



Introduction

Purpose: To provide preliminary information regarding marine shell artifacts found at Salado sites along the Upper Gila River; specifically regarding possible trade origins of saltwater shell species

Method: Analysis of shell species data provided by Desert Archaeology and Archaeology Southwest

Implications: Provides a solid base for continued research into the economic organization of marine shell trade among the Salado, and other groups along the Upper Gila River

Background: Salado

- The Salado represents a coalescence of Kayenta migrants and southern locals, including Mogollon and Hohokam peoples, during the 13th and 14th centuries
- These diasporic groups maintained connection for at least 100 years, trading intensively across southeastern Arizona and southwestern New Mexico, especially obsidian from Mule Creek, New Mexico
- This obsidian source inspired more data recovery investigations from the Upper Gila River by Archaeology Southwest

Shell

- Shell is a fairly common occurrence at sites along the Upper Gila River, both worked and unworked.
- Most of the shell recovered from the Upper Gila River come from riverine species, but marine shells are also found in smaller concentrations.
- Shell, like obsidian suggests a wide trade network to bring material long distances to arrive in the Upper Gila River
- **The Salado must have had connections with groups close to the source of these shells**
- By looking at the source of shells, we can ask:

How did the Salado acquire marine shell?

What can shell tell us about the economic organization of the Upper Gila River Salado?

Shell Distribution at Sites

- Dinwiddie contained only a small amount of *Conus* shell.
- Gila River Farm contained the most diverse collection of shells and shell artifacts with *Conus* being the most common as well as being the only site where *Laevicardium e.* and *Spondylus* were present.
- 3-Up contained a very small amount of *Olivella* and *Glycymeris*
- Gamalstad contained a relatively large concentration of *Glycymeris*. The only example of *Argopecten* across the sites was also found at Gamalstad

Shell Statistics

- The most commonly found Marine shell were *Olivella* and *Glycymeris*, each with 11 total artifacts across all of the sites.
- The next most common was *Conus*, with 7 examples across all excavated sites.
- With the exception of Gila River Farm, the other sites appear to have preferred certain shell species over others. Dinwiddie only had *Conus* shells, and Gamalstad had almost only *Glycymeris*. What can this tell us about the organization of shell trade in the southwest?

Site Name	<i>Conus sp.</i>	<i>Cerithidea</i>	<i>Olivella</i>	<i>Nassarius</i>	<i>Turritella</i>	<i>Glycymeris g.</i>	<i>Laevicardium e.</i>	<i>Spondylus</i>	<i>Argopecten c.</i>
Dinwiddie	3	0	8	0	0	0	0	0	0
Gila River Farms	4	1	2	2	1	1	3	2	0
3-Up	0	0	1	0	0	2	0	0	0
Gamalstad	0	0	0	0	0	8	0	0	1
Total	7	1	11	2	1	11	3	2	1

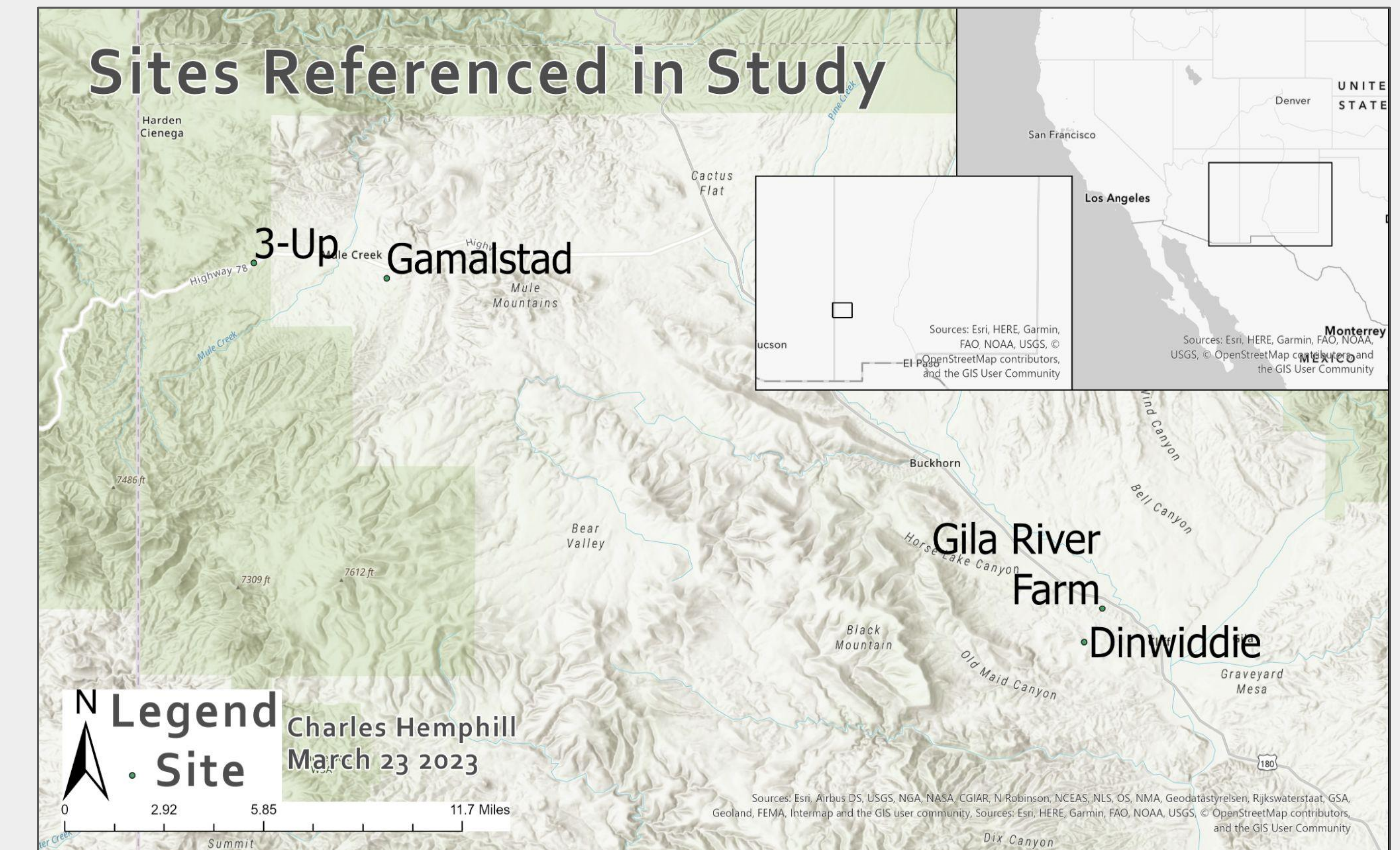
Many species of shell found in Upper Gila River sites, such as the popular *Olivella*, as well as *Turritella*, *Cerithidea*, and *Conus* sea snails can be found on many different beaches all over the world. Similarly, the *Nassarius*, which is a genus of mud snails can be found along much of the East Pacific

Another popular shell, known as *Glycymeris gigantea* is a large clam and can be found in shallows along subtropical and tropical regions including the Gulf of California. *Glycymeris* is also commonly used by the Hohokam, who use the entire shell to fashion bracelets. Much of the worked *Glycymeris* found at sites along the Upper Gila documented by ASW were fragments of shell bracelets of the type worn by the Hohokam.

Laevicardium e. is a cockle and is found from Central California to Panama and is most often used to create disk, and other types of beads

Spondylus, also known as Spiny Oyster has a large distribution from the Gulf of California down to the northern beaches of Peru. *Spondylus* is also used to fashion beads and is sought after due to its orange, red or purple coloration

Argopecten c. is a scallop and comes from Southern California into Baja California.



This map shows the general areas of sites excavated by Archaeology Southwest's UGPA field school



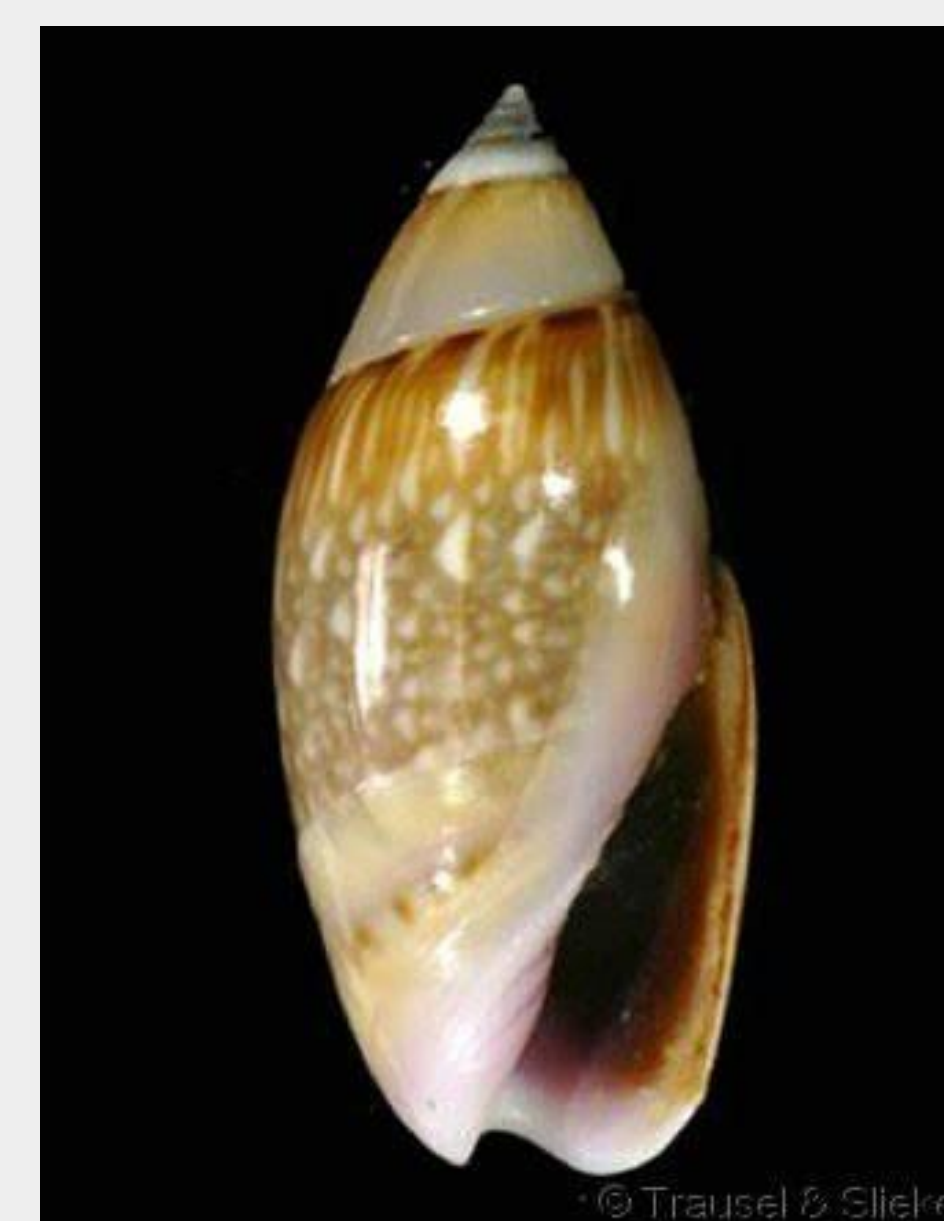
Shell artifacts uncovered by the 2019 UGPA field school in Cliff, NM.



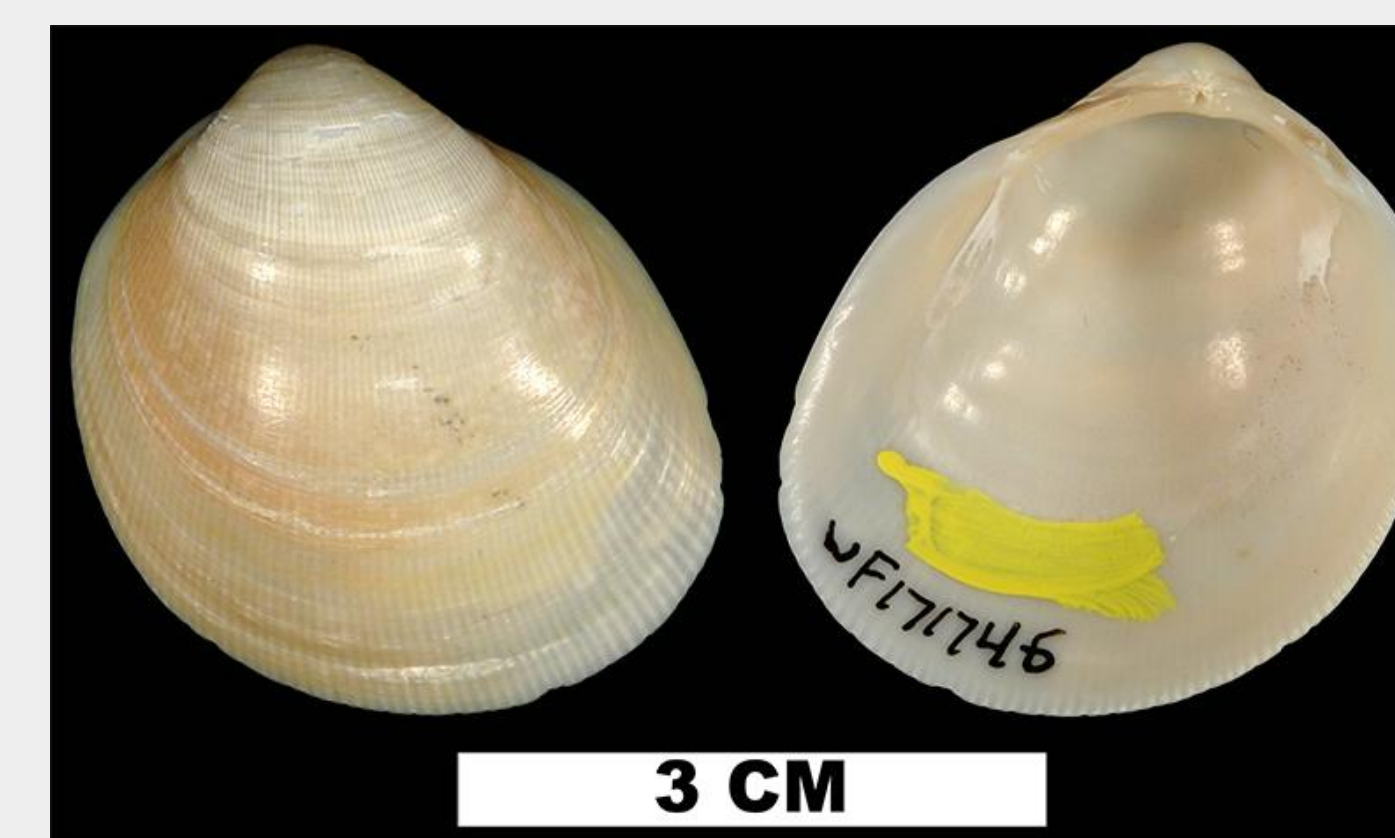
An example of *Conus Californicus*. A subtype of *Conus* found off the coast of California. Image courtesy of californiashells.com



Glycymeris bracelets of the type fashioned by the Hohokam. Image courtesy of Arizona State Museum



Olivella is often used to make tinklers and shell beads. Image courtesy of gastropods.com



Laevicardium shell is commonly used to make beads. Image courtesy of neogene.net

Next Steps and Further Research

- Most of the shell found at sites along the Upper Gila river likely originated in the Gulf of California.
- The Hohokam were likely involved in the transport and distribution of *Glycymeris g.* Throughout the southwest.
- How did the Hohokam obtain *Glycymeris*? Did they travel long distances to gather it themselves or did they trade for it with a group closer to the gulf of California?
- How can we further reconstruct marine shell trade routes throughout the American Southwest?

Acknowledgments

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