

THE GRAND CANYON River Runner

Number Eight

preserving public access to the Colorado River

Spring, 2009



PHOTO © WILL CROWTHER



PHOTO © LESLIE PYNE

GCRRA MEMBER PHOTO CONTEST WINNERS!

Congratulations to the photo winners featured above, and thanks to all who submitted images for the Spring, 2009 contest. Other selections are included in the following pages and on our website : <http://www.gcriverrunners.org>.

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CRMP Update The lawsuit against the National Park Service over implementation of the latest Colorado River Management Plan (CRMP) brought by RRFW *et al.* is currently awaiting review in the 9th Circuit Court of Appeals. The Grand Canyon Private Boaters Association and Grand Canyon River Outfitters Association both intervened in the suit on the side of the National Park Service, believing that the CRMP is a good plan and should be given a chance to work. More recently, in July 2008, Grand Canyon River Runners Association, Grand Canyon River Guides and Chicago Whitewater Association filed an amicus brief in support of the NPS and the CRMP. We expect the Court to issue a decision before the end of 2009. See past numbers of The River Runner for a complete review of the lawsuit and the issues involved.

WHY JOIN GCRRA?

Have you experienced a fantastic commercially outfitted trip down the Colorado River? Are you planning to have one in the future? Do you think that the opportunity to see Grand Canyon from river level should be available to everyone, even if they do not have the skill or strength to row their own boat? Did you know that lawsuits continue to challenge the use of motors on the river and/or the ability of commercial outfitters to offer a variety of types and lengths of river trips through the park? Did you know that the Park Service can change its management plan, including adjusting the number of visitors and kinds of trips permitted, from time to time? If you care about these issues, GCRRA speaks for you, with the Park Service and in the courts, helping preserve your opportunities to participate in a commercially outfitted river trip. Have your voice heard! Join us today!

Membership includes half-yearly issues of the beautiful Grand Canyon River Runner newsletter. GCRRA is a 501(c)3 organization that has donated a portion of membership dues to Grand Canyon related charities, over \$8,000 to date.



Native Voices Enhances Understanding of the Grand Canyon

There are seven of us sitting around a table ready to eat. We are not sure how to begin. Everyone is politely waiting for someone else. Our hostess asks if anyone would like to say a prayer. We say, "No, please begin in your own way". We are then taught to break off small amounts of each food for an offering. This is how we start our Hopi meal on Second Mesa.

We eat paatupsuki, a delicious mixture of beans, sweet corn, and ham; piki, a rolled wafer bread made with blue corn meal cooked on a special stone; somiviki, a sweet blue cornmeal steamed in corn husks; fry bread, and a tea made from sage juice. Our group is composed of Colorado River guides participating in a Hopi cultural workshop sponsored by the Native Voices on the Colorado River program.

Native Voices on the Colorado River is a cultural interpretive program funded by the Grand Canyon River Outfitters Association in collaboration with Northern Arizona University. The goal of the program is to increase understanding and communication about the relationships of affiliated tribes with the Grand Canyon from their own perspectives.

There are eleven affiliated tribes: A:shiwí (Zuni), Diné (Navajo), Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Paiute Indian Tribe of Utah, Las Vegas Paiute, Moapa Band of Paiute Indians, San Juan Southern Paiute, and Yavapai-Apache. The program provides opportunities in multiple formats for these voices to be shared with the guiding community. We have created a website, www.nativevoicesgrandcanyon.org that provides some basic information about the tribes and will grow to include online learning modules. The program is producing a tribal series publication that provides a one page information sheet about each tribe. The program also provides cultural workshops and presentations.

Importantly, the Native Voices on the Colorado River program provides opportunities for multiple voices to share their own cultural ideas, connections, and stories. This multivocality is intended to provide multiple understandings of complex and enduring cultures. The tribal members' voices are not academic. Rather they are personal, sharing things that are appropriate for non-native peoples to know. Some stories or information are restricted to traditional ceremonies or time of year. It is critical to understand that not all cultural knowledge can or should be divulged. Some information is privileged and can only be shared under specific conditions with certain individuals. We provide cultural information on identity, relationships with the Grand Canyon, perspectives on the archeology and history of the Grand Canyon and

region, and perspectives on the cultural landscape.

The group eating a Hopi meal is participating in one of our cultural workshops designed to provide deeper experiences with Hopi culture and greater understanding of Hopi relationships with the Grand Canyon. William Talashoma, a river runner himself, is our guide. He is explaining that the Grand Canyon is a place of origin into this fourth world for Hopi and is very sacred. He further explains that in order to visit places like the sipapuni or salt mines, a Hopi man must be initiated into a special kind of society. He must go through a fasting and cleansing period for his own protection. For these reasons of protection and special preparations Hopi have asked tourists not to visit these sacred sites.

The Grand Canyon is not all we discuss. Our group visits each of the three mesas and Munqapi (Moencopi), learning how some of the villages came to be and of the long history of Hopi clan migrations. We are also very fortunate to be invited to respectfully watch the katsinas as part of the Powamuya or Bean Dance. There is no substitution for sensory learning and experience: smelling the mixture of food and smoke, listening to children playing and to the songs of the katsinas, observing the katsinas and the events taking place in the village, tasting the blue corn knowing those seeds have been saved and used for centuries, and feeling the winter sun on our faces.

Hopi is not the only cultural experience the Native Voices on the Colorado River program provides. There are other opportunities for learning about additional tribal cultures and perspectives on the Grand Canyon. In late February 2009, we offered an intertribal cultural event in Salt Lake City, Utah. There we learned about Hopi, Navajo, and Paiute cultures. We are planning a Diné workshop this spring in which we plan to stay in a hogan overnight with Nikki Cooley's family, assist with cultural activities, listen to traditional winter stories, play the Navajo shoe game, and experience different aspects of Diné life. We will also offer a session at the annual Guide Training Seminar sponsored by the Grand Canyon River Guides Association at Marble Canyon in March 2009.

For updates on Native Voices on the Colorado River programs check our website: www.nativevoicesgrandcanyon.org



Native Voices on the Colorado River presenters & sponsors, Salt Lake City (left to right front) Dorena Martineau, Eleanor Tom, Nikki Cooley, (left to right back) Brian Merrill, William Sohveymah Talashoma, Joëlle Clark

Joelle Clark,
Program Director
Native Voices on the
Colorado River
Northern Arizona
University
PO Box 15200, Flagstaff,
AZ 86011
Joelle.Clark@nau.edu

RIGHT IN FRONT OF YOUR FACE

By Mari Carlos

It is difficult to boat through Grand Canyon without becoming acutely aware of the human past all around you, both contemporary and ancient. Some of the ancient past is prominently visible in the form of petroglyphs, pictographs and dwellings. Some is only known to us through the efforts of archeologists who have excavated obscure sites so that we can study and enjoy them today. Jennifer Dierker's article in this issue is a reminder that the past really is all around us, full of fascinating clues to how the ancient ones lived and worked in Grand Canyon.

We, as river travelers, are very fortunate in that we can see or visit a bountiful collection of sites on our trips. There is a sense of triumph in finally spotting the Anasazi Bridge as the boats drift past so far below. For me there is also a personal defeat in the float past South Canyon as I am rarely able to spot the ancient walls of a dwelling that I have visited several times. How magnificently it blends into its surroundings!

And what about those hand prints at Deer Creek? This might be my first question for Jen as I ask the archeologist if they are truly ancient, or are they modern hoaxes? How were they made? Who made them? Regardless of their authenticity, they are intriguing.

Unkar Delta housed an entire village of farmers, the foundations of their dwellings, their tools and potsherds covering a wide area overlooking the river. Nankoweap Delta also was home to many. The trek up to their granaries, windows high up in the cliffs, has given rise to some of the most evocative photography of Grand Canyon. Several of the photographs submitted for our Issue Eight photo contest were taken from the granary trail. You have to wonder if the ancient ones appreciated the beauty of their surroundings as they trudged up that long, steep trail to store and hide their provisions for leaner times.

A delta seems to have been the most functional stopping place for the ancient inhabitants of Grand Canyon. In addition to the well documented and often visited sites at Unkar and Nankoweap, there is a wonderful little archeological site right in front of your face when you stop at the boat beach at Phantom. The location is... Bright Angel Delta. The boat beach is generally an action packed stop, with mad dashes up to the cantina at Phantom for a coke, or to send a postcard. Therefore it is easy to miss this little jewel of a habitation lodged just below the mule trail and just above the beach. John Wesley Powell noted it in his journal when he stopped at the delta in 1869, but it would be another 100 years before the site was comprehensively excavated.

The National Park Service will make the visit to Bright Angel Pueblo more enticing with the imminent placement of new interpretive displays. These will guide you through the history and lifestyle of the people who lived here, how they survived, and where they went. Each room is defined and described, including the kiva – eight rooms in all. The interpretive displays are well worth the 10 minutes you will need to walk over to the site and read them. It will give you a very different perspective on your way back into Bright Angel Canyon, walking in the footsteps of the ancients.

Thank you to the members who participated in the photo contest for this issue. Even though the photographs submitted were personal favorites of the sender, I think we can all identify with them in the context of our own river journeys because this shared experience was so intensely imprinted on us. In each photograph we are reminded of a hike, a view, a moment in time that we also have experienced. Thank you all for sharing.

See you downstream.



PHOTO © HAROLD BRANTON



PHOTO COURTESY OF JOELLE CLARK



DOCK'S DATA OF NAVIGATIONAL NUMBERS: THE 1ST 100 GRAND CANYON RIVER RUNNERS

By C.V. Abacus1

If any of you attended the public meetings for the last Colorado

River Management Plan process, you may have read a statement on one of the posters that reported, "By 1949, only 100 people had boated the Colorado River through Grand Canyon." Besides being incorrect, as we shall see forthwith, that statement has been bandied about since around 1970 and has led to much statistical confusion, particularly regarding total numbers of river runners.²

Otis Reed "Dock" Marston, along with his son Garth, first ran the Grand as a passenger with commercial outfitter Norm Nevills in 1942. Dock became a boatman for Nevills and then branched out on his own, leading or being a part of many seminal Grand Canyon river trips: first inboard powerboat run in 1949; first outboard powerboat run in 1951; first and only successful uprun via jetboats in 1960; and a sportyak trip in 1963 on extremely low water as Glen Canyon Dam began controlling flows.

Dock also studied the history of river running on the Colorado River, researching for a comprehensive publication. Among his topics of interest was who accomplished a complete run through Grand Canyon and when they did it. In correspondence with Norm over criteria, they discussed the end point of a trip at Diamond Creek, the Callville/Virgin River area, or Hoover Dam, but settled on the Grand Wash Cliffs, the geological termination of the Grand Canyon. Thus, a person had to boat 277 miles on the Colorado River, from Lee's Ferry to the Grand Wash Cliffs, in order to have successfully completed a run of the Grand. Only the first complete run counted, though partial trips could be combined, and Dock listed names in alphabetical order within trips.

Extending his historical research to his Christmas cards, Dock provided lists of the first and second 100 for 1953 and 1954.³ The list of the first 100 from 1953 causes a lot of confusion, leading to the aforementioned misstatement. Dock ended that list at exactly 100, leaving off Leigh Lint in 1923, but also did not



DOCK RUNS 217 MILE RAPID

note that the total from all trips through 1949 resulted in 110, not evident until you also have seen the Christmas card from 1954. This would have resulted in a 10% increase in the number of unique river runners through 1949, statistically significant. The inclusion of Sandy Nevills, in utero in 1940, becomes a bit problematic.

The 1954 greeting included through number 206, for if he stopped at 200 Dock would have left off six people from Bus Hatch's first commercial trip, repeating a mistake such as that for



JON HAMILTON, GEORGIE WHITE, DOCK MARSTON

the first 100. Actually, Dock missed one name for 1950, which would have made the count 207. At the end of 1954, there were around 222 folks having made the "cruise," as Dock called it, which included a Georgie White commercial trip. In Bill Beer's book, We Swam the Grand Canyon, he wrote that Dock told

him that his and John Daggett's swim, the first run in 1955, earned them the numbers 219 and 220.

Neither of these Christmas card lists became readily available, but Dock shared the information with others, mainly in regard to notifying continuing river runners what their number was, as with Beer and Daggett above. Dock tried to continue the count, but the increase in the number of "Grand Canyoners" due to the upsurge in commercial river trips made this impossible. Not until Barry Goldwater included a slightly modified list of "The First Hundred," in 1970 in his Delightful Journey down the Green and Colorado Rivers, did Dock's research in this area become accessible to others than those actually boating the Colorado River and corresponding with him. Due to Goldwater's publication, Dock's list was the basis for all accountability of Grand Canyon river runners, taken out of context and

repeatedly misconstrued.⁴

Now that I've supplied the background established by Dock for early Grand Canyon river runners and trips, I'll proceed with what the GCRRA President Mari Carlos asked me to inform you about, an introduction to those trips and their significance. More detailed information may be found in any number of publications, but the best are David Lavender's River Runners of the Grand Canyon and Don Briggs's video of the same name, based on Lavender's book, and subtitled Messing about in Boats. Twenty-four trips are represented through 1949, so descriptions will, of necessity, be very brief. You will be familiar with some of the trips, and other details on a few also may be found in a previous newsletter article, "Rites of Passage."⁵

Trip 1, 1869, numbers 1-6: John Wesley Powell led the first intentional trip through the Grand Canyon. [James White's possible log raft trip in 1867 has never been confirmed.] You'll notice that Oramel and Seneca Howland and William Dunn are not on the list, as they departed at Separation Canyon, about Colorado River Mile (CRM) 240. Because Dock listed alphabetically, rather than being #1 as trip leader Major Powell is only #4. He and his brother Walter left at the mouth of the Virgin River, George Bradley and Billy Hawkins stopped at Fort Mojave, and Andy Hall and Jack Sumner continued to Fort Yuma and the Gulf of California. Powell's 1872 expedition ended at Kanab, Creek, about CRM 144, thus eliminating those men from consideration.

Trip 2, 1890, numbers 7-13: Robert Brewster Stanton completed the ill-fated Frank Mason Brown railroad survey trip of the previous year. In July 1889, Brown and two other men drowned in the first 25 miles, so Stanton abandoned the trip near South Canyon. Survey engineer Stanton's successful 1890 trip was not without mishaps: photographer Franklin Nims fell and had to be evacuated, unconscious, in a snow storm around New Year's; they lost one boat in Horn Creek; and all-around handyman and boatman Harry McDonald hiked out at Crystal Creek. Though Stanton thought

a near-river-level railroad could be built, investors thought otherwise.

Trip 3, 1896, numbers 14-15: George Flavell with Ramon Montez (spellings vary), the first Mexican, took one boat through Grand Canyon, and ran every rapid except Soap Creek. Flavell may have rowed stern-first facing downstream and wrote a diary published as The Log of the Panthon, a rollicking good story if there ever was one.

Trip 4, 1897, numbers 16-17: Nathaniel Galloway, who gets the credit for implementing the stern-first technique, and William Richmond followed the Flavell/Montez party by one month. Galloway's name and date, found in "Inscription Cave" near Elves Chasm, is the oldest known river inscription in Grand Canyon.

Trip 5, 1903, numbers 18-20: The mysterious "Hum" Wooley, with John King and Arthur Sanger, left Los Angeles for Quartzite, Arizona to patent mining claims for one "Madame Schell." Instead of going by railroad almost all the way, Hum built a boat, took it to Lee's Ferry, and proceeded downstream. A chance meeting in 1951 of P.T. Reilly with Sanger provided the only known information on this trip.

Trip 6, 1908, numbers 21-22: Prospectors Charlie Russell, on-again off-again friend/partner of Bert Loper, and Edwin Monett took a steel boat through Grand Canyon, after losing one in Hance Rapid. Loper had accompanied them partway through Glen Canyon, but, in a series of miscommunications, did not join them in their first attempt at Grand Canyon. A second attempt by Loper, Russell, and August Tadge and others in 1914-15 resulted in hilarious escapades covered in both Lavender and Briggs.

Trip 7, 1909, numbers 23-25: Businessman Julius Stone organized a trip and hired Nathaniel Galloway as boatman, thereby making Galloway the first person to do two Grand Canyon "cruises." A pleasure trip, Raymond Cogswell was the photographer and gritty Seymour Dubendorff the third boatman. The Galloway/Stone-designed boats make their debut.

Trip 8, 1912, numbers 26-27: Grand Canyon photographer-brothers

Ellsworth and Emery Kolb used Galloway/Stone-type boats and took the first motion pictures of the Green and Colorado Rivers, from Green River, Wyoming on down through the Grand Canyon. In 1913, Ellsworth completed the trip to the Gulf of California and in 1914 published his account of the entire trip based on both his and Emery's journals; over 30 variants have been printed, including recent reprints.⁶

Trip 9, 1923, numbers 28-35: In order to "tame" the Colorado River, the USGS surveyed for dam sites and mapped the "plans and profiles" for the Green and Colorado Rivers. Col. Claude Birdseye led the last major effort in 1923, with Emery Kolb as head boatman on his second trip, in Galloway/Stone boats. Dock inadvertently left off boatman Leigh Lint's name on the 1953 Christmas card, but corrected it for 1954. Dock listed Roland Burchard, out of alphabetical order, as he had been upstream to near CRM 252 on a previous survey, and thus completed his traverse prior to the others at the Grand Wash Cliffs.

Trip 10, 1927, numbers 36-45: Clyde Eddy, whom David Lavender called "the most humorless man ever to run the Colorado," enlisted Nathaniel Galloway's son Parley as head boatman and "pink-wristed collegians" and others as crew, in a reversion to oversized Powell-style Whitehall boats. They became the first to make a completely successful run of Soap Creek Rapid (Ellsworth Kolb had two "somewhat successful" runs in 1911) and took the first dog, Rags, and the only bear cub, Cataract, through Grand Canyon on a river trip.

Trip 11, 1934, numbers 46-51: "The Dusty Dozen," because of the extreme low water, became the nickname for these six, plus a return trip by Clyde Eddy. Among the leaders was Bus Hatch, who started as a commercial Grand Canyon outfitter in 1954.

Trip 12, 1937, number 54: Buzz Holmstrom becomes the first man to run the Grand solo, as head boatman Frank Dodge turned down his application for the Carnegie-Cal Tech trip. Though Buzz started later in his personally-designed and home-built boat, what some have called the best hard-hulled boat ever

built for Grand Canyon, he caught them at Diamond Creek, camped with them, but floated ahead alone, completing the trip days before they did by nosing his boat against Boulder Dam.

Trip 13, 1937, numbers 52-53, 55-58: The Carnegie Institute of Washington and the California Institute of Technology geology trip moved slowly through Grand Canyon, mapping geological section. Frank Dodge repeated from that other geological trip in 1923, accompanied by Fairchild Aerial Survey boatmen Owen Clark and Merrill Spencer. In September, 1935, Dodge, Clark, Spencer, and another man rowed from Diamond Creek to Lake Mead for Fairchild. You may have noticed the difference in number order for them and Buzz, because he passed the Grand Wash Cliffs after Clark and Spencer completed their "cruise" when they passed Diamond Creek.⁷ Trip members left messages for Buzz along the shore, as they knew they would meet, the first time two trips were on the river at the same time, let alone encounter each other. Park naturalist Eddie McKee hiked down the Bass Trail and joined them, so failed to make the list, but big-name geologists do: Ian Campbell, John Maxson, Robert Sharp, and John Stark.

Trip 14, 1938, numbers 59-64: Norman Nevills ran his first commercial Grand Canyon river trip, starting at Green River, Utah, with some crew changes at Lee's Ferry. Nevills designed his own "cataract" or "sadiron" boats, with help building them from Don Harris. Elzada Clover, a botanist from the University of Michigan, met Norm the previous year at the Nevills family's Mexican Hat Lodge, and together they planned the trip. Clover and U.M. graduate student Lois Jotter become the first two women to complete a Grand Canyon "cruise." [Bessie Hyde, with her husband Glen, in 1927, probably died around 232 Mile Rapid, thus not achieving this claim.]

Trip 15, 1938, numbers 65-66: Amos Burg planned this trip to make a movie of and publicize Buzz Holmstrom's solo trip of the year before. Burg rowed the first inflatable raft, the "Charlie," through Grand Canyon. Buzz became the third person to make two "cruises."

Utah melon picker Willis Johnson joined them as an assistant.

Trip 16, 1939, numbers 67-69: Bert Loper "cruised" Grand Canyon, after at least two other opportunities went sour, celebrating his 70th birthday. Friend Don Harris, who left the '38 Nevills trip at Lee's Ferry, got his first Grand Canyon run under his belt. Chet Klevin made up the third new member on the list, while Bill Gibson from the Nevills '38 trip was the fourth to repeat.

Trip 17, 1940, numbers 70-76: Norm Nevills, in his second Grand Canyon run, was the fifth to run twice, from Green River, Wyoming, and brought along his wife, Doris, and Mildred Baker, the third and fourth women through Grand. Barry Goldwater joined at Green River, Utah, taking photographs and moving pictures, ones whose promotion propelled his political career. Dock concluded that Doris was two months pregnant with daughter Sandy, so, after much debate over whether life starts at conception or birth, Dock gave Sandy credit for a full "cruise," though he noted in correspondence that Sandy completed 2/9th of a "cruise."

Trip 18, 1941, numbers 77-80: Nevills's third trip, the first person to do so, with other repeaters and the first kayaker to complete a Grand Canyon "cruise," Zee Grant in the Escalante. Agnes Albert was the fifth or sixth woman, depending on how you count Sandy.

Trip 19, 1942, numbers 81-88: Nevills increased his record with his fourth run. Among the new names is Ed Hudson, who will figure prominently in motor-operated boating. Dock completed his first "cruise" with son Garth, along with another father-son combo, Neill and Bruce Wilson. Dock broke his rule of alphabetized name order, by placing his name Otis ahead of his son's name Garth; he might have thought the "D" in Dock should be ahead of the "G" in Garth, but he listed his name with an "O" instead. When I pointed this out to Garth in 1994 during the "Old Timers Trip," Garth said he thought that he was in a boat ahead of his dad anyway. In those days, any name beginning with "Mc" was alphabetized as beginning

with "Mac," making Wayne McConkie ahead of both Marstons.

Trip 20, 1947, numbers 89-92: Nevills again, his fifth "cruise," with Dock and Garth repeating, but at the oars along with Kent Frost. Dock's wife and Garth's mother Margaret is either the sixth or seventh woman. Desert Magazine editor Randall Henderson carved some inscriptions and typed a daily log, left at campsites and the basis for a series of magazine articles promoting Nevills.

Trip 21, 1948, numbers 93-98: Nevills's number six trip, Ros Johnson and Lucille Hiser as seventh and eighth or eighth and ninth women, boatmen or future boatmen Moulty Fulmer, "Fisheyes" Masland, and Frank Wright are all on this one, which was also Dock's third trip. Besides increased numbers of trips and repeaters, things start get confusing after 1948. More people have boated partial runs and more hiking exchanges mean that names get mixed up as they complete their 277-mile "cruises" at different times than their fellow passengers.

Trip 22, 1949, numbers 99-101: Dock was on his and Ed (Egbert Andrew) Hudson's powerboat run in Ed's Esmeralda II, the first successful motor "cruise." Ed's son, Edward Wallace Hudson, joined along with Dock's friend Willie Taylor, who accompanied many trips, then died on the 1956 "cruise" and was buried in the Canyon. Taylor and young Hudson were upstream with Marston and the elder Hudson in 1948 to 217 Mile Rapid. Bestor Robinson, #100 on the 1953 Christmas card, was #101 on the 1954 version as Dock inadvertently missed boatman Leigh Lint of the 1923 USGS trip. Robinson ran previously to Bright Angel in 1948 with Nevills.

Trip 23, 1949, numbers 102-105, 107-108: This trip was the reunion run of Harris and Loper for Bert's 80th birthday, though Bert succumbed around mile 24 1/2. Harry Aleson rowed the second-ever inflatable raft, a government "ten-man" and the first military surplus rubber, with friend Lou (Louise) Fetzner as passenger. Howard Welty was with Nevills in 1948, from Bright Angel past the Grand Wash Cliffs, completing his run this trip when he went below Phantom Ranch. Harry

Aleson met the 1941 Nevills trip to tow them across Lake Mead and then attempted upstream runs through rapids, getting as high as CRM 218 in 1943. In 1946, he and Georgie White boated/floated downstream from Parashant Wash (CRM 198), which meant Harry only had to get to Parashant to complete his "cruise." Aleson later teamed with Charles Larabee, with Nevills in 1940, in commercial river ventures. Fetzner, either the ninth or tenth woman, had gone upstream to Bridge Canyon, about CRM 235, with Aleson the previous year. Jack Brennan later joined Harris as a river outfitter and Wayne Nichol was Loper's passenger.

Trip 24, 1949, number 106, 109-110: The seventh and last "cruise" for Nevills, as he and Doris died in a plane crash shortly after the trip. Nancy Streator, the tenth or eleventh woman, made the run to Bright Angel with Nevills in 1948. She barely lost out to Louise, as Lou reached Bridge Canyon around noon on July 17th, while Nance made Bright Angel around 4 p.m. on the same day. P.T. Reilly and Jim Rigg are boatmen for Norm on this trip. Reilly had Eddie McKee as a passenger from Lee's Ferry to Bright Angel; McKee doesn't make the list because he has a gap between Bright Angel and the Bass Trail, from the 1937 trip. Rigg with Frank Wright purchased Nevills Expedition, continued as Mexican Hat Expeditions, while Reilly rowed for them prior to his own private trips.

We end here, with 110 names instead of 100, and 80 years of Grand Canyon river running, beginning 140 years ago with John Wesley Powell. The number of unique names on Dock's second list more than doubles the total in only five more years, with Dock no longer able to comprehensibly continue acquisition, as the magnitude is all too evident. Dock "ran the last rapid" 30 years ago, on August 30, 1979, his opus unpublished. While researching, he accumulated over 432 boxes of resource material – river rat as pack rat, "foolhearty" canyoneer8 – for which we are in awe and eternally grateful.

And that's no hokum!

Thanks, Dock, and Cheerio!

6	1869—George Young Bradley, Andrew Hall, William Rhodes Hawkins, John Wesley Powell, Walter Henry Powell, John Colton Sumner.
7	1890—Henry George Ballard, William Hiram Edwards, Langdon Gibson, John Hislop, Elmer Kane, Robert Brewster Stanton, Reginald Travers.
2	1896—George F. Flavell, Ramon Montez.
2	1897—Nathaniel J. Galloway, William Chesley Richmond.
3	1903—John Aaron King, Arthur Randall Sanger, E. B. "Hum" Wooley.
2	1908—Edwin Reagan Monett, Charles Silver Russell.
3	1909—Raymond Austin Cogswell, Seymour S. Dubendorff, Julius Frederick Stone.
2	1912—Ellsworth Leonardson Kolb, Emery Clifford Kolb.
7	1923—Roland W. Burchard, Claude Hale Birdseye, Holly Elwyn Blake, Francis B. Dodge, Lewis Ransome Freeman, Eugene Clyde LaRue, Raymond C. Moore. EMERY KOLB REPEATED LEIGH BRINTON LINT
10	1927—W. Gordon Adger, Robert F. Bartl, Vincent F. Calloway, Vincent Forde Carey, Clyde Langton Eddy, Parley McCoy Galloway, Edward L. Holt, Oscar R. Jaeger, Orrin A. Seager, Robert Harding Weatherhead.
6	1934—William J. Fahrni, Russell G. Frazier, Alton Hatch, Bus Hatch, Royce Mowrey, Franklin Enos Swain. EMERY REPEATED
7	1937—Haldane "Buzz" Holmstrom, Owen R. Clark, Ian Campbell, John H. Maxson, Robert P. Sharp, Merrill Frank Spencer, John Thomas Stark. DOCK REPEATED
8	1938—Lorin William Bell, Elzada Urseba Clover, William Cochran Gibson, Lois Jotter, Norman Davies Nevills, Thomas Delbert Reed, Amos Burg, Willis D. Johnson. HOLMSTROM REPEATED
3	1939—Laphene "Don" Harris, Chester Klevin, Albert Loper. d
3	1940—Mildred Baker, Hugh Carson Cutler, Barry Goldwater, Charles W. Larabee, Doris Droyn Nevills, Sandra Nevills, John Silas Southworth.
4	1941—Agnes Clark Albert, Alexander G. Grant, Jr., Weldon F. Heald, William J. Schukraft. d Dec 26, 1977
8	1942—Ed Andrew Hudson, Wayne Russell McConkie, Otis Reed Marston, Garth Waite Marston, Edwin E. Olsen, Robert Preston Walker, Bruce Neill Wilson, Neill Compton Wilson. d 30 AUG 1979
4	1947—Kent Frost, Randall Henderson, Alfred Milotte, Margaret Garthwaite Marston. d 14-9-89
6	1948—Rosalind Tracy Johnson, Moulton Fulmer, Lucille Hiser, Wayne Hiser, Frank E. Masland, Jr., John Franklin Wright. d Stephen d 3-20-89 SUN CITY
3	1949—Edward Wallace Hudson, Wilson Boigle Taylor, Bestor Robinson. =101
101	OR HARSTON, ED A. HUDSON REPEATED.

(Endnotes)

- 1 Please send comments/corrections to C.V. Abacus, c/o richard.quartaroli@nau.edu.
- 2 See Tom Myers, "River Runners and the Numbers Game," Boatman's Quarterly Review, 10(1)(1997):22-23; <http://www.gcr.org>. I thank Tom Myers for discussion on numbers and other points of river history.
- 3 Reproduced here are the list of the 1st 100 and the 1949 names from the 2nd 100, from the P.T. Reilly Collection at Northern Arizona University Cline Library, with P.T.'s annotations (NAU.MS.275, Series 1, Box 15, Folder 244a). I have yet to find the 1953 and 1954 Christmas cards in the Marston Collection at The Huntington Library. The finding guide to that collection is available through the Online Archives of California: <http://findaid.oac.cdlib.org/findaid/ark:/13030/tf438n99sg>.
- 4 Goldwater included Leigh Lint, but excluded Sandy Nevills, thereby ending with Bestor Robinson as Dock originally did. For detailed discussion of these names, see "Trip 9, 1923" and "Trip 17, 1940." Gaylord Staveley, who purchased Mexican Hat Expeditions from Frank Wright and renamed the company Canyoneers, and Shane Murphy have co-authored versions of the 1st 100 in Ammo Can Interp: Talking Points for a Grand Canyon River Trip, "published by and for Canyoneers, Inc. as an interpretive aide for its crew and passengers." I thank Gaylord Staveley for his assistance and thoughts on Dock's trips and lists.
- 5 The Grand Canyon River Runner, Number One

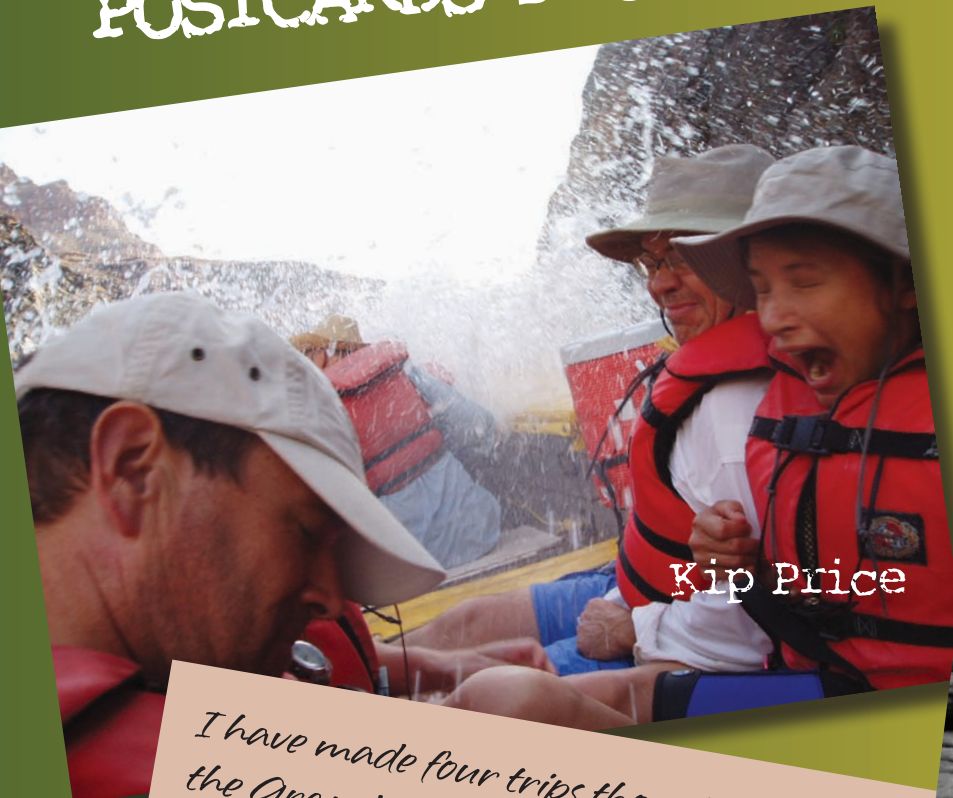
(Fall 2005, 4-5): http://www.gcriverrunners.org/pdfs/GCRR_NEWSLETTER_WEB.pdf. Over 35,000 citations on the Grand Canyon and the lower Colorado River, from Glen Canyon Dam downstream, may be found in Early Spamer's bibliography: <http://www.grandcanyonbiblio.org/>. Marcia Thomas's John Wesley Powell: An Annotated Bibliography is indispensable. Northern Arizona University's Colorado Plateau Digital Archives is a treasure trove for primary source material on the Grand Canyon and the Colorado River: <http://library.nau.edu/speccoll/index.html>.

6 For a discussion of the first twenty-nine variants, see Richard D. Quartaroli, "Variants on a Tome," in The Brave Ones: The Journals and Letters of the 1911-1912 Expedition Down the Green and Colorado Rivers by Ellsworth L. Kolb and Emery C. Kolb, including the Journal of Hubert R. Lauzon, transcribed and edited by William C. Suran.

7 Though I noted Clark and Spencer's river work for Fairchild Aerial Surveys, I thank Brad Dimock for pointing out this discrepancy in Dock's numbering because of it, and also for his critical eye in review of this article.

8 In the song "The Canyoneers," by Loy Clingman, sung by Katie Lee on her album Folk Songs of the Colorado River, part of the chorus is "He'll die a lonely River Rat, Foolhardy Canyoneer." Late night composing by this author led to the typo "foolhearty," and so it stays for this effort.

POSTCARDS FROM THE CANYON

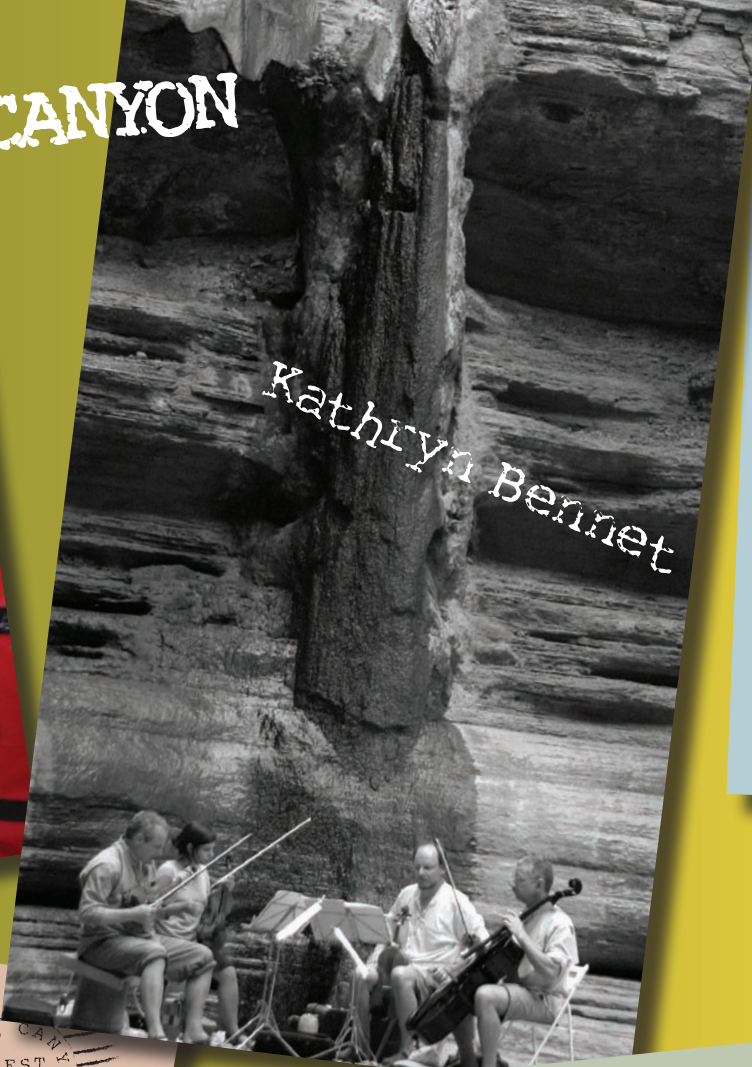


Kip Price

I have made four trips though the Grand Canyon, each with a different outfitter. All were unique due to the guides and the other passengers. My best memories are joining everyone after dinner, exchanging stories, and getting away from camp and sitting on a rock with a drink and a good cigar watching sunsets and amazing star shows.



Harold Branton
Goodyear, AZ



Kathryn Bennet

Grand Canyon! For the first time, in ALL my travels, I am calling it the best trip ever! What a magnificent experience! Seventeen days in late September, in the Canyon, on the river. We adventured down 277 miles of the Colorado River through the varied and incredible geology of the Grand Canyon. Four dories, each rowed by a boatman with four passengers, and the "mothership", an inflatable motorized rig some 35 feet long with all our supplies and gear. Each of the boatmen (gender-neutral term; one was female) were skilled river runners, great story-tellers, fascinating individuals, superb cooks, and all-round wonderful companions and guides. We had a great group and many new friendships were forged. The Canyon must be one of the most remote and unspoiled wilderness areas in the world. What an extraordinary experience! Calm water and raging rapids, indescribably beautiful canyon walls and landscapes, 200 billion year old rocks, side-canyon hikes, sleeping under the stars, no contact with the outside world, immersion in nature. It was soul-stirring, eye-popping, clothes-drenching, mind-boggling fantastic!



Jim Hansen

The most memorable event of my Grand Canyon river trip in 2002 was the following. Our three motorized rafts had tied up at the top of a rapid. We were informed that because the rapid ahead of us was so dangerous, we had to wear our life jackets while disembarking for a hike. We then removed the life jackets and fastened them down as usual. Once the life jackets were secured, we all went on a hike up a side canyon (Havasupai). On returning to the rafts from the hike, we were walking single-file along the top of a cliff looking down on the river. I heard a brief scream behind me and looked down to see a hat in the river. I thought "Oh, someone dropped their hat." But then I realized that behind the hat there was a PERSON in the river. A woman on the trip had slipped off the cliff and was being swept away, with no life jacket on, toward the rapid! One of the Arizona River Runner guides, Bill Sims, started running down the cliff, wearing flip-flops on his feet. I have never seen anyone run and climb down so fast in flip-flops. He reached the water, held firmly to something on shore, and reached out and grabbed the woman as she went by! He pulled her into shore, thus saving her life. She escaped with a few bruises, and treated the guide as her hero for the rest of the trip.



Nancy Crowther
DeLanson, NY

I've been home for some time now, back in the same old routine. But it's different now for not all of me is here. My heart is deep in a Canyon in Arizona. It's beating rapidly as I hike up a rocky trail, through a clear, cold stream to a beautiful waterfall. It beats as we bounce through the many rapids with names and stories I have read of for many years. Here at last, I see.



Gary Reid
Grand Rapids, MI

Then, each night, it beats slowly as I lay in my sleeping bag listening to the river flow and watching what seems like a million stars strung between the canyon walls.

Thankfully, whenever life gets a bit too much, my heart will take me back to the Canyon, to the river beating rapidly, beating slowly, beating forever with such wonderful memories.



Hank Detering

snake charmer

Story & Photos by Jan Taylor



It was day five of a 10-day September 2008 geologic rafting trip led by noted geologist Wayne Ranney (and organized by me). Until that day, we had had perfect weather with warm days and jacket-free nights. Our rafting companions came from all across the country, lured by the opportunity to learn about the earth's history in, arguably, the most remarkable geology classroom in the world.

Sleeping under the stars each night had been a luxury, since my trips are more typically in the spring when weather can be very unpredictable. The previous night at mile 122.5, we had a few sprinkles of rain during dinner – just enough to liven up



the moment and make us wonder if we should chance the night without a tent. The majority of the group had not rafted the Canyon before and many were still tent-needy, but experimenting with wilderness freedom. Although my husband had gone down the Canyon on one previous trip with me, he was still testing himself by sleeping without a thin roof of parachute fabric over his head. We, regretfully, succumbed to the possibility of rain and put the tent up. Within no time, I'd removed the rain fly and latched the window and door fully open. The tent stayed packed the rest of the trip.

Following our brief encounter with rain the previous night, we woke up to the music of a Canyon Wren and a brilliantly deep blue Grand Canyon sky, providing the perfect "golden hour" for the photographers in our group. The sun was just starting to work its way down the cliffs as we shoved off from camp. Our first stop of the day was Shinumo Creek where we took a quick hike up to the falls to swim in the pool. As we started going downriver again, the clouds

started coming in and it cooled down a bit – not enough to bundle up, but enough to consider going into my day bag to pull out a long-sleeved shirt. As we moved downcanyon through the Monument Fold zone, travertine (also called flow stone, for good reason) started appearing. Once I see travertine in this part of the Canyon, I know Elves Chasm is not far ahead. We were lucky enough to have a well-paced trip that allowed us to visit not only areas of geologic interest, but also areas of just pure beauty. Elves is one of those archetypal areas of sheer loveliness. Although I have been to Elves many times, my joy in stopping there is to see the look of awe on the faces of



first-timers. Something was a little different about this visit, though.

Ed Hasse, our AzRA trip leader, was the first in the pool. He swam out to the cave behind the waterfall and climbed to the top of the chockstone that serves as the jump rock. As he was preparing to climb to the top of the slick, moss-covered rock, Cassie Micheli, one of our other guides, who was standing with us on a gravel bar at the far end of the pool, starting yelling as loudly as she could, "Stop, Ed! Don't move! There's a snake!" None of the passengers had given any notice to what looked like a light-colored branch on the front of the rock, but Cassie had noticed a slight movement. There was no wind, so there was no reason to believe that the slight movement at one end of the branch was due to any air current. Cassie was alert to the "branch's" unnatural movement and immediately realized the danger that Ed was in, since he would have had to put his foot right on the "branch" to spring off the rock into the pool below. The din of the waterfall

prevented Ed from clearly hearing what she was screaming, but he finally noticed all of us waving our arms and pointing to the face of the rock. He peered over the top of the rock and wisely climbed back down. We could only assume that the creature fell to the chockstone from above since there was no obvious way it could have climbed to that water-slick spot.

After swimming back to our side of the pool, Ed found a large branch and swam back. We all understood the danger this poor reptile was in. Not being able to regulate its body temperature, and being stuck in a sunless spot with cold mist and water all around, the snake could not possibly survive



long in its present environment. From a distance, I wondered if this could be a Grand Canyon Pink Rattlesnake due to its light color against the darker background. In my previous nine years of rafting the Canyon, I have only had one lucky encounter with a Pink at Lava Falls. These are shy creatures that easily blend in with their surroundings, so spotting a Pink is a fortunate and rare occasion. Ed's intention, with the branch, was not to do any harm to the snake, but to free it from its precarious perch in order to find a safer and warmer spot.

Ed climbed back up to the top of the chockstone with the branch in hand. As he was prodding at the snake, attempting to knock it off the rock, the snake was obviously annoyed and tried to unsuccessfully slither up the slick rock. It finally was knocked off into the pool below. The snake attempted to climb up the closest wall, but the rocks were too wet and slippery for it to get any purchase. Eventually, it slowly made its way to the gravelly shore, although all of us were quietly hoping that it would not choose the

gravel bar we were standing on. Once it was out of the pool, Ed was secure enough to jump in and swim to shore. Prodding it again with a branch, Ed urged it to move to a place that would not only assure the safety of the snake, but also assure us of a broad space around it. It was apparent that the snake was exhausted from its ordeal since it never once coiled or rattled. We realized from close up that it was not pink, but pale green and tan. There were no snake experts among us, so the species would remain unknown until later. The snake made its way under a bush, where we left it in peace. Only one other brave person decided to swim the pool after that, and it wasn't me.

Following the end of our wonderful trip, I submitted a brief trip report to a few of the Grand Canyon on-line groups I belong to, mentioning our unusual snake encounter in Elves Chasm. A few days later, I received an e-mail from Nikolle Brown, a wildlife biologist and "Snake Lady" of the Canyon. Nikolle began a Grand Canyon snake distribution study in 1998 and "redefined the distribution of the Grand Canyon Rattlesnake and the Speckled Rattlesnake (which was always thought to be the Grand Canyon rattlesnake)." From the pictures, she identified our fine scaled friend as a Western Rattlesnake (*Crotalus viridis*), and indicated that it is a Grand Canyon Rattlesnake because of its range. The Grand Canyon Rattlesnake is now considered to be its own species, according to Nikolle, with the old taxonomic name of *Crotalus viridis abyssus*; which has now been shortened to *Crotalus abyssus* (see Geoff Carpenter and Charles Painter's article in the Fall 2008 "River Runner"). Nikolle also pointed out that the Grand Canyon Pink is not always pink, but can be of many colors.

How lucky we were to see this beautiful creature, and how fortunate we were to take part in giving it a second chance. As with all wild creatures in the Canyon, please respect their presence and their home. We are just visitors passing through.

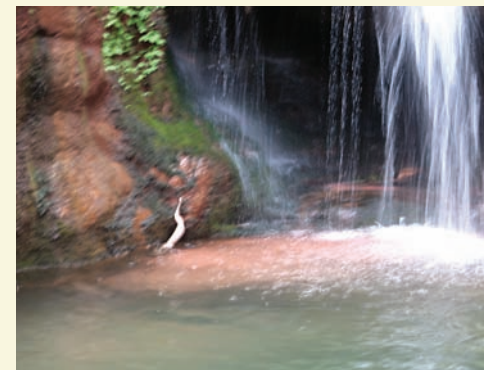


PHOTO © MARIE BEYERLEIN



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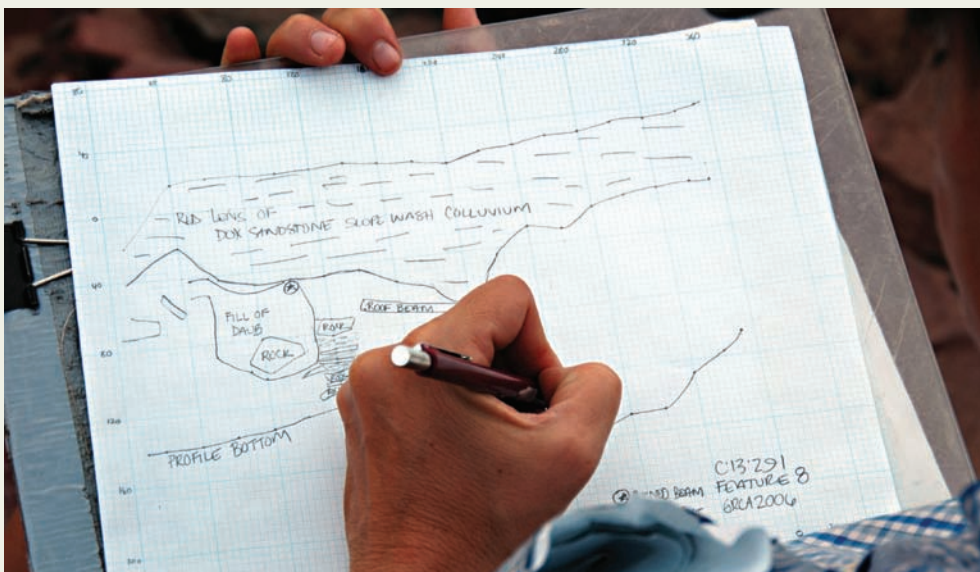


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ARCHEOLOGY IN THE CANYON



HI, MY NAME IS JEN DIERKER, AND I AM AN ARCHEOLOGIST AT GRAND CANYON NATIONAL PARK.

My field experiences have ranged from digging a hand line in the dirt with a hotshot crew in the middle of a fire on the north rim –while keeping an eye out for sites, building rock checkdams along the river in eroding gullies under the guidance of Pueblo of Zuni conservation team members, conducting condition assessments (monitoring), documenting structures for stabilization, teaching students how to survey and identify artifacts in the field, working with land surveys to topographically map sites, and excavating impacted features. Every day that I'm in the field, I learn something new, and the challenges never cease. But the truth is I really spend most of my time in an office, writing reports, working with a geographic information system (GIS) database, updating the site database, and working with other agencies on projects related to archeology in Grand Canyon. To be honest, my biggest challenge is how to convey all the archeology information to you. My thought here in writing this piece is that I would introduce myself and what I do at the park and that we could open up a dialog where you contact me with archeology questions and I can get you the information you are looking for. Like

an "Ask the Archeologist" kind of thing. So here goes.

Grand Canyon National Park encompasses 1.2 million acres of land in northern Arizona. There are exactly 4,178 sites recorded in the database as I type this; tomorrow there may be more. To date, only 64,676 acres have actually been surveyed for cultural resources. If you are a numbers person maybe you calculated that to be 5.3% of the entire park. You are right, that is just a drop in the bucket and realistically the areas where we do have site data are adjacent to transportation or high wire corridors, in the developed area, or have been surveyed as a direct result of some compliance need such as prescribed burns. So as a resource manager, we've got a long way to go, but keep in mind it is a balance. There are sites in the park that people visit regularly and it is just as important to maintain and protect those sites as it is to identify new sites.

People have been living, eating, harvesting, hunting, trading, and visiting Grand Canyon for over 10,000 years, and it is the evidence of those activities that I and my colleagues are responsible for managing. So first off what does that word manage mean? As an NPS archeologist, I am responsible for in-place preservation of cultural remains. How I do that is by visiting sites and documenting any disturbances or potential threats, assessing the overall condition of the site. Multiple visits through time may show a trend towards stability or increasing impact. Once a threshold is met –say moderate or severe collapse of a

structure wall, treatment recommendations are implemented to curtail further site loss. Monitoring condition requires us to look at sites based on the type, the overall physical setting, any disturbances we can identify, and the information contained in the site. Information potential refers to both the features and artifacts we can see on the surface, the buried features, and the information contained in buried deposits such as pollen and charcoal.

Along the river corridor, projects related to the operations of Glen Canyon dam (funded by power revenues) focus on the 475 sites recorded between the dam and Separation Canyon within the zone of the old high water. The Colorado River Management Plan (CRMP) project area encompasses more sites, including those adjacent to the river and up side canyons accessed from the river. There are 595 sites between Lees Ferry and Diamond Creek that are considered in the CRMP project area, though many side canyons have not yet been surveyed. Although the most high-profile components of the CRMP implementation had to do with group size, launch limits and allocation, there was also extensive analysis of resource condition. My task was to determine the most appropriate methods for documenting impacts to archeological sites within the CRMP project area.

The archeology monitoring program is based on a series of management questions that the NPS has identified as important guidance for identifying triggers for management. For example, how do trails affect archeology sites? It is one thing to say "Yep, there is a trail," but it is something different to be able to identify the impact, the impact source, and the connection between visitation and resource impact. Monitoring data is entered into a database and then extracted annually to look for trends in condition, impact, and context. While a fairly unglamorous part of an archeologist's job, it is kind of exciting to be able to analyze information –usually we are reacting to something like road construction or a fire.

Two river trips (April and September) are conducted with a team of resource specialists including archeologists, vegetation managers, wildlife biologists, and recreation planners who conduct the monitoring and assessment activities. The results of these data are used to determine the mitigation work schedule which is conducted in conjunction with trails specialists on separate river trips in November and February. When campsites



Geomorphologists document additional soil stratigraphy information.



Archeologists map surface artifacts and features prior to excavation.



Feature 9, a hearth or roasting area found during excavation work September, 2008.



Surface artifacts: Daub, a material used for room construction (left) and a portion of an axe head (right).

are improved or portions rehabilitated these maps become available for downloading by river users. You can see examples of CRMP work on the Grand Canyon website http://www.nps.gov/grca/parkmgmt/riv_mgt.htm. Look under the header River Trip Planning Resources for Resource Education Information. Examples that you may or may not even notice while in the park include trail work (re-routing, establishment, obliteration), vegetation management (planting, pruning, transplanting), and erosion control in trails or drainages using vegetation, gravel, or rocks. These techniques are implemented when disturbances are observed as moderate to severe and are directly impacting archeological sites. In very extreme instances, the park may officially close a site to all visitation such as at the "Anasazi Bridge" site near river mile 43.

Recently, the park has also begun to implement data recovery (excavation) programs at sites along the river corridor. This is unusual because as park service employees we are constantly trying to find appropriate methods for in place preservation. Removing things from the ground is really a last-resort action (contrary to popular belief). Currently, there are two ongoing projects of archeological excavation. The NPS/Museum of Northern Arizona project winds down this year with two more trips to excavate three sites. This project includes analysis and reporting and has already found some interesting patterns in occupation and use of the river by puebloan farmers. Their movements across the landscape and re-use over time are intriguing, but we have to wait for reports to show the analysis of excavated materials. The Bureau of Reclamation has initiated a treatment plan to address dam impacts to sites and has identified data recovery as an appropriate treatment at 54 sites. Two river trips will occur in 2009 with excavations at five sites. So far, we have identified corn pollen in a 2000 year old deposit in western Grand Canyon (where you think of hunter-gatherers in constant motion utilizing resources) and a living surface adjacent to Tanner rapid that dated over 2000 years old –this is one of the oldest occupations found along the river! Both of these projects will continue to add a lot of information towards a better understanding of Grand Canyon prehistory. When you launch at Lees Ferry, the rangers may provide you with information about projects that are currently underway along the river. The excavation projects have NPS interpreters (they are the ones in uniform), on site to provide your trip with information and site tours, so if it fits in your schedule please stop by and visit. If you don't get a chance to see an excavation there are lectures, photo displays, and articles that you may find interesting.

The canyon is an immense and amazing place. Those of us who work there really do want to share our knowledge with you. And, we want you to feel as deeply about the resources as we do. Want to know more? Contact me and let's see how we can work together to provide information about Grand Canyon archeology and ways to protect the resources we all love.

Jen Dierker is an archeologist and has worked at Grand Canyon National Park for the past 10 years. When she isn't working in the dirt you can find her playing in the dirt and being challenged by high-elevation, low-water gardening. She can be reached at: Jennifer_Dierker@nps.gov



Park Biologists Survey for Non-Native Brown-Headed Cowbirds

by Brian Gatlin, Park Ranger - Interpretation

Throughout the spring and summer nesting season, biologists from the Division of Science and Resource Management at Grand Canyon National Park intensively searched for bird nests at several locations within the park. When they located the nests, they carefully examined the eggs within the nests. Often, they saw a single egg that was noticeably larger than the others. This was the egg of a Brown-headed Cowbird (*Molothrus ater*).

When cowbird eggs were located, the biologist carefully removed them and shook them vigorously before replacing them in the nest. This was done with the hope that these added eggs would not hatch. The biologist then made careful note of the nest location and the type of bird that had made the nest.



Cowbird egg in a Chipping Sparrow nest.

Interfering with the reproductive success of wildlife is not a typical day's work for a National Park Service biologist. But these biologists are part of a three-year program designed to reduce the numbers of Brown-headed Cowbirds at the Grand Canyon while learning more about their impacts.

Trapping or removing one wildlife species to protect another is not a new idea. In the early 1900s, many national parks and forests had predator control programs. For example, to preserve deer, resource managers and game wardens shot mountain lions—with predictably disastrous ecological results. Deer populations exploded, exceeding the land's carrying capacity and leading to mass die-offs. But unlike these early programs, which disrupted functioning ecosystems, today's cowbird control program is aimed at restoring a natural balance.

Cowbirds are not native to Arizona. Originally restricted to the open grasslands of the Great Plains, cowbirds have followed modern human impacts across North America, colonizing new landscapes wherever cattle, agriculture, or suburban landscapes have spread. First seen in Arizona in 1934, Brown-headed Cowbirds are now one of Arizona's most common birds. Brown-headed cowbirds are obligate parasites,



USFWS Photo by Lee Karney Brown-headed Cowbird (Female)

meaning that they rely on a host of another species to bring up their young. Instead of building nests, incubating their eggs, and raising their young, Cowbirds locate the nest of another bird, lay their eggs there, and leave them for the other bird—the host—to raise for them. Cowbird eggs typically hatch sooner, and cowbird chicks are generally larger than those of the host species. This allows the cowbird chick to dominate the others and receive more food from the host parents. In the battle for survival in the nest, cowbird chicks usually win.

Cowbirds lay their eggs in the nests of many different species. One of them is the endangered southwestern willow flycatcher (*Empidonax traillii extimus*). While Cowbirds have expanded their numbers, following humans and our impacts, Willow Flycatcher populations have plummeted for related reasons. Willow Flycatchers were once common along rivers and streams throughout the southwest, but much of their former habitat has been flooded by dams along these rivers, while other habitat has been lost to urbanization or water diversion projects. At the same time that these Flycatchers' breeding habitat disappeared, Cowbirds have expanded into their range and begun to parasitize their nests. Southwestern Willow Flycatchers were listed as endangered in 1995, and the population today is approximately 1000 pairs.



Cowbird egg in a Plumbeous Vireo nest.

The Southwestern Willow Flycatcher breeds within the Grand Canyon along the Colorado River. Between 1982 and 2002, half the Willow Flycatcher nests found within the canyon had been parasitized by cowbirds. Cowbirds also impact other native species in the park. Park wildlife biologist Rosa Palarino says, "Cowbirds have been identified as one of many important factors contributing to the decline of several songbird species."

In 2007, Grand Canyon National Park launched the cowbird research program to measure the impact of Cowbirds on the endangered Southwestern Willow Flycatchers and other species. The cowbird control program is designed to monitor and record cowbird abundance and concentration points within the park, and to identify the species that they parasitize.

In 2008, biologists conducted intensive nest searches in Grand Canyon Village, as well as inner canyon locations such as Indian



Gardens and Phantom Ranch. By moving quietly and carefully observing bird behavior, they were able to locate over 500 nests. Once the nests were located, biologists used wireless cameras and long poles with mirrors on the end to see inside nests without actually climbing up to them. When Cowbird eggs were discovered, they were shaken, or addled, and Cowbird chicks were removed from nests. Adult Cowbirds were also trapped and removed from the park.

Palarino said, "It is our hope that this project will not only reduce the number of Brown-headed Cowbirds at Grand Canyon National Park, but that we will also gain a greater knowledge of their impacts on our native bird species."

The data gathered will help us better understand the habits and distribution of cowbirds within the park, and may prove essential to the survival of the local population of Southwestern Willow Flycatchers as well as other native birds."

As human impacts affect more and more of the planet, projects like Grand Canyon's Cowbird study will become more necessary. While populations of species like Cowbirds expand because of human presence and associated impacts on natural environments, other, wilder native species disappear. If park managers hope to preserve these wild and vulnerable species within intact and functioning ecosystems, the intervention of biologists may be one key to their success.

For more information on Brown-headed Cowbirds:

http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/Brown-headed_Cowbird.html For more information on Southwestern Willow Flycatchers: <http://sbcs.wr.usgs.gov/cprs/research/projects/swwf/cprsmain.asp> - Final Recovery Plan: Southwestern Willow Flycatcher - August 2002 Available as an audiocast read by Patrick Gamman. http://www.nps.gov/grca/photosmultimedia/upload/20090218_wbirdp3



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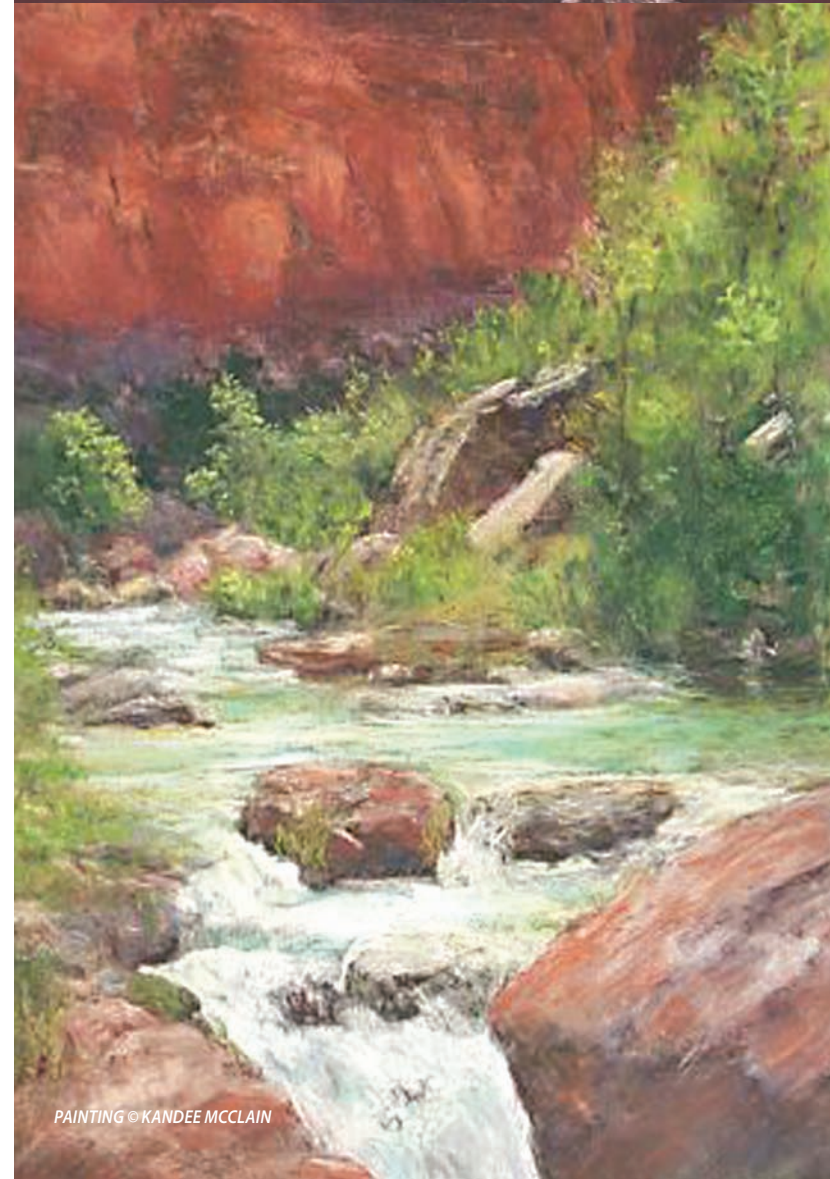
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