

## 9. EXCAVATIONS IN SIXTEENTH CENTURY SHELLMOUNDS AT DRAKE'S BAY, MARIN COUNTY

Clement W. Meighan

The Drake's Bay region of the Central California coast has been of great archaeological and historical interest because of the known sixteenth century visit of Sebastian Rodriguez Cermeno in 1595 and the presumed sojourn there of Sir Francis Drake in 1579. This paper comprises a summary report of the archaeology of several historic sites in which have been found fragments of Ming porcelain of late sixteenth century date.

Seven shellmounds on the shores of Drake's Bay are now known to contain historic materials over 350 years old. This is a fact of major significance to California archaeology, as sites of this age which can be precisely dated are rare in North America. Here we have seven such sites located within a small area, and the systematic investigation of these mounds has yielded invaluable cultural and historical information.

The first archaeological work in the Drake's Bay region was done in 1940 by Dr. R. F. Heizer, then a graduate student in the Anthropology Department, University of California. At Estero mound (Mn-232), Dr. Heizer's field party recovered a number of heavily oxidized iron ship's spikes and numerous fragments of blue-on-white Chinese porcelain. In 1941, further excavations at Estero and at other Drake's Bay sites were carried out under the direction of Dr. R. K. Beardsley, then a graduate student at Berkeley. At the end of the two seasons of field work, the historic material recovered totalled 74 porcelain fragments and 49 iron spikes. The porcelain was identified by Dr. Theodore Y. Hobby, Assistant Curator in the Department of Far Eastern Art, Metropolitan Museum of Art, New York, as being Chinese and ascribable to the Ming dynasty period. Most of the porcelain was of the Wan Li period, which is dated 1573 to 1619. The iron spikes were identified as being of ancient origin by Drs. Colin G. Fink and Eugene P. Polushkin of the Department of Chemical Engineering, Columbia University. A report on the two seasons of field work was made by Dr. Heizer at a meeting of the California Historical Society's Quarterly.<sup>1</sup>

On the basis of strong inferential evidence, Heizer attributed the historic material to the visit of Cermeno in 1595. Cermeno was the pilot of a Manila ship, the 200 ton San Agustin. Ordered to survey the California coast for a way-station for the Manila galleons, Cermeno anchored his vessel in Drake's Bay in November, 1595. Late in that month, the ship was lost in a gale which drove the vessel onto the beach. This wreck was a fortunate circumstance for modern archaeologists, since it resulted in the dispersal of dateable objects throughout the Indian villages of the region.

In all, the Spanish remained at Drake's Bay for a month. Cermeno and some 70 survivors of the shipwreck sailed down the coast in a small Philippine launch, and after seven weeks of extreme hardship arrived at Chacala, a port north of Cape Corrientes in Mexico.<sup>2</sup>

Of the earlier visit of Sir Francis Drake in 1579, no positive archaeological evidence has yet been found. Drake and his men spent six weeks at some port on the California coast, and there is linguistic and ethnographic evidence for believing Drake's Bay to be the site of his stay.<sup>3</sup> The famous Drake Plate was also recovered in this region, having been traced to a spot only a few miles from the Estero site.<sup>4</sup>

The material evidence of sixteenth century foreign visitors recovered from coastal Marin County sites gives the archaeologist a known time datum for the Indian culture in this part of California which is almost 400 years old. This, in turn, enables the archaeologist to assess the changes which have taken place in Indian culture during the centuries which have passed since first contact with the Whites. Analysis of the aboriginal artifacts recovered from the porcelain-bearing layers of the archaeological sites shows that these artifact types are of the latest known Indian culture in the region;<sup>5</sup> indeed, they are identical to the objects used by the Indians when the Spanish missions were established in Northern California, some two centuries later. The artifact types of the Late Horizon culture, such as incised birdbone tubes, clam-shell disc beads, and small, delicately chipped projectile points, are all now known to date back to a minimum date of 1595. The Late culture of Marin County (historically that of the Coast Miwok tribe) is thus shown to have undergone remarkably little modification of a long period of time, at least in the department of material culture.

An outline account of the archaeological investigations which have been carried out at each of the seven sixteenth century sites is given in the following paragraphs. Two tables are appended which itemize the material recovered.

#### Estero (Mrn-232):

The Estero site has been intensively investigated by three field crews (in 1940, under R. F. Heizer; in 1941, under R. K. Beardsley; in 1949, under the present writer).<sup>6</sup> This midden has now been approximately 80 per cent excavated. Further work here would probably be unprofitable.

Estero was the first site to yield sixteenth century material, and the successful 1940 excavations carried out here were the chief stimulus for the subsequent historic archaeology done in this region during the ensuing decade. Almost three-fourths of the artifacts from the seven sixteenth century sites, both aboriginal and historic, have<sup>conc</sup> from Estero mound alone (Table 2). Nearly all of the handwrought iron spikes thus far found are from the Estero site, a fact which may indicate that the Estero residents made use of many of the nail-studded timbers of the wrecked San Agustin.<sup>7</sup>

#### Mrn-242:

A preliminary investigation of Mrn-242 which yielded a single piece of Late Ming porcelain was made in 1940 under R. F. Heizer. In 1941 this site was extensively dug by a crew under R. K. Beardsley; a quantity of aboriginal artifacts was recovered, but only a few additional historic artifacts were found.

#### Mrn-271:

Mrn-271 was partially excavated in 1941 by R. K. Beardsley's field party. Some additional material from this site was secured by A. E. Treganza in 1945.

#### Mrn-235:

Only preliminary test-pitting has been done at site Mrn-235, which is a comparatively large and deep midden. This work, part of the 1941 investigations of R. K. Beardsley, yielded a few aboriginal artifacts and three pieces of Ming porcelain. One of the porcelain fragments is half of a small bowl and is

the largest single piece of porcelain recovered to date.

Mrn-236:

Testing of this site in 1941 yielded three pieces of Ming porcelain and a single iron spike. No further work has been done.

Mrn-274:

A single piece of Ming porcelain was reported from this site by the 1941 field crew. No further excavation has been done here.

Mrn-307:

Mrn-307, a small midden near the Estero site, was first excavated in 1949 by a field crew under the present writer. Further excavation was carried out in April and September of 1950. The site is now about 40 percent excavated, and it is anticipated that it will be completely dug in the near future.

Although much excavation has been done in the sites described above, the total number of aboriginal artifacts recovered from all the digging is only slightly over 1000. This small number is primarily due to the low artifact yield in the coastal shell middens; usually only a couple of artifacts are recovered from each cubic yard of midden excavated.<sup>8</sup> Nearly 200 sixteenth century artifacts have been recovered from the same sites -- thus one shipwreck dispersed enough historic material throughout the area to cause the high ratio of one historic artifact to each five aboriginal artifacts.

The amount of sixteenth century historic material which has been found at Drake's Bay can be appreciated when it is realized that the 110 pieces of Ming porcelain now in hand represent parts of at least 38 different vessels. These include 16 plates of at least two shapes, 10 bowls of three different shapes, and two fluted vessels. The quantity of porcelain is strong evidence for the belief that it was derived from a shipwreck, since Chinese porcelain was highly valued by sixteenth century Europeans, and no European would have passed out 38 of the precious vessels to the California aborigines. A detailed analysis of the Ming vessel fragments is now in preparation.<sup>9</sup>

In addition to the porcelain, 57 iron spikes have been found in the Drake's Bay sites. An analysis and description of these may be found in Heizer's published report.<sup>10</sup> In 1949, several large iron rods were found in the upper levels of site Mrn-307. These rods, four feet long and one inch in diameter, exhibit peened ends which hold iron washers. Such rods have long been used in wooden ship construction to hold heavy keel timbers together. The dating on these specimens is still doubtful, although Ming porcelain fragments have been recovered from the same levels of the site.<sup>11</sup>

Site Mrn-307 alone has yielded another type of historic artifact in the form of seven pieces of brown-glazed stone-ware, of a type which is widely used in the Orient for water containers. A positive identification of this ware also awaits further analysis, although it has been tentatively identified as being Oriental in origin, and a sixteenth century date is possible for this stoneware.

Conclusions:

Seven shellmounds on Drake's Bay have been dated as having been occupied in the late sixteenth century by the finding of Ming porcelain which

came from a Spanish ship wrecked there in 1595. Of these mounds, three (Mrn-235, Mrn-236, Mrn-274) are still virtually untouched by excavation. The other sites have been more extensively excavated by various field parties, so that further work will probably be unrewarding.

The discovery and dating of these sixteenth century sites will be invaluable in the detailed reconstruction of the history of the Indian culture of the Late period in Central California. Prior to the investigation of the Drake's Bay sites, the oldest dated material extended only to the Spanish Mission period of the late eighteenth century. The Drake's Bay sites have therefore extended the archaeologist's known time datum by almost two hundred years and will enable him to make amore accurate evaluation of culture change than has been possible previously.

The University of California Archaeological Survey files record the position of no less than 40 sites on the shores of Drake's Bay and the adjoining esteros. Most of these sites cannot be assigned a temporal position, since no excavation data is available for the majority of sites. However, it is known that sites of the Middle Horizon (which precedes the Late) are found on Drake's Bay. Late Horizon sites appear to be more numerous, and of these, seven (those discussed here) are of sixteenth century date. Late sites of the post-sixteenth century period are also known, an example being site Mrn-234, situated on the U.S.Coast Guard Base near Point Reyes.

It may be stated that up to the present time no positive evidence which would indicate Drake's presence in the bay which now bears his name has been found. Any effort to so interpret the materials thus far recovered would be unjustified. The high historical importance of being certain of the correct identification of Drake's landfall makes it imperative that the evidence presented be of a material and unquestionable character. Such evidence has not yet been found in any archaeological site on Drake's Bay, although the evidence, when and if it is found, will almost certainly be of an archaeological nature.

Clement W. Meighan  
Department of Anthropology  
University of California

## NOTES

- 1 R. F. Heizer: "Archaeological Evidence of Sebastian Rodriguez Cermeno's California Visit in 1595". California Historical Society Quarterly, vol. 20, no. 4, 1941. Also published separately by the Society with an introduction by A. L. Kroeber and a metallurgical report on the iron spikes by C. G. Fink and E. P. Polushkin.
- 2 The original documents are presented by H. R. Wagner. Spanish Voyages to the Northwest Coast of America in the Sixteenth Century. San Francisco, 1929, pp. 154-167. 369-373.
- 3 R. F. Heizer: "Francis Drake and the California Indians, 1579". UCPAAE vol. 42, no. 3, 1947. See also A. L. Kroeber: Handbook of the Indians of California. BAE B 78, 1925, pp. 275-278.
- 4 H. E. Bolton: "Francis Drake's Plate of Brass" in California Historical Society's Special Publication No. 13, 1937. C. G. Fink: "Drake's Plate of Brass Authenticated". California Historical Society Quarterly, vol. 18, no. 4, part 2, 1938.
- 5 R. K. Beardsley: Temporal and Areal Relationships in California Archaeology (Ph.D. thesis, University of California at Berkeley, 1947). Beardsley defines (p. 120) the aboriginal material associated with the porcelain as being of the "Estero Facies of the Marin Province of the Late Horizon". Among the artifacts characteristic of this period are small, stemmed arrow points; flat-bottomed mortars with smooth, straight, or flaring sides; clamshell disc beads; steatite and magnesite beads; charmstones of phallus form; and notched scapular "saws".
- 6 The 1949 excavations received financial backing from the California Historical Society, through the efforts of Mr. Allen L. Chickering. Other excavations at Drake's Bay have been sponsored by the University of California at Berkeley; the 1949-1950 work being under the supervision of the University of California Archaeological Survey.
- 7 R. F. Heizer: op. cit. in note 1.
- 8 C. W. Meighan: "Observations on the Efficiency of Shovel Archaeology". UCAS-R, no. 7, 1950.
- 9 C. W. Meighan: "Report on the 1949 Excavations of Sixteenth Century Sites on Drake's Bay". ms. (UCAS', no. 79).
- 10 R. F. Heizer: op. cit. in note 1.
- 11 A metallurgical analysis of these rods has been made by Drs. C. G. Fink and E. P. Polushkin. Copies of this report on file at the California Historical Society and the University of California Archaeological Survey (UCAS ms. no. 85). The metallurgical evidence is inconclusive as far as proving the rods to be of recent or ancient manufacture. From the standpoints of stratigraphic position and association, their archaeological occurrence indicates them to be of equal age as the Wan Li porcelain from the same site.

TABLE 1 -- MATERIAL RECOVERED FROM 16th CENTURY SITES ON DRAKE'S BAY

| <u>Site:</u> | <u>Date:</u> | <u>Aboriginal artifacts:</u> | <u>Historic artifacts:</u> | <u>Bone, shell, soil samples:</u> |
|--------------|--------------|------------------------------|----------------------------|-----------------------------------|
| Mrn-232      | 1940         | 114                          | 25                         | 35                                |
|              | 1941         | 154                          | 102                        | 32                                |
|              | 1949         | 443                          | 28                         | ca. 150                           |
| Mrn-235      | 1941         | 27                           | 3                          | 1                                 |
| Mrn-236      | 1941         | 18                           | 3                          | 1                                 |
| Mrn-242      | 1941         | 167                          | 3                          | 10                                |
| Mrn-271      | 1941         | 83                           | 23                         | 15                                |
|              | 1945         | 14                           | 3                          | 1                                 |
| Mrn-274      | 1941         | 4                            | 1                          | 0                                 |
| Mrn-307      | 1949         | 23                           | 17                         | 6                                 |
|              | 1950         | 65                           | 15                         | ca. 50                            |

TABLE 2 -- DISTRIBUTION OF IRON SPIKES AND PORCELAIN FRAGMENTS

| <u>Site:</u> | <u>Porcelain fragments:</u> | <u>Iron Spikes:</u> |
|--------------|-----------------------------|---------------------|
| Mrn-232      | 69                          | 51                  |
| Mrn-235      | 4                           | 2                   |
| Mrn-236      | 3                           | 1                   |
| Mrn-242      | 4                           | 2                   |
| Mrn-271      | 17                          | 0                   |
| Mrn-274      | 1                           | 0                   |
| Mrn-307      | 14                          | 9*                  |
| Totals:      | <u>112</u>                  | <u>65</u>           |

\* Includes the large iron rods, which have been found only in this site.