman la Ciénaga Crande... despoblado")	6	36	6.0	Proceding southward from Moreno Chico one reaches the Inca tambo of Punta Ciénaga (Raffino 1969) at the confluence of the Arroyo Tres Cruces and the Arroyo Punta Ciénaga in the headwaters of the Quebrada del Toro. I believe the site of Punta Ciénaga to be Los Tambos de Buena Yerba (cf. Raffino 1981: 234).
Los Tambos de Buena Yerba to the "pie del puerto que se pasa para entrar en el valle de Calchaquí, tambo del Inga"	5	37	7.4	The tambo at the foot of the pass (abra? cuesta?) to enter the Calchaquí Valley could well be the Inca site of El Corralito, which lies to the southwest of Santa Rosa de Tastil (Hyslop and Díaz 1983).

Route segment	leagues	km.	km. per league	observations
"De allí por la mañana se pasa el puerto al Tambo de la Paloma...que no hay otra cosa que no sea muy llana, y ésta lo es también"	4	24	6.0	As reconstructed here, the "puerto" is the Cuesta de Ingañan, with the Tambo de la Paloma thus being the Inca site of Las Capillas surveyed by Hyslop and Díaz (1983).
Tambo de la Paloma to Pascaoma ("pueblo de indios de Calchaquí, ques el que ahora está alzado")	6	36	6.0	To the south of Las Capillas are found two important sites of Inca affiliation: Potrero de Payogasta and Cortaderas. With its strategic placement and construction, Cortaderas is interpreted here as being Pascaoma.
Pascaoma to Chicuana ("pueblo de Calchaquí)	6	39	6.5	Chicuana is undoubtedly the important village site of La Paya (Gonzales 1981).
Chicuana to Guxuil ("pueblo de indios")	4	30	7.5	Guxuil has not been located precisely archaeologically. It should lie at or near the present town of Molinos.
Guxuil to Angostaco ("pueblo de indios")	4	30	7.5	Angostaco is preserved by a present town with the same name
Angostaco to Córdova ("ciudad...que solía ser de españoles, questá ahora despoblada")	6	40	6.7	Córdova is the present town of San Carlos (Reyes Gajardo 1957: 42; 1958: 20).
Cordova to Talombones ("pueblo de indois")	5	35	7.0	Talombones is undoubtedly the archaeological village site at present town of the same name (Aparicio 1948).

Route segment	leagues	km.	km. per league	observations
Talombones to Tambos de la Ciénaga	4	30	7.5	The tambos of La Ciénaga have not been verified archaeologically, but could well lie near "El Bañado," in the vicinity of the Quilmes site in the Santa María Valley, as suggested by Lizondo Borda (1943: 82).
Tambos de la Ciénaga to Gualaqueni ("Pueblo de indios") "y adelante, tameria del Inga... de allí a la boca de la quebrada, entrada de los Andes de Tucumán"	9	55	6.1	Two day/journeys. Gualaqueni should lie near the present town of Amaicha del Valle, and "the mouth of the quebrada" should be at Taff del Valley; the mentioned Inca tambo has not been reported archaeologically.

Maps Utilized

Argentina maps:

SNMG (Secretaría Nacional de Minería y Geología) 1:100,000; 3c (1974), 6d (1955-59), 7d (1974).
DNGM (Dirección Nacional de Geología y Minería) 1:200,000: 6c (1962), 7c (1960).
INGM (Instituto Nacional de Geología y Mineria) 1:200,000: 1a-b (1965), 2a (1967), 9e (1965), 10e (1967), 11e (1965).
DNM (Dirección Nacional de Minería) 1:200,000: 2b (1962), 7d (1954).
DGMGH (Dirección General de Minas, Geología e Hidrología) 1:200,000: 8e (1926).
IGM (Instituto Geográfico Militar) 1:500,000: 2366-2166 (1967), 2566 (1968), 2766 (1972).
CAM (Carta Aeronaútica Mundial, by Instituto Geográfic Militar for the Argentine Air Force) 1:1,000,000: 3259 (1971), 3316 (1971).

Chilean maps:

IGM (Instituto Geográfico Militar) 1:500,000: 2100-6500 (1972), 2300-6500 (1972).

References

Aparicio, Francisco de
1948 Las ruinas de Tolombón. Actes de XXVIII Congres International des Américanistes, pp. 569-580. Paris. (1947).

Boman, Eric
1908 Antiquités de la region andine de la Republique Argentine et du Desert d'Aracama. 2 vols. Imprimerie Nationale, Paris.

Bowman, Isaiah
1924 Desert Trails of Atacama. American Geographical Society, Special publication no. 5, New York.

Chardon, Roland
1980 The elusive Spanish league: a problem of measurement in sixteenth-century New Spain. Hispanic American Historical Review 60 (2), pp. 294-302.

Diccionario
1963 Diccionario de Autoridades (1726-1737), vol. II, Madrid.

Gonzales, Alberto Rex
1980 Patrones de asentamiento incaico en una provincia marginal del imperio. Relaciones XIV, no. 1, pp. 63-82. Buenos Aires.

1981 La cuidad de Chicoana, su importancia histórica y arqueológica. Síntomas, no. 3, pp. 15-21. Buenos Aires.

1983 Inca settlement patterns in a marginal province of the Empire: sociocultural implications, in Prehistoric Settlement Patterns, edited by E.Z. Vogt and R.M. Leventhal, pp. 337-360. University of New Mexico Press and Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Hyslop, John and Pío Pablo Díaz
1983 El camino Incaico: Calchaquí-Tastil (N.O. Argentino). Gaceta Arqueológica Andina, vol. 1, no. 6, pp. 6-8. Instituto de Estudios Andinos, Lima.

Jiménez de la Espada, Don Marcos
1965 Relaciones geograficas de Indias--Perú. Edition by José Urbano Martinez Carreras. Ediciones Atlas, Madrid. (contains the 1566 Matienzo itinerary, vol. II, pp. 70-75).

Krapovickas, Pedro
1978 Los indios de la puna en el siglo XVI. Relaciones XII, pp. 71-94, Buenos Aires.

Levillier, Roberto
1927 Nueva crónica de la conquista del Tucumán. Vol. 1, 1542-1563. Sucesores de Rivadeneyra, Madrid.

Lizondo Borda, Manuel
1942 Historia del Tucumán (siglo XVI). Instituto de Historia, Linguistica y Folklore, VIII. Departamento de Investigaciones Regionales. Universidad Nacional de Tucumán.

1943 Descubrimiento del Tucumán; el pasaje de Almagro; la entrada de Rojas; el itinerario de Matienzo. Instituto de Historia, Linguistica y Folklore, XI. Departamento de Investigaciones Regionales. Universidad Nacional de Tucumán.

Lohmann Villena, Guillermo (editor)
1967 Govierno del Perú (1567), by Juan de Matienzo. Travaux de L'institut Francais d'etudes Andines, vol. XI, Paris-Lima.

Lorandi, Ana María
1980 La frontera oriental del Tawantinsuyu: el umasuyu u el Tucumán, una hipotesis de trabajo. Relaciones XIV, no. 1, pp. 147-164. Buenos Aires.

1982 Establecimiento incaico "El Potrero" en Andalgalá, provincia de Catamarca. Novedades del Museo de la Plata 1 (4), pp. 34-35.

Lorenzi, Mónica de and Pío Pablo Díaz
1976 La ocupatión incaica en el sector septentrional del valle Calchauí. Actas y memorias del cuarto congreso nacional de arqueología argentina (primera parte). Revista del Museo de Historia Natural de San Rafael, Tomo III, no. 1/4, pp. 75-88.

Madrazo, Guillermo and Marta Ottonello de García Reinoso
1966 Tipos de instalación prehispánica en la región de la puna y su borde. Monografías 1. Museo Etnográfico Municipal "Dámaso Arce," Olavarría.

Pocock, H.R.S.
1967 The Conquest of Chile. Stein and Day, New York.

Pollard, Gordon C.
1983 Prehistoric N.W. Argentina: the Calchaquí Valley Project 1977-1981. Journal of Field Archaeology, vol. 10, no. 1, pp. 11-32. Boston.

Raffino, Rodolfo A.
1969 Nota preliminar sobre dos nuevos sitios incaicos del N.W. Argentino. Etnía 10, pp. 13-15, Olavarría.

1978 La ocupación inka en el N.O. Argentino. Relaciones XII, pp. 95-122. Buenos Aires.

1981 Los inkas del Kollasuyu. Ramos Americana Editora, La Plata (2nd edition 1984).

Raimondi, Antonio
1974 El Perú. 4 vols. Lima.

Reyes Gajardo, Carlos
1938 Apuntes históricos sobre San Carlos del valle Calchaquí de Salta. Unión Salteña, Sociedad Provincial de Fomento, Buenos Aires.

1957 Poblaciones indígenas del valle Calchaquí. Revista del Instituto de Antropología, tomo VIII, 1955-57, pp. 27-59. Universidad Nacional de Tucumán.

Rostworowski de Díez Canseco, María
1981 Mediciones y cómputos en el antiguo Peru. in La Tecnología en el mundo Andino, edited by H. Lechtman and A.M. Soldi, vol. 1, pp. 379-405. Universidad Nacional Autónoma de Mexico. Mexico.

Santillán de Andrés, Selva E.
1982 La región del valle Calchaquí. Revista Geográfica no. 95, pp. 94-109. Instituto Panamericano de Geografía e Historia, Mexico.

Santoro Vargas, Calogero
1983 Camino del Inca en la sierra de Arica. Chungará 10, pp. 47-56. Universidad de Tarapacá, Arica, Chile.

Strube Erdmann, Leon
1958 La ruta de Don Diego de Almagro en su viaje de exploración a Chile. Homenaje a Mons. Pablo Cabrerra. Revista de la Universidad Nacional de Córdoba, número especial, Córdoba, pp. 270-293.

1963 Vialidad imperial do los incas. Universidad Nacional de Córdoba, Instituto de Estudios Americanistas, serie histórica XXXIII, pp. 3-100. Córdoba.

Zapater Equioiz, Horacio
1981 Los incas y la conquista de Chile. Historia, tomo 16, pp. 249-268. Instituto de Historia, Universidad Católica, Santiago.

Written Sources on Andean Cosmogony

George Kubler

Yale University

In ancient America, two widely believed theories of creation existed, one among Mesoamerican peoples, and the other in the Central Andes.

The Andean histories of creation are the main subject, but some discussion of the Mesoamerican cosmogony is necessary because of two conditions. In the first place both may arise from a common ancestry in Asiatic paleolithic time as much as 40,000 years ago when immigration to America is now thought to have begun via Beringia. Secondly the Spanish conquest mingled both traditions Mesoamerican and Andean, in ways that do not disguise their underlying affinity of origin.[1]

Before discussing the Andean tests I should briefly mention the Mesoamerican evidence.

The Legend of the Suns is a cosmogonic narrative preserved in ten fragmentary versions (Moreno, 1967). Parts of it are also shown in eight figural representations as cosmogonal diagrams, where varying schemes of imago mundi and a ring of time cojoin in an emblem of the extent and duration of the Mesoamerican universe.

The narratives are about the incomplete (or imperfect) creations of the universe that have been recognized until now only in colonial Mexican and Maya versions. These explain the coming into being of the universe and the appearance of mankind as a succession of divine creations marked by different suns, named for the agents of their destruction as earth, wind, fire, flood and earthquake. Each of these ages had different natures as to regent deity, color, direction, animal life and food. The

fourth age ended in total destruction, but the gods who had been the previous suns recreated the universe a fifth time at Teotihuacan in A.D. 694, under the dispensation of human sacrifice to maintain the gods in existence. These early colonial versions reflect different periods and peoples. Some narratives mention four ages, while others add a fifth. Those with four ages may be of non-Aztec origin, when the successive creations were thought to form a continuity that was reasserted by human survivors after catastrophes. The Aztec recension, however, turned the preceding ages into failed creations, upon which the new thought had for a short time tried to impose the dispensation of human sacrifices on a very large scale.

Figural representations, both before and after the Conquest, are preserved mainly as pictorial manuscripts, on the same subject of cosmogony, but viewed as maps of ritual objects and processes. Both types, whether cosmological histories or ritual maps, are arranged according to the same chronological system of periodic intervals. These are cycles of 9, 13 x 20, 365 and 584 days interlocking with yearly intervals of 2 x 52 (104), 7 x 52 (364), 8 x 52 (416), and 9 x 15 (468) years of 365 days.

In Peru similar theories of multiple creation were noted by a least sixteen cronistas before 1650. Their accounts divide as two chronological groups. The earlier of these, mentioning only two creations, appears in the period 1550-1572. Another group after 1572 until 1633 includes evolutionary schemes like Acosta's and Garcilaso's, as well as systems of three, four and five separate creations like those of Mesoamerica.

The method of presentation will be to indicate when the author wrote, and what his sources were, followed by a summary of the cosmogony he

presents, and of its relation to other versions of the same notion.

The long list of 16 sources is really shorter, for some authors are only mentioned because they generously borrowed from others, as Garcilaso did from Blas Valera, or Gregorio Garcia from Juan de Betanzos.

Group I (1550-1572)

1. Pedro Gutierrez de Santa Clara was born a mestizo in Mexico City after 1521. He claims to have gone to Peru in 1543/4,[2] but he said he returned with Pedro de Gasca to Panama in 1550. His history of the civil wars has an ending at his death, in 1605.

The history of creation Gutierrez presents may have been collected before 1550 (Gutierrez, 1963:231-234), but it is more likely that he took it from Gómara after 1552; Gómara was Hernando Cortés' secretary and biographer and therefore close to Mexican sources.

In the Gutierrez account the first gods were Cons and Pachacama, or the sun and moon as a couple who populated the earth. Cons appeared first and formed earth, sun, sky, moon, stars and all living things before leaving earth for sky. Many centuries later Pachacama came as creator and reformer, destroying everything made by Cons, and turning people into monkeys, before creating another humanity after a flood.

Gutierrez may have taken the monkeys and the flood from the Mexican Legend of the Suns, the various texts of which are analyzed by Roberto Moreno de los Arcos (1967). The main theme for Gutierrez, however, is that of a two-time creation, once by Cons, and again by Pachacama. Yet these gods are not given territorial identity, as they will be later on, in 1565-7 by Calvete de Estrella, in <u>De Rebus Indicis</u>.

2. Juan de Betanzos learned Quechua from his Inca wife, Doña Angelina, the sister of Atahualpa and daughter of Huayna Capac. After

serving Pizarro as interpreter, he was commissioned by Viceroy Mendoza to write the Suma y narración (Betanzos, 1968), completing it in 1551. Only the first half of the manuscript has been found, covering events to the reign of Pachacutec.

The first creator was Contitiviracocha, who made heaven and earth leaving all dark. Then he made people who angered him and he turned them into stone at the same hour of creating sun and day, moon and stars. Of the stone people he created other viracochas as replicas or clones of himself to populate the land. These two creations, however, were not separate but the work of the same creator, who multiplied himself in the second one.

3. Francisco Lopez de Gómara was chaplain to Cortés in Spain and never saw Peru. His Historia General de las Indias appeared in print at Valladolid in 1552. It contains a creation story like the one told by Gutierrez about Con and Pachacama (Gómara, 1852:233-234) with other details.

Con was a man from the north without bones calling himself son of the sun who swelled the earth with men and women. Pachacama was also a son of the sun and moon and he exiled Con, turning humans into black cats. A new creation then ended by flood, and the present age will end by sun and moon disappearing after a drought.

Thus two creators are responsible for two creations, followed by two more without named creators. Gómara separately tells the Legend of the Suns in its Mexican form.[3] The legend of Con is seen in ethno-historical evidence from many coastal sites by M. Rostworowski (1977:141-154) as a water deity whose cult preceded Pachacama's in the north and on the coast as far south as Chillón Valley. Gómara, who had access to state papers,

was the first to put Mexico and Peru together as a Renaissance historian.

4. Pedro Cieza de Leon, although depending on interpreters in Peru to understand Quechua, had the guidance of the lexicographer Domingo de Santo Tomás as his preceptor. After four years of travel in Peru he revised the Señorio in Spain between 1552 and 1554. The first two chapters are lost, but the creation story continues in the third as an account of a flood and an origin of humanity in springs and lakes and on peaks (Cieza, 1967). This creation was by Ticiviracocha, a white man accompanying the first emergence of the sun at Titicaca Island. A flood later destroyed all peoples save a few, among whom the Inca rulers emerged in the Andean two-stage account.

Cieza's surviving text is incomplete, opening only after the Ticiviracocha creation. The missing chapters may have mentioned Con as a primary creator, as in the cluster of related sources including Betanzos, Gutierrez and Gómara.

5. Bartolomé de las Casas was never in Peru but when writing the Apologética Historia between 1552 and 1559, he took what he needed from Cieza and Cristobal de Molina. After mention of Condicibiracocha, he names Taguapiracocha as the evil off-spring of the Creator. An interesting pre-Inca condition of rule by lords in small states is mentioned as lasting five or six centuries (Las Casas, 1939:9).

6. Juan Cristobal Calvete de Estrella became chronista en latin in 1587 until his death in 1593 at the court of Philip II. He was never in America. His cosmogony (written 1565-1567) differs from his predecessors' by a separation of Pachacamac and Viracocha as coastal and highland creators. His information may have come from Gasca's papers, which he used in his account of the rebellion of 1565-1567.[4]

7. Blas Valera, a mestizo Jesuit, was more erudite than most writers in this group, being able to write catechisms in both Quechua and Aymara as well as other works destroyed at Cadiz in 1596. He writes of Viracocha as a "dios immenso" who created the sky and its bodies, which Peruvians adored long before idols. Images of his "ideas" were the first to be adored (Valera, 1945:5). This wording suggests the concept of allegory.

Valera too cites Gómara's version of the Leyenda de los soles (Valera, 1945:51). Other remarks by Valera were properly quoted by Garcilaso (1962: 41-352) at length on other topics as well. Valera's work also underlies that of Montesinos, who restructured Andean history in part on the lines of the Leyenda taken by Valera from Gómara.

Group II (1572-1633)

8. Pedro Sarmiento de Gamboa completed the Historia General Indica in 1572. He tells the fable of the origin of Peru (1942:100-110) by interpreting the sources of the period before his time in a narrative reconstruction. He separates two ages as in the sources, but he supplies details occurring only in his account.

The two ages of creation were both by Viracocha (as in Betanzos). The first was of the giants, and the second was of the present peoples of Peru. After them the "inca tyranny" began in A.D. 565.

Porras (1962:281) contrasts Sarmiento's "rude, vital vision" with Garcilaso's "idyllic, tame account" from Cieza. In 1572, the survivors of the Inca lineages attested after hearing Sarmiento's Historia indica and correcting details, that it was "buena y verdadera" (1942:283-4).

9. José de Acosta, the Jesuit historian, was in Peru 1572-86 and in Mexico briefly before returning to Spain (1940:516) where his Historia natural y moral de las Indias appeared in 1590 at Seville. He was

concerned with separating the "natural doctrine" of Peruvian Indians from man-made "denials of the highest God." He also introduced an early idea of social evolution from "savage barbarians" to "tribal communes," and then to "states or monarchies" such as the Inca and Mexican polities. But he says little about their own cosmogonies as these were by his own words "denials of the Highest God" he knew.

10. Cristobal de Molina is probably closest among these authors to the standard of impassive historical objectivity. He was perhaps a mestizo (Molina, 1916, vii-xvi), becoming curate of the parish of the Hospital de Naturales in Cuzco and receiving salary as a preacher in Quechua. Three of his lost writings were on Inca history and sacred places. Fabulas y ritos was written in 1576 (Porras, 1962:88).

For Molina creator gods were not born of woman but immutable and eternal (1916:14). Creation history began with Manco Capac and Viracocha, who were coeval, in making of peoples and turning the disobedient into stone images (1916:8-14), as in the account by Juan de Betanzos.

11. Guaman Poma de Ayala wrote mostly in Quechua between 1612 and 1615, recently translated (1980, edited by J. V. Murra). Claiming to be Garcilaso's cousin, he sought to rival him, adding new information to the record. His was a five-stage developmental sequence: cavedwellers; sowers and builders; weavers and metalworkers; rival powers; and the Inca state. This evolution lasted from creation 2000612 years, during which two vast ages preceded three more totalling 5300 years. Guaman Poma then enumerates seven ages, beginning with 1) those of the dawn, 2) those of the cataclysm, then the five ages of man: primeval; legendary; desolation; growth; warfare; Inca (1980, I, 5-105 and III, 1097-8). This scheme was widely diffused in a recent history written for school use in Peru (Tello, 1939).

12. Garcilaso de la Vega (el Inca) had little to say about cosmogony. The closest he came to it was around 1600 in a developmental history of tribal behavior where he blames Mexicans for cannibalism in the primeval age. His second age begins with the Inca dynasty. He sees himself as an apologist for Inca society, writing about it in Spain, seeking coherence and combining variant evidence. His literary art helped him to validate his position. On many points he used the papers of Blas Valera (Garcilaso, 1967, II;vii-viii).

13. Martín de Murua wrote the Historia General del Peru at Cuzco between 1606 and 1611. He belongs as historian among a group (Kubler, 1947:174) including Cristobal de Molina and Guaman Poma (who detested Murua).

Murua, a Mercedarian friar, wrote that from creation to Mama Ocllo in Inca history, four suns had passed before the present fifth sun (1962, I, 70). The first ended by water, the second by collapse of the sky on the earth, the third by fire. The fourth was omitted. The fifth sun was the disk of gold in Coricancha at Cuzco before which Huayna Capac was crowned. This scheme, based on the Mexican Leyenda, also appears in the work by Guaman Poma. Both authors probably took it from Gómara and/or Gutierrez de Santa Clara.

14. Bernabé Cobo, a Jesuit writing a Historia del Nuevo Mundo between 1613 and 1653, spent 40 years in Peru and 20 in Mexico after 1626. His summary of Andean origin myths (Cobo, 1964:150-163) mentions several creators. They are at Tiahuanaco (or Titicaca or Chucuito); Pachacamac; Huanacauri (near Cuzco); Quito, and several more ending in succession by flood, hunger, pestilence and fire.

The creator at Tiahuanaco shaped and painted all kinds of life, but the methods of the other creators are not mentioned. Cobo has the merit

of listing various myths at many known places, e.g., Cañaribamba near Quito, or Ancasmarca near Cuzco. He assumes that these were versions of local history after the Biblical Flood, in an effort approaching historical precision (Rowe, 1979).

15. Fernando de Montesinos was a mining metallurgist working in Peru 1629-1644. His chronology for Peru extends 4500 years since the Biblical Flood. This span falls short of the Leyenda de los Soles. But it lists 103 rulers divided as being in nine pachacutis, or periods each of 500 years (Imbelloni, 1941:302, 316-319). Two pachacutis mark one sun of 1000 years. Nine pachacutis are four elapsed suns and a fifth present one. This calculation follows an earlier one by Blas Valera, as cited by Garcilaso (1967, Bk II, ch. 6). The term pachacutiy also means "end of the world" in the dictionaries (Holguín, 1608; Torres Rubio, 1603) both Quechua and Aymara.

The emerging position of Montesinos today is that he was on the whole in line with the thought of his time. That he is out of line with our time, is a measure of our continuing reluctance as historians to accept the values governing the thought of other centuries and peoples.

16. The clearest colonial statement of ideas on Andean cosmogony is by the Augustinian friar, Antonio de la Calancha who began the Coronica moralizada in 1630-31, completing it in 1633. According to him (Calancha, 1638:92-98), Viracocha divided the world in four at Tiahuanaco after the Flood.

Since then, five suns or creations, as in the Mexican legend, pursue their course as in Gómara's account. The present age was 858 years old in 1552. Darkness was everywhere after A.D. 694. Man and woman were formed in A.D. 701. The new sun was created in A.D. 704 when the old gods

died.

These borrowings from Gómara are followed by the passage from Acosta about stages of culture: "forest dwellers living in lands without King or lord," followed by "democracy, a pestilential government where everyone rules," then 3) "monarchy." Thus, Calancha reconciles Inca history with the Five Suns of Mesoamerica, and with the social science of the sixteenth century.

A surprising quality in these Mexican and Peruvian combinations of texts, is their mutual adaptation within official Spanish standards. As to the appropriateness of mixing Mesoamerican and Andean sources, it is in the words by Juan de Palafox y Mendoza, archibishop of Puebla in 1649. For his lovely discourse of that year, entitled La naturaleza del indio (Palafox y Mendoza, 1546), he wrote that "New Spain and Peru were as one birth...like twins born from one womb and at the same time and hour... preserving their resemblance in innumerable ways..."

As to the doubled creator gods of the Andean peoples, they may be older and nearer to the beginnings than the elaborate Mesoamerican imagery of spatial figures of time.

Although from paleolithic beginning to discovery the twins were unaware of each other, the remark by Palafox is proving to be more and more prophetic, both in archaeology and ethnohistory, in our relationship here in the north to the rest of America, being all, north, central and south, "as one birth...preserving their resemblance..."

Footnotes

1. A. A. Demarest (1981:75) finds that "broad comparison of Mesoamerican and Andean celestial high gods confirms the parallels in both underlying conceptions and later manipulations."

2. M. Bataillon 1961, thinks that Gutierrez never saw Peru. Denied by Perez de Tudela, who edited Gutierrez (1963-65:xcv-xcvi).

3. This was borrowed from Gómara by Michel de Montaigne before 1588.

4. A. Paz y Melia, ed., Rebelión de Pizarro in el Perú, Madrid, 1889, 2 vols.

References

Acosta, José de
1940 Historia natural y moral de las Indias. (1950) Edited by Edmundo O'Gorman. Fondo de Cultura Económica, Mexico.

Bataillon, Marcel
1960 Gutierrez de Santa Clara, escritor Mexicano, Nueva Revista de Filología Hispánica, año 15, pp. 405-440. Madrid.

Betanzos, Juan Diez de
1968 Suma y narración de los Incas. (1551) Edited by Francisco Esteve Barba. Biblioteca de Autores Españoles, tomo 206. Ediciones Atlas, Madrid.

Calancha, Antonio de la
1638 Coronica moralizada del Orden de San Agustin el Peru, Pedro Lacavellaria, Barcelona.

Calvete de Estrella, Juan Cristobal
1963 De rebus indicis o comentarios del Peru con sucesos egenplares en esta Monarquia. Edited by J. Perez de Tudela Bueso. Biblioteca de Autores Españoles, tomo 164. Ediciones Atlas, Madrid.

1889 Rebelión de Pizarro en el Perú. Edited by A. Paz y Melia. Madrid. 2 vols.

Cieza de León, Pedro
1967 El Señorio de los Incas. (1553) Intro. by C. Aranibar. Instituto de Estudios Peruanos, Lima.

Cobo, Bernabé
1956 Obras del P. Bernabé Cobo de la Compañia de Jesús. (1653) Biblioteca de Autores Españoles, tomos 91-92. Ediciones Atlas, Madrid.

Demarest, Arthur A.
1981 Viracocha. The nature and antiquity of the Andean high god. Peabody Museum Monographs. Harvard University, number 6. Cambridge (Mass.)

Garcilaso de la Vega, "El Inca"
1967 Comentarios reales de los Incas. (1609) Edited by Carmelo Saenz. Biblioteca de Autores Españoles, tomos 133-134.

Gómara, Francisco Lopez de
1852 Historia general de Indias. (1552) Edited by Enrique de Vedia. Biblioteca de Autores Españoles, tomo 22. Imprenta de M. Rivadeneyra, Madrid.

Guaman Poma de Ayala, Felipe
1980 El primer nueva coronica y buen gobierno. Edited by John Victor Murra and Rolena Adorno. Siglo Veintiuno, Mexico. 3 vols.

Gutierrez de Santa Clara, Pedro
1963-1965 Quinquenarios o Historias de las guerras civiles del Perú (1544-1550) y do otros sucesos de las Indias. Edited by Juan Perez de Tudela Bueso. Biblioteca de Autores Españoles, tomo 164. Ediciones Atlas, Madrid.

Holguín, Diego Gonzalez
1952 Vocabulario de la lengua general lengua general.... Llamada lengua Quichua o del Inca [1608]. Instituto de Historia. Universidad de San Marcos.

Imbelloni, José
1941 La Capaccuna de Montesinos. Anales del Instituto de Etnografía Americana, II, pp. 259-354. Buenos Aires.

Kubler, George
1947 Reviews of works by Constantino Bayle and Raul Porras Barrenechea on Martin de Murua's writings, Hispanic American Historical Review, XXVII, pp. 299-300:562-563.

Las Casas, Bartolomé de
1939 Las antiguas gentes del Perú. Edited by Horacio H. Urteaga, Colección de libros y documentos referentes a la historia del Perú, 2da serie, XI, Lima.

1967 Apologética historia sumaria. Edited by E. O'Gorman (3rd ed.) Mexico.

León, Pedro R.
1973 Algunas observaciones sobre P. Cieza de León y la Crónica del Perú. Editorial Gredos, Madrid.

Molina, Cristobal de
1916 Relación de las fabulas y ritos de los Incas. (1576) Edited by Carlos A. Romero. Sanmarti y Ca, Lima.

Montaigne, Michel de
1887 Les essais de Montaigne. Edited by H. Motheau and D. Jouaust. Librairie des Bibliophiles, Paris. Vol. 6, chap. VI, Des coches, pp. 70-71.

Montesinos, Fernando de
1882 Memoriales antiguas historiales y políticas del Perú. (1644) Edited by Marcos Jimenez de la Espada. M. Ginester, Madrid.

Moreno de los Arcos, Roberto
1967 Los cinco soles cosmogónicos. Estudios de cultura nahuatl, VII, pp. 183-216. Mexico.

Murra, John Victor
1980 Guaman Poma, El primer nueva coronica y buen gobierno. Edited by John V. Murra and Rolena Adorno, Siglo Veintiuno, Mexico. 3 vols.

Murua, Martín de
1962 Historia general del Perú. Intro. and notes by M. Ballesteros Gaibrois. Colección Bibliotheca Americana Vetus, vol. 1, Madrid.

Palafox y Mendoza, Juan de
1946 La naturaleza del indio, ([1649] in José Rojas Garcidueñas, 1946) Mexico, 1946.

Porras Barrenechea, Raúl
1962 Los cronistas del Perú, 1528-1560. Sanmarti, Lima.

Rojas Garcudueñas, José J.
1946 Ideas políticas. Mexico.

Rostworowski, Maria Tovar de Diez Canseco
1977 Etnía y sociedad: costa peruana prehispánica. Instituto de Estudios Peruaños, Lima.

Rowe, John Howland
1979 Religion e historia en la obra de Bernabé Cobo, Antropología andina, III, 1979, pp. 31-39. Cusco.

Sarmiento de Gamboa, Pedro
1942 Historia general indica. (1572) Edited by Angel Rosenblat. Biblioteca Emece, Buenos Aires.

Tello, Julio Cesar
1939 Las primeras edades del Perú por Guaman Poma. T. Scheuch, Lima.

Torres Rubio, Diego de
1966 Arte de la lengua aymara. (1616) Edited by Mario Franco Inojosa, Lyrsa, Lima.

Valera, Blas
1945 Las costumbres antiguas del Peru y la Historia de los Incas. Edited by Francisco A. Loayza. Lima

Appendix 1

The reference listing is lacking dates for several original manuscripts. These dates are included here and relate to the composition of relevant parts of texts which may have spanned many decades.

As these are dates the author has deduced, they are part of the research, rather than the bibliography.

1. Pedro Gutierrez de Santa Clara, 1544-1550
* 2. Juan de Betanzos, ?-1551
3. Francisco Lopez de Gómara, 1552
4. Pedro Cieza de León, 1550-1554
5. Bartolomé de Las Casas OP, 1552-1559
6. Juan Cristobal Calvete de Estrella, 1565-1567
7. Blas Valera, before 1572-1590
8. Pedro Sarmiento de Gamboa, 1572
9. José de Acosta SJ, 1572-1587
10. Cristobal de Molina, 1576
11. Felipe Guaman Poma, 1583-1613
12. Inca Garcilaso de la Vega, 1590-1600
13. Martin de Murúa OSA, 1606-1611
14. Bernabé Cobo SJ, 1613-1653
15. Fernando de Montesinos 1629-1644
16. Antonio Calancha OSA, 1630-1633

*2A. Gregorio Garcia, 1607, repeats 2

NORTHEAST CONFERENCE ON ANDEAN ARCHAEOLOGY AND ETHNOHISTORY

Second Annual Meeting
November 19-20, 1983

American Museum of Natural History
New York, New York

PROGRAM

Friday, November 18, 1983

6:00 - 8:00 p.m. ---------- Alberto Rex Gonzalez
Second Junius Bird Memorial Lecture
"Art and Archeology of the Southern Andes"
South Chilean Archaeological Expedition Film
Junius Bird

Kaufmann Theater - First Floor

Saturday, November 19, 1983 All talks will be held in
The Linder Theater - First Floor

9:30 - 10:00 a.m. ----- COFFEE AND REGISTRATION

10:00 - 10:30 a.m. ---------- Elizabeth P. Benson
"The Moche Moon"

10:30 - 11:00 a.m. ----- William Isbell (SUNY - Binghamton)
"The Ayacucho Valley in Middle Horizon I"

11:00 - 11:30 a.m. ---------- Anita Cook (Colgate)
"The Significance of the Conchopata B Deposit: I"

11:30 - 12:00 noon ---------- Dorothy Menzel
"The Significance of the Conchopata B Deposit: II"

12:00 - 12:30 p.m. --------- Steven Wegner (Dumbarton Oaks)
"A Distinctive Supernatural Creature of Recuay Iconography

12:30 - 2:00 p.m. ----- LUNCH

2:00 - 2:30 p.m. ---------- Anne-Louise Schaffer
(Metropolitan Museum of Art)
"Impressions in Metal: Reconstructing Burial Context at Loma Negra"

2:30 - 3:00 p.m. ---------- Anthony Aveni (Colgate)
"New Data on the Nasca Line Centers"

3:00 - 3:30 p.m. ---------- Gary Urton (Colgate)
"Ethnographic and Ethnohistoric Perspectives on the Nasca Lines and the Plaza at Quebrada de la Vaca"

3:30 - 4:00 p.m. ---------- John Hyslop
(American Museum of Natural History)
"Symbolic Structure at Inkawasi, Cañete Valley"

4:00 - 4:30 p.m. ----- COFFEE BREAK

4:30 - 5:00 p.m. ---------- Patricia Netherly
(University of Massachusetts, Amherst)
Tom D. Dillehay
(University of Kentucky, Lexington)
"Dualism and Ceremonial Architecture in the Northern Andes"

5:00 - 5:30 p.m. ---------- George Kubler (Yale)
"Written Sources on Andean Cosmogony"

5:30 - 6:00 p.m. ---------- Carolyn J. North (Princeton)
"The Guinea Pig is Good to Eat. The Guinea Pig is Good to Think"

Sunday, November 10, 1983

9:30 - 10:00 a.m. ----- COFFEE

10:00 - 10:30 a.m. ---------- Michael Malpass (St. Lawrence)
"Two Preceramic and Formative Period Occupations in the Cordillera Negra: Preliminary Report"

10:30 - 11:00 a.m. ------- Charles S. Spencer/Elsa M. Remond
(University of Connecticut)
"Recent Archaeological Investigations in the High Llanos and Piedmont of Western Venezuela"

11:00 - 11:30 a.m. ---------- Richard E. Daggett
(University of Massachusetts, Amherst)
"The Transition from the Early Horizon to the Early Intermediate Period: A Comparison of the Nepeña and Viru Valleys"

11:30 - 12:00 noon ---------- Dwight Wallace (SUNY - Albany)
"A Re-Evaluation of the Paracas Seriation"

12:00 - 1:00 p.m. ----- LUNCH

1:00 - 1:30 p.m. ---------- Alberto Rex Gonzalez
"The Metal Plaques of the Southern Andes: Meaning, Function and History"

1:30 - 2:00 p.m. ---------- Thomas C. Patterson (Temple)
"Pachacamac: The Production and Ideology in Central Peru Under the Incas"

2:00 - 2:30 p.m. -- Gordon C. Pollard (SUNY - Plattsburgh)
"The Spanish League and Inca Sites: A Reassessment of the 1566 Itinerary of Juan de Matienzo through N.W. Argentina"

2:30 - 3:00 p.m. ---------- John Murra
(Institute of Andean Research)
"Bolivia: Progress on Andean History"

3:00 - 3:15 p.m. ----- COFFEE

3:15 - 3:45 p.m. ---------- Leon G. Doyon (Yale)
"Machu Picchu Ceramics: Hiram Bingham and the Lost City of the Incas Rediscovered"

3:45 - 4:15 p.m. ---------- Milica Skinner
(American Museum of Natural History)
"Patterns/Designs of Huaca Prieta Textiles"

4:15 - 5:15 p.m. ----- HUACA PRIETA EXCAVATIONS - VIDEO FILM

Mailing Addresses of Speakers

Second Annual NCAAE

American Museum of Natural History

November 19-20, 1983

Dr. Anthony F. Aveni
Sociology & Anthro. Dept.
Colgate University
Hamilton, NY 13346

Dr. Elizabeth P. Benson
8314 Seven Locks Road
Bethesda, MD 20817

Anita Cook
Department of Anthropology
SUNY - Binghamton
Binghamton, NY 13901

Richard Daggett
Anthropology Department
Machmer Hall
University of Massachusetts
Amherst, MA 01003

Alberto Rex Gonzalez
Calle Uno
N" 714
La Plata, ARGENTINA

Dr. John Hyslop
234 Thompson Street, Apt. 7
New York, NY 10012

Dr. William H. Isbell
Anthropology Department
SUNY - Binghamton
Binghamton, NY 13901

George Kubler
History of Art
Yale University
53 High Street
New Haven, CT 06520

Michael Malpass
Department of Sociology/Anthro.
St. Lawrence University
Canton, NY 13617

Dorothy Menzel
30 Esplanade
Mt. Vernon, NY 10553

Patricia Netherly
205 Utica Street
Ithaca, NY 14850

Carolyn J. North
Department of Anthropology
Princeton University
100 Aaron Burr Hall
Princeton, NJ 08544

Dr. Thomas C. Patterson
Anthropology Department
Temple University
Philadelphia, PA 19122

Dr. Gordon C. Pollard
Department of Anthropology
SUNY - Plattsburgh
Plattsburg, NY 12901

Elsa M. Redmond
College of Liberal Arts & Sciences
Department of Anthropology
University of Connecticut
Box U-176
Storrs, CT 06268

Anne-Louise Schaffer
511 West 113th Street, Nr.21
New York, NY 10025

Milica Skinner
333 East 53rd Street
Apt. 8-J
New York, NY 10022

Charles S. Spencer
College of Liberal Arts & Sciences
Department of Anthropology
University of Connecticut
Box U-176
Storrs, CT 06268

Dr. Gary Urton
Sociology & Anthropology Department
Colgate University
Hamilton, NY 13346

Dr. Dwight T. Wallace
Anthropology Department
Soc. Sci. 369
SUNY - Albany
Albany, NY 12222

Steve Wegner
2702 Wisconsin Avenue, N.W.
Apt. 804
Washington, D.C. 20007