

# Chapter Thirteen

## Shell

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A total of 144 pieces of shell, including 83 worked pieces, were recovered during the excavations at Homol'ovi IV. Identification of the shell was done by Barbara Harper with the assistance of Sharon Urban and Arthur Vokes.

### SITE DISTRIBUTION

As indicated in Table 13.1, almost three-fourths of the shell came from the plaza excavations. This is due primarily to the preponderance of excavations occurring in the plaza versus the structures, which accounts for 58% of the surface area and 63.3% of the volume. Factoring in the differential volume, 91 artifacts out of 144 should have been recovered from the plaza based on volume alone. For the structures, by volume structure 301 should have had only 7.6 artifacts. Therefore, the plaza and structure 301 had slightly more artifacts than predicted by volume. A high frequency of beads in both these areas accounts for their higher artifact count versus other structure or provenience categories.

The high frequency of shell in the plaza is due either to its general use as a midden, especially early in its occupation, possible slope wash of this trash covering the plaza area, or the probability, especially with the *Anodonta*, that shell manufacture was taking place outside in the plaza rather than within structures. Very few shells in general were recovered from structures and many of these were beads, which are the most easily lost artifacts of shell. With the exception of *Anodonta*, there is very little indication of shell manufacture at Homol'ovi IV. The limited number and range of tools reflects this situation. Only a couple of the *Glycymeris* bracelet fragments appear to have been reused or reshaped after being broken. Photos of mortuary materials recovered by pothunters at Homol'ovi IV include many shell items, especially bracelets and necklaces. These suggest that shell was common and relatively easily available to the inhabitants. Such ease of access may explain the low frequency of shell manufacture debris in the midden areas excavated within the plaza and beneath several of the rooms.

Table 13.1 Distribution of shell artifact types by structure

Structure	Misc. shell	Pendant	Bracelet	Bead	Tinkler	Ring	TOTAL
0/Plaza	41	3	12	46	4		106
1	5	2		1			8
2	5			2			7
5	3						3
10	2			2			4
201	2						2
301	3			10		1	14
TOTAL	61	5	12	61	4	1	144

### DISTRIBUTION OF SHELL BY GENERA

Table 13.2 lists the distribution of shell genera by structure. More than 30% of the shell from Homol'ovi IV is from the local freshwater clam, *Anodonta*, which lived in the Little Colorado River in the Homol'ovi area at least into the 1950s (Bequaert and Miller 1973:222). This is a lower frequency than the nearly 40% at Homol'ovi III (Urban 2001: Table 13.1). The frequency of *Anodonta* in the plaza is in line with the quantity of material excavated from the plaza versus the structures. *Anodonta* is an edible clam and could have been a food source as well as a source of raw material for shell manufacture. Its local availability rather than the scarcity of access to shell trade is probably why it is found so abundantly at Homol'ovi villages (Urban 2110:301).

Two of the three next most frequent genera at Homol'ovi IV, *Olivella* (Figure 13.1) and *Glycymeris* (Figure 13.2), were second and third at Homol'ovi III, but the relative frequency of *Olivella* at Homol'ovi IV, at 36.8% was nearly double that at Homol'ovi III, whereas the frequency of *Glycymeris* was slightly lower at Homol'ovi IV in comparison to Homol'ovi III (Urban 2001:Table 13.1). The major difference between the two assemblages was in *Sonorella*, at 18, the third most frequent genera at Homol'ovi IV, but only the ninth most frequent at Homol'ovi

III where only 4 were recovered. Given that *Sonorella* is a land snail, it is most likely indigenous to the deposits. Two other land snails, *Helisoma* and *Succinea*, were more common at Homol'ovi III, perhaps indicating that the floodplain environment of Homol'ovi III was less suitable to *Sonorella* than the more colluvial and eolian nature of Homol'ovi IV deposits.

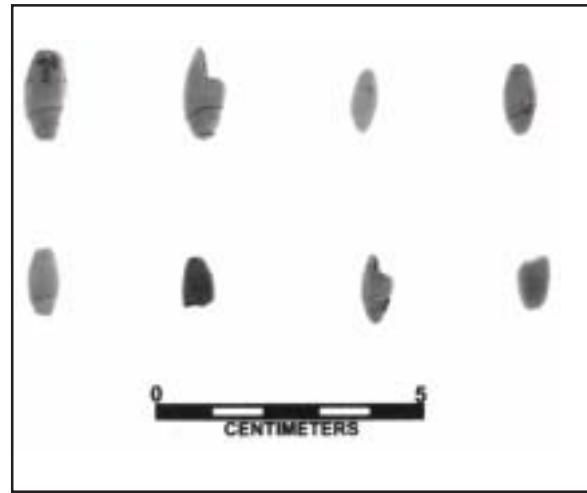


Figure 13.1 *Olivella* beads

Only the two pieces of *Haliotis* came indisputably from the Pacific Ocean (Urban 2001). All other genera could have originated in the Gulf of California and been exchanged through the Hohokam region and probably down-the-line through intermediaries in the Verde Valley and

Table 13.2 Distribution of shell genera by structure

Structure	0/Plaza	1	2	5	10	201	301	TOTAL
<i>Anodonta</i>	31	6	1	1		2	3	44
<i>Cerithidea</i>	1							1
<i>Conus</i>	2							2
<i>Turritella</i>	1							1
<i>Glycymeris</i>	15	1					1	17
<i>Haliotis</i>		1			1			2
<i>Laevicardium</i>	3				1			4
<i>Olivella</i>	42				1		10	53
<i>Pecten</i>	2							2
<i>Sonorella</i>	9	2	6		1			18
TOTAL	106	10	7	1	4	2	14	144

possibly on Anderson Mesa (Sinagua) or into the Tonto Basin (Urban 2001:300). All areas have ceramics exchanged from the Homol'ovi area and shell exchanged from the Hohokam area indicating they were in contact with groups from both areas and could have served as intermediaries in the far-reaching exchange of shell in the U.S. Southwest (Urban 2001:300).



Figure 13.2 *Glycymeris* shell bracelet fragments

Only 7 of the 61 in the miscellaneous shell category are marine with the remainder being either *Sonorella* or *Anodonta* (Table 13.3). Four of these seven are *Laevicardium*, a marine shell present along the West Coast as well as the Gulf of California (Urban 2001:300). Three of these were recovered from the plaza. This distribution is repeated at Homol'ovi III where all six

*Laevicardium* shells were recovered from the plaza and five were fragments. This is the marine genera whose condition and location most suggests manufacture, although none of the fragments has attributes that indicate anything other than natural breakage.

The only other noteworthy distributions in Table 13.3 are the beads and *Glycymeris*. Virtually all of the beads are from *Olivella*, a shell that is simply and easily converted into a bead. The seven *Sonorella* shell beads are problematical. Snails have fragile shells and *Sonorella* can easily break giving the physical appearance that they could have been used as beads. None of the *Sonorella* beads clearly shows manufacture, but their possible use as beads has been retained in the table.

The *Glycymeris* genera is easily the most diverse in terms of artifact types appearing in five categories compared to at most two for any other genus (Table 13.3). This diverse use was also true at Homol'ovi III (Urban 2001) and is probably the result of the broad range of sizes in which *Glycymeris* can be recovered naturally or manufactured. It also is the most easily remanufactured into another artifact type when it breaks. As at Homol'ovi II and III (Urban 1991, 2001), the preferred artifact type is the bracelet. The other rare species were primarily used as pendants or tinklers, as is the case with *Conus* (Figure 13.3, Table 13.3).

Table 13.3 Relationship between artifact type and shell genera

Structure	Misc. shell	Pendant	Bracelet	Bead	Tinkler	Ring	TOTAL
<i>Anodonta</i>	43	1					44
<i>Cerithidea</i>		1					1
<i>Conus</i>					2		2
<i>Turritella</i>		1					1
<i>Glycymeris</i>		1	12	1	2	1	17
<i>Haliotis</i>	1	1					2
<i>Laevicardium</i>	4						4
<i>Olivella</i>				53			53
<i>Pecten</i>	2						2
<i>Sonorella</i>	11			7			18
TOTAL	61	5	12	61	4	1	144

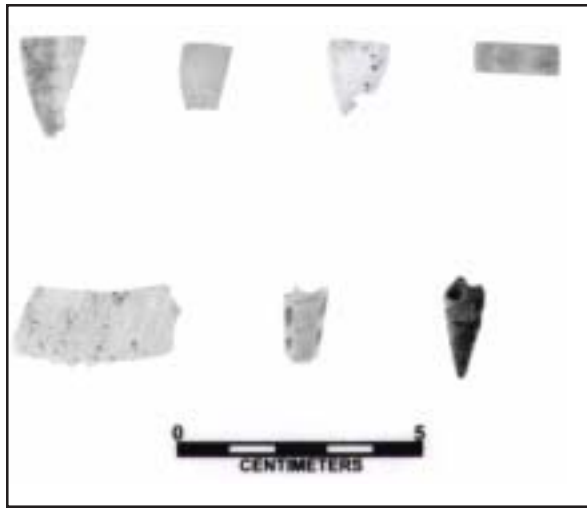


Figure 13.3 Worked shell and shell beads

### SUMMARY

The single season of fieldwork at Homol'ovi IV recovered 144 pieces of shell, 62 indigenous clam or snail and 84 marine, almost exclusively imported from the Gulf of California. This importation was probably via down-the-line exchange from the Hohokam of the Phoenix Basin via intermediaries either in the Verde Valley or Tonto Basin and then onto Anderson Mesa (Urban 2001). The eight marine genera are in line with the sample size. In contrast, the 428 shell from Homol'ovi III produced 13 marine genera. The most common shell genera at Homol'ovi III were also recovered from Homol'ovi IV. As with Homol'ovi III, the most frequent genus was the local freshwater clam, *Anodonta*, and the most common context was the plaza. At both sites this frequency is a product of volume of materials excavated from the plaza versus other proveniences or structures at the site.

The only genera showing positive manufacture or reworking at Homol'ovi IV are *Anodonta* and *Glycymeris*. Because *Anodonta* could have been used as a food source, the many fragments of this fragile shell could have resulted from their incorporation into the Homol'ovi IV diet rather than attempts at manufacturing it into an ar-

tifact. *Sonorella* may also have been modified into beads, but its fragile nature makes it equally as likely that shells were selected to be used as beads as a result of natural breakage or were not even used for beads but broke in such a way as to give that appearance.

The diversity and frequency of shell recovered from a single season of excavations at Homol'ovi IV combined with opportunities to view photos of shell artifacts recovered from pothunted burials at the village, indicates the occupants participated in a robust shell trade. The most likely source of shell was the Sinagua of Anderson Mesa. Obsidian artifacts and large amounts of pottery from these villages have also been recovered at Homol'ovi IV. In exchange for these goods from the south, the Homol'ovi IV people are known to have exchanged pottery, which also appears in the Anderson Mesa, Verde Valley and Tonto Basin areas, and possibly cotton. It is possible the Homol'ovi IV people exchanged directly with groups in the Verde Valley, Tonto Basin, or even the Phoenix Basin, for their shell. But the fact that their most intense and persistent trade partners were villages on Anderson Mesa makes them the most likely source of shell.

The shell from Homol'ovi IV fits exactly within the range of shell genera and shell artifacts recovered from other Homol'ovi villages (Urban 1991, 2001). This suggests the source of trade relationships probably persisted over the length of the occupation of the Homol'ovi villages, or to 1400. Tree-ring dates from Chavez Pass villages date as late as the mid-1380s (Bernardini and Brown 2004). The intensity and diversity of shell may have declined after 1385 or even slightly earlier when Homol'ovi II arrived and the Homol'ovi cluster becomes almost totally focused on exchange with Hopi Mesa villages (Adams 2002). But for the people at Homol'ovi IV, they seem to have enjoyed robust exchange relationships in diverse material categories with villages to the north on the Hopi Mesas and with villages to the south on Anderson Mesa.