

## NEW EVIDENCE FOR PRE-CERAMIC MAIZE ON THE COAST OF PERU

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This report gives a preliminary account of some limited excavations at a habitation site near Huarney on the north central coast of Peru. The excavations, by Kelley in 1957 and 1958 and by Bonavía in 1960, provided new evidence for the presence of maize in a pre-ceramic context. No local name was secured for the site, which is designated Huarney North One in Kelley's records.

Kelley was in Peru on a Fulbright grant in 1957-58 to participate in the archaeological survey program of the University of San Marcos, and he worked chiefly in the far north, in the Department of Piura. The work at Huarney North One was therefore an incidental part of his project, and only a limited amount of time could be devoted to it. Kelley was shown the site by Edward P. Lanning, who was at that time excavating for Frédéric Engel at Culebras, the next valley north of Huarney.

Huarney North One lies about 1.5 km. west of the Panamerican Highway, measured from a point 50 m. north of the Km. 281 marker on the highway north of Lima. The site lies about a kilometer from the northern border of vegetation in the valley of Huarney. The sea is about a kilometer to the northwest, but there is a fossil lagoon which extended almost to the edge of the site. This lagoon still has some vegetation in it, although the rest of the area is completely barren. The site is located on the eastern slopes of a series of sand covered hills lying between the site and the sea to the west (fig. 1).

Kelley's first excavation at Huarney North One was carried out in the week between September 28 and October 5, 1957. He was assisted by Miss Rosa Fung P., then a student at the University of San Marcos, and by Adriano Martínez, who acted as foreman. When Kelley first visited the site small chips of stone were common on the surface, but there was little else to indicate human occupation. One squared-off stone looked as if it might be part of a structure, so it was decided to begin with a clearing operation along this stone. The cleaning revealed that the stone was completely isolated, but that there were extensive deposits of refuse under a thin layer of relatively clean sand. No pottery was found, but vegetable remains were abundant.

A 2 by 2 meter pit was then laid out to test the refuse, which was expected to be shallow because of the slope. After a week's work the pit had reached a depth of 2.2 meters, and the refuse continued. In order to dig deeper, it would have been necessary to enlarge the pit and make steps, work which would have demanded more time than could be spared from the Piura project. The excavation was therefore suspended.

No pottery was found in any level of the first pit, but plant remains and broken sea shells were abundant. One maize cob and a broken

peanut shell were found in level 1. Abundant remains of cotton, some in the boll, were found in all levels, and *Lagenaria* gourd fragments were also common in all levels. One fragment was found which appeared to be part of a Lima bean, but no formal identification was made. The other vegetable remains have not yet been identified, even informally. Large shells and fish bones increased in number relative to plant remains in the lower levels of the pit. Ash layers occurred in the lower levels of the pit in such a way as to suggest that the deposit was primary occupation refuse, but some of the upper debris looked as if it might have been structural fill. It was not possible to check this point further. As to artifacts, fragments of string were abundant, and one piece of cotton rope was found. Other artifacts were rare but included a typical Culebras stone disk having the original cortex on one side and the other side roughened.

It was not until July 24, 1958, that an opportunity for further work at the site presented itself. On that occasion D. H. Kelley and Jane Holden Kelley spent the morning clearing back from the edge of the pit on a surface of reddish brown dirt ("floor") which had extensive vegetable remains on it. The purpose of this work was merely to obtain a further sample of maize cobs in the brief time available, and no attempt was made to go below the "floor." Ten more maize cobs and one maize tassel were found. Aside from the plant remains, the only indications of human habitation were burned stones, occasional sea shells, and bits of string. No pottery was found.

The maize from Huarney North One was turned over to Paul C. Mangelsdorf of the Botanical Museum, Harvard University, for study. Mangelsdorf thought that the material was of sufficient potential importance to justify further investigation of the site, and he secured funds for a new excavation which Duccio Bonavía B. was commissioned to carry out. Bonavía, assisted by his brother, Gauro Bonavía, and two workmen, dug at Huarney North One from January 25 to February 6, 1960. The party made five test pits, about 1 by 1 m. in surface dimensions, and two stratigraphic cuts of 2 by 2 m. each, as well as minor clearing at several other points on the site to determine the extent of refuse. Heavy winds and the abundance of small stones in the sandy deposit combined to make digging difficult, but the results were highly satisfactory.

Only three fragments of pottery were found in all of Bonavía's digging. Two of them were found within 15 cm. of the surface in the second stratigraphic cut, and the third was found in clearing fallen materials in the same cut. All the cuts were carried to over a meter in depth.

No pottery is visible on the surface of the site, but this fact is of relatively little importance, since the archaeological deposit is covered with a cap of about 10 cm. of windblown sand. What is significant is the complete absence of pottery, other than the three sherds mentioned, in all the excavations and in all the places where Bonavía cleared away the surface sand. Refuse is abundant, and the evidence seems clear that most of the occupation of the site is pre-ceramic.

Remains of maize were scanty in the first test pit, and no cobs were found. In the second test pit somewhat more was found, and in all the

others maize was abundant, including not only cobs and leaves but even some complete plants. Over 60 additional cobs or cob fragments were found. There were still a few kernels on some of the cobs. Mangelsdorf comments as follows on his first examination of these materials: "Two things are already apparent: 1. There is a distinct evolutionary series, the earliest corn being quite primitive and the later corn more evolved. 2. Even at the earliest level (Level 5 in one pit and Level 4 in the other) there are already two distinct types of corn. This leads me to suspect that neither may be wild and that they represent early cultigens in two different regions."

With the evidence available, it is not clear whether Kelley reached an earlier pre-ceramic period, not found by Bonavía, or whether the absence of maize cobs and maize plants in the lower levels of Kelley's pit is purely accidental. The pits are sufficiently far apart so that strata cannot be traced between them. Furthermore, too few artifacts were found to permit identification of cultural strata by significant changes in the artifact assemblages. A larger excavation would be needed to construct an archaeological sequence.

There is some probability that there are structural remains at this site, as there are at Culebras. Rectangular outlines can be distinguished in the sand, and some of them are considerably larger than any of the Culebras structures. None of these outlines was investigated, however, because of limitations of time.

Bonavía found a number of textile fragments of fair size and in a relatively good state of preservation. All of these were executed in the technique of twining which is characteristic of pre-ceramic associations. The textiles are being studied by Miss Elizabeth King.

Apart from the textiles, the most important artifact found was a chipped stone point (fig. 2). This point was found near Pit PH-1 at a depth of 20 to 25 cm. but without close stratigraphic control. It is 5.4 cm. long, 1.65 cm. in maximum width, and 0.7 cm. thick, and it weighs 5.8 grams. The material of which it is made is a fine grained black stone of the type usually called "basalt" by archaeologists. The original form of the point cannot be determined, since it has been reworked by percussion. The flakes detached in the reworking are larger than those removed in the original process of manufacture. Edward P. Lanning, who has seen this point, suggests that it may be a reworked Culebras type point.

Further information on the maize from Huarmey North One and its associations will be presented in future publications. We feel that the evidence presented above is sufficient to establish the fact that maize occurs in a pre-ceramic context at this site.

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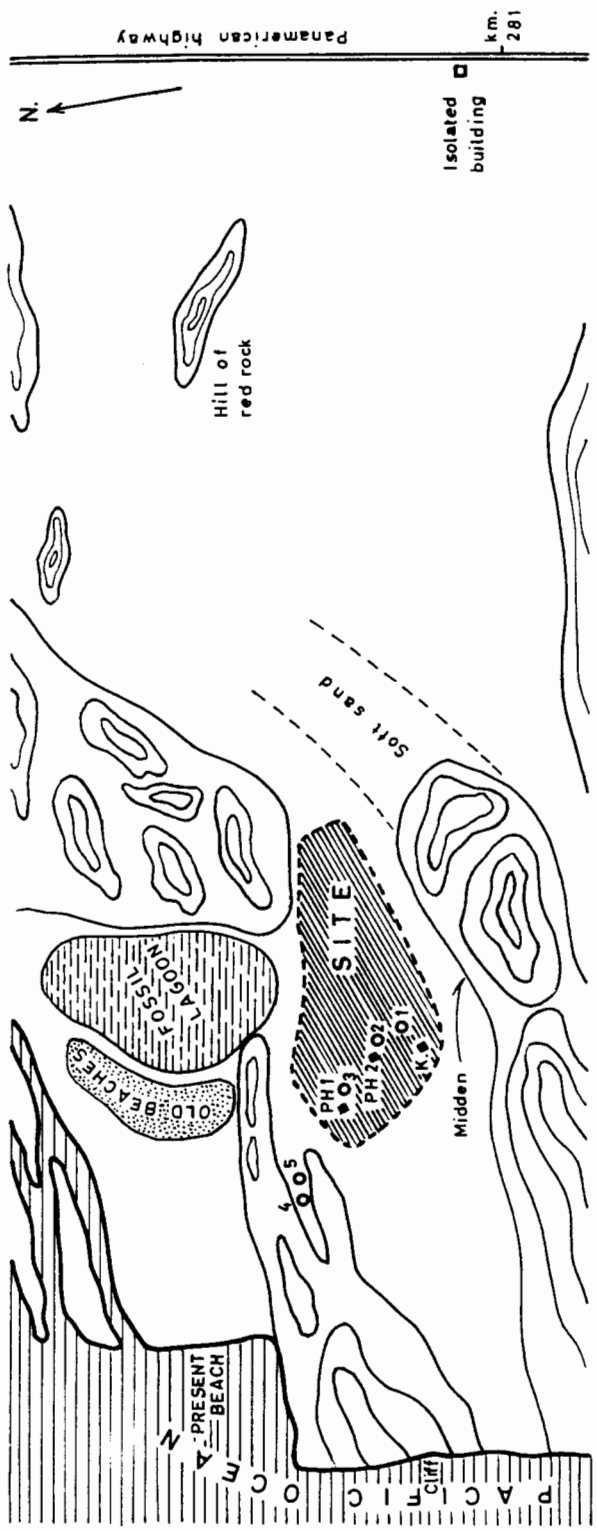
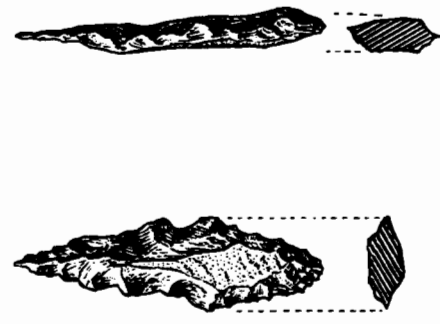


Fig: 1



*F. Conydon*

Fig: 2