

PRELIMINARY REPORT ON INVESTIGATIONS
IN THE
REGION OF THE VALSEQUILLO RESERVOIR
1966

Report on Archaeological
Investigation in the
Region of the Valsequillo
Reservoir, Puebla, (Puebla),
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Introduction and Recapitulation:

*"The question of the origin, age, and character of the earliest inhabitants of the Western Hemisphere is an intriguing one, and presents one of the major unsolved problems of New World Prehistory. Scientific opinion has shifted dramatically in the past several decades from the belief widely held prior to 1926 that man in this hemisphere dated back no more than a few millennia, to modern estimates ranging from 11,000 to more than 30,000 years ago. Whatever the ultimate solution is, it is apparent by now that the earliest Americans were few in number and left relatively little impershable material culture. It is also evident that man in this remote period was only one of a large and varied fauna, in a complex environment and that he should be studied in the context of the available knowledge of contemporary geology and paleontology".

The region of the Valsequillo Reservoir near Puebla, (Puebla) had long been known as an area which offered excellent opportunities for Pleistocene (and earlier?) research.

*Footnote: From Irwin-Williams "Report on Investigations in the Region of the Valsequillo Reservoir, 1962".

Professor Juan Armenta Camacho had carried out surficial reconnaissance in the region for many years and had amassed a large collection of archaeological and paleontological materials. His studies had led him to conclude that certain bone and stone objects possibly of human manufacture had originated in the Valsequillo Formation, which had also produced an extensive extinct faunal assemblage, featuring camel, horse, mastodon, mammoth, glyptodon, dire wolf, etc. If those of the objects definitely of human manufacture had in fact proceeded from this formation, and if it proved to be of considerable antiquity, research here might provide vital clues concerning the earliest inhabitants of the New World.

In 1962 Armenta and I conducted research in the Valsequillo Region to investigate the existence or lack of it, of artifacts of unquestionable human manufacture in situ in the Valsequillo Formation. After an extensive survey four localities at which there was definite evidence of this association were located and tested. The results of this research have been summarized in an earlier report (Irwin-Williams, 1963).

It was evident on the basis of these results that further research could profitably be done on the archaeology of the Valsequillo Formation. It was also obvious the complex geologic-paleontologic context necessitated the active day to day participation of specialists in geology and paleontology. Dr. H.E. Malde (geologist, U.S. Geological Survey) and Dr. Clayton Ray (paleontologist, Smithsonian Institution) therefore joined the project.

In 1964 attention focused on the Site of Hueyatlatco; high water in the reservoir prohibited investigations at the other localities. The results of this work are discussed below.

Investigations in the Valsequillo Region, 1966

Chronology

Research in 1966 continued in that began in 1962 and continued in 1964. I arrived in Mexico City on April 19, 1966, and on receipt of a permit to excavate began work in the Valsequillo Region on April 21, 1966. A work party had already been organized and supplies purchased. Field work was begun on April 21, and terminated on May 27 when it was necessary to return to the United States to direct the Anasazi Origins Project of the PaleoIndian Institute (Eastern New Mexico University). The Departamento de Prehistoria of the Instituto Nacional de Antropologia e Historia gererously granted me permission to export temporarily some of the fossil remains for detailed study.

Meanwhile during the months of March and early April limited paleontological investigation had been carried out by Dr. Clayton Ray, under the observation of members of the Instituto Nacional de Antropologia e Historia.

As in 1964, archaeological investigations were confined to the Hueyatlatco locality due to high water levels. These same conditions had in fact necessitated a postponement of the field season, and the first few days of the work period were spent removing lake deposits

and vegetation from the excavation.

Background

In order to place the 1966 research at the Hueyatlatco locality in perspective, it is necessary to review briefly the results of the 1962 and 1964 excavations: The site of Hueyatlatco is located on a high terrace of the Valsequillo Reservoir below the eastern edge of the town of La Colonia Buena Vista de Tetela ($98^{\circ} 1'$ longitude, $18^{\circ} 55'$ North latitude). It is situated at an altitude of 2055 - 2058 meters above sea level. The site itself comprises a prominent outcrop of the Valsequillo Formation, divided into two sections by a shallow arroyo. The two sections are termed initially Hueyatlatco I and 2. A third outcrop of the same formation occupies a position 50 - 60 meters north of the site, at an altitude of 2056 - 2058.76 meters. Armenta in 1959 reported finding the engraved fragment of proboscidean pelvis just north of this third outcrop. (Armenta, 1959).

From the beginning it was observed that the micro-geology of the locale was extremely varied from fine silt and sand representing a weak current to gravels representing a swifter flow. Subdivisions of the deposit were recognized in 1962

and the basic strata at each station were described in 1964. The problem of correlating the stratigraphy of Hueyatlatco I and 2 was only partially solved in 1964, due to the extensive erosion between the two stations. A coordinating trench sunk between these in 1964 still revealed a considerable erosional break, an arroyo filled with recent sediment (see sections from Irwin-Williams, 1964, particularly I - W). Confirmation of the tentative correlations suggested in 1964 needed further work.

Most of the strata recognized produced remains of extinct fauna, notably mammoth, mastodon, horse, camel, peccary and four horned antelope. Several in addition yielded man-made implements, some in direct association with the faunal remains. A significant observation in 1962 and 1964 was the fresh unrolled character of both bones and artifacts indicated that they had been moved little or no distance from their point of origin. All bones and artifacts were recovered and photographed in situ.

Hueyatlatco - 1966: Objectives

The principal objectives of the 1966 season were (in order of importance): 1) establish firm stratigraphic

correlations between Hueyatenco I and 2; 2) establish correlations between the stratigraphic column in the main site area and the larger depositional column in the terrace bench; 3) recover more cultural remains; 4) test the isolated outcrop to the north (see above), to better understand the local alluvial situation and to explore the possibility of recovering new faunal and archaeological materials; 5) to make a detailed contour map of the site area.

In brief the results were as follows: 1) We succeeded in making definitive correlations between Hueyatenco I and 2. 2) Thanks to the cooperation of the research team of the Instituto Nacional de Antropología e Historia it was possible to make some definitive and some tentative correlations with the larger depositional sequence of the terrace, revealed in their adjacent excavations. 3) The site produced only very meager cultural remains, but their character confirmed existing hypotheses on the archaeological sequence. 4) A test trench sunk in the third outcrop (Hueyatenco 3) yielded information on the alluvial situation, and produced faunal remains but no cultural materials. 5) A contour map for the site area was completed.

Procedure

The datum point established on June 12, 1962 was checked and re-triangulated and the grid of meter squares was re-established. The considerable quantity of lake-mud and vegetation was removed and new areas to be excavated were thoroughly cleaned. Sr. Juan Hernandez served as foreman over a group of forty local workmen employed in actual excavation. Most of these had received extensive training in the 1962 and 1964 seasons and/or in excavations of the Instituto Poblano de Antropologia e Historia. They produced some of the best, most accurate work I have seen in an archaeological excavation. They were furnished with line levels, tapes and cross-sectioned workbooks to record tiny fossil fragments, etc. supplementing my own detailed site notes and Hernandez' site-diary.

Excavation proceeded with various hand tools and all excavated earth was passed through a one-fourth inch mesh screen. One-eighth inch screens were substituted at regular intervals to check for micro-faunal remains, but produced few results. Ten centimeter vertical numeration units were employed only within observed stratigraphic units. Each artifact or flake was photographed in situ and recorded

in terms of its geologic-stratigraphic context, depth below baseline, and triangulated horizontal position. The same procedure was followed for all fossil remains, except for very tiny fragments which were recorded in the workers' notebooks. In order to accurately record the complex stratigraphy of the site, continuous detailed profiles were taken by myself and profile balks were left at key positions to facilitate back-checking of profiles. Ultimately profiles of all four sides of each meter square plus profiles of all key stratigraphic situations within each meter square, were completed. On the basis of this data it would be possible to create an accurate large three-dimensional diagram of the site, with each artifact and fossil in position.

In view of the objectives outlined above, excavation strategy was aimed at 1) opening the area between Hueyatlatco I and 2; 2) expanding the excavation Hueyatlatco 2 toward the south and north. Due to the proximity of a trench of the Instituto Nacional de Antropologia e Historia to Hueyatlatco I, and to the observed character of the deposits, relatively little horizontal expansion of Hueyatlatco I was attempted; the site was deepened to a uniform extent, and a deep pit put in to test the vertical extent of the deposit.

The Deposits: Archaeology and Stratigraphy

The stratigraphic situation at Hueyatlatco as recorded in 1966 may be considered under two headings: 1) The stratigraphic units already observed in 1964. One of the principal objectives of 1966 was to explore and define relations between Hueyatlatco I and 2 and to test the tentative hypotheses on these relations formulated in 1964. These had been given the tentative field designations of "A through J" in 1964, and 2) the contextual stratigraphic units tested in 1966, which served principally to relate the internal site-column to the larger alluvial sequence, represented in a) new trenches at Hueyatlatco; b) trenches of the Instituto Nacional de Antropologia e Historia; c) trenches at the isolated outcrop designated Hueyatlatco 3; d) auger holes between Hueyatlatco I and 2, and Hueyatlatco 3.

With this background it is possible to outline briefly the current state of knowledge of the Hueyatlatco stratigraphic situation, and accompanying fossil and cultural remains. Information from all three field seasons is included. Key profiles are included for reference. The internal stratigraphic column, already noted in 1964, will be dealt with first.

Unit A

1A and 2A: Recent dark brown loam covers much of the

earlier deposits at both stations. In some localities (the arroyo separating the two stations) it is composed in part of redeposited earlier sediments, including fragmentary fossils. Culturally it yielded a few obsidian and chert flakes and recent ceramics and glass. It is obviously separated from the earlier deposits by a considerable hiatus marked by a sharp erosional contact.

Unit B

1B: The uppermost early deposit at Station I was a fine sandy silt within which two subdivisions were recognized: 1B¹ comprised fine white to light gray slightly bedded sand silt and slightly contorted clay lenses. The underlying 1B² consisted of fine reddish brown sand with occasional small clay galls. Outward toward the channel edge both sediments grade to an indivisible sandy clay. Detailed examination of these sediments (1B¹ and 1B²) in 1966 revealed that some of the sand-sized grains were pumice. Both 1B¹ and 1B² yielded a few fossils (principally horse and camel) but no cultural remains.

2B Deposit 2B was a fine whitish sand with a rather massive structure and containing clay galls. Investigations in 1966 proved that 2B, like 1B, contained some pumice.

2B likewise produced a few fossils but no artifacts. In 1964 it was hypothesized, on the basis of lithology and stratigraphic position that 1B and 2B were equivalent. New trenching in 1966, along lines and tends to confirm this hypothesis. 1B and 2B evidently represent two separate flow channels, whose position in the stratigraphic sequence strongly indicates essential synchronicity.

Unit C

1C: Deposit 1C represents the effects of a small shallow stream which has cut a distinct southwest-northeast trending in earlier strata. Numerous recognizable subdivisions were observed in the channel center ($1C^1$ - $1C^5$; see Irwin-Williams, 1964, for details). The overall character of the deposits was a rather well sorted silt to sand, with occasional fine gravel frequently showing alluvial cross-bedding. Color varied from white to light gray, with local oxidization. The channel bottom cutting earlier formations exhibited a dip of up to 25° . All subdivisions produced sparse to abundant fossil remains, particularly horse and camel. $1C^1$ also yielded several man-made artifacts and flakes in 1962 and 1964. These include a percussion flaked stemmed projectile point; a large bifacial cutting tool; a scraping-edge- and- perforator;

a cutting edge on a blade; a concave end scraper- and-perforator; and a gouge or chisel on an oblong flake. As noted, (see Irwin-Williams, 1962) the concave end scraper- and-perforator was recovered in situ about one centimeter from a horse mandible, and the associated pieces were removed in a block. No cultural remains were recovered from this unit in 1966. At the east and west lateral extremities of the 1C channel, deposits of Unit 1C thin and grade into a silty-clay facies which is ^{very} difficult to distinguish from the underlying Unit D. Unit D can be traced across the site to Station 2 where it is again cut by a channel whose deposits 2C are lithologically very similar to 1C. It had been hypothesized in 1964 on the basis of stratigraphic position and lithology that Units 1C and 2C represented the same temporal interval. Evidence of the 1966 season seems to bear this out. Within the 2C channel, three subdivisions were recognized in 1964, (see Irwin-Williams, 1964 for detail). All yielded fossil remains, and 2C¹ produced a single percussion flaked bifacial form (possibly a projectile point).

Unit D

1D: Deposit 1D consisted of a very fine clayey silt with massive structure and a light tan coloration. In

1964 it was encountered as a thick deposit in the west end of the trench between the two stations, at the east end of Hueyatenco I and as isolated remnants in the northwest corner of the same station. In 1966 it was traced as a massive bed between the two stations separated from Unit F only locally by the channel deposits of the Unit E phenomenon. It had been entirely removed at Hueyatenco 2 by the stream action responsible for Unit C. It contained no fossils or cultural materials.

Unit E

1E: Deposit 1E comprised a series of alluvial sediments in a shallow channel cut in earlier strata. The channel represented was apparently considerably broader than that cut by the stream responsible for Unit C, and its orientation is somewhat more south-southwest to north-northwest. That the water current was frequently stronger is evidenced by numerous lenses and layers of coarse sand and fine gravel. In mid-channel a maximum of eight subdivisions (1E - 1E⁸) could be recognized, (see Irwin-Williams, 1964. for details). The character of the deposits varied from fine bedded gray sand to yellowish coarse sand and fine gravel toward the channel edge, 1E graded to a fine silty clay. All portions of 1E produced abundant fossils, principally horse, camel,

mammoth and four-horned antelope. In addition in 1964 1E¹ yielded a single heavily calcinated man-made flake. In 1E² were recovered a portion of a semi-articulated horse skeleton definitely associated with two artifacts and probably two more: A bifacial bi-pointed projectile point was found in situ near a group of semi-articulated horse ribs; a well made fragment of a bifacial knife or point occurred directly under one of the associated vertebrae. Nearby were discovered a fragment of a thick bifacial tool and a core or utilized core. Very little of Unit 1E remained to be excavated in 1966, and no further cultural remains were recovered.

2E: Deposit 2E, underlying Unit C at Hueyatenco, was hypothesized on the basis of lithology, stratigraphic position, etc. to be equivalent to 1E. Data gathered in 1966 are in accord. Within the 2E deposit three divisions had been recognized in 1964, ranging from a fine yellowish sand through coarse sand and fine gravel. All yielded fossil remains, principally horse, camel and mastodon. The lowest, 2E³, had produced in 1962 and 1964, cultural remains. In the northwest portion of the site occurred a concentration of mastodon bones which may be from the same animal and are associated with human activity. The mandible and maxilla had been purposely split and fragmented and two man-made

artifacts were discovered with the fragments. A small chopping tool had been employed as a wedge and was discovered imbedded in a fragment of mandible next to the tooth row. The association was removed in a block. Nearby, in 1964 a thin flake with a burin-like spall removed from one edge was recovered in situ between the cusps of one of the molar teeth.

In 1966 a fourth subdivision of 2E was only locally distinguishable in the southernmost portion of Hueyatenco 2 as a narrow channel bottom deposit, cutting into earlier strata. Deposit 2E⁴ itself comprised a fine gray to yellowish fine sand with lenses of coarse sand and fine gravel. Within this channel bottom deposit occurred very numerous remains of horse, camel, antelope and peccary and mastodon. Deposit 2E⁴ also produced the only diagnostic man-made artifact recovered in 1966: A large fragment of a bifacial knife or point. The object occurred in close proximity to the remains of horse, an immature mastodon, peccary and camel. However in view of its condition (see below), the association may well be secondary. The piece represents a trianguloid section near the tip of a large knife or, less probably, a point. It was produced by the same kind of well controlled broad percussion flaking found on the bi-pointed projectile

point from 1E². It is bifacially worked and bi-convex in cross-section. It had been broken laterally across the existing base, and also probably at the tip. Its width and angle of lateral expansion suggest a knife rather than a projectile point. The edges of the piece have been moderately battered suggesting some displacement from its point of origin. It is notable in this respect, since all of the other artifacts recovered from Hueyatenco are fresh with no signs of rolling, and indicate little displacement from point of origin.

The relation of the artifact recovered in 1966 from 2E⁴ to other archaeological materials from Unit E is of interest. First, it is evident in view of their stratigraphic relationship that the cultural event represented by the knife fragment from 2E⁴, predates and is separate from that represented by the mastodon-butcherings of 2E³. In addition the character of the material indicates primary association of artifacts and mastodon in 2E³, and secondary association of the knife and extinct fauna in 2E⁴. The character of the cultural remains from 1E² indicates that a very similar technology was involved in both instances and is in accord with the stratigraphically determined general equivalence of Units 1E and 2E. This technology is in strong contrast to that represented by earlier materials from the site.

Unit F

1F and 2F: 1F as defined in 1964 comprised a pale yellowish gray fine sandy clay and silt with occasional lenses of coarse sand. It produced few fossils and no cultural remains. In 1966 it was traced as a thick layer directly to the corresponding stratum, 2F at Hueyatenco 2. This likewise yielded only a few fossils and no cultural materials.

Units G and I

The only rather surprising data yielded by the 1966 trenches at the south end of Hueyatenco 2 and between Hueyatenco I and 2 , concerns the relationship of Units G and I: As tentatively understood in 1964 on the basis of very limited exposures in one badly eroded trench between Stations I and 2, Unit G comprised yellow to gray fine sand to coarse sand or grit. Color tended to grade from fine gray sand in the upper portions of the stratum to yellowish grit at the base. A field division was made in the field on the basis of color, but considered to be tentative for reporting. The boundary between Units G and I was gradational except for local flow rolls. Unit I consisted of yellowish fine sand and silt, gritty clay and grit.

Data from the 1966 season are as follows: New trenches

between Stations I and 2 revealed numerous exposures where the fine gray sand of the upper portion of Unit G is separated from the yellowish grit of the lower portion by a marked erosional disconformity. At the same time a boundary between G and I remains gradational. The weight of the new evidence suggests that the lower fine gray sand of Unit G as defined in 1964 belongs to the geologic event responsible for Unit I rather than that represented by Unit G. This substratum is accordingly now treated as a subdivision of Unit I (I¹). Since all field profiles from 1964 included this tentative divisions, the conversion is simply a matter of terminological designation. Of interest is the fact that all of the cultural materials recovered in 1964 were from this fine yellowish-gray sand, and thus belong to the Unit I¹ geologic unit. Unit G thus becomes an interval without evidence of cultural activity.

In addition to clarifying the Unit G - I relation, the 1966 excavations revealed one further man-made object from Unit I: A single percussion struck flake from I¹.

Unit H

Deposit H was described in 1964 as a very localized phenomenon at Hueyatenco 2. It evidently represented a narrow channel deposit within Unit 2G. The period of channel incision corresponded to the internal break within Unit G.

On the basis of the redefinition of the lower portion of Unit G, it may be seen as occupying the interval between Unit I¹ and G. In 1964 it produced a number of fossil remains of camel, horse, and a single lightly retouched flake.

Unit J

Unit J was thoroughly investigated in 1966. Its composition ranges from coarse yellowish sand (J²) to fine sand and gray clay (J¹). New data indicate that this variability reflects relation to the activity of a large early channel centered near but outside of Hueyatenco I where most of the larger grained deposits occur. Some of the latter yielded sparse fossil remains but no artifacts; the clay deposits characteristic of Hueyatenco 2 produced neither. The deposit may best be seen in the context of very early channel cutting activities explored in a deep test pit in 1966, and discussed below.

New Data on the Stratigraphic Context-Tentative Correlations

With the background of the cumulative data recovered on the internal stratigraphy of the Hueyatenco Site, it is now possible to consider new contextual information gained in 1966: 1) on deposits directly underlying this known stratigraphic column, revealed in a deep test pit (H-L/8);

2) deposits not encountered before 1966, overlying and within the known column, revealed in 1966 trenching between Hueyatenco I and 2; and 3) deposits uncovered in testing the isolated outcrop (Hueyatenco 3) to the north. In addition it is possible 4) to attempt some tentative correlations with strata exposed in nearby trenches of the Instituto Nacional de Antropología e Historia.

1. As exposed in the deep trench (H-L/8) cut in the west side of Hueyatenco I, three stratigraphic entities were recognized below the known J^2 . It will be remembered that J^2 at Station I was identified as a channel deposit of fine gray sand and clay distinguished from the massive gray clay facies (J^1) characteristic of Station 2. Directly below the three meter level to which the station had been uniformly lowered, stratum J^2 could still be recognized for another 50 centimeters. Below this occurred another stratum, J^3 apparently belonging to the same channel. This comprised a relatively massive gray clay, with occasional lenses of sand and gravel. It yielded only very sparse fragmentary fossils.

Underlying J^3 , occurred Unit J^4 . This apparently represented a slightly earlier channel not entirely coincidental with that of Unit J^3 . The deposit comprised a blocky

massive sandy gray clay with occasional lenses of sand or gravel. It likewise yielded very few fragmentary fossil remains.

Below J⁴ was encountered Unit K, a distinctive channel fill non-coincidental with that of Unit J. The deposit itself is a thick massive heavy gravel, (up to 40 centimeters in diameter) characterized by the inclusion of large fragments of Xalnene and Touquillo basalt. The Unit yielded several fossil remains, including a mastodon molar, but no cultural materials.

Under Unit K was distinguished Unit L, a fine pink clay with lenses of heavy gravel. It produced only very rare fossil materials. Of considerable interest is the general lithologic similarity of Units K-L to the deposits encountered at the site of Tecacaxco in 1962. Both evidently cut a channel into and through the earlier pink clays and indurated Xalnene formations. The overall relations will be more thoroughly discussed in the final report.

2) In trenching between Stations 1 and 2, new data were recovered on both the internal and external stratigraphic situation.

Work in the +1 - +3 zone indicated the existence of a previously unencountered deposit between Units D and E.

Termed Unit EE, it comprises yellowish gray coarse sand and fine gravel. It evidently represents a brief local episode of channel-cutting following the deposition of Unit E. It produced fossil remains, principally horse and camel but no cultural materials.

The trench along line +1 and +3 plus the evidence of the adjacent trench of the Instituto Nacional Antropologia e Historia, documented the existence of thick deposits of silty clay overlying Unit B. One of these, visible along Line +2 (see accompanying charts) was termed Unit M. It comprised a rather massive yellowish silty clay which can be easily traced to a corresponding bed in the Instituto Nacional Antropologia e Historia trench. When a profile of the latter becomes available, identification and correlation with the terminology employed by the Instituto Nacional Antropologia e Historia will be possible. The unit produced no fossil or cultural remains.

3. A test trench was sunk in the isolated outcrop termed Hueyatenco 3 in order to provide contextual data on the local stratigraphic situation and to test for possible cultural materials. (See accompanying profile of Line P). Although of necessity our knowledge is limited, four crude stratigraphic units were defined, and tentatively termed

H3a-d. H3a comprised a fine light gray bedded sand and silt with contorted clay lenses and sand-sized pieces of pumice. The unit conformed to a broad channel. It produced no fossil remains or cultural materials. Unit H3b constituted a thick series of sands and silts alternating with layers of silty clay and grading toward gravel at its base. It likewise conformed to a broad channel and produced a few fossil remains but no cultural material. Unit H3c was a massive heavy gray clay, producing neither fossils nor artifacts.

The data gained from the trench is of interest: Although completely separated from Stations 1 and 2, Hueyatenco 3 seems to reflect crudely the same stratigraphic succession. In terms of correlation the following estimates may be made on the basis of lithology, stratigraphic position and fossil content: Unit H3a - Unit B; Unit H3b - Units C-F; Unit H3c - Units G-I; Unit H3d - Unit J. A more complete picture of local channel relations will be possible after the completion of analysis of the cores of numerous auger-holes (AA on map) placed between Hueyatenco I-2 and Hueyatenco 3. That several units were somewhat fossiliferous is not surprising in view of the widespread occurrence in the Valsequillo Formation. That they produced no artifacts or

flakes strengthens the conviction that cultural remains are not randomly distributed, but indeed reflect loci of human activity.

4. Finally on the basis of the cumulative though preliminary information on the stratigraphy of Hueyatenco I-3 and the generously furnished profile of the principal pit excavated by the Instituto Nacional de Antropologia e Historia (as well as field observations on the Instituto Nacional de Antropologia e Historia trenches for which profiles are not available yet to the author), it is possible to attempt a few tentative correlations within the larger series.

The best relatively most reliable correlations can be made between the lowest units in each sequence:

Closest of all are the similarities of lithology, stratigraphic position and fossil content between the Instituto Nacional de Antropologia e Historia Unit VIII and Hueyatenco I and 2 Unit I. The greenish-yellow coarse sand and fine gravel of VIII are very like those of Unit I. Both include fragments of a fine white ash. The fossil content is relatively great in both. The exact altitude of the two is similar although VIII occurs slightly lower than Unit I. The Unit VIII channel is somewhat smaller with a distinct orientation.

The Instituto Nacional de Antropologia e Historia VII should probably be subdivided in accordance and post-dating (or equivalent to) Unit VIII. Stratigraphic limits to these subdivisions were observable in the field and are partially indicated on the large profile furnished by the Instituto Nacional de Antropologia e Historia. The lowest of these (termed "mas compacta") is very reminiscent of Unit J (or L): a massive gray to pinkish clay with occasional sand lenses.

The Instituto Nacional de Antropologia e Historia Unit VI could likewise be divided by the significant sandy lens bisecting it longitudinally. On the whole it appears rather similar to the clay and silty-clay facies of Units C-F (and G?): It will be remembered that the coarse facies of Units G and E only produced most of the fossil and all of the cultural remains.

The Instituto Nacional de Antropologia e Historia Unit II-III are not apparently represented at the Hueyatlatco I-2 stations. The Instituto Nacional de Antropologia e Historia Unit I is of course the modern loam which corresponds in part at least to Unit A.

On the whole, it seems very likely that most or all of the deposits at Hueyatlatco I and 2 have their counterparts

in the column uncovered by the main Instituto Nacional de Antropologia e Historia test pit. Extensive geologically-oriented trenching between the two would be required to establish the details of these relationships.

Summary

To recapitulate, as indicated above in the synopsis of results: 1) We succeeded in making definitive correlations between Hueyatitlao I and 2. 2) Thanks to the cooperation of the research team of the Instituto Nacional de Antropologia e Historia it was possible to make some definitive and some tentative correlations with the larger depositional sequence of the terrace, revealed in their adjacent excavations. 3) The site produced only very meager cultural remains, but their character confirmed existing hypothesis on the archaeological sequence. 4) A test trench sunk in the third outcrop (Hueyatitlao 3) yielded information on the alluvial situation, and produced faunal remains but no cultural materials. 5) A contour map for the area was completed.

Meanwhile studies on the paleontology conducted by Dr. Clayton Ray are underway, and should shed considerable light on the faunal environment. Research on geologic

questions under Dr. Harold Malde and relevant laboratory analyses will yield valuable data on chronology and environment.

Bibliography

Irwin-Williams, C
1962 (3)

Preliminary Report on
Investigations in the Region
of the Valsequillo Reservoir:
1962. Report submitted to the
Instituto Nacional de Antropologia
e Historia.

Irwin-Williams, C.
1964

Preliminary Report on
Investigations in the Region
of the Valsequillo Reservoir:
1964. Report submitted to the
Instituto Nacional de Antropologia
e Historia.



Unit A



Unit B



Unit C



Unit D



Unit E



Unit F



Unit G



Unit H



Unit I



Unit J



Unit K



Unit L



Unit M



Unit EE



Unit 1



Unit 2



Unit 3



Unit 4



