BRIEF REPORTS

Early rock art at the Upper Sand Island Site near Bluff, Utah, United States: addenda et corrigenda

By EKKEHART MALOTKI

In *RAR* 28(2): 143–152, Henry Wallace and I reported a spectacular discovery of two apparent Columbian mammoth petroglyphs at the extensive Upper Sand Island site along the San Juan River corridor near the town of Bluff in south-eastern Utah. The discovery is remarkable in that it offers the first bona fide *pictorial* evidence for the co-existence of Palaeoamericans and extinct megafauna in the rock art of North America, indeed, the entire Western Hemisphere.

In addition to pachyderms, over thirty taxa of North American terrestrial megamammals disappeared at the end of the Ice Age around 11 000 BP (Martin and Steadman 1999), including horse, camel, sabre-toothed cat, short-faced bear, lion, dire wolf, giant beaver and giant peccary. Probably none of these animals possesses more diagnostic features than mammoths and mastodons whose tusks and trunks make for unambiguous identification in graphic renditions. Both of these features are clearly visible in mammoth 1 (M1) and mammoth 2 (M2) at the Upper Sand Island location (Malotki and Wallace 2011: Figs 7 and 10). M1, furthermore, displays at the tip of its 'trunk' an astounding and not popularly known anatomic detail of Pleistocene proboscideans, called 'fingers' by mammalogists. Additionally, both beasts show the characteristic topknot that identifies the mammoth species as *Mammuthus columbi* (Fig. 1).

With the exception of one case of outright denial (as if Palaeoamerican hunter-foragers were not endowed with the universally innate and adaptive predisposition to 'artify' their environment; Dissanayake 2009) and a few sceptical voices that, to be convinced, would first like to see some of the currently available dating strategies applied — none of which are applicable at the site — the reaction of the rock art community to our findings has been overwhelmingly positive. After all, the proboscidean portrayals speak for themselves and cannot be pontificated away. This was clearly expressed by Jean Clottes in his comments on one of them when he wrote: 'If it had been discovered in a French or Spanish cave, nobody would have questioned its identification' (pers. comm. 29 September 2011).

M1, believed to be superimposed by a bison, had been known to some researchers and rock art aficionados since the late 1980s, but it was not until the fall of 2010 when drawings were made from the photographs taken 'blindly' with an autofocus camera of the cliff section adjacent to M1 (Malotki and Wallace 2011: Fig. 8) that, sensationally, the outline of M2 became apparent. In addition to this second depiction, which no one had previously reported, several other engraved elements of unidentifiable nature were observed to the left of M1. Some of these seemed to share stylistic commonalities with the M1 imagery, so a composite drawing (Malotki and Wallace 2011: Fig. 11) was made in which elements thought to be contemporaneous with M1 and M2, and thus assumedly of a Pleistocene-Holocene Transition (PHT) age, were shown in red, while others, believed to be more recent in origin, were rendered in blue.

Unfortunately, due to time constraints and unfavourable lighting conditions — strong side light is essential to make the time-worn petroglyphs 'pop out' on the sheer cliff wall some 5 m above ground level — M2 was not even spotted on the first visit to the site. Because of this oversight, I decided to revisit the locale and subject the missed elements to greater scrutiny. In all, I have undertaken the 350 km round trip six more times since the preliminary investigation in 2010.

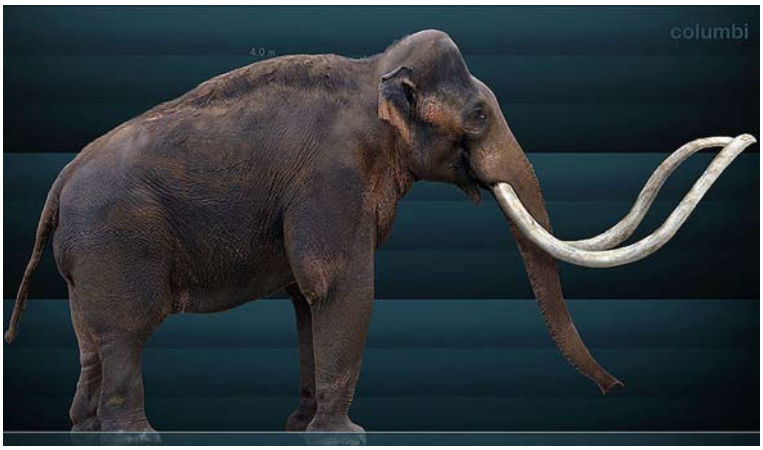

Figure 1. Mammuthus columbi *reconstruction, digital model: Sergio de la Rosa, Wikimedia Commons.*

Figure 2. *Tail sections of mammoth 2 and unidentifiable quadruped* h*, displaying near-identical style and manufacturing mode. Photo: E. Malotki.*

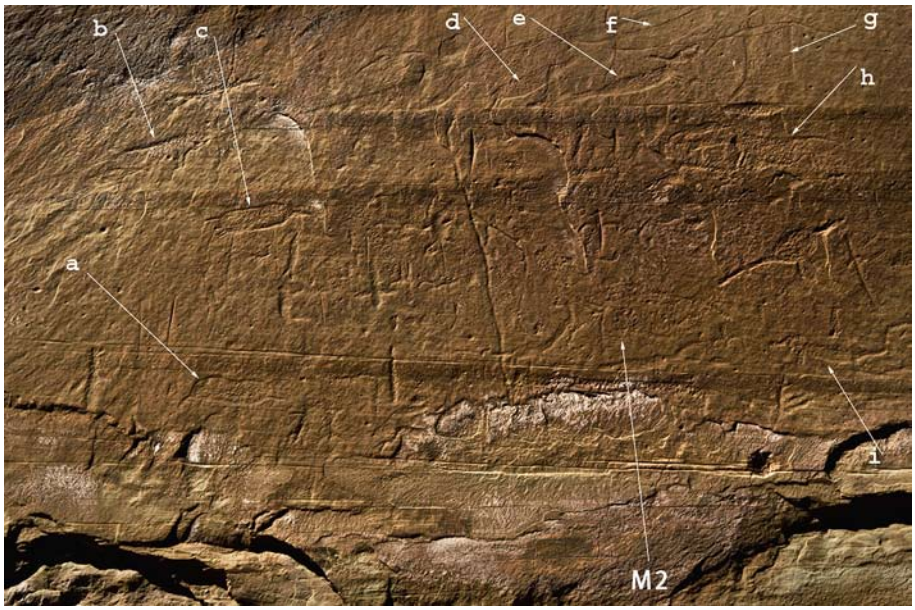

Figure 3. *Cliff segment of mammoth 2, surrounded by enigmatic motifs* a–i *of possible Palaeoamerican origin. Photo: E. Malotki.*

Unaided by a ladder or any other assistance, I trained my telephoto lens not on the 'primary' motifs of M1 and M2 but on the 'secondary' ones to the left of M1 and those surrounding M2, a cliff segment approximately 5.5 m in width.

In the course of these repeat visits it soon became apparent to me that the initial iconographic separation into PHT and post-PHT elements may have been premature and may be in need of revision. From all indications, the cliff face framed by M1 and M2 is populated by many more probable palaeo-motifs than originally recognised in the dichromatic classification (Malotki and Wallace 2011: Figure 11). One exception is a tiny, lightly incised 'lizard-man' motif high above the assemblage that is clearly of Puebloan origin (Malotki and Wallace 2011: Fig. 11, extreme top to the right of page number 150). There are archaeological indicators in the form of post holes on the cliff wall, as well as ash lenses and masonry remnants on the gravel bar below, that a structure once stood directly underneath the palaeo-imagery, which may have allowed a latter-day Native American to add the image from the rooftop. Excavation work on the gravel bar, should it ever be undertaken, may eventually help clarify whether this assumption is verifiable.

Ultimately, of course, only 'forensic' field inspection of all the individual glyphs, preferably conducted from stable scaffolding by a team of specialists, may be able to sort out the precise interrelationships of primary and secondary elements. Such a close inspection would of necessity require, among other efforts, establishing a complete photographic inventory of all graven elements under different lighting conditions, including perhaps artificial light at night; the taking of macro-photos to determine rock wear, manufacturing technique and possible evidence for superimposition; the manual tracing of each individual element on transparent plastic; and fine-grained recording of the degree of varnish on all elements and their comparison with some of the nearby, well-known pre-Historic and Historic imagery at the extensive Upper Sand Island rock art site. Although such fine-tuned investigative research still awaits realisation, I feel, nevertheless, that I can state with a high degree of confidence that, on the basis of stylistic evidence, the majority of secondary motifs are of Palaeoamerican origin — that is, attributable to the PHT period.

A couple of photographs must suffice at this point to illustrate my tentative conclusion. The outline of M2, for example, shows the same pointillist pecking mode as the unidentifiable quadruped (*h*) at the top of the photograph (Fig. 2). Note how their tails are executed in

near-identical manner and practically interchangeable. Similar stylistic commonalities are observable in several of the other elements (marked by lower-case letters) that are found in the area next to M2 (Fig. 3). Many of these elements exhibit peculiar ovoid shapes with single or paired sticklike attachments reminiscent of 'legs', if indeed some of the graven depictions, singled out in a close-up in Fig. 4, do represent life forms. While a final verdict on these enigmatic elements will require a great deal more research, their idiosyncratic appearance is unique among the tens of thousands of petroglyphs along the San Juan or, for that matter, at any other rock art site in the American West I am familiar with, and sets them apart as a likely cluster of PHT rock art unparalleled anywhere else in North America.

In light of the impossibility to apply direct chronometry to the palaeo-imagery at the site, a temporal window between 13 000 and 11 000 calendar years BP was suggested, based on both archaeological and palaeontological factors (Malotki and Wallace 2011: 151). The older end of this age span was linked to the presence of a known Clovis site some 12 km west-southwest of the Upper Sand Island location. Named after the eponymous limestone that occurs in the region, the Lime Ridge site was officially recorded in 1985 by William Davis, owner of Abajo Archaeology in the town of Bluff. Among the fourteen definitively recognised Clovis locations in the American Southwest (Vance 2011: 5), Lime Ridge is the only one lacking megafaunal remains. It consists entirely of flaked stone debitage and artefacts — a clear indication that it had served as a campsite, not a kill site (Vance 2011: 26). Among the surficial material were two distinct bi-fluted bases with lateral edge grinding clearly identifiable as Clovis spear point fragments (Davis 1989: Figs. 4e and f) and two discarded Clovis projectile point tips (Vance 2011: Fig. 4.29), as well as other non-projectile Clovis stone debitage and tools that provided the unmistakable diagnostic hallmarks critical for the recognition and interpretation of the site as Palaeoamerican. Vance (2011: 138), in her detailed analysis of the 294 lithic artefacts comprising the Lime Ridge assemblage, concluded that the site 'was occupied for only a short period of time — perhaps a week or less' and suggested that the main objective of the stop-off by the ancient hunters may have been 'the replenishment of tools damaged in a successful hunting endeavor' (Vance 2011: 95).

Impressed by the description of the site, spectacularly situated on a high flat-topped crest approximately 4 km to the north of the San Juan River, with an uninterrupted 360-degree view (Davis 1989: 66), I recruited archaeologist Winston Hurst of Blanding, Utah, to accompany me to the area solely for the purpose of getting an impression of what Palaeoamericans might have seen when they camped at that spot. Hurst, in turn, invited Bill Davis, the original recorder of the site some 25 years earlier, who brought along Mark Bond, a field archaeologist who belongs to the professional staff at Abajo Archaeology. It was Bond who shortly after

Figure 4. *Close-up of mystery elements* a *and* c. *Photo: E. Malotki.*

Figure 5. *Clovis spearpoint found in situ at the Lime Ridge site, c. 12 km from the 'mammoth' panel. Photo: E. Malotki.*

our arrival noted the tip of an unidentifiable artefact. Minutes later, Davis spotted the unmistakable fluted base of a Clovis projectile point firmly lodged in the ground (Fig. 5). Together with the earlier tip, which fit this base perfectly, we had a complete Clovis point (Fig. 6). According to Meghann Vance (pers. comm. 18 December 2011), it consists of fine-grained material that she classifies as 'cream quartzite' whose 'source

Figure 6. *Clovis spearpoint with broken tip at the Lime Ridge location. Photo: E. Malotki.*

Figure 7. *Proboscidean femur (approx. length 96 cm), a surface find in Butler Wash, c. 28 km from the 'mammoth' imagery. Photo: Steven Czerkas.*

is unknown but certainly not immediately local to the Lime Ridge site' (Vance 2011: 65). Abajo archaeologists, after mapping the point's locality, collected it and delivered it for curation to the Edge of the Cedars museum in Blanding, Utah, where the entire Lime Ridge assemblage is housed.

Based on distribution patterns of isolated Clovis points and known sites in the American Southwest, it has been concluded that Clovis hunters primarily chose rivers as travel corridors. The fact that Lime Ridge is situated near the San Juan River seems to corroborate this observation. It is also expressed by Davis (1989: 75) when he posits that 'the movements of the Clovis people were mainly confined to the San Juan River Valley' near the Lime Ridge site. The encampment itself on top of the narrow ridgeline is situated near a saddle that may have attracted game animals seeking a passage to the river.

While there can be little doubt that the artist who pounded the two mammoth depictions at Upper Sand Island must have been intimately familiar with the animal, there is no way of establishing whether it was a hunter from the Lime Ridge camp who was responsible for their portrayal. There is ever-more compelling archaeological proof for a pre-Clovis entrance into North America that clearly challenges the long-held theory that 'Clovis people' (c. 12.8 to 13.1 ka) were the first to inhabit the New World. Among some of the most recent revelations is a large artefactual assemblage at the Debra L. Friedkin site in central Texas that, dated by optically stimulated luminescence to c. 13.2 and 15.5 ka, stratigraphically underlies a Clovis horizon (Walters et al. 2011).

By the same token, it could have been post-'Clovis people' that artified the cliff section at Upper Sand Island with its exceptional rupestrian palaeo-complex, provided it can be shown that there existed refuge areas on the Colorado Plateau where proboscids survived beyond the generally accepted extinction threshold for megafauna in the American West. For this reason the demise of the Huntington Canyon mammoth, the best-preserved *Mammuthus columbi* skeleton in the American West was cited, at c. 11 ka, as a minimum age for the creation of the imagery (Malotki and Wallace 2011: 149–150). However, as palaeontologist David Gillette points out (pers. comm. 2011), there is no knowing whether the Huntington Canyon specimen, found in the Wasatch Mountains at an altitude of 2740 m and some 500 km from the Upper Sand Island locale, was among the last of its line. One cannot rule out refuge populations in other areas, but of course the only test would be more specimens and confident dates. A much closer refugium with even younger megafossil remains may actually have existed in the region surrounding Bluff, as is indicated by a mammoth femur retrieved in Butler Wash, a mere 28 km from the rock art site. According to Hurst (pers. comm. 14 September 2011), the well-preserved bone with no signs of mineralisation, now in storage at the Dinosaur Museum in Blanding, Utah, was a surface find in the 1950s by local rancher Clyde Barton of Monticello, Utah, who deserves credit for not having sold it to fossil collectors.

Gillette, working only from a photo of the bone (Fig. 7) that has yet to be analysed scientifically, observed (pers. comm. 12 November 2011) that it looked 'like it could be from a very late population', but also cautioned that the lack of associated tusk fragments precluded any identification as to mastodon or mammoth. From the fact that the epiphysis or cartilaginous growth plate has not closed, evident on this bone at its undamaged distal end, he deduced that it belonged to a juvenile. In the absence of a reliable radiocarbon date for the bone, however, there is presently no way of telling if it might offer evidence for a more recent refugium and thus provide a possibly more definitive end date for the palaeoart. Nevertheless, its proximity to the art, just like the nearby Clovis site, constitutes circumstantial corroboration for a likely PHT age of the palaeo-panel at the Upper Sand Island rock art site.

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