



“if I would study my old, lost art, let us say, I must make myself the artisan of it...”

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Report of the Beutell Expedition to Hole-in-the-Wall, Churchill County, North Central Nevada

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Editor's Note: This article is published with permission of the author. Due to limitations of the The Atlatl, the article has been extensively excerpted and edited. A copy of the full article that contains all pictures and tables will be posted on the WAA website in pdf format. The editor thanks Michael Gramly for allowing this article to be published here. The article is due to be published in the April 2023 edition Central States Archaeological Journal.

Hole-in-the-Wall agate was important to Clovis groups and their descendants who carried it to sites distant from its source (Fig. 1) and was employed by later cultures of the Great Basin for their projectile points, scrapers, and other implements. Remarkably, the Hopewell archaeological culture east of the Mississippi River, also had learned about this special raw material and found a place for it among their ritual paraphernalia.

This document presents evidence, which came to light during the expedition, for quarrying and lithic reduction during the Palaeo-American Clovis era when presumably, the region was better watered and populated by game and hunters who preyed upon them. Conversely, we will argue that afterwards visitation was desultory and perhaps incidental. Actual quarrying during later prehistory may not have been performed; rather, cast-off lithic debris and failed specimens of Palaeo-American age were retrieved from the surface and transformed into flaked stone implements. In sum, we hypothesize primary use of the Hole-in-the-Wall quarry occurred during the pre-Hypsithermal, Palaeo-

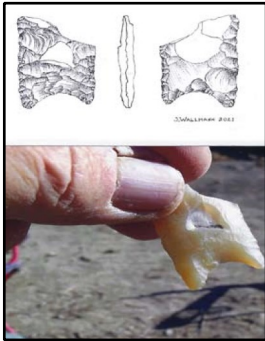


Figure 1. Palaeo lanceolate point of Hole-in-the-Wall agate, width = 21 mm, found during 2021 at Modoc County, south of Alturas, California.



Figure 2. Isaac Newton holds a massive, very large agate (weight = 16 pounds), which was unearthed at the upslope end of Trench B, on October 5, 2021.

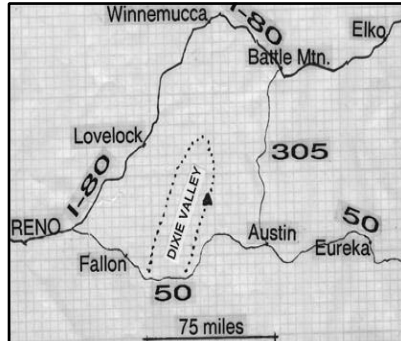


Figure 3. Location of Hole-in-the-Wall, Dixie Valley, and population centers of north-central Nevada.

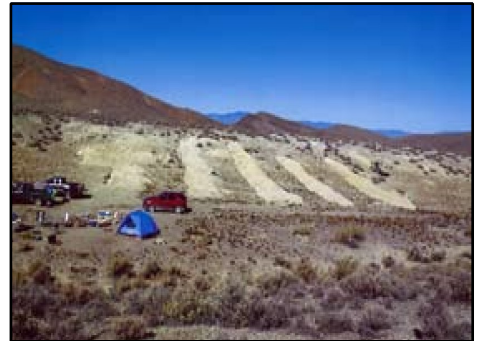


Figure 4. Trenches A-F (F is being dug by backhoe) on the eastern flank of the low ridge that helps form a shallow draw. This draw opens northward into the valley of an unnamed stream that flows west through Hole-in-the-Wall canyon. October, 2021.

American era; while, secondary use may have been characteristic from 7000 B.C., when climate had warmed significantly, continuing until nearly the present day. The only exception appears to be during Hopewell times (1700-2000 years ago) when rare, large masses of agate (Fig. 2) were sought to supply a specialized market for exotic raw materials (Gramly 2022). Some small-scale quarrying on the fringe of the Palaeo-American workings may have taken place then.

CONTENTS:	PAGE	CONTENTS:	PAGE
2023 Event Schedule.....	7-9		
Announcement Regarding Posting of the ISAC Scores in this Edition of the Newsletter.....	10		
Mary Granneman Obituary.....	10		
Information for the Annual Meeting at Jordan Valley OR.....	11		

A. Location of the Fieldwork

Hole-in-the-Wall is a prominent geographic feature, which is shown upon standard maps of Nevada (DeLorme 2018; USGS 7.5' quadrangle - Hole in the Wall, Nevada). It lies along the eastern edge of the Dixie Valley in northern Churchill County. Today the Dixie Valley is thinly populated, with only scattered ranches and farms where husbandry is enabled by borehole irrigation. A prominent valley landmark lying 15 km due west of the entrance to Hole-in-the-Wall canyon is a geothermal spring used to generate electricity; a small community of workers is served by an unpaved road and an airstrip. The principal human activity in this part of Nevada, however, is linked with the United States Navy, whose pilots incessantly conduct practice exercises in jet aircraft flying at low altitude and sometimes at supersonic speed.

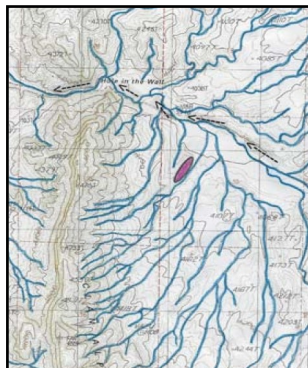


Figure 5. Map showing the Hole-in-the-Wall lithic source in relation to seasonal watercourses draining highlands of the Augusta and Clan Alpine Mountains



Figure 6. Mark Newton, owner of the Red Eagle Mine claim at Hole-in-the-Wall, stands within a short section of Trench A May 2021



Figure 7 Derek Risley measures the depth of a mid-sized agate nodule (weight four pounds) resting upon diatomite bedrock at the base of Trench A, May, 2021. This specimen clearly had been overlooked by ancient quarrymen.

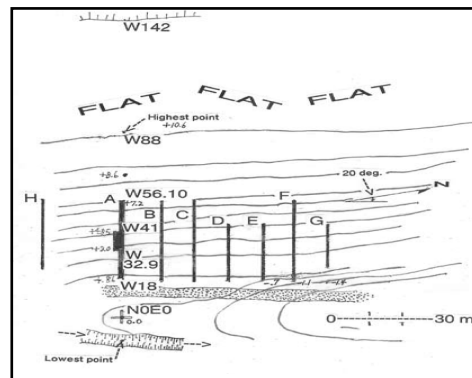


Figure 8 Map of Trench locations along the flank of the ridge at Hole-in-the-Wall Draw, October, 2021. Contour interval = 1 meter

The nearest centers of population, which lie 3-5 hours steady driving to the west, are Fallon, Churchill County (9,471 residents) and Lovelock (1,787 residents); while, to the southeast on US Route 50 is the picturesque community of Austin, Nevada, with a seasonal population of nearly 200 (Fig. 3). All supplies, fuel, and dependable water sources must be accessed in Fallon and Lovelock via routes 50 and I-80.

The principal ancient workings of the Hole-in-the-Wall lithic source occupy the eastern flank of a low ridge, 350 m long (Fig. 4) and lying approximately 4,050 feet above sea level. This ridge helps demarcate a shallow draw (“Hole-in-the-Wall Draw”), along which a minor watercourse which has cut its way, debouching into the broad valley of an unnamed stream (tributary of Spring Creek in Dixie Valley?). These days the unnamed stream is usually dry, but formerly it must have gathered waters off the southern flank of the Augusta Mountains (peak 8,409 feet) and northern section of the Clan Alpine Mountains (peak 8,647 feet) – see Figure 5. It seems likely that this unnamed stream once carried a goodly flow, and its alluvial valley may have supported thick vegetation. Today, however, no surface water is seen except during late winter or early spring within Hole-in-the-Wall canyon itself, and the predominant vegetation is bushy and thin. Bare ground is everywhere exposed, providing good visibility when searching for ancient artifacts.

B. Rationale of our work at the lithic quarry

Work in Trench A (Figs. 6, 7) prior to the Beutell Expedition during Fall, 2021, had revealed dug over soil with quarry debris to a depth of 1-1.5 meters. This debris overlay sloping bedrock – a water-laid tuff – having agates still embedded within its upper surface. Agates took the form of rounded masses and thin sheets; however, prehistoric quarrying had extracted most larger masses. Because prehistoric trenching was likely irregular and took place sporadically, not surprisingly a few good agates per square meter of bedrock had been missed; however, in relation to the amount of work necessary to retrieve them today, this residue of usable agate that escaped the attention of prehistoric quarrymen is uneconomic.

Extensive hand-digging and sieving of ancient quarry debris within Trench A yielded a small number of culturally diagnostic specimens. Extrapolating our return of data from so small a section of the prehistoric quarry to the entire ancient working, however, struck me as logically unsound. Therefore, our 2021 fieldwork was designed to sample a large section of the quarry within a limited time-frame. A backhoe was indispensable. In practice, we found that artifacts separated themselves from dry soil-matrix as fast as they came to light upon the spoil piles. Two attendants with hoes stood by freshly-generated spoil and retrieved specimens – bucket after bucket – throughout the day. Also, watch was kept for any usable nodules that had been overlooked by ancient quarrymen.

As a check upon the thoroughness of our rough-and-ready recovery method, we tested several cubic meters of spoil from Trenches A and B by sieving upon a 6 mm mesh and collecting all flaked stone artifacts, as well as any hammerstones and anvils. We were surprised to observe no appreciable difference in the variety of culturally diagnostic specimens yielded by either method. In short, diligent inspection (with the aid of a hoe) of a large volume of spoil generated by the backhoe was as revealing archaeologically as slower sieving of small volumes of trench fill.

At the end of two full weeks, we had used a backhoe to explore eight (8) trenches – each 70 cm wide (approximately two feet) and as deep as two meters. We labeled the trenches consecutively and alphabetically as they were dug – A through H (Fig. 8). The cuts ran parallel to one another, at intervals of approximately 10 m, with the exception of Trench H, which was sited 25 m to the south of Trench A. Roughly, a span of 85 meters of sloped, agate-bearing deposit was examined, or perhaps 25-30 per cent of the entire potential outcrop zone. Two hundred forty-four (244) linear meters or



Figure 9. Model of an agglutinated nodule of agate made by fusing isolated gelatine capsules with gentle heat

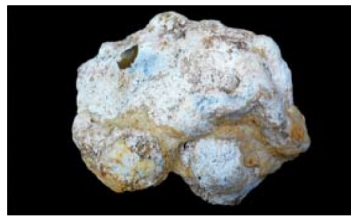


Figure 10. Large agglutinated nodule of lemon-yellow agate from Trench E. Weight = 4 kg.



Figure 11. Stage 4 fluted point preform (bottom photo) made from an untreated, sheet agate (upper photo) weighing 1.3 kg by master knapper D. C. Waldorf.



Figure 12. Prismatic blade core made on nodule fragment recovered from Trench A, Hole-in-the-Wall. Inked illustration by Steve Wallmann. Height of core = 70 mm.

just short of 800 feet of trench were dug either to bedrock, or at most, two meters below surface.

The agate-bearing zone at the eastern extremities of Trenches E, F, and G was deeply buried by alluvium. Prehistoric quarrymen appear to have been unwilling to penetrate more than two meters below surface; therefore, another meter of rich “ore” remained for us to explore, as we might with machinery. Scores of kilograms of raw agate came to light within Trenches E-G at the base of the slope bordering the main axis of Hole-in-the-Wall draw.. A minimum estimate of this proven reserve of sizeable, raw agates for just this sector is 50-100 tons.

Apart from the abundance of raw, unflaked agate within deep tests at the eastern extremities of Trenches E-G, there were few surprises, and the yield of artifacts and intact agates was surprisingly uniform everywhere. It was mute confirmation, it seemed to me, of the cultural homogeneity of the portion we had explored.

The sole novel discovery during our two weeks of trenching was an archaeological feature at point West 38 meters of Trench F and continuing eastward (downslope) to West 36 meters. It was a scrambled heap of sheet agate slabs. Obviously, they had been gathered and stacked together – perhaps as a depot of potentially useful raw material. None of the slabs had been reduced anciently on the spot, nor were there any hammerstones and anvil-stones among the slabs to indicate that such reduction had been intended. The quality of the slab agate appeared good. Most were 5 cm or more in thickness and exhibited attractive banding parallel with the upper and lower flat surfaces. Merely as mineral specimens, the agate slabs had value.

C. The nature of the agates exposed by trenching

Variations in agate's habit of concern to knappers

We observed three habits of agate at Hole-in-the-Wall. The first, and least common, is the single nodule. Most isolated nodules are small in size, weighing a half-pound to a pound, with a maximum width of 10-13 cm; however, our work proved they can attain a weight of 16 pounds with a diameter of 25 cm or 10 inches (!) -- as typified by the amazing specimen shown in Figure 2. Such an impressive agate, solid throughout, would have been exceedingly rare during prehistory and as valuable then as it is today.

The second form of agate, and by far the most common, is the “agglutinated nodule,” which is composed of multiple smaller nodules joined together. Fusion must have occurred when individual nodules were still in a gelatinous state, and perhaps the process was accelerated by heat. We are reminded of how genesis may have occurred by a model composed of fused gelatin capsules, which were subjected to gentle heat (Fig. 9). A good example of an agglutinated nodule is given by Figure 10, which weighs 4 kg and was discovered within Trench E. Even heavier agglutinated nodules were found by us with the backhoe; however, it seems unlikely that very large bifaces could be derived from them, as the constituent smaller nodules are sometimes imperfectly joined. Large, crystal-lined vugs sometimes separate nodules and these gaps are not easily bridged except by talented knappers. Making a large biface from an agglutinated nodule involves a great deal of skill – and luck.

Agate in sheets is the third form at Hole-in-the-Wall. Pieces that are well suited to manufacturing bifaces and other thin, “two-dimensional” artifacts should be 3-6 cm thick. None of this dimension, however, were observed in situ during our backhoe operation; therefore, the maximum length and width of naturally occurring sheet agate with this critical thickness are unknown. However, some sheet agate slabs that had been heaped anciently into a pile within Trench F measured as much as 40 cm in length and 7 cm in thickness.

The suitability of sheet agate for knapping is set forth in Figure 11, which shows a slab weighing 1.3 kg from the heap within Trench F that was transformed into a Stage 4 fluted point preform weighing 300 grams and measuring 15.5 cm in length (about six inches) by expert flintknapper D. C. Waldorf. It is necessary to note that this was D. C.'s first attempt at flaking sheet agate and that this raw material was not heat-treated or enhanced in any manner! His remarkable creation underscores the value of sheet agate from the Hole-in-the-Wall source, and it alerts us to the possibility that this raw material may have been important in prehistory.

Likewise, some agglutinated agates are capable of yielding large bifaces although working this variety of raw material is technically more challenging than reducing sheet agate. It, too, was the handiwork of master knapper D. C. Waldorf. Novice knappers are advised to first heat-treat agate nodules (to 400 degrees F) before attempting to emulate Dave's craftsmanship!

Of course, it is not only bifaces for making points, knives, and adzes that were intended products of the quarrymen-knappers at Hole-in-the-Wall. Cores for producing prismatic blades were also a desired end product. Cores of this sort could be made upon single nodules or nodules broken away from agglutinated masses, as for example Figure 12. Pris



Figure 13. Exquisite Folsom point, a few mm thick, of Hole-in-the-Wall lemon-yellow agate made by master knapper Dan Theus with the famous Cooper site Folsom (cast) beside it for comparison.

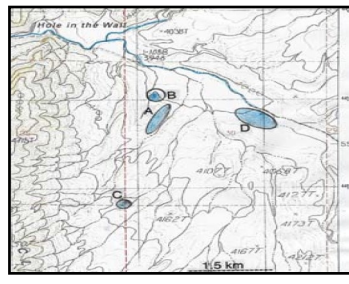


Figure 14. Map of Hole-in-the-Wall and the four principal collecting localities (components), namely: A, Main Quarry along flank of ridge; B, North End of Ridge; C, Hole in the-Wall South; D, East Workshop.

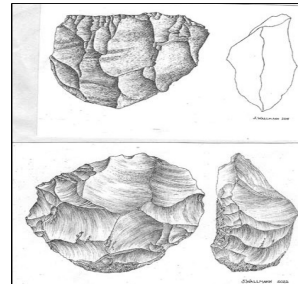


Figure 15. Upper, small prismatic blade core made on a biface fragment – the snap serving as the striking platform, Main Quarry, 2019 find; lower, discoidal core from Trench F. The maximum width of this specimen is 7.2 cm. Steve Wallmann illustrations.

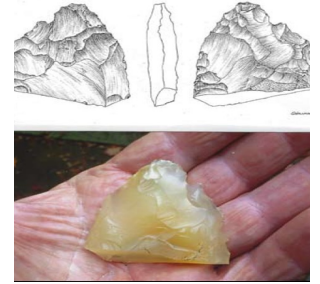


Figure 16. Tip of a Clovis-era biface with an *outpasse* flake emanating from one end; made of lemon-yellow Hole-in-the-Wall agate. Found upon the surface of the East Workshop during October, 2020, by Derek Risley. Width = 54 mm

matic blades and bladelets constituted important elements of the Clovis tool-kit. Their exceedingly sharp edges could be used without modification for cutting or dulled (“backed”) in order to make points, borers and sidescrapers. The distal ends of prismatic blades could be shaped as endscrapers or backed – thereby creating platforms for removing burin-spalls.

The superior nature of Hole-in-the-Wall agate for making prismatic blades has been addressed in our 2021 essay for CSAJ. Suffice it to say, it is a “free-running stone,” and rarely do prismatic blades made from it turn inward at their distal end. In other words, prismatic blades of Hole-in-the-Wall agate are flat along their entire length. Further, very thin prismatic blades and bladelets of Hole-in-the-Wall agate are strong and resist breakage. This attribute is important when crafting very thin projectile points with keen working edges – such as Folsom points. An extraordinary specimen, modernly made by master knapper Dan Theus, is shown in Figure 13 along with a cast of the famous Folsom point from the Cooper site, Oklahoma, for comparison. The Folsom point crafted by Theus is all the more remarkable as it was fully fluted on both faces across a healed crack in the agate!

D. Collection localities at Hole-in-the Wall

During 2018-2021 artifacts were collected repeatedly from four areas, namely, 1) The Main Quarry along the flank of the ridge forming Hole-in-the-Wall Draw; 2) North End of Ridge; 3) Hole-in-the-Wall South; and 4) The East Workshop (see Figure 14 for locations). Intensive industrial activity occurred at the Main Quarry and Hole-in-the-Wall South; the other two localities appear to have been residences where some agate reduction took place. At residences, tools were used, maintained and ultimately discarded. While, the majority of flaked artifacts we encountered at the east Workshop and North End of Ridge had been fashioned of lemon-yellow agate, there was an appreciable number of specimens made of raw materials introduced from afar. These artifacts were likely culls from the tool-kits of Palaeo-Americans who had come to Hole-in-the-Wall in order to quarry fresh tool-stone. At the same time, hunting and gathering must have been occurring, for then the region likely was better watered than today and suited to seasonal, but perhaps longer term, habitation.

For each area at Hole-in-the-Wall I shall review and illustrate some salient, as well as typical, stone artifact finds. Alas, neither organic materials (such as wedges, hoes, and the like) nor dietary remains were encountered by us.

Main Quarry

The rough-stone, industrial sub-assembly that came to light during initial surface-collecting and test-pitting as well as 2021 backhoe trenching consists of 1) hammerstones, 2) massive anvils, and 3) heads of digging-picks.

Beginning with hammerstones, here we report 26 which were measured and weighed, as given in. Two categories by weight are evident – “light” and “heavy.”

Light hammerstone are more numerous (N = 22), and their weights range from 109 to 583 grams with a median value of 259 grams. Hammerstones of such mass are ideal for reducing agate spalls to biface preforms and for shaping cores and driving flakes off them.

The essential homogeneity of light hammerstone shapes and the limited range of raw materials that were employed in their manufacture are evidence of only one archaeological culture or industrial tradition being responsible for workings at the Main Quarry at Hole-in-the-Wall.

Heavy hammerstones, used in conjunction with stable, blocky anvil-stones would have been ideal for reducing (“cobbing”) massive agates that were too heavy and awkward to be grasped. Pitting upon anvil-stones is testimony of their hard service by ancient flintknappers.)

Although we excavators regularly unearthed elements belonging to the rough-stone industrial sub-assembly (hammerstones, anvil-stones, and picks) at the Main Quarry, more often we encountered the primary products of the ancient quarrying operation, that is to say, 1) bifaces, 2) cores for producing prismatic blades and bladelets, and 3) prismatic blades and bladelets themselves. Needless to say, most of the bifaces were rejects, which had been discarded because of flaws in the agate and perverse fractures. Cores, on the other hand, were thrown away because they were exhausted or unpromising. Prismatic blades and bladelets were deselected because they were thick and misshapen or had broken in half when they were struck off the core.

Cores were an important part of the output of the quarrymen at Hole-in-the-Wall. The predominant form is a simple prismatic core with one, sometimes two, striking platforms. A good example of the single-platform variety from Trench A has already been presented as Figure 12. Another excellent specimen, which was collected near our tent-camp below the Main Quarry during 2019, is shown as Figure 15 (upper). This small core is based upon a biface fragment – the lateral



Figure 17. Proximal end of a prismatic blade with double arises. Made of a banded chert (or agate) foreign to the immediate region. East Workshop, discovered October 2020. Length of fragment = 47mm

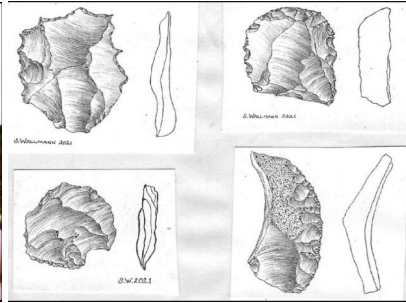


Figure 18. Formal types of flaked stone tools from the surface of the East Workshop. *Top Row:* from left, coronet graver, end scraper. *Bottom Row:* from left, combination beak/denticulate, small side scraper. All are lemon colored agate. Length of sicescraper=5.3 cm. Steve Wallman

break serving as a striking platform for blade removal. The agate from which it was made is high-grade and free from flaw.

Although prismatic blades and bladelets were generated at the Main Quarry, perhaps the bulk of these cutting instruments were produced elsewhere from cores that had been shaped preliminarily at the quarry and then carried away. All are made of a good grade of lemon-yellow agate, which is the proximal end of prismatic blade of volcanic rock (dacite?) – an import to this site from afar.

A preference for prismatic blades and bladelets is characteristic of Clovis and Cumberland Palaeo-American cultures, although they were also desired by some later cultures (e.g., Hopewell). The intimate association of these special artifacts with fluted point and adze preforms indicates that their cultural connections lie with earliest cultures rather later manifestations.

Finally, the archaeological deposits at the Main Quarry yielded a few finished flaked stone artifacts suggesting that activities besides quarrying and primary reduction of agate may have taken place there. Three examples of this small group of uncommon artifacts – all fashioned of lemon-yellow agate. The first item (A) is a bifacial chopper that is conveniently sized for grasping. Remnant cortex of the agate nodule provides a sure grip. B is an endscraper with a talon that has been flaked bifacially for inserting within a haft. The item labelled C is a diminutive sidescraper with two, sub-parallel, unifacially-flaked working edges. All three implements, of course, may have been used to fashion pick-handles and equipment needed for quarrying, or they may have had other purposes altogether.

North End of Ridge (Locus)

The crest of the ridge for almost its entire length was a focus of ancient habitation, and anyone walking upon its deflated soils and among its sparse vegetation will expect to observe scatters of agate debitage and flaked tools. The density of these vestiges increases as one approaches the ridge's north end where the frequency of exotic lithics also is greater.

A concentration of artifacts was observed upon the surface of the ridge at the extreme north end, and on October 4, 2021, I scraped up surficial soil and sieved it through a 6 mm mesh. All artifacts were collected for study and illustration; afterwards, they were returned to the find-spot. The concentration covered a circular area approximately two meters in diameter. The impetus for this work was the discovery of a projectile point tip of lemon-yellow agate, which may be a Clovis point fragment.

In close proximity to the sieved concentration were scattered artifacts suggesting a Palaeo-American (Clovis?) former presence. Chief among them were fragmentary and intact utilized prismatic blades.. Although lemon-yellow agate predominates, there are specimens of colorful, banded cherts and agates that may have been introduced from afar within Clovis tool-kits. Later after fresh replacements were manufactured from the local agate, these well-used tools were purged from tool-kits and discarded on the spot.

Hole-in-the-Wall South

This lithic quarry-workshop, which lies 1.5 kilometers to the south of the Main Quarry and at an altitude nearly one hundred meters above it, was discovered during 2018 by Mark Newton. At the time of the Beutell Expedition it was not part of the Red Eagle Mine claim, and, therefore, our explorations were necessarily cursory and restricted in scope.

During 2021 our goals were merely to sample ancient materials lying upon the surface, thereby establishing the site's extent, and to ascertain by means of a single, shallow test-pit (one-meter square) if archaeological deposits lay below the surface.

Our observations suggest that a mineral claim at Hole-in-the-Wall South is warranted, but we can only guess what the tonnage of agate awaiting harvesting might be. Archaeologically, this quarry workshop appears to offer little new information. We predict that it will mirror what has already been learned by excavations at the Main Quarry – except for the fact that a small percentage of the lemon-yellow agate there is imbued with a red or pink color. The element that is responsible for this attractive “strawberry” hue has not been established, but it might be gold.

The East Workshop

This extensive, flat-lying archaeological site, which has eroded to a slight degree because of livestock grazing upon it, was discovered by crew member, Derek Risley when reconnoitering on October 4, 2020. Two of the three artifacts (a Clovis-age biface with outrepasse flaking and a prismatic blade fragment) that he collected that day from the surface are shown in Figures 16 and 17.

The prehistoric habitation loci that together constitute the “East Workshop” are widely scattered across a terrace, which is elevated 10-15 meters above the broad valley with an unnamed stream.

Repeated visits were made to the East Workshop during the clement months of 2021 searching for diagnostic artifacts. Also, we hoped to document the limits of the ancient occupation and understand its nature. Three, discrete loci or artifact concentrations (designated A, B, and C) were observed in the northwest sector of the terrace; elsewhere at the East Workshop artifacts were more dispersed. Exposure of the ancient occupation surface, however, was poor, and organic artifacts were not preserved. We came away with the realization that our understanding was limited and inconclusive except for one fact: All the flaked stone within an area of 75 X 300 meters could be relegated to occupations by Palaeo-Americans (likely, Clovis people). We identified no vestiges of a later time period, that is to say, no Neo-Indian habitations.

Underscoring our belief that artifacts upon the East Workshop had been left by Palaeo-American (Clovis) visitors, is the presence of utilized tools and tool preforms made of exotic raw materials. At least 25 specimens were noted across the terrace wherever erosion had done its work. This number, however, is hardly 15-20% of the sub-assembly of tools, tool fragments, cores made of lemon-yellow agate that was observed there. If we had not been selective and instead included in our tally every piece of lemon-yellow agate debitage lying exposed upon the East Workshop, the representation of exotic raw materials would be much less – likely less than one per cent of the total.

As one might expect for a Clovis site, prismatic blades and the cores used to generate them were common finds by us. Most of the blades bore edge damage from prolonged usage. The longest specimens did not exceed 6-7 cm; average-sized prismatic blades measured only 4-5 cm in length. The longest scar created by removing prismatic blades from cores discovered upon the East Workshop is only 7.5 cm.

Our repeated searching among the ancient flaked stone debris upon the terrace did yield a few key indicators of Palaeo-American presence (see Gramly 2000), some of which are illustrated by Figure 18. Noteworthy is a coronet graver with nine prominent spurs and a common form of trianguloid endscraper. Both of these implements had been fashioned of good grades of lemon-yellow agate.

Only a small fraction of this Clovis site is exposed upon the surface. What remains hidden, buried under drifted sediment and desert vegetation, undoubtedly will prove more than ample for archaeological studies, which this potentially important Palaeo-American station deserves.

F. Overview

The work accomplished during the Beutell Expedition supports our belief that the Hole-in-the-Wall lithic source was intensively quarried during Palaeo-American (Clovis) times only. Workshops and residences of Clovis quarrymen were established at overlooks and were short distances from the Main Quarry and Hole-in-the-Wall South.

Later visitors to Hole-in-the-Wall scavenged quarry debris that must have lain about abundantly, and they even gleaned workshops and habitations for discarded pieces. If actual quarrying was carried out by Neo-Indian groups, we observed no evidence of it.

Clovis tool-makers employing lemon-yellow agate contented themselves with small-to-medium sized raw material, which yielded bifaces and prismatic blades having a maximum dimension of 10-15 cm (4-6 inches). Clovis fluted points of this size are on record for the Great Basin, Texas, and western Nebraska. Of course, from time to time larger masses of agate capable of yielding larger tools must have come to light, but such vestiges are rare.

Hole-in-the-Wall agate is a superior material for sharp cutting instruments. Prismatic blades and bifacial implements made of this tough stone may have given prolonged service and, thus, ended up at archaeological sites far and wide. Find-spots of Palaeo-American domestic implements made of this agate, however, all are located west of the Mississippi; most finds are on record for the Great Basin (states of Nevada, Oregon, California, and Washington).

In Hopewell times when raw materials were appreciated not only for their utility but also for their color, texture, and inherent beauty, lemon-colored Hole-in-the-Wall agate must have been prized. Being a true rarity to prehistoric Native Americans residing in the East, it was imported with considerable difficulty via trading networks stretching across North America. Whether it moved as rare, large nodules or as finished artworks has not been established; however, evidence suggests it was reduced and recycled within Indiana (D. Greives, personal communication).

When in the course of backhoe trenching during the Beutell Expedition we confirmed the presence of extra-large agate nodules (Fig. 2), a “veil” separating Hopewell art-fanciers living 2,000 years ago and us archaeologists/mineralogists was lifted. It was easy to believe that members of two separate cultures could venerate the same wonderful creation of Nature – a stone yellow as lemons and full of light as the Sun.

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WAA EVENT CALENDAR

DEADLINES FOR THE NEWSLETTER

Sunday July 1, 2023 for events in September, October, November 2023

Saturday July 1, 2023 for submissions for the Summer 2023 Edition of the Newsletter

Sunday October 1, 2023 for event submission for November 2023

Sunday October 1, 2023 for submissions for the Fall 2023 Edition of the Newsletter

Please Note: In these times of uncertainty (weather events, pandemic, etc.) events may be cancelled or rescheduled. If event changes occur, please keep Deb Andrews informed. Also check the website Event List for cancellations or changes. In addition, contact information for event leaders can be found to verify the event schedule.

NORTH AMERICA

DATE/STATE	EVENT
Fri 21 Apr—Sun 23 Apr 2023 Wisconsin	<p><u>Ojibwa Bow Hunters Bow-Jam and Traditional Shoot</u> <i>Fri 21 Apr 2023 - Sun 23 Apr 2023 at 00:00</i> - <i>Ojibwa Bowhunters Club: New Berlin Wisconsin 53146 – Lenny Riemersma wisatlatl@gmail.com 9209170335</i> Ojibwa Bow Hunters Bow-Jam and Traditional Shoot. 3045 Johnson Road, New Berlin, WI. 53146 Friday night ISAC. Saturday and Sunday Demos and ISAC. This event is in conjunction with the Wisconsin Traditional Archers Bow-Jam and traditional 3-D shoot. Free camping on site</p>
Fri 21 Apr 2023 Utah	<p><u>Sanpete Atlatl Competition</u> <i>Fri 21 Apr 2023 at 15:00 - 18:00- Dye Residence: Chester UT 84623 – David Dye msatlatlleague@gmail.com</i> There will be educational instruction, fun field throwing, and a casual gathering starting at 3 pm. No entry fee for any of the events. Atlatls will be available to purchase, but not required. There will be Atlatls available to borrow if you don't have one. Beginning at 4 PM we will have an official ISAC competition. This is a single day event. Sponsored by the Mammoth Slayers Atlatl League. The event will be held at our home in Chester, Utah.—14430 North 2820 East Chester, UT 84623 msatlatlleague@gmail.com for more information</p>
Sat 29 Apr New York	<p><u>Candor Daffodil Festival Atlatl Contests</u> <i>Sat 29 Apr 2023 - Sun 30 Apr 2023 at 00:00- Thunderbird Atlatl: Candor New York 13743 – 90Main Street, Candor, New York.</i> Local atlatl contests, ISACs on from 10 a.m. until 5 p.m. on Saturday, April 29, at 90 Main Street, Candor, NY. ISAC, Sunday, April 30, mid morning. Contests will take place on the Thunderbird Atlatl grounds. Other Daffodil Festivities will take place at the local ballfield and throughout the community on April 29. For further information contact Bob and Cheryl Berg at contact@thunderbirdatlatl.com or 607-659-3854.</p>
Sat 29 Apr 2023 Kentucky	<p><u>Kentucky Atlatl Event</u> <i>Sat 29 Apr 2023 at 13:00 - 17:00- Gary Miller's Property: Jeffersontown KY 40299 – Kentucky Locals and ISAC at Gary Miller's Home, Jeffersontown, KY. Contact Hallmrcdi@gmail.com or Steve Hall 502-681-4886 2:00 pm</i></p>
Sat 6 May 2023 Ohio	<p><u>OAA Events Kickoff</u> <i>Sat 6 May 2023 at 10:00 - 14:00 Andrews Residence: Albany OH 45710 – Deb Andrews' property. Ohio locals, ISAC. Contact Ray Strischek, ohioatlatl@hotmail.com, 740-331-4351; Steve Barnett, barnz@juno.com 740-698-6553; or Deb Andrews, deb_andrews@frontier.com 740-541-4036 for more information. 10:00 am – 2:00 pm, or thereabouts.</i></p>
Fri 12 May - Sun 14 May 2023 Wisconsin	<p><u>Mosquito Hill Nature Center</u> <i>Fri 12 May 2023 - Sun 14 May 2023 - Mosquito Hill Nature Center: New London WI 54961 — Demo and ISAC Each Day —Address: Mosquito Hill Nature Center ~ N3880 Rodgers Rd. New London, WI. 54961 ~ Contact: Lenny Riemersma (920) 917-0335 —</i></p>
Sat 13 May 2023 Ohio	<p><u>Deb's Second Event</u> <i>Sat 13 May 2023 at 10:00 - 14:00—Andrews Residence: Albany OH 45710 – Deb Andrews' property. Ohio locals, ISAC. Contact Ray Strischek, ohioatlatl@hotmail.com, 740-331-4351; Steve Barnett, barnz@juno.com 740-698-6553; or Deb Andrews, deb_andrews@frontier.com 740-541-4036 for more information. 10:00 am – 2:00 pm, or thereabouts.</i></p>
Sat 13 May 2023 Illinois	<p><u>REC Festival</u> <i>Sat 13 May 2023 at 10:00 - 16:00 central—The Great Rivers Museum: East Alton IL – David Patterson stikflinger@gmail.com 5736579408</i> We will be a part of the REC Festival, put on by The Great Rivers Museum in East Alton, Illinois, adjacent to the Melvin Price Lock and Dam. The Festival will feature many outdoor recreational activities for visitors to sample, and we will be demonstrating and teaching the use and lore of the atlatl and dart. ISAC will follow.</p>
Sat 20 May 2023 Utah	<p><u>Fremont Indian State Park Atlatl Competition</u> <i>Sat 20 May 2023 at 09:00 - 18:00 - Fremont Indian State Park: Sevier UT 84766 – David Dye msatlatlleague@gmail.com</i> There will be educational instruction, fun throwing, and a casual class on how to build an atlatl and primitive dart, starting at 9 AM. This will be held in conjunction with the Mountain Man Rendezvous, at the same location. No entry fee will be charged for any of the atlatl events. A limited number of Atlatls will be available to purchase, but not required. There will also be a limited number of Atlatls available to borrow if you don't have one. Beginning at 2 PM we will have an official ISAC competition. This is a single day event. Sponsored by the Mammoth Slayers Atlatl League. This will be at Fremont Indian State Park. 3820 Clear Creek Canyon Road Sevier, UT 84766 msatlatlleague@gmail.com for more information</p>

DATE/STATE

EVENT

Sat 27 May 2023 Washington	Between the Rivers Sat 27 May 2023 - Sat 3 Jun 2023 at 00:00 - <i>Between the Rivers – Huffman: Valley WA 99181 – Contact James Turner (970) 946-2096 el_lobo_solo@hotmail.com</i>
Fri 2 Jun - Sat 3 Jun 2023 Tennessee	World Atlatl Days at Old Stone Fort Fri 2 Jun 2023 - Sat 3 Jun 2023 at All Day Central - <i>Old Stone Fort State Archaeological Park: Manchester TN 37355 – United States Eric Collins Eric.L.Collins@tn.gov 19312474673</i> Old Stone Fort State Archaeological Park will celebrate World Atlatl Day with the return of our annual Atlatl Days the first weekend of June. ISACs will be held on Friday, June 2nd and Saturday, June 3rd. We will also take part in the state competition on Saturday. We are excited to welcome everyone back after the year away.
Sat 3 Jun 2023 Wisconsin	Glen Oechsner's Residence World Atlatl Day Competition & ISAC Sat 3 Jun 2023 - <i>Glen Oechsner's Residence: 1167 Minnie Lane, Campbellsport, WI. 53010 ~Contact: Glen Oechsner (920) 533-5039 — World Atlatl Day Competition and ISAC</i>
Sat 3 Jun 2023 Ohio	World Atlatl Day Sat 3 Jun 2023 at 10:00 - 14:00- <i>Athens Public Library: Athens OH 45701 – Athens Library. Ohio locals, ISAC, and team WAD competitions, as well as instruction for people wishing to learn how to throw. Contact Ray Strischeck, ohioatlatl@hotmail.com 740-331-4351 or Steve Barnett, barnz@juno.com 740-698-6553 for more information</i>
Sat 3 Jun 2023 Missouri	World Atlatl Day Sat 3 Jun 2023 at 10:00 - 16:00 central - <i>Graham Cave State Park: Danville Missouri 63361-5509 – David Patterson stikflinger@gmail.com 5736579408</i> Come to beautiful Graham Cave State Park and help us celebrate World Atlatl Day, dedicated to preserving the knowledge and use of one of humankind's ancient innovations. We will demonstrate, explain, and teach the use of the atlatl and dart, with ISAC and other contests as well.
Sun 11 Jun—Sat Jun 17 2023 Utah	Fire to Fire Sun 11 Jun 2023 - Sat 17 Jun 2023 at 00:00- <i>Fire to Fire: Tabiona UT 84072 – Contact James Turner (970) 946-2096 el_lobo_solo@hotmail.com</i>
Fri 16 Jun - Sun 18 Jun 2023 Pennsylvania	25th Annual Meadowcroft Atlatl Event Fri 16 Jun 2023 - Sun 18 Jun 2023 - <i>Meadowcroft Rockshelter & Historic Village: Avella Pennsylvania 15312</i> Friday noon to Sunday 2:00. Local contest Friday and Saturday. ISAC all 3 days. Awards for local contests on Saturday. Primitive camping. No showers. Modern rest rooms. No food available. Saturday evening dinner is a potluck. Bring something to share and join us! For information contact Margie Takoch — margieandfrank@hotmail.com 740.246.1755. Gates lock at 5:00 pm, if you know you are going to be later, let me know and I'll give you my cell so I can let you in.
Fri 23 Jun - Sun 25 Jun 2023 Ohio	Serpent Mound Summer Solstice Celebration Fri 23 Jun 2023 - Sun 25 Jun 2023 at 00:00- <i>Soaring Eagle Retreat: Peebles OH 45660 –</i> New Event! OAA will be at the Serpent Mound Summer Solstice Celebration, held at the Soaring Eagle Retreat next to the Serpent Mound. Friday 6/23 3 pm -7 pm, Saturday & Sunday 10 am- 7 pm. Camping is available (\$10/ for tent/car or \$20 for RV or camper) to those who preregister for the event by contacting Ray Strischeck (ohioatlatl@hotmail.com or 740-331-4351) or Steve Barnett (barnz@juno.com or 740-698-6553). Dogs are permitted but must be leashed at all times. For further information, contact Ray or Steve, or go to the Serpent Mound website at http://www.serpentmound.org/ . OAA will provide instruction for those wanting to experience the atlatl and dart. Ohio locals and ISACs will be held daily. Activities provided at the Serpent Mound and festival are free to the public.
Mon 3 Jul 2023 Montana	Ravalli County Atlatl Competition & Championship Mon 3 Jul 2023 at 10:00 - 13:00- <i>Corvallis MT 59828</i> <i>David Dye msatlatlleague@gmail.com</i> There will be educational instruction, fun field throwing, and a casual gathering starting at 10 AM. No entry fee for any of the events. Atlatls will be available to purchase, but not required. There will be Atlatls available to borrow if you don't have one. Bring your own food. Beginning about noon, we will have an official ISAC competition. This is a single day event. Sponsored by the Mammoth Slayers Atlatl League. The event will be held at 757 Eastside Hwy Corvallis, Mt 59828 msatlatlleague@gmail.com for more information
Fri 7 Jul - Sat 9 Jul 2023 Ohio	Flint Ridge Gathering Fri 7 Jul 2023 - Sun 9 Jul 2023 at 00:00 - <i>Flint Ridge Ancient Quarries and Nature Preserve: Glenford OH 43739 –</i> OAA will provide instruction, Ohio local contests and ISACs for this 3-day event held at the Flint Ridge Ancient Quarries and Nature Preserve. For more information, contact Ray Strischeck (ohioatlatl@hotmail.com or 740-331-4351) or Steve Barnett (barnz@juno.com or 740-698-6553).
Thu 20 Jul - Sat 22 Jul 2023 Missouri	MOJAM23 Thu 20 Jul 2023 - Sat 22 Jul 2023 at 10:00 - 17:00 central - <i>Indian Foothills Park in Marshall, MO: Marshall Missouri 65340 –</i> <i>David Patterson stikflinger@gmail.com 5736579408</i> We will be a part of this great Event celebrating archery, atlatl, and primitive skills of every sort. We will demonstrate, educate, and hold daily ISAC. There is a food shack, ongoing bow building, archery range and a 3-D course as well.
Fri 28 Jul - Sun 29 Jul 2023 Indiana	Indianapolis Summer Event Fri 28 Jul 2023 - Sun 30 Jul 2023 at 00:00- <i>Tim Hall's Property: Indianapolis IN 46268</i> OAA will provide instruction and contests, including ISACs daily at Tim Hall's property in Indianapolis. Contact Tim Hall (thcustom@sbcglobal.net or 317-627-5693) for more information.

EUROPE

DATE/STATE

EVENT

Sun 28 May 2023
Belgium

European Prehistoric Championship Saint Hubert (WBCC) *Sun 28 May 2023 at 12:00 - 15:00*
- Saint Hubert: 6870 Saint Hubert Luxembourg – Belgium
Val de poix, n° 1,
6870 Saint Hubert
Luxembourg, Belgium
For more information contact Michel Laurent mich.laurent@outlook.com



ANNOUNCEMENT REGARDING POSTING OF ISAC SCORES IN THIS EDITION OF THE NEWSLETTER

Announcement:

Dear Atlatl Friends ,

I regret to tell you that the envelope that was supposed to include all my forwarded office mail, especially ISAC scores, just reached me empty and torn. Accordingly, for this year so far (April 11) I have only a few scores sent to me as emails. If you kept duplicate scoresheets in some form, please resend them.

I hope this was a once-only disaster, but from now on, I will prefer to get all scores as clear, readable pdfs or jpegs of scoresheets. I realize this may put an added burden on event scorekeepers or organizers, and I will continue to accept paper mail, but I feel this will be the best way to improve security and timeliness. As I receive emailed scores, I can immediately confirm that I got them, and organizers will then also have a duplicate record.

Please spread the word.

With apologies,

John Whittaker, ISAC Scorekeeper

Obituary for Mary Granneman



Mary Jean Granneman, 67, of Ottumwa, died at 1:12 p.m. March 27, 2023 at Ottumwa Regional Health Center. She was born October 18, 1955 in Ottumwa to Vincent and Lorraine Westerdahl Shovlain. She married Roger Granneman on April 23, 1976.

Mary was a 1975 graduate of Ottumwa High School and a graduate of Iowa School of Beauty. She worked as a beautician for over 40 years.

Mary loved working with her flowers and in her garden. She enjoyed competing in Atlatl throwing, competing in the National Atlatl Association competitions in Las Vegas and multiple other national sites. Mary especially loved spending time with her family.

Surviving is her husband, Roger; their daughters, Sadie Granneman of Marion and Neely Granneman (Steve Yates) of Ottumwa; 2 grandchildren, Addison Norfolk and Lucas Yates; and a brother, Paul (Bonnie) Shovlain of Florida.

Editor's Note: Thanks go out to Courtney Birkett for informing me of Mary's passing. Anita and I participated in several events held by the Granneman's at their home. The Iowa hospitality and fun shared were appreciated by Anita and I. Our best wishes go out to Roger and the rest of the Granneman family at this time of loss.

Frank Lukes

Editor's Note: An email was sent with a correction for the location for the WAA Annual Meeting location in Jordan Valley, OR. I am reprinting the meet information from the last newsletter with the correct location. The editor of The Atlatl apologizes for any confusion or problems this mistake may have caused.

THE 2023 World Atlatl Association Annual Meeting is Coming to Jordan Valley, Oregon From Friday September 1st to Monday September 4th 2023

Location for the Meet: Oxbow Trailer Park (listed on internet and Google Maps as Pelota RV Oxbow Trailer Park) , US 95, Jordan Valley, OR, GPS coordinates: 42.9746,-117.0525 (can put coordinates into the search field of your map application). Oxbow Trailer Park can accommodate RV and tent camping with electric, water, and sewer full hookups available. Jordan Valley Oregon sits close to the Idaho-Oregon border and is 82 miles (approximately 1 hour and 28 minutes) from Boise Idaho on US Highway 95.

Contact Person — Glen Fretwell — Cell Phone—541-586-2477 — No e-mail or internet access

Travel: By Car or RV— From Boise, ID—Interstate 84 to Idaho Highway 55 Exit 33A (Nampa, Idaho).

Travel west on Idaho 55 for approximately 16.5 miles to US Highway 95. Head South on US Hwy 95 for approximately 44.7 miles to the meet site

From Interstate 80 — Exit Interstate 80 in Winnemucca Nevada at Exit 176 (US Highway 95). Head north on Highway 95 for 175.5 miles to the meet site.

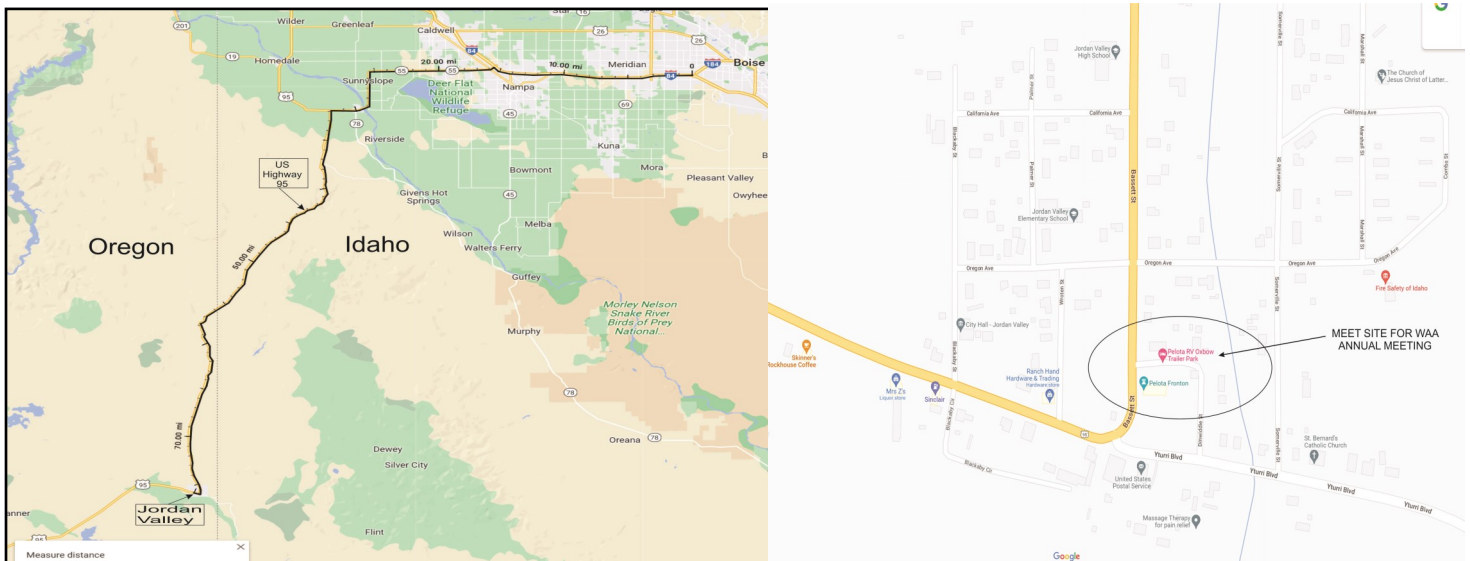
Air Travel — The Boise Idaho airport is closest to the site and is served by United Airlines, Alaska Airlines, Allegiant Airlines, Delta Airlines, South West Airlines, and American Airlines.

Lodging -- RV and Tent Camping — Oxbow Trailer Park — Full Hookups (Electric, water, sewer), Laundromat — this is the meet site. For more information including reservations contact Glen Fretwell (Cell Phone — 541-586-2477).

Hotel/Motel/Food — There is a motel in Jordan Valley called Basque Station Motel (Phone 541-586-2201 or 541-586-2206). A word of caution about staying at this motel— the motel normally serves as housing for local workers, so amenities will be limited. In addition there are no restaurant facilities in town and the local grocery provides basics like milk, eggs, bread, etc. so selection of food is limited.

The towns of Boise ID, Nampa ID(17.5 miles west of Boise on Interstate 84), and Caldwell ID (26 miles west of Boise on Interstate 84) are served by a wide range of restaurants, motels/hotels, and groceries. However, these towns lie 60-80 miles from the meet site.

The tentative date for the annual meeting is Saturday September 2, 2023 (the board meeting would occur on Friday September 1, 2023) — Glen Fretwell is planning on providing a meal for the annual meeting. The cost of the meal is to be determined.



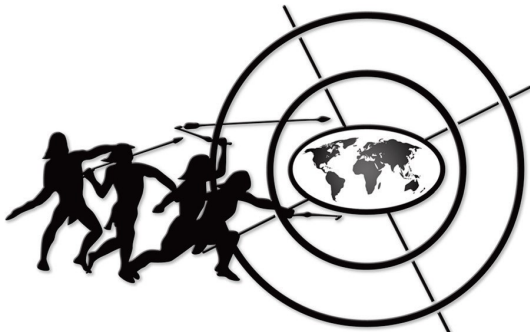
Frank Lukes

3809 Broadview Road

West Lafayette, IN 47906

Phone: (765)250-8234

Or Email: theatlatl@gmail.com



The WORLD ATLATL ASSOCIATION, Inc.

The date that your membership expires follows your name in the address above.

JORDAN VALLEY, OREGON (NEAR THE OREGON-IDAHO BORDER) SITE OF THE 2023 ANNUAL MEETING (SCHEDULED FOR SEPTEMBER 1st 4th) — See Article on Page 10

