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Cover background photograph: Grand Canyon visitors along the Colorado River at the end of the Bright Angel Trail, November 14, 1906. Photograph courtesy of the GCNP Museum Collection (#13655)

Cover inset photograph: Louis Boucher atop his mule, Silver Bell, circa 1910. Photograph courtesy of the GCNP Museum Collection (#5972)

It is the mission of the Grand Canyon Association to cultivate knowledge, discovery, and stewardship for the benefit of Grand Canyon National Park and its visitors. Proceeds from the sale of this book will be used to support the educational goals of Grand Canyon National Park.

Why James White's 1867 Raft Trip Doesn't Float—At Least through Grand Canyon

BY TOM MYERS

"It would be idle for me to deny in toto that Mr. White did go through the entire canyon as he claims, but I think the probability of having done so is about in the ratio of one to infinity." 1

It is said that the best stories have a beginning, middle, and end. But one of the best Grand Canyon river stories has only an end. It concludes at the beginning, near three in the afternoon, on September 7, 1867. That was when a vagabond floated into Callville, Nevada, on a makeshift log raft. He was barely alive. This caused a bit of a fuss in the tiny settlement on the Colorado River, and residents hurriedly pulled the raft ashore.2 Haggard, delirious, and barely clothed, James White told his rescuers that he had been floating for two weeks on the river. Before that, he had been prospecting with two companions several hundred overland miles upstream in Utah near the San Juan River. They were attacked by Indians (of an unspecified tribe), who killed one of the prospectors. White and his remaining companion fled to the Colorado, where they hopped aboard a hastily made log raft and floated downstream. Several days later, White's companion drowned. White continued to float a total of fourteen days, enduring

near-starvation, deadly heat, and perilous white water.

For the stunned handful of Mormons, soldiers, and barge workers present, White's story aroused wonder. They all knew that the next sixty upstream miles, all the way to the Grand Wash Cliffs and the yawning mouth of the Big Cañon, the Colorado was not navigable because of exposed rocks, sandbars, and cataracts.³ As for Grand Canyon, no one had yet traveled through it by boat, either. The San Juan River lay still farther upstream from the beginning of the Grand Canyon, over a hundred miles more and nearly 500 miles from Callville. If White told the truth, then he must have come through the Big Cañon, making him the first man to do so.⁴ There could be no other conclusion.

They extolled the corpselike White for his historical feat of bravery. White, vague and almost oblivious about logistics of his trip, really didn't know where he had been and didn't really care. He appreciated just being alive. But word quickly spread. For two years following White's

Julius F. Stone to R. C. Clowry, 1906. Reprinted in *Colorado River Controversies* by Robert Brewster Stanton (New York: Dodd, Mead & Company, 1932).

² Caliville, at three years old in 1867, was an outpost on the river inspired by Mormon missionaries and built to serve as a port for freight received from ocean vessels near the mouth of the Colorado at the Gulf of California. The freight, as well as converted church immigrants from Europe, was hauled upriver by steam-driven paddle-wheeling boats, and would arrive at the scorching hot Mojave Desert settlement for later distribution to outlying Mormon communities.

³ A letter in The Daily Alta California, 14 May 1864, described

[&]quot;Messrs. Butterfield and Perry (Ferry?)" as having traveled upriver in a small boat 250 miles upstream of Fort Mohave, Arizona Territory, placing them above Grand Wash Cliffs and 20 miles into Grand Canyon, 260 miles from Fort Mohave. The duo reported they lost nearly all their provisions by the capsizing of their boat before returning. Octavius Decatur "O. D." Gass of Las Vegas Ranch and an American Indian reportedly joined the cruise.

White may have actually been preceded by two others. Captain John Moss, a frontiersman, in the 1870s claimed he had floated solo through the Grand Canyon in 1861. "Tiyo," of Hopi legend, was a boy who floated through the Grand Canyon in a hollowed-out log many generations earlier.

appearance, his incredulous story found its way into print from coast to coast, uncontested and undisputed.⁵ That would all change.

In 1869 John Wesley Powell led an expedition down the canyons of the Green and Colorado rivers. The difficulties and dangers of the navigation were well documented. So horrendous was the trip that Powell was thoroughly convinced a voyage such as White's was impossible, and believed he and his crew were the first through the Grand Canyon. Other early river runners, enduring the same hardships, would similarly support Powell and discount White's tale as a myth or a blatant lie. Indeed for the next seventy years, none of the early river runners would defend the title slapped on White by those who had never experienced the hazards of boating in Grand Canyon. Some would even become fierce, outspoken critics, especially Robert Brewster Stanton, leader of the ill-fated 1889 and 1890 expeditions, in which three of his crew drowned.

Now, 140 years later, the White saga remains perhaps the most controversial and hotly debated tale in the annals of Grand Canyon history. Was he the first to go down the Colorado through the Grand Canyon? Given the lack of physical evidence, other than White being found on his raft, and the lack of witnesses, most of the controversy has surrounded the little testimony White could provide, and equally important—what he couldn't. Both would change over the years. Ironically, the answer seems to lie in what hasn't changed: the limited physical evidence.

RIVER ENTRY IMPASSE

The biggest argument revolves around where he entered the river. Both proponents and opponents have suggested at least a dozen different locations as a point of White's entry to the river.8 Obviously, to garner credit for the first Grand Canyon traverse, White needed to start his float upstream of the canyon. White himself thought he entered on the Grand River (the name of the Colorado River above the confluence with the Green at the time), some 145 miles or more upstream of the San Juan River, which would have required a traverse of the notorious Big Drops in Cataract Canyon. Those who support White's traverse eliminate Cataract Canyon and shorten the mileage by placing the point of origin closer to the mouth of the San Juan River. Robert C. Euler, respected Grand Canyon anthropologist and White historian, and White biographer Eilean Adams, conclude White likely entered the river at Moqui Canyon in Glen Canyon, 125 miles above Lees Ferry. This still puts White roughly 465 river miles above Callville.

THE TIME DILEMMA

At the time of White's arrival in Callville and in every subsequent interview with him, he never wavered on the fourteen-day length of his float trip. Starving through most of it, he remembered his last meals to the hour. Yet floating nearly 500 miles in that time? Even the staunchest of White supporters question it. James White's granddaughter, Eilean Adams, in her book, Hell or High Water: James White's Disputed Passage through Grand Canyon, 1867, recognizes the problem. She addressed the criticism that "White could not have gone through the Grand Canyon in fourteen days." Using the 1867 almanac and lunar eclipse data, she hypothesized that White actually had more time on the water than he accounted for, concluding "this would allow roughly twenty-one to twenty-four days to make the journey from Moqui Canyon to Callville, a more likely time period than White's '14 days." 10 This hypothesis discredits White's testimony and adds another seven to ten days of starvation for White. In reality, the time he had to get through the Grand Canyon was closer to half of that.

For the first four days he had smooth sailing, encountering no rapids until near nightfall on the fourth day.¹¹ Those who believe White began his float upstream from the Grand Canyon have logically theorized that this smooth water must have occurred in Glen Canyon, which

Word of White's apparent journey spread quickly, first by mouth, then by print. Within one week the "account of the first passage, as far as it is known, of any human being through the Big Canon of the Colorado," appeared in The Arizona Miner of Prescott. Within two months, other articles about White would appear from coast to coast, including in the Los Angeles News, the San Bernardino Guardian, San Francisco's Alta California, and the New York Times.

⁶ Eilean Adams, Hell or High Water: James White's Disputed Passage through Grand Canyon (Logan: Utah State University Press, 2001), chapter 13.

⁷ Barry Goldwater, a commercial passenger of Norman Nevills'

¹⁹⁴⁰ expedition on the Green and Colorado rivers, supported White's journey in his book *Delightful Journey*. He was the first of early Grand Canyon river runners to publicly do so.

⁸ Otis "Dock" Marston, James White's Grand Canyon Cruise. Unpublished paper, Feb. 1976.

⁹ Robert Brewster Stanton, Colorado River Controversies (1932; repr., Boulder City, Nev.: Westwater Books, 1982), 44, 56.

¹⁰ Adams, Hell or High Water, 163.

Stanton, Colorado River Controversies, 45. White reportedly told Stanton, "Near night on the fourth day we struck our first rapid." In his December 1867 interview with William Parry, White reported he encountered the first rapid at 3 PM on day four.

was known to have no significant rapids. His first rapid then, "a small one," would have been the Paria Riffle, only about one mile into what is today Grand Canyon National Park. He and his companion, George Strole, camped just below this rapid.12 This leaves roughly ten days to go nearly 340 miles. To traverse the last sixty-mile distance from Grand Wash Cliffs to Callville likely took at least two days or more. (Day 14 was not a "full day." His float ended at 3:00 PM.) This leaves eight days or less. At least another day can be chalked off for various stops in the canyon itself: One day saw him stranded in an eddy for two hours. On several occasions he lost hours rebuilding his raft. He also spent time interacting with Indians and lost an entire half day sleeping in the shade. 13 This leaves about seven days or less of actual float time for Grand Canyon. Thus, the 280mile canyon traverse would have required an astounding forty miles per day clip. Can a raft travel that fast in twelve to fourteen hours? That depends on water flow and raft speed.

THE LOW WATER FLOW PREDICAMENT

It is likely that White rode the typical low water flows seen in late summer. Although snowmelt had made river flows of early summer 1867 exceptionally high,14 by mid-July flows had dropped off. The San Bernardino Guardian on August 24, 1867, reported, "The Colorado began to fall July 10, when numerous crops were put in, but it is feared too late to amount to much." In December 1867 during an interview with William Parry, MD, Parry noted that White "saw the high-water mark at 30-40 feet above his water level."15 Years later, during an interview in October 1917 at his home in Trinidad, Colorado, White spoke with interviewer Dr. William Abraham Bell. Bell recorded that White told him "that the season was very low when he went through, and that in his condition, which was the only condition he knew of, the rapids were not anywhere so bad that they would swamp a good boat properly handled."16 In all of his testimonies and interviews, White never described anything suggesting a monsoon spike in

the river's flow. There were no clouds or rain, no flash flooding or debris seen in the river, nor was there a description of water rising. He saw exposed rocks (days 8–11), and got stuck on a rock island, 17 but little else was noted.

RAFT SPEED

The Colorado in Grand Canyon is known as a "pool-drop" river. That is, water slows or "pools" before dropping through rapids. 18 Rapids also create large, powerful eddies. 19 Both would likely slow raft travel, as would low flows. The pre-Glen Canyon Dam Colorado in late summer averaged about 4,000 cubic feet per second (cfs) in the Grand Canyon.²⁰ How fast can a log raft travel on these flows? On December 16, 2006, three friends and I launched a log raft on the Colorado above Moab, Utah, on 4,600 cfs. Eight pine logs nearly one foot in diameter and fifteen to sixteen feet in length composed our raft. It closely matched the dimensions of White's second raft of cedar logs, the one on which he completed most of his journey.21 Virtually impossible to propel due to its size and weight, we noted that maneuvering was limited to minor steering. Getting stuck twice in eddies and three times on rocks, the raft made about two miles per hour over six miles, equating to twenty-four to twenty-eight miles in a twelveto fourteen-hour day.

How have other rafters and floaters fared? Between 1954 and 1964, legendary Grand Canyon hiker Harvey Butchart made multiple downstream float trips on the Colorado and one on the San Juan on an air mattress. He wore no life jacket and used swim fins. In all he floated 125 miles of the San Juan and Glen canyons (Mexican Hat to Last Chance Canyon) as well as 104 miles in Grand Canyon (Lees Ferry to Bass Canyon). White-like, he typically floated the entire day (more than twelve hours) throughout the trips. In Glen Canyon, he averaged twenty to twenty-four miles per day, not forty, or about two miles per hour. Predictably, it got even slower in Grand Canyon. Indeed, in August 1960, he averaged only twelve to fourteen

¹² Stanton, Colorado River Controversies, 45.

¹³ Ibid., 46-48.

¹⁴ The Daily Alta California, July 10, 1867.

¹⁵ James—White—Kenosha Wisconsin, Parry notes from interview, Bancroft Library, University of California, Berkeley. "Line of high water mark 30-40 ft width if river in canon narrowest 100 ft."

¹⁶ William Bell to Robert Stanton, 2 October 1917.

¹⁷ Stanton, Colorado River Controversies, 47-48.

¹⁸ Steven Carothers and Bryan Brown, The Colorado River through Grand Canyon (Tucson: University of Arizona Press, 1991), 30.

¹⁹ An eddy is a river term that refers to a cycling mass of water that forms along the banks of a river. Eddies rotate water upstream,

thus making for a pull-out where boaters can halt downstream progress. By the same token, eddies can also be traps that are very difficult to escape.

²⁰ David Topping, John Schmidt, and L. E. Vierra, Jr., Computation and Analysis of the Instantaneous-Discharge Record for the Colorado River at Lee's Ferry, Arizona—May 8, 1921 through September 30, 2000, U.S. Geological Survey Professional Paper 1677. (Denver, Colo.: USGS Branch of Information Services, 2003), 51.

²¹ Stanton, Colorado River Controversies, 45.

miles per day through Marble Canyon. He walked around the larger rapids, but it still took almost three hours to float between Badger and Soap Creek rapids, a distance of only three miles! His experiences prompted him to note in his logbook, "Even if James White had come through shooting all the rapids, he couldn't have done any better since he couldn't have paddled the raft forward or even enough to take advantage of the best current." 22

In May 1955, it took Bill Beer and John Daggett twenty-three days to float 280 miles through the canyon from Lees Ferry to Pearce Ferry in life jackets, assisted by swim fins. In 1988, Manfred Kraus did the same in eleven days with support by a commercial trip. Adams and Euler have pointed to Kraus as proof, ²³ but again, White had to go nearly 500 miles in fourteen days, not 280. In winter 2001, three women, Julie Munger, Rebecca Rusch, and Kelley Kalfatich, using swim fins and floating on river boards, ²⁴ needed eighteen days to go 295 miles from Glen Canyon Dam to Pearce Ferry, a pace of about sixteen miles per day.

In June 1946, Harry Leroy Aleson and Georgie White Clark tried to mimic James White's run. Hiking in at Parashant Canyon, mile 198.3, they brought a one-man rubber raft and four life preservers. They constructed a raft of juniper and cottonwood logs and tried to embark on the river on a high flow of between 34,600 and 42,200 cfs. For four hours they tried but failed to get it out of the eddy and into the current. Two days later, they made a second raft, but "it would not take the current." ²⁵

Again, eddies would likely have been a huge problem for White, regardless of whether the river was at low or high flow. Further illustration of their hindrance to river travel was seen in a May 1955 incident when Harvey Butchart and Boyd Moore tried to cross the river on air mattresses while it was flowing at 32,000 cfs. Moore got swept downstream by the current. Frozen with fear, he floated helplessly. Butchart, on his own air mattress, was unable to extricate Moore from two eddies that held him captive for nearly two hours total. In all, they floated about five and a half miles in three hours before Moore drowned in Lava Canyon Rapid (mile 65).²⁶

In July 1957, thirty-nine-year-old Robert Billingsley launched on 50,000 cfs at Lees Ferry on two truck-tire inner tubes while wearing a life jacket. He took nine (or

eleven) days to go 267 miles²⁷ before being rescued. His fast twenty-nine miles per day is still more than ten miles per day short of what White needed. In short, there is no record of anyone floating at White's reputedly frenetic pace, at either low or high water.

FATAL OR NEAR-FATAL OUTCOMES OF OTHER LOG RAFTERS

At least thirty-six people have drowned attempting navigation of the Colorado without life jackets. Twelve of these were prior to Glen Canyon Dam in 1963.²⁸ From records of attempted log-raft floats in Grand Canyon, two of three have ended with fatalities, the third with a near fatality. In June 1958, twenty-eight-year-old George Jensen attempted to float downstream from the Furnace Flats area (near Tanner Canyon Rapid, river mile 69) on a log raft, wearing no life jacket. River runners discovered his body later downstream. Where and when he drowned remains a mystery. On November 5, 1966, fourteen-year-old Peter Scott Lebrun drowned trying to swim to shore after floating through Bright Angel Rapid on a driftwood raft he and two other teenage boys made at the Boat Beach (mile 88).²⁹

A near-fatal incident occurred in 1959. On July 23 of that year, fifteen-year-old John Manson Owens III attempted his own log float on a hastily made raft, launching from near the foot of the Tanner Trail at river mile 69, like George Jensen. Owens ran one large rapid—Unkar Creek. He nearly drowned and also almost broke his hip getting smashed between his logs and a rock, before he wisely headed for shore.

White's chances of successfully floating/swimming through 200-plus rapids with no life jacket grow small indeed when one considers the difficulty and risk of attempting this even in one rapid, especially a large one. Owens's experience is a good example. Owens was an excellent swimmer but nearly drowned. White's own swimming ability comes into question. He nearly drowned after falling in the first rapid he encountered, a "small one." White claimed his companion, George Strole, yanked him out by the hair and saved him from drowning.³⁰

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²² Harvey Butchart, Pipe Creek to Hermit Rapids, August 28 to 30, 1962, in "Hiking Logs of J. Harvey Butchart, 1954–1964," vol 1. Northern Arizona University Cline Library Special Collections and Archives, Flagstaff.

²³ Adams, Hell or High Water, 139. There is a video documentary of Kraus's trip entitled Call of the Canyon.

²⁴ River boards are larger than "boogie" boards and have 160 pounds of flotation.

²⁵ Marston, James White's Grand Canyon Cruise, 53.

²⁶ Michael Ghiglieri and Thomas Myers, Over the Edge: Death in Grand Canyon (Flagstaff, Ariz.: Puma Press, 2001), 190.

^{27 &}quot;'Lost' Raft Rider Safe in Canyon," Arizona Republic, August 1, 1957.

²⁸ Ghiglieri and Myers, Over the Edge: Death in Grand Canyon, 215-25.

²⁹ Ibid, 160-61.

³⁰ Stanton, Colorado River Controversies, 45.

Complicating White's ability to swim and self-rescue would have been weakness from starvation and dehydration. He was found emaciated and dehydrated. Prior to his launch he had already spent fifteen miles running for his life from Indians. Then he had minimal or no caloric intake during his float. Thus, his ability to paddle out of eddies, extricate his raft off rocks (he wore no boots, and cracking, sore feet would have limited his ability to stand or walk), and ride rapids becomes extremely suspect.

RAPIDS AHEAD

Ninety percent of Grand Canyon rapids become worse at lower flows: drops are steeper and holes are sharper.31 Injuries navigating these rapids are not uncommon, with the majority occurring when boat occupants collide against frames or other objects within the boat.³² A log raft would likely present a much higher potential for injury either from direct collision or from the logs rolling onto the raft rider, possibly crushing or pinning the rider or an extremity. Lariats bound White's rafts together. No transverse logs were ever mentioned that might stabilize his rafts. I floated through a small rapid, White's Rapid³³ on the Colorado, lying on a replica of the larger of James White's rafts. The logs nearly rolled over onto me and almost crushed my hand. Yet White arrived at Callville with no significant injuries. This makes his claims of encounters with serious white water doubtful. Further, on days 5-8 of his float, White reported that "there were not any heavy rapids, only small rapids and swift water."34 These are days, according to the necessary mileage rate calculations, he would have encountered Hance, Sockdolager, Grapevine, Horn Creek, Granite, and Hermit rapids, all extremely large and dangerous at low

water. Certainly, he would have taken an unforgettable and terrifying pounding in such rapids. Interesting too is that White could stop and pull his raft to shore at night, but apparently he never once stopped to scout a rapid for a potentially fatal drop.

Further, White tied himself to his raft. In white-water navigation such an act is potentially hazardous and absolutely contraindicated. In 1955, John Daggett tethered himself to his dry boxes and nearly drowned in President Harding Rapid when he got hung up on the large boulder that forms the rapid.³⁵ Yet White had no problems whatsoever.

THE UNANSWERABLE QUESTION

Given the evidence, it seems certain that White could not have started his float anywhere in or above Grand Canyon. The four days of smooth water rule out side-canyon entries such as at Diamond Creek, the Little Colorado, and Lees Ferry, as he would have immediately encountered rapids. Further upriver entries are eliminated by inconsistencies in trip time and raft speed. In 1907, Robert Brewster Stanton interviewed White. Sometime later Stanton concluded White probably entered the river at Grapevine Wash just below Grand Wash Cliffs.³⁶ In September 1924, E. C. LaRue and five others floated this section in two skiffs, one with a 3.5-horsepower motor and one with a canoe. Miles of placid water came before the first rapid. They arrived at Callville four days later, having encountered thirty rapids, with the canoe flipping twice. They had lined the boats around Hualapai Rapid, known to be large at low water, and portaged the gear.³⁷ Although not a perfect match, this trip is infinitely more probable than a float that took White through the Grand Canyon.

³¹ Larry Stevens, Colorado through Grand Canyon Guide (Flagstaff, Ariz.: Red Lake Books, 1983).

³² Thomas Myers, Christopher Becker, and Lawrence E. Stevens, Fateful Journey: Injury and Death on Colorado River Trips in Grand Canyon (Flagstaff, Ariz.: Red Lake Books, 1999), 66.

³³ White's Rapid is on the Colorado above Moab, Utah.

³⁴ Stanton, Colorado River Controversies, 47.

³⁵ Bill Beer, We Swam the Grand Canyon (Seattle, Wash.: The Mountaineers, 1988).

³⁶ Stanton, Colorado River Controversies, 93.

³⁶ Marston, James White's Grand Canyon Cruise, 52.