

boatman's quarterly review

Cam Staveley

Dear Eddy • Prez Blurb • Farewells • Uranium Mining in Grand Canyon
Adaptive Management • Assault • New Book • Fall Rendezvous
Reading List • Back of the Boat • Guide Profile • Happy Anniversary

boatman's quarterly review

...is published more or less quarterly
by and for GRAND CANYON RIVER GUIDES.

GRAND CANYON RIVER GUIDES
is a nonprofit organization dedicated to

Protecting Grand Canyon
Setting the highest standards for the river profession
Celebrating the unique spirit of the river community
Providing the best possible river experience

General Meetings are held each Spring and Fall. Our Board of Directors Meetings are generally held the first Wednesday of each month. All innocent bystanders are urged to attend. Call for details.

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Our editorial policy, such as it is: provide an open forum. We need articles, poetry, stories, drawings, photos, opinions, suggestions, gripes, comics, etc. Opinions expressed are not necessarily those of Grand Canyon River Guides, Inc.

Written submissions should be less than 1500 words and, if possible, be sent on a CD or emailed to GCRG; Microsoft Word files are best but we can translate most programs. Include postpaid return envelope if you want your disk or submission returned.

Deadlines for submissions are the 1st of February, May, August and November. Thanks.

Our office location: 515 West Birch, Flagstaff, AZ 86001

Office Hours: 10:30-5:00 Monday through Friday

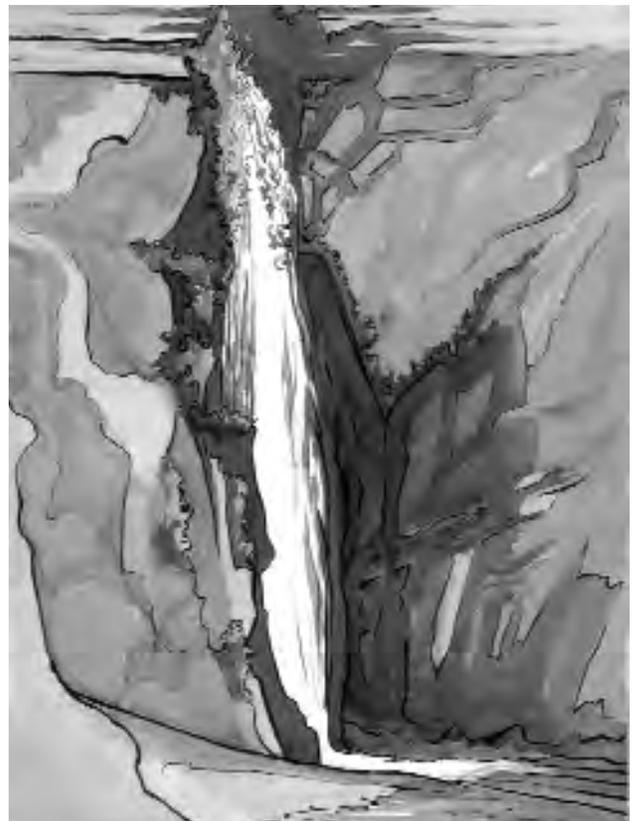
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Dear Eddy

ENJOYED THE NEW BQR—especially the piece on Vaughn Short. It prompted me to pull out my copy of *Raging Rivers* to enjoy his poems again. Vaughn Short's poems about the Colorado River and the Grand Canyon were the first I'd ever heard that were specifically about the Canyon. I was introduced to them by Matt Herrman of Moki Mac back in the late 1980's and it was on that trip that I first tried writing my own poetry about trivers. I'm no Vaughn Short, but it's fun to try. Thanks to all who made that one possible!

Diane Benninghoff

EDITOR'S NOTE: Diane's wonderful poetry has graced the pages of the BQR—goes to show what inspiration can do! We encourage everyone to send in stories, poetry, art, photography—your creativity imbues our newsletter with the river spirit.



Deer Creek Falls

Susan Detering

Thanks to azra guide Susan Detering for the beautiful artwork in this issue. You can view more of her work at www.susandetering.com.

Prez Blurp

GREETINGS! I am writing this as the first snow is falling here in Flagstaff. The river season is wrapping up and I hope that you all had a great one.

I am excited to be aboard as your new president. There have been some changes in the Board of Directors here at GCRG. A huge thank you to Matt Herrmann for doing such a great job as president last year. A big thanks also to Deanna Sanderson. The board is welcoming new members Laura Fallon, Jed Koller and Jared Weaver. Erika Andersson stays on as our new vice president and Fred Thevenin is staying on as our secretary/treasurer.

The GCRG Fall Rendezvous was another great success. Thanks to AZRA and Craig Ahrens for transportation to and from the Kane Ranch. Thanks to Matt Herrmann and Moki Mac for supplying the kitchen. And thanks so much to the Grand Canyon Trust for opening up Kane Ranch to us! What a beautiful place they have out there in House Rock Valley. We went for some great hikes where we saw some incredible pictographs and gorgeous scenery. Dinner that night was fun; Nikki Cooley showed us all how to make traditional Navajo fry bread. What a treat!

Thanks also to all the folks who shared their wealth of knowledge. We heard from Phil Pearl and Rick Moore of the Grand Canyon Trust about the history and restoration of the ranch that they are working on. Wade Parsons, an archaeologist for the BLM, shared some of the human history of the area. We also heard from Roger Clark of the Grand Canyon Trust about the uranium mining that we have been hearing so much about.

Uranium mining near Grand Canyon is an important issue that deserves some attention right now. GCRG submitted official comments. I submitted mine and I hope that you all did too. It is important to let our opinions be heard in these matters. This is how the river community can make a difference and protect the places that are so important to us.

There are other issues that will be presenting themselves in the coming months. One of these is the issue of Canyon overflights. We will be keeping everyone up-to-date through e-mail, so if Lynn doesn't have your e-mail, ask to be included on our guide or general member email list. You can also join us on Facebook. These methods are a quicker way to reach everyone since these EIS comment periods can be short!

We hope you enjoy this issue of the BQR. Please consider submitting an article, some poetry, artwork or photography! Also, we urge you to stay in touch and get

involved. It's important that the folks who are in the Canyon as a part of their daily lives are vocal on the issues that can have profound effects on our jobs, our lives, and the place we love.

Have a great winter!

Emily Perry

Notice To All Guide Members

THE BOARD OF DIRECTORS of Grand Canyon River Guides is working on revising the bylaws of the organization to bring them up to date and add new policies as required by the IRS. A mail ballot for this bylaws revision may either be included in the next issue of the BQR or as a separate mailing, and we request that all guide members take the time to fill it out and return it to GCRG.

Announcements

FOUND

A nice fedora-type hat at Stone Creek campground, below Dubendorff, at the end of October. Contact Tracy Madole at tbsmadole@earthlink.net.

FOUND

A woman's wedding ring, with, "May 30, 1999 I love you. S." inscribed on the inside. It was found in the Little Colorado on August 17, 2009. Contact David at davidkashinski@yahoo.com.

Farewells

STEVE “WREN” REYNOLDS (JANUARY 15, 1951–AUGUST 12, 2009)

FRIEND, BOATMAN, FELLOW VOYAGER—Steve “Wren” Reynolds died on the afternoon of August 12, 2009 in Honolulu, Hawaii—the result of liver failure due to Hepatitis C. His wife Noriko, and his siblings, courageously decided to keep Wren on life support until his fellow boatmen arrived to maintain a bedside vigil. They were certain he wanted his river “family” nearby.

In the months preceding his death Wren kept his wit



very small raft, absent the luxury of scouting, with headphones blasting his favorite tunes. He was a boatman’s boatman.

In July 1983, Wren was part of the trio of dory boatmen (which included Kenton Grua and Rudi Petschek) who completed the Speed Run through Grand Canyon in record time. It was an audacious feat that captured the spirit and imagination of boatmen past and present. When the *Emerald Mile* hit the Hole in Crystal, Wren was perched on the bow, leaning into the face of the ocean-size wave. As the boat flipped end-over-end,

his forehead crashed into the bow post. An audience of river guides, rangers, and passengers on shore watched in bewildered astonishment. Hadn’t the River been closed because of the high water? Better to ask forgiveness than permission, most rivermen would agree.

The three dorymen righted the wooden boat and made for TGE (Thank God Eddy) to regroup and staunch the flow of blood from Wren’s wound before rowing on. In the years to come he never mentioned his role in the historic run to family or friends. He was not one to linger in the past.

In less desperate circumstances his balletic physical grace was evident as he danced from gunwale to gunwale across a line of

photo: Rudi Petschek

and humor razor sharp as he navigated the health care system in his quest for a liver transplant. Nurses and doctors alike quickly caught onto his irreverent patter and embraced this maverick spirit. Despite chronic pain, he rarely complained. He would have laughed at the irony that at the end of his life he received some of the best drugs modern medicine had to offer. His fortitude was remarkable.

Of his skill as an oarsman, Tim Cooper wrote, “...He wasn’t as good then as he later became. Later he got this kind of ruthless concentration about him, like a gunfighter. He was very, very good.” It was typical of Wren to push the limits when the opportunity presented itself. He once rowed naked through Lava Falls, alone in a

bobbing dories at evening’s rest, beers in hand, to join the party. He liked a party. He was also known to make lengthy hikes in the side canyons of Grand Canyon at breakneck speed in his flip-flops.

On the River, Wren developed an untutored facility with language, more sound than meaning. His sentences were barbed. He invented words, strung them together and let them fly, uncensored and without a flight plan. Among his more delightfully tortured turns-of-phrases: “*Hey Brachley*”, a general greeting; “*Hammerhead*”, an apt descriptive for a boatman who had blundered mindlessly; “*Mud-bean-fiend-tar-Joe-coal-crank-java*”, a morning coffee litany in defiance of brevity; “*I’m a little busy right now*”, a playful attempt to scare unwitting

cooks. After scouting a major rapid he would order any of his nervous passengers who loitered too long on shore: “*Get in the boat...now!*” His verbal acrobatics, like so much else in his life, were performed without a (in this case grammatical) safety net. Wren-speak soon seeped into regular use among his fellow boatmen.

His flaws, leavened by natural charm, were typical of a generation of boatmen. He had a few scrapes with the law. He drank more than he should have, and later sought to bring his habit under control. He had a low threshold of tolerance for passenger nonsense. He could be impatient, even rude, yet he often adopted the loner, the oddball, or the socially inept and shepherded them downstream with fierce kindness. He took rookie boatmen under his weathered wing, boosting their confidence with a dead-pan analysis of the run and by treating them as his equal. For all his intemperate behavior there was not a mean bone in Wren’s body. Sharp of tongue, he never aimed for the heart. His wit was not so much sparkling as deliciously irreverent, and often contagious. He made people laugh.

In the dory tribe of the late 1970’s and early 1980’s, Wren remained a lone voyager. After the river season he would set off for Southeast Asia or South America with a small backpack to go “hiking.” Later he purchased *Tranquilla*, a 26-foot sailboat, and took to the ocean. He learned to navigate and sailed the South Pacific. On one passage from Japan to Hawaii he stopped in Guam to rid himself of an incompatible deckhand and finished the final leg of his voyage to Hawaii alone, a remarkable feat given his lack of experience. He danced along the edge of many different rims, beckoning us to follow with his trademark mischievous grin. Many marked their distance from the abyss by Wren’s balancing act.

After he stopped rowing in Grand Canyon, Wren landed in Japan where he taught English as a Second Language. One can only shudder at what his Japanese students took for Standard English. He met Noriko, his future wife, and together they opened an English Language School. When asked for his credentials, he borrowed a copy of a B.A. diploma from a fellow boatman. Someone ought to make money from an English degree, both reasoned. Two children, Tom and Leia, came along.

A decade ago he moved his family to Hawaii, his adopted home. Water—salt or fresh—remained his medium. He earned his Captain’s license and ran charter sailing and diving tours off the coast of the islands. Wren’s ashes are spread in the same coastal waters where he worked and played, a fitting resting place for a wandering boatman.

Row on, Shipmate, Row on.

Vince Welch

LAST SEPTEMBER KEVIN FEDARKO WROTE THE FOLLOWING TO RUDI PETSCHKE:

“Having now returned and dug into my correspondence, I read the text of your email with a profound sense of both gratitude and loss.

I should begin by telling you how horribly saddened I am by the news of poor Wren’s death. When he and I met for the first (and now, it turns out, the last) time back in May, I wasn’t quite sure what to expect. A number of people in the dory community had warned me that Steve could be rather abrasive and that he might not take well to being pelted with questions from a reporter. Your own efforts to reach out to him helped enormously in paving the way, of course; but during the course of the two days that he and I spent together in Santa Rosa, an unexpected side to his personality emerged.

I would have to go back and look through the eight hours of transcripts to find the exact moment in which this occurred, but at some point during our conversation, he seemed abruptly to realize—with a rather endearing sense of surprise—that he was actually enjoying the process of having his recollections of the Grand Canyon and the Speed Run stimulated and rekindled. And in the process, a sort of gentleness and sweetness seemed to emerge from somewhere inside of him.

You could hear and see this gentleness and sweetness in the tone of his voice and in the softened expression on his face. But he communicated these qualities even more clearly through the pleasure that he was obviously deriving from the experience of returning to a place and a time that had been stored in some back chamber of his mind and which had not been accessed, fully, for several years. It was at that point, I seem to recall, that he remarked, with an almost child-like sense of wonder, at how much he was enjoying the process—and then mentioned how very glad he was that you had gone to the trouble to persuade him to agree to the interview.

Such a remark would have been a delight under any circumstances; but coming, as it did, from a man who was passing through the twilight weeks of his life, it doesn’t seem like too much of an exaggeration to say that, for me, it qualified as rather extraordinary. To be permitted to listen as someone recounts the memories of an exceptional event during a life that was lived as vigorously as Wren’s was a privilege, of course. But to be told that the interview itself may have afforded a small measure of temporary relief from a dying man’s discomfort—well, that was something I’m not quite sure I have the words to express.”

Kevin is writing a book on the Dories which is due out in the spring of 2011.

JON HAMILTON (1925–2009)

JON HAMILTON, A KEY MEMBER of the 1960 jet boat expedition through the Grand Canyon, died in Christchurch, New Zealand, September 6, 2009. His engineering knowledge of the jet's impeller drive mechanism and experience piloting jetboats on the rivers of New Zealand's South Island proved crucial factors in the expedition's success. Jon (Jon Oliver Feilden Hamilton) was the son of Sir William and Lady Peg Hamilton. Bill was a successful rancher with a large sheep station, *Irishman Creek*, in the shadow of Mt. Cook, an inventor, and corporate executive. CWF Hamilton Co. manufactured earth moving equipment and designed engineering projects such as hydropower stations. Jon grew to adulthood in a dual rural and urban environment. His mother had many ties to writers, artists and public leaders in the United Kingdom; life on the station was connected to the world. In the 1950's Bill, frustrated by the failures of propeller craft on New Zealand's shallow glacial streams, developed what became the Hamilton jet. Jon, then a university trained engineer was involved in the step-by-step perfection of the jet. In 1965, he succeeded his father as the firm's chairman, a position he held until 2000. In the 1980's Hamilton and his son Michael, his successor as the company's chairman, made the decision to concentrate exclusively on commercial jets that are today widely used in ferries, patrol, and workboats; the firm has 50 distributors worldwide.

In 1957, Bill Austin and I met the Hamiltons and Guy and Margie Mannering in Christchurch. We made many river outings with them and concluded that the Hamilton jetboat might make its way up the Colorado River.

After a downriver run setting up fuel caches and testing rapids, Jon piloted all four boats up Lava Falls on July 5 and 6, 1960. Throughout the expedition Jon reworked the impeller blades in the jets to maintain their performance. The 1960 trip led to triumphs on the Sepik in New Guinea, the Ganges from the Indian Ocean to its headwaters in Nepal with Sir Edmund Hillary, and, on the Congo, among others, with Jon as the lead driver. Jon was a world class glider pilot, and a skilled mountain climber. He had a self-effacing demeanor and was given to understatement. On viewing movies of the Colorado on arrival at Doc Marston's home in 1960 Jon laconically said: "It's a frisky little river!"

In 2004 Jon, Joyce, and I circumnavigated the Canyon, stopping at Toroweap, Lees Ferry, and overlooks on the South Rim. At Lees Ferry, groups putting in discovered they were talking to the Jon Hamilton and were in awe—much to Jon's discomfort. In his late years his keen engineering intellect ranged widely, puzzling over alternative energy technologies and ways



Jon Hamilton. Photo courtesy NAU Cline Library, Special Collections, Bill Belknap Collection, NAU.PH.96.4.95.265.

engineering might assist adaptation to climate change.

Jon was awarded the Order of British Empire in 1981. His wife Joyce (a participant in the 1960 expedition), three children, seven grandchildren, two great grandchildren, and sister June survive him.

Philip M. Smith

EDITORS NOTE: Buzz Belknap and Phil Smith are writing an article on the 50th anniversary of the 1960 expedition for future issues of the *Boatman's Quarterly Review*.

GCRG Mini Updates

GUIDES TRAINING SEMINAR INFO

THE GUIDES TRAINING SEMINAR land session will be held March 27–28 at Hatch River Expeditions in Marble Canyon, Arizona. Save the dates! We're already hatching plans (sorry for the pun): the Hualapai tribe will be doing a traditional agave roast, we'll have a segment celebrating the 50TH anniversary of the jet boat uprun, and that's just the tip of the iceberg. Cost is \$40 unless you're sponsored by your outfitter, and you can either send a check to GCRG, or sign up and pay through the GCRG website, www.gcr.org. The GTS land session is open to the public, so please join us!

The Guides Training Seminar river trip will be April 1–7 (upper half) and April 7–15 (lower half). In addition to the interpretive training, we'll be working with the NPS on some important stewardship projects. Talk to your outfitters now and save a spot! It's the best training trip on the water.

Look for more info on the GTS land and river sessions in the next BQR and in the GTS postcard that will be mailed out to all guides after the first of the year. Feel free to call GCRG with any questions at 928-773-1075.

WILDERNESS FIRST RESPONDER REFRESHER

A WFR refresher course will be offered through GCRG and Desert Medicine Institute (DMI) (Drs. Tom Myers and Michelle Grua), February 18–20 at the AZRA warehouse. We're hoping the dates will be convenient for

out-of-towners since you can finish class and then go have fun at the Whale Foundation Wing Ding on the evening of February 20TH! The cost for the WFR refresher will be \$200 (such a deal!). A deposit of \$50 will hold your spot in the course. Send checks to GCRG, P.O. Box 1934, Flagstaff, AZ 86002. Better check your first aid card and see if you need to recertify in 2010. If so, sign up right away because the course will fill up fast and space is limited. Checks can be mailed to GCRG or you can sign up and pay on the GCRG website. DMI will provide an extension for anyone who needs it as we're aware that our class three years ago was a month earlier. Please note that GCRG will not be offering a full WFR this year because there are a number of other options out there to serve the guide community. See the GCRG website for details.

ADOPT-A-BOATMAN

The Adopt-a-Boatman program would like to announce that the interview with Christa Sadler is now fully funded thanks to an anonymous contributor. Open adoptions are Pete Gibbs and Stu Reeder. The GCRG website has posted the updated adoption spreadsheet so you can check the status, and you can either donate through the miracle of Google checkout or send in a snail mail check to GCRG. Thanks to all Adopt-a-Boatman contributors for their help in supporting our oral history project! The Adopt-a-Boatman program is not currently accepting new adoptions at this time as we've got plenty on our plate to keep us busy. But we welcome any and all suggestions!

Shop At Bashas And Help GCRG!

GRAND CANYON RIVER GUIDES is participating in the Shop and Give program. It's easy to support GCRG every time you buy groceries at Bashas', anywhere in Arizona from September 1, 2009 to April 30, 2010. Here's how it works:

GCRG GROUP ID NUMBER: 24776

- Link your Bashas' Thank You Card to GCRG's group ID number (just once on or after September 1) at any checkout. The link remains active until April 30,

2010. (Please note: supporters who participated in last year's program must re-link their Thank You card again at the start of this year's program.)

- From September 1, 2009 to April 30, 2010, be sure that your Thank You Card is scanned every time you shop at Bashas'.
- Bashas' designates one percent of your grocery bill back to GCRG.

So link to GCRG's number, shop at Bashas, and help GCRG every time! What could be easier than that!

Uranium Mining In The Grand Canyon— Biting My Tongue In Front Of Congress

AS I SAT BEFORE CONGRESS in Washington D.C. last summer, I couldn't believe what the representative from the mining industry had just said. I had just testified on House Resolution (HR) 644, the Grand Canyon Watersheds Protection Act of 2009, and now the last member of the panel, the representative of the mining companies, was speaking. The mining representative had just stated to Congress, "A rock containing one percent natural uranium, ten thousand parts per million, or what is a maximum average grade of breccia pipes, can be held on a person's head for four hours, and the person will receive no more radiation than they would from a medical x-ray". I was thinking how best to respond a moment later when we would be questioned by members of Congress after the individuals on the panel finished their testimony.

I wondered if the mining representative's statement should be chided—"anyone who would make that argument has had uranium on their head too long" or "the reason I'm follicly challenged (lacking hair on top) is from balancing breccia". No, perhaps I should just explain the huge difference between putting unstable isotopes on your head, and ingesting them where internally the radionuclides accumulate, particularly in the proximal tubules of your kidneys. Build up of heavy metals in the human body can be manifest in many ways—from fatigue to central nervous system disruption—but often is a slow process that builds up over time. And it doesn't just go away quickly like when a rock is taken off your head after four hours or when the lead-protected, x-ray technician steps back in the room. Probably best to bite my tongue, stay on message, and ignore the comment from the mining representative, I thought.

I am profoundly concerned about mining in or near the Grand Canyon which I believe will damage the quantity and quality of Grand Canyon springs, and the plants and animals that depend on those springs. The lands in question include the Tusayan Ranger District and Federal land managed by the Bureau of Land Management in the vicinity of Kanab Creek and in House Rock Valley. The

springs support a rich diversity of animals, birds, insects and plants, and provide water for backcountry hikers and Native Americans. My university research group was the first to study uranium concentrations in water from various springs in the Grand Canyon, including Horn Creek (which is below the site of the abandoned Orphan Uranium Mine on the Rim). In 1995, we discovered elevated uranium levels in Horn Creek (92.7 parts per billion (PPB)), which is above the EPA Maximum Contaminant Level Goals (0 PPB), and in excess of the EPA Maximum Contaminant Levels (zero PPB). This provided part of the impetus for the Park Service to clean up the Orphan Mine site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund. The cost for remediation of the Orphan Mine's surface area is estimated at fifteen million (Phase One), but costs to remediate contamination in the underground portion of the mine and in Horn Creek are unknown (*Washington Independent*, July 22, 2008). Elevated uranium concentrations in spring water below the Orphan Site relative to other Grand Canyon springs were later confirmed by a U.S. Geological Survey study. The Orphan Mine shut down in the late 1960's and early 1970's, yet decades later high uranium was showing up in springs below the mine site.

So this last summer, I sat and listened as Congress was addressed by representatives from the Havasupai tribe, from the Coconino County Board of Supervisors,



UNLV Graduate student Kim Zukosky filtering water samples at night (Hermit Camp).

from the Southern Nevada Water Authority, from the Grand Canyon Trust, and from the businesses in Tusayan who all voiced concerns about uranium mining near the Grand Canyon. I wasn't alone in support of HR 644 and my concern about mining operations. Two different panels testified with me before Congress that day, and each (except the two representatives of mining interests) expressed different reasons for their support of the House Resolution.

My own professional misgivings about mining operations around the Canyon, expressed in my Congressional testimony, centered on the potential degradation of both the quantity and the quality of Canyon spring flow that the mining operations would produce, and the subsequent impacts on the habitat and wildlife the springs support. It only takes a few hikes in the Grand Canyon for even the most rookie biologist to realize the importance of springs to the abundance and diversity of life in these verdant little pockets. And you don't have to be an expert to appreciate water value in arid lands. There are the hardcore scientists gathering information and statistics on springs, and then there is the backpacker or river runner, gathering his or her own data as a sundown frog symphony mixes with the sounds of their camp stove. If you've ever been thirsty in the backcountry, you know the importance of the Grand Canyon springs.

BRECCIA PIPES, MINING, AND GROUNDWATER RECHARGE

Over 10,000 mining claims have been staked in the region adjacent to the Colorado River and Grand Canyon National Park. It is important to understand geologic reasons why mining is proposed for the Canyon area, and how that might be detrimental to springs.

Uranium mines in the Grand Canyon area typically involve excavation of vertical and horizontal shafts into, or near, breccia pipes, which are geologic collapse features and zones of historical groundwater recharge. Breccia pipes are abundant in the region, and form vertical zones of angular clasts surrounded by a consolidated rock matrix originally formed by the caving-in of paleochannels in underlying rock. These pipes can also form ground surface depressions and sink holes

(Huntoon, 1996). The way breccia pipes became collapse features was by dissolution cavities in the Redwall Limestone (halfway down the Canyon) falling-in, and chimneys of the rubble debris of broken up rock (breccias) propagating upward to ground surface on the Rim more than two thousand feet higher.

As mentioned, the ground surface expression of these pipes on the Rim was often a localized depression that



UNLV Graduate Student Kim Zukosky
above Dripping Springs.

could attract surface runoff waters. Surface runoff from rains and snowmelt eventually played connect-the-dots between many of these depressions. This made preferred pathways for surface flow on the Rim, and significant volumes of water passed in washes along the ground surface near these pipes, and were shunted underground to recharge groundwater and eventually emerge as springs in the Canyon below. Water influx into the ground could be significant as evidenced during a 100 year flood event on the South Rim in August 1984 which wiped out HWY 64—the road to Tusayan and Grand Canyon Village. The waters passed over the road and flowed down Little Red Horse Wash with a estimated peak flow of 2447 cubic feet per second but apparently dissipated in the large flat area some four miles downstream.

There was no significant runoff reported beyond this area—the waters apparently disappeared and totally infiltrated into the ground (Canyon Uranium Mine EIS, 1986).

The reason the mining companies are so interested in these breccia pipes is because these same percolating and recharging waters also carried and deposited uranium as they moved downward through geologic history. Uranium was dissolved in surface waters in small amounts, and over the years it was carried to zones below the surface which were low in oxygen (like the Hermit Shale formation). In these anoxic conditions, uranium was chemically precipitated out of the dissolved phase, becoming a solid, mineable rock in a breccia pipe environment.

This breccia pipe-type of uranium mine generates ore and waste rock which is typically stockpiled on the land surface until shipment to a mill takes place. Local precipitation and surface runoff waters can be in contact with



UNLV Graduate student Jim Fitzgerald samples Page Spring (Miner's).

this surface uranium ore. Certain mining activities, such as the interception of water by wells, creation of vertical shafts, the diversion of surface water, and the collection of surface water into holding ponds, has the potential to alter the amount and quality of water recharging the aquifers surrounding Grand Canyon National Park.

DIMINISHMENT OF SPRING WATER QUANTITY— PART ONE, MINE WATER USE

Uranium mines in the arid Southwest use water, which is usually supplied from wells or imported from springs. Water is necessary at mining operations to support drilling, potable water supply and sanitary needs. Wells in the Grand Canyon region typically are over 2,000 feet deep, tapping the Redwall-Muav aquifer. This same Redwall-Muav formation is the level in the Canyon where the large majority of springs discharge (approximately halfway down the Canyon vertically). Previous uranium mining in the Grand Canyon region estimates that this water usage would be, at a minimum, over 2.5 million gallons per year for one mine (Canyon Uranium Mine EIS, 1986).

There are many springs and seeps in the Grand Canyon that, according to the U.S. Geological Survey and other investigators, have discharge similar to these amounts, or even much less. Some of these springs and seeps are ephemeral, and the biotic communities associated with them are very vulnerable to the extraction of water and reduction of flow. Multiplying potential water use of each mine by the number of potential mine sites gives a volume of water that if abstracted could eliminate and/or critically diminished a majority of springs and seeps in the Grand Canyon. The work of our research group at the University of Nevada, Las Vegas, (using environmental tracers including stable and radiogenic

isotopes, trace elements, chloro-fluorocarbons, and uranium isotope disequilibrium measurements, shows compelling supporting evidence for existence of a hydrologic connection between the aquifers surrounding the Canyon and the springs within the Canyon (Goings, 1985; Zukosky, 1995; Fitzgerald, 1996; Ingraham et al., 2001).

If all mining claims in the Grand Canyon region were turned into active mines and used the same amount of water as that projected by Canyon Uranium Mine (Canyon Uranium Mine EIS, 1986), the resulting water use would be

over five times the use of the city of Flagstaff and would decimate Canyon springs. Fortunately, mining speculators typically stake many more claims than they will ever move into active mining sites. Even so, one mine alone could use water equivalent to several small Canyon springs or seeps.

DIMINISHMENT OF SPRING WATER QUANTITY— PART TWO, PIERCING THE PERCHED

The deep, drilled wells associated with projected mining operations throughout the Grand Canyon region, and the mine shafts themselves, have the potential to pierce smaller perched aquifers in the overlying Coconino Sandstone (approximately one-quarter of the way down the Canyon vertically), which supplies water to springs higher up on the wall of the Canyon. The Hermit Shale, which serves as a low permeability base holding up this aquifer, is unfortunately also the geologic unit in which much uranium is expected to have been emplaced, and which would necessarily be penetrated by vertical shafts.

In one uranium mine in the Grand Canyon region, a perched aquifer was encountered during exploratory drilling operations. Long-term downward drainage and water disruption potential of the mining operation was estimated to be over 1.3 million gallons per year (Canyon Uranium Mine EIS, 1986). Piercing a perched aquifer would have the effect of draining the perched aquifer, and disrupting flow to springs issuing from the Coconino Sandstone-Hermit Shale contact and the underlying Supai Group.

DIMINISHMENT OF SPRING WATER QUANTITY— PART THREE, DAM SURFACE STRUCTURES

The historical water recharge to the subsurface in potential mining areas could also be altered by surface mining

structures. These structures include diversion channels, berms, dikes, or barriers to surface flow. These structures are designed, in part, to minimize contact of surface ore piles and waste rock with surface water runoff. Eventually this impoundment of surface water would manifest itself as diminished groundwater recharge and spring flow. Retention of surface water would unbalance the groundwater equilibrium between recharge and spring discharge, and could also affect the timing of downward water percolation, and eventually spring water quality.

WATER QUALITY IMPACT

Throughout the U.S. and the world, valid claims by industry that their activities have not negatively impacted groundwater quality are buttressed by rigorous monitoring programs. These programs typically involve the emplacement of monitoring wells, regular sampling and chemical analysis of water, and hydrologic and hydrochemical mathematical modeling. No such industry program exists in the Canyon. There is no comprehensive system of monitoring wells to support mining claims that prior mining in the Canyon region have had no impact. Testifying before Congress, the mining representatives were reduced to implying that the cosmetic fix of cleaning up a former mining site after mining operations to look nice at the surface, constituted evidence that there was no subsurface pollution. It is also important to realize that the effects of pollution on groundwater many take years, decades, or even centuries to be fully manifest. Groundwater movement is very slow compared to surface water flow.

The lack of clear and consistent monitoring of groundwater undercuts claims by the mines that previous mining in the Canyon has not harmed groundwater in the past. A friend once said, "standing in the middle of a busy freeway shouting 'I'm safe, I'm safe' because you haven't been hit with a car yet, doesn't really mean you're safe."

BITING MY TONGUE, SAYING MY PIECE

The questions from the Congressmen and Congresswomen went about how I expected it. My experience as an "expert witness" in court proceedings had prepared me for supportive questions from the Representatives that supported HR 644, and for questions meant to undermine (pardon the pun) my testimony and my credibility from the other side. I did have to bite my tongue one more time, however.

When the Congressman who opposed HR 644 stated in the preamble to a question that I had "speculated" about groundwater flow in the Canyon, my mind flashed to the stalwart graduate students (particularly Jim Fitzgerald and Kim Zukosky), the great Park Service personnel, the good-spirited boatmen and women, and the many "sherpas" that had assisted our spring research through the years. We had carried heavy packs, endured



UNLV Graduate Student Kim Zukosky measures side stream flow.

and enjoyed all sorts of weather, hopped over snakes, and suffered bad jokes to get water samples in the Canyon. I looked around and thought that I might be the only one in the room who has carried 90 pounds of water samples out of the Canyon in one go, carried in ultra-pure nitric acid to preserve them, hiked in 120 degree heat to get them, slept with many liters of water in the bag at night in winter to keep them from freezing, did solo hikes, backed up chemical analyses with split samples to the U.S. Environmental Protection Agency on the campus of my university to make sure the samples gave accurate numbers, and published peer-reviewed articles in reputable journals and books which might capture the science, but none of the adventure and mystery. I bit my tongue, thinking he just wouldn't understand until he really experiences the Canyon, and quietly thanked the tremendous people with whom I'd shared the wonderful, wide, wild, grand, hole-in-the-ground.

What I did say, I'll write down now. I said that the science has shown that it is unreasonable to assume that the groundwater below the Rim of the Grand Canyon and in its breccia pipes does not have hydrologic connection with the Canyon's springs. It's unreasonable to assume that water supply to mines is trivial, particularly if more than one mine begins operations in the Grand Canyon region. It's unreasonable to assume that the surface mining structures, the dams, berms, dikes

won't reduce recharge to the Redwall-Muav aquifer, and that's if they don't fail and flood the subsurface with contaminated water. It's unreasonable to assume that mining in the Hermit Shale aquitard won't pierce the perched aquifer system in the Grand Canyon. It's unreasonable to assume that potential pollution to springs and drainages in the Canyon won't occur—we've already found it. And it's unreasonable to assume that no potential huge cleanup costs will be associated with any pollution that does occur.

I then borrowed part of a wonderful quote that I had heard early in my environmental career. I said, by allowing uranium mining in the Grand Canyon region we were, like the sorcerer's apprentice, opening an environmental box, ignoring the precautionary principles that good scientists and responsible industry follow, principles that I teach to my students in the most basic environmental geology courses.

THE TASK AHEAD

Scientific evidence suggests that the exploitation of uranium resources near the Grand Canyon will be intimately connected with the groundwater aquifers and springs in the region. The hydrologic impacts have a great potential to be negative to people and biotic systems. I believe that an assumption that uranium mining will have minimal impact on springs, people and ecosystems in the Grand Canyon is unreasonable, and is not supported by past investigations, research, and data. In my best professional judgment, I believe HR 644 will help preserve clean water and the sustainable natural resources that water supports, in this treasured region of our country. In my view, at the same time it will support recreational economic interests and indigenous peoples of the region.

This last summer, Secretary of the Interior Salazar temporarily placed one million acres of public lands surrounding Grand Canyon off limits to development of existing, unpatented claims. The order also halts new mining claims and exploration, in compliance with a June 2008 Congressional House Resolution by the Committee on Natural Resources. Much of the effort to enact protections across this area have been spearheaded by Congressman Raul Grijalva of Arizona. Unfortunately, the protections are not permanent, and do not affect the exploration of existing patented claims, or three existing mines in the area scheduled to reopen.

Responsible industry works hard to account for the long-term effects of its activities. Conscientious miners do this, not only with realistic projections of what those long term effects will be, but also with credible and continuing monitoring, accountability for past mistakes, and true adherence to a precautionary principle that does not allow short-term gain to outweigh public and ecological safety. Unfortunately, not all businesses are dependable, diligent, and answerable to this principle.

Aldo Leopold once wrote, "One of the penalties of an ecological education is that one lives alone in a world of wounds". For every environmental battle won, there appear more threats, often from unreliable, unknowledgeable, and/or unscrupulous individuals and companies.

In Greek mythology, King Sisyphus was condemned by the Gods for eternity to roll a rock up a hill in Tartarus, only to watch it roll down the hill, and start the task again. And so, the Sisyphian Grand Canyon environmentalist pushes the rock containing one percent uranium up the hill, with shoulders and head to the mineral. I wonder if the Greek King would have made a good shoe-tapper in an underground mining operation? Perhaps Camus said it best: "The struggle itself... is enough to fill a man's heart. One must imagine Sisyphus happy." So—Joy, Environmental Shipmates, Joy!

Dave Kreamer

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Adaptive Management Program— Reservoir Levels, El Niño, and the Dam

WE CLOSE OUT THE 2009 river season with many of the newly built sandbars from the high flow experiment (HFE or BHBF) of March 2008 still intact, from our own observations. It seems we did lose a lot of sand from the fluctuating zone below the 18,000 cfs stage, so mooring areas are generally rocky but camping areas are still pretty good. The scientific studies due in December will give us a clearer picture and our Adopt-a-Beach results will help constrain these results.

Reclamation released 8.23 million acre-feet (MAF) this past Water Year of 2009 (ending September 30), so releases since the HFE have been minimal, but that's not likely for the coming year. Due to an odd runoff season from the Rockies, Reclamation held more water back in Lake Powell causing Lake Mead to fall a lot more, revealing several new and gnarly rapids as the river superimposed itself through silt beds onto bedrock reefs not previously seen.

As we go to press, the probability is about 55 percent that equalization will be triggered in 2010, next April. Also, if equalization is triggered, the release volume would increase to 10.6 MAF in order to "equalize" storage between Lake Mead and Lake Powell. These are estimates and things may change as the weather progresses through the year.

Climatologists are predicting a moderate El Niño year, which could mean strong winter precipitation in the Rockies. So, although it's still very early, do plan for higher flows through Grand Canyon this winter and next summer. This means that many of the newly built sandbars and associated habitat could be eroded to Lake Mead, and camping beaches will be reduced and or flooded during the coming year. We will keep the river community informed as the picture becomes clearer.

On another note, Ms. Anne Castle is the new Assistant Secretary for Water and Science reporting to Secretary of the Interior Ken Salazar. John O'Brien and I recently met with Ms. Castle and a member of her staff here in Flagstaff. They were in Flagstaff in order to join a science trip with the USGS to get acquainted with the river ecosystem and learn more about the science. Ms. Castle seems committed to achieving AMP goals and assures us that the Secretary is similarly engaged in Colorado River issues.

Ms. Castle expressed interest in seeing the scientific results from the last artificial flood (BHBF). She has already taken a number of steps to focus the AMP efforts, including:

1. Working with the Interior agencies to increase cooperation and coordinate efforts.
2. Establishing a tribal liaison to work directly with the Department of the Interior (DOI) in order to effectively articulate and address tribal concerns and perspectives.
3. Articulating desired future conditions (DFC) for the river ecosystem within a range of natural variability.
4. Promoting timeliness of scientific reporting and AMP response.

Some of the areas GCRG would like to work with Assistant Secretary Castle include the following:

- How can the Glen Canyon Dam Adaptive Management Program better integrate with the Annual Operating Plan for the dam to meet the intent of the Grand Canyon Protection Act?
- What effect could equalization flows have on the five-year plan?
- Can the Long Term Experimental Plan be resurrected in the future?
- Can the budget be better utilized to include all resources, not just sediment and fish?
- How can we increase the effectiveness of the AMP to act adaptively to changing conditions while ensuring that policy is based on scientific recommendations?

Grand Canyon River Guides will continue to address these issues and others as the stakeholder representing recreational river running interests within the Adaptive Management Program for Glen Canyon Dam. The challenges are significant, but the positive and proactive approach exhibited by the Secretary's Designee is encouraging, and we are hopeful that the Glen Canyon Dam Adaptive Management Program will benefit from her leadership.

The Secretary needs to move this program toward its goals employing the best available science to achieve the primary intent of the Grand Canyon Protection Act of 1992... to "operate the dam to preserve, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were formed, including natural and cultural resources and visitor use."

Andre Potochnik (ADAPTIVE MANAGEMENT WORK GROUP REPRESENTATIVE) and *John O'Brien* (TECHNICAL WORK GROUP REPRESENTATIVE)

Grand Canyon Assult

ONE CAN ALMOST IMAGINE Grand Canyon holding its breath, waiting for the next onslaught of too-rapid human-induced change. The most profound of these changes to the Colorado River ecosystem in Glen and Grand Canyons have been the construction of Glen Canyon Dam and the introduction of tamarisk, a highly invasive non-native shoreline shrub. All ecosystems on Earth have been subjected to rapid ecological changes, and Grand Canyon's river system is a leading example. However, the next fast change, and one promising to be as great in magnitude, is the introduction of a non-native biological control agent—a small striped leaf beetle that only eats tamarisk foliage.

Although well intentioned, humanity's success with biological control has been less than satisfactory. Disasters in biological control range from the introduction of mongoose into Hawaii, which have eaten what's left of the native lowland bird fauna towards extinction, to the introduction of non-native thistle weevils that now threaten endangered native thistles in the United States. Many biological control efforts have had serious unintended consequences. In the case of the tamarisk leaf beetle, the beetle was supposed to be released only north of 38° latitude and never into the range of the endangered southwestern willow flycatcher (swFL) in Arizona and southern Utah. Oddly, swFL apparently prefers to nest in tamarisk, and defoliation of the exotic shrub in Arizona may spell doom for the little songbird. As one of only a few endangered riparian birds in the region, swFL serves as an important "umbrella" species, in that protecting it also protects more than two dozen other riparian bird species that nest in tamarisk: loss of habitat for one species (swFL) means loss of habitat for all.

The beetle population is eruptive, and has quickly moved southward or westward from its release sites in Texas, Colorado and Nevada. The beetle was only expected to move tens of meters per season versus at least forty miles now documented. The invasion process in southern Utah sped up considerably through several releases (without the required additional environmental compliance agreed to by the Department of Agriculture) in the lower Colorado and Virgin River basins. By summer 2009, the beetle reached Page, Arizona and at least fifteen miles downstream from Lees Ferry in Grand Canyon. Next year, 2010, the beetle will likely begin to defoliate tamarisk during the spring and summer months, when swFL and other riparian birds use the

plant as nesting habitat and feed on insects that feed on tamarisk. Beetle-defoliated plants look like they were burned, and the loss of June shade along the river may considerably alter some rafting trip experiences.

The leaf beetle is a northern species, and needs the longer summer days of higher latitudes to produce two generations per summer. At lower latitudes it may undergo only one generation per year, rather than two generations, and while that single generation will feed on, and most likely defoliate tamarisk plants, the plant will likely recover in late summer and fall, and therefore not perish from beetle attack, at least for some time. Ironically, the leaf beetle may defoliate tamarisk during the only period in which the plant provides useful bird habitat, but may allow the plant to recover during the latter half of the growing season.

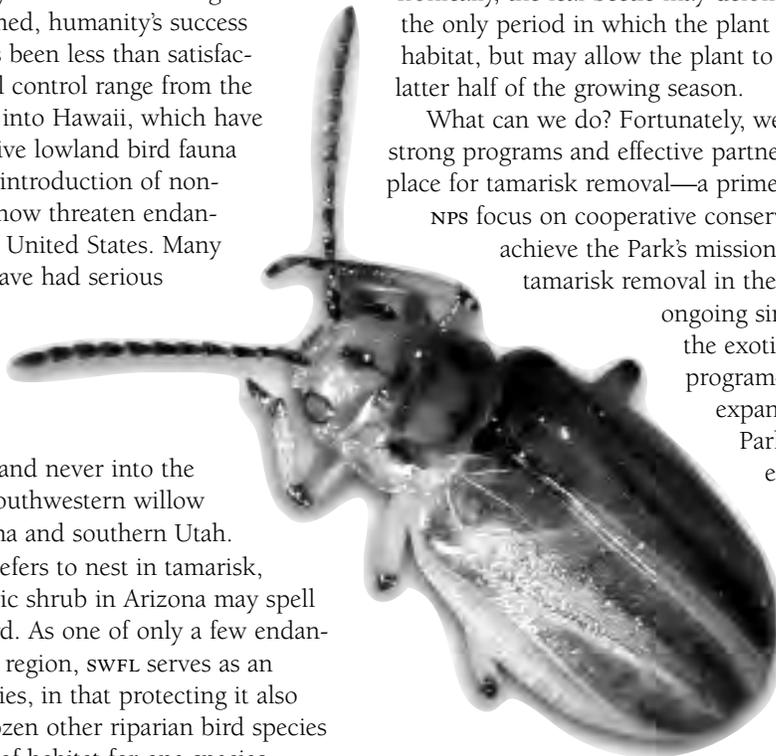
What can we do? Fortunately, we can build on the strong programs and effective partnerships already in place for tamarisk removal—a prime example of the new

NPS focus on cooperative conservation to better achieve the Park's mission. Large-scale NPS tamarisk removal in the tributaries has been

ongoing since 2000 as part of the exotic weed control program—an important and expanded focus for the Park. The tributary effort has been supported by significant funding from the Arizona Water Protection Fund with project partners such as Grand Canyon Wildlands Council, Inc., Fred Phillips

Consulting, and Grand Canyon Trust. The same concerns over loss of potential swFL habitat have limited the Park's tamarisk control efforts along the mainstem. Except, that is, at two sites where Grand Canyon Wildlands Council partnered with Glen Canyon National Recreation Area, to remove dense mature tamarisk stands and restore/revegetate with native riparian trees and shrubs. This work is now providing new insight into remote wilderness-compatible riparian restoration techniques.

In light of the pending loss of tamarisk cover throughout Grand and Glen Canyons all project partners agree that tamarisk stand removal and native revegetation is urgently needed and at a scale that is sobering.



The hydrologic regime and sediment grain size of alluvial deposits along the Colorado River below Glen Canyon Dam prevent Goodding's willow and Fremont cottonwood regeneration without direct planting, and irrigation until their roots reach the water table. Native beavers, whose populations are favored by post-dam conditions, chew away at any of these trees that are not protected by fencing. In a recent analysis of historical photography, Grand Canyon Wildlands Council has been able to demonstrate that native tree willow and cottonwood existed at 23 locations along the river. At these sites, the NPS and its collaborative partners can appropriately proceed to remove tamarisk and revegetate with native plant species. The willow/cottonwood report documents the locations, the estimated time and staff needed to remove tamarisk and replace it with native vegetation. In another effort, Grand Canyon Wildlands Council has prepared a river corridor riparian revegetation plan for Glen Canyon National Recreation Area to remove all tamarisk from Glen Canyon Dam to Lees Ferry. Additionally, the recent work at Hidden Slough, a remote site upstream from Lees Ferry, provides a good understanding of the challenges and costs associated with the effort, and should help to minimize habitat and bird life losses associated with the pending reduction in tamarisk canopy.

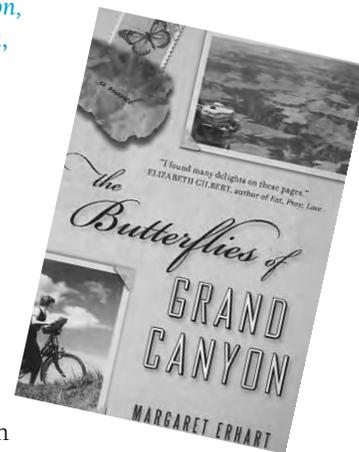
Whether or not you believe that the tamarisk leaf beetle is a good idea, is moot now... The beetle is here and the time for action is upon us. Significant funding, good planning and lots of hard work are needed. What a great opportunity to rewild the riparian habitats of the Colorado River downstream from Glen Canyon Dam. Anyone care to join in the adventure of restoring native vegetation to the Colorado River in Glen and Grand Canyons?

Larry Stevens and Kelly Burke
GRAND CANYON WILDLANDS COUNCIL

At www.grandcanyonwildlands.org you can view a powerpoint presentation given to the Glen Canyon Dam Adaptive Management Workgroup on the tamarisk leaf beetle and you can download the Goodding's Willow report and the earlier report for the Arizona Water Protection Fund about Lees Ferry restoration and tributary tamarisk removal. Additional resources including the Hidden Slough report and the Glen Canyon Riparian Revegetation Plan will be posted here as they become available. You can find contact information or donate to the project securely online from our website, follow us on twitter, and join our cause on Facebook. We would love to hear from you with ideas about restoration, funding, and collaborations.

A New Book

The Butterflies of Grand Canyon,
BY MARGARET ERHART, PLUME,
\$15 PAPER (352P) ISBN 978-0-
452-29549-0. (DECEMBER
RELEASE.)



THIS FIFTH BOOK BY Erhart is a lively novel set in Grand Canyon, 1951. Filled with mystery and romance, it details the all-too-familiar story of someone first falling in love *with* the Canyon, and then falling in love *in* the Canyon. Young Jane Merkle arrives in Flagstaff with her older husband, a bit out of her element and most certain that home is in St. Louis. But, much quicker than she could've imagined possible, she's eddied out in Northern Arizona (while her husband returns to Missouri) and now longs to call it home. Her sister-in-law's blue jeans replace her prim dresses and a butterfly net from her brother-in-law takes the place of her country club tennis racket. She is captivated by the American West and, not long after that, captivated by ranger Euell Wigglesworth. And as she is drawn into the romance of Grand Canyon, so too is she drawn into a murder mystery with a cast of characters sure to delight; while the fictional characters are wonderful, some of Erhart's other characters are people we already know, people we already love. I felt like I was eavesdropping on ghosts as I read a conversation between Lois Jotter and Elzada Clover, set thirteen years after their infamous trip with Norm Nevills. It was so fun! And it's not just Lois and Elzada (who plays a bit of an amateur sleuth in this story): Emory and Ellsworth Kolb are there, and Emory's at the heart of the murder mystery; Louie Schellbach and Superintendent H.C. Bryant are there too. But don't just read it for the Grand Canyon super star historical figures, or for the wonderfully believable fictional characters, or any of the great natural and human history included in this book. Read it also because it does a fantastic job of taking you to Flagstaff and Grand Canyon, and, well, it's fast and fun to boot (kinda like a rapid, but not). It's perfect to bring on a river trip or hike, when most likely you'll be all wrapped up in talking or learning about the amazing natural and human history. But I think it may become most popular as an off-season read, because it'll transport you right back to the places you love. Erhart's vivid prose will encourage you to relive memories.

Nicole Corbo

2009 Fall Rendezvous— Kane Ranch: North Rim, Arizona

WE POSED THE QUESTION, “What do October skies, cowboys and river guides have in common?” Well, those of us who attended the 2009 Fall GCRG Rendezvous on October 17–18 at the Kane Ranch found out there were many answers to that one simple but thought-provoking question. As we drove down Highway 89 in AZRA’s van loaded with coolers of coca-cola, tecate, chicken posole and frybread fixings, it was a familiar and well-traveled road to our summer home, the Colorado River. With the AZRA van driven by Craig Ahrens, six boatwomen including GCRG’s lovely executive director Lynn Hamilton set off to Kane Ranch, which is owned by the Grand Canyon Trust, to meet up with the Trust folks and GCRG members for the weekend. Early this year, The Grand Canyon Trust invited members of Grand Canyon River Guides to Kane Ranch to host their annual Fall Rendezvous, and we were never more excited to spend time learning about an area not many visitors nor river guides get to explore at the invitation of the landowners.

We drove over the Navajo Bridge and waved at the

Colorado, shot past the familiar turn-off to Lees Ferry, and drove onto Cliff Dwellers to pick up Doc Nicholson and partner along the way to the ranch. Unfortunately, due to someone’s (the driver’s wife’s) wrong directions we got to glance at Tim and Simone’s homestead while making a u-turn in front of their house.

As we pulled onto the Kane Ranch road we found GCRG member and GTS/Fall Rendezvous regular Jim Mackenzie weaving one of his popular and coveted drag bags he so graciously donates to the GTS raffle each year. We said our hellos and got to driving down a very dry, dusty washboard road that would give any reservation back road a run for its money. Nonetheless, it was not bothersome as the wide expansive land and clear blue skies before us captured our attention and awed us with her beauty. As we drove up to Kane Ranch, we saw huge corrals made out of wood and stabilized with rock and a couple of beautiful structures that were obviously well-maintained as they passed through several ownerships including current owners, Grand Canyon Trust.

At the ranch, we were greeted by Phil Pearl from the



photos by Lynn Hamilton

Trust who took us on a tour of the historic Ranch house, which included photographs and information about the early stages of the Ranch. The Ranch quarters are impressive as it included a meeting room, small kitchen, bedroom, outdoor toilets and a shower. Most impressive was the front porch view, complete with rocking chairs, views of the Vermillion Cliffs, the top of South Canyon, Saddle Mountain, and an expansive view of a small piece of the beautiful Colorado Plateau. No freeways, semi-trucks, Wal-Marts or Starbucks to spoil the view. After the arrival of folks from GCE, CANX, OARS, AZRA, OU, the Trust and Park Service, we made lunch provided by GCRG using a kitchen generously provided by Moki Mac.



Afterward, the Trust, led by Phil Pearl and Rick Moore welcomed us with an overview of the Ranch's history and current projects. Kane Ranch, including Two Mile Ranch, was a joint purchase by The Grand Canyon Trust and The Conservation Fund in 2005 in hopes of restoring and maintaining the ecology, scenic and cultural values of the area and working collaboratively with local land management agencies across a diverse ecosystem of 860,000 acres. The grazing permit that comes with ownership of Kane and Two Mile Ranch specifies that the land must be livestock grazed at a certain level, or risk the chance of losing the permit. Currently, the Trust is operating the grazing permit at approximately 400 head of cattle rotating between winter and summer ranges, even though the permit states the land is capable of grazing up to 15,000 head of cattle. The historic high was once over 40,000 head of cattle which is hard for us city dwellers and Bashas/Safeway loyalists to imagine. The Trust uses student researchers to assess the detrimental effects over-grazing has had on these critical desert grasslands.

Afterwards, Rick Moore spoke about the Trust's relationship with the Bureau of Land Management and the U.S. Forest Service, and about recognizing the cultural significance of the Ranch area to local Native American tribes. Thankfully, there is a program that brings the respective tribes and federal agencies together to communicate on how to appropriately manage archeological sites significant to the tribes.

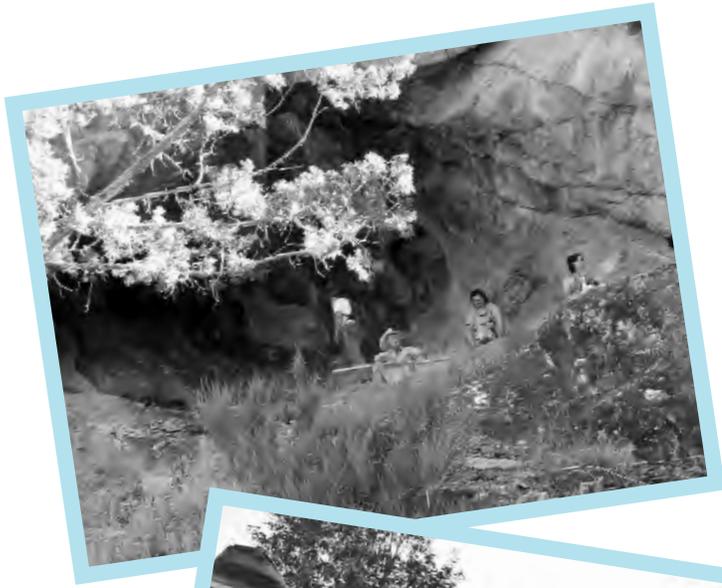
After a brief question and comment session with the Trust, an environmental and archeology educator Wade Parsons with the Utah BLM, shared his knowledge about the history of the Ranch and surrounding areas. From



cattle companies, to Mormon history, to cowboy tales and the Roll Away Saloon, Wade's talk was entertaining and educational.

As the early afternoon talks came to a close, plans were made to break into groups to explore our hikes of interest which included South Canyon, back up into a canyon behind the Ranch, or just sitting contentedly on the front porch of the Kane Ranch house. A majority of the group hiked back up into the canyon behind the Ranch where there are springs that feed drinking water to the Ranch livestock and numerous archeological sites and artifacts that are not as evident to the human eye. We set off after Wade Parsons, exploring the canyon for petroglyphs, pot sherds, and ancient rock structures. Along for the hike came Connie Tibbits and her gorgeous painted quarter horse, and a couple of us were lucky to get a short ride.

After a couple of hours or so, we all met back at the Ranch to lounge on the front porch, make introductions



and shoot the breeze before dinner. Sitting back on rocking chairs, cracking open a cold beer or coke, laughing, deep conversations, and looking out onto the Colorado Plateau...couldn't get any better, right? Well, actually it did because dinner preparations began with warming up Emily's wonderful home-made chicken posole, fresh salad fixings and my frybread demonstration and training. What a way to end an amazing day of learning and hiking with good people...orange red sunset for our kitchen view, frybread with honey or with some delicious posole and Bert Jones' scrumptious brownies made with bananas. Perfect! After sunset, folks either sat/stood around on the porch or around the campfire conversing under the beautifully expansive sky dotted with stars and the Milky Way. By the light of the fire, Jim Mackenzie showed a couple of us on how he weaves his coveted drag bags while the rest planned on buying GRS raffle tickets and relying on good karma in hopes of owning the bag. One by one or two by two, folks began drifting off to their camp and warm sleeping bags to catch a glimpse of the beautiful night sky before dozing off. We woke up to a stunning sunrise that cannot be matched in any photograph or on any



widescreen plasma television screen. As the sun began to climb the horizon, we injected IVs of coffee and cold breakfast into our systems to get ready for another amazing day on the Ranch.

We started Sunday activities with a fascinating briefing on the proposed uranium mining in the Grand Canyon from Roger Clark, Air and Energy Director for the Grand Canyon Trust. First, Roger spoke about the ban on environmental groups by the Hopi and Navajo tribes which claim that those organizations are hurting the tribal economies by fighting against their biggest money makers, coal mines and power plants. Second, Roger gave an update on the October 15 public meeting on uranium mining with the BLM where the Havasupai elders took over the meeting for thirty minutes singing prayer songs and initiating a round dance. Lastly, he talked about the proposed uranium mining components including how the mining companies are using the outdated 1872 Mining Law to their advantage which essentially allows corporations and individuals “free and open access” to more than 350 million acres of public lands across the Western United States.

As a Navajo Nation citizen, GCRG board member and river guide, I spoke passionately about coal and uranium mining and the effects of mining, including job loss and cancer, on my own family. In addition, I pointed out that the public support of the ban on environmental groups by Navajo Nation President, Joe Shirley, is not supported by all Navajo Nation citizens. I stated, “Just as former President Bush did not represent all Americans, Navajo President Shirley does not speak for all Navajos. These environmental groups that he is banning from the reservation are the same organizations that have been helping Navajos and other tribes fight against environmental atrocities such as uranium mining. Some of us are ashamed of his two-faced politics and are standing up and voicing our opposition.”

To end the session, Roger handed out maps of the proposed mine locations and a fact sheet regarding public comment deadlines and Environmental Impact Statement (EIS) facts.

After a quick breakdown of the camp kitchen and camp gear, some of us parted ways until the next gathering, river trip or Lees Ferry pre-trip rendezvous and some of us made plans to do one last hike. As we packed up, we looked around at a place that has a history that very few river guides have had the privilege

to experience. Although our stay was brief, we learned a lot about this area that is obviously beautiful and serene yet vulnerable to modern development and ecological damage. Phil Pearl of the Trust said, “One reason the Trust is stepping up their outreach to the guiding community is that river guides have access to thousands of visitors to the Grand Canyon each year.” At GCRG we agree that our access to visitors is unique as we spend many days showing them a wonderful place, which



some of us consider our second home—a home that has magnificent environmental and scenic qualities that visitors are hungry to learn about. We enjoy telling them stories about Captain John Hance and Major John Wesley Powell, but as stewards of Grand Canyon, we also need to educate them about the environmental victories and environmental challenges of this special place. Grand Canyon and its watersheds are our collective responsibility to protect, now and always.

Many thanks to our wonderful hosts, speakers, and volunteers who helped make our Fall Rendezvous at Kane Ranch such a great experience!

Nikki Cooley

Grand Canyon Reading List

LAST AUGUST I did a history-oriented Grand Canyon trip with Grand Canyon Expeditions, and as always, in the course of the trip, I referred to a number of books written by early explorers and residents of the Canyon. At the end, some of the guests asked me for references to those books, and I put together a quick, “off the top of my head” list of the standard works that I always use to prepare for the history trip. After consulting with some other Grand Canyon historians and aficionados, we came up with the following list.

Before I launch off into that, though, I should say that some of these are long out of print; some are rare even books. They might be a bit hard to find, but like the hike to Nankoweap, well worth the effort. You can find just about anything on Amazon these days, or check your local library; even if they don't have it there is always Interlibrary Loan. The online catalog at the University of Utah (www.lib.utah.edu) lists over 300 titles, and the catalog at Northern Arizona University's Cline Library (library.nau.edu/), has many more. In fact, so much has been published about the Grand Canyon that you need a comprehensive bibliography, which, happily enough, is available online at www.grandcanyonbiblio.org. This bibliography by Earl Spamer is so comprehensive that I have yet to scoop him on anything, no matter how obscure; it really is “everything you ever wanted to know,” or read at least, about the Grand Canyon. Libraries are fine, but if you do happen to be a book collector or just really want a certain book I've mentioned, there's a great book dealer that specializes in Grand Canyon literature, Five Quail Books (www.grandcanyonbooks.com). Dan and Diane Cassidy have a great catalog of titles about the Grand Canyon and the Green and Colorado Rivers, and are great resource for such books—if they don't have it, it probably doesn't exist.

So now to the specifics. The best human overall history of the Grand Canyon is J. Donald Hughes' *In The House Of Stone And Light*. Published in 1978, it covers the entire range of human experience in the Grand Canyon, from the ancients to the miners to the tourists to the park managers. Very highly recommended. (Not to be confused with the song by someone of the same name—I always wondered if the guy who wrote the song was inspired by the Grand Canyon.) Hughes work is out of print but well worth the effort of tracking down a copy because it's not only comprehensive but delightfully written.

A basic primer on river running history is David Lavender's *River Runners Of The Grand Canyon*, 1985. Again, not to be confused with the DVD by Don Briggs. A lot of the same information, but in Lavender's elegant

prose. Lavender drew heavily on the Otis “Doc” Marston collection at the Huntington Library in California, and it's well worth reading. It has many stories of river trips that don't appear anywhere else, such as the story of Hum Wooley in 1903, the Pathe-Bray film trip in the 1920's, and so on.

Speaking of *River Runners Of The Grand Canyon*, the DVD version, the latest version dates from 2002; I found it with a Google search for \$24.95. You have to put in RR0TGC video or DVD, or search for the producer, “Don Briggs river runners.” Briggs is an old time river guide himself, and it's well worth the search. I enjoy it every time I watch it. There are also a number of other documentaries and films about the Grand Canyon, so many that I can't even list them all, *River of Stone* to *Wanda Nevada* (an obscure Brooke Shields vehicle that takes place in the Grand Canyon). One way to find them is to go to imdb.com (internet movie database), and put in “Grand Canyon” as the search term. I think they even list the “Brady Bunch at the Grand Canyon” (Season 3, episode #50–52, 1971, if you're interested!). Movies are also listed in Earl Spamer's bibliography.

Now for some more obscure sources. Unfortunately, there isn't a single book on Robert Brewster Stanton's experiences in the Grand Canyon. He wrote a 2000-page version of his experiences, but died before he could get his great manuscript published, so it's been mined, so to speak, by other editors and authors. One of the books that came out of it was *Colorado Rver Controversies*, edited by James Chalfant in 1932 (remember, I said some of these might be hard to find!) Another is *The Colorado River Survey: Robert B. Stanton And The Denver, Colorado Canyon & Pacific Railroad* / Dwight L. Smith and C. Gregory Crampton, editors. This is an edited version of the record Stanton kept of the railroad survey. Finally, in 1996, Robert H. Webb (no relation) published a book comparing the photos that Nims and Stanton had taken to today, using the same locations: *Grand Canyon: A Century Of Change: Rephotography Of The 1889–1890 Stanton Expedition*. I wrote a long article about Stanton for the *Canyon Legacy*, a journal published in Moab, Utah by the Dan O'Laurie Museum, that is available through them (*Canyon Legacy*, Winter 1991).

Of course the opposite is true of John Wesley Powell; I could write—as others have done—a complete historiographic essay just on Powell sources alone. Using our online catalog at the library where I work, there are almost 100 entries with Powell as a subject. So I'll start with his own work. His report, *Exploration Of The Colorado River And Its Canyons*, first published in 1875, has been through so many editions that I couldn't even

begin to count them. It is still in print and should be easily available at just about any bookstore. Then there are the journals; it's one of the most documented exploring expeditions in history, literally. Of the 21 men on the 1869 and 1871–72 expeditions, no less than 17 kept journals or wrote long letters to the hometown newspapers, as was the custom of the times. The journals and letters were gathered and published by the Utah State Historical Society in the 1940's, but those are long out of print and very pricey when you do find them. However, they have recently been reprinted by the University of Utah Press, so they are now easily available and cheap. One member, Frederick S. Dellenbaugh, became Powell's apologist and hagiographer and wrote an additional two books, *Romance Of The Colorado* and *A Canyon Voyage*, about his experiences. Then the two best biographies of Powell: Wallace Stegner's *Beyond The Hundredth Meridian*, published on the Powell Centennial in 1969, and *River Running West: The Life Of John Wesley Powell*, by Donald Worster. Stegner's book is worth it for his beautiful writing; Worster's is a masterpiece of the "everything you ever wanted to know" genre. Besides these there have been movies, documentaries, novels, plays, kids books, dozens of articles; really, I can't overemphasize how much has been written about JWP.

If you read about Powell you'll run across the story of James White, who supposedly floated through the Grand Canyon tied to a cottonwood log raft in 1867, two years before Powell's voyage. This has been a subject of dispute ever since, but one who never doubted the story was his granddaughter, Eilean Adams. She wrote *Hell Or High Water: James White's Disputed Passage Through Grand Canyon, 1867*, in part to answer the many critics, from Stanton on down, of her grandfather's story.

About the only 19TH century Grand Canyon river runner to leave an account about his travels was George Flavell, whose book is titled *The Log Of The Panthon*. Flavell was a trapper and hanger-on on the lower Colorado, down by the delta, when there was a delta, in the late 1800's. He amused himself by giving himself tattoos. One day he got the idea that he would float the whole length of the Colorado, starting in Green River, Wyoming, down to his home near Yuma, Arizona. So in the fall of 1896 he did so, with a companion, Ramon Montos. He built a small square-ended skiff he called the Panthon—no clue where the name comes from—and ran all but four of the major rapids on the whole 1000-plus mile stretch of the Green and the Colorado, sitting on a box in the middle of the boat. A very engaging and charming book with a lot of wit and humor.

Some other river runners, then. One I always like to talk about is Julius Stone, who was an investor in Stanton's great mining scheme in Glen Canyon, met Nathaniel Galloway, and became intrigued by the river.

At the end of his life Stone published a book of photos and his memories called *Canyon Country: A Romance Of A Drop Of Water And A Grain Of Sand*. Galloway, not one to write much that has survived, features largely in Stone's book.

Along the same vein is *Through The Grand Canyon From Wyoming To Mexico*, by Ellsworth Kolb. The book, about their 1911 film trip, is engaging and an easy read. Again, it's been through something like 40 editions, so it's pretty easy to find. The Kolbs had a photo studio on the South Rim, and after hearing about Stone and Charles Silver Russell and so on, decided they wanted to go down the river and make the first motion picture. They did so in the fall of 1911 and the winter of 1912; the two brothers had a falling out in the 1920's but Emery, the elder, stayed on the South Rim and showed that film every day, without fail, until the day of his death in 1976. If you are interested in the film, contact the Cline Library Special Collections and Archives at Northern Arizona University; but the book is well worth reading.

Another that's not specifically river running but about the Grand Canyon is *Dave Rust: A Life In The Canyons*, by Fred Swanson. Rust was the first person to start a tourist camp at the bottom of the Grand Canyon, Rust's Camp, which later became Phantom Ranch. This book details his efforts to get a tourist business established, and his love of the canyons of the Colorado Plateau.

Another canyoneer was the unintentionally hilarious Clyde Eddy, whose Grand Canyon voyage in 1927 is documented in his 1929 book *Down The World's Most Dangerous River*. Eddy was a veteran of the trenches in World War 1, and after the war became captivated by the Colorado River. He put together a trip of "pink-wristed collegians" along with Nat Galloway's son, Parley, a ne'er do well but a good river guide, and brought along a bear cub and a cur, "mostly Airedale," as human interest for a film he planned to make. Eddy's melodramatic style was meant to convey what a macho explorer he was, but it really is just funny. Read it with a grain of salt, and laugh at Eddy "snapping his teeth in defiance at the raging river."

I always talk quite a bit about the USGS survey of 1923, because it laid the groundwork for so much that has happened along the river since. A good book about it was recently published, *Damming Grand Canyon: The 1923 USGS Colorado River Expedition* by Diane E. Boyer and Robert H. Webb. Both Boyer and Webb are scientists but this is more than a dry recitation of the facts; they delve into the personalities and events that marked this important expedition. Another participant in the 1923 USGS survey was Lewis R. Freeman, who wrote two books about his experiences: *Down The Grand Canyon*, and *The Colorado River: Yesterday, Today, And Tomorrow*. One is just about the survey, the other is a general book about Colorado River history. Finally, another member of

the survey, and many other river expeditions, was H. Elwyn Blake, whose biography *Rough-water Man: Elwyn Blake's Colorado River Expeditions*, was written by his great-nephew, Richard Westwood. This is another great read about an interesting, and not well-known river runner.

So let's move forward in time a bit. Another important early river runner is Bus Hatch; my biography of Bus, *Riverman: The Story Of Bus Hatch*, is available from Fretwater Press (www.fretwater.com/Fretwater_Press/index.html) in a new and improved edition. Bus spent more time on the upper Green and its tributaries than he did the Grand Canyon but I wrote a whole chapter about the 1934 Dusty Dozen Grand trip, and added a chapter about his sons in the Grand in the 1960s, including the Bobby Kennedy trip in 1967. Hatch is still one of the best known and oldest river outfits in the Grand Canyon; they are on their third generation of river runners. Another of my books, *Call Of The Colorado*, published in 1994, contains many photos and stories about Grand Canyon river runners. It's out of print too but I keep threatening to bring it back to life.

Fretwater Press is also the place to find three superb books on river runners in the Grand Canyon by Brad Dimock, recidivist river guide and excellent author. These are *The Doing Of The Thing: The Brief, Brilliant Whitewater Carrer Of Buzz Holmstrom*; *Sunk Without A Sound: The Tragic Colorado River Honeymoon Of Glen And Bessie Hyde*; and *The Very Hard Way: Bert Loper And The Colorado River*. I can't recommend all of these too highly; Brad is an indefatigable researcher and a first-rate writer. All three are full of thrills, poignant scenes, tragedy, humor; really, you owe it to yourself to look for these, and a number of other titles on the Fretwater list. Tell Brad I sent you!

One river runner who had a great impact on the development of the modern river outfitting business was Norman D. Nevills. I mentioned that he was another of those characters, so common in Colorado River and Grand Canyon history, who was either adored or despised. (Powell is another; there is little middle ground in these disputes among scholars and readers!) For many years, after I processed his papers and wrote a finding aid, I struggled with the idea of a biography, but finally decided to let him tell his own story by editing and annotating his extensive journals, published by Utah State University Press in 2005. *High, Wide, And Handsome: The River Journal Of Norman D. Nevills* (the title comes from how Nevills used to describe running rapids) uses not only his on-the-spot diaries, but his extensive correspondence that are housed in the Nevills papers.

One of Nevills's passengers on a 1940 trip through the Grand Canyon was Barry Goldwater, future senator

and presidential candidate. Yes, before Goldwater became a presidential candidate, he was a river runner. One of his great ambitions in life, before bombing Vietnam back to the stone age, was to see the Colorado River through the Grand Canyon. So he signed on with Norm Nevills 1940 traverse of the length of the river, although he started in Green River, Utah, going through Cataract Canyon and all the way through the Grand Canyon. At the end of his long political career, he allegedly said that the only vote he ever regretted as a Senator was the one to dam Glen Canyon. His *Delightful Journey Down The Green And Colorado Rivers* is an excellent book with lots of photographs.

I also talked about Georgie White quite a bit; few characters are as well-known as Georgie, who also fits into that "love or hate" mold. Some saw her as a pioneer and loved her; others reviled her for turning river running from a macho expedition into something the whole family could enjoy. At any rate, she was definitely a character; there I was...No, seriously, I won't go into my own Georgie stories, but will recommend highly Richard Westwood's 1997 biography, *Woman Of The River: Georgie White Clark, White-water Pioneer*. I'm not saying this just because I wrote the foreword, it really is an excellent book; he goes beyond the usual "there I was" to explore the transitional phase of river running history in the Grand Canyon, and tells a heckuva lot of good Georgie stories along the way. Georgie wrote her own "autobiography," *Georgie Clark: Thirty Years Of River Running*, in 1977, but Westwood's book is much better.

The 1950s were a transitional period in river running in the Grand Canyon, between the time of macho men wearing engineer boots in wooden boats and the dawn of the inflatable raft and the river runner. A couple of guys who were less than impressed with the former's tales of derring-do in the Canyon were Bill Beer and John Daggett. In 1955, they decided to prove that the Grand Canyon wasn't so tough, so they bought "rubber shirts" and set out to swim down the Colorado River through the Canyon. Bill Beer's book about it, *We Swam The Grand Canyon: The True Story Of A Cheap Vacation That Got A Little Out Of Hand*, is one of the funniest and most enjoyable books about the Grand Canyon that you'll find. There are so many great stories from their trip; when his partner, John Daggett, got caught under the big rock at President Harding rapid; when they stared down the Superintendent of Grand Canyon National Park, and many other occasions. One of my favorite quotes about life in general comes from this book, Beer's comment about running Lava Falls—"suddenly I relaxed; there were no more decisions to make." I think about it every time I feel the current catch me at the top of a rapid, or when the jet starts to accelerate down the runway.

And speaking of transitions, in 1960 a long-sought goal of running upriver through the Grand Canyon (don't ask me why, it just was!) was finally reached. The only full accounting of this epic is [White Water: The Colorado Jet Boat Expedition](#), by Joyce Hamilton. This feat, accomplished with New Zealand-designed jet boats, was the last time this was allowed by the NPS. It took me a while to find it, because the title is two words: white water. I did see it on Amazon but pretty pricey; try inter-library loan. There was a film made about this event by the Indiana Gear Works Company, which had something to do with the production of the jet boat engines; that's where Don Briggs got all the footage of the upruns that you'll see in the DVD [River Runners Of The Grand Canyon](#).

Now to finish up with some more modern sources. One that a lot of boatmen like to read stories from is [There's This River: Grand Canyon Boatman Stories](#), edited by Christa Sadler; it's out in a new edition. Another great book, focused on women river runners (who like to be called "boatmen," by the way, despite Louise's title) is [Breaking Into The Current: Boatwomen Of The Grand Canyon](#), edited by Louise Teal. Another compilation of more modern river stories, with plenty of "there I was" but also plenty of tales of how hard it was for a woman to break into the river guide world in the 1970's and 1980's. For those with a taste for the more macabre, there is [Over The Edge: Death In Grand Canyon](#), by Michael Ghiglieri and Tom Myers. Michael is a long-time river guide, while Tom is the former emergency room doctor on the South Rim; together they present many harrowing and tragic tales of people who met their ends in a beautiful place. You'll be surprised at how few such things actually happen on the river; it's usually a case of "Hey, hold my beer and watch this!" up on the rims. Ghiglieri also describes his experiences as a river guide in [Canyon](#), published in 1992. His doctorate in primate anthropology gives him an interesting perspective on river guides.

Then there are two books by a couple of my favorite authors, Colin Fletcher and Ann Zwinger. Fletcher, also the author of the 1963 [The Man Who Walked Through Time](#), about his solo hike through the Grand Canyon, came back in 1997 to solo down the river, and the result is [River: One Man's Journey Down The Colorado, Source To Sea](#). A reflective, introspective book about the river and his own life and work. Ann Zwinger, naturalist, is the source of my oft-used quote, "Days of the week have no meaning, nor do eons or epochs. Time is only today on the river and tonight on the sandbar," which I bring out anytime someone asks what time it is. My favorite work of hers, [Run River Run](#), is about the Green; but she also came down the Grand Canyon in 1995 and wrote [Downcanyon: A Naturalist Explores The Colorado River Though The Grand Canyon](#). Another elegant writer.

I'd also highly recommend the collected writing to be found in the [Boatman's Quarterly Review \(BQR\)](#), the official organ of Grand Canyon River Guides. You can read many of them online at [www.gcr.org](#). The BQR contains history, musings, poetry, artwork, and news about the Grand Canyon guide community, and each issue also includes an interview with a veteran guide, brought to you by GCRG's Colorado River Runners Oral History program in partnership with Northern Arizona University's Cline Library. GCRG is one of the best organizations around, and you might consider joining up.

Finally, another organization that is well worth joining is the Grand Canyon River Runners Association, a group specifically for people who love the river in the Grand Canyon. You can find out how to join, and read their fun and informative newsletter, [The Grand Canyon River Runner](#), at [www.gcriverrunners.org/](#).

This list only dips beneath the surface of what is a huge body of work about the Grand Canyon; enough, Captain John Hance might say, to fill up the canyon. And I'm sure I've left some good books and sources out, since this is right off the top of my cluttered head. So go to your library, log on to Amazon.com, check around on eBay, and settle back with a good read about the one and only Grand Canyon. It's not the same as shading up in Redwall Cavern or running Lava Falls, but it'll keep you until the next trip. See you on the river!

Roy Webb

Back of the Boat— The Whale Foundation News Bulletin

2009 FALL MENTAL HEALTH AND LIAISON TRAINING

THE WHALE FOUNDATION's Health Services Committee held its annual Fall Mental Health and Liaison Training on October 5TH at the Wilderness warehouse in Page. Dick McCallum and Norm Hanson, the workshop presenters, informed attendees about the Whale Foundation's services and taught active listening skills for attendees to use on the river and off. As always this workshop was free and open to all members of the river community. *A Big Thanks* to the good folks at Wilderness River Adventures for their great hospitality! Stay tuned for future trainings.

WINGDING VIII

The eighth annual WingDing will be held on Saturday, February 20, 2010 from 6–11 P.M. at the Coconino Center for the Arts, 2300 N. Fort Valley Road, Flagstaff (behind Sechrist School.)

This Grand Canyon river family rendezvous and fundraiser is a great gathering and whale-sized undertaking for about 350 folks. We'll have dinner and music, live and silent auctions with lots of beautiful art, books, services, and getaways donated by the river community. We are looking for volunteers to lend a hand with food, beverages, registration, auctions, set up and clean up. If you'd like to help with the planning and execution of this fabulous celebration, we'd love to have you join the team! Just give us a call at 928-774-9440.

GTS HEALTH FAIR

We want to remind everyone of the Whale Foundation's upcoming Health Fair at the spring GTS on Saturday, March 27TH at Hatchland. Our healthcare professionals will provide blood work vouchers and free screenings including skin cancer, blood pressure, diabetes, cholesterol, plus oral examinations plus more. We encourage those uninsured—or under insured—members of the river community to take advantage of this *free* \$750 value.

WHALE FOUNDATION BOARD OF DIRECTORS

In 2009 the Whale Foundation welcomed new Board members: Alida Dierker, Sarah Hatch, Elena Kirschner, Christa Sadler and Derik Spice. We thank these individuals, our other Board of Directors, our Health Services Committee, our WingDing Committee—as well as the many others—for donating their considerable time and talents in support of our community. If you are interested in volunteering for the Board or in other capacities,

please give us a call at 928-774-9440. We look forward to hearing from you!

The Whale Foundation
P.O. Box 855, Flagstaff, AZ 86002
Toll Free Help Line: 877-44-WHALE
Business: 928-774-9440
Web: www.whalefoundation.org
Email: whale@whalefoundation.org



They're Watching.

Susan Detering.

Guide Profile

Steve Lonie, Age 61

WHERE WERE YOU BORN & WHERE DID YOU GROW UP? Portland, Oregon.

WHO DO YOU WORK FOR CURRENTLY (AND IN THE PAST)? AZRA, GCY, Colorado Outward Bound School, Prescott College, freelance “hoods-in-the-woods” and disabilities trips.

HOW LONG HAVE YOU BEEN GUIDING? Since 1979.

WHAT KIND OF BOAT(S) DO YOU RUN? Oar, paddle, sportyak, kayak, of a blue moon, and with much coaching, a motor-rig.

WHAT OTHER RIVERS HAVE YOU WORKED ON? Yampa, Green, San Juan, Verde, Salt, Salmon Poudre, Eel, Koyakuk, Cataract.

MARRIED/FAMILY/PETS? My family and pets are not married; they enjoy their anonymity.

SCHOOL/AREA OF STUDY/DEGREES? The Evergreen State College; Journalism.

WHAT MADE YOU START GUIDING? It was an accident. I think. I started climbing mountains to get out of the newspaper office I worked in, fell part way into a crevasse, and decided this mountain climbing business probably shouldn't be self-taught. Willi Unsoeld, my counselor at Evergreen, recommended I go as an exchange student to Prescott College, take an (as it turned out, excellent, thanks to Mike Goff) search-and-rescue class, and study something besides journalism that would, perhaps, fulfill my life better than the way more than adequate journalism credits I already had for a degree, like philosophy, religion, and the like. (He was somewhat esoteric at times. Perhaps always). Since there

were no mountains nearby, I started climbing rocks. (Kids, eh?). Then some “friends” corralled me into rowing a boat down the old muddy so they could



kayak. That was a comedy of errors with a confederacy of dunces. But...I was hooked. Then I got an invitation to go on an Outward Bound training/hiring trip on the Yampa. I'd heard enough from both students and instructors about Outward Bound to know it wasn't my ilk, (little action, lots of talking), but I pretended I wanted a job because I had heard a lot about the Yampa, and it was a free trip (suckers). As it turned out, both Outward Bound and the instructors were pretty standup, they offered me a job, and I took it. (Who's the sucker?)

WHAT BROUGHT YOU HERE? Well, it's a pretty big hole in the ground.

WHO HAVE BEEN YOUR MENTORS AND/OR ROLE MODELS? Well that's a tough one, because anyone I meet that is admirable and outstanding is, to me, a mentor. But honestly, the two most influential people in my life were my grandfather (the most honest person and politician I ever met), and Willi Unsoeld, who was pretty damn frank. He cut to the quick; sometimes stung it. In the Grand Canyon, Lynn Myers. The first time I met him he had just come back from a sojourn working (or getting worked by) the Zambezi, the Futalefu, the Bio Bio. I was in awe. I thought highwater Cat was tough, so I said, “Well, Lynn, how was the Futalefu?” All he says is, “Well...it's just a river.” You have to know Lynn; there's no arrogance there. He's just that matter-of-fact.

WHAT DO YOU DO IN THE WINTER? Winter has varied from off season trips for the park (archaeology, trail crew, resource trips), working in the AZRA office, teaching at Prescott College.

WHAT'S THE MOST MEMORABLE MOMENT IN YOUR GUIDING CAREER? Describing to a blind woman on a disabilities trip the schist, and its sunlit colors, while she ran her hands across it. She said, “I can see the colors!” I said, “Cool!” She said, “No it's not. Sit me down. That's my aura. I'm also an epileptic.”

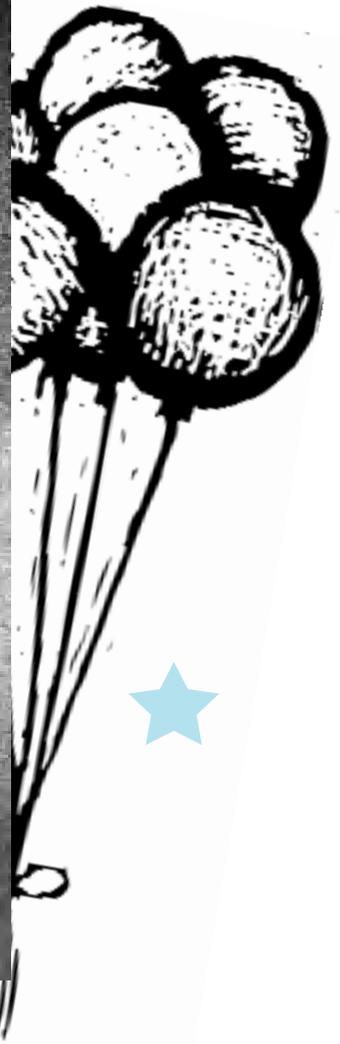
WHAT'S THE CRAZIEST QUESTION YOU'VE EVER BEEN ASKED ABOUT THE CANYON/RIVER? How much does the Canyon weigh?

WHAT DO YOU THINK YOUR FUTURE HOLDS? I hope it holds tight, or at least, it holds water, as they say.

WHAT KEEPS YOU HERE? Presently, this interview. Sometimes I feel like I'm “in utero” down there, so encompassing is the place. Very calming.

140th Anniversary

ONE HUNDRED AND FORTY YEARS AGO, on Aug. 29, 1869, John Wesley Powell and his remaining crew of five, Jack Sumner, George Bradley, Walter H. Powell, Andy Hall, and Billy Hawkins, passed the Grand Wash Cliffs, thus completing the first intentional, documented expedition on the Colorado River through the Grand Canyon. There were no photographs taken because no photographer accompanied the trip. Shown here is a ca. 1869 photograph of Major John Wesley Powell (NAU.PH.268.1.5).



100th Anniversary

ONE HUNDRED YEARS AGO, in 1909 businessman Julius Stone organized the 7TH Grand Canyon river trip and hired Nathaniel Galloway as boatman, thereby making Galloway the first person to do two Grand Canyon runs. A pleasure trip, Raymond Cogswell was the photographer and gritty Seymour Dubendorff the third boatman. The Galloway/Stone-designed boats make their debut (NAU.PH.97.34.287). Also shown are two views looking upstream at 232-Mile Rapid (background photo) and Lava Cliff Rapid (NAU.PH.97.34.279 and NAU.PH.97.34.297).



Cam Staveley

MY BROTHER AND I both had done a bit of rowing—when we lived in Mexican Hat during the winter—we were out at Hite in the summer. My folks were anticipating Lake Powell coming up. I believe it was '62 when we actually first moved out there, might have been '61. But anyway, we were out there at Hite in the summers and they were trying to get a store and quasi-marina set up out there.

We had one of the old Nevills San Juan boats, and that was our craft of choice. We would spend hours, days, just down there rowing that thing around the lake and exploring, and rowin' all over the darned place. So that was our exposure to rowing.

My first Canyon trip was in 1969, and that was via the Cataract boats. That year my dad [Gay Staveley] was doing the Powell Centennial, the retracing of Powell's trip—as much as he could. Of course there are a few obstacles in the way (chuckles)...in the way of dams and such. But anyway, my brother Scott and I were both on that Grand Canyon segment. That was quite a thrill for me. I was thirteen years old, and my brother was ten and a half. So that was a pretty cool deal. That was actually the last year that the Nevills boats ran. I think my brother and I both, we were like pinching ourselves. We couldn't believe...I mean, this was an important trip. We'd been down the Juan, but we *knew* from listening to the folks and just all the dynamics that were goin' around—boat prep and all that kind of stuff—that this was a big deal. And my dad put an extra boat on that trip so we could go, because he wanted us to go. So that was powerful. That was really, really powerful. It was amazing. There are little things that happened on that trip...stopping to scout Soap Creek. Of course we did a lot of scouting, and we lined some things, which was scary. (chuckles) But standing up there with my dad and all the other boatmen, just listening to what they were talking about, and looking to see what they were looking at, and really, for the first time, *looking* and seeing something—not seeing all of it, but beginning to really see that there was more than just

jumpin' in this boat and pushin' off shore and goin' for it. In fact, at Soap Creek, my brother took a swim there. He got washed off the stern of the *Sandra*, so that was pretty exciting for him.

But there were other things, like when we got down to Bass, Chuck Reiff put a hole—he hit a rock in Bass Rapid. I can't say...He was the only one that hit



Cam, Graylord Staveley, Fred Eiseman. Cam's first Grand Canyon trip, 1969.



1969 trip, Cam and his dad scouting. Learning on the Grand scale begins.

anything, and maybe he was just goin' for it. Whatever, it didn't make any difference. But we got down, pulled into North Bass Camp there. It was a significant hole. In fact, it was like *right* under his feet, as I remember. And so we had to take everything out and get the plywood and the screws and the glue.

STEIGER: Turn the thing upside down.

STAVELEY: All that stuff. You remember.

STEIGER: Boy, do I! (laughter) "Here we go again!"

STAVELEY: And there was a guy, and I don't remember who it was, but there was a passenger on the trip who

was trying to take pictures of the patch. And I kept standing in front of it. (laughter) He'd get the camera out, I'd stand in front of it. And Scott started doin' the same thing, and then finally he just said, "I need you to get out of my way." And I said (gruffly), "You don't need to take a picture of this." (laughter) My dad said, "Hey, it's okay. This stuff happens, it's not a big deal." But just feeling kind of protective, you know, about the whole thing. But yeah, that was incredible.

There was one of the liquor companies—Jim Beam—actually created a bottle, a Powell Centennial bottle. It

was a pretty classy bottle. I think Dad has one, in fact, I *know* he's got one. It's probably empty, but I'm sure he's got one. It was a real classy bottle. It was one of those things where you think, "Wow." You know? I mean, this was kind of a big deal. And there were some articles and stuff. It just didn't really do anything [for the company business-wise].

Then in Flagstaff in 1970, the family all kind of pulled together and worked in the front yard and in the garage, building my dad's first big boat—the motor-rigs [for Canyoners]. We were all involved in that from...everything—learning how to patch and doing lots of painting and stuff like that. We got on the river a couple of times that year, and then it was just kind of a slow graduation. 1970 was the first year...at the ripe age of fourteen or fifteen, I began really training to kind of become a boatman, or at least take the first few steps toward becoming a boatman down there. I think I did four or five trips that year.

Going to the big motor boats, now all of a sudden it wasn't just a boat, it's like, "Wow, you've got this big group of people."

STEIGER: Big group of people.

STAVELEY: Yeah. They're like right there, and you're part of the deal there, and they kind of look to you, this kid (laughs), asking you questions. Some things you know—a lot of things—most things you don't. But that was pretty amazing. And it seems ironic, but I think—maybe it was because we lined the rapids that we lined in '69—but on those trips in '70 is when I first realized the power of the river. I mean, you're on the stern of a Cataract boat, yeah, your face is the first thing hittin' everything. But it just didn't dawn on me. Maybe I was havin' too much fun. I don't know, I'm not even sure what it was. But we got in that big boat and all of a sudden I realized the power of that water down there—maybe because it would just push that big boat around like it was insignificant, it didn't really make any difference. I think there were other things: the boat would break a lot.

STEIGER: So you started—you were a boatman...at sixteen you were runnin' your own boat? (**STAVELEY:** Yeah.) That must have been pretty interesting, like you say, havin' all those people get on there, and you—they're goin', "Where's our boatman!?" (chuckles)

STAVELEY: Well, yeah. My dad would pair me up with



Joan Staveley and young guide Cam Staveley, 1971.

actual adults that were the maturity on the trip, and I was the driver, basically. I blew it a lot of times (laughs) dealing with people as a kid, not having those skills. It worked out, though. Even in those days you needed to have somebody that was—you had to be at least eighteen to be a trip leader. So I wasn't there. And in those days, it was kind of funny, I guess, but you could have a swamper who didn't know how to run the boat, but as long as they were eighteen, they could be a trip leader. (laughs) They've obviously changed things a little bit since then. But yeah, it was great.

It was a very different deal. The Canyon was different. The boats were different; there weren't hardly any people down there, relative to now. God, it was exciting. And what a great way for a kid to spend a summer. It was incredible.

* * *

You'd be hard pressed to find anyone in Grand Canyon with a more illustrious pedigree, or all-encompassing river resume, than Cam Staveley. This interview was done in late summer of 2005, under the auspices of a generous grant from Dan and Alida Dierker to the Grand Canyon National Park Foundation, as part of the Historic Boat Project.

(One of the cooler things that have happened in the

interim since this was recorded is, Cam's cousin Greg Reiff—with a lot of support from Cam's dad, Gay—has fixed up the SANDRA, a Cataract boat named after Greg's mom, and started rowing her on trips again.)

One of the cooler things about talking to Cam was, though he admits to being LUCKY right there on tape, after you do a trip with him, you realize that here's a guy who has always made his own luck too, and who really earned all the good stuff that's come his way so far.

(Hard telling where ANY of us would be without Cam's granddad and all that rippled forth from HIS endeavors...)

* * *

STAVELEY: My grandfather was Norman Nevills, and he offered the first commercial trip through Grand Canyon in 1938: Elzada Clover and Lois Jotter, the first two women all the way through—that memorable trip. He continued to run right up through 1949, a handful of trips, both in the Grand and Cataract Canyon, and even up in Wyoming. In September of 1949, he and his wife, my grandmother Doris, were killed in a plane crash—their own plane, in Mexican Hat. So that was in September of '49. I was born in '55. I just missed both of them by a few years, unfortunately, so I didn't know him, but I certainly like to think that I, in some way, am carrying on in his tradition.

Norm Nevills' initial boat was the San Juan boat. It was his very first boat, his honeymoon boat, we all referred to as "the horse trough." The "horse trough" was basically a dismantled outhouse, and it kind of looked like a horse trough. He kind of fixed/fastened it together with some tin and nails and lumber layin' around, and highway signs for oars, and things like that. That was the boat that he and my grandmother used for their little honeymoon trip, which was from Mexican Hat on down to Clay Hills. The San Juan boat actually was a great improvement on that boat, but it was still sixteen feet long, just like the Cataract boats. However, it had a square bow and stern. It wasn't a symmetrical boat, and didn't have any closed compartments, except the seat—the boatman's seat was a closed compartment. But otherwise there was storage space underneath both bow and stern decks. It was sixteen feet long, about five and a half wide, with about thirty inches or so from a chine up to the top of the gunwale. In that boat, you could actually carry four or five passengers, but many times he might not have had more than two. So that boat was used on the San Juan exclusively, and in Glen Canyon somewhat. Those were places where that boat, because of the nature of the water, you didn't have to worry about swampin' 'em too often.

STEIGER: So he didn't flip too many of those?

STAVELEY: Didn't flip *any* of 'em. There's a book written by Ernie Pyle, it's called *Home Country*. Ernie

Pyle actually drove through Mexican Hat and just happened to hear about this wild river man. So Ernie made the trip from Bluff down to the bridge at Mexican Hat. To read Ernie Pyle's description of *Gypsum*, you would think that you were in Lava. (laughter) It's worth going through it and reading it, because it's talkin' about this eight-foot or ten-foot wave that's crashing down. But *Gypsum*, at it's best, is maybe a two or three-foot wave. I mean, really, at it's best.

But anyway, yeah, those boats were just used in those two places. Then he modified that boat, that design, and made his Cataract boat...looking at some of the prior boats that had been built by Stone and Galloway and the Kolbs, and trying to come up with something that made sense for what he ultimately did, and was kind of given the idea to do, by Elzada Clover...which was to run the Grand. He'd thought about that, but not real, real seriously until she suggested it...Well, she basically was inquiring about what rivers he ran. She was out studying the desert cacti, and so she was just trying to get a sense of what he did. Obviously, she knew right away that he did the San Juan. But then she brought up the idea of a Canyon trip, and he kind of picked up on that and said, "Yeah, I was planning on doing that." But she really planted the seed, or at least pushed him over the edge.

STEIGER: And so they built three or four boats? Him and Don Harris?

STAVELEY: Right. In that first wave, there were three boats. They built those three in spring, 1938—the *Wen*, the *Botany*, and the *Mexican Hat*.

They were all just a little bit different but they were all generally the same design. The *Wen* [his dad's—William Eugene Nevills—initials] was a bit different than the other boats. That was *his* boat, his lead boat, and so it was bound to be a little bit different. You know, it's got the leather pouch or pocket up there behind the splash board for his clock. It's got an old jerry can in his seat on the right-hand side that he actually...kinda like the precursor to a 20 mil. (chuckles) What he did is, he took a jerry can, cut it in half, set the bottom down into the storage space in there, the air space down in the seat, and then he built a wood lid with a rubber seal to go around it, with a latch on it, so it sealed up real tight. And that's where he kept his maps. There may have been 20 mils before that, but he didn't have access to 'em. This is what he had.

STEIGER: Had a leather pouch with a clock in it?

STAVELEY: Well, he was pretty meticulous. If you look at his notes, when he's running, he's got everything: start time, "arrived at the top of Granite Falls at 12:15; finished lining at 3:14." He was very, very meticulous about keeping time. So yeah.

STEIGER: So he has journals for every trip and wrote down what happened throughout?

STAVELEY: Oh, yeah...They're with the family. I've got



Cam at age 2, 1958.

a few of 'em. I've got some of his maps and some of his stuff, but it's all largely still with the family. Roy Webb [historian and author of a book on Nevills] has some of that stuff at the Marriott Library in Salt Lake City.

My grandmother also...she was on the 1940 trip. That was the first time actually a woman had gone *all* the way through from Green River, Wyoming. Elzada and Lois had started from Green River, Utah. So Mildred Baker and my grandmother were the first two women to pretty much float the whole deal. My grandmother had a real interesting—it was beautiful—recounting of that story. But that was the only trip that she did. She handled logistics.

STEIGER: A common theme among the early river runners! (laughter) So he started the business, and it was like a trip a year, or maybe a couple of trips a year?

STAVELEY: They'd do typically one Grand trip a year. He was doing several San Juan trips. He was doing some Cat trips, doing Glen trips. He'd oftentimes run down to Clay Hills. But he also would oftentimes run down to Lees—just a little bit longer trip, kind of depending on what's goin' on down there at 13-Foot. That sometimes was a bit of an obstacle I guess.

They died in '49, and before they died—I don't recall exactly what year it was that he and Frank Wright got together—but it would have been somewhere between '47 and '48. Frank actually, as far as I can tell, was probably one of the better boatmen that's ever rowed a boat. Frank Wright, by all accounts, was a very humble guy, and he would certainly never tout himself. But he was very good. It started out as kind of funny. The story I heard, his brother had a welding shop in Blanding, and so he would work on my grandfather's truck and trailer,

all that stuff. The roads back then were dirt, and they were washed out. (laughs) But he was a mechanic for my grandfather. One day when Frank was in the shop my grandfather said, "Hey, Frank, you oughta come on down and just float from Bluff down to the Hat with me." "Ah, nah, I'm too busy." "Aw, you don't have anything to do. It's just gonna take a day." So he talked him into it. So the truck pulls up with two boats, and there's two folks over there that are gonna be passengers, and Frank doesn't realize that my grandfather and he are the

only two other people there. There's two boats. So Frank's just kinda helpin' load everything. The other truck's parked, and my grandmother is gonna take it back to Mexican Hat. Finally Frank says, "Well, where do you want me to be?" "Well, that's your boat." (laughter) And Frank said, "Ohhh, nooo! No, no, no. I've never done that before, I don't know how to do it!" "Oh, you'll be fine, just follow me." And so, you know, granted, it's just the San Juan, but Frank didn't know the river. He was a smart enough guy to know this is a wooden boat, there's rocks. And he did it with some trepidation.

But that was instrumental, because after my grandparents died, Frank actually ended up continuing that business with Bob and Jim Rigg. Bob and Jim Rigg were the sons of my mom's godfather, Dr. Jim Rigg, senior, who lived in Grand Junction. He was an M.D.—I think an eye, ear, nose, and throat doc. His sons Jim and Bob also became doctors.

But anyway, the Riggs had been on the river in some capacity, and I'm not real sure, to be honest with you, how that all worked. But they liked it. (laughs) They liked it *a lot*. Frank didn't have the financial means to run the business, and the Riggs did. They thought, "This would be kind of a cool deal. It's not gonna cost us that much, we're not gonna be runnin' that many trips. We can go down there, we can row, we can go on trips." So they financed the continuation of Nevills Expeditions. Eventually, it became Mexican Hat Expeditions. But then in '57 my folks ended up starting the buy-back process from Frank Wright. So '57 was actually my dad's first trip through the Grand as a boatman. He was a passenger in 1956.

STEIGER: So you were already born...That must have

been your mom [Joan Nevills], huh? Did she say, “Hey, let’s get this company back from these guys”?

STAVELEY: You know, my mom loved my grandfather—they were inseparable—and what he did and the way he did it—everything. He was everything to her. So from that perspective...and she’s a real people person, she was real interested in that aspect, she was never interested in runnin’ her own boat. She did that a number of times on the San Juan, but that wasn’t really where she came from. She enjoyed providing the opportunity for people to do it. I don’t think she ever thought they could necessarily do much more than make a living. But that wasn’t really all that important to her.

My dad, on the other hand, I don’t think he necessarily thought they were gonna make any *great* living, but he was a college student when they met. Just happened to be driving through Mexican Hat in 1951, and he was the son of an Iowa farmer. He really thought this was just the coolest. He liked it *a lot*. Oh, he liked it a lot. He’s always been a real hands-on guy. He and Frank ended up building that next generation of boats. My grandfather and Frank had built earlier...I have to go back and really dig a little bit to find out the names of

the specific boats and who built what—but I think that my dad and Frank built the *Bright Angel*. My dad and his dad built the *Petroglyph*, a San Juan boat, and of course, the *CamScott*, (the only aluminum Cataract boat ever made) named after me and my brother. The other boats, of course the *Wen* had moved to the South Rim pretty early; the *Botany* had gone to the Smithsonian; the *Mexican Hat* had gone with Don Harris.

STEIGER: Oh, yeah? Your granddad gave it to him?

STAVELEY: Right. And the boats were taking a little bit of a beating, but I think it was just—it made sense that those boats went where they went. So yeah, the fact that my dad not only got to row these things, but he got to work on them, improve them—I think that was probably as much fun as it was rowing, for awhile anyway...Oh, he loved it. *Loved* it. That was the best. Of course by that time, too, there were some newer materials available...like on the *Wen* and some of those early boats, they were using lead paste and stuff like that for sealing the joints. And so...*voila!* Polyester resins and fiberglass and so on...But, you know, it didn’t really largely change the design of the boat at all. It just became a little bit more efficient, probably a little safer



Cam and Scott, life in Mexican Hat.

working environment.

STEIGER: So for quite a while they ran the same kind of trips as your granddad did...and that was like two passengers to a boat?

STAVELEY: Right.

STEIGER: Thousand bucks a head, that kind of thing?

STAVELEY: Right.

STEIGER: And a trip was how long?

STAVELEY: The folks' standard Canyon trip was nineteen days from Lees Ferry to Temple Bar. The Grand Canyon section of the Powell Centennial was fourteen or sixteen days—somewhere right in there. He started at Green River, Utah, down through Stillwater, and then down through Cat, then trailered the boats down around—after Powell had started to fill—down around Powell, and take 'em down to Lees, and launch 'em there. The only time that we didn't go to Temple Bar was in '69. We took out at Diamond Creek then. Took two weeks, but we took out at Diamond.

STEIGER: Two weeks to do the takeout?

STAVELEY: Well, the road had been...There was a guy...Pete Byers. He'd done a little bit to kind of keep that road open. Traffic was beginning to slowly but surely...Pete probably just didn't—if he could have lived another thirty years or so, he might have been able to capitalize on it. But anyway, he met us down at the river at the end of that trip and said, "Well, the road's washed out, and it's pretty bad now, but I think we can probably have it fixed here in a little while." They had talked about this, of course, before the trip put on...

But the take-out down there on the lake was always fraught with peril too. (laughter) You had these relatively small motorboats that are trying to pull anywhere between four and five Cataract boats, and the afternoon winds come up, and it was just, you know...**[STEIGER:** Long way to go.] Oh, man. In fact, it must have been like '68 or maybe '67, we went up—my mom and I, and I think it was Joe James. We took a boat up there to pull 'em out, and it was like a little sixteen-foot Owens Brunswick with a fifty-horse Merc on the back. I remember it really well. We used to call the boat the *Baby B* (short for Brunswick). And the thing stopped running right out in the middle of Iceberg. The winds were blowing I don't know how hard, but the waves were three and four feet high, and we were disabled. I thought for sure, at the ripe age of, whatever I was, ten or eleven or something like that, I was thinking, "I'm gonna die!" (laughter)

STEIGER: So that '69 deal was gonna be the last trip of those boats?

STAVELEY: Of the Cats, yeah. Yeah, my dad had already decided. He had all *but* decided. There was one little caveat in there that if the trip had gotten the publicity that he hoped it would—which unfortunately it didn't—and if the phone was ringin', then he'd do it

again, and try to get into doin' maybe a couple of trips a year in the Cat boats, but it just didn't happen.

STEIGER: Now, was your dad runnin' big boats before then?

STAVELEY: No.

STEIGER: So from 1957 'til '69...

STAVELEY: It was all Cataract boats on through the Grand and San Juan boats (in Glen and on the San Juan). Three to five boats.

STEIGER: Two people to a boat.

STAVELEY: Yeah. Pretty hard to make a living.

STEIGER: Yeah, and raise...

STAVELEY: Me and my brother. And you're livin' out in Mexican Hat. It's not like you go down to Basha's and do the grocery shopping, or go to Home Depot and get lumber. You go up to the sawmill in Monticello and you go to Grand Junction, really, for any real meaningful...Yeah, it was real expensive. So yeah, at the end of '69, that was it. In fact, we had moved—just to see if he could make it, if it was gonna be a little bit easier—in January of '66, we moved to Flagstaff. And that was based on, "Okay, let's get someplace where there actually are grocery stores, hardware stores, and that kind of stuff, and see if..." And kind of a town...

STEIGER: "So we can, like, go get things and get a trip together."

STAVELEY: Right.

STEIGER: "Maybe see some more people."

STAVELEY: Right, see some more people. The road between Flag and Lees was better than the road between Lees, Tuba City turnoff, and Mexican Hat. And to try just little things, little tweaks. But that didn't really make any difference either, so...He loved what he was doin', but he just couldn't make a living. He just couldn't continue to do that. You couldn't charge, you know...couldn't have *our* passengers payin' a thousand bucks a head, and Georgie's payin' a hundred bucks (laughs), two hundred bucks or somethin'. All the people she had on that boat, and just herself runnin' it, maybe somebody else helpin' her out. The economies of scale were in her favor.

STEIGER: Well, I can see where your dad's gotta support his family, and if you're only runnin'...And there again, it was like one or two trips a year?

STAVELEY: Right. A trip down the Grand, a handful of San Juan and Glen trips were typical for a year. He had a civil service job to augment the income, taking water samples out of the San Juan—anything to make a buck.

STEIGER: So he decided to go to motors and inflatables, and you guys all—how did all that evolve?

STAVELEY: Oh, that was amazing! (laughter) That was amazing. You know, he had *so* many ideas, you couldn't put 'em all into one boat. (laughter) And he tried! (more laughter) But there were so many ideas. First of all...okay, you have to go back. We didn't have any money. I mean, we had *nada*. And so we, of course, all

jump in a couple of vehicles and go over to Henderson, Nevada, over to Buck's Surplus. (laughs) Went over there and had a great shopping spree and picked up—tubes, in those days, you could get for a hundred bucks. If you didn't mind a couple of holes, you could get 'em for less than that. The frame system... Well, he had a couple of things: a lot of those tubes were cotton. And they were just miserable, miserable boats. And here you've got like a fourteen-year-old, and about a twelve-year-old, I guess—or an eleven-and-a-half-year-old—who are two of your main laborers. (laughter) We'd patched bike tubes before, but we've never patched anything like this. So you just gotta go from scratch. He'd order up this Gaco paint, the old silver paint, and we'd paint these things up. We'd patch 'em and lace 'em together. All right there in the front yard. I mean, this is on Upper Greenlaw and Childress. I don't know what the neighbors thought. But the boats were all being constructed right there. This is in Flagstaff, yeah. It's a residential area.

It was our house. We had a neighbor, Mel Reinert, who actually was a Greyhound bus driver, but he had a

welder, and he was a good neighbor to have, because the thing was built out of this...all channel steel. I mean, it was frigging heavy. Oh! it was heavy! Even when the tubes were fully inflated, the boat was half submerged. I mean, it was literally—I'm not exaggerating, it was half submerged. No way you could flip that sucker. Just impossible. You could break it—and we did—but you couldn't flip it.

So we just kind of learned, hands-on experience, kind of taught ourselves how to patch. My dad would give us the stuff and say, "Okay, this is what you want to do," and we'd do that. The configuration of that boat, like I said, it was all steel, super heavy. There were three sections, three cars. The front two had "wings"—that's what we used to call 'em—and they were collapsible. So when it was in a running state, then these wings would sit down on the outboard tubes, and you'd try to get the benefit of the buoyancy. Which was kind of good, because you actually would get the inboard tubes up out of the water a little bit (laughs) so it'd float a little bit higher. But when you got to the end, then you'd stand



Rig day at Lees Ferry.

up this tripod on top of the car, kind of in the middle, and then there'd be this cable. There'd be a pulley up here at the top. There's a winch down underneath the trailer, welded onto one of the cross-members. This cable would come up, through from the bottom of the trailer, up between the frames, up through the tripod, over the pulley, and down, attached to the wings. In fact, there were two of them for each. They would hook onto each wing. Then you'd get my brother and I down under the trailer, working the winches.

STEIGER: Fourteen and eleven, still.

STAVELEY: We're down there, "(neeeeeee)." And they didn't, oftentimes, work. Those wings were so heavy, and the angle was so steep, it was really hard. It wasn't

STEIGER: Oh my gosh, straight up!

STAVELEY: Straight up. So you never had to reach back there. Of course...

STEIGER: Was the driver back there in the back?

STAVELEY: The motors were behind the driver. He was still in the back of the boat, but he was back there. But then you had to have this—it's kind of opposite—then you'd have this lever, after they were up you'd have to have somebody *else* back there to get 'em back down! (laughter) And we were runnin' twin twenties. In fact, twin twenties, and then he even experimented with some fifties.

STEIGER: Was he the boatman, did he run the first trips and all that?



Early Canyoneers' rig.

Photo: Gray Staveley

uncommon for it to take... You get the boat out of the river, onto the trailer; it might only take half an hour or maybe a little bit more. But there was at least one time where it took us eight hours to get those wings actually up... And the other thing that boat had, which was actually pretty cool—when I was a kid, it was pretty cool—but it had a steering wheel. So you'd sit back there with the steering wheel, and the jackasses actually operated by a foot pedal. You'd push this foot pedal down, and then back at the engines, I think there were three garage door springs that were attached to this bracket up above the motors, and then down to the jackass, down to the transoms, where the motor sat. The pedal would actuate the lever, and the motors would just pop up.

STAVELEY: Yeah. And he found out pretty quick that the steering wheel thing just didn't really—it didn't really work very well. Too complicated. There's just too much delay. You know, I mean, when you were gonna jackass, you needed to jackass, and you needed to know, as the person running the boat, that the motors were up—or that they were down. (laughter)

STEIGER: Which you couldn't necessarily do.

STAVELEY: Well, no, because you were depending on somebody else, and all this mechanical advantage stuff. So that didn't last all that long.

STEIGER: Do you have pictures of all that stuff?

STAVELEY: Dad does. I don't. I wasn't taking pictures in those days. I was fourteen. But he certainly does. And

so that was kind of the first generation of those boats. The hinges or the hinge points were connected with trailer hitches...

Well, he didn't want to... You know, it would have been much easier to just go talk to Ron Smith, and say, "Hey, I need a frame," 'cause they were being built in those days. But he wanted to do his own thing. And really, he came up with some pretty good stuff. Probably the best one—he came up with this—and Brad [Dimock] can tell you about this—but he came up with this holding tank for human waste, and that was *long* before the Park...

STEIGER: Oh *way* before! Yeah, I remember that, "Those guys are carryin' their shit out!" (laughter) "Don't go near *that* boat!" No, I remember just kind of—I remember it being pointed out, like you said. And it was *way* before they *made* us do it.

STAVELEY: Yeah, it was in '72 I think was the first year. That was a huge thing. Not only could we carry our own [human waste] out, but we could actually clean up [human waste] from other groups. Shoot, I think it was a fifty-gallon holding tank. He was really innovative in that way. Dad was also the first outfitter to trailer his motor-rigs. Nobody followed suit on that for years. How many motor companies trailer their rigs today? In many respects, he was ahead of his time.

STEIGER: How did that transpire, that whole human waste deal? He just decided that was the right thing to do?

STAVELEY: He did. Just about any place we'd stop, he'd say, "If you see a pit, clean it up." We thought it was great. We kind of wondered why we didn't think about it (laughs), why it wasn't our idea, 'cause he wasn't runnin' that many trips anymore.

STEIGER: So the warehouse was just your garage?

STAVELEY: The garage and the front yard, yeah. We couldn't afford a garage *or* a warehouse in the beginning. It worked okay, the neighbors didn't complain. We started out with one boat, so it was parked out on the street, and I think everybody found it to be kind of a curious thing and kind of interesting, so that wasn't a problem. Then when we moved into the second boat, God, that was a couple years down the road... '72, I guess is when we built the second boat, so it took a little while. About that time, things were startin' to look pretty good, and the bank was feeling better about the business. I mean, he'd already made three times more money than he *ever* had with the Cataract boats, even with all the hardships and all the failures and everything else.

STEIGER: Yeah, well, you just do the math—it's pretty obvious... And then I guess the second boat was just "gravey", pretty much.

STAVELEY: Well, he was still payin' off a lot of borrowed money. To build that first boat, I don't know exactly in dollar figures what it was, but it was money he didn't have.

* * *

STEIGER: Well, lookin' back on your Canyoneers' days, what would be the highlight, if you could say?

STAVELEY: There's nothing that really comes close to the Powell trip, for all the reasons: the nature of the trip, the fact that it was the first Canyon trip, and being down there with my dad, and just how he made it happen, there's nothing... you really can't top that.

In terms of the Canyoneers' days, I think it was—probably the highlight there was the people I was working with. We were all so much on the same page. There just weren't any agendas. Well, we had a common agenda, and that was to run a great trip in the amount of time we had. But the group of people down there that I worked with... Jim Protiva, Jim Norton, Mike Lomax, Don Ross, Dan Lindeman—I mean, Dan stands out in my mind as a person, but also as a boatman that I really tried to emulate. Working down there with Brad Dimock and Tim Cooper and... Jack O'Neill, Scott Thybony, Steve Martin [our current superintendent]. We really, really had a corps of people down there that were all just tryin' to do the same thing: No egos, just go down there, have a good time, and share the place with people. So I think that's what I'd say about that.

And I *was* getting better as time went on. (laughing) Water came up a little bit! (laughs). In the '70s we were learning on flows from under 3,000 to around 30,000 cfs.

You know, in those days, too—I mean, I wouldn't call it a highlight, but it's certainly notable—the people *were* different. They were a different breed. They'd wake up with smiles, the sand in their teeth, crawlin' out of their tube tents. They didn't care whether it was hot or cold. You know, people just were happy to be there.

* * *

STAVELEY: I worked for Canyoneers up until '79, and at the end of '79 I decided I needed to maybe take a little bit of a break. I was doin' a lot of trips by that time, a lot of consecutive trips, and just felt like I needed to maybe step back from things.

Well, that winter, '79-'80, Brad [Dimock] and Tim [Cooper]—Brad in particular—I ran into him someplace, probably around town. We just got talkin' like you do, and I said, "I'm just done." He said, "You can't be done! You need to come work for Dories." And so we went through that whole thing. I didn't feel like I was qualified to row a dory at all. So I just kind of laughed it off. First of all, I'd already made the decision that I wasn't gonna work. And second of all, me rowin' a dory was like me flying an airplane tomorrow. (laughs) That wasn't really gonna be happening.

But Brad kept kinda eggin' me on, off and on during the winter. So circumstances were such that... I had an

opportunity for a little break from my going through a divorce and all that kind of stuff. I thought, “Maybe it wouldn’t be bad to just go off and kinda recollect, rejuvenate,” and figure out what I wanted to do when I grew up—you know, my life and stuff...so in 1980, I actually worked for Grand Canyon Dories, ran a couple of trips

STAVELEY: We were talkin’ about the Canyoneers oar trips earlier on. There were a couple of experiences that were pretty memorable. One of ’em, I believe it was the ’78 oar trip in which Jim Norton was rowin’ a Chubasco, the big heavier one, and Bruce Steinhouse was rowing the lighter, the kevlar Chubasco, and I was rowing this



Canyoneers’ boatmen—Brad Dimock, Cam Staveley, Tim Cooper.

for them. I was a single parent at that time, so it was kind of hard to make ends meet on Dories wages, and you’re gone for eighteen-, 21-days at a time. So, as much fun as that was, it just didn’t really kind of fit into my parental role and obligations. So I did that only that one season.

Then ’81, I did a couple of Canyoneers trips, helped my dad out, just kind of was, again, not really working too much, focusing on school and being a parent. Then in ’82 I actually got a call from AZRA. They were looking for somebody to fill in and do a few motor trips. I ended up working for them as a boatman until ’89, on a full-time basis. Then in the fall of ’89, I was hired in to do personnel, and did that until 2000. Had a great time at AZRA.

Then in the fall of 2000, I actually moved on over to my wife’s [Laurie] family business, Canyon Explorations, and I’ve been there ever since.

* * *

new-fangled boat, which was actually a sixteen-foot stretched to a nineteen. (laughs) So it was pretty canoe-like.

But anyway, things were going pretty well until we got down to Bedrock. At that point in time, I think we all had probably one oar trip under our belts. So we were bursting with experience down there. We got down, and I was gonna be first boat through. Water was a pretty decent level. It was actually pretty user friendly, maybe 12,000, somethin’ like that. And there was a lot more room *then* than there is now. So it wasn’t a big deal. We just stopped and scouted it. So I’ve got two folks, a father and son, in the front, and then I’ve got my swamper or trainee, and another passenger in the stern. We pull out and start goin’ down, I’m makin’ the ferry over there to the right, and just kinda gettin’ ready to take that last stroke, ’cause there was a lot of room, and my right oar snapped. So I’m tryin’ to pull the stub out and get the spare in. And of course soon as I *didn’t* have that last stroke, I started kinda movin’ back to the left

and center. So finally I get the spare stabbed in there, into the lock, and about that time realized that there's no way to avoid the Bedrock. We hit that sucker just smack dab on the point. So I had time to straighten it up, pretty much. That's *all* I had time to do. We just climbed right up the face of that thing. Jim was the father, and Glenn was his son, fifteen- or sixteen-year-old son. And they were literally just dangling right over my head. The boat was just sitting absolutely vertical, and it was kind of shaking, but I was leaning forward and trying to hold on. The boat actually slid off the left side, just hugging the Bedrock the entire time. And I figure I know what's gonna happen now: You know, that current coming from the left, into the downstream side of the Bedrock, we're gonna flip. That was the first thing that I thought. The second thing was, "You know, I used to have two people in the back of my boat, and they're not there anymore." (laughs)

So I'm looking around for them, and the frame is just scraping alongside of the Bedrock. Marilyn Robbins was the gal's name—she was the passenger. She pops up, right in front of the boat, and I can see her. I yelled to Jim to grab her. But Jim was terrified, he was absolutely stonelike. So the boat is kind of doin' this kind [wobbles] of thing. And you know the distance is not very great right in there, it's incredibly short. So I jump over my kitchen box, into the front, and I'm gonna try to swing her around, away from the wall, because the boat is just like playin' cat and mouse with her. But I realize there's no time, we're just comin', it's just gonna be impending impact. So she reaches up, and I shove her head down underwater (laughs) because I didn't want her to get squished. So I push her down like *that*. Almost soon as I get my arm out of the way, boom!, we hit the rock, and kinda bounce off of that. So she's back underwater again. She pops up a few seconds later, and I'm yellin' at her, "Marilyn! Marilyn! Grab my hand!" She didn't want to have anything to do with me at that point! (laughter) So finally the river kinda pushes us together, the boat and her, and I grab her and pull her in, and she's definitely in shock. I still don't see Billy, the swamper. Time? I don't know, maybe it's fifteen seconds or whatever it is, but I still don't see him. We're goin' down the left channel. We get just about even with the downstream end of the Bedrock, and Billy pops up about fifteen feet off to the left, he's just—his eyes are kinda rollin' and he's just ashen, not even voice responsive. I mean, he's conscious, I'm yellin' at him, and he's just kind of dazed. So a couple of things happened right then. The front of the boat is starting to sink because when we went up the face of the Bedrock, the granite just sliced the front two chambers, just like a cat or somethin'. So I tell Jim and Glenn and Marilyn, "Get in the back of the boat." They're sinkin', they're pretty motivated to get back there where it's a little higher. So they

get back there, Billy just kind of drifts over, we're able to get him too. I tell Jim, "You gotta help me pull this bow over the frame, because I can't row the boat like this." So we get up there and both get a side and we just pull the front of the tube over the frame, and then I row downstream and get in on the right, and then get everybody out of the boat, and just, you know, gotta do an assessment, how is everybody? There's a few little cuts and scratches, and just make sure that nobody's seriously injured.

Then I look back upstream, and there's this frenzy goin' on. I'm thinkin', "Oh, [expletive], they're gonna come save me." And just thinkin' they're gonna be a little bit anxious. But I'm fine. I'm tryin' to get their attention to say, "Hey, I'm okay, I'm fine," but nobody's lookin' at me. Granted, it's over a hundred yards, for sure, but they're just not even looking in my direction. So here comes Bruce, and Bruce almost looked like he lined up for the left run. (laughs) I mean, it wasn't even close. So he goes over and down the left channel, and he gets stuck in Forever Eddy, and he's just goin' round and round and round, and I'm *still* tryin' to get his attention, 'cause he is like ASR'ed [autonomic stress response]. I mean, he is just *goin'* with those oars. I'm just tryin' to get his attention and say, "Hey, everything's fine over here, everything's good." But nobody's lookin'. So he pulls and pulls and pulls and pulls, finally tucks one oar, gets both hands on the other oar and just *yanks* as hard as he can a few times, and his boat comes *flyin'* outta that eddy and goes right sideways into the downstream side of the Bedrock, and—22-footer—boom! Tips over, upside down.

So we've got five passengers and Bruce in the water, boat upside down.

I have a half a boat. And we still have Norton up at the top, who doesn't pull hardly ever, and I'm thinkin', "This is just gettin' worse." Norton comes down, he just makes this great run. He gets lined up, goes right down the right channel, no big deal. But Bruce is floating by me and I'm yelling. He wears glasses that are really, really thick, so he comes up without his glasses on, he can't see *anything*—absolutely nothing. He's just lookin' around. A couple of his folks have grabbed onto the boat, and I'm tellin' 'em, "Get up on the bottom of the boat!" as they're kind of drifting by. Of course they're going down past me, and one of 'em shouts to Bruce, and Bruce gets over there. Jim comes through, they're floating down toward Dubie, that little riffle just above Dubie, and I look back upstream, and here comes a CRATE [Colorado River and Trail Expeditions], motor-rig. And Bill Trevithic is—by the time he gets down there, I can see who it is—and he looks at me and I said, "I'm fine," and point downstream. So he takes off and he catches these guys down there just above Galloway. So he pushes 'em into shore, and then I get everybody in my boat, and we

row down there. By the time I get there, [Kim] Crumbo and Brad, who are on a Ken Sleight trip, they're camped down at Stone, they've seen all this flotsam going down. So they wander up. By the time I get down there, they're there. It took me a little while to kind of get everybody in there.

So we get in there, and we turn Bruce's boat right-side up. And whether the latches failed, or whatever happened, the freezer lids came open. So we lost almost all of our frozen perishable groceries, which is kind of critical, because we've still got four more days. So Bill Trevithic gives us—he always carries an extra canned ham. He gives us this big canned ham and some other stuff, some bread and stuff. We get everybody together. Brad says, "Maybe I should come down and help you guys." I said, "Nah, I think we're okay." He says, "Well, you could probably use an extra hand. You've gotta patch your boat, and a couple of your folks are pretty wiggled out." "Well, yeah, you're probably right—if it works." He said, "Well, let me go talk to Crumbo." So he and I go over and talk to Crumbo. "Yeah, that'd be fine." So Brad takes off, goin' down to their camp and gettin' his boat together, and gettin' anything off that they might need there on the Sleight trip. And everybody jumps in the two boats, and Jim and his son walk around Deubendorff (laughs), they don't trust me—plus, I only have half a boat anyway. So I just go down this right run, the right side, which I've never run since—I don't know if I could *find* it, but it's over there someplace. It was a pretty easy run in higher water. Anyway, we go down to Racetrack. So we're deriggin' my boat, gotta patch that thing, and the front is just mauled, just all kinds of patches we gotta throw on that thing.

And we're cookin', of course, some of this canned ham, and we had a few things. So Brad's kinda runnin' back and forth, kinda helpin' me patch, and he and I are kinda goin' back and forth in the kitchen, and he's gonna cook the potatoes O'Brien. And he's up there, the rest of dinner's been ready for a little while, and he's just takin' a *long* time. So I walk over there, "Brad, are those potatoes almost done? Doesn't look like they're brownin' up very well." "God," he said, "I don't know *what's* goin' on, they just won't brown." I said, "Well, you got plenty of heat in there. What's goin' on?" "I don't know." I said, "What did you put in there?" He said, "I just put some cookin' oil in there—the oil over there in that bottle." So I go over there and pick up the bottle, and it's our hand soap. (laughter) He's been cookin' these potatoes for like an hour and a half. So that was kind of the climax of our perfect afternoon.

STEIGER: Oops. So much for spuds!

STAVELEY: Yeah. That was kind of funny, after the fact was over.

* * *

STAVELEY: I don't know any great words of wisdom or anything. I think that when I was back there at the end of '79 and I was feeling like, because of my heritage, and because how I'd started out loving the place so much, but had gotten to a point where I thought I didn't anymore...I couldn't believe that I was actually feeling that way. I mean, I knew the reasons why, but it just seemed like...It didn't make that much sense that I would just, in some way, discard the heritage and just...But at the same time, it was important to me to be happy doin' what I'm doin'. I think that's what translated all the way through to where I am today...There was certainly a period of time in there where I wasn't sure what I wanted to do; other times in my life, too. Doin' the dory trips was great. It certainly opened my eyes. And the timing of everything at AZRA—it almost falls into the category of just bein' *lucky*, in some ways—you know, being born into this business, this community, and making the right decisions, early decisions, that ultimately took me on a path to where I am today. I have thought about it quite a bit, especially having done this...several of us did a seven-day motor trip, which I haven't done in a long time. We took Jim Norton down there, 'cause he's dyin' of prostate cancer. We just wanted to get him one last trip.

STEIGER: He is?! I didn't know that.

STAVELEY: Yeah. And just kind of that whole trip, and with all those guys—those were all Canyoneers guys. Some of us worked together in the seventies. Yeah, we did that in August. And just thinking I could have made a different decision or different decisions at any given time, and I wouldn't be married to my wife, I wouldn't have my son, I wouldn't be where I am. I would have been someplace else, and it probably would have been fun...but I *love* my life, I really love where it is. And everything that happened along the way, decisions I made, and the timing of things, I think it's kinda *luck*. (laughter) Yeah. I really think it is.

...And I still *love* the business. I still like to get down there and row a boat, and I think what I really enjoy about it the most is just you see those faces. And if you don't see the faces, you read the comments. Even though the clients are different—people are still coming off of these trips changed. It's just one of those places that's bigger than life, just makes you feel pretty insignificant.



Radiating Wall

Susan Detering

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boatman's quarterly review



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THANKS TO ALL YOU poets, photographers, writers, artists, and to all of you who send us stuff. Don't ever stop. Special thanks to the Walton Family Foundation, the Adopt-a-Boatman sponsors, , "Circle of Friends" contributors, and innumerable GCRG members for their generous and much appreciated support of this publication.



“FONDLY HE GAZED INTO THE RUSHING WATER, into the transparent green, into the crystalline lines of its mysterious design. He saw bright pearls rising up from the depths, tranquil air bubbles swimming to the reflective surface, imaging the blue of the sky. With a thousand eyes the river gazed at him, with green, with white, with crystalline, with azure eyes. How he he loved this water, how it enchanted him, how grateful he was to it! In his heart he hears the voice speaking, the newly awakened voice, and it said to him: Love this water! Stay here! Learn from it! Oh yes, he wanted to learn from the water, he wanted to listen to it. Whoever understood this water and its secrets, it seemed to him, that person would understand much else, many secrets, all secrets.

Of the river's secrets, however, today he saw only one that seized his soul: This water ran on and on, it always ran and yet it always was there, it was always and ever the same and yet at every moment new! Lucky the man who grasped this, who understood this! He did not understand or grasp it, he only sensed the stirring of a surmise, a distant memory, divine voices.”

—from “Siddhartha” by Hermann Hesse

Scouting Hermit
2009 watercolor and ink on arches
7 x 10 inches

Susan Detering