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# The Bonneville Flood Debris Field as Sacred Landscape

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*This study argues that the debris field left by the Bonneville Flood in southwestern Idaho can be viewed as a sacred landscape. A correlation is made between petroglyph placement and flood-produced Melon Gravel. The significance of this correlation is then discussed within a mythic framework.*

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Catastrophic flooding throughout the Pleistocene left an indelible mark on various northern-hemisphere landscapes. High energy impacts from superfloods were the result of ice-dam breaching or subglacial outburst flooding in most instances (Baker 2002; Colman 2002). In western North America, the most notable example is the Glacial Lake Missoula flood sequence, which inundated much of the Columbia River system in Washington and Oregon and created a scabland topography and the famous “coulees” or dry falls (Bretz 1923). In the period between 18,000 and 12,000 years B.P., “phenomenal catastrophic flooding occurred” (Baker 1980:121) that drained the impounded waters of Lake Missoula (Pardee 1942; Richmond et al. 1965). A similar fluvial event—the Bonneville Flood—also occurred across the Snake River Plain of southern Idaho, ca. 14,500 years B.P.

The Bonneville Flood, or Lake Bonneville overflow, occurred when Provo-age shoreline sediments collapsed from spillover waters of Pleistocene Lake Bonneville at Red Rock Pass in southeastern Idaho (Gilbert 1878; Malde 1968). The consequent flood waters raced down Marsh Creek and the lower Portneuf River, entering the Snake River Plain north of Pocatello (O’Conner 1993). The flood’s route continued westward on the Snake River Plain, with a major reentry into the Snake River canyon in central Idaho; it then continued west and north along the Snake, eventually entering the Columbia River in Washington State (Fig.1). During this event an extraordinary volume of water, estimated to have been some 4,750 km<sup>3</sup>, drained from Pleistocene Lake Bonneville (Jarrett and Malde 1987:134; O’Conner 1993:5). The initial wave is believed to have occurred

within “a few days...and that voluminous discharge continued for a least a year” (Malde 1968:13).

In the vicinity of Twin Falls, the floodwaters scoured the northern canyon rim and then became entrenched within the confines of the canyon. At this point the canyon is a mile wide and 500 feet deep, and it is thought that it was nearly brimful of floodwater at its peak discharge, floodwater that carved a scabland topography in its path (Malde 1968: Fig. 15) (Fig. 2). Once confined to the narrow canyon, the water became impounded within several basins, or coves, which acted as large sediment traps. That entrapped basaltic debris is known as “Melon Gravel,” and is composed of sediments which range in size from coarse sand to boulders over 15 feet in diameter (Malde and Powers 1962). The flood route continued westward for about 275 kilometers, until the canyon basalt rimrock dissipated and the canyon widened into a broad plain, thus reducing the water’s energy flow and capacity. The present study argues for a prehistoric recognition of Melon Gravel (represented by petroglyph inscriptions) as being part of a sacred landscape in the Snake River canyon of southwest Idaho.

## SITE CONTEXT AND SAMPLING

The primary research involved in this study entailed gleaning data from the archaeological site survey files housed in the Office of Archaeology, Idaho State Preservation Office, in Boise. Data collection was then reinforced by field observations carried out during the record search and during earlier site visits by the author (Pavesic 1990, 1998, 2002). The research area extended from the Perrine Bridge at Twin Falls, at the eastern end

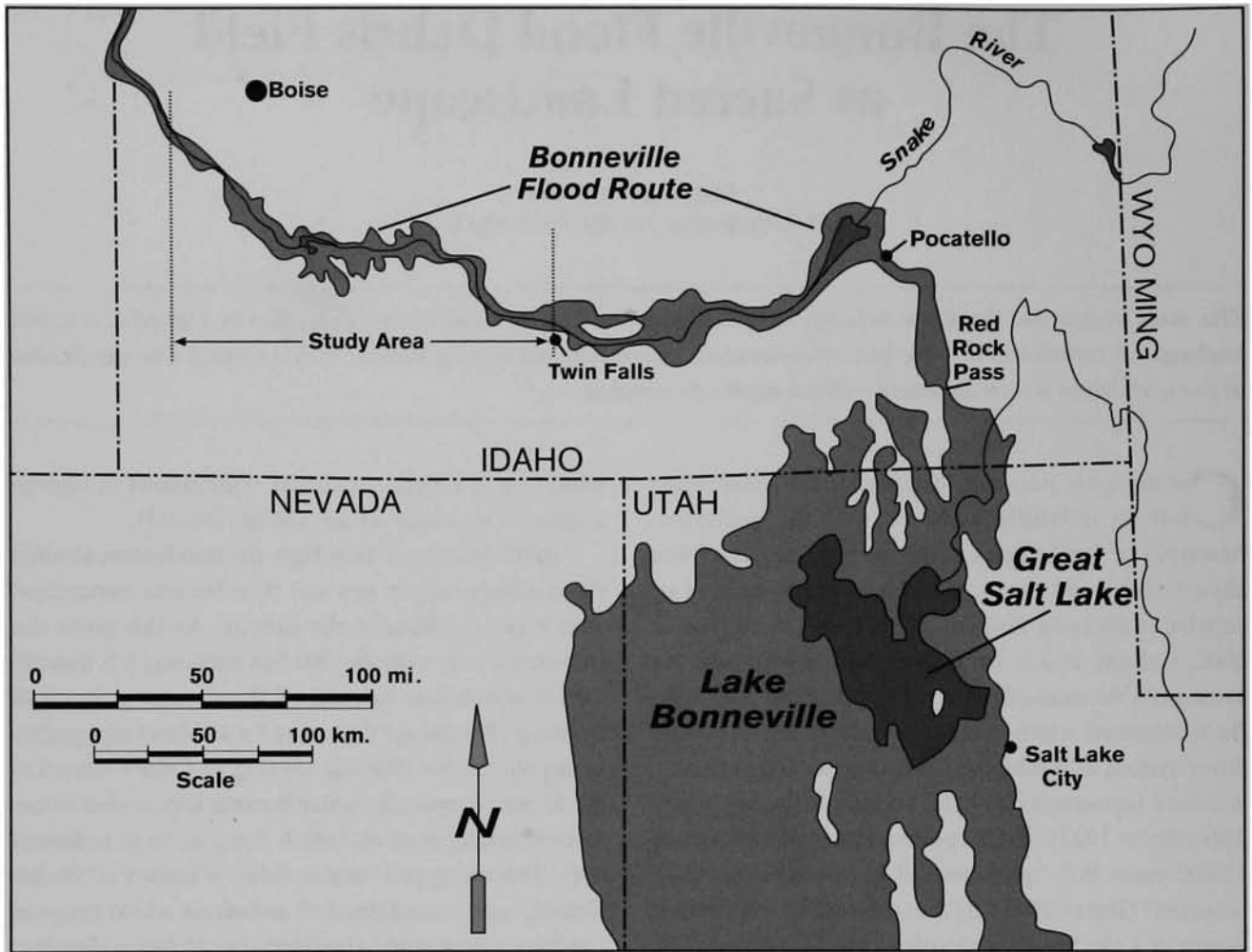


Figure 1. Route of Bonneville Flood through southern Idaho (base map after O'Conner 1993:Fig. 1).

of the study area, to the bridge crossing the Snake River at Marsing, Idaho (Fig. 2); it included the riverside portions of Ada, Canyon, Elmore, Gooding, Jerome and Owyhee counties. In this stretch of the Snake River Canyon, approximately 1,450 archaeological sites have been recorded in or adjacent to the flood path, which was first reported by Erwin (1930) and Schellbach (1930). While the site total is impressive, it is replete with recording problems. Part of the confusion stems from the fact that most researchers do not define an archaeological site; in addition, field objectives were executed under different conditions (e.g., Butler and Murphey 1982; Miss et al. 1997; Ostrogorsky and Plew 1978; Plew and Ostrogorsky 1980). Such recording problems are not entirely the fault of the researchers, since site surface evidence can change through time, and resurveyed river sections often provide different results.

However, the unique nature of the Melon Gravel provides a more refined database. The gravel bars of rounded, redeposited basaltic boulders are "the most easily recognized evidence of the catastrophic magnitude of the flood" (Malde 1968:13). Gravel deposition was a rapid event. The boulders originated a few miles upstream, often as flood-carved rock originating in the canyon walls, and now are found below the canyon's restrictive basins or coves. Only 36 of the 1,450 reviewed site reports involve rock art locales in the flood path, and 32 of those 36 are petroglyph sites, with images etched into Melon Gravel. Only four petroglyph sites—10-GG-173, a glyph located on a cliff face; 10-GG-303, a slide rock locality; and two sites identified as possible historic markers (10-EL-1281 and 10-JE-426)—fall outside of the study parameters. Painted motifs are rare, if nonexistent, although some petroglyphs have



**Figure 2. A primary entry point of flood water into the Snake River Canyon. View to the west from Perrine Bridge, Twin Falls.**

been coated with red ochre (Murphey 1987). There is, however, some confusion in site recording in the lower reaches of the study area, primarily as a result of survey parties using different recording techniques (e.g., Delisio 1971; Keeler and Koko 1971; Statham 1971; Tuohy 1958). Rock art researchers recognize the deposited boulder fields as representing a swift fluvial event, but site survey crews have a tendency to record single loci and overlook the depositional episode. This problem is particularly evident in the Walters Bar area, where an over-lapping of site numbering has occurred (Fig. 3). The 36 petroglyph localities include seven recorded in Ada County, thirteen in Canyon County, three in Elmore County, five in Gooding County, one in Jerome County and seven in Owyhee County (Table 1). While site description and motif analysis is not a primary purpose of this paper, several major petroglyph locations warrant further discussion.

The most extensive interpretive art rock research in the area has been conducted at the Kanaka-Briggs Creek

**Table 1**

**MELON GRAVEL PETROGLYPH SITES**

**Ada County**

10-AA-2/3\*, 5/66, 8, 47, 164, 213, 214

**Canyon County**

10-CN-1, 2/3, 4, 7/8, 10, 12, 14, 15, 16, 17, 21, 60, 70

**Elmore County**

10-EL-216, 1281, 1412

**Gooding County**

10-GG-29, 44, 303, 307

**Jerome County**

10-JE-173, 426

**Owyhee County**

10-OE-12, 15, 270, 272, 563, 1992, 1685/3160

\* = denotes recording duplication

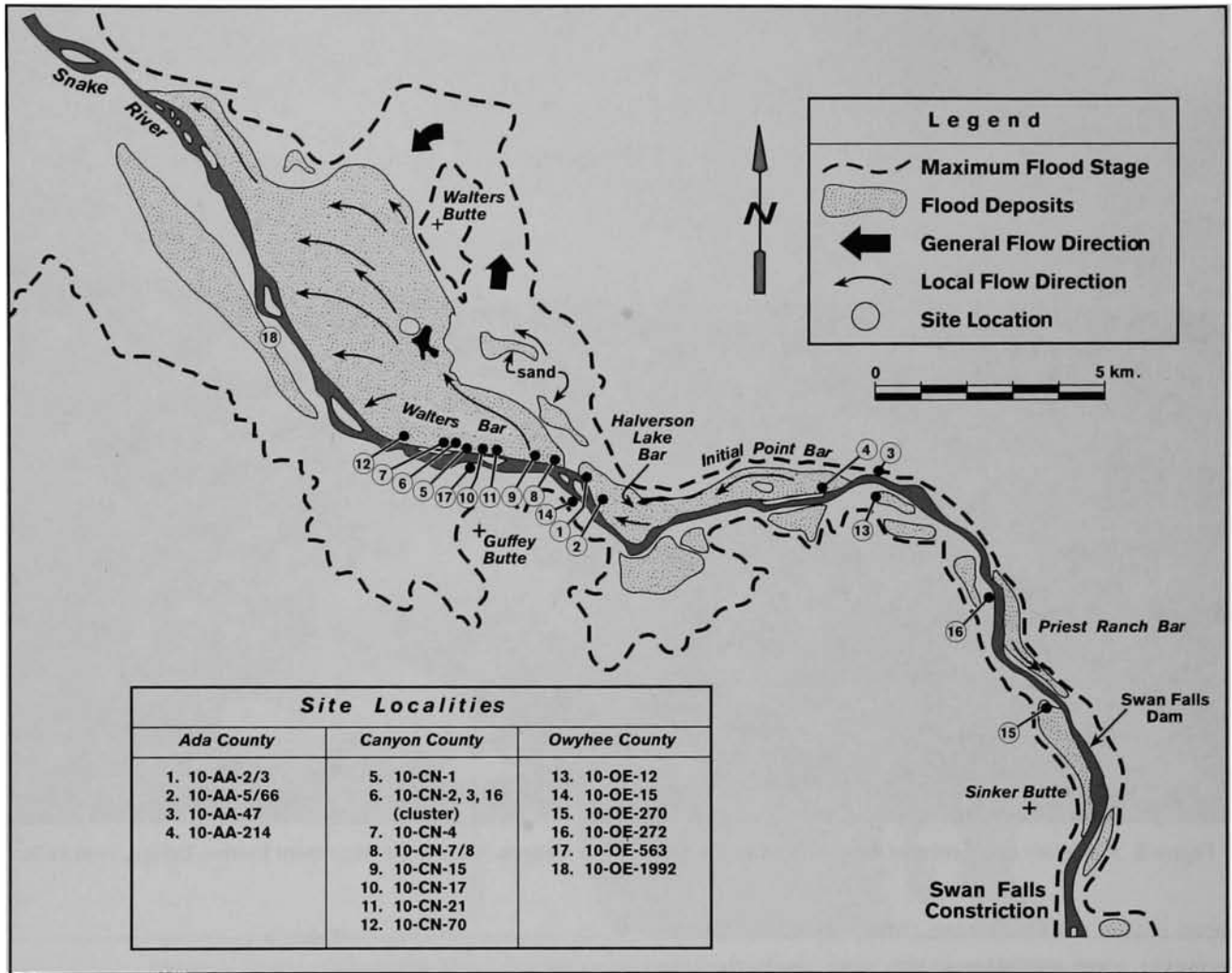


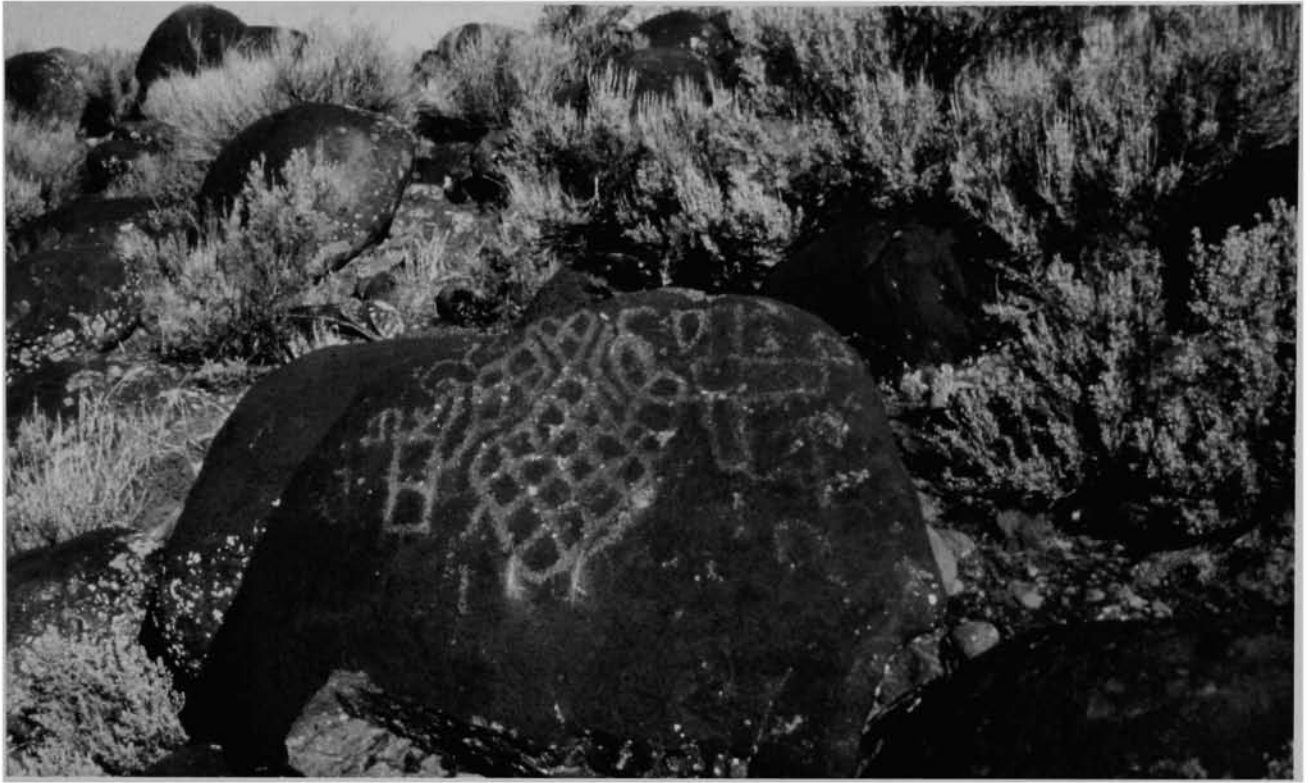
Figure 3. Walters Bar site recording congestion.

locality (10-GG-307) near Buhl, Idaho. Murphey (1987) reports six petroglyph loci consisting of seven to fifteen boulders each spread over 420 m<sup>2</sup> (Fig. 4). Murphey interprets the motifs as resulting from a Fremont Culture intrusion into southern Idaho, which is a contentious research issue (see Adovasio et al. 1982; Butler 1980, 1981; Harrison and Hanson 1980; Plew 1980a, 1980b, 1981). The locality has since been heavily impacted by the removal of several boulders by private parties.

Upper Salmon Falls (10-GG-29), also investigated by Murphey (1997), involves a series of eleven boulders scattered over a kilometer (Figs. 5 and 6). Murphy identifies this locality as having been an anadromous fishing station and argues for Shoshone or Great Basin motifs being present, with some additional Fremont design elements.

The C.J. Strike Park site (10-OE-1685/3160) is a relocation of portions of two boulder groupings originally found near the mouth of the Bruneau River at its confluence with the Snake (Erwin 1930:102). During construction of the nearby C.J. Strike dam, the Idaho Power Company attempted to save the rock art by moving it. Today, 17 reconstructed and several broken caliche-encrusted boulders are displayed at a public recreation site (Woods 1994).

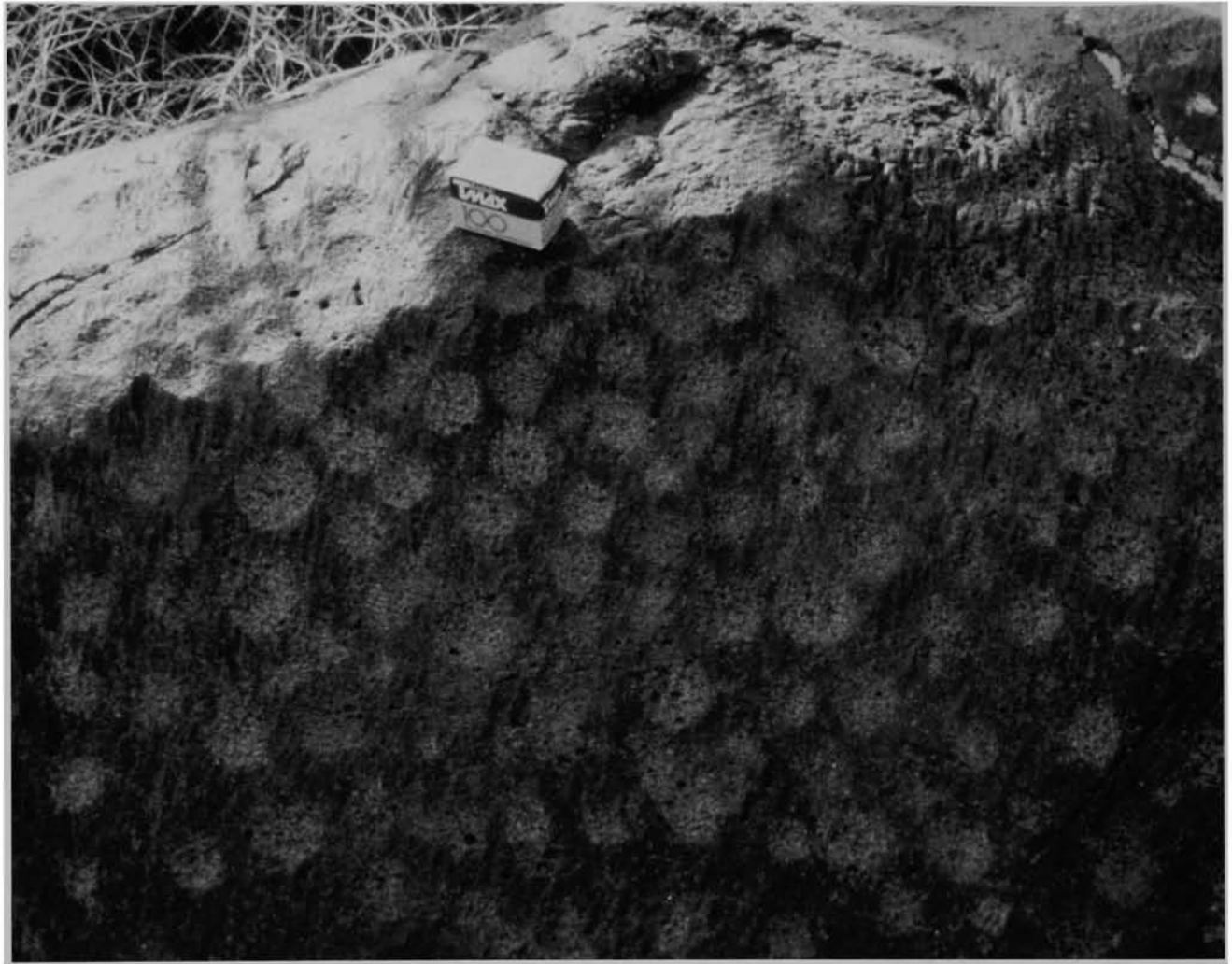
The Wees Bar petroglyph field (10-OE-12), located south of Boise below Swan Falls Dam, is the most extensively recorded rock art site in the study area (Fig. 7). Amateur recorder Nelle Tobias (1981), in the course of a program lasting twenty years, noted approximately 90 inscribed boulders at the site and produced a descriptive catalog of the main panels. The



**Figure 4. Diamond-shaped anthropomorph, Kananka-Briggs Creek locality, 10-GG-307 (photo by Kelly Murphey).**



**Figure 5. Modified and ochre stained vulva-shaped opening with allied cupules, Upper Salmon Falls, 10-GG-29 (photo by Kelly Murphey).**



**Figure 6. Cupules, Upper Salmon Falls locality, 10-GG-29 (photo by Kelly Murphey).**

design elements appear to consist of typical Great Basin curvilinear and rectangular motifs (Fig. 8) (Heizer and Baumhoff 1962; Hedges 1982), and are comparable to those found at southeastern Oregon sites (Crosser and Crosser 2002; Randolph 2001).

The Walters Bar complex consists of 20 individually-recorded rock art localities, ranging from single boulders (such as 10-CN-21) to a cluster of 23 boulders at Celebration Park (10-CN-7/8/15) (see Fig. 3). This part of the canyon is a transition point between the incised canyon upstream and a low-gradient alluvial basin (O'Conner 1993:27) where surging floodwaters produced a massive Melon Gravel deposit (Malde 1968:42–44).

Lastly, the infamous Map Rock (10-CN-10), which is located at the western end of the study area, should

be mentioned. The boulder is a redeposited slide rock that is less rounded than is typical of Melon Gravel (Fig. 9). Erwin (1930) and earlier observers (Anonymous 1991) suggested that a horizontal design element that is present represents the Snake River across southern Idaho, a suggestion which has become embedded in Idaho folklore. Map Rock still awaits serious analysis.

No inventory of the design elements present at all the recorded sites in the study area exists. With the exception of the work done by Murphey (1987, 1997) and Tobias (1981), little site-specific recording has been conducted, which makes systematic design analysis across the study area problematic. However, there appear to be more anthropomorphic designs at Kanaka-Briggs Creek (Fig. 4), at the eastern end of the study area, in contrast to the geometric elements at Wees Bar

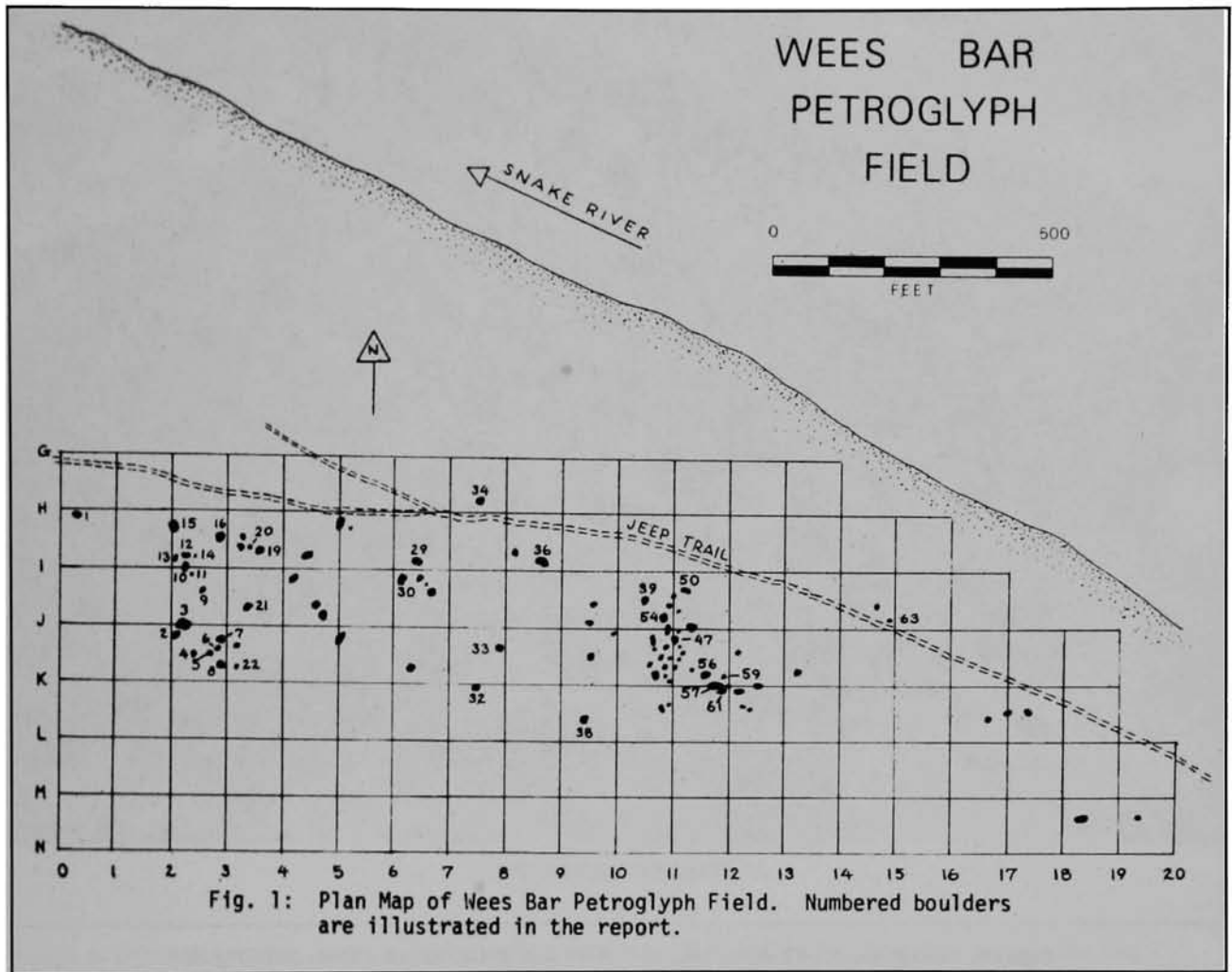


Figure 7. Plan of Wees Bar, 10-OE-12 (after Tobias 1981:Fig. 1).

at the western end (Fig. 8). The east-west contrasts may reflect individual artisans, local bands, cultural affiliation, site function, or age differences. Dating petroglyphs is a difficult problem, and one that is recognized by areal researchers; it is often speculative at best. Nevertheless, Cannon and Ricks (1986) report that a petroglyph panel in southern Oregon underlies Mount Mazama ash at ca. 6,700 years B.P., and Murphey has estimated a time range of A.D. 700 to 1000 for the Kanaka-Briggs Creek locality, 10-GG-307 (1987:89). Complicating the dating issue is the fact that superimposed design elements are usually non-existent in the study area, which limits the opportunities for creating a relative chronology; this factor is common throughout the Columbia Basin (Keyser 1992:19). Hopefully, future research will rectify the problems of cultural affiliation and age.

#### MEANING IN THE LANDSCAPE

The petroglyph sites of the western Snake River canyon were selectively placed on Melon Gravel deposits. At issue is why ancient artisans chose these water-placed boulders when the thousands of angular slide-rock deposits lining the canyon walls were available. In order to address this question, the anthropological concepts of ritual space and place, as well as generalized ethnographic analogy, are used. Sacred settings are assumed to carry a “range of rules and regulations regarding people’s behavior” (Carmichael et al. 1994:3). Natural places as ritual spaces are located in settings with special or natural associations—they are areas characterized by repeated symbols (redundancy); they may involve public or exclusive displays; and they may be infused with the concepts of cleanliness and pollution, or defined as



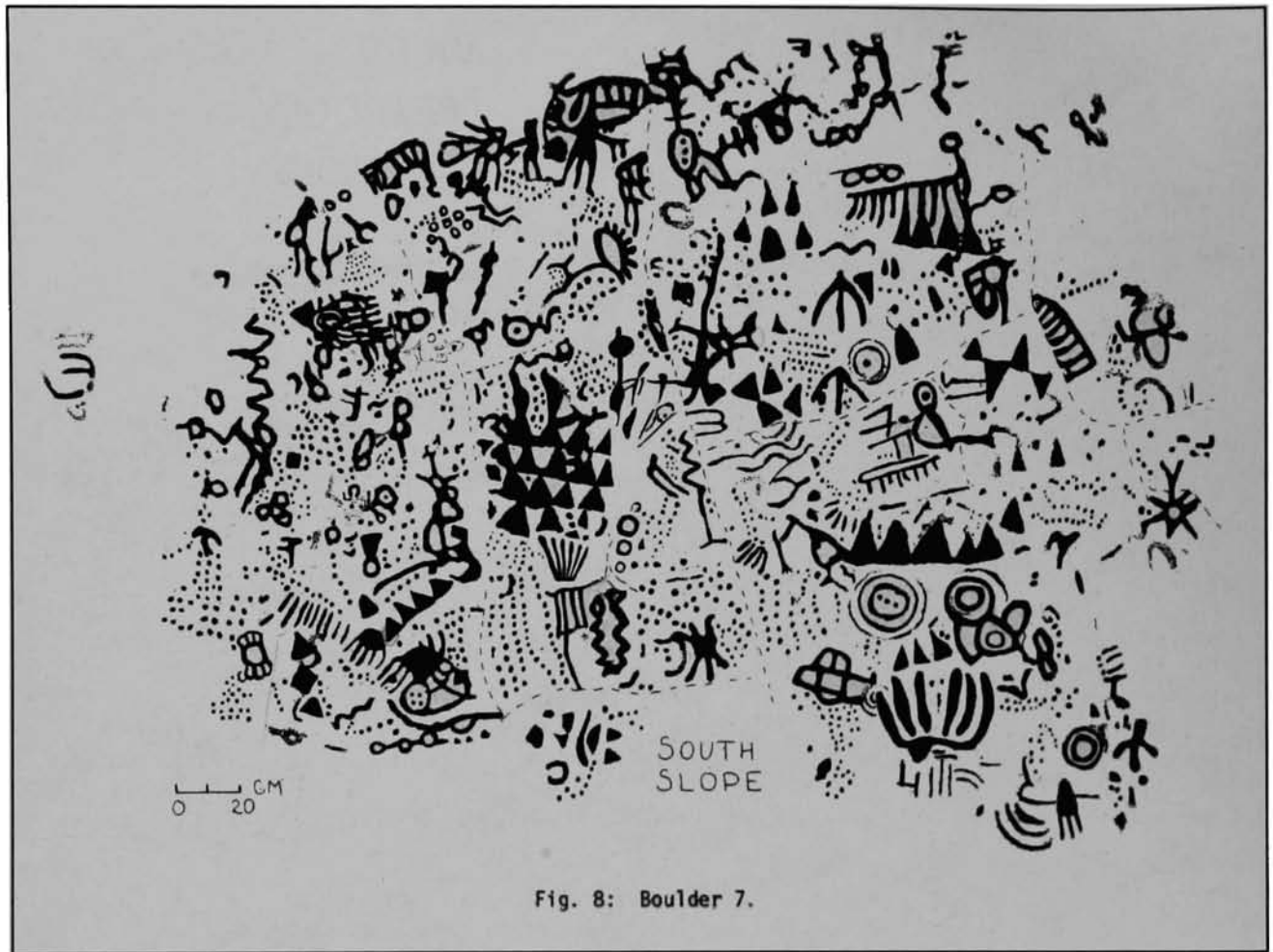


Figure 8. Heavily inscribed boulder number 7, Wees Bar, 10-OE-12 (after Tobias 1981:Fig. 8).

sacred or profane (Bradley 2000:38–39; Renfrew and Bahn 2000:408–409). Ethnographically, Walker (1988, 1996) discusses similar variables, including natural timing and geography, that reflect sacredness; specific locales possessing great sacredness and harmony are maintained through proper ritual behavior. “Portals” or access points to the sacred are of particular importance. A comment made elsewhere about southern Idaho rock art is particularly relevant here: “Sacred events simply don’t occur in a vacuum. They occur in a natural setting where universal order is understood and maintained” (Pavesic and Stuebaker 1993:9). These principles are applicable to the Bonneville Flood, in that the Melon Gravel was identifiable as being of fluvial origin. Gravel shape, size and location, material, and the forces associated with a flood were physical characteristics recognized by past populations as the chosen setting for artistic displays.

A water-based setting is critical in understanding the sacred dimension of the Melon Gravel. Water is laden with symbolic implications and is often recognized as a ritual cleanser or purifier, an agent of renewal or rebirth, and a source of power. Flood legends, for example, are believed to have great time depth and are universally noted (Dundes 1988; Vitaliano 1973). Blackburn (1975:85) argues that water is “(1) a substance by means of which symbolic inversion can be accomplished, and (2) a substance that represents an active interface between the realms of the sacred and the profane.” In the American West, Miller (1983:78) identifies water as “the keystone of Basin religion because power, with its affinity for life, was strongly attached to water.” Similarly, Paper (1990:14) notes that “streams and rivers are understood as the veins and arteries of the earth.” Within the context of the Bonneville Flood, beliefs in an origin myth, in primeval



Figure 9. Map Rock, 10-CN-10.

waters, or in ritual cleansing may be primary motives for selecting the Melon Gravel for cosmological expression. A common mythic theme relates that before people arrived, the earth was covered with water, and animals acted like people until coyote, turtle, weasel, or other water creatures created the land and populated it with various tribes (Hultkrantz 1986:638; Miller 1992:39–64). Such creation myths have been frequently recorded among native groups in California, the Great Basin, and the Columbia Plateau (e.g., Clark 1953, 1966; Heizer 1978).

Specific Northern Shoshone tales include a flood story which explains the creation of the Snake River (Clark 1966:174–177), as well as a renewal account of Coyote and his companions being saved from widespread flooding as the land was cleansed (Lowie 1909:247). The sacred power of water is also attested to in a Western Shoshone tale of spiritual cleansing/purification:

Once upon a time there was a man. He got mad and said, 'Our land doesn't seem to smell good.

Everything stinks. I think we better make another land.' They slept that night and all through in the night he sang and sang and sang. He wished for a great water. The great water came. It took everything away and cleaned up all the land. It washed the highest mountains everywhere.

The people went to the top of the highest mountain and stayed there until the water went down. It went as this man wished it would. After the water died down, the land and everything was perfect and clean again [Julia Panguish in Smith 1993:108].

These examples illustrate water's mythic power and life-force qualities. This is a major Numic theme, since supernatural power, *puha*, is believed to follow the flow of water (Miller 1983), a fact that helps explain the distribution of rock art (Whitley 1994:19). Thus the flood origins of Melon Gravel, it is suggested, probably played a pivotal role in the placement of petroglyphs.

In building the case for the sacredness of Melon Gravel, it should be noted that rock can generally be recognized as a source of spiritual power (Vander

1997:150–153); in some instances it can even take on human-like qualities (Lowie 1909:202–203). Whitley (1994:22) notes that “...art was not created on neutral lithic backgrounds but, instead, the site/location itself had important symbolic meaning.” The physical setting, the landscape, could be as important or even more important than any individual rock art design element. And while sacredness is often believed to be omnipresent in the environment, certain places can have concentrated or special potency (Liljeblad 1986:644). These portals, ritual times/spaces, often include unusual geological features and rock art sites (Liljeblad 1986: Figs. 2 and 5; Walker 1996:65). To insure ritual access, ceremonies had to be properly performed, requiring actions at specific times of the day or season, actions often carried out by shamans (Liljeblad 1969:52). Whether portals, or simply “contact points” where power was concentrated (Pavesic and Studebaker 1993:50), they showed that a transference of power was possible between inanimate objects and humans. Shamans are widely believed to be major players that “enter” (often in an altered state of consciousness) the sacred via rock art (Whitley 1994, 2000; Lewis-Williams and Dowson 1988). Whitley (1994:22), referencing Laird (1976:216), provides an example of a shaman having the ability to enter rock and by his actions “opening the vagina of the earth and releasing its life fecundity.” An analogous situation seems present at Upper Salmon Falls (10-GG-29), where a natural opening was modified by pecking and then smeared with red ochre (Fig. 5). Ritual redundancy, on the other hand, is suggested in the creation of cupules (Fig. 6), in that their repetitive, rhythmic manufacture may have induced an entopic trance-like state (Steinbring et al. 1995). An entopic state would also account for the redundancy in recognized abstract geometric patterns (Lewis-Williams and Dowson 1988). In general, rock art plays a key role in dream-based vision power, initiation rituals, myths, and even historical events, although in some instances historic native individuals deny having created petroglyphs (Steward 1968:viii). In southwest Idaho, this is often the case with petroglyph manufacture, which suggests possible pre-Shoshone origins. No matter what their ritual justification or meaning might have been, Melon Gravel petroglyphs can be perceived as having been locales of great sacred potency sometime in the past.

## CONCLUSIONS

The placement of petroglyphs on Melon Gravel was purposeful in the Snake River canyon of southwest Idaho. Ancient peoples certainly recognized the fluvial power of the Bonneville Flood, as well as the resulting Melon Gravel, and imposed symbolic meaning on the landscape. Observable variables of gravel shape, size, location, material, and flood force, it is suggested, were intermingled with beliefs concerning origin myths, primeval waters, or ritual cleansing. Altogether, 32 of the 36 identifiable petroglyph locales in the area are inscribed on Melon Gravel constituents, giving a correlation of 88%; if the two possible historic inscriptions are eliminated from the count, a 94% correlation is noted. That correlation is even more impressive when one realizes that thousands, possibly millions, of useable and available slide-rock surfaces were ignored. The purposeful selection of water-lain (or -sculpted) gravel in a river setting invokes interpretations involving water’s sacredness and the inanimate power of rock. It also suggests that shamans were the primary makers of the imagery, often during an entopic trance.

North American archaeological research has begun to realize that myths or ancient legends can provide a legitimate insight into the past. This is also true of vertebrate paleontology and geology, where extinct creatures or past volcanic, fluvial, or other events can be tied to actual field observations (Mayor 2005; Vitaliano 1973). In the Pacific Northwest, for example, Native American mud flow, volcanic eruption, earthquake, and tsunami myths are based on verifiable events (Krajick 2005). In a similar vein, Echo-Hawk (2000) has attempted to correlate archaeological interpretations with Amerindian lore. The present study has utilized a similar framework in identifying the sacredness of a particular landscape as a means of tying ancient peoples to their mythic beginnings. In archaeological research, the rejection of oral traditions is often based upon a distrust of the direct-historical approach (see Brown 1997:472). However, shared beliefs spread over great distances can be seen to have great time-depth, as von Gernet (1993:72) has observed: “...some aspects of culture do not arise *sui generis*, but are vestiges of a previous heritage carried through long periods of history. As historians of religion have noted, no belief system is completely new...”.

The findings of this study could easily be tested in other areas, since petroglyph inscriptions associated with Melon Gravel have also been documented upstream in the Portneuf River drainage of eastern Idaho (e.g., 10-BK-1 and 10-BK-135 to 145), and downstream in Hells Canyon, on the Idaho-Oregon border, at sites such as 10-IH-639. Future research will eventually document the degree of correlation in these areas. In summary, the Bonneville Flood was recognized by ancient people as a sacred event, and the placement of petroglyphs on Melon Gravel was the chosen medium for the message.

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