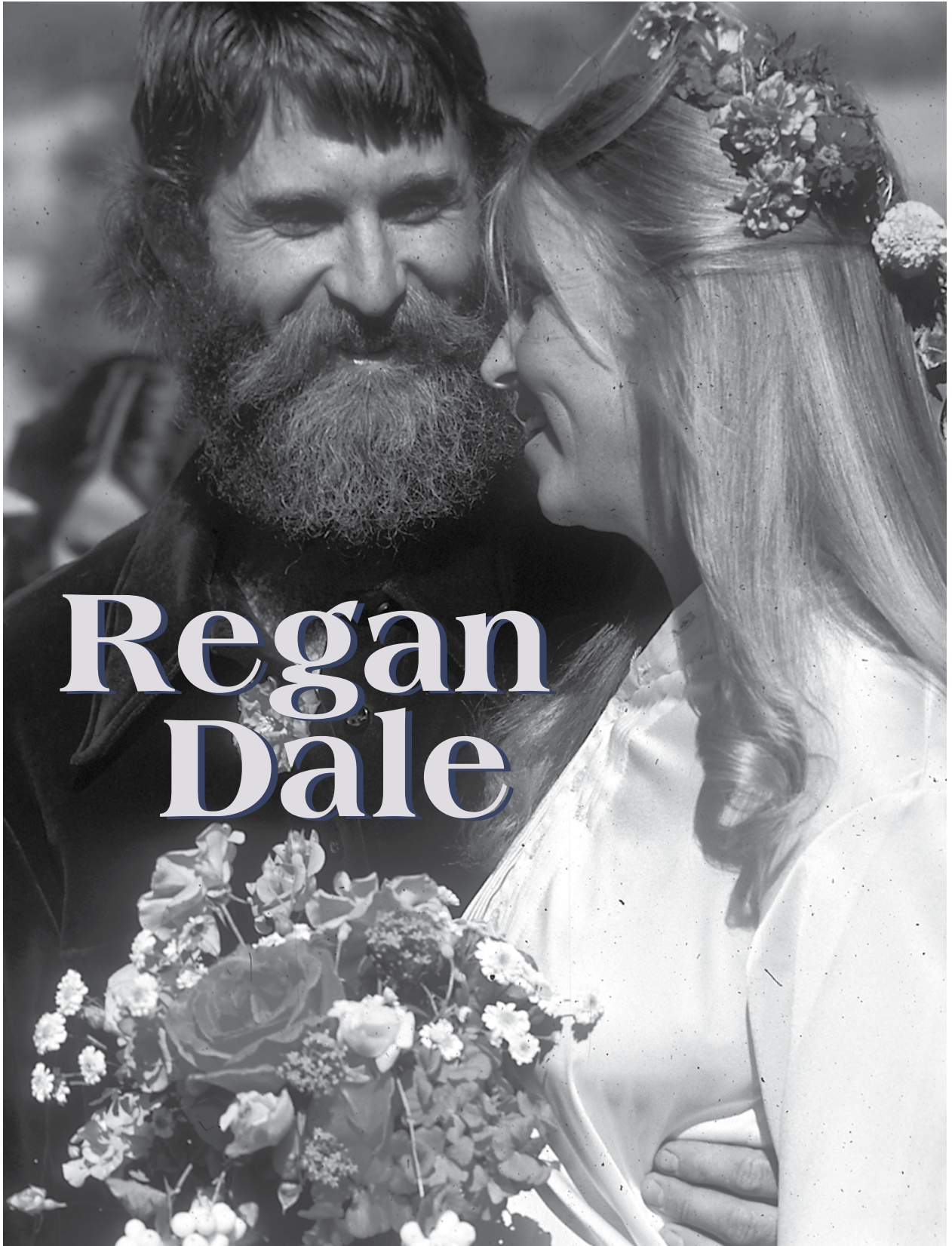


boatman's quarterly review

the journal of Grand Canyon River Guides, Inc | volume 18 number 2 | summer 2005



Regan Dale

Prez Blurb • Dear Eddy • Farewell • GTS • GCY • Ocotillo
Stewardship • Take Me to the River • Old River Gravels • Back of the Boat
GCRRRA • Wild Lands • King Yucca • Books

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 computer disk, PC or MAC format; 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.
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Prez Blurp—

ON PAGE FIVE YOU will find a letter from Dave Yeamans, a lifetime member of GCRG, who took exception to some of my remarks in the last BQR. Dave, if you don't know him, is also Vice President of the Grand Canyon Private Boaters Association (GCPBA), and has been actively involved in river issues for many years. He was a guide for Bus, Don, and Ted Hatch in the late '60s and early '70s.

I'll take a few moments to dispel some of Dave's mis-perceptions about the stand we've taken on various issues, but—since he also objected to the tone of my remarks, I'll begin with an apology. I did not intend to be offensive in speaking my mind, and if Dave (and others) find that I was, it was certainly a mistake on my part, which I regret.

GCRG does not claim to be the only organization that “sees the big picture,” and we welcome, and appreciate, the contributions to the planning process from other organizations and individuals with differing views. But our “big picture” begins—and ends—with protecting Grand Canyon: we don't think that's the only issue, but it's at the top of our list. We also believe it should be at the top of the list for the National Park Service (NPS), and have said so in our formal comments on the plan.

If I implied that the four parties to the “historic agreement”—Grand Canyon Private Boaters Association (GCPBA), Grand Canyon River Outfitters Association (GCROA), American Whitewater (AW), and Grand Canyon River Runners Association (GCRRA)—were attempting to exert “authority” over the planning process, it's not because of what they said, but rather the manner in which it was revealed in a press release in the days just before the end of the comment period.

It was easy to get the impression from the press release—which made it into a number of newspapers—that the principal problems of the management plan had been solved by agreement of the interested parties. The positions of other organizations—including GCRG's and organizations representing wilderness advocates—were ignored.

(GCRG doesn't do press releases. However, my Op-Ed piece, reproduced in the last BQR, also was in the papers during the closing moments of the comment period. It was clearly an opinion piece, and—in any event—it certainly was not labeled a “historic breakthrough;” I did not imply that others were on board with the views expressed. Just the opposite was the case—and the point—of my comments.)

As for “joining the process,” GCRG was actively involved in trying to “Protect Grand Canyon” before there was a GCPBA, a GCROA, or a GCRRA.

With regard to the big picture of “equal rights” for

private boaters, we've consistently supported improvements in the way that private boaters are treated. As for "equal rights," where we stand is open to interpretation: it might depend on what "equal" means.

During the public scoping sessions, a number of private boaters argued that a 50/50 split of the allocation was the only "fair" division. Some pointed out that if two people can't agree on how to divide something—let's say a pile of books, for example—a fair method would have one person divide it into two piles, and then let the other person have first choice.

It was assumed that this was a proper analogy for the split allocation in Grand Canyon, rather than the analogy of the division that two people—a large adult and a small child—might make when serving up food for dinner. That's closer to the analogy that was used to divide the recreational use in Grand Canyon into a large commercial sector, and a smaller non-commercial sector, years ago under previous plans. Which of these analogies is more appropriate today was one of the hotly contested issues of the planning process.

Today everyone recognizes that the child has grown and has a bigger appetite. But the experts disagreed about whether it was even theoretically possible to quantify the relative level of demand for commercial and non-commercial use. Under the preferred alternative, the NPS proposes to measure demand, and adjust the allocation accordingly. Mr. Yeaman, himself, admits that efforts to quantify demand have been unsuccessful: after describing attempts (with expert help) to address this problem, he writes "In the end we decided that there wasn't a good way to measure demand." [<http://groups.yahoo.com/group/gcpba/message/22493>]

GCRG, the outfitters, and GCPBA all agreed the proposed mechanism to measure demand would be cumbersome and not likely to produce reliable results. When four organizations representing private boaters, outfitters, and commercial passengers agreed to endorse a 50/50 split allocation, and drop the controversial registration proposal of the NPS, GCRG supported them in our comments to the NPS on the management plan.

We think it's time to recognize, in principal, that private boaters have as much right to see the canyon as do commercial customers, and move on to more difficult matters, and difficulties do still remain. The 50/50 agreement is a major advance for private boaters, but since commercial boating remains restricted under a user day system, and non-commercial boating is restricted by limits on the number of possible launches, it is impossible to make meaningful direct comparisons. Outfitters—and commercial passengers—continue to have the bulk of summer season launches, while private boaters have a virtual monopoly on winter trips. The shoulder season is shared, and more private trips will get on the river under the new plan than is the case today. The "Waiting List" is slated to go away, and something closer

to "real time" access for private boaters will take its place. These are improvements, for sure.

Is this "equal" and "fair," or perhaps only "separate and equal?" Surely there will continue to be differences of opinion about what is "equal," "fair," and "appropriate." But I think private access to the canyon will improve, and it's about time. At least under the "historic agreement" private boaters move from being perceived as a "peripheral nuisance" to "major players."

GCRG does not claim to own "the best possible river experience." Everyone's "best experience" is a little different, so we've tried to support the conditions that allow enough flexibility for people to get what they want, and need, out of the canyon and river experience. Consequently, we opposed shorter trip length requirements for both commercial and non-commercial trips. If you want to go fast, fine: but some folks (including those on motor trips) have a different experience in mind, and we only hope that what is available today will continue to remain available in the future. We also recognize that "once in a lifetime" is not enough for everybody (surprise!), and GCRG opposed the "once a year" rule proposed in Alternative H. While we have not endorsed all of the agenda of the GCPBA, we have stood up for meaningful improvements on the issues affecting private boaters in Grand Canyon.

A couple of Dave's points that I agree with:

"All the river advocates deserve our respect and not our subtle or overt calumny. After all, who was it that brought the great preponderance of those resource-damaging people down the canyon, anyway? It was you and I, not any of the smaller players. And now we rail at our little brothers for ruining the resource? Get serious."

No doubt about it, we are the ones that made Grand Canyon River trips as popular as they are. I'm not blaming the impacts on our "little brothers"—they are ours as well, and we know it. All I (and GCRG) are saying is that it's time we acknowledge this, and deal with it in a responsible fashion. And that means that "limits on use" as well as "limits of acceptable change" should have real meaning: changing the standards of protection to pacify folks unhappy with the current system is a sleazy and unacceptable solution. And we ARE serious about that....

And now—at great risk—I'm going to say something favorable about a just a few of the players in this process, and express my appreciation. I'll qualify this at the start by saying almost everybody gets left out—the NPS received nearly 20,000 comments from individuals and organizations, including at least 29 distinct form letters. So beginning with about 20,000 apologies...in alphabetical order—I'd like to acknowledge the contributions of the following:

Superintendent Joe Alston (and the NPS crew): These guys and gals got a lot of crap from everybody for a system that just about everyone agrees needs to be

fixed. Few critics have bothered to notice that the folks at the NPS today inherited most of this from their predecessors, and aren't personally responsible for the acknowledged shortcomings of the current system. Some of them—Steve Sullivan in particular—have tried to make interim improvements within the limits allowed by the last plan, and provide information and statistics so that people making comments and suggestions for changes would at least have some facts on which to base their opinions. Behind the scenes are a number of other folks, whose names you probably wouldn't recognize, who have tried to understand the issues, follow the arguments, read the comments, and (in the end) write the best plan possible, knowing that a) nobody will be completely happy with it, and b) they'll probably face lawsuits, if not worse, as a reward for their efforts. An inherently thankless task—but we should say “THANKS!” anyway, they deserve it.

Mark Grisham, Executive Director of GCROA: Mark sits in a seat perhaps even hotter than that of GCNP Superintendent Joe Alston. Mark has set out to find a solution that adequately addresses the divergent, and sometime opposing, interests of everyone who would use the river resource in the Grand Canyon. Mark believes that consensus is more promising than confrontation, and that the bottom line requires that you understand the folks with different points of view.

While there is an “outfitters association” the reality is that there is much diversity of opinion among outfitters, just as there is among non-commercial boaters. Trying to speak for, and represent, the views of all of them at the same time is probably more difficult than it looks. I have had differences of opinion with Mark on specific issues, but I have a deep respect for his courage and devotion to the idea that a good plan will address the interests of all parties, and involve compromise to achieve that end.

Richard Martin (and GCPBA): Ricardo is the past President of Grand Canyon Private Boaters Association, the editor of their excellent publication “The Waiting List”, a former mayor of Jerome, Arizona (in the good old days), and one of my most treasured friends.

I remember an interview in which Bill Clinton was asked about the most difficult challenges he faced as President. His response was, “Getting someone to tell me what I don't want to hear.” If I screw up in what I say, write, or think, Ricardo will set me straight again without telling me I'm a jerk. I've tried to do the same for him. We've agreed to disagree about some things, and try to keep each other informed all the time; this has worked well for me, and (hopefully) for him as well.

Ricardo has been an excellent advocate for improving access for private boaters in Grand Canyon. At the same time, he's made an outstanding effort to understand the interests of other users, and has tried to craft a solution in which everyone gets most of what they want, with as few compromises as possible. Like me, he has been somewhat

of a “lightening rod” for his organization, catching flak from both ends of the spectrum.

At the same time, Ricardo has been the editor of “The Waiting List: A Forum for Canyon River Runners”—the Grand Canyon Private Boaters quarterly publication. I'm a life-time member of GCPBA largely because I don't want to miss an issue—just as many GCPBA members have joined our organization because they want to keep informed by reading every issue of the Boatman's Quarterly Review. If you are unfamiliar with “The Waiting List” you can look at it online here: <http://www.gcpba.org/pubs/waitinglist/>

Again, my apologies to the other 20,000 or so nameless players—you all deserve thanks for speaking up and weighing in on the issues.

Some other issues: aircraft noise in the Grand Canyon is not about to go away. Another series of public meetings is happening, and environmental advocates (including GCRG) are beginning to wonder when, if ever, “natural quiet” will be heard in the canyon. Air tour operators would like to re-write existing legislation in a way that would define the incessant background whine of aircraft as “natural quiet” and allow their businesses to grow even more in future years. Environmentalists are beginning to think that the “quiet” we heard 20 years ago—the reason for existing legislation—is better than the “quiet” we hear now, and maybe much better than the “quiet” planned for the future.

Colorado River water rights under drought conditions also remain in the news. There's been some discussion about whether the recent drought in the Colorado River Basin merits special attention, up to and including changing the way water releases are being managed. Interior Secretary Gail Norton suggested that this was a problem best resolved by the states involved, and they held an unprecedented series of meetings to consider the matter. At the heart of the matter: the question of how much water should be released from Lake Powell.

Upper basin states want to reduce water releases from Lake Powell, which would give them additional flexibility if the drought continues. Lower basin states point to the recent wet winter, and say “No need to change anything right now.” Now that the stalemate is official, we're waiting to see how it will be resolved by Secretary of the Interior, Gail Norton. The answer could affect flows through the Grand Canyon this summer—if the upper basin states get their way, water flows through the Grand Canyon will be less than last year, if the lower basin states win they will be the same...at least for now. The immediate answer could come as early as today, and be old news by the time you read this. The long run answer is likely to be uncertain for years to come.

Drifter Smith

Dear Eddy

IN REFERENCE TO “PREZ BLURB—CRMP UPDATE” BY DRIFTER SMITH IN BQR 18:1

Drifter,

THE DIVISION YOU CONTINUE to support and cause between various user groups is as amazing as it is well hidden in your rhetoric in the “Prez Blurb” (BQR, Spring, 2005). How can it be that a person who wants to continue “celebrating the unique spirit of the river community....” can also try to divide it with such disingenuous barbs as you have? Is GCRG really on higher moral ground? Does GCRG really believe it sees the big picture and nobody else does? Is the attempt to find a common negotiated solution really a swamp? If the representatives of a volunteer group aren’t self-appointed, then who should appoint them? And what’s with all the “quotation marks” that lead the reader to trivialize perfectly good concepts? From my reading of the joint comments of the four agreeing parties (GCPBA, GCROA, AW, and GCRRA) I didn’t get any sense of them trying to assert “authority” (your quotation marks) over a final plan any more than GCRG tried to assert its authority with 39 pages of its own comments. That’s the public planning process, Sir. It is not a battle of them versus us. If you would join the process you would be more likely to be effective than if carping from the shadows.

There is a big picture that GCRG doesn’t acknowledge—equal rights. A stakeholder group, not one of mine, recently mentioned secretly, too late, and also from the shadows, the big picture. Unfortunately none of us read the mind of that group nor divined which comments would suit its directors, so that group paints all of us black, even GCRG. And black may be an appropriate color. We didn’t offer to close the canyon to visitation; we didn’t offer any of our own allocation to people who don’t want to be on commercially outfitted trips; we didn’t support equal rights. Equal rights is a far bigger issue than canyon protection; in fact, resource protection is a subset of equal rights, specifically, the next generation cannot enjoy the canyon if we don’t give them a chance to use it or if we trash the place by hosing through a horde of people. And while GCRG is justifiably proud of their goal of protecting the resource, a goal shared by most if not all stakeholder groups, GCRG has missed the big picture.

If the big picture of equal rights were our focus right now we could indeed celebrate the unique spirit of the River Community, not just the community of guides, outfitters, and customers. Unfortunately, to do so we would have to wring some of the GCRG rhetoric out of our laundry so we can move ahead a bit cleaner. I really hope that some day we guides can give up the idea that we own some sort of magical experience that only we can truly

develop, enhance, and impart. We don’t own “the best possible river experience.” We provide only one of many possible best experiences. But with your empty rhetoric, delivered too late to influence the planning, the best that GCRG has managed for now is to continue the divisive message of the last four decades. That message is that guides on professional trips are better than other river users.

I am calling on my fellow guides to stop poisoning the well. Start treating all others in the river community as neighbors you’d like to enjoy. All the river advocates deserve our respect and not our subtle or overt calumny. After all, who was it that brought the great preponderance of those resource-damaging people down the canyon, anyway? It was you and I, not any of the smaller players. And now we rail at our little brothers for ruining the resource? Get serious.

David Yeamans
CRMP COMMENTER

IN REFERENCE TO “LAKE WHAT-A-HUGEE?” BY JON HIRSH IN BQR 17:4

I RECENTLY DISCOVERED an article by Jon Hirsh on a landslide by Fossil Rapid in the BQR. I am a graduate student at the University of Missouri—Rolla. I enjoyed reading the article on “Lake What-a-hugee” and think he has something here. I am researching similar events throughout the canyon and it seems landslide damming is FAR more common than anyone previously realized. The real classics are around Deer Creek. There is the old buried channel of the river at mile 135 and the huge Deer Creek Slide just downstream. It seems that the Deer Creek Slide dammed the river, filled up with sediments, and then broke catastrophically, leaving significant debris terraces downstream. Anyways, check out some of my research at www.UMR.edu/~rogersda/cp_megalandslides

Conor Watkins

Farewell

LINDA LOU LINDEMAN

NOT THAT MANY FOLKS on the river today remember Linda Lou Lindemann's smile. She graced the Canyoneers fleet in the early



Linda on her wedding trip,
1973

1970s, cooking and swamping with her husband Dan. Her energy and sparkle were a joy to all who beheld them. In 1973 Linda and Dan wed at the foot of the falls, deep in the back of Travertine Grotto, the roar of the water drowning the voice of the fully-robed minister (who wore cut-offs and sneakers beneath his garments).

Born Linda Robb in Douglas, Arizona in 1950, she earned a BS from Northern Arizona University and later worked as the first woman cook for the Forest Service Hot Shot crew. After retiring from Grand Canyon, she taught Home Economics at Page High School. Her career was cut short when she was diagnosed with Multiple Sclerosis which, over the following decades, slowly claimed her body. But her mind, spirit, and optimism remained strong until the end.

Like so many of us, the River had gotten hold of her and would not let go. In the mid-1980s Linda found a way to continue her involvement with the river community as she compiled her river guide, *Colorado River Briefs for a Trip through the Grand Canyon*. First published in 1984, it is now in its ninth printing, fully augmented with drawings by husband Dan, who taught art when not boating.

Linda's increasing handicap did not keep her off the River. She made her last trip in Grand Canyon in 1981, taking the hike to Stone Creek Falls in an oar-and-lawn-chair sedan. She and Dan also ran Alaskan rivers while spending summers in Haines building a cabin. Her final trip was on the San Juan, where decades earlier she had first learned to row. There, on February 20 at Anticline Rapid, her spirit departed this plane. Her ashes now work their way down that stream, headed patiently past her home and husband in Page, back to Grand Canyon.

Brad Dimock

GARTH MARSTON

GARTH MARSTON, son of Grand Canyon legend Otis "Dock" Marston and one of three Marston family members on the Grand Canyon First One Hundred list, died quietly in his sleep in Boston, Massachusetts on March 31, 2005. He died of complications of Parkinson's disease which he had fought for over 13 years.

In 1942, at age 16, Garth joined his father on a heretofore unknown adventure—running the Grand Canyon on a trip led by another Grand Canyon legend, Norm Nevills. For 15 years following the Second World War and graduation from college (Univ. of California), Garth was a frequent boatman for Norm Nevills and his father. Getting married, having five children, and working for a living did not allow him to become as avid a Colorado River runner as his father.

It is quite likely that, in a secondary way, that Garth actually had a role in Dock becoming introduced to the Colorado River. The Marston's first trip on the River was purely a matter of luck. Two of Dock's Bohemian Club friends had found out about Nevills' new adventure idea and had signed up with their sons for the 1942 trip. One of the pairs dropped out and Dock's Bohemian friend contacted him about having Garth and his son replace the other father-son team. It is not too farfetched to speculate that Dock may not have gone on the trip if he did not have an athletic teenaged son at the time.

Garth's first work as a boatman was also an accident. In 1947, Dock Marston returned to river running with Norm Nevills bringing Garth, Garth's twin daughters Loel and Mala, and Garth's wife, Shirley, for a Green River trip. Norm Nevills, a world class tall tales teller, exceeded himself on the first night out and one of Norm's hired boatmen believed him and bailed out. Norm recruited Garth the next morning. Shirley Marston says that watching Garth run his boat through his first rapid was the most nerve racking moment of her life. (This was clearly at a time before outfitters certification and training!!!!!!)

After the Green River trip, the three women returned to California. Dock's wife, Margaret ("Mag"), turned over babysitting duties for Garth's first child, Jeff, to his mother and headed for Arizona where she joined Dock and Garth for a trip through the Grand Canyon. Margaret, therefore, became the third Marston family on the First One Hundred list.

Garth's three most noteworthy historical trips spanned over three decades. The first trip was in 1957

as a boatman for Dock Marston who guided a Disney film crew trip that shot background footage for what could arguably be one of the worst pseudo-historical movies ever produced, *Ten Who Dared*, about Major Powell's first Grand Canyon trip. In addition to guiding the motorized replica boats of the Powell Expedition, Garth and many other boatmen donned 19th century garb and full make-up in the June heat for the filming of authentic rapid-running footage for the movie.

His second trip was in 1960 as a boatman on the down river run of the New Zealand jet boats. He missed the historical up-river trip because he had to return to his job in Seattle. Although he missed the up river trip, both his mother, Margaret, and his daughter, Deborah, rode the Rim as spotters. He and his wife, Shirley, also were on the Old Timer's/Legends trip sponsored by the US Geological Survey in 1994, along with the Nevills' daughters, Sandy Reiff and Joan Staveley. This was Garth's final Grand Canyon run.

Garth and Shirley passed the river running baton and a love of the Grand Canyon to the next two generations of Marstons with many family river trips. The first Marston charter was a 1986 Green River run in Sport yaks. In 1991, Garth and Shirley, three children, two daughters-in-law, and four grandchildren ran the Grand Canyon. In 1997, Garth made his final river run as he and Shirley chartered a Salmon River trip. Although Garth's Parkinson's had progressed to the point that he could not join, the Marstons chartered a Grand Canyon trip in 2001. With this second trip, four of Garth's five children have run the Grand Canyon and all six of his grandchildren.

Over the years, his river career overlapped a pantheon of early river running greats, including the Sanderson brothers and Bill and Buzz Belknap. After the mid-sixties, Garth's river running focus moved to whitewater kayaking. When he moved to Washington, D.C. in 1973 and then to Boston, he became active in the Appalachian Mountain Club. He became a Class IV kayak boatman and ran many rivers from the Carolinas to Maine.

Garth, the Marston family, and friends have been longtime members of GCRG. Accordingly, the Marston family has requested that memorial donations be sent to Grand Canyon River Guides at PO Box 1934, Flagstaff, AZ 86002. This memorial fund in Garth Marston's name is being established to promote education on the history of Grand Canyon navigation.

Jeffrey Marston



Garth and Shirley Marston
photo: Dugald Bremner

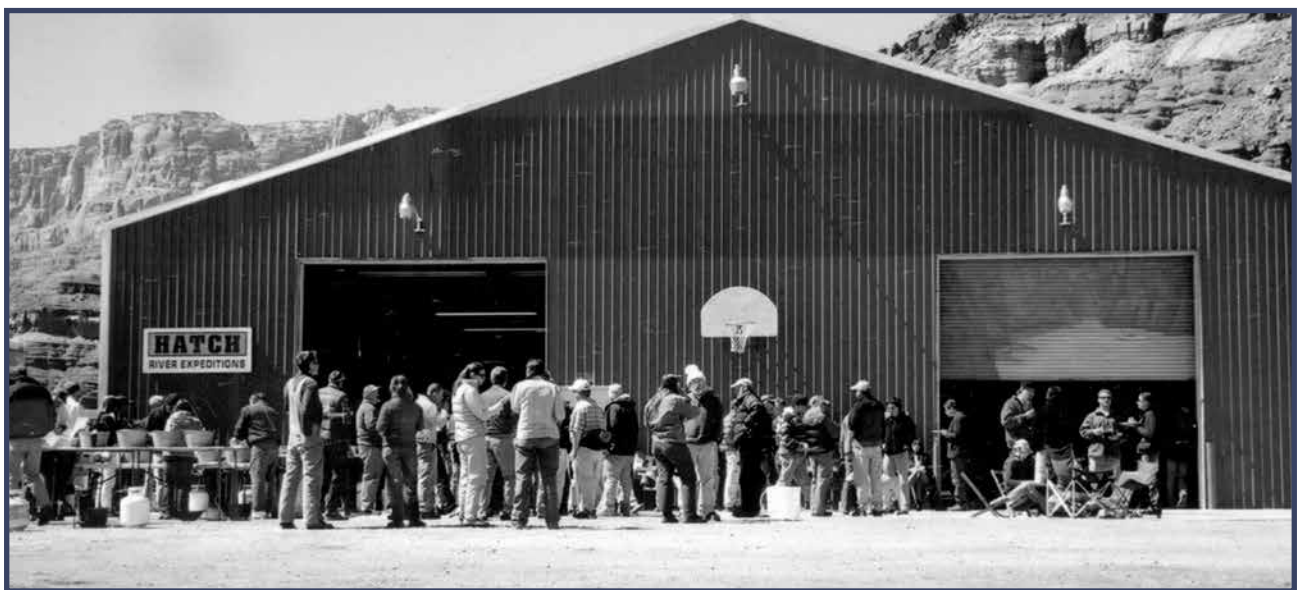
GTS Land Session 2005

WHAT DO RIVER GUIDES, researchers, historians and pink bunnies have to do with each other? The Guides Training Seminar (GTS), of course—over the Easter weekend, March 26-27, 2005 at Hatch River Expeditions in Marble Canyon, AZ. What a superlative weekend it was. The weather went from windy (and I mean WINDY as only Marble Canyon can be) to wonderful. The topics ran the gamut from fish, to dam flows, the high flow experiment, landslides, amphibians, and the list goes on. The speakers were simply wonderful, exhibiting diverse backgrounds and such great depth of expertise in their fields with a few new topics this year spicing things up and providing new learning opportunities. The Whale Foundation held their second annual Health Fair, offering amazing (and free) services to everyone who attended. The food provided by Martha and Thad Stewart was positively ambrosial and was indeed their “swan song” before departing for new culinary horizons in Alaska. The party on Saturday night simply rocked to the outlaw country tunes of Flagstaff’s own “Gravy.” As one guide said, it was a surreal experience to see a guy in dreadlocks sing a Merle Haggard song! The band had such a great time that they never took a break and everyone danced until they dropped in the wee hours of the AM.

And did Easter Sunday stop the festivities and learning? Of course not! Early Easter morning we were greeted by Flopsie (Pamela Mathues in floppy bunny ears), Mopsie (speaker Mike Anderson—his watch-

cap jauntily festooned with a stuffed bunny on top), and Cotton Tail (Martha Clark Stewart, absolutely resplendent in a full bunny suit). “Easter baskets” were placed by the still-recumbent bodies around the Hatch parking lot and a fantastic Easter breakfast followed! The serious portion of the day had to wait until our eyes were open and our brains cleared from party-induced cobwebs, but learn we did, and the crowd for Sunday’s speakers was actually fair-sized and exceeded numbers from some past years. Fortunately, our speaker line-up for Sunday was incredibly strong, so people who stayed for the last day were richly rewarded with some top-notch science and cultural history.

It is impossible for me to pick a highlight of the weekend. Everyone who attended would have a different opinion, and indeed the diversity of topics would have been music to the ears of any canyon and river aficionado regardless of where their interests lay. One attendee commented that she was thankful to hear more about our oral history project, courtesy of Richard Quartaroli and the support of the Arizona Humanities Council. Other attendees were engaged by Geoff Carpenter’s spirited talk about reptiles and amphibians. Yet others were taken by Conor Watkins’ contagious enthusiasm for landslides in Grand Canyon, or by Matt Kaplinski’s wild ride through a virtual reality of sediment deposits. And still others commented on how interesting they found Andre Potochnik’s talk, drawing parallels between the





ancestral origins of the Salt River region and Grand Canyon formations. But really, these were just the tip of the iceberg as every single speaker had some unique and fascinating information to impart. And that is perhaps what makes the GRS land session so great – the diversity of talks and the amazing speakers who come to share their expertise with the guiding community and the public at large. Additionally, it is enormously gratifying (and quite rare) to learn something new while having the ability to ask questions directly of the experts. In fact, the answers to the excellent questions posed by GRS attendees really added depth to the program.

And, now for the thank you's. Obviously first and foremost, we are so grateful that Hatch River Expeditions provided us with a home for the GRS once again. Thanks Ted, Steve, Sarah and Eva! Our appreciation also goes out to all the hardworking volunteers who helped get the materials to the event (and back), provided assistance with set up and take-down, and with a myriad of other small details that made the weekend come together so seamlessly. It takes time and energy, and you gave us both! And of course, Martha, Tad and Moseys Kitchen concocted absolutely delectable food, our beer was provided by Mogollon Brewery and the wonderful coffee was donated by Toucanet Coffee (if you're interested in bulk orders of these fantastic specialty and bird friendly coffees, you simply must give Helen Yard a call at her toll-free number, 866-779-1856, or locally in Flagstaff at 779-1856). Cline Library graciously loaned us their audio/visual equipment for the event, Gravy (the band) rocked the warehouse, and the list goes on....

Lastly, this event was generously supported by the commercial river outfitters, the Grand Canyon Conservation Fund (a non-profit grant-making

program established and managed by the Grand Canyon river outfitters), our new partner, the Grand Canyon Association, and Teva Sport Sandals. As we mentioned previously, the oral history presentation was also funded in part by a grant from the Arizona Humanities Council. All of our funding partners know, as we do, that education is the key to stewardship and advocacy. The Guides Training Seminar also

helps bring us together as a community and carries that spirit forth into the upcoming river season. It matters not whether you're a new guide, an old timer, an outfitter, a canyon lover, a private boater – there is something for everyone at the GRS. Take a look at the letter we recently received from one of our members. You'll see what I mean. See you next year!

Lynn Hamilton

Dear Lynn,

I just want to let you know what a great time I had at the 2005 Guides Training Seminar. Thank you so much for your efforts and the work of Grand Canyon River Guides. The spirit of camaraderie that exists within the rafting community is so incredible. Despite the fact that this was the first GRS I've ever attended, it didn't matter, because everyone was so friendly and welcoming.

In particular, it was great to learn about so many issues associated with Grand Canyon and the Colorado River. There were so many interesting presentations that it would not be fair for me to single out any particular one. I look forward to sharing some of my newfound knowledge with people I meet on my next rafting trip in July.

Oh yeah, and I must say I thoroughly enjoyed the food (thanks, Martha!) and the beer and the band on Saturday night!

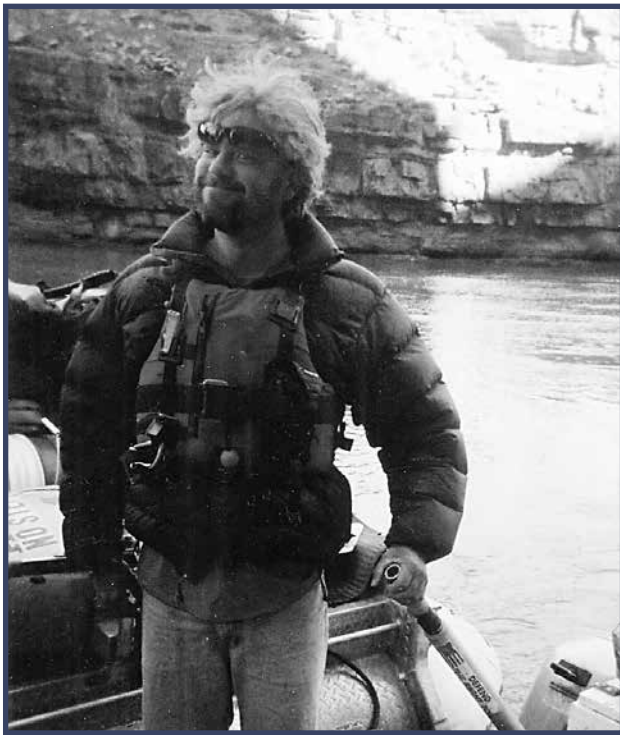
Sincerely,
Diane Bracey

2005 GTS River Trip

I AM NOT A WRITER, as will soon become apparent. I tend to ramble, and I tend to start every sentence with "I". I apologize. Oops! But I had the great pleasure of leading the GTS river trip this year, so here goes....

Spring has sprung, as my mom would say. Only after a good water year like this do we get to enjoy the magic of the desert in spring. Wildflowers do their thing. Life is doing its thing. Pollen and insects dust the morning light. Love is in the air, literally. It's the finest of all seasons. Another of spring's good qualities: longer days. The winter doldrums fade. Your general energy level increases. Another of spring's ubiquity: Grand Canyon junkies converge on Hatchland. Oh yeah!

At the GTS land session, after meeting the little intrepid group of river runners I had been charged with, I was inundated with the inevitable flood of questions, at which point I informed them of the one rule of the trip: each participant had 10 questions per half, and to use them wisely. My standard orientation is to make a bad impres-



Look, it's me and 40-feet of rubber

sion, that way everything else is sunny from then on. It certainly worked here. The caliber of the people I've met in the Canyon, guides and customers, has always been high. These little angels were no exception.

On the way to Lees, adversity stared us in the face, with our vehicle topping out at 25 mph down Highway 89.

Thanks to Gaylord for bringing us a replacement vehicle! At the ferry, I arrived wearing my "Pro-Choice: Keep Motors In Grand Canyon" pin to make a good impression on the motor contingent. A quick rig ensued, and dinner at vc (once a tradition, always a pleasure). Much protein and a few complex sugars were imbibed in preparation of much learning over 15 days in the greatest stretch of river in the world.

Next morning we did a quick historical tour, I gave a short orientation sprinkled heavily with mediocrity, a thorough safety talk, and informed my little group that safety was to come in first on this trip, and fun was to come in a close second, now let's go. I couldn't wait to get on the water, no one can stop the fun once you launch, and, after all, the Canyon itself is the ultimate teacher. We were there to learn.

At first night's camp, Hotnana (I know, not a very original camp for an OARS guide) Roy Webb told stories of great whitewater moments with everybody from Bus Hatch to George Flavell, "Stupid Whitewater Moments with Matt Fahey" was what I had to offer, and it took a while to tell.

Next morning, low water, a scout at Houserock, a hike up Ryder, a talk on the Stanton expedition, and a quick surf session at Redneck Rapid, some Roaring 20's, lunch and more Stanton at the H McD tree, more 20's, scout at 24 Mile, a broken oar, wind, private at South, so on to Redwall, where my little group of river runners tried to break down my TL defenses by guilting me into camping there, but thanks to the NPS river ranger, Brenton White for helping me beat back the throng of tired and weary campers, and on to Nautiloid for Carolyn's fine cooking.

Morning 3, we took a jaunt up Nautiloid, then I traded in the paddle for a motor handle. We did a very thorough exploration of the river right side of the Marble Canyon dam site, its survey points, trails, skiffs, and tramway remains, then another geology talk up Buck Farm, and a hike to its terminus in the Redwall completed our days adventure. Camp was made at President Harding.

Morning 4, a quick stroll up the hill to say hi to Hansborough, and then a day dedicated to route finding. Only one person wanted to kill me for this one! Just wanted to make sure that it's not really commercially viable. A hardy dozen, red-blooded Canyon junkies attained the rim up Eminence Break, at which point we encountered two USGS/GCMRC scientists running GPS benchmarks co-ordinates. What serendipity! Off in the distance, Comanche point and the south rim, barely visible over the rising marble platform, Shinumo Alter close at hand, snow still thick and white on the slopes of the East Kaibab Monocline across the river, the beauty was astounding. Then as if to

prove this break was a route for the ancient ones, Beav found an arrowhead with a broken tip. This was certainly crafted by skilled hands from that red Redwall chert. We camped at Saddle where Mae Franklin gave a great talk on Navajo culture, and a vegetarian ate hamburgers (seen it a hundred times).

Next day, a few hiked to the granaries, while others rested, bathed, and napped. Then we made some miles, heading to Carbon Creek for an early camp, and loop hike to Lava Chuar, where under the bent skyward Tapeats ledges at the Butte fault geologist Conor Watkins helped me finish every sentence of my layman's geology talk. Then a stroll along the fault to Lava Chuar, which had more water than I'd seen there ever. The loop was completed by motorboat back to Carbon. Thank you, Jack—the best assistant trip leader one could ever want. We then had something for dinner and Shana Watahomigie told us some Havasupai family history, and Roy Webb told us more fascinating river stories.

Day something, we awoke under the watchful eye of Mary Jane's tower. First we enjoyed a quick stretch before a day of earning karma points. Thanks for the yoga, Susan. Throughout Furnace Flats the brittlebush really started doing its thing in yellow on those rich, red ledges. I tried to surf the hole in Tanner that swam me a few years ago, we pulled six tires out of an eddy below Basalt, one at Rattlesnake, then an hour and a half of camelthorn eradication at Unkar, a flower walk, a pot shard talk, a scout at Hance, and a victory lunch below surrounded by yellow and red. An early camp at Grapevine, and a hike up Vishnu Canyon, thanks to Jack and four strokes, while Shane and I prepared something to soak up the revelry I could feel brewing in this well-bonded group. Upper Vishnu falls was reached, and the group ferried back for food, fun, and festivities. The day's camelthorn was torched and illuminated those pink granite walls, where a safe but fun party unfolded and I went to bed early. The wind came up and Operation Desert Storm raged till morning. Not the party—the wind.

We all woke up with eolian sand ripples in our bags, and brushed our crunchy teeth. It was interchange day. Shane was appointed new assistant TL, and sworn in, many hugs and kisses to our hikers, and the motorboat jammed them to Phantom on Sunday's low water. Goodbye, amigos. On our arrival, we rolled the tires to the ranger hut for a free chopper ride to the rim land fill, called loved ones, visited with the locals, then met the newbies, had orientation training, and headed down to my favorite Grand Canyon rapid, Horn Creek. A scout. It was low, almost as low as I've seen it. Then more wind and low water. Camp was made at Monument with a Grand Canyon Field Institute hiking trip that was generous enough to share their camp with us in return for a fireside lesson on biology and canyon history. Thanks guys!

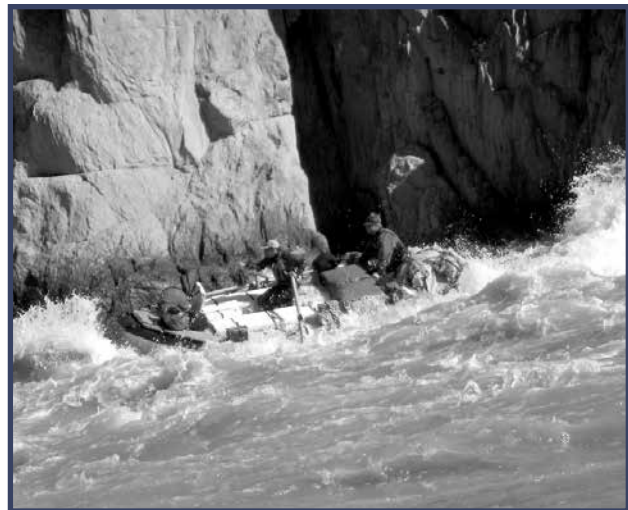
Day whatever, the Gorge on 20k. Granite, big as usual.



Latimer, Robyn, Shrager — River Time



Birddog, Tammie Killer, Robyn — Canyon Time



Whitewater Goodness

At Hermit, I told everybody they could cheat it if they wanted, but why? Safest flip in the canyon. Some people had never even seen a flip, so we gave them two. That's what happens with the hey-diddle-diddle in Hermit at 20k. Everybody was all right, the boats were promptly righted, and then on to Crystal to eradicate more camelthorn. A napalm strike couldn't get all the camelthorn there. It's fascinating how tenacious this plant is. Two hours of digging, then safe runs all. The motorboat spotted a private at Bass camp, and jammed back upstream (those things are great! There should be one on every trip), so we camped at Slash camp, because hardly anyone else had been up and over into upper Shinumo. Most went, some had the Bright Angel shuffle, and Roy, Shane, Adam, Al, and I had a very thorough exploration of both sides of Bass' cable crossing. Food, fire, smoldering camelthorn, Roy Webb history, Larry Stevens biology and song, and booty beers for the swimmers rounded off the day. The trip leader breathes a sigh of relief. Good day!

Walthenberg day, pack lunch, Upper Elves, camp at Blacktail. I know, tough day. They earned it. Food was served up once again, along with history, bio, geo, and song.

Middle gorge day, pack lunch, spent first half of the day in Upper Blacktail, Fred Phillips talked about the riparian restoration work he does, and showed us his handy work at the spring. New hike for me, big, drains most of the Powell Plateau. Then much whitewater fun, private scouting Bedrock, one at Galloway looking at Stone, one at Race-track, and a single boat in the Mouth. We camp with it since its owner was nowhere to be seen.

Tapeats/Deer day, we hurried up the trail, gawked at more flowers the whole way, many Thunder virgins were awed, Surprise virgins were surprised, geologist Conor Watkins pointed out the catastrophic landslides, and a diligent group got started re-constructing the Throne Room, which was mysteriously thrown down this winter. Hmm...? Camp was established at Pancho's Kitchen, which is a little blown out after last November's flood flow. There was a meal of some kind, river-running history, flower identification, and midnight rain.

The Icebox lived up to its name as my hardy row-boaters rowed in the wind and rain thirty-one miles to Fern Glen. Larry Stevens and company parted our company at Havasu, where the assistant TL made the executive decision to brew up some coffee for the chilly wood-pushers. What a beautiful sight to row by the mouth with its blue lake and narrows, without pulling in, for the first time for most, and see Shane and the blaster doing their thing on the ledges below. Thanks, Shane, for helping avert a near mutiny. Except for Upset, the selfish kayakers rode on rafts or the motorboat. Alamo Arch, the lower unit, camp, more food, more stories. Good night....

Lava Day, I finally ran it without scouting and rolled for my first time in three different runs in a kayak. Hiked



Our mighty historian, Roy



Mae and Jason — NPS Amigos



Eager hikers at Lees Ferry

up to run it again. I could do better, Middendorf did. Meanwhile, a broken cotter pin allowed the prop to spin off, and afforded Conor the opportunity to make a diving leap into the Warm Spring to pull it into the eddy before imminent adventure befell. Back at the scout, much trepidation as no one wanted to run the left. Right looked big, the first group proved it for us. I wanted to run it again, charge the V-wave, and meltdown through the foam, but I ended up being a rider/high-sider instead, for the first time since maybe '94? I volunteered to ride. Maybe I'm not such a selfish kayaker after all. Being a passenger is very exciting. I'd forgotten that. Shana had the best run of all I witnessed, and not only am glad I was a rider, I look forward to seeing her being a steward of the place for which she has cultural propriety. Toilets and kitchen were set up at Hualapai Acres. Edibles, fuego, Lava Follies, and grease bomb training. Jolly good show! Real professionals. Felt like a proud parent.

"Run-out" day, more miles, more stories, short hikes, camp at 220 to break down the side-tubes. The cook crew put on their finest bikinis and sarongs, cooked up a free-form meal, and prepared what Georgie used to call buckets of stupid. Thank you, Fred, John, and Geoff!

After 15 days of sheer pleasure leading this training trip, we arrived at Diamond Creek for the take-out. The 40 feet of fun and convenience then motored on for South Cove and a day of adventure on its own. The remaining phase in training was true takeout initiation. I told my merry band of hiking/camping funhogs I'd treat them to lunch at Delgadillo's. His sons, John and Robert, replete with mustard string, false doorknobs, and the "Number 6, number 6 your order is not ready" call over the PA, are carrying on Juan Delgadillo's payaso legacy.

At this point I'd like to say thanks to Lynn Hamilton for all the legwork the trip entailed, for paying for everybody's lunch at the Snow Cap, as well as cutting the spam from this article. Thanks as well to the NPS and all the outfitters for gear, but mostly for sending great people.



Bonding and ore bonding...

From beginning to end, everybody was immersed in the learning and teaching, and even those few doing their first trip had things to offer the group as a whole, explanation of hydraulics and the nuances of the holy molecule, H₂O, for example. Our speakers were all enthusiastic, knowledgeable, and captivating. Like a light to a moth, Larry Stevens, the bard biologist captivated us with lessons on yucca moths, pineal sheath size of Kanab Amber Snails (size matters), narrow corridor plant migrations, and regaled us with pirate ballads and his NPR mega-hit, the song of the Humpback Chub. Mae Franklin told us Navajo history through her own clans, NPS/Navajo relations, the hogan housing project, and invited all the Belagana to come visit her in her office. Conor Watkins, our enthusiastic Grand Canyon geologist on loan from the University of Missouri at Rolla, explained everything geo-related and enlightened us about how landsliding is one of the mechanisms that helped shape the canyon through the ages. John Middendorf, the dean of big wall climbing and fellow selfish kayaker gave an informative talk on ropes, spotting, climbing, and hiking safely in the canyon. Our gentle herp guy, Geoff Carpenter, captured, displayed, and taught all he could on every scaled critter he could catch. Fred Phillips, mi hermano, introduced us to his world of riparian restoration. And last but not least, Roy Webb's history lessons bridged many of the gaps in the river stories we tell our people all season long. Thanks to all.

Still basking in the glow of the trip, I sit, trying to wax poetic, but it's more like waning poetic. All the things that spring brings, came. The brittlebush yellow dominated the slopes from the LC to Diamond Creek while delicate mariposa lilies, stemless primrose, asters, Whipple Yucca, red hedgehog and pink prickly pear cactus flowers filled in the spaces. The bees, moths, and other bugs were doing their thing. We hiked, we observed, we learned from the artistic method. We laughed, I cried. And I fell in love with everybody on the trip, which I succinctly notified them of in a 15-minute ramble. Sorry. It's amazing that you can do a trip with total strangers, and end up with 38 friends for life. On this trip, learning, safety and fun tied for first, and so did friendship.

Matt Fahey

Grand Canyon Youth

A BIG THANK YOU!

OUR 5TH ANNUAL River Runner Film Festival & Auction held on April 8, 2005 was our most successful fundraiser to date! The new venue at the Museum of Northern Arizona was wonderful and the turn-out substantial. We'd like to thank all of the artists, vendors, volunteers (including 20 youth) donors and buyers who made the event a success. The River Runner Film Fest will be moving to the fall sometime as spring is just getting too busy for GCY with an increasing number of trips. The film festival will be in partnership with the Paddler Magazine film fest which is exciting. There will still be room for local and regional film makers to submit their films. We'll keep you posted as to the new date and thanks again for supporting Grand Canyon Youth!

WELCOME EMILY MOESCHLER!

Grand Canyon Youth is pleased to announce the hiring of our new Assistant Director, Emily Moeschler. She comes to GCY right as our season is really picking up and is going to be a huge help. Emily is a recent graduate of Prescott College and has worked for PRO and Mad River Rafting in Jackson Hole. She serves on the Board of Directors at Camp Colton and has worked with Arizona's Children Association. Her enthusiasm and commitment will compliment the GCY team.

2005 PROGRAM UPDATE

As of the end of April, GCY already had six river programs on the water and back. These programs have been with a variety of groups including middle school youth from Texas and Tucson, and a group of young women from Williams. In addition we had our 4th annual Hopi Youth program. Our first Grand Canyon trip with Canyoneers also went on the water at the end of the month. All of these exciting programs and we aren't even a third of the way through the season!

THANK YOU, ROB ELLIOTT!

Grand Canyon Youth owes part of our newly increased capacity to Rob Elliott. The AZRA San Juan River permit was gifted to Northern Arizona University in collaboration with Grand Canyon Youth at the end of March. This profound gift of access is unprecedented in the outfitter community and should be commended. This gift has helped to create a mutually beneficial relationship between NAU and GCY. Rob thank you for continuing your legacy of education and environmental stewardship.

GET INVOLVED!

As always, your support, in whatever form you can give it, is much appreciated. To learn more about Grand Canyon Youth, to donate, to volunteer, or to guide please call Emma Wharton (928) 773-7921 or email info@gcyouth.org or check out our website, www.gcyouth.org. Our office is currently located in the same little house with GCY, 515 W. Birch in Flagstaff. Again, thank you to all of our current supporters, you know who you are, thanks for all you do!

PARENT LETTER

This is a letter written by a parent of two GCY participants. It emphasizes some of the impacts a GCY trip can have on youth.

Some of today's youth are moving into adulthood experiencing only what they can "get out" of something, and not what it is they can "give" to something. While our two teenaged daughters would not be considered "at-risk" youth if looking at their grades, athletics, and community involvement, it has been an important family goal to emphasize character and service. GCY has been a catalyst in both of their lives to find what they have to give to others. A GCY trip is a "giving" experience. The guides, leaders, and volunteers of GCY share their time, expertise, love of the outdoors and most of all their sense of wonder for the world around them. In turn, the youth must give of themselves in the community, educational, and participation as part of the GCY trips. The youth do not just experience the trip, they live it. Isn't that the whole experience that life is all about?

Laurie Steinhaus

PARENT

Announcements



Teenagers really get into their river trip. This was taken on the first day at lunch.

photo: Aaron Moore



Youth survey the beauty of the river from Redwall Cavern.

photo: Pam Cox



Education and service is mixed with fun as these youth and their guides, Shoshanna Jensen and Lars Harr frolic at the Little Colorado River.

photo: Melinda Thompson

LEFT AT GTS

A few things were left at the Hatch River Expeditions warehouse after the GTS land session weekend (March 26-27, 2005). These included a windbreaker, a woman's jacket and a composition notebook. If any of these items belong to you, please contact Lynn at the GCRG office (928) 773-1075, or gcrg@infomagic.net.

FOUND

Anyone lost (or need a spare) a women's size 7 Chaco thong (right/olive green)? Call (435) 635-4144.

LOST

In a night of stormy weather...a rig bag. Reckon it is on the river bottom near the shore at 194 Mile camp, so if you're there on a low/clear water trip... call (435) 635-4144 if you find it.

MISPRINT

In the last issue, in an article about Charly Heavrich's multimedia DVD "Spirit of the Canyon," we printed that there were 19 images of the Canyon when there are actually 190! Oops. Check out the last issue for ordering information.

BORN

Mackenzie Rain Spillman was born on March 31st—6 weeks early at 4 pounds 1 ounce and 16 inches long. There was no stopping her—it seems she was tired of waiting. Proud parents, Katherine Spillman (AZRA) and Dave Spillman (GCE, AZRA) are thrilled beyond belief and Mackenzie is growing hourly! She'll have her own boat soon.

Ocotillo

Fouquieria splendens—Ocotillo or Candlewood Family

OCOTILLO IS ONE OF the most characteristic plants of the southwestern deserts. This woody, semi-succulent shrub with sword-like branches growing 2-9 meters long is not easily confused with any other plant. Ocotillo comes alive in the spring when brilliant orange-red flower clusters burst from its branch tips. Following a rainy winter or summer monsoons, ocotillo is particularly impressive with its lush, green foliage densely covering the long, elegant stems. After the rains subside, the gray branches blend in to the surrounding landscape.

You may first mistake this plant for a cactus or a succulent because of its thorny, leafless nature, but it is actually neither. The harsh desert environment compelled ocotillo, cacti and other succulents to evolve similar strategies (shallow roots, reduced leaves, water storage organs) for coping with extreme heat and dryness. Ocotillo does not reside in the Cactus Family because of its fused flower petals, which are more highly evolved than the free petals of cacti. The photosynthetic stems allow it to produce energy without losing precious water from its leaves. Its spreading, spiny branches come into leaf during each rainy period, and the foliage is shed in the intervening dry spells to aid in conserving water. It may actually change its leaves five or six times during some years.

Ocotillo is an important food plant for hummingbirds in need of “fast-food” stopovers on their spring migration through the desert to breeding grounds further north. It is often the only plant blooming in drought years, offering a relatively stable food source. It bears tubular flowers that have probably coevolved to suit the needs of these specific pollinators, such as hummingbirds (Anna’s, black-chinned, broad-billed, broad-tailed, Costa’s, and rufous). During the peak nectar-producing season, carpenter bees transfer pollen effectively while crawling around on the inflorescences as they feed on the flower tubes. Look for ocotillo stripped of leaves from the top down for evidence of the Calleta moth feeding during the summer rainy season. Antelope ground squirrels scurry up onto ocotillo branches and feed on the seeds and flowers.

Ocotillo reveals an interesting correlation of elevation, geology, and soil type. At higher elevations (to 6000 feet) it favors limestone formations, which have high specific heat and are able to retain warmth longer than other rocks. This helps ocotillo persist during the winter season at the high end of its elevational limit, as in Grand Canyon. At lower elevations (to sea level), ocotillo is more limited by water availability than

temperature. Here it prefers granite soils, which more readily retain organic matter and moisture.

Where it occurs, native people, pioneers and explorers have used ocotillo for centuries. Tohono O’odham (Papago) people use ocotillo for house construction, while Akimel O’odham (Pima) people beautify their gardens with it. Highly flammable and sensitive to fire, ocotillo bark is full of resin and burns with heavy smoke, making it a supreme firewood. Mexican natives made the thin, dry wands of the ocotillo into torches. Branch cuttings root readily and make living fences, hedges, or enclosures, which also serve as coyote-proof runs and corrals for fowl. Ocotillo

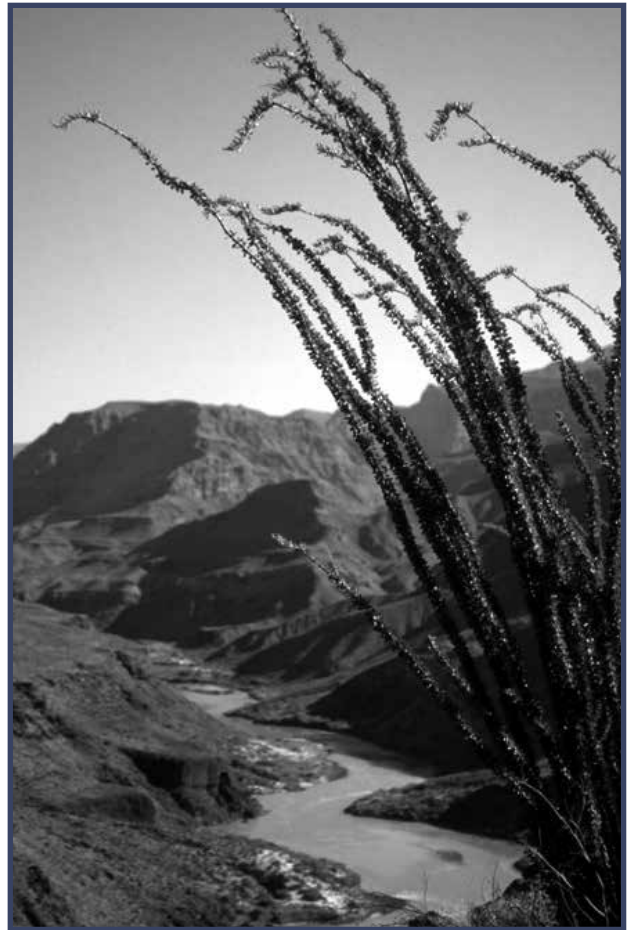


photo: Kate Thompson

is often used along with adobe mud in constructing shelters, houses, and outhouses and as support for thatched roofs of ramadas.

The flowers, soaked in cold water, make a very refreshing and tasty beverage. Others eat the seeds,

which reportedly have an alum-like drying quality and make the mouth feel very strange. Herbalists make a tea from the bark to cleanse the lymph system and as a poultice to reduce swelling and inflammation.

According to Rose E. Collom, Grand Canyon National Park's first botanist, the Apache Indians relieved fatigue by bathing in a decoction of the roots and also applied the powdered roots to painful swellings. Around 1760, German Jesuit Ignaz Pfefferkorn testified that "this contemptible hocotillo is an incomparable



photo: John Running

remedy in driving away with astonishing speed swellings caused by falls, bumps, or crushing" by peeling some hocotillo twigs, roasting "the remainder for a short time in hot ashes, ... then [pressing] out the juice on a cloth and [binding] the swollen leg with it."

The genus, *Fouquieria*, has 13 species and is restricted to the arid regions of North America. It is named for a Parisian professor of medicine, Pierre Éloi Fouquier (1776-1850) and *splendens* is descriptive of the brilliant, scarlet flowers. First collected in 1847 near Chihuahua, Mexico by Dr. Frederick Adolphus Wislizenus, Dr. George Engelmann later described *Fouquieria splendens* as distinct from other species in the genus, such as boojum (*Fouquieria columnaris*). Ocotillo has sixteen common names many of which are derived from Mexican, Spanish, Aztec and other Native American languages.

In Grand Canyon, ocotillo is found on dry mesas and slopes of the Inner Gorge from Colorado River Mile 155 downstream to the Grand Wash Cliffs. As you float on the Colorado River towards Havasu Canyon, look for ocotillo on the Muav benches, first appearing on river left just after you pass the "Polar Bear Rocks," above Ledges Camp. A stately ocotillo greets hikers at the entrance to Havasu Creek along the trail. Although ocotillo is absent from the Grand Canyon fossil record, the lower Grand Canyon took on its present appearance between 4000 and 2000 years ago, a landscape that included ocotillo. It lives for several centuries as evidenced in comparisons of historical photographs. Elsewhere, ocotillo is found on dry mesas and plains in grasslands and deserts from southwestern California extending east to Texas and south to mainland Mexico and Baja California.

Researched by Richard Quartaroli

Most of you have likely heard about the up and coming field guide to inner canyon and river plants. Word on the street is that you'll have it in your hot little hands in 2006. There will be much fan fare around its release so please put some time aside to celebrate with us. In the painless process of editing plant descriptions, we have had to cut them down, sometimes dramatically. We are doing this to include as many species as possible, keep it affordable, and ensure that you'll want to take it with you on your hikes. Many of our writers have spent countless hours researching the fascinating lives of these plants, and over the next year we will share the more complete versions with you. What follows is one of our favorite descriptions of one of the many plants that are on proud display this spring.

Call or write if you have any photographs or want to give us the strength to carry on:

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Learning by Watching: Inroads to Stewardship

WHAT DOES WILDERNESS look like?" "What does wilderness sound like?" "What does wilderness feel like?" a refrain circling round and round my head, while I separate charcoal debris from sand through a sieve, rocking, back and forth – shshshshshshshsh.

Soot coats my damp hot arms. I've been sifting three hours and I WILL NEVER BE DONE! On this exquisite beach we've identified four fire sites, one with evidence of multiple fires. Think of that, four fire sites leave such severe impact that I will never be done!

I wonder, "Do 20% of the folks who'll visit this beach notice charcoal, or not notice charcoal? Do 5% notice charcoal, or not notice charcoal? Or do .5%? Or do 80%? Or, or, or.

No one knows.

What do I know? I'm just a guy rafting the Colorado for eighteen days with five other volunteers, supervised by NPS folks, helping to move forward the Grand Canyon GCRA Revegetation Plan: removing and/or documenting exotics, obliterating social trails, recording visitor impact, tallying animal sightings, relentlessly pick up micro and macro trash.

And because I am sifting it happens that I'm thinking about stewardship. I set down the sieve, puzzling, "How can visitors, commercials and privates, manage even more successful river stewardship?" The response seems to always be inextricably linked to usage impact issues, predicated on whose resources are affected.

Mesmerized by the heat and the repetitive rhythm I fall into a trance, and wonder, "What about other tasks I am here to accomplish?"

Picking up trash, that makes undisputed sense. Yanking invasive Ravenna grass, that makes sense. If left unchecked it will choke beaches, slash at and welt visitors' legs. Rerouting walkers' feet away from endangered areas by building stage-set like deterrents of brush, rocks and branches, that makes sense. Unless footsteps are deterred, the fragile cryptogamic soil will be forever lost.

Loudly intruding on my reveries, irritatingly, challengingly, a GCRA employee leans over my pile of charcoal asking, "So now that you've been working on river stewardship, what useful insights might you share with other river stewards?"

A response forms over the next few days. As I observe happenings along the river, I notice a pattern of missed opportunities to display stewardship—opportunities to teach others about stewardship. I call the pattern "People Learn by Watching."

Here are two examples:

ONE

I overhear, spoken by a commercial trip leader to tired-at-end-of-day passengers, "Just take your gear and walk up river about 100 yards and find a site. This is a great camping area."

So I watch passengers cart 20 dry bags along, and alongside, the clearly outlined path, plopping them down in obvious site areas, and also plopping them down in areas that obviously are not intended for camping. In fact, we volunteers had just spent 3 hours making the obvious sites even more obvious. And the less obvious sites even less obvious. **GRRRR.**

I wondered, "Why didn't the leader have someone accompany the passengers to show them what paths and campsites look like...and don't look like?"

TWO

A trudging caravan of visitors edge along paths that ultimately lead to an arch site. Social trails are everywhere and the guide allows his herd to wander as they will. "All roads lead to Rome." must be his thinking. So I watch the wandering. In fact, I'm sweating in the sun, obliterating trails as the leader walks by, and waves. **GRRR.**

Again, I wonder, "Why didn't the leader point out the impact of social trailing? Why didn't he scout out the designated paths for his group and show the way?"

I detail these stories because they are stories of folks asleep at the stewardship wheel. None are badly intended. None are uneducated. And these stewards hold the interests of the river's ecology close to their hearts. Undeniably.

I guess that the day-to-day caring for passengers' safety and the quality of their trip comes first, and sometimes it's tough to elevate stewardship to the same priority.

At the same time I noticed how short stewardshipless naps cause the river banks to become, at a glacial but steady pace, less than what they are.

I don't mean to criticize, only to offer a gentle reminder—stay awake—don't nap.

Bruce Kanarek

Take Me To The River

*Take me to the river
And wash me down
Won't you cleanse my soul?
Put my feet on the ground.*

Al Green, gospel singer

HE WAS HEADED toward the River that balmy spring morning, the only hiker to pass me on the trail in Havasu Canyon. There was a bounce in her step, purpose in her stride. She seemed more pilgrim than wanderer. Her specific destination, I learned afterwards, was the River itself. She wanted to put her hand in the Colorado River of all things.

Later that afternoon, at the mouth of Havasu Creek, where the news of her death spread in whispers among the returning boatmen and passengers, and then floated downstream as trips departed, I searched my memory for details. I had been ambling up creek, a laid-back boatman shepherding his flock of river folk on a stroll through a familiar landscape, when she whisked by me. With the entire day before me and no real destination, I could have been cited for loitering.

I would like to say that I remembered her face or afterwards that I learned her name. Neither is true. The harder I grasped for her specific features, only a few hours old, the more elusive they became. In the days following our less-than-brief encounter, her vague image began to bleed into the fabric of the river trip. Eventually she disappeared, or so I thought.

At Mile 157, Havasu Canyon is an idyllic, seasonally overpopulated, ten-mile long side canyon in the heart of Grand Canyon. At Havasu Springs an underground river gushes forth, eventually plunges over three waterfalls—Navajo, Havasu, and Mooney Falls—and forms Havasu Creek. To wander along its string of turquoise pools, to seek refuge from the crowds in any of its numerous streamside hiding spots, to gawk at its brick-red, desert-varnished walls or to stand an arm length away at the bottom of one its cascading waterfalls with the ground rumbling and the mist rising, is to inhabit a hiker's paradise. On some mornings the scent of honey and a coming storm mix in the air or a scale of water music plays counterpoint to birdsong. Where Grand Canyon offers symphonic awe and wonder, Havasu Canyon invites intimacy and the opportunity to relish rather than gasp before the transitory nature of one's existence.

It is the home of the Havasupai, "people of the blue-green water."

In days gone by, no river trip leader could pass by this premier attraction in good conscience unless he or she were willing to risk the disappointment (or ire?) of a river traveler who had heard, or worse read, about this riverside attraction. Thus, most of the foot traffic in Havasu is born on the Colorado itself. In peak season, the numbers are considerable; the outdoor sanctuary is full to overflowing then. Generally, the surge of hikers runs up canyon in the shadow-bearing morning and trickles down in the heat and dust of mid afternoon.

So my anonymous hiker was on her own as she made her way to the Colorado River. Likely as not, she had pitched her tent at the Supai Village campgrounds, eight, probably nine miles up canyon. To come as far she did when we passed one another, she would have gotten up early. She would also have been walking for at least two hours; I, on the other hand, had given fresh meaning to the term meandering. Indeed, though I had been on the trail for a half-hour or less, the distance traveled could have been measured in yards.

The job of "running sweep" required that I trail behind our main body of hikers, going up canyon in the morning and coming down canyon in the afternoon. Already they had pooled into smaller groups based on some alchemy of individual pace, temperament, and destination. These reconstituted pods, I knew, would be spread along the trail for most of the day. My task was to keep an eye on their whereabouts, taking note on who and how many had stopped along the creek, who and how many had made a dash for the distant waterfalls. On any given Havasu hike it is also the sweep's job to answer questions, wander freely, bandaged scrapes, keep time, lend a hand, voice encouragement, share water, roundup the stragglers, tell stories, and generally linger. It is an idler's dream.

Two fundamental kinds of walkers tread the paths along Havasu Creek. At one end of the spectrum are those who mosey and never get anywhere and don't care if they get fifty yards or five miles upstream. They are wonderfully purposeless, light-hearted day-trippers. Lacking in drive, determination or a destination, they sit in pools dangling their feet, speak in whispers, nap, read, allow dragonflies to land on their arms, or study the petals and stamen of the crimson monkey flower as if it were an entire garden. These are the English Romantic poet William Blake's "eternity in a grain of sand" hikers. Recreational loiterers and malingers, one and all. They move through time; space (i.e.

scenery), while beautiful and obviously unavoidable, is secondary in their world. They do not march to a different drummer so much as tiptoe and weave.

On the other end of the spectrum are the fleet-footed athletes—trail cruisers, runners, joggers and fast walkers. Goal-orientated, racing past the visual, auditory and olfactory scenery as if they were in the Boston Marathon, they are enthralled with motion and distance. Time, for these bi-peds, is measured and treasured to the drumbeat of a march. Space is linear, at least on a spring morning in Havasu Canyon.

These *mile-makers* take pure physical pleasure in putting one foot in front of another, avoiding the cactus, finishing the task. They like the view from atop the ridge, the rhythm of movement, the blur of color and smell and sound, the place few get to. They do not ponder so much as interact with their environment. They play hard to earn their bounty. They don't mind a smallish group, but prefer to travel in trios, pairs or solo.

Most hikers fall somewhere between these two bookends.

My mystery woman would have passed at least one of those small, destination-driven groups before we met.

Long before I could see her, the pat-pat-pat of her footsteps signaled her presence. It was not the quick footfall of a runner but the steady rhythm of a sure-footed walker, someone in for the long haul. The sound grew, and soon enough a female figure was rounding a bend in the trail, perhaps three hundred yards away. Even though she seemed to be looking in my general direction, she showed no sign of noticing my presence. I might as well have been a lizard.

The trail had cut away from the creek, spilling out onto a wide bench of shadow land. Waist-high patches of grape ivy and hackberry bushes bordered this wide spot. The sun had only just tipped over the edge of the canyon wall and spilled onto the floor, pushing the shadows back up onto the north-facing wall. You could hear the trickle of Havasu Creek. It would be a warm day.

In my memory, she was of average height and build. I think she had brown hair, perhaps to her shoulder, but no more. Because it was typical, I am more certain of her outfit—a visor, loose fitting t-shirt, baggy shorts, small backpack. Her tennis shoes, I know, were soaking wet as were her drooping socks from wading through Havasu Creek. She left damp foot prints in the fine, red dust of the well-worn path.

The distance between us closed fast.

As my mystery walker neared, she gave the impression that she had no time to waste. To say we met, then, is a misnomer. There was no pause, no sign of an inclination to slow down on her part. The trail was

wide enough that neither of us had to give way. She brushed by me like a fresh breeze. She was smiling. I suspect she had been all morning.

"How far to the river?" she asked eagerly without breaking stride, a little short of breath. She might have smelled of sage, sweat or suntan lotion.

"Mile, maybe a bit more," I answered.

"Thanks!"

Then she was gone, swallowed up by the green grape ivy and the morning shadows.

A smile may be the ultimate reciprocal act. It can be an invitation as well as a request, a call for recognition or a cover for feelings best left unexpressed. In this case, I suspect my mystery walker's beaming countenance was not only one of natural courtesy that she could not suppress, but also an overflow of the elation that she could not conceal. In hindsight, I am quite sure that she was beaming. That is the right word, I think. *Beaming*. It was far too early in the morning to behold a spell of bliss. And yet, if bliss is the experience of awe coupled with the experience of being connected to something greater than one self, than that is what I had witnessed briefly.

And though I occasionally entertain the idea that something about me was the cause of her smile, it is most unlikely. Of course I smiled back, unable to not return a walking woman's smile, even if it had nothing to do with my presence.

The encounter was over before it began.

At the rate she was traveling she would reach the Colorado River in fifteen, twenty minutes at the most. Since I had no destination, I would stop a half-dozen times, malingering that I am, awash in the morning silence. I would chat with my passengers, soak in a pool, eat lunch, nap, spy on a dragonfly, ponder my good fortune, enjoy the fact of my temporal, deliciously animal existence. I would not return to Havasu Harbor until midafternoon, hours away. And then, and only then, would I learn that my mystery hiker was thirty-years-old, a divorced mother with an adopted child. She was on vacation from South Dakota, home of Mt. Rushmore and the Badlands. It was a thin profile for the woman soon to inhabit my imagination.

Indeed, she had been in a hurry. She had to be back at the Supai Village campgrounds to catch her ride to the airport or bus station before noon. So when she passed me she was on a roundtrip mission, a narrow, 20-mile loop. To see the River was one thing; to dip her hand in the River was quite another. Only with the touch could she then tell her child she had really been there.

After she left me on the trail, she would have crossed Havasu Creek once or twice more, scrambled

over travertine dams, encountered more hikers, stepped up her pace to avoid conversation when possible, her smile threatening to turn into a laugh. Or so I like to think. Finally she would have reached the cliffs above the harbor which was crowded with boats. She would have seen the River before she touched it.

As usual two or three boatmen, acting as harbor masters, sat on the floating armada of rubber and wood, messing about. She found her way down. Then she moved the last few feet to the river's edge, her goal literally within reach. The limestone rock may have been wet where it meets the water; the river was running fast, high, brown that day. Pulling out of the harbor would require attention—stern-first, a ferry angle not too sharp or too broad, a sturdy downstream oar, the thin lynchpin holding the whole maneuver together.

At last she was in the presence of the Colorado, the River of her imagination and longing. Her holiday pilgrimage was nearly complete. Now she had only to kneel down to touch the water. Perhaps a boatman had spoken to her beforehand. It is not hard to imagine. Perhaps she told him she had hiked ten miles to touch the Colorado River when in fact she would have to hike another ten miles up canyon to complete her journey. That bit of information, plus her smile, would have caught any boatman's attention. Perhaps one was watching as she bent to touch the water.

Abruptly, so the story later went, she slipped or fell into the water. Does it matter? Immediately she was swept downstream. People have slipped into the River before; people have been washed out of boats and picked up downstream. These things happen.

Before being pulled down beneath the water the first time, she screams for help. Already one of the boatmen is cutting loose a raft. They watch her head bob downstream, growing smaller by the second. Another boatman is at the oars of the first boat out. In seconds, he is off and away. He figures he can reach her before anything serious happens. He pulls down-

stream, bending the oars to ride the current. He looks over his shoulder, trying to keep an eye on her whereabouts. She has disappeared. Then she pops up. If he pulls harder surely he will catch up with her. But she is a hiker, without a lifejacket, not a river runner. He cannot outrace the River this day.

She disappears around the bend in the river. He will not see her again.

Her body will show up in a week, maybe ten days, depending on who you talk to.

Over the years the figure on the trail has taken up residence in my imagination. Her presence reminds me of one of the shadow figures in the Indonesian art of "wayang kalut," where puppets perform behind a screen illuminated by back light. She moves silently through my memory amidst a colorful, often noisy parade of river characters. She never speaks, nor does

she interact. Of course, the harder I try to banish her from my private movie, the more she insists on showing up, the relative who comes for a week and stays forever.

Like a member of the audience watching the shadow figures of the puppet theater, I can see her form and movement but nothing more. So I must paste her silhouette with bits and pieces of description and narrative as best I can. She remains, however, essentially inscrutable and this, perhaps, is as it should be.

Because of her inscrutability, I have made her my Bearer of Canyon Mystery, the Carrier of the Unknown. In this matter she had no choice. It was chance that we passed one another on the trail that morning. She was simply another hiker. She could have avoided eye-contact; she could

have kept her smile to herself, couldn't she? And so I find myself, at odd moments and in periods of doubt, leaning on my memory of her. She is forever walking the red-dust, shadow-and-light trail in Havasu Canyon, determined to touch the Colorado River, a beatific smile on her face showing the way.

Vince Welch



New Studies of Old River Gravels

WHAT'S WITH THOSE OLD river gravels you see as you drive down to the boat ramp at Lees or float through Furnace Flats? Have you ever hiked up Nankoweap or Kwagunt or done the Carbon-Lava Chuar loop and wondered what all those flat terraces and gravels are doing up there? You may be familiar with the work of Ivo Lucchitta on these old gravels, but research done over the past few years using new tools for geologic dating is giving us more information on the age and meaning of these old gravels. Here, I try to relate what these recent studies tell us about the history of canyon cutting and the surprising influence of climate change on the Colorado River.

PLEISTOCENE GRAVELS AND TERRACES IN THE BIG PICTURE

To understand these gravels, we have to take a step back. Remember that overall incision of Grand Canyon began about six million years ago when the river finally found its way off the high Colorado Plateau and flowed out through the low country beyond Lake Mead. As river incision has continued since that time, it has occasionally stopped, and instead of cutting, has deposited sediment for several intervals of the Pleistocene (from 1.8 million years ago to ten thousand years ago). What is left behind from these cyclic changes are the gravels we see preserved here and there along the canyon, left high and dry by more recent incision. Why would the river have a split personality—incising sometimes and depositing other times? The answer is climate change.

We know from fossil plants and other things that lived in Grand Canyon during the peak of the last ice age (about 20 thousand years ago) that the average temperature back then was much lower (6-7 degrees C, or about 12 degrees F) and that annual precipitation was a bit higher. This would have significantly changed the rates of erosion and the amount of sediment getting to the river through side canyons and larger tributaries. The climate changes up in the Rocky Mountain headwaters were even more extreme, changing the discharge and flooding patterns of the river drastically. Looking over the whole Pleistocene, there have been many glacial-interglacial climate cycles, and each of them fundamentally changed the balance between the river's flow and the sediment it was carrying. This sometimes caused the river to deposit sediment that it didn't have the energy to carry, building up its bed before the next climate shift changed the balance back to downcutting again.

Previous researchers like Machette and Rosholt, as well as Ivo Lucchitta, recognized these gravels were probably formed by such climate cycles. But exactly when and how rivers respond to climate changes is one

of the big questions in Geomorphology—especially considering our efforts to understand what is going to happen in the future as global warming continues. Ken Hamblin, with his research on the lava flows in western Grand Canyon, suggested instead that these gravels were all deposited at times when the river was backed up behind lava dams. Is this even possible? Below are three familiar examples of gravels my collaborators and I have worked on in order to answer these questions:

EXAMPLE 1:

OUTCROP ACROSS FROM KWAGUNT ON RIVER LEFT

Seeps and spring deposits, or travertine, are abundant along river left from Kwagunt (RM 56) to the confluence of the LCR. Straight across from Kwagunt camp one can see some of this travertine interlayered with old river gravel and hillslope deposits (Figure 1). This outcrop shows that, in the past, springs were seeping out along the edge of the Colorado River when it was depositing sediment rather than incising. A great thing about travertine is that its age often can be determined using

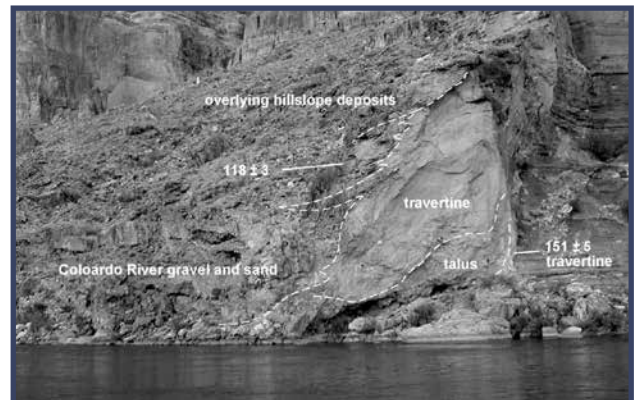


Figure 1

a method called uranium-series dating, which we have used to figure out the age of the gravel at this outcrop.

A sample from travertine lying on the bedrock stratigraphically below and older than the river gravel is 151 thousand years old. Another sample of interfingering travertine up near the top of the river gravel is 118 thousand years old. Together, this means the river stopped incising and started depositing gravel sometime after 151 thousand years ago and deposition continued until some time just after 118 thousand years ago.

EXAMPLE 2: DOWNSTREAM END OF TANNER BAR

This is an example of the most prominent paleo-Colorado River gravel in eastern Grand Canyon (Figure 2). It is the lowest old gravel next to the modern river

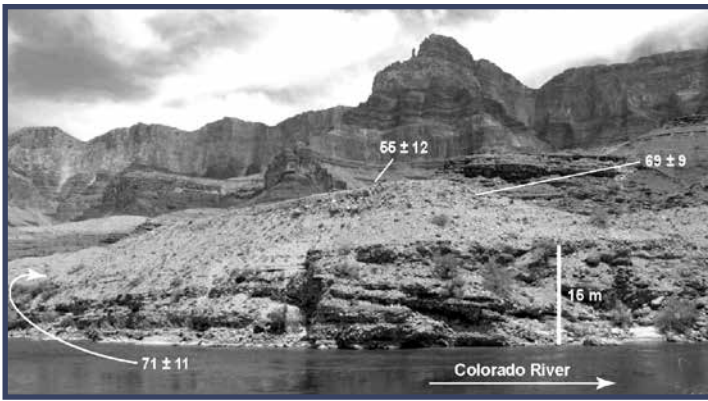


Figure 2

and the base of it is still below present river level. Sand lenses within the deposit can be dated by a method called optically-stimulated luminescence dating to tell us when the river was depositing and burying those sand lenses. Pebbles from the top surface of this landform also can be analyzed to tell us how long they have been exposed at the surface—that is, how long it has been since the river started downcutting again and left this flat terrace behind. For this, we use a different method called cosmogenic-exposure dating.

The summary here is that the paleo-river was depositing gravel during an episode that began prior to 71 thousand years ago and continued until after 69 thousand years ago. The exposure age from this terrace surface tells us that by 55 thousand years ago the river had changed processes and started downcutting again.

EXAMPLE 3: TERRACES AND DEPOSITS UP THE CARBON-LAVA CHUAR HIKE

Perhaps when hiking up Carbon Canyon, across the Butte fault, and into Lava Chuar, you have hung a right and walked a ways up Lava Chuar creek. If you get up on one of the Pleistocene terraces up there you get an overview like that in Figure 3. Although there are cool



Figure 3

old gravels along the mainstem Colorado, most of our recent work has concentrated on tributary catchments like Carbon and Lava Chuar because they hold a spectacular record of stream gravels. Five or more distinct gravel deposits that can be correlated (are the same age) have been recognized in each of these tributary canyons.

A disconnect seems to exist between the gravels in these side canyons and the gravels along the mainstem Colorado. It seems the tributaries, though in-synch with each other, are depositing gravels at distinctly different times than Colorado River. We don't yet know why—more on that some other time.

THINGS TO THINK ABOUT

The weird tributaries aside, the timing of when the mainstem Colorado River is dumping gravels rather than incising matches the timing of glacial ice advances up in the headwaters of the San Juans, the Uintas, etc. Specifically, this happens starting at about the peak of mountain glaciation and then continues during the time those glaciers were melting back.

Another weird thing: Pretty much everywhere else in the western u.s., and even across the world, geomorph-geeks find Pleistocene river gravels that date to the last ice age, about 20 thousand years ago. We cannot find any gravels this young in Grand Canyon. They should be there! A fun hypothesis is that they do, in fact, exist, but are hidden under the present-day channel.

What about those damned lava dams? Even though lavas poured into the western canyon and disrupted the river, all evidence argues against the idea that these volcanic eruptions somehow caused these gravels in eastern Grand Canyon to accumulate. Even if some of the proposed monster lava-dam lakes did exist, the timing is all wrong, and the gravel deposits themselves are all wrong sedimentologically. They were clearly put there by the same streams and rivers that cut down through them today.

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P.S. my collaborators in this work have been Matt Anders (grad student), Warren Sharp, Tammy Rittenour, and John Gosse who all produced the ages on the gravels, and Karl Karlstrom who took a break from bedrock geology to check out these gravels.

Regan Dale

I WAS BORN IN RIVERSIDE, CALIFORNIA—native Californian. My parents were native Californians. I was the oldest male in my family, one of ten children, second born. I have six sisters, and then the last three were brothers—all of whom now work for me on the river. (chuckles) Pretty ironic.

I lived with my parents until I was about sixteen, and then I moved in with my grandmother, 'cause she was alone, she was a widow. It gave me an opportunity to get out of the house. . . she needed somebody to kind of look after her. So it was good for both of us. I lived with her for about five years.

Eventually I went to college. I was workin' for my dad at A to Z Printing, which was a printing company that his dad had started in Riverside in 1909 or something like that. I was goin' to school, workin' for my dad, and that's when I met Bill Belknap. He came in one day and wanted a Colorado River map printed. I was runnin' some of the offset presses and we ran his Colorado River guide, so I got to see first-hand the Colorado River via a river map. The first year he printed it, my cousin, O'C, had just gotten back from Vietnam—1969 or 1970. So he was kinda lookin' for somethin' to do, and Bill offered him an opportunity to go down the river in 1970.

A funny story—O'C ended up spendin' the summer on the river with Grand Canyon Expeditions. He called me back after a couple of trips, said how cool it was, and it was really exciting, I had to do it. So I figured, "Well, I'll go get me a raft and I'll go do it!" (laughter) I went down to the local surplus store and bought this \$49 raft. It might have been \$29, I can't remember... yellow, just little plastic oars and stuff. I was ready! (laughter) I called him up one time, I told him I'd gotten myself a raft and I was comin' out. He goes, (flatly) "Take the raft back." (laughter) (excitedly) "No, man, I'm comin'! Really, I'm comin' down to do it!" (flatly) "Take the raft back." (laughter) Okay, so I took the raft back.

You know, he came back and told me all kinds of stories that fall. And then Bill came to the print shop and we were reprinting his guide book. We did that every year for a number of years.

LEW STEIGER: You mean, you just did a year's worth at a time?

REGAN DALE: Uh-huh. This was a brand new thing.

STEIGER: He didn't want to get in too deep.

RD: No. At the time, he was partners with Grand Canyon Expeditions (GCE)—he and Ron Smith were partners, and they were operating out of Salt Lake City, driving to the Grand Canyon for every trip... So I asked Bill if I could go down the river with him. He goes, "Sure. You come up to Kanab, Utah, and we'll give you a river trip or somethin', give you an opportunity."

I said, "Great!" About two weeks later, I quit school, quit work, packed up—I had a backpack, and was gonna hitchhike to Kanab from Riverside. I had, I can't remember who it was, give me a ride to the on-ramp for the freeway, and I'm sittin' there hitchhikin'—in the spring of 1971, like in March. This car pulls up, and it was full of five or six black guys. They go, "Hop in!" I'm goin', "Where you goin'?" They said, "Wherever you wanna go!" I don't know about this. (laughter) "I don't think so." They go, "You got any money? Got any drugs?" I'm goin', "No, I don't think so. I'm not gettin' in that car with you," and I started walkin' away. They were just gonna roll me. (**STEIGER:** Yeah.) They were gonna take me out in the desert and take everything I had and bury me somewhere. So I was pretty lucky I didn't get in *that* car. And after that I went, "Shit, I'm not hitchhikin'. This is crazy!" I went back and got a bus ticket to St. George, and pulled into St. George about 7 a.m. It was like an all-night bus ride. Pulled into St. George and asked 'em, "Where's Kanab?" They said, "Well, you got a little ways to go yet." I started hitchhikin' out of St. George and hitchhiked over to Hurricane, and then spent about half a day on that Hurricane Hill, you know, sittin' there, waitin'. Finally somebody gave me a ride to Colorado City.

STEIGER: Now, you probably looked pretty clean-cut and everything, huh? I'm tryin' to just place the times.

RD: I can't remember. No, I probably had long hair and a beard. Yeah. So finally I got to Fredonia, and then I got another ride to Kanab. It was probably four o'clock in the afternoon by the time I got to Kanab. I'm walkin' through town, and the local sheriff pulls up, wants to know what I'm doin', where I'm goin'. You know, checked me out thoroughly. Wanted to see my I.D. I thought he was gonna go through my pack. That wouldn't have surprised me. But I kept tellin' him I was just goin' up here to Grand Canyon Expeditions, they had offered me a job. So he kind of escorted me up there. They had just bought the building, the warehouse. I walked in and Dean Waterman was there, O'C was there. Dean said he'd give me a job, and I spent the next... Well, the first three or four weeks, we built the bunkhouse: put the siding on the bunkhouse and put in windows and doors, just labor.

STEIGER: You did a pretty nice job!

RD: Yeah, it's held up well. They had their office in there also, in part of it. They gave us a room. I don't think there was any heat, but it was springtime.

Then we started workin' on the main warehouse: putting siding on it. It had mostly been sided, but there were big holes, and we put up doors, filled-in trenches, took out old plumbing. For the first couple of months,



photo: Regan Dale

that's all we did, was work on the warehouse, tryin' to enclose it.

STEIGER: Didn't see any of the river at all?

RD: Un-uh. Then I started buildin' fiberglass coolers, and I did that for a couple of months. So it was probably May before I got on the river. The first trip I went down was with Rick Petrillo and Pete Gibbs. I'm not sure what ever happened to Rick. He had a lot of back problems, and eventually he went to work in Idaho, and that's kind of where I lost him... I did about five trips that summer, and they needed somebody to go up and run Cataract—run triple-rigs in Cataract.

STEIGER: After you'd done five Grand Canyon trips?

RD: Yeah.

STEIGER: Were you just swampin' or were you runnin' a boat?

RD: Well, Rick would let me run as much as he thought I could. He taught me a lot, actually. I drew maps, and I had my own little map that I tried to keep track of with notes and stuff. It takes a long time to learn the river, you know, so any little aid that you could use... The boats were *very* similar to what they are now. It's amazing how progressive Ron Smith and Dean Waterman were. I mean, they've modified them a *little* bit, but they were pretty much just like they are today. They used those coolers that I built in 1971 until about 1990—almost twenty years—those big, red, polyester resin coolers—huge, heavy, very heavy; and red food boxes. Pretty amazing. Anyway, we used those for many years.

Well, anyway, so then I went up and ran Cataract with Mark Smith and Foxy and a couple other guys—I can't really remember their names. But they put me on back oar, 'cause you didn't need quite as much experience on the back oar of a triple-rig. And we set off down Cataract. I'd never run Cataract, and I was back oar on

this triple rig. We just went down there and just got hammered, you know, by the Big Drops.

STEIGER: Well, by that time, it must not have been *huge* water.

RD: No, it was down. I think the highest that I ran that spring was probably about 30,000, 35,000—pretty big. We got thumped good in Satan's Gut. I remember gettin' trashed. But we made it. It was pretty amazing. Those boats were pretty forgiving in a lot of ways, in that they kind of snaked through. We didn't really need to be all that precise.

Then I did about, oh, five or six Cat trips, and then went back down to Grand Canyon and did a couple trips in the fall—one in a triple-rig with Rick Petrillo and George Billingsley, the geologist, works for USGS now.

The triple rig trip, George was runnin' back oar, and Petrillo was runnin' front oar. O'C was runnin' a motor rig for support. This was in September or October, I can't remember. We went down and I was ridin' in the triple-rig, just kinda ridin' along. I didn't really have any duties. We went right over the left horn in Horn Creek in low water, and the back boat just kinda went (boom!) like that, and just snapped up. Well, this gal sittin' right next to me, she was this frail lady, probably about 110-120 pounds. Just as we dropped over the rock there and into the hole behind the rock, it was so violent that she broke both bones in her forearm—the radius and the ulna. Serious. And she was right next to me. So we splinted her up and went down to Monument, and George was gonna hike out and get help.

It was pretty funny, because we're sittin' around, and I kept watchin', he's just kicked back real casual. "George, when are you leavin'?" He goes, "Oh, I'm gonna leave after dinner." So here it is, we ate dinner and it's gettin' dark, and pretty soon it's pitch black, and George decides well now he's gonna hike out. I'm



photo: Regan Dale

lookin' at this guy goin', "What is he, some kind of superman or somethin'"? But he preferred to hike out in the dark. He was an interesting guy.

STEIGER: I guess he's a pretty experienced hiker.

RD: Yeah, he'd done lots and lots of hiking, and he knew the route, and he wasn't worried at all about gettin' to the rim. Probably only took him three or four hours.

STEIGER: So he already knew this woman, it was gonna be tomorrow morning before they got in....

RD: Yeah, it was gonna be in the morning. This was before we had radios, you know. . . So he starts hikin', and we all go to sleep and wake up in the morning, and (shoop, shoop, shoop, shoop) here comes the helicopter, and George is in it with the Park Service. But when he went out, he found out his grandmother had died.

So then, they didn't have a back oar, but then *I* was there, and I had done back oar in Cataract all summer, so they figured "Perfect!"

STEIGER: "You can do it."

RD: I can do it. Funny story was that he got to the rim probably about three or four in the morning, and he's walkin' from Hermit's Rest back to the village, because he doesn't want to wake anybody up at Hermit's Rest, 'cause he's afraid he might get shot. There's a bunch of people sleepin' in their cars and stuff, but he's, "Naw, I'm not wakin' anybody up." So he's walkin' to the village and he falls asleep, walks off the road and runs into a tree and knocks himself out. (laughter) Wakes up, and he's sittin' there at the base of the tree, you know, with a big ol' bump on his head. It was pretty funny.

So we go down the next day, and we're runnin' Hermit, Petrillo wants to cheat it. He doesn't want to run down the middle. So we try to get left of it. Of course we *don't* get left of it, we go right down into that hole on the left side, just crashes—just trashes us. So then he's a little bit shaken. Of course this was the first time *he'd* ever run a triple-rig. He'd been down the canyon quite a few times and had a lot of experience, but had never run a triple-rig, and he's front oar on this thing. *I* should

have been the front oar.

STEIGER: Because you knew more about it.

RD: I knew more about techniques and triple-rigs. He was always over-pullin' me. You know, he'd start pullin' way before me, and then I couldn't catch up with him.

STEIGER: 'Cause the downstream oar could always outrun the upstream oar.

RD: Exactly. And it didn't matter how hard I pulled, I could never catch up with him.

STEIGER: So you were the one that was hangin' out there. (laughs)

RD: Yeah, exactly.

STEIGER: And he was in next to shore.

RD: Yeah. And a lot of times we'd just spin. You know, he'd catch the eddy, and then the boat would spin and pretty soon I'd be front oar and he'd be back oar, and then we'd just kinda cartwheel downriver.

We got to Crystal, and this was when Crystal was still pretty nasty, when it still had both holes. Fortunately, it wasn't very high water. It was probably only about maybe 10,000 or less. It was either September or October. We go down and run the old hole on the left side. Of course he overpulls me and we spin and we go down there. It takes the front boat and folds it over on the middle boat. I'm in the back boat. There were probably five or six people in the boat. O'C's parents, his dad was on the trip, and I think his brother was on the trip. Now they're all in the middle boat... Maybe his dad was on the motor rig, and it was just Little Eben that was in the triple-rig—I can't remember exactly. But I jumped

up and I tried to lift it up, and just barely could get enough of a grab to get 'em out. They helped me, and we pushed it over, and got it right side up again—the front boat—just as we went down and got hung up on the rock pile.

STEIGER: Oh, my God, on the island. Oh, no!

RD: We were there for fifteen minutes, just kinda draped over some rocks in this triple-rig. And one guy in the boat had gotten a pretty good laceration in his head from the whole ordeal. But they made passengers a lot tougher then, it wasn't a big deal. We patched him up and he went on. Anymore, you'd fly somebody out with a head injury. But it was quite the experience.

So the next summer, I had my own thirty-seven, and Kenton and I ran together most of the season. I think I did nine or ten trips that year. That was in 1972. Toward the fall of that year, Martin Litton chartered a boat from GCE. He had rented the north warehouse from Ron Smith for *their* operation for that summer, and over the course of that year I got to know Jeff Clayton and Bill Bodie and Curt Chang and Wally Rist and John Blaustein, 'cause they were in and out of there, and so were we.

Anyway, they needed somebody to run this charter. It was toward the end of the season also. So I told 'em I'd do it. So Martin and Curtis, Ronn Hayes, Martin's secretary, and three guys from Hollywood—we set out to do a seven-day trip through the canyon. They were scoutin' for a movie. Martin wanted to impress 'em, so he had a Yampa that we rolled up and took along with us, and in certain sections of the river, he was gonna blow it up and put these guys from Hollywood in it.

STEIGER: Show 'em what it was like from a little boat.

RD: Yeah. Another funny story was that we got down to Lava Chuar—Lava Canyon there—and that was when there was a big lateral comin' off the right shore there, about halfway through the rapid. Curt hollers down to 'em, "Run right, Martin, run right!" He was thinkin' that he'd go down there and just have a big ride. Well, Martin flips this Yampa with these guys in it.

STEIGER: So that got their attention! (laughter)

RD: So then I had to gather 'em up, pull 'em back in, and then Martin's boat goes down and goes around the island there at Espejo, around the left side. Well, I'd never been down there, so I didn't go down there after it. I just went around the bottom and waited and waited and waited. Finally it came out. We probably waited twenty minutes. I was thinkin', "Well, it probably got hung up somewhere for a short period." And then we rolled it up. I said, "That's it, Martin, we're not playin' in the Yampa anymore," 'cause we had to make tracks. It was a seven-day trip or somethin' like that. And that was the reason why he had chartered the rig from....

STEIGER: These guys didn't have time, they had to just blast through real fast and see what was goin' on.

RD: Yeah, check it out. We got down to Crystal, and these guys wanted to run the biggest wave in the canyon, which was the left side in Crystal, both those holes. They wanted to see what it was like in the big boat, 'cause they wanted to strap on a five-ton generator on the front of one of these boats, and they wanted to see if they could take it. So I told 'em I'd run it. But I'm comin' down... I look down there and see those two holes and I go, "Oh, shit, man, I can't do that." So I run right, and they're goin', "What's the deal here?" I'm goin', "Man, we're out here, by ourselves, and those are big, big, waves and we're not goin' in 'em. That's it. If you want a big ride, I'll give you the right in Lava or somethin'." But I wasn't about to run those holes in Crystal by myself. You know? They were huge.

So we got on down there and made it without any incident. At the end of the trip, Martin asked me if I would be interested in workin' for him. I said, "Yeah, I'd love to row dories." He said, "Well, give me a call this winter, we'll talk about it." So sometime during that winter I got a call, and it was Ronn Hayes and Martin—they were on two phones and they were callin' me. They both wanted me to go to work for 'em.

STEIGER: For different companies: Ronn Hayes had Wilderness World. (RD: Yeah.) But they're callin' you at the same time?

RD: Yeah.

STEIGER: They were arguin' over it.

RD: Yeah, as to who I was gonna work for. And finally I decided that I wanted to row dories more than I wanted to row rafts, so I went to work for Martin.

The Dale dynasty is well known on the river. As river families go, the Dales are both distinguished and distinctive, encompassing not just the immediate family of Regan and his wife, Ote, but Regan's brothers and cousin O'C, and their families too. (There's a gene or something... they're all great boaters and excellent guides.)

Regan Dale is the manager now of OARS/Grand Canyon Dories. Before that he was known as an uncannily good boatman—I've watched him pull out from the beach at Granite Falls when we were doing a left sneak that half of us couldn't even find once we got out there ourselves; take four strokes out from shore at the top of the eddy, stop rowing, and float clear down into the slot without taking another stroke. He's an equally good photographer. This interview took place in November, 1998.

The first trip I did with Martin that spring, we were still in the warehouse on the north side of GCE. It was Bill Bodie and John Blaustein and I and Curtis and Martin.

That was the beginning. I led every trip after that for the next ten years. I led one set of trips, and Wally Rist led the other. At some point, right after that first trip, we moved to Hurricane. Martin asked me after that trip if there was anybody else I knew that would be good for his operation. I told him, yeah, I knew somebody that would love to do this—Kenton Grua. He goes, “Well, call him up, tell him to come on over here,” ‘cause we needed some more guides, we needed some people. He went from four trips in 1972 to twelve trips in 1973. He needed qualified guides who could row, and I’d run with Kenton, so he and I were friends. He was excited to do it and came right over and got right on the river, runnin’ dories.

STEIGER: How was that little transition?

RD: Oh, I remember gettin’ in the dory the first time we were runnin’ down through the Paria, and it was just so cool, it was the best. I knew right away, before I’d gone two miles. Oh, yeah, they were just painted plywood. I mean, every year you’d sand the paint down and paint ‘em, and they’d soak up water. For the first week, you’d have water just gushin’ in. Pretty soon they’d swell and close off. But it was a ritual. Everything would be wet in the hatches, and you’d just get used to bailin’ ‘em. It was part of it.

STEIGER: And no bilge pumps, no sponges.

RD: No, just plastic containers to throw the water back out. Big rocket boxes, lots of ammo cans, everything was in an ammo can. We might have fifteen, twenty ammo cans—twenty mils—in your boat, just ‘cause they had to put everything in twenty mils. I mean, you’d have twenty mils layin’ on their sides, back up under the seats.

STEIGER: Plus there was no baggage boat, huh?

RD: No.

STEIGER: So you had to get everything in there.

RD: But we didn’t carry—you didn’t have toilets, you didn’t have stoves, you didn’t have water jugs, you didn’t have tables, tents, you didn’t have—I mean, it was fire pans....

STEIGER: A couple of kitchen bags.

RD: Yeah. For about a year we didn’t have tables,

and finally I started takin’ tables because I said, “This is stupid! Why can’t we have tables?” Oh, it wasn’t the wilderness experience to have a table! I said, “Well, bull, we’re gonna start carryin’ tables. We’re gonna make it easy.” ‘Cause you’d be eatin’ food off the ground. You’d serve lunch off the tarp on the ground.

STEIGER: Full of sand, yeah. (chuckles) But yet, did you always have cooks?

RD: We always had cooks. Anne Marie Gretch, Sabine, Kenly, Carol Starling—those were some of the early dory cooks.... Tom Gallagher. Sharkey came in the door one day, wanted to do river trips. He did about



Martin Litton's Grand Canyon Dories shuttle fleet taking out at Grand Wash

photo: Regan Dale

three, and all of a sudden he had his own dory. I think at some point we started taking rafts. I can’t remember exactly when it happened.

STEIGER: Was that for carryin’ out the human waste? Was that when it started? It was before that?

RD: Yeah, we were buryin’ it initially, and we were takin’ porta-potties. Initially it was up in the rocks, far away from camp.

STEIGER: In the cracks!

RD: Yeah, it was an adventure. (chuckles) “Burn your toilet paper.”... There were a few times where we had big fires from people burnin’ toilet paper. We’d have to all get buckets and carry ‘em up and put the fire out. I remember a couple of really big fires. (chuckles) Lower Lava one time. Martin had a big fire goin’.

STEIGER: Just to back up a little bit, before we drive off from your earliest days. You said you were goin’ to college in the winter. What did you study in school?

RD: Initially I was studying psychology, and then I changed my major to philosophy, and then I changed it again to anthropology, and then eventually I settled on physical education.

STEIGER: Ah-ha. But you're thinkin' like this might....

RD: I *wasn't* thinkin'. I was just goin' to school.

STEIGER: When you went to the river, when did you start thinkin' in terms of: this was somethin' you were gonna do for a long time?

RD: Oh, I never thought about that. It was more just fun, a fun thing to do in the summer. Nobody ever thought that they'd do that for a living, for a livelihood. It was more of a hobby. We were makin', I don't know, \$5,000-\$6,000 a year, at the most.

STEIGER: Yeah, but you'd *have* it at the end of the season, was the thing, which wasn't that bad.

RD: I had no expenses, 'cause I lived in a truck. Usually, for the first three or four years, I drove to Salt Lake, parked my truck, and bought a season pass at Alta and just skied all winter.

STEIGER: Do you remember much about your very first experience on the water?

RD: I remember the first time I saw Lava Falls. You know, I had heard a lot about Lava Falls.

STEIGER: From O'C?

RD: Yeah. So the first year *he* was runnin', I hiked in at Lava.

STEIGER: Just to go see that?

RD: Just to go see Lava. I can't even remember *how* I found it. I think I wandered out there, and somehow found my way down to it and sat down there and looked at it. I was kind of....

STEIGER: This was after you'd taken the little boat back. (chuckles)

RD: Yeah. I was kinda thinkin' it was gonna be this big waterfall, and it turned out to be just this *little* waterfall, so I was kinda thinkin', "Well, shit, this isn't much." And then I watched a couple Hatch boats come through, and they were rowin'. They had the tail-draggers and they pulled their motor and rowed down the left. But one of 'em went right into the ledge hole, sideways. Yeah. I remember vividly. They got thumped pretty good, but they washed out the bottom. Those were the only boats I'd seen, so I figured *all* the boats were like that. It was no big deal. But I can't remember the first trip I did.

STEIGER: Just that it was a cool thing, but nothing really sank in?

RD: Unt-uh. I remember... At some point I remember meetin' Ote. She was on a private trip with Pete Gibbs and Bego, and they were climbin' that granite spire just below Grapevine, a big chunk of granite that comes down, below Grapevine on the right. Next time you come down there—big ol' thing, big wall

of granite, sheer wall, comes right out of the river and goes up about 700-800 feet. And they were climbin' that on a private trip, just a couple of rowboats. Then we had 'em in for dinner below Deer Creek, and that was the first time I met her.

I remember the first trip I did in a dory, I hit a rock pullin' out at Havasu. Didn't quite make it far enough across, and hit those rocks right at the top of the rock pile, put a big hole in the *Makaha*. Second trip I did, I went down and got stuck in the corner pocket [at Lava Falls] for a couple minutes. Uh-huh, and did some damage there. So I was havin' a tough go the first couple of trips. The third trip I did, I finally made it through Lava, and I was pretty excited. Martin has some footage of me jumpin' up and down on the deck of the *Makaha*. Pretty funny. I was pretty excited. Finally made it without hittin' anything.

STEIGER: Did Martin go on most of those early trips?

RD: He went on, yeah, a couple, right in the first two or three, and then he got too busy.

STEIGER: Doin' other stuff? Not so much with the company, but environmental battles or whatever?

RD: Right. And he lived in California. He'd fly back and forth. A funny story was that he used to buy bread at the day-old bakery in Palo Alto and load his plane up with bread and fly it out and put it on the trip. It was already two or three days old, and we'd start off with it.

STEIGER: To go for twenty-two days!

RD: Yeah.

STEIGER: 'Cause he got a deal on it. (chuckles)

RD: Uh-huh, he had a great deal on it. And then we bought Schaefer's. Schaefer was the beer that we carried. It was pretty funny, 'cause the slogan on the side of the can was, "It's the beer to drink if you're havin' more than one," or somethin' like that. If you're gonna drink more than one beer, have a Schaefer, 'cause after that, you didn't notice how bad it was. (laughter) He was buyin' six-packs for ninety-nine cents or somethin'. So between bread and Schaefer's he always had his plane full of stuff that he brought out. We'd pick him up at the airport in Hurricane and we'd have to bring the van to load up.

STEIGER: You'd think it would cost more just to fly out there than it would... Well, maybe he was comin' out anyway.

RD: Yeah. But it was just the classic Martin Litton. Schaefer beer.

STEIGER: What did you think about all the environmental stuff? Were you aware of that?

RD: Oh, yeah. Everybody felt really proud of the man for what he had accomplished. He was still very involved in fighting to save the Redwoods and trying to keep a powerplant out of Diablo Canyon. We were all really proud to work for Martin, 'cause he was tryin' to

SOME BIG WATER DORY ANTICS CAUGHT IN THE ACT...
REGAN DALE'S PHOTOS (THERE'S LOTS MORE WHERE THESE CAME FROM)





do some good stuff.

STEIGER: Well, as far as techniques go in the early days, how'd all that evolve?

RD: You know what was interesting was there was really nobody that really knew anything. Martin was probably in his fifties, so he was past his prime, almost.

STEIGER: Well, and he had just learned from P. T..... It was all upstream ferry, huh?

RD: Oh, yeah.

STEIGER: Which those guys had picked up from rowin' those Cataract boats, which wouldn't track?

RD: Yeah, so we had to figure things out ourselves—the “Powelling” and ferry angles and all that—that kind of evolved over time. I don't think there was anybody that really actually showed us how to do that. We just learned the best way to move 'em was to use the water. It was all trial and error. We used to call it the school of hard knocks, because very seldom would you go on a trip where you didn't smash a boat or two. I mean, it was part of it. Golden trips were unheard of. It was pretty standard to hit somethin', somewhere. In the early seventies, we had the lower flows, too. 1977, the whole issue of Rainbow Bridge came to light, and they closed the river and nobody was runnin'. We decided we wanted to go see what it looked like at 1,000 cfs. So O'C and I, and Rudi and Kenton, and it might have been Dale DeLlamas, decided to.... We took three Selways... Oh, it was Richie Turner—no, Gary Call—one of those guys. Took three Selways and two kayaks. I had just bought a Selway from Ron Smith. (Steiger: Boy, those are nice boats.) Yeah, they were. I decided I wanted to have a little bathtub to play in. So it was kinda brand new. We took those down, and there wasn't anybody on the river. The water was warm, 'cause there was no flow, and it was the middle of summer. We had a great time. Stopped and looked at all the rapids, took pictures of 'em all, which someday will probably be interesting to go back... I've got 'em stored somewhere. I got some really fun pictures of Hance, Crystal, and Lava... We did portage twice: Little Ruby and Lava. Wannabe Ruby. The whole river funnelled down and dropped right onto a rock, right in the middle of the river, so there was no



Lava Falls at 1000 cfs, Summer 1977

photo: Regan Dale

way we were gonna... Un-uh. You know the rock that makes the hole in Crystal? I remember pullin' in behind it, in my Selway—we ran left of it...

STEIGER: Wasn't it kind of a flat, gray rock or some-thin'? (RD: Uh-huh.) Not like you'd expect it to have been.

RD: Un-uh. We ran left of it, 'cause that was where the water went, and I pulled in behind it, parked, and climbed up on it, and it was like six feet out of the water. I'm standin' on it goin', “Wow, this is wild.” Horn Creek, we went down the far right side. Far right, as far right as you could get.

STEIGER: Which is a pretty big ride.

RD: Oh, it was huge! It was a funnel down between these rocks, and drop-offs and waves and holes. It was wild. It was a wild ride. We went left at Bedrock. That was the only place there was any water. And it was calm water, goin' around the left side. No biggie. Floated around the left side. Pretty interesting. At Lava, all the rocks that make the ledge were sticking out of the water. It's like three or four rocks. Big rocks kinda like the rocks that make the domer in the left side of the V-Wave. There's about three of 'em up on top there. And there was still a slot. You could actually see where the slot was.

STEIGER: In the rocks.

RD: Yeah. And we chose to portage our boats. I think somebody kayaked it. I can't remember who—it might have been O'C or Gary Cll. Other than that, it was pretty interesting. It was really fun. It was just mostly a boating trip, we didn't do any hiking on that. We just wanted to see the river at low water.

STEIGER: I know there's been a billion adventures. A lot of years there, like you say, where you were runnin' down the right in Lava, and it's like every time you get there...

RD: There was one time we got there, and Kenton was on another trip one day ahead of me. We pull in there and walk up to scout, and looked down, and here's the *Niagara* sittin' in the corner pocket, upside down. Just sittin' there, nobody around. Didn't see anybody.

STEIGER: Oh, man!

RD: Suddenly Kenton shows up where we're scoutin', and he goes, "Any ideas?" (laughter) "What do you mean?" He goes, "Let's get that boat out of there." "Well, let us run first, and then we'll talk about it." So we ran through. Then we came back up, and there was no way, it was wedged big time.

STEIGER: This was a metal boat, though? (RD: Yeah.) Not wood?

RD: Yeah. It was dead sideways in the slot, with the deck out. So I finally talked Kenton into just leavin' it, 'cause there's really nothin' we can do. We couldn't pull it out. And I didn't want anybody gettin' hurt. So Kenton, bein' the determined guy that he is, gets his hatchet, and starts cuttin' his way in through the bottom of the boat. He's out there with this hatchet, whalin' on this aluminum boat, (STEIGER: He's gonna get that stuff out of there!) tryin' to get into it. I'm with him, and the water's comin' up— it's late in the day, it's about six o'clock at night, the water's comin' up and it's gettin' dark, I'm tryin' to pull him off this boat. He's goin', "No, no, just a few more minutes. I'll get this out of there." He's cut a hole in it, and he's reachin' in and pullin' out stuff. Finally I said, "Kenton, we're outta here," and grabbed him and pulled him away. We eventually left it. It went underwater that night, and the next morning we were downstream.

Kenton and the Cold Chisel Gang hiked back in at Lava with come-alongs and cables and bolts and winches and all the stuff they needed, and they winched it out and took it to Lower Lava and choppered it to Tuweap, where they put it on a trailer and eventually took it to the recycling center in Las Vegas.

STEIGER: But it wasn't gonna be a boat anymore after that.

RD: No, it was pretty well tweaked. It was bent up, bad. Lots of stories like that.

There's a ton of history here, and many more stories— bad ass days galore with the dories at Lava Falls; a heroic rescue by Ote of a very large client there; and many epic days that Regan had in a host of places... the Imax movie;

the flood of '83; the sinking of the Lava Cliff; Hollywood trips; crazy plane rides... triumph, tragedy, and no small dose of hilarity— all of which we're gonna have to forego in order to celebrate another, more resonant note. When asked what was his most memorable trip, RD answered without hesitation: the 40-day trip that he and Ote did back in the late seventies, before they got married. We talked to Ote in 2004 when RD was nowhere around and she said the same thing: that was the one—her most memorable trip too.

Back then all you had to do was call up and tell the Park that you wanted to go, and it was no big deal. It was a training trip. Most of our trips were training back then. For some reason, we decided—this was *before* we got married, though.

STEIGER: Good idea! (laughs)

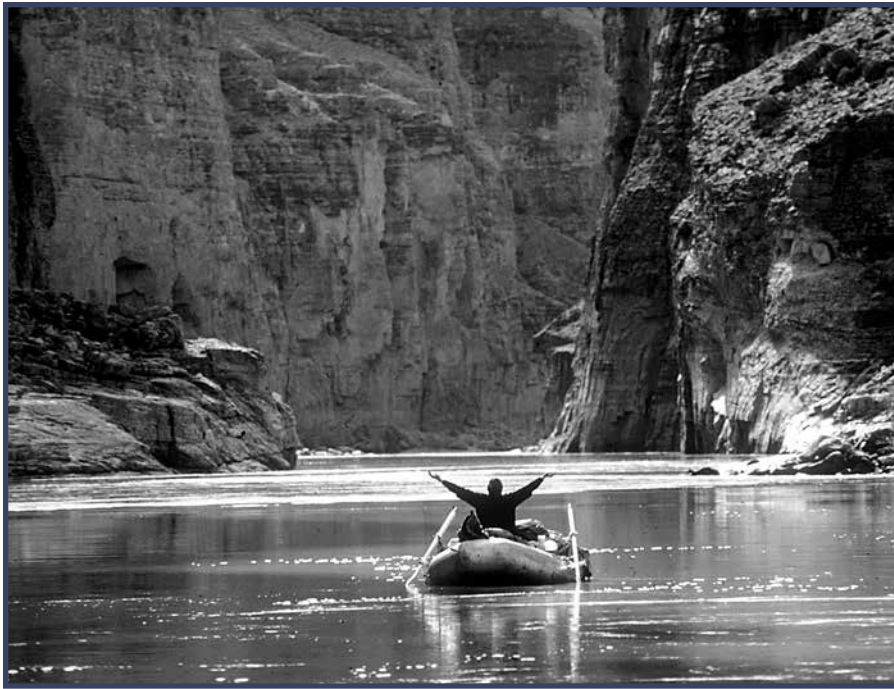
RD: That's where you really find out if you're compatible... Well, that fall we started livin' together, after our season. I had this 1947 Ford bread truck that I lived in. It was an old Wonder Bread truck, and I traveled all over the West in it. So Ote started livin' with me. We hiked in at Nankoweap in the fall, spent a week down there fishin' and hangin' out. Boy, there were some big fish at Nankoweap in the early seventies! This was probably 1977, 1978. And then we decided to do a trip that next year, just the two of us. We each had a Selway, and put on in mid-February, 'cause we were gonna take a couple of months. We were in no hurry.

STEIGER: Open-ended departure. You left and then it was an open-ended take-out? You'd just figure that out somehow?

RD: Yeah. We didn't even do a shuttle. I think we hiked out. What we did is, we hiked out at Phantom and resupplied ourselves. Then we hiked out at Lower Lava, stashed our boats. Rolled 'em up, put 'em under a big tarp high enough for the river, and hiked out at Lava. I'm tryin' to think... Oh, we hiked to Riffey's [former NPS Ranger, stationed at Toroweap], and then Riffey gave us a ride to Kanab. That was where my truck was. Then we went to a training seminar at the South Rim— Guides Training Seminar.

STEIGER: Wow, that must have been one of the first ones of those.

RD: Yeah, it was, at the Albright Center. That was where Ernie Kunstle drew the gun and fired his gun in the classroom, just to scare... Had some blanks or some-thin'. People were so shook up they got up and walked out. It was really out there. So then we went from there to Southern California, picked up [Regan's brothers] Peter and Roger and Tim, drove back out to Toroweap, and hiked back in, blew up our boats, and went down river.



Ote Dale, floating slowly through Marble Canyon

photo: Regan Dale

STEIGER: With all those boys? (laughs)

RD: Yeah.

STEIGER: On those Selways.

RD: Yeah. And took 'em on their first river trip.

STEIGER: So the total trip was probably two months or somethin' like that.

RD: I think it was like forty-two days or forty-three days.

STEIGER: You guys must have done a lot of hikin'.

RD: We did a lot of hikin'. Yeah, there were many



The two-Selway, 42-day private trip

photo: Regan Dale

places where we'd spend three or four days. It was really a wet spring, it was really beautiful. I mean, it probably rained twenty, twenty-five days out of forty. It was really wet. We both flipped in Hermit.

STEIGER: How'd that work?.

RD: We had just figured out flip lines.

STEIGER: Just like, you mean a few days before?

RD: Well, no, I mean....

STEIGER: In the dories?

RD: Yeah. Initially, everybody thought if you put a line on your boat you're just askin' for trouble. You're gonna flip for sure [if] you put a flip line on there.

STEIGER: Oh, you mean just like it would jinx you? (RD: Yeah.) Not so much that it would be too much drag, or....

RD: No, no, it was just....

STEIGER: That's a negative attitude! (laughs)

RD: Yeah. And we thought, "Well, this is the *only* way to go." Initially we had a lot of damage to the boats, they'd tip over.

STEIGER: You'd have to push 'em into shore before you could right 'em.

RD: Push 'em into shore, and that's where most of the damage happened—was just gettin' 'em to the shore. As you were gettin' close to shore, that's when you'd hit the rocks. Finally we decided there had to be a better way. I don't remember how it all started, but I remember Kenton and I started usin' 'em, runnin' a line underneath.

STEIGER: Sayin', "To hell with this, we're gonna right these out in the deep water."

RD: Yeah, get these right side up right away. So we were usin' 'em on our Selways, too, 'cause they're just a little eleven-foot boat with twelve-inch tubes. They're *little*, like a bathtub. Turned out that we both flipped in Hermit. We were right behind each other. Ote had a *huge* ride in Granite, where she'd just gotten pummelled, and was full

of water and kinda got beat up a little bit, got washed out of her boat. Didn't flip, but she was kinda shaken a little bit. So we decided we'd run Hermit. She didn't want to look at it, she just wanted to run it wide open. 'Cause she knew if she looked at it, she'd get scared. It was probably about 15,000, 16,000. It's crankin'. This is like in March. Nobody else down there. We had full wetsuits and helmets. Both of us were pretty well outfitted. Booties, full wetsuits and helmets, and so we were ready for whatever happened. Turned out that we both flipped, boom! boom!, within two or three seconds of each other in the fifth wave. It was just too big for our little boats, and it flipped us both. So I crawled up on the bottom of my boat and turned around, and there was Ote, she'd crawled up on the bottom of hers. And we started laughin'. But we were about thirty feet apart. We tried to right our boats, each one of us.

Couldn't do it by ourselves. So she reached under her boat and got one of her oars out and used it as a paddle and paddled down to where I was, and then we righted my boat, climbed in it, rowed back over to her boat, climbed on it, righted it, climbed back in it, rowed back over to my boat. And all this time we're floatin' downstream. So we pulled in at Schist Camp and said, "That's it! Camp for the night. No more." (laughter)

That night at Schist Camp it stormed to beat the band. We had thunder and lightning and rock falls. We're camped out, and every once in a while we'd stick our head out to see if the river had come up, and our boats were still there... We didn't have anything else happen on the trip. We got to Lava and we were runnin' the slot in Lava.

STEIGER: Oh, my God, 'cause it was 15,000 or something'?

RD: Yeah, in our Selways, and we're thinking "We'd better ride with each other in case we flip."

STEIGER: Yeah, good idea.

RD: And then we go down and look at it, and Ote goes, "I don't want to ride through here twice!" "Okay, let's just do it." Run it together. We both had good runs in the slot. Boy, talk about a big ride in a little boat!

STEIGER: So were you guys engaged when you went? Or did you decide to get married on that trip?

RD: No. Probably sometime that spring Ote told me she was pregnant, and I said, "Well, let's get married. What the hell." So we set a date for October. This was sometime in the spring. So that fall we got married out at Toroweap.



Regan and Ote Dale's wedding day at Toroweap

Note: This oral history project is made possible by a grant from the Arizona Humanities Council (AHC). The results of this project do not necessarily represent the view of AHC or the National Endowment for the Humanities.



Arizona Humanities Council

Back of the Boat— Whale Foundation News

THE SURPRISING TRUTH ABOUT ADDICTION

CHANGE IS NATURAL. You no doubt act very differently in many areas of your life now compared with how you did as a teenager. Likewise, over time you will probably overcome or ameliorate certain behaviors; short temper, crippling insecurity.

For some reason, we exempt addiction from our beliefs about change. In both popular and scientific models, addiction is seen as locking you into an inescapable pattern of behavior. Both, folk wisdom, as represented by Alcoholics Anonymous and modern neuroscience regard addiction as a virtually permanent brain disease. No matter how many years ago your Uncle Joe had his last drink, he is still considered an alcoholic. The very word addict confers an identity that admits no other possibilities. It incorporates the assumption that you can't or won't change.

But this fatalistic thinking about addiction doesn't jibe with the facts. More people overcome addiction than do not. And the vast majority does so without therapy. Quitting may take several tries and people may not stop smoking, drinking or using drugs altogether. But eventually they succeed in shaking dependence.

Kicking these habits constitutes a dramatic change, but the change need not occur in a dramatic way. So when it comes to dramatic treatment, the most effective approaches rely on the counterintuitive principle that less is often more. Successful treatment places the responsibility for change squarely on the individual and acknowledges that positive events in other realms may jump-start change.

Consider the experience of American soldiers returning from the war in Vietnam, where heroin use and addiction was widespread. In 90 percent of cases, when GIs left the pressure cooker of the battle zone, they also shed their addiction—proof that drug addiction can be just a matter of where in life you are.

Of course, it took more than a plane trip back from Asia for these men to overcome drug addiction. Most soldiers experienced dramatically altered lives when they returned. They left the anxiety, fear and boredom of the war arena and settled back into their home environments. They returned to their families, formed new relationships, developed new work skills.

Smoking is at the top of the charts in terms of difficulty of quitting. The majority of ex-smokers quit without any aid. In fact, as many cigarette smokers quit on their own, an even higher percentage of heroin and cocaine addicts and alcoholics quit without treatment.

It is simply more difficult to keep these habits going through adulthood. It's hard to go to Disney World with your family while you're shooting heroin. Addicts who quit on their own typically report that they do so in order to achieve normalcy.

Every year the National Survey on Drug Use and Health interviews Americans about their drug and alcohol habits. Ages 18-25 constitute the peak period of drug and alcohol use. In 2002, the latest year for which data are available, 22 percent of Americans between 18 and 25 were abusing or were dependent on a substance, versus only three percent of those 55-59. These data show that most people overcome their substance abuse, even though most of them do not enter treatment.

How do we know the majority aren't seeking treatment? In 1992 the National Institute on Alcohol Abuse and Alcoholism conducted one of the largest surveys of substance abuse ever, sending Census Bureau workers to interview more than 42,000 Americans about their lifetime drug and alcohol use. Of the 4,500-plus respondents who had ever been dependent on alcohol, only 27 percent had gone to treatment of any kind, including Alcoholics Anonymous. In this group one-third were still abusing alcohol.

Of those who never had any treatment, only about one-quarter were currently diagnosable as alcoholic abusers. This study, known as The National Longitudinal Alcohol Epidemiologic Survey, indicates first that treatment is not a cue-all, and second that it is not necessary. The vast majority of Americans who were alcohol dependent, about three-quarters, never underwent treatment. And fewer of them were abusing alcohol than those who were treated.

This is not to say that treatment can't be useful. But the most successful treatments are nonconfrontational approaches that allow self-propelled change. Psychologists at the University of New Mexico led by William Miller tabulated every controlled study of alcoholism treatment they could find. They concluded that the leading therapy was barely a therapy at all but a quick encounter between patient and health care worker in an ordinary medical setting. The intervention is sometimes as brief as a doctor looking at the results of liver function tests and telling a patient to cut down on his drinking. Many patients then decide to cut back-and do!

As brief interventions have evolved, they have become more structured. A physician may simply review the amount the patient drinks, or use a checklist to evaluate the extent of a drinking problem. The doctor then typically recommends and seeks agreement from

the patient on a goal (usually reduced drinking rather than complete abstinence). More severe alcoholics would typically be referred out for specialized treatment. A range of options is discussed such as attending AA meetings, engaging in activities incompatible with drinking or using a self help manual. A spouse or family member might be involved in the planning. The patient is then scheduled for a future visit where progress can be checked. A case monitor might call every few weeks to see whether the person has any questions or problems.

The second most effective approach is motivational enhancement, also called motivational interviewing. This technique throws the decision to quit or reduce drinking—and to find the best method of doing so—back on the individual. In this case, the therapist asks targeted questions that prompt the individual to reflect on his drinking in terms of his own values and goals. When patients resist, the therapist does not agree with the individual but explores the person's ambivalence about change so as to allow him or her to draw his own conclusions. "You say that you like to be in control of your behavior, yet you feel when you drink you are often not in charge. Could you just clarify that for me?"

Miller's team found that the list of most effective treatments for alcoholism included a few more surprises. Self help manuals were highly successful. So was the community-reinforcement approach, which addresses the person's capacity to deal with life, notably marital relationships, work issues (like getting a job), leisure planning and social group formation (a buddy might be provided as in AA as a resource to encourage sobriety). The focus is on developing life skills, such as resisting pressure to drink, coping with stress and building communication skills.

These findings square with what we know about change in other areas of life: people change when they want it badly enough and when they feel strong enough to face the challenge, not when they're humiliated or coerced. An approach that empowers and offers positive reinforcement is preferable to one that strips the individual of agency. These techniques are most likely to elicit real changes, however short of perfect and hard-won they may be.

Stanton Peele
AUTHOR OF "LOVE AND ADDICTION" and
"TOOLS TO BEAT ADDICTION"

LIAISON COMMITTEE

The Whale Foundation's Liaison Program was created to provide a personal link between the river community and the Foundation's services. We are still looking for one working Grand Canyon guide in each commercial company, and a few freelancers, who would be willing to act as a bridge between fellow guides and the Whale Foundation's outreach services. If you're interested please contact us.

SPRING 2005 GTS HEALTH FAIR

The second annual Whale Foundation Health Fair was held at the GTS. Informative materials and free screenings were provided including mammogram vouchers, breast self-exam education, blood pressure checks, dental exams, skin cancer exams, physical therapy evaluations, and vouchers for blood tests to include diabetes, kidney disease, cholesterol, and prostate cancer tests. 41 folks ran the gauntlet and seemed to be very appreciative of the services. Thanks go to the professionals who donated their services; these included Jim Marzolf for dental exams, Diane Hoffman and Eric Pitcher from Flagstaff Medical Center physical therapy, Alan Motter for blood pressure and cardiovascular prevention advice, and Tom Myers, Michelle Grua, and Walt Taylor for medical screenings and advice. Alliance Lab of Flagstaff provided discounted lab services. Soroptimists donated free mammograms, and of course a big thank you goes to Hatch River Expeditions for providing the space and set-up for the event,

2005 WHALE FOUNDATION T SHIRT

This year's shirt with art provided by Disney artist Pamela Mathues may be seen and ordered on the website. It true. Whales can row boats.



WHALE FOUNDATION ONLINE ARTIST GALLERY

We are developing an online gallery for artists who have donated to the WingDing over the years. If you would like to show your art in the gallery please contact us. We'll need a thumbnail image of you, your art or your webpage. Also prepare a brief bio and contact information.

Grand Canyon River Runners Association

THE LAST TEN YEARS have been interesting and challenging for everyone concerned with river running in Grand Canyon. Most stakeholders represent groups that are well established and recognized in the river community, having been players in the evolving processes for years, some even for decades. Yet one voice was missing: that of the commercial passengers who have formed the majority of river travelers over the last half century.

Back up to June, 2003. Dwight Sherwood and I, both multi-trip commercial passengers, were invited to participate in the CRMP stakeholder workshop held in Phoenix. This was the first time that commercial passengers had been recognized as a stakeholder in the CRMP and been asked to participate in the DEIS process. At the workshop and in subsequent research we both recognized that the most invidious recurring theme, even in our presence, was the division of all dialog about regulated access into “outfitters” and “privates”. It was as if 19,000 commercial boaters per year didn’t even exist. Acknowledgment of the commercial passengers was either non-existent or swathed in shades of derogatory language, as in the assertions that we are generally unsuited for a wilderness trip, or wanted a ‘Disneyland’ experience. There have been (and continue to be) individuals who feel that commercial passengers do not deserve to experience the river in the Grand Canyon.

Dwight and I came away from that workshop facing the stark realization that we were going to have to jump into this occasionally hostile and dismissive environment. The CRMP was well along its course and heretofore the only input from our fellow passengers had been in the form of scattershot letters to the NPS. Some dedicated individuals had submitted opinions over the years, but by and large their voices were drowned out by better organized groups. A unified voice for the outfitted public was a near impossibility given the many years of outfitters and guides “protecting” their guests from the political winds blowing up and down the canyon. Passenger awareness was dangerously low and fast-track education was needed. With no organization to provide a common voice for the outfitted public, the largest user group on the river was in danger of being left behind. We discussed the problem and quickly realized that nothing short of a new organization representing the commercial passengers was going to be adequate. It would take more than a year for this vision to be realized.

The formidably short time frame of the DEIS release meant that the new group would have to get up to speed quickly. After discussions with outfitters, guides, other interested river runners and even members of the public who have yet to take their first river trip, a board of

directors organized and met to formulate a mission statement and goals. Incorporation was the next step, and finally formalization of all the disparate parts into a unit dedicated to preserving public access to the Colorado River in Grand Canyon. It was a supreme test of our collective commitment for seven volunteers to come together and found a non-profit organization at lightning speed while simultaneously designing a website (www.gcriverrunners.org), organizing mass mailings to potential members, attending public meetings, and reading and responding to the DEIS. At times we all knew what the one-armed paper hanger must have felt like, juggling jobs and lives to accommodate the demands of our new organization.

The Board consists of seven volunteers, all of whom have been passengers on commercial river trips or who have participated with commercial passengers in other ways. They are Dwight Sherwood, President; Pam Whitney, Vice President; Mari Carlos, Secretary/Treasurer; Catharine Cooper; Linda Kahan; Robert McConnell and Ruthann Stoner. Their collective experience provides a diverse approach to the issues, and all have devoted an inordinate amount of time to early efforts to launch this organization.

After the initial press release announcing GCRRA there were the expected barbs to dodge, including the trivial assertion that GCRRA was merely a puppet of the outfitters. While inaccurate, the perception is sure to linger simply because of the symbiotic nature of our relationship. We happen to like the outfitters. They provide a service that we need and the boats that we do not have, staff them with canyon experts to guide us, and give us as much or as little time in the canyon as we can manage. On the other hand the outfitters cannot exist without us. We are intertwined for life, and for the most part what is good for one will always be good for the other so positive interaction is inevitable. The outfitters helped us in the early going by agreeing to mail our introductory literature. Without that kickstart we could not have contacted our core group of members. Because they provide the river experience that engenders the connection between canyon and boater, we will continue to rely on them in this manner.

GCRRA went to work quickly. Board members attended all seven public meetings. There we met members and chapter presidents representing an ever growing membership (more than 1800 individuals became members in the first six months). We met and discussed issues with other stakeholders. Most importantly, we listened, learned and asked questions of NPS representatives. Board members ran their own numbers, exposing flaws in allocation and trip scheduling models.

We presented scenario after scenario under which the proposed boater registration/split allocation could not achieve its objectives. We gathered information on aspects of the preferred alternative that would directly impact the commercial passenger and resource and then incorporated our findings in GCRRA's official comment to the park, which is available on the website.

GCRRA participated in negotiations over and eventually signed the agreement struck between GCROA, GCPBA, American Whitewater and GCRRA that offered a collaborative set of river management proposals to the NPS. We felt this was very important for a number of reasons. Primarily, our hope is that the joint recommendations will help the NPS reduce or bring an end to much of the debate over river management issues, allowing the NPS and some or most stakeholders to move on. Perhaps by working together, the divisiveness that has marked the relationship between outfitters and private boaters can be laid to rest while simultaneously assisting the NPS improve management of the resource, which must come first, after all.

The seven public meetings gave GCRRA a much needed introduction to the players in the political pool, but there still seems to be a dearth of information about this organization and its goals. In its simplest form one of GCRRA's goals can be summarized in the phrase, "Preserving Public Access to Grand Canyon". The word public has been commandeered by more than one river group, but in taking the broadest meaning of the word GCRRA will lobby for continued access for everyone, not only those with white water boating skills. It is our belief that Grand Canyon should always be accessible to people of all ages and capabilities, whether seasoned hikers or first time campers, whether physically challenged or star athletes. There should never be prerequisites for who gets to raft in Grand Canyon, and choosing the services of a licensed concessionaire, whether via motor or oar raft, makes us no less deserving of the opportunity.

GCRRA is also dedicated to promoting the highest ideals of resource stewardship and responsible, sustainable use of the river corridor as fully consistent with maintenance of the area in an unimpaired natural condition. In support of that dedication, 20% of our membership fees are donated to the Grand Canyon Conservation Fund, supporting conservation activities along the river and helping to provide visitation opportunities to this area for those working to overcome physical disabilities or other hardships.

Like many in the river community we were initially alarmed at the increases in use proposed under the preferred alternative of the DEIS. Protection of the resource is a basic precept of our mission statement and bylaws. We are eager to view the final CRMP as well as the NPS adaptive management guidelines and will watch

closely. It has been stated and history reflects that such use increases are seldom rescinded. We would prefer to think that history can be changed. We signed an agreement with three other responsible user groups, and it is our fervent hope that all four will react appropriately if there is evidence that the increased use is proving detrimental to canyon resources or the visitor experience.

Finally, we hope that Grand Canyon River Runners Association will be a positive link between commercial boaters and the canyon. The canyon touches us in unexpected ways, and most of us feel that a part of us stays in the canyon after we have left. If we can perpetuate that connection by providing a forum for our members we will have succeeded on an inspirational level. If we can continue to educate and advocate for them, we will have succeeded on a political level. In the future the GCRRA expects to continue to represent to the public and to the government decision makers the interests of the thousands of commercial passengers who take Grand Canyon river trips every year.

Mari Carlos, GCRG life member
FOR THE BOARD OF DIRECTORS OF
GRAND CANYON RIVER RUNNERS
ASSOCIATION

Wild Lands

NINE YEARS AGO Kelly Burke, Larry Stevens and I announced in the Boatman's Quarterly Review a new organization dedicated to protecting and restoring wild nature in the Grand Canyon ecoregion. Since then the Grand Canyon Wildlands Council has steadily worked to do just that.

The Grand Canyon ecoregion is a vast area extending from the pristine, 11,000-foot wilderness headwaters of the Little Colorado in the east to the Grand Canyon-Parashant National Monument in the west. The ponderosa and mixed conifer forests of the Mogollon Rim dramatically delineate the southern boundary while the Grand Staircase Escalante National Monument and the headwaters of Kanab Creek and the Virgin River define the ecoregion's northern reaches. At its heart lies the Grand Canyon.

"The last word in ignorance," wrote Aldo Leopold, arguably the father of the progressive science of conservation biology, "is the man who says of animal or plant: 'What good is it?'"

If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.

Protecting and restoring wild nature requires saving all creation's natural pieces remaining in the landscape. These "pieces" include designated wilderness and roadless areas, wild and free-flowing springs, steams and rivers, old growth forests and intact grasslands.

Leopold also understood that one of the penalties of an ecological education is that one lives alone in a world of wounds... An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who see the marks of death in a community that believes itself well and does not want to be told otherwise.

Following the lead of the scientists and other conservationists of The Wildlands Project and The Rewilding Institute, our other mission is to heal those wounds we collectively inflicted on the land. Healing the wounds, or "rewilding," means restoring native vegetation, restoring "natural" fire regimes, restoring natural flows to depleted steams and springs, and restoring effective populations of all native species, especially highly interactive, critical species such as prairie dogs and large carnivores.

One major effort developed by Grand Canyon Wildlands is the conceptual development of a wildland network, a series of protected wildlife habitat linked together by compatible use areas to assure the long-term

viability of all native species in natural patterns of abundance and distribution. If you want to learn more about these terms and ideas, please give us a call.

In the same BQR issue announcing the formation of the Grand Canyon Wildlands Council, I presented an account of the Canyon's "last Timber Wolf." It was (and is) our hope that together, we will restore natural fire and old growth forests, heal the scared landscape, and provide sanctuary for all wild creatures. And if we will it, if we passionately pursue it, wildness will heal the land. The wolf will return.

In concert with other groups such as the Defenders of Wildlife, the Sierra Club, the Center for Biodiversity and others, the Grand Canyon Wildlands Council embarked on the "Grand Canyon Wolf Recovery Project", a bold but practical effort to restore wildlands and provide habitat hospitable to all wildlife, and return the wolf to its rightful place—the plateaus and forests of the Grand Canyon ecoregion.

Kim Crumbo

P.S. If you're interested in helping out with our volunteer ecological and wilderness inventories and associated projects, check out our website at grandcanyonwildlands.org or give us a call at 928-556-9306.

When Yucca Was King

YUCCA, SPANISH BAYONET, datil, soapweed,—all names for one of the most important plant resources used by ancient peoples in the Southwest. It is a plant that literally wove together the day-to-day life of the prehistoric cultures. If you were an ancient traveler in the desert regions a thousand years ago, yucca would have been a trusted friend providing the means to weave rope and baskets, fashion sandals, create fire by friction, tan deer hides, make soap and medicine, and providing carbohydrate-rich foods. It was and still is a tremendously utilized plant in the Southwest though its applications today, amongst native peoples, are now most often associated with basketry.

A member of the Lily family, the genus *Yucca* includes about 40 species, most of which are found in the Southwest and Mexico, although some species are indigenous to the southeastern United States and the Caribbean islands. *Yucca* grows on windswept mesas, in the low desert, and can even be found up to 8500 feet on the San Francisco Peaks.

One use for this amazing plant is in the area of primitive firemaking—otherwise known as the art of rubbing two sticks together. Archeological evidence indicates that the predominant method of firemaking used throughout the Southwest, before the Bic, was the friction method called the hand-drill. I remember the first time I used yucca for firemaking in the old way. It was on a 10-day primitive walkabout in central Arizona where a friend and I were relying solely on the ancient skills used in the Southwest without the aid of any modern gear. With sunset upon us and a cold night ahead, we were on a quest for fire and sought out a cluster of narrow leaf yuccas on a hillside that were heavy with dead stalks.

After cutting down a weathered stalk with my stone blade, I sharpened the pithy stalk into a flat fireboard and carved out a small hole with a notch. This hole would receive a spindle made from another thin yucca stalk. Thirty-seconds of spinning the spindle into the fireboard and a glowing coal was produced which was then placed in a bundle of shredded cottonwood bark and blown into flame. We were no longer at the mercy of the cold and a dinner of cattails, mesquite flour, and trout cooked over the open flames never tasted so good. Fire-by-friction is one skill that was certainly used by prehistoric peoples and making it with your own hands is an empowering feeling that connects you with an ancient timeline. Ever since that trip, I have always looked upon yucca with great appreciation and respect.

The hand-drill method universally employs three

underlying principles that are critical to success:

- 1) Soft, non-resinous wood like yucca or cottonwood must be used.
- 2) A skillful combination of speed and downward pressure must be employed if the proper level of friction is to occur.
- 3) And lots of elbow grease is involved.

A couple of things become evident when you first undertake primitive firemaking. The first is that you can give up your gym membership. The second is that you will never be caught in the wilds without a lighter! Friction firemaking does certainly give you a healthy respect for the day-to-day living skills used by our ancestors and the ancient peoples of the Southwest.

If you want to try this method of firemaking, you will need three materials:

First, cut a plant stalk for the drill. This needs to be about 16" long and made from yucca, sunflower, mullein, seep willow, arrow wood, or cattail. The most common material showing up in the ethnographic literature in Arizona was yucca.

Second, carve a flat fireboard of soft, non-resinous wood such as yucca, cottonwood, rotten aspen, or willow. Avoid resinous wood such as pine as the sap will cause convective cooling and not allow for the formation of a coal. Specimens from the Museum of Northern Arizona were made from yucca and juniper.



Students practicing primitive firemaking skills with yucca.

My personal favorite is to use cottonwood for a fireboard with a drill made from a sunflower stalk.

Third, construct a tinder bundle from the fluffy, shredded bark of a dead juniper or cottonwood tree. Form it into a bird's nest and use it to cradle the coal

and send it on its way to flame.

Finally, practice, practice, practice. This is a skill that the ancient peoples of the Southwest grew up with using on a daily basis so it takes time to develop proficiency. Oh yeah, calluses and lots of caveman grunting helps too when performing this skill.

Another use for yucca is to make soap. It doesn't take much to create some quick suds for your hair or hands when on the river. The entire plant contains saponins and is one of the few wild plants that can be used as a soap substitute. When out on a long primitive trek with a group, my students often strongly encourage each other, after dealing with days of sweat and dust, to gather some yucca root!

The waxy, green outer coating on yucca leaves can be utilized for a quickie lather and when I make rope from the inner fibers of yucca, I always save this green fuzz. This is easily shaved off with a stone flake or a knife held at a right angle.

The most concentrated soap, however, can be had from the yucca root. Rather than dig up and injure an entire plant just for a small root section, I prefer to look for yuccas overhanging rock faces or outcroppings where the roots are already exposed. I then carefully cut a small thumb-sized piece as this will not damage the plant. Even roots from dead yuccas can be used. Next, the root is sliced up and then mashed in about two cups of water. Voila—wilderness shampoo. Who said you can't smell good in the outback!

Using yucca to make fire in the old way or create soap are ways of gaining a deeper connection to the desert landscape as well as providing insight into prehistoric living that you just can't get walking through a museum. Hail the mighty yucca!

Tony Nester

Tony Nester teaches courses in traditional living and desert survival skills through his company Ancient Pathways in Flagstaff. When not foraging for yucca, he can be reached at www.apathways.com or 928/774-7522.

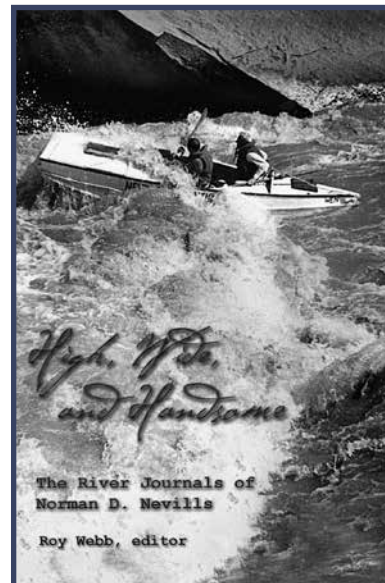
Book

NORMAN NEVILLS hammered together his first crude boat from a horse trough and a privy, launched it below his home in Mexican Hat, Utah, and rowed his bride Doris down the San Juan River for their honeymoon. They fell in love with the river and realized others could find a similar thrill. Within four years Nevills had invented the idea of whitewater tourism and was running several commercial trips each summer down the San Juan.

In 1938 Nevills took the next step, designing a new craft for serious whitewater, and taking on the formidable rapids of Cataract Canyon and the Grand Canyon of the Colorado. For twelve years Nevills tackled the San Juan, Green, Colorado, Salmon, and Snake Rivers, never flipping a boat nor losing a passenger. When he and Doris died in a tragic plane crash in 1949, Nevills

was by far the most experienced whitewater man in history.

National media found Nevills irresistible and portrayed him as the dazzling wizard of whitewater. Some boatmen who worked with him found him all too human, however, and launched a counter-campaign of vitriol that outlasted Nevills by many years.



Now river

historian and editor Roy Webb presents Nevills not through the publicist's eyes, nor those of his detractors, but through Nevill's own, in the form of his river journals.

In these pages, Nevills shares his fears, his frustrations, his failings, but also his utter joy in the beauty and excitement of the river and his drive to share it with the world.

"HIGH, WIDE, AND HANDSOME, THE RIVER JOURNALS OF NORMAN D. NEVILLS", Roy Webb, editor, Foreword by Brad Dimock, March 2005, \$21.95 paper, 0-87421-603-6, \$39.95 cloth, 0-87421-602-8, 302 pages, 6 x 9, photos

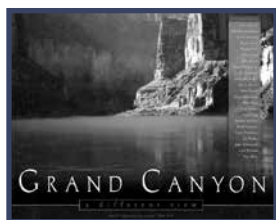
Why is the Grand Canyon?

EACH YEAR MILLIONS of people visit the Grand Canyon to view its scenic beauty. Most of them probably wonder about how it came to be, and why it looks so different from the scenery closer to home, a topic that has entranced and challenged geologists for nearly a century and a half.

Until recently, details of the on-going debate over the origin and evolution of the Grand Canyon were to be found scattered through dozens of scientific articles available only to those with access to a good academic library and the time to dig them out. Several recent publications have now put this debate, and contrasting views, within easy reach of anyone interested in the details.

“GRAND CANYON: A DIFFERENT VIEW” by Tom Vail, 2003, Master Books, P.O. Box 726, Green Forest, AR 72638, 104 pages, Hardcover, \$16.99

Tom Vail’s book, *Grand Canyon: A Different View*, is a colorful example of “Creation Science”: it explains the origin of the Grand Canyon from a perspective of biblical literalism. To say this book has provoked controversy is an



understatement. Customer reviews on Amazon.com, for example, break down along religious lines. Tom’s supporters, as well as detractors, seem to agree that some books (and ideas) deserve burning, or at least suppression, although

they disagree on which ones merit this special attention. The various rants (pro and con) do little credit to either religious or scientific perspectives, but the attention and controversy may have served to sell more books. Controversy aside, Tom’s book stands out in one respect: it’s chock full of beautiful photographs, many of them by Charly Heavenrich. And according to the author, “All contributions have been peer-reviewed to ensure a consistent and biblical perspective.” In the view of “Creation Scientists” (there are contributions by about two dozen writers), geology is pretty simple: “...most rocks we see on Earth today would have been formed during two very short periods of time. The first was the six-day creation week, about 6,000 years ago when the entire planet was produced. The second was the one-year Flood when the planet was reshaped. By comparison, not much happened in the roughly 1,500-year period between Creation and the Flood, or in the roughly 4,500-year period since.”

In this view, all the rocks from the Tapeats up to the Kaibab (as well as the rocks at the Echo and Vermilion cliffs) were laid down as the earth was inundated by

Noah’s flood, and as the flood receded, “the carving of the canyon would have taken place when the sedimentary layers were still soft, allowing the catastrophic erosion process to quickly, and easily, cut through the layers.” All of these events happened, according to the authors, in a single year!

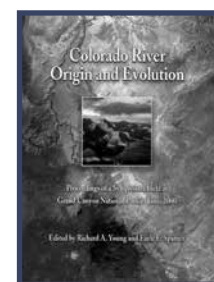
If the flood was “a catastrophic, global event”, and the above explanation makes sense, non-creationists might well wonder why the unique scenery of the Grand Canyon is confined to a small section of the American Southwest and why other parts of the world look so very different. A few calculations reveal that a world-wide flood that would cover the Kaibab at the south rim only requires forty days and nights of steady rain at the rate of about an inch and a half a minute. The titles discussed below explore some possible explanations for the unique features of the Grand Canyon, but invoke a universe a couple million times more extensive in time and space to do so; Noah’s flood is not one of the contending ideas.

“COLORADO RIVER ORIGIN AND EVOLUTION: PROCEEDINGS OF A SYMPOSIUM HELD AT GRAND CANYON NATIONAL PARK IN JUNE, 2000” Edited by Richard A. Young and Earle E. Spamer, 2001, Grand Canyon Association, P.O. Box 399, Grand Canyon, AZ 86023, 280 pages, Paper, \$25

Colorado River Origin and Evolution contains 33 papers from a symposium at the South Rim held in June of 2000 which was attended by more than 70 geologists. This is the classic collection of papers reflecting current thinking on how and why the Grand Canyon exists. Many of these papers contain technical details that may be opaque to readers with a only a general interest in geology, and they have not been peer-reviewed with an eye towards a “consistent...perspective”.

In the sciences, peer-review does not require agreement with any particular conclusion, but aims at insuring minimal compliance with accepted research methods and reasoning.

People with a background in geology will find this an interesting and informative read. Recent research and newer dating techniques have shed new light on old ideas about critical events in the history of the river and canyon. An old idea that climate change and overflowing basins upstream, rather than headward erosion and stream capture, may have helped establish the course of the Colorado River through Grand Canyon seems to be gaining supporters. New studies show that the cutting and deepening of the canyon may be even faster than previously thought. But—as always—the timing of some critical events and

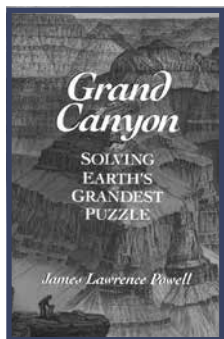


the relative importance of proposed mechanisms (the “technical details” remain open questions, and the experts continue to disagree.)

Two new books set out to explain the ideas—and controversies—surrounding the history of the river and the canyon to the general reader. Covering much of the same grounds and touching on the careers of some of America’s greatest geologists, either would make an excellent addition to the ammo box or bookshelf of any armchair geologist curious about the history of the Colorado River and the development of the amazing landscape called Grand Canyon.

“GRAND CANYON: SOLVING EARTH’S GRANDEST PUZZLE” by James Lawrence Powell, 2005, Pi Press, New York, NY, 309 pages, Hardcover, \$27.95

James Lawrence Powell (no relation to John Wesley)—author of *Grand Canyon Solving Earth’s Grandest Puzzle*—is the former Director and President of the Los Angeles County Museum of Natural History. He also taught geology for twenty years at Oberlin College, and last year he entertained an enthusiastic audience at NAU Cline Library with his impersonation of John Wesley Powell reminiscing about his trip through the canyon in 1869.



Grand Canyon: Solving the Earth’s Grandest Puzzle has a broad focus, and traces the physical and intellectual exploration of the river—and its geologic puzzle—from the era of John Wesley Powell to the 21st century. Along the way, we meet many notable scientists, including Clarence Dutton, Grove Karl Gilbert, Eliot Blackwelder, Chester Longwell, Charlie Hunt, Eddie McKee, and Ivo Lucchita (to mention a few) and we see how ideas about canyons, rivers, and landscapes

have evolved over time. In addition, there’s the story of Powell’s river trip and subsequent career, and other historical details that provide the backdrop and context for the development of geological concepts about rivers and canyons and how they are formed. It’s illustrated with a number of maps and diagrams, some familiar historic photographs, and a jacket design featuring the Panorama from Point Sublime by William Henry Holmes. Although there is no formal bibliography, chapter by chapter references to the geologic literature and other sources serve the same purpose.

“CARVING GRAND CANYON: EVIDENCE, THEORIES, AND MYSTERY” by Wayne Ranney, 2005, Grand Canyon Association, P.O. Box 399, Grand Canyon, AZ 86023, 160 pages, Paper, \$14.95

Flagstaff writer and guide Wayne Ranney—author of *Carving Grand Canyon: Evidence, Theories, and Mystery*—is an adjunct professor of geology at Yavapai College in Sedona, and leads field trips throughout the Southwest for a number of organizations including the Museum of Northern Arizona, Grand Canyon Field Institute, and Smithsonian Journeys. He’s a former river guide on southwestern rivers and has been a naturalist and lecturer on guided excursions to all seven continents, and has a long standing interest in the geology of the Grand Canyon and the surrounding area.

In *Carving Grand Canyon* Ranney covers much of the same ground as Powell, but with a much tighter focus on the geology. There’s an orderly progression of topics, from background on the Grand Canyon “Enigma” to a discussion about how rivers carve canyons. Then there’s a long chapter on the history of geologic ideas about the canyon, organized around the geologists who were the principal players during the 19th, 20th, and early 21st century. As in Powell’s book there are photos of most of the geologists, and a liberal assortment of quotations in which their ideas are expressed in their own words. But unlike Powell, the focus is almost exclusively on the geology—Powell’s river trip and career, and other tangential topics, don’t divert the readers attention.



The numerous illustrations are, in a word, spectacular, and include eye-grabbing scenic photography, Landstat images from the USGS, paintings by Bruce Aiken, paleogeographic maps, and block diagrams which elucidate geologic features and ideas. Most of the illustrations are in color and, as is typical of other recent publications of the Grand Canyon Association, careful attention has been paid to the details that make this a beautiful, as well as informative, addition to anyone’s bookshelf. A “Scientific Bibliography” lists the principal sources for readers who might want to pursue the subject further in the library.

It’s easy to follow the progression of ideas from Newberry’s recognition of the role of water in cutting the canyon, to currently popular concepts like headward erosion, stream capture, the complex history of the river, etc. Some topics receive individual treatment, while others are covered in the sections about the geologists who came up with the ideas.

Each chapter ends in a concise summary, and the book finishes with a broad summary and overview of the various topics that were discussed. Ranney identifies the questions and issues that remain unresolved, and explains why these uncertainties still exist after 150 years of research: primarily missing, undiscovered, or ambiguous evidence.

Overall, both books are informative. Powell’s approach

sheds more light on the history and background of the ongoing debate over the origin of the Colorado River and Grand Canyon, but Ranney does a better job of explaining the geological issues, theories, and remaining uncertainties. In many ways, the two books compliment each other well, and anyone seriously interested in increasing their understanding how, and why, the Colorado River and Grand Canyon reached their current form would profit from reading both. Each author, on occasion, managed to mention, or explain, something in a way that grabbed my attention, and provided an insight that I missed in the other book.

Curiously, while the title of *Grand Canyon: Solving the Earth's Grandest Puzzle* suggests that there is a solution to the puzzle, it's easy for the reader to come away mystified about the nature of the solution. Powell mentions a "new theory"—he calls it the "Lazarus theory"—that seems to have gained wider acceptance at the recent symposium. This idea—that rivers can die, only to come back to life again later (perhaps even running the other way)—has been around for awhile, and takes different forms depending on who is describing their preferred version of events that are concealed behind the mists of time.

All of these applications of the Lazarus idea have one thing in common, the agreement that rivers can have complex histories, and an old landscape, developed under conditions that no longer exist, can be rejuvenated in a different form later. This brings to mind a point that Ivo Lucchitta has been emphasizing for many years: the Grand Canyon did not develop on a blank slate. Instead, there was an earlier landscape that set the stage for what we see today, and although it may be difficult to imagine exactly what it used to look like in detail, there's plenty of evidence to suggest the broader features and their implications.

An excellent example of the application of the "Lazarus theory" is found in Andre Potochnik's study of the history of the Salt River, where the evidence is well preserved. Long ago, drainage through the Salt River canyon was towards the NE, when that was the downhill direction. Later, as the drainage was disrupted by regional events, the canyon filled with gravels which recorded information about where they came from and which direction they were going. Then, for a time, through-going drainage ceased and the river died. Eventually, the downhill direction was reversed, water started flowing again, and the old canyon was utilized by a river running the other way, the modern Salt River.

In the same manner, a much earlier river may have drained the area now occupied by the Grand Canyon, towards some (currently unknown) destination to the NE. When regional events disrupted the drainage pattern, the river valley may have become choked with sediments that the river couldn't carry away. After a period of inactivity—and pretty recently in a geological sense—this old river

valley may have been resurrected by a river running in the opposite direction. A glance at a satellite photograph or topographic map of Marble Canyon shows "barbed tributaries" that argue for a river running down the slope of sedimentary rocks in a direction opposite of what we see today: an observation as simple, and important, as Wegner's observations about the shape of the coastlines of Africa and South America, and their implications for moving continents.

As different parts of today's Colorado River—the Grand and the Green, the San Juan, and the Little Colorado River, each of which may have had independent lives until recent times—came together and eventually found an exit at or near sea level, the river gained water and strength. Rapid down-cutting over a large area followed, and carved the landscape we see today, but (at the same time) removed much of the evidence of what the landscape looked like before the integration of the various parts into today's whole.

Curiously, Andre—and Don Elson, who advocated another Lazarus variation—aren't mentioned in *Grand Canyon: Solving the Earth's Grandest Puzzle*, but both get attention in *Carving Grand Canyon: Evidence, Theories, and Mystery*. As for the "mystery," both authors make it clear that much of the critical evidence is currently missing, and that some central questions may never be fully answered. So—to be honest about this—there's no magic or final "solution," only some improved ideas that look promising for future investigations, as well as lingering mysteries.

Overall, Ranney does a better job of explaining and illustrating the ideas, old and new, that are likely to be combined in future theories. But Powell's book has a broader focus on the historical element that adds much to understanding why the Grand Canyon is of such special interest to geologists today, in spite of nearly a century and a half of intense scrutiny by some of the best minds in the history of the science. Both of these are fascinating and parallel stories that overlap at many points.

Readers who also want the latest technical details will definitely want to consult *Colorado River Origin and Evolution* and decide for themselves about the significance of the latest research. But if you insist on a clear cut, definitive "explanation"—without the burden of uncertain or conflicting details, a universe older than 6,000 years, or the possibility of future revisions, there's always *Grand Canyon: A Different View*. Regardless of your approach, if looking at the canyon makes you wonder "Why?", there should be enough to think about to keep you entertained for years to come.

Drifter Smith

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Thanks to the businesses that like to show their support for GCRG by offering varying discounts to members.

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Songs and Stories From Grand Canyon

THE WESTERN FOLKLIFE CENTER presents a CD of music, poetry and stories inspired by the Grand Canyon. *Songs and Stories from Grand Canyon* was just released on Smithsonian Folkways Records. This recording is a rare look at how people who live here, year after year, have interpreted the Grand Canyon in story and song.

The CD represents an incredible array of traditions rooted in the Grand Canyon. Examples from the CD include Alger Greyeyes and members of the Todi Neesh Zhee Singers singing a new Navajo song called, "Grand Canyon Gold." Phyllis Yoyetewa

Kachinhongva tells a Hopi story about how the Canyon was created. Larry Stevens, a well-known environmental scientist, sings the song of the Humpback Chub. D-Squared and Christa Sadler sing river running songs and veteran boat guide Vaughn Short recites a poem from Lava Falls. Ross Knox, who has packed over 40,000 miles in the canyon on the back of a mule, recites a poem of the mulepacker.

The CD is available at most Grand Canyon oriented stores and through the Western Folklife Center at www.westernfolklife.org.

Circle Time Again!

BY NOW YOU'VE RECEIVED an invitation to join the BQR Circle of Friends. This is GCRG's second annual fundraising drive specifically for the Boatman's Quarterly Review and it affords you a wonderful opportunity to become involved in the continued success and quality of a publication that you really cherish. Barry Goldwater wrote GCRG years ago and said, "I receive your publication every time you publish it, and I read every page before doing any of my other work." We hear that same sentiment echoed by many of our members. The BQR is such a fascinating and eclectic mix of science, culture and art, all magically inspired by Grand Canyon and the Colorado River. What could be better? Moreover, our publication is far more than just words on a page. The BQR actually seems to have a very distinct personality. After pondering this for a while, I laughed when I realized what should have been so incredibly obvious – the personality is that of a river guide – smart, funny, a great story teller, artistic, interested in science, and a passionate steward with a very beautiful soul. Sound familiar?

We are thrilled that the Circle is rapidly growing, with almost \$6,000 received in the first week of round two! Your support is humbling and a tremendous boon for this organization. We will be listing the contributor

names in the next issue of the BQR, so if you'd like to support this fine publication and have a little bit of fame, send us a check made out to GCRG and note that it's for the Circle of Friends. Remember, the donation levels are:

\$1 - \$99	Friend
\$100 - \$499	Sponsor
\$500 - \$999	Protector
\$1,000 - \$2,499	Steward
\$2,500 - \$4,999	Advocate
\$5,000 or more	Philanthropist

GCRG believes strongly that education is the key to stewardship and advocacy. By contributing to the Circle of Friends, you can do your part to protect and preserve all that make Grand Canyon and the Colorado River unique. Barry Goldwater also implored us to "just keep putting out that good little magazine." Well, it's not so "little" anymore, and this publication is far more expensive to produce than it once was. In fact, the Boatman's Quarterly Review is without a doubt GCRG's single largest expense, but it has also become an integral part of Grand Canyon River Guides' identity and our most powerful learning tool. Take this opportunity to make a positive impact. Please join the Circle of Friends today!

Care To Join Us?

IF YOU'RE NOT A MEMBER YET and would like to be, or if your membership has lapsed, get with the program! Your membership dues help fund many of the worthwhile projects we are pursuing. And you get this fine journal to boot. Do it today. **We are a 501(c)(3) tax deductible non-profit organization, so send lots of money!**

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JUN 6 1969

Mr. C. Martin Litton
180 Bear Gulch Drive
Portola Valley, California 94025

Dear Martin:

You will have been through Grand by the time you receive this, and I hope the flows were to your satisfaction. We did make a very special effort to facilitate your running the problem rapids. I will be particularly interested in knowing if you had good water for Horn Creek. We sold power in nine western states trying to get enough Sunday load on June 1. Our weekday releases have been averaging up to 23,000 c.f.s., so you should have been okay on the others. For running Lava Falls, we will cut back on Glen releases as early as possible on Monday, June 9; and if you waited until late afternoon, you should have found minimum flow for Lava. I hope you will have an opportunity to let me know how things were before your second run.

Very truly yours,

R. P. Marean
Chief, Operations Division

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, Arizona Humanities Council, "Circle of Friends" contributors, and innumerable GCRG members for their generous and much appreciated support of this publication.

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boatman's quarterly review

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