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Hohokam T-Shaped Stones

(Second of Two Parts)

by Alan Ferg

The gentle reader will recall that in the last issue of the *AIT* newsletter your author was precariously balanced on the cutting edge of an incredibly insightful archaeological inference regarding Hohokam T-shaped stones. Or perhaps it was somewhere near (or just beyond) the fringe of pseudoscience? "Fergoliths" *(Archaeology in Tucson,* August 1991, p. 3) seem to have brought out the sillier side of many people, and a host of possible functions have been suggested, some in jest, others only half so. When dealing with an unidentified artifact, the boundary between an unsupportable inference and a reasonable argument can be a bit fuzzy. I suspect that is the true appeal of "fergoliths"—professional and avocational archaeologists alike are in unknown territory, and no one can resist proposing their own interpretation. But we mustn't lose sight of the fact that the Hohokam did indeed make these objects, at some cost in time and effort. They are not a hoax or joke, and trying to understand their role in Hohokam society is a legitimate field for inquiry.

SHAKY INTERPRETATIONS. I stated last issue that there are no historic survivals of Hohokam T-shaped stones. A stout-hearted diffusionist might disagree. Although no such objects are known to me from the ethnographic Southwest or surrounding areas, similarly shaped food-processing tools are known from several South American tribes. They are used with a rocking motion as two-hand pestles or crushers, for grinding corn or manioc in wooden troughs. Those made of wood are quite similar in appearance to Hohokam T-shaped stones (Figure 40, while those made of stone (Nordenskiöld 1924:Item 43 on Map 16) are shaped like half a disk. However, without some kind of corroborating evidence, I am not willing to attribute similar functions to Hohokam T-shaped stones. The resemblances may be more apparent than real, and I wonder whether DiPeso had these ethnographic descriptions in mind when he was writing about the Babocomari Village specimens. And even if I have to eat these words in the future, and conclude that T-shaped stones *were* some sort of crushers, until similar implements are recovered between Arizona and Colombia, the similarities must be considered *analogous,* and not *homologous:* there is currently no evidence for any direct connection between the two types of objects.

The notion that T-shaped stones are sluice-gates for small Hohokam canals or laterals occurred to many people. However, much as the shape might cry out its identity as a canal gate, the argument against this idea is wonderfully straightforward. The distributions of T-shaped stones and Hohokam canal irrigation are essentially mutually exclusive: the Phoenix Basin with its enormous system of canals has few or no T-shaped stones, whereas Tucson and the upland areas north of Phoenix are primarily dry-farming areas with few canals. Although there is a type of large rock apparently associated with canals in the Phoenix Basin (see Masse 1987:76-82), they do not resemble T-shaped stones. However, this exploration of the sluice-gate idea does point out the similar distribution of T-shaped stones and dry-farming areas, a point which we will return to later.

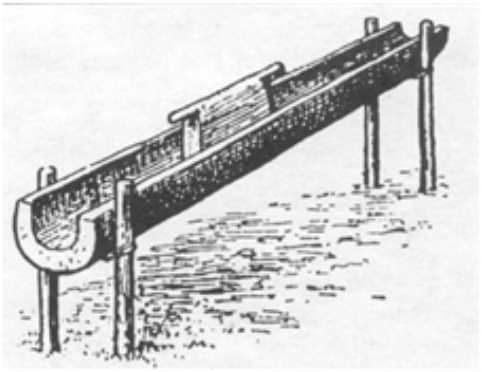

Figure 4. *South American wooden crusher in wooden trough, illustrated by Nordenskiöld (1924:Map 16).*

While thinking of agriculture, the possibility arises that T-shaped stones might be field boundary markers. Forde (1931:367-371) described the stone markers used to delimit the boundaries of village, clan, and family agricultural lands at Hopi. There are doubtless other ethnographic and archaeological examples. However, if T-shaped stones were simply some sort of formalized field marker, one might expect them to occur in the Phoenix Basin as well. Their complete, or nearly complete, absence from that area seems a strong argument against this interpretation.

Two pairs of T-shaped stones found at a site in the Bloody Basin area (three of which are now at the Smoki Museum in Prescott) have come to be identified as "loom weights." According to Prescott oral history, this identification was provided by someone from the Smithsonian in response to a letter containing drawings of the stones. If we are talking about actual weights for

Fergolith Found During Lower San Pedro Survey

During the first field season of the Center for Desert Archaeology's Lower San Pedro survey, one of the crewmembers found a broken "fergolith" (Hohokam T-shaped stone) at AZ BB:11:54 (ASM), a prehistoric agricultural field site. This was only one among many exciting archaeological discoveries made during this ongoing project.

The LSP's survey's third field season began October 5th and will continue into December. If the weather cooperates, in November and December, we'll look for more archaeological sites in the San Pedro Valley from Aravaipa Creek northward down to where the San Pedro River flows into the Gila River. Survey dates are November 2nd (Saturday), November 17th (Sunday), December 7th (Saturday), and December 15th (Sunday). If you are a member of *Archaeology in Tucson*, are in good physical condition, and would like to join in the survey excitement, call Al Dart at 881-2244.

warp-weighted looms, I can find no evidence of this loom type in the Southwest. Conceivably this identification came about as a result of a vague resemblance between the shape of T-shaped stones and small trapezoidal clay loom weights that are depicted on Greek urns and often illustrated in weaving histories, or perhaps because the Smoki specimens were found in pairs, as prehistoric and historic loom blocks are. Puebloan blocks for vertical looms are generally a rectanguloid sandstone block with a hole for the insertion of a wooden warp bar. Other than being heavy, shaped-stone objects that can occur in pairs, loom blocks bear no resemblances to T-shaped stones. And horizontal looms (the type of loom probably used most in southern Arizona prehistorically) did not employ any sort of heavy stone paraphernalia. So, although it is intriguing to think that T-shaped stones might be somehow related to Hohokam weaving, we currently have no support for such an idea.

INTERPRETATIONS WITH WHICH I AM CURRENTLY SMITTEN. Frisbie (1971) has documented an unbroken continuum in the use of conical stone "Maize Deity symbols" among Southwestern Pueblo Indians from about AD. 1000 to the present. All information presented here is drawn from Frisbie's discussions. Maize Deity symbols are generally made of sandstone, ground to a flattened cone shape, and average about 20 cm tall. Variously called Corn Mothers, Germ Gods, Cloud Mountains and *tiponi*, all are terms that may be appropriate for some stones in certain circumstances, but are inappropriate to describe the whole class of these objects. They are generally used as parts of altars, and their functions vary depending on the ceremony. Archaeologically they have been found singly and in pairs. Ethnographic information indicates that they are used in kivas and shrines, can be stored in a society room or a family's storage rooms when not in use (as can many kinds of ritual paraphernalia), may be present in burials and trash deposits, and can be "planted" (placed, not buried) in agricultural fields to assure good crops.

I would like to suggest that perhaps T-shaped stones could be considered ceremonial paraphernalia related to rainfall and crop fertility—the Hohokam equivalent of Puebloan Maize Deity symbols. Both artifact types are similarly sized stone objects that exhibit a good deal of individual variation but nevertheless adhere to one standard shape or form. They are often found in pairs. Most of the proveniences in which T-shaped stones have been found could be considered as having parallels among the contexts in which Maize Deity symbols occur: both can be found apparently discarded in trash; T-shaped stones found on pithouse floors and in extramural pits may have been in storage; T-shaped stones found in rock pile fields may have been "planted" there and/or were parts of crop fertility shrines. Finally, both artifact types seem to have originated at the time an important new agricultural crop was either introduced to a group or became relatively more important: corn in the Pueblo area, agave among those Hohokam who primarily practiced dry farming.

Although agave cultivation apparently dramatically increased throughout the Hohokam area early in the Classic period (Fish and others 1985), it is the association of T-shaped stones, dependence on dry-farming technology, and agave during this time period that is critical to the interpretation of T-shaped stones as some sort of ceremonial paraphernalia—that and my belief that T-shaped stones exhibit no usewear. Actually, it is only this last attribute that would distinguish T-shaped stones as ceremonial items, rather than utilitarian tools, related to agave cultivation or processing. The other associations would hold for a tool as well. Again, it is difficult to know what type of wear the processing of agave might produce, and some experimental archaeology is definitely called for.

The similarity of Maize Deity symbols and T-shaped stones in general consistency of form, occasional occurrence in pairs, similar contexts, temporal co-occurrence with shifts in crop emphasis, and occurrence in areas where rainfall and crop fertility were inseparable makes this analogy extremely appealing. If it is legitimate, we might predict that T-shaped stones would eventually be found in mortuary and ceremonial contexts. Whether or not such finds will be made is wide open to speculation: T-shaped stones are more restricted in time than Maize Deity symbols, and Hohokam structures believed to have religious functions are not as common as Puebloan kivas. However, it is quite rare to find a Maize Deity symbol in a burial, and even if a T-shaped stone is never found with a burial there need not be an

absolute one-to-one correspondence for the analogy to be useful. Nevertheless, given the number of Maize Deity symbols found in kivas, if T-shaped stones *are* some sort of religious symbol one might reasonably expect some to be found in Tanque Verde phase shrines or caches of ceremonial materials, or associated with religious architecture.

I must at least raise the possibility that T-shaped stones represent clouds. Although I really like this idea, I am unwilling to endorse it too strongly in print, lest I heap even more dung upon my head than I have already. To make a potentially very long and involved argument short, let me just say that images in the Southwest that are related to water and that include T-shapes (either right-side up, or upside down) are quite common. I cannot help but think there may be some real underlying relationship among images like (to name a few) clouds in Navajo sand paintings (Wyman 1970:35, Plate 6), clouds on Hopi altars (Webb and Weinstein 1987:113), presumed cloud designs on Puebloan dance paddles (and the shapes of the paddles themselves) from Navajo Pueblito sites (Roessel 1983:149-154), T-shapes incorporated into prehistoric depictions of kachinas and rock art figures interpreted as the water deity "Tlaloc" (Figure 5; see Ferg 1982), and Mesoamerican Tlaloc symbols themselves (Covarrubias 1957:Figure 55, lower right). Do T-shaped doors (Love 1974) and T-shaped altars (Rinaldo 1974:324-325) figure into this as well? Love (1974:see specifically pp. 301-303) makes similar arguments for T-shaped images and artifacts being related to rain and clouds. Whether Hohokam T-shaped stones prove to be ceremonial or utilitarian, what *is* the origin of their shape?

SO WHERE DOES ALL OF THIS LEAVE US? With no definitive answer, of course. The early Classic period was apparently a time of many changes in Hohokam society and religion. Regional alliances and trade networks were shifting. Settlement patterns were changing from scattered small villages to fewer and larger settlements. Platform mounds replaced ballcourts as the most visible pieces of public, presumably religious, architecture. Burial of the dead shifted largely from cremation to inhumation. And there was a variety of distinctive changes in several classes of material culture, including a new dominance of redware, changes in styles of decoration on buffware, loss of palettes, changes in shell species used and the jewelry produced. Curiously, a T-shaped form of tabular stone knives also appeared at this time (see Part 1). Earlier tabular knives were generally subrectangular or trapezoidal in shape, but would still have had a T-shaped appearance when hafted with a split wooden stick handle. In the realm of rock art Wallace and Holmlund (1986:149-151) have discussed the distribution of figures known as pipettes (so called because of a vague similarity in shape to a chemist's glass pipette). They appear to occur primarily in Tanque Verde phase and Classic period sites, although earlier

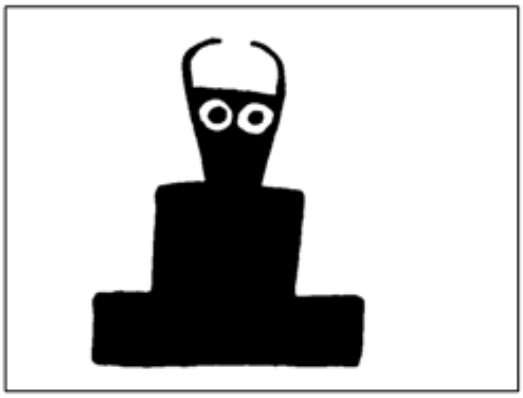

Figure 5. *Possible Tlaloc pictograph from the Black Range of New Mexico (after Schaafsma 1972:77).*

dates cannot be excluded at this time. These figures are generally found at large petroglyph sites, and are themselves often among the largest of the glyphs present. This caused Wallace and Holmlund (1986:151) to suggest that the pipette design relates to a Hohokam deity: "With its rectangular box-like form and common eye-like circles, we see some resemblance to Tlaloc, the goggle-eyed rain god of Mesoamerica. Given the occurrence of much clearer Tlaloc representations in the glyphs of the Jornada Mogollon to the east...it does not seem unreasonable to find a stylized form incorporated into Hohokam culture, particularly since other Mesoamerican traits have been documented...." This seems a distinct possibility given the variation in what are apparently Tlaloc depictions in rock art (see Schaafsma 1972:Figures 63, 94; 1980:201, 208-209, 236, Plate 17) and our increasing understanding of both Hohokam-Mimbres interaction, and Mimbres iconography as it relates to Mesoamerica (Thompson 1991). If demonstrable, the presence of Tlaloc depictions in Hohokam rock art would, I believe, be quite compatible with the notion that T-shaped stones too are related to Tlaloc iconography, clouds, rain, and crop fertility.

In conclusion, regardless of whether one subscribes to the interpretation that T-shaped stones are simply utilitarian tools for pulping agave, or that they are some sort of agricultural shrine stone, perhaps representing clouds and a watered-down *(get it?)* representation of Tlaloc, it appears that both are intimately related to dry-farming by Hohokam in areas where irrigation was impractical. And, in that the greatest frequencies of T-shaped stones (both geographically and temporally) correspond reasonably well with those areas and time periods where the cultivation of agave experienced its greatest florescence, presumably T-shaped stones are related specifically to agave farming. As usual, I must conclude with the archaeologist's old saw, which is nevertheless true: only additional data will help clarify the situation.

THE TRUE (MYTHOLOGICAL) ORIGIN OF "FERGOLITHS." Tucson artist Diane Dittemore recently served as a vehicle for unveiling information on what

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is undoubtedly the true, ancient origin of T-shaped stones. In 1988 Diane created a bola tie in the form of a "Santa Fe" coyote with stars on its body and a star in its mouth. When the author asked her to make another for him, she was inexplicably driven to create the new tie with a spotted coyote holding a "fergolith" in its mouth (see back cover). Although Diane was not consciously aware of the deeper truth her work had revealed, it was immediately apparent to the author. It was our old Southwestern friend Coyote barfing up indigestible fragments of the universe, pieces that would be puzzled over in a later time. And judging by the number of T-shaped stones around, whatever they are, they made Coyote very sick indeed.

HELP WANTED! Many, many people have directed me to T-shaped stones in various public and private collections. So many, in fact, that I have fallen behind in following up on their tips. BUT DON'T STOP! If you know of any T-shaped stones, please let me know. Also, I am looking for information on a Dr. C. J. Sarle, a Tucson mining geologist mentioned by Turney as having found 11 of these stones. Please contact Alan Ferg at 670-6576 (weekdays) or 623-1228 (nights/weekends).

Acknowledgements. In Part 1 of the "Fergoliths" article, all photographs are by Helga Teiwes, courtesy of the Arizona State Museum (Negatives 61317. 61322). In Figure 2 the stone at left is from the 3-C Ranch, near Oracle, from the Alice H. Carpenter Collection; the stone at right is ASM Cat No. A-3949 from the Magnetic Observatory Site, AZ BB:9:101 (ASM). Figure 3 is from the San Pedro Valley, probably near Oracle, from the Alice H. Carpenter Collection. The artifact illustrated on the back page of the August newsletter was a surface find by archaeologists from Pima Community College at Indian Town Ruin, AZ BB:5:26 (ASM). Space does not permit naming all of the people who have provided me with information, but I do thank them. Marty Tagg is at fault for getting me involved in this in the first place. Dave Phillips should be reprimanded for coining a new artifact name, although I have to admit that the term "Fergolith" has stuck with people and undoubtedly resulted in more of these stones being reported to me. Thanks to Mike Jacobs for the Hayden citation. And especially to Al Dart for alerting me to the Tumey reference, but more importantly for poking me to put something on paper, and then editing it.

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