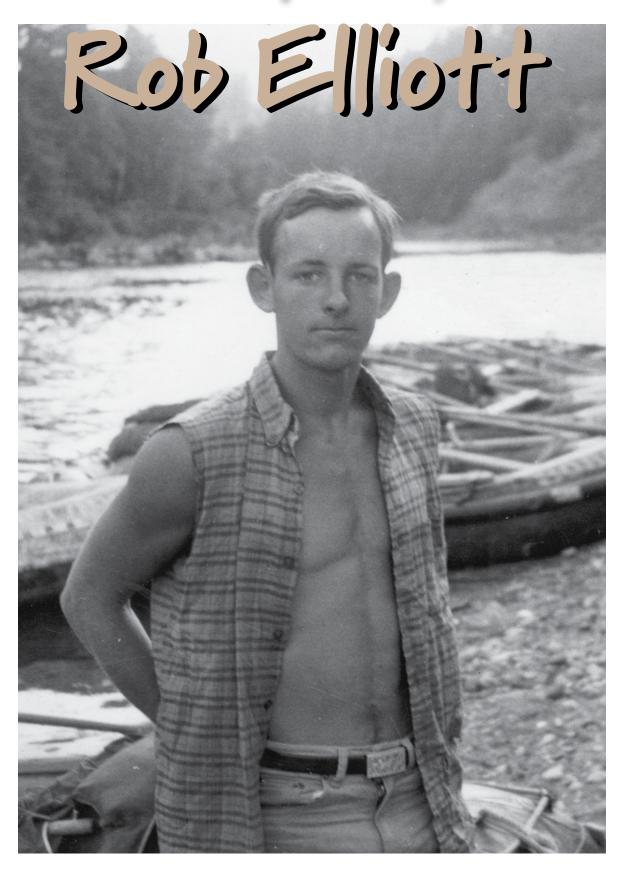
boatman's quarterly review



Prez Blurb • Dear Eddy • Back of the Boat • Leopard Frogs Clogging the Canyon • GTS • Partners in Education • Kent Frost Video GCY • Lava Dam Failure • Science Update • Thanks!

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. Our office location: 515 West Birch, Flagstaff, Az 86001 Office Hours: 10:30–4:30 Monday through Friday

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Prez Blurb— CRMP Update

THE PAST QUARTER has been a busy one for the officers, board members, and volunteers who have been working on the Draft Environmental Impact Statement for the Colorado River Management Plan (DEIS). In November, a number of us attended the series of public meetings held by the NPS to explain details of the plan and answer questions. In early December, based on what we learned, we put together a draft version of our proposed comments and posted them on the GCRG website, just in time to get caught up in the usual holiday distractions.

Then, the NPS announced an extension of the public comment period from January 7TH until February 1ST. Given the complexity of the plan and the distractions of holiday activities, they thought a less rushed schedule could result in better comments.

Consequently, we were able to take a break, during which we heard from some of our membership about our draft comments. We resumed working on our comments in January, submitting 39 pages worth to the NPS at the end of the month.

The public meetings, held in a number of cities during November, were in an open house format, with exhibits arranged around the room to explain different aspects of the plan, and a member of the planning team at each station to answer questions. There was also a brief introductory video running in another room which presented background information on the planning process.

This format seemed to work pretty well. I think I learned almost as much about the plan from other people attending the meetings as I did from the NPS. Everyone, it seemed, had focused in on different aspects of the proposed plan, and asked somewhat different questions. After awhile, a lot of information and questions were being shared by people who had already talked to members of the planning team, while others were busy asking new questions.

In January, after another Board Meeting in which we talked about the deeps, we recruited volunteers among the board and officers to take a section or two of our draft comments, review them for clarity while making additions and subtractions as needed, and shipped them all back to Lynn at the gerg office. During the last week of January, Lynn hammered it all back together, circulated the results, and—eventually—shipped the final result off to the NPs. The full text of our comments should be available on the Grand Canyon River Guides website at www.gcrg.org.

I'd like to thank everyone who pitched in to make our comments as good as we could make them. Rather than try to name everyone—I'm sure I'll leave someone out—I'll just mention that Lynn Hamilton, Executive Director of Grand Canyon River Guides, did a fantastic job of co-ordinating the effort, taking notes on the ideas that were flying thick and fast, and trying to make sure they ended up somewhere in the final product. Thanks again, Lynn!

I think we did a pretty good and comprehensive job of critiquing the details. The primary focus of our remarks had to do with protecting the resources of the Grand Canyon, and maintaining the quality of the river experience. It's easy to get the impression that most of the other stakeholder groups were focused on narrower objectives: getting something new (private boaters, wilderness advocates) or keeping something they already had (outfitters, passengers) etc. We tried to be advocates for the canyon and stay focused on the big picture: protecting the resource, and upholding thebelief that the quality of the experience available on the river in Grand Canyon comes first, and everything else comes afterwards.

Consequently, we opposed a massive increase in use levels as a politically driven, but irresponsible, "easy way out" that ignores the fragility of already declining canyon resources and turns a blind eye to the cumulative nature of many of the impacts of recreational visitation. While we agreed with the NPS that a reduction in maximum group sizes could reduce some impacts, we felt that insufficient attention was being paid to other impacts that are directly related to the numbers of people and trips.

We also found inconsistencies between the park's official policies which say that when there is a conflict between resource protection and recreation, resource protection comes first, and a plan that seems to put increased recreation above all else. We were very disappointed that no alternative, other than the "no action" status quo, contemplated holding the line on overall use at or near current levels.

We also took exception to many of the particular features of the plan that were designed to allow for additional use, but which would decrease opportunities for recreational boaters and the quality of the experience available on the river in the canyon. We opposed short trip lengths for several reasons, noting that their own research indicates many boaters would like even longer trips. We noted that the reduction in motor launches during the summer season, in conjunction with limits on trip lengths and trip sizes would probably result in a sharp decrease in the number of one boat trips, and an increase in the numbers of large trips, looking for large campsites. We approved of the longer no-motor season, but agreed with outfitters and passen-

gers that it made more sense to continue allowing motors in September, and that it was unrealistic to expect that outfitters shift a significant chunk of their motor seasons to the month of March. We suggested that motor trips longer than ten-days—hiking trips, or kayak support trips, for example—should be "grandfathered" in under the final plan to the same extent that they exist under the status quo.

We did not like the idea that non-commercial trips would be limited to sixteen-days in the summer season, and pointed out that there would be a serious conflict with longer commercial oar trips, which might find themselves on the same schedule as one or even two private trips from the launch ramp all the way to Diamond Creek. We pointed out that there's a big difference between contacts with trips that quickly get ahead or fall behind, and repeated contacts with the same trips every day, each hoping to go to the same places you are, on the same schedule.

Our biggest concern, overall, had to do with the lack of a plan to monitor the effects of all these changes. According to the NPS, monitoring impacts and mitigating them depends upon "additional funding" at a time when this appears unlikely. Many of us can remember a wonderful General Management Plan to get cars and congestion away from the rim, now stalled (if not forgotten) for lack of funding.

We believe that the bottom line on any changes must be the ability to track results, and make corrections if the objectives are not achieved. The proposal to modify the "limits of acceptable change" (LAC) based on the management plan, rather than base the plan on the LACS, is exactly backwards. Under previous plans, checking up on the results has been somewhat hit and miss, and we were not reassured by the statement that if more use creates problems, they could cut it back. Experience suggests that will never happen.

We asked that any changes be conditional on funding for monitoring and mitigation, and that the final plan should say what will happen if there's no money. Giving up on resource protection because it's too expensive, or politically inconvenient, is not acceptable.

At the last minute, before the end of the comment period, there were a couple of new developments. One was the announcement that: "Grand Canyon River Groups Achieve Historic Breakthrough Settlement." Another was an Op Ed piece that I wrote about the management plan for "Writers on the Range" that appeared in some Western newspapers, including those in Phoenix, Aspen, and Los Alamos. (That article is reprinted in this issue on page fifteen.) The focus of my piece was the pressure to increase use in the management plan, despite declining resources.

The "Historic Breakthrough"—called a "Historic

Breakdown" by some environmental groups—may have achieved somewhat more publicity. The so-called "Grand Canyon River Groups"—not to be confused with "Grand Canyon River Guides"—was the latest incarnation of "firewalk"—an informal discussion group organized several years ago by Mark Grisham (Executive Director of Grand Canyon River Outfitter's Association); I was one of the original participants.

The intent was to discuss and explore ideas that might represent a middle ground among outfitters, private boaters, guides, the NPS, and the environmental community for resolving the most critical issues faced by the Colorado River Management Plan: use limits, allocation, etc. Mark had decided that representatives of the "Wilderness faction" were not likely to be responsive, and they were not invited to participate. But there were representatives from the outfitters, the environmental community, the private boater community, the guiding community, and an observer from the NPS.

None of the participants—except Mark—were there in an official capacity. As soon as it became clear that the object of the discussion was to find a way for the outfitters to "have their cake and eat it too" while appeasing the private boaters, and cramming the Grand Canyon with more users in a "scientific" manner that could be sold to the NPS and the environmental community as well, I bailed out.

I'm not sure how long the other environmentalists stayed in the swamp after I left, but eventually some Wilderness advocates got wind of what was going on, FIREWALK was outed, and everyone (except Mark and the private boater community) fled to higher ground. Time passed, the ashes cooled down and blew away, and the NPS continued to grind away at the Colorado River Management Plan.

All was not lost, however: under the auspices and sponsorship of the outfitters, a new organization was formed last fall (just as the deis was released) to represent the interests of commercial passengers: the "Grand Canyon River Runners Association." Together with Grand Canyon River Outfitters Association, Grand Canyon Private Boaters Association, and American Whitewater, these self-appointed representatives of three stakeholder groups involved in the planning process banded together to assert their "authority" over the final plan in a way that would assure that they each got what they craved most.

Under the Park's preferred alternative in the DEIS, outfitters would retain their current user-day allocation, and private boaters would get a greater number of launch opportunities. Both groups, however, were upset by the Park's planned registration system and the prospect of an "adjustable split allocation." Other groups, including Grand Canyon River Guides, were skeptical as well, and the NPS itself seemed to have but a ghost of an

idea about how the system would work.

In any event, outfitter, private boater, and passenger advocate groups had one thing in common: the fear that the proposed system would fail to confirm the claims they had made about demand, and that it would show that the allocation for their sector was too large, and needed to be reduced.

They, as well as GCRG, agreed with the NPS that there would be a high incentive for interests competing for allocation to attempt to stack the results in their favor, and that consequently the results, whatever they might be, would continue the controversy over allocation rather than resolve it. Meanwhile, some wilderness advocates that had sought a "common pool" allocation system saw the proposed "adjustable split allocation" as a mixed blessing, far short of a "common pool" but their best hope to prove their belief that the commercial allocation is far larger than is appropriate.

The "Historic Breakthrough" was an agreement to "settle" the allocation controversy by saying there should be equal access for commercial and non-commercial boaters, as measured in user days, and that commercial use would predominate during the popular summer season, while non-commercial use would have the upper hand in the shoulder and winter seasons. Furthermore, due to the different trip lengths and sizes in the two sectors, it was agreed that "equal access" did not mean parity in numbers of launches. But the most significant aspect was that now there would be no need for the proposed registration system and an "adjustable split allocation."

Oh—and one more thing: the commercial allocation would remain at 115,500 user days, and the noncommercial allocation would rise to the same level, bringing the total "recreational allocation" to 231,000 user-days, up from the 218,000 proposed by the NPS. In other words, recreational use would jump 35 percent over the current level, not the piddling 28 percent jump "scientifically" proposed by the NPS in Alternative H.

In our comments on the DEIS, Grand Canyon River Guides challenged the NPS to accept this 50/50 split in allocation, but hold the line on additional use to meet their responsibility of protecting the resources of Grand Canyon. And we agreed that they should forget the idea of an "adjustable split allocation" and registration system.

The proposed 50/50 split allocation is mostly symbolic, in any event: under Alternative H commercial use is based upon a user day system, with some additional restrictions on launches. But non-commercial use is based on launches, not user days. During the scoping meetings, there were many comments on the "apples versus oranges" nature of any comparisons between commercial and non-commercial demand. The park's preferred Alternative H, with a user day system for the commercial allocation, and a launch based system for

the non-commercial allocation, would write "apples and oranges" into the regulations.

The "Historic Breakthrough" in short: three of seventeen stakeholder groups agree to take what they want from the canyon, and worry about the consequences (and other stakeholder interests) later. We're asking the National Park Service to have better vision than that.

The full text of our comments on the DEIS is available on our website at www.gcrg.org. Some of our positions support ideas advanced by outfitters, private boaters, and other environmental groups, while on other issues we had different opinions. In all cases, we tried to stick close to our objectives: protect the canyon and the quality of the river experience. We argued that new rules should be kept to a minimum, and that they should make sense, and not appear arbitrary. We advocated an emphasis on education and cooperation, and less emphasis on enforcement, as a means of accomplishing management objectives. We tried to say what we liked about ideas advanced in the management plan, and not focus entirely on the things that we thought needed improvement.

What's next? The NPS will take several months to tabulate the comments they received and—hopefully—

find some worthy ideas about how the management plan can be improved. A final plan will be drafted, and with a little luck we may see it sometime around the middle of the year. I believe there may be another opportunity to comment on the final plan before the official Record of Decision is announced, but it's not likely that additional comments will have any impact on the final result.

Once the Record of Decision has been made, the NPS will turn to the complicated task of implementing all the changes. I suspect it will be too late for bidding on new commercial contracts before the beginning of next season, when the existing contracts will have expired.

It's likely that it will take awhile before all the changes actually occur: many details may still remain to be worked out even after the Record of Decision.

Our job of "Protecting Grand Canyon, Setting the highest standards for the river profession, Celebrating the unique spirit of the river community, and Providing the best possible river experience" will continue under the new plan, in ways that we can't yet imagine.

Drifter Smith

Tapeats, August Walking to Tapeats Creek wind blows so hard we half wonder if it won't carry us off. "Windiest-goddamn-day" Claire says. We sit and watch the river. I would have told you the strange smoothness of potholes the most minute detail of Travertine of Maidenhair and Datura through a child's eyes. I would have told you I still feel my father's hand in ageless white heat" that, like dreams where the purpose is wordlessly clear, we were there to say goodbye to our desert we were there to apologize. This day, the wind would have carried the briefest sketch or, perhaps, had I said nothing But you have boats and wives and cattle you speak of like lovers; I have futures to ruin and time enough to worry. And then there were canyon wrens and evening sun balanced on Redwall. turn to swallows Wrens turn to brown bats and wind. Brook Chidester

Dear Eddy

In Reference to an email sent out to gcrg guide members on November 24, 2004, referencing a New York Times article about the 41,000 cfs November flood flow titled "In Bold Experiment at Canyon, A River Rips Through It" by Sandra Blakeslee, printed on November 23, 2004.

Your LAST LETTER concerning test flows in the Colorado River, clipped from the *New York Times*, compelled me to spew forth this diatribe.

I was dumbfounded by a line in the article quoting Bennett Raley of the Department of Interior: "Playing God is harder than it looks." Raley has since "met his maker" and stepped down as assistant secretary for water and science. This remark is not tongue in cheek, but close to the truth. The secretary may only be a pawn, but under the current administration Christian fundamentalist fanatics are playing God as they systematically destroy the last of America's wild heritage.

At the risk of being an anachronism, Raley (and in fact all news media if you can believe them) really hit the nail on the head when he said that the primary reason for the 41,000 "test" release was to build beaches for fishermen and foster a more "natural" environment for boaters. How vain to think that beach building should be considered the number-one objective in the Canyon. How self-serving to think that beaches exist only as an economic asset for a commercial enterprise.

Reaction to the ecological disaster brought about by Glen Canyon Dam seems obsessively focused on the "loss of beaches," and science perpetrates the illusion that they can "fix" it by collecting mountains of data and spending millions of dollars in the process—as if having beaches was a divine right that we must salvage for our pleasure. Please! Have you heard the scream of the mesquite as they die of thirst along the old high-water line as you shuffle through old driftwood piles? Imagine what it was like when the river was alive!

Don't you wonder why there was no mention in the article of decommissioning the Glen Canyon Dam as a way of reclaiming beaches and restoring ecosystems? Now wouldn't that be a "bold experiment," as the title of the article in the *Times* suggests!? I've got an even bolder one: Are scientists also "playing God" in the Grand Canyon? What may appear as a benign, well-meaning experiment in the name of science and a boon to the commercial boating industry may be a symptom of a larger social disorder propagated by Francis Bacon, who pointed the way toward universal domestication and the abolition of the mystery.

As an industrial society and as slaves to technological thought, what we fear most is the loss of control. Imagine

actually *letting something be*—it is beyond our comprehension! Why must we be drawn into a symbolic system that feels compelled to "manage a resource," to order, to explain, to interpret, and to assign value?

Who are we to judge which species are "good" and which are "bad," which are "natural" and which are "alien!" Men's meddling seems eternal, fostering the illusion that we are God and can recreate a river corridor as it was before the advent of Europeans and commercialization.

Is the peregrine falcon more important than a willow flycatcher? If science was forced to choose, would it prefer that the Colorado squawfish survive rather than a hump-back chub? What's a Kanab ambersnail worth? Meddling biologists revel over their introduction of the condor and, after several of the birds died eating a carcass full of lead shot, arrogantly proclaim that "the birds may be victims of their own success." What then is the fate of man?

Drifting away from the subject of the "test flow"—why is there no media attention or dollars for far-reaching ecological projects for artists? For writers? For philosophers? For animists? Where are the under-privileged kids from the inner cities who will never be able to afford a trip down the Colorado through Grand Canyon? Where are the Native Americans? The Canyon has become a playground for the rich or for those who have endured a long waiting list. If there were funding, I would take bunch of young kids in a heartbeat and show them the real America with some hands-on diplomacy that would make G.W. cringe.

As the rhetoric over allocation and restoration increases, it might be worth recalling what English writer Richard Jefferies took a lifetime to conclude: "I look at the sunshine and feel that there is no contracted order: there is divine chaos, and, in it, limitless hope and possibilities." Perhaps if Bennett Raley and other Christian fundamentalist types who play God, in their need for mythologies and miracles, could lean a little toward science—and the scientists could back off and admit that not all phenomena can be explained by science—then there would be peace not only in the Canyon, but in the heartland.

Whatever side suits your agenda, we all need the courage to come together to embrace the "unfamiliar," to shake complacency and doubt, casting aside conventional vocabularies and discovering a talent for speaking differently rather than arguing well. Perhaps within Jefferies' "divine chaos" lies our redemption when we accept that we can no longer play God, and that the Grand Canyon is larger and wiser than all of us.

Renny Russell

In reference to "The Powell Centennial—August, 1969" by Pete Winn and "The Curse of Howland Island" by Don Lago in bor 17:4.

ENJOYED THE LATEST issue, especially the Pete Winn's article on the Powell Centennial and Don Lago's Amelia Earhart piece. I find it amazing that the BQR consistently finds ways to intersect with my personal interests and history.

I was on the Mexican Hat Expedition the summer of '69, and we all felt that there was something special about it. It was an honor to be following in Powell's footsteps, or oar dips, a hundred years after the fact.

I am also a member of Tighar, a group researching the last flight of Amelia (www.tighar.org), and a member of the 2001 expedition to Nikumaroro Island, some 450 miles southeast of Howland Island where we think she ended up. Tighar is applying the principals of scientific investigation to the problem in an attempt to separate out the fact from the fiction and conspiracy theories that surround Amelia Earhart, and we think we've made some significant progress toward solving the mystery of her disappearance.

We've researched the history of the British Colonial system, interviewed former colonists, analyzed artifacts, applied modern forensic techniques, examined satellite imagery, etc....Along the road, we've found that the bones of a castaway were discovered on Nikumaroro in 1940 along with a woman's shoe, sextant box, water bottle, and a campfire. We've also found aircraft aluminum, plexiglass, and other aircraft material that is consistent with the Lockheed Electra, but no smoking gun yet. I've learned more than I ever expected during the project.

For those researching the disappearance of Bill Dunn and the Howland Brothers, my advice would be to stick to the facts as best they can be obtained, and keep on with dogged determination. The answer is out there yet to be found.

And remember that whether it is searching for Amelia, researching the Howland Brothers, or taking a river trip, enjoying the ride is more important than getting to the end.

Andrew McKenna

Correction

In Reference to "First Aid Options" in BQR 17:4

N THE ARTICLE referenced above there was a mistake on the email address for Remote Rescue. Their correct email address is remoterescue@yahoo.com. We are sorry for the inconvenience.

Back of the Boat— Whale Foundation News Bulletin

THE 3RD ANNUAL WHALE FOUNDATION WINGDING

THE THIRD ANNUAL Whale Foundation Wing Ding was the great mid-winter bash we anticipated and more fun than a barrel of boaters, raising money to fund a whole slew of things including a free or reduced cost professional mental health counseling as well as physician care for the uninsured; free health screenings for guides at this Spring's GTS Health Fair; scholarship money for guides; the cost of a Toll-Free On Call Help Line; and a website.

Many thanks go to the all volunteer cast including artists, suppliers, organizers, musicians, dessert cooks, Sutcliffe Floral and Cork n' Bottle. But we especially want to thank our sponsors whose generous financial support made the Wing Ding possible:

\$1000 DONATIONS INCLUDE: Anonymous, Steve Carothers and Jamie Dickey, Rob Elliott, Mark and Rachel Thatcher.

\$500-\$600 DONATIONS INCLUDE: Anonymous, Arizona River Runners, Tim Bonatus and Karen Stepan, Dan and Kris Downs, Ted Hatch, John and Deb Ledington, Joan Mitrius.

\$250 DONATIONS INCLUDE: Rich and Doreen Evans, Jim Marzolf, Phil Williams and Shannon Clark and Mark and Linda Giesecke.

Thanks again and check out the new slide show of the party at www.whalefoundation.org. See you next year!

2004 KENTON GRUA MEMORIAL SCHOLARSHIPS

Last year we were happy to award five \$1000 scholarships. We had many qualified applicants, but unfortunately we were unable to consider several applications which arrived after the deadline. The deadline for applications is June 1, 2005. If you are interested in applying, do try to get your application in before your season gets busy. You can download an application online at www. whalefoundation.org or you may request one by mail at P.O. Box 855 Flagstaff, Az 86002-0855.

APRIL LIAISON TRAINING PROGRAM

On April 2, 2005 we will hold a Liaison Training session in Flagstaff. The Whale Foundation's Liaison Program was created to provide a personal link between the river community and the Foundation's services. Our goal is to find at least one working Grand Canyon guide in each commercial company, and a few freelancers, who would be willing to act as a bridge—or liaison—between fellow guides and the Whale Foundation's services. We are grateful to those who have generously and enthusiastically volunteered to serve in this capacity and applaud

those who have used this link to get help. All liaisons sign an agreement promising confidentiality and undergo a full day of training with an experienced provider before serving. By the end of the day, Liaisons recognize and are committed to honoring the confidential nature of their role and are now there for you.

OPENINGS ON THE WHALE FOUNDATION BOARD

There are currently two openings on the Whale Foundation Board of Directors. We're getting a lot accomplished on behalf of the Grand Canyon guiding community and having a pretty darn good time doing it. Members of the Board of Directors serve for one year and we have recently restructured the foundation into four main divisions which has improved our efficiency and communication. The divisions are Mental Health Services; Support Services; Fundraising and Public Relations; and General Administration. Although we have more clearly defined the roles of each member, we all pretty much keep sticking our fingers into each other's piece of the pie, because it's so much fun! In other words, if your strength is database management, but the position is for the fundraising committee, join us anyway! We'll find a spot for you! If you are interested in being part of this effort, we'd love to hear from you. You may send us an email or call 928-774-9440.

Whale Foundation Health Fair "We're Back!"

We're going to do it again...the second annual Whale Foundation Health Fair will be held at the Hatch warehouse Saturday March 26 during the lunch break at the Guides Training Seminar. Last year, led by Dr. Tom Myers, we screened about 35 guides and gave out vouchers for free blood tests and mammograms. We also provided dental screenings, optometry checks, as well as instruction in breast self-examination for women, skin cancer screenings, blood pressure checks, and physical therapy evaluations and advice. We also provided educational pamphlets on various topics including depression, skin cancers, std's, back care, hypertension, and cholesterol level management. This year we'll provide all the same services and again it will all be free; up to \$500 worth of services in some cases. We'd love to have even more working guides take advantage of this great opportunity! If you were screened last year, come run the gauntlet again; it makes good sense to be re-checked for skin cancer, high blood pressure, diabetes, cholesterol, etc. See you there!





Announcements

JOB AVAILABLE

Professional River Outfitters needs two customer service people for their Flagstaff office. Full or part-time. Contact Hester at PRO, 928-779-1512 if interested.

BOATING OPPORTUNITIES IN GREATER TIBET

We're looking for boaters and trekkers for two expeditions in Greater Tibet.

- I) A first descent of the Indus headwaters in western Tibet (Class III, using inflatable kayaks). The expedition includes a yak supported three day trek around Mt. Kailash and a three day ride on Tibetan ponies to the put-in (with boating gear carried by yaks).
- 2) A ten-day horse supported trek through the Yading Nature Preserve in southwestern Sichuan. You'll have the opportunity to meet and photograph several colorful minority cultures which live in the valleys near the spectacular peaks of Chenrezig (Avalokiteshvara), Jambeyang, and Chanadorje.

We've been running expeditions in this area for over ten years, and without exception these have been the trip of a lifetime. Many previous participants have participated in several of our expeditions.

More information is available at www.shangri-la-river-expeditions.com.

We expect these expeditions to fill quickly, so after reviewing the information, if you're interested please call Pete Winn as soon as possible 877-242-7108 (toll free).

CRAYFISH FESTIVAL

The Grand Canyon Wildlands Council is looking for volunteers to help restore native aquatic communities by controlling crayfish on East Clear Creek. East Clear Creek is a tributary to the Little Colorado River, and a proposed Wild and Scenic River flowing through a rugged, ponderosa forest canyon.

East Clear Creek is designated as critical habitat for the endangered Little Colorado River spinedace. Non-native crayfish, a voracious predator, have contributed to the decline of spinedace and other native aquatic species. Therefore, Grand Canyon Wildlands is conducting an experimental control program involving live traps and hand netting. We need volunteers experienced in getting their feet wet.

Meals and transportation will be provided and the real outdoor enthusiast can cook up their own crayfish if so inclined. Cajun-style is best.

The weekend dates are: April 15–17; April 29–May 1; and May 6–8. We need your help! For more information please contact Heidi or Liz at 928-556-9306; or heidi@grandcanyonwildlands.org.

Leopard Frogs of Grand Canyon— A Good News / Bad News Tale

GOT A CALL FROM my beloved via satellite phone the other day that began with "Well, the good news is, we're ok!" I've gotten these calls before. They're usually related to some kind of paddling trip somewhere in the Southwest in the middle of winter. And while the conversation temporarily affects your heart rate you hang up the phone knowing you'll see each other again and have another hairy adventure story to talk about. The bad news, no matter how dismal, is completely overshadowed by the "We're ok!" proclamation.

I started thinking about that good news/bad news dichotomy in terms of a project that I've been working on for the past couple of years in Glen Canyon National Recreation Area and Grand Canyon National Park. However, with this project the good news does not make the bad news seem insignificant. The bad news is bad as ever.

So, I'll start there, with the bad news which is worldwide amphibian declines. Beginning in the 1970s, people started noticing rapid declines in local populations of amphibians. These population losses were happening in Australia, South and

Central America and western North America. Species that had only recently been discovered, like the Golden Toad of the Costa Rican cloud forest, had disappeared less than thirty years after its discovery. In western Canada, millions of Northern Leopard Frogs bellied up. Gradually researchers pieced these and other stories together and by 1989, at the First World Congress of Herpetology, concluded that something was awry with global amphibian populations. Researchers continued to document these declines and, aided by the use of technology, integrated the information.

A recent global amphibian assessment combined data from over five hundred scientists in sixty countries. It offers some sobering statistics. There are currently 1,856 threatened amphibian species. That's 32.5 percent of the known amphibian species on the planet. Of these, 435 species are in rapid decline. At least nine species have

gone extinct since 1980 with another 113 species not reported from the wild in recent years and believed to be possibly extinct. This data is alarming because as G. B. Rabb of the Chicago Zoological Society states in his paper on the amphibian decline phenomenon, amphibians "may be the canaries in the coal mine of Mother Earth."

Amphibians are intimately connected to their surrounding physical environment because their moist, permeable skins act as a conduit for water and gas

exchange. They have the unfortunate role of being indicators of environmental health, the same environment that we move around in. While no one has been able to put a finger on exactly why we have had large scale amphibian die offs, things like climate change, chemical toxicants, acidification, nitrification, introduced predators, habitat alteration and increases in diseases among amphibians are all suspect. There may be no single, easily-remedied reason for the declines and that is what makes the problem so nagging and so difficult to approach. While amphibians are generally not considered high profile species like grizzly bears or wolves, their role as

Northern Leopard Frog. Rana pipiens
This photo illustrates many identifying characteristics of
the species including many spots and a continuous dorsolateral fold along the side of the animal. These frogs can
be brown or green.

indicator species has thrust them into the limelight and grabbed our attention.

Scientists with the Arizona Department of Game and Fish started statewide surveys of our five native and one introduced leopard frog species in 1990 because they suspected declines and wanted to establish a statewide baseline. The Northern Leopard Frog became a candidate species for the state list of threatened wildlife after its numbers declined in Arizona. The idea to look at these frogs in the National Parks didn't get off the ground until much later.

Beginning in 2003, Charles Drost, US Geological Survey Zoologist, and RV Ward, Wildlife Biologist for Grand Canyon, teamed up to launch a series of lake, river trip and hike-in amphibian surveys in the Glen and Grand Canyon regions with an emphasis on Northern Leopard Frogs. This frog had been documented inhabiting



Lowland Leopard Frog. Rana yavapaiensis
This frog. was photographed in Suprise Canyon and is
the newest member of the Grand Canyon National
Park's amphibian fauna. The frog appears lighter in
color but color is not an identifier because there is
much variation. It has fewer spots and the terminal
portion of the dorsolateral fold is broken.

a fairly widespread area within Glen Canyon, historically, and was noted as being common in areas of good habitat. While known from far fewer places in Grand Canyon, it was documented there as well. When the reservoir known as Lake Powell filled, many of the historic locales for Northern Leopard Frogs were inundated and lost. The only recent information for leopard frogs around the lake came from Glen Canyon National Recreation Area Botanist, John Spence's surveys of hanging gardens. Spence documented some new locations for Northern Leopard Frogs up riparian side arms and at springs in the early 1990s. Downstream in Grand Canyon, Northern Leopard Frogs had completely disappeared from one known locale. There were no reports of adult frogs and only a few isolated single tadpole sightings elsewhere.

Finding out what was happening to the region's leopard frogs all of a sudden seemed like a good question to investigate. And, since there was no comprehensive baseline information, that was the place to begin. Historic locales were revisited and as many springs and side streams that could be accessed during the two year time-frame were surveyed. Data for all amphibian species observed was tabulated.

After a couple of years of surveys, the data showed that Northern Leopard Frog locales in Glen Canyon appear to be clustered around the Escalante arm of the lake with one other disjunct population located below the dam. Up until the spring of 2004, we had not documented a single leopard frog in Grand Canyon.

This is where the good news part of this story comes in. In early March of 2004, several of us, on the longest private trip launch of that year, were hiking and surveying



Lowland Leopard Frog. Rana yavapaiensis
This photograph shows the break in the dorsolateral
fold and a distinctive mottling on the rear of the
inner thigh. Note the few pale spots and large eyes.

up Surprise Canyon in western Grand Canyon. The habitat looked good: perennial surface flows of water with some deeper, slower moving pools interspersed with and surrounded by vegetation. Leopard frogs seem to like deep, dank pools with alcoves cut in the banks that they can dive into to escape detection or thick mats of grasses and cattails that they can disappear into on land. While walking along the edge of a pool ringed with cattails, we heard the distinct "plop" of a frog jumping into the water. After a minute of intensive searching three individual leopard frogs were spotted hiding under a cut bank. We captured and photographed an individual. Something about these frogs was different from the frogs we had been observing in Glen Canyon. They had far fewer spots than the typical Northern Leopard Frog. More importantly, the dorsolateral fold along either side of the frog's body was somewhat discontinuous. These folds are diagnostic keys for leopard frog identification. In Northern Leopard Frogs they are continuous and unbroken. In the Surprise Canyon frogs, the terminal parts of the folds were broken. When we distributed the images to frog researchers and experts in the Southwest, all agreed that these probably were not Northern Leopard Frogs but some other species of leopard frog.

This discovery constituted a new record for an amphibian species in Grand Canyon National Park. But what species was it? Preliminary analysis of tissue samples by Jef Jaeger at the University of Nevada, Las Vegas, showed that this frog is probably a Lowland Leopard Frog. While stable populations of this species occur in central Arizona, these frogs are rapidly declining in southeastern Arizona and are extirpated from southwestern Arizona. They are a candidate for threatened species in the state. Continuing genetic analysis will give us a better understanding of how this Surprise Canyon population of



Canyon Tree Frog. Hyla arenicolor
Famous for its ability to scale vertical rock walls with
suction cupt toes, this frog suns on rocks and escapes
into pools. It is variable in color and often has spots
that may make you confuse it with a leopard frog.

Lowland Leopard Frog is related to other populations distributed elsewhere in the state. Further surveys will continue to flesh out a picture of where leopard frogs are located in the region and what is happening to their numbers.

It is really amazing how little we know about the amphibians in the Southwest and how important it is to gather information given the global trends. One way to do this is to enlist the observation skills of all canyon users. If you work in the Canyon, find yourself hiking the trails or are motoring around on Lake Powell or Lake Mead and



Woodhouse's Toad, Bufo woodhousii
Often seen on the beaches of Grand Canyon
at night or along the edge of the river, these
large toads have a white stripe down their backs
and elongate their glands behind their eyes. Frog.
species lack the glands.

think you have come across a leopard frog, please send us your observations. Better yet, contact me and I'll send you a set of laminated amphibian cards that you can keep in your ammo can or backpack. Note the location of your observation and take a picture of the frog if you can, but try not to handle it. Send requests for observation cards or actual observations and photos to: Lisa Gelczis, usgs-sbsc-cprs, 2255 N. Gemini Dr., Flagstaff, AZ 86001-1600; 928-556-7250. lisa.gelczis@nau.edu

Lisa Gelczis



Red-spotted Toad, Bufo punctatus
This common Grand Canyon toad is well-dadpted to
dry conditions. It has many red spots on its body and
the glands behind its eyes are round, not elongate.
Notice the difference between the smaller male, on
top, and the larger female below.

Clogging the Grand Canyon with River Boats— One Boatman's Opinion

ACH YEAR, NEARLY five million people visit the Grand Canyon, most traveling to the South Rim where they spend as much time looking for a parking place as they do looking at the canyon. Only a few venture below the rim on a trail.

Another 22,000 people a year see the canyon from the bottom up, enjoying a week or more of spectacular scenery while running rapids, hiking to waterfalls hidden in side canyons and sleeping on sand next to the river under a sky studded with stars.

For most, life on the river is an earthly paradise. Surrounded by "the best wallpaper in the world," as my fellow guide Kevin Johnson describes it, your body is assaulted by sensations—the warmth of a breeze, splash of cool water, roar of a rapid, song of a canyon wren, smell of coffee at sunrise, the yipping of a pack of coyotes.

Absent are clocks, television, newspapers and phones that ring. A hundred miles down the river you don't know, or care, what day it is.

It's not for everyone. But for some, the experience beats most pleasures known to man. And there's the rub: interest in whitewater boating has grown steadily over the years, and there's not enough room in the canyon for everybody to be there at once.

In the century before the completion of Glen Canyon Dam, 1,100 people floated through the Grand Canyon. Five years later, it was a thousand a year; in five more years, it was 10,000. Recognizing that people have impacts on the canyon, and on each other's experience, the National Park Service "stabilized" use in 1973, by saying, in effect, "No more people."

A decade later, a new plan called for the elimination of motorized boating but more than doubled use levels, in an effort to appease both commercial and noncommercial users. A rider attached to the Park Service appropriations bill axed the controversial elimination of motorboats, but left the increased use levels. Complaints about crowding and competition for campsites soon followed. As interest in do-it-yourself trips grew, the Park Service established a waiting list for future trips, a list that grew ever longer.

Today, canyon resources are in a tailspin. Downstream impacts of Glen Canyon Dam, which began operations in 1963, have increased. Camping beaches, deprived of new sediment, grow smaller and disappear, some native fish species exist on the brink of extinction, while others are gone for good. Footprints evolve into trails, then metamorphose into backcountry highways.

Non-native plants and animals proliferate while ancient artifacts disappear into the pockets of tourists.

Nobody is trying to wreck anything, but the changes accumulate over the years, many in direct proportion to the number of visitors. Almost everybody has a great time in the canyon, they tell their friends about it, and even more want to go the next year, with no end in sight. Professionally outfitted trips book far in advance, and when the waiting list for a private trip got to be twenty years long, the agency stopped taking names.

A planning process intended to straighten all this out got so bogged down in controversy it was terminated by the agency in 2000. After a lawsuit got the process started again, the controversy over who gets to go on the river, on their own or with an outfitter, resumed. Outfitters just want to do what they've done for years—make a living showing folks a good time in the canyon. Private boaters just want to get on the river soon, not in twenty years. The Park Service wants the controversy to go away, so it can get on to other issues—managing the backcountry for hikers, or dealing with aircraft noise. The agency's last plan, aimed at getting cars away from the rim, lacks funding and appears stalled.

Now, there's a new plan, but sad to say, it increases river use by 28 percent, reaching a level two-and-a-half times what was "enough" thirty years ago. The public comment period for the plan closed on February 1.

The Park Service assures the public that if more use creates more problems, it will cut back. Experience says that will never happen. Simply monitoring the impacts of this proposed plan, for example, will depend on "additional funding" from unspecified sources.

For three decades, I've watched the Park Service struggle to please everyone, while crowds and congestion increased and the river experience diminished. That is why most river guides oppose further use increases, even if it means less work and smaller incomes for us. We believe that the canyon, and the experience, are too precious to destroy.

Drifter Smith

This article previously appeared in Writers on the Range, a syndicated column distributed by High Country News.

Guides Training Seminar 2005

THAT DO YOU GET when you combine river guides, top-notch interpretive training, a great networking opportunity, and loads of fun? Of course, it's GTS time! This year's Spring Guides Training Seminar land session will be fabulous (but of course!) and the topics run the gamut: fossils, trails history, archaeology, reptiles and amphibians, water quality, flood flow results, basin hydrology, the drought forecast, sediment/camping beaches, Bert Loper, Grand Canyon Monitoring and Research Center (GCMRC) activities, landslides in Grand Canyon, the Stone, Eggert and Eddy expeditions and more! Sounds wildly interesting, right? It darn well is! Some of the best researchers and most knowledgeable historians will be at the GTS to share their knowledge with you and answer all of your burning questions. Not to mention, you get to see river buddies that you haven't seen all winter. What an opportunity! We'll round out GTS talks with fun and interesting movies and have a little Easter egg hunt for the kiddies on Sunday morning. Festivities abound!

And, of course, that's not all. The Whale Foundation will be hosting their second annual Health Fair at the GTS. This is your opportunity to "talk to the docs," get good health information, receive free vouchers for all sorts of testing, etc... We want all of you to head upstairs at Hatchland and check it out. Don't be shy! If you want to guide in Grand Canyon, you simply must take care of yourself, and the Whale Foundation will be there to help you do just that. And, the best part is, the Health Fair doesn't cost you a dime but you'll really benefit!

One of our talks scheduled for the GTS deserves special mention: Richard Quartaroli will be presenting a talk about GCRG's River Runners Oral History Project. As you know, oral history segments magically appear in the newsletter, but we'll provide you with a "behind the scenes" glance at what's involved, how the program developed and where we're going with it. Recording and publishing these reminiscences captures the river experience in all its wonderful, poignant, funny, whacky and wild forms. Lew Steiger is still jaunting around the west, prodding older (and newer) river guides for their great stories. This part of the GTS program is made possible by the Arizona Humanities Council (AHC), although any findings do not necessarily represent the view of AHC or the National Endowment of the Humanities.

Speaking of interesting activities—Joe Shannon and Emma Benenati will be conducting their own mini-river trip in the Glen Canyon reach above Lees Ferry. On Friday, March 25 they will launch a 21-foot aluminum hard shell fishing / work boat from Lees Ferry that will hold five to six people (besides themselves). They will head up to the dam and back, stopping at a couple sites

and talking about river ecology and dam effects on the Colorado River (especially as it relates to the food base). Each trip would be about three hours in length and there is no cost. The first trip will leave at 10 A.M. and the second trip at 1 P.M., weather permitting, of course. Participants should have rain type gear/warm clothes because (as you probably already know) it can be pretty darn cold in Glen Canyon in a motorboat. If you're interested in this unique opportunity to "head up the river" and learn more about the ecology, you can contact Emma at (928) 226-0163.

We're working on developing the land session agenda right now, and we'll post it on our website, www.gcrg.org when it's ready, so check it out! As usual, the GTS land session is open to the general public. If you want to learn more about Grand Canyon and the Colorado River, this is the place to be, whether you're a guide or not! We encourage you to sign up in advance so we can get a handle on numbers. Towards this end, we will provide a discount for those of you who sign up by March 18T.

And, speaking of "river", let's not forget the GTS river trip—ah, only the best thoroughly cooperative training trip on the Colorado River through Grand Canyon! As most of you know, we take the interpretive training of the land session and put it on the river, so you can see, hear, or touch the things you're learning about. Plus, it's a great opportunity to learn (or teach) boating and guiding skills. It covers the gamut—great interpretive training in the cultural, natural and human history of Grand Canyon, coupled with guiding skills. If that weren't enough, those lasting connections you make with guides from other companies are simply invaluable. Talk to anyone who has gone on the GTS river trip in the past, and they'll tell you all this is true!

For the river session, first priority will be given to guides sponsored by an outfitter, then to all interested guides and trainees who have trips for the 2005 season. If you want to be sponsored by your outfitter for the GTS river trip, start talking to them now! If you're not sponsored for the river trip, you must have all your medical requirements and other guide certifications fulfilled as specified by Grand Canyon National Park, or you must be a licensed guide on another river, actively working towards becoming a guide in Grand Canyon. Also, freelance guides must send us a letter or resume with your background—tell us who you are, how you meet these requirements and why you should go. This will help with our selection process. Send us a check too, although we will hold it until we make our decision. The GTS postcards have been sent to guides, so look for it in the mail, fill it out, and send it back to us as soon as you can.

So, here is the deal. Write it down on your calendars! Tell your friends! Make plans!

FRIDAY, MARCH 25TH

- Food Handler's Class, 10 A.M.—2 P.M. at Old Marble Canyon Lodge. Contact Marlene Gaither at (928) 226-2769 to sign up.
- Guide testing at Lees Ferry, 11–5 without an appointment.
- Glen Canyon float/talk—Meet at Lees Ferry. Trips leave at 10 A.M. and again at 1 P.M.. They will motor up to Lees Ferry and back. See article above for details. Contact Emma Benenati to sign up at (928) 226-0163. Space is limited, so call right away!
- Grand Canyon River Guides' Spring Meeting: 3 P.M. at Old Marble Canyon Lodge. Nomination of officers, conservation issues, etc...Please join us!
- Dinner and party at Hatch River Expeditions warehouse.

SATURDAY AND SUNDAY, MARCH 26 & 27
GTS LAND SESSION AT HATCH RIVER EXPEDITIONS WAREHOUSE IN MARBLE CANYON, ARIZONA.

Lodging: on your own (camping or staying at one of the local lodges).

Cost: \$35 (covers food for the weekend) or \$30 if you sign up by March 1.

Note: if you're sponsored by an outfitter, please sign up and we'll bill them later.

Bring: a camp chair, a mug, dress warmly and in layers and plan on staying for the weekend!

Guide testing will be available at Lees Ferry both Saturday and Sunday from 11-5 P.M. without an appointment.

Tuesday, March 29 through Monday, April 4
Upper half of the GTS river trip—
Lees Ferry to Phantom Ranch.

Cost: \$165

Note: if you're sponsored by an outfitter, please sign up and we'll bill them later.

REQUIREMENT: The river session is open to guides/ trainees with work for the 2005 season.

Monday, April 4 through Tuesday, April 12

Lower half of the GTS river trip—

Phantom to Diamond Creek.

Cost: \$185

REQUIREMENT: same as above

The GTS is made possible in part by funding from the Grand Canyon Conservation Fund (a non-profit grant-making program established and managed by the Grand Canyon river outfitters), the Grand Canyon Association and Teva. As we mentioned previously, the oral history presentation is funded in part by the Arizona Humanities Council. We thank all of our funders for their generous support, all the speakers for giving us their time and imparting their knowledge, and all the participants for their eagerness to learn more about this special place. And, you can be a part of it, so hurry and sign up for the best and most thorough training around!

Lynn Hamilton
Executive Director GCRG

Partners in Education

F THE TITLE DIDN'T scare you away, thanks for reading this article. The Grand Canyon Association (GCA) has been around for awhile, since 1932 to be exact. Our mission is to support education and science at Grand Canyon National Park. In support of our mission, we have donated more than \$20 million to the park. Our main source of revenue is the operation of six bookstore locations on both the North and South rims of the canyon. That's how we make our money. We spend our money in support of our mission by funding the operations of the Grand Canyon Field Institute, providing free public art exhibitions at historic Kolb Studio, sending curriculum based educational trunks about Colorado River ecology, Colorado River history and related subjects out to the entire nation, and by supporting community lectures in Flagstaff and Prescott, Az.

So what does that have to do with the river community? More than anything else, we see ourselves as educators, we use different mediums, but we strive to bring people to an improved understanding of what they are experiencing, and that is what a good river guide does as well. We believe that people will value what they understand, and what they value, they will protect. This is why we get up and go to work every morning.

I have been working with organizations like the Grand Canyon Association for the last twenty-some-odd years of my life, either as a volunteer or more recently as paid staff. In every organization like GCA I have ever worked with, the association has been heavily involved in the support and delivery of river guide education. Most recently, I worked closely with Colorado Plateau River Guides (CPRG), John Weisheit and his crew in Moab. Year after year Canyonlands Natural History Association (CNHA) participated in the annual river guide training events in Moab, either providing speakers or helping to financially support speakers from the river community to enhance the event. I even got to do a flip in Big Drop Three at 43,000 cFs, and to this day I am not sure if John flipped us on purpose as a training event for the forty some odd river guides watching us as the first boat through. I do remember that John was still at the oars upside down as we washed through the tail wave in that rapid and I also remember being very grateful for being scooped up about twenty feet before I was sucked into swimming Satan's gut. Cprg and CNHA also helped Dinosaur National Monument sponsor training in Vernal for guides running the Yampa and the Green.

So, the idea of having a cooperating association, like the Grand Canyon Association, participate in annual spring guide training is not a new one. I apologize that GCA has been so slow to step up to the plate, but we are here now and looking forward to establishing a longterm relationship with the Grand Canyon River Guides and your river community.

As a non-profit supporting the park, one of our goals is to encourage your clients to purchase pre-trip materials that will enhance their river experience. By purchasing river guidebooks, maps and river history materials from us rather than from commercial bookstores, your clients can choose to help support the resources they will be enjoying. Another major goal is for continued support of the river community through financial contributions in support of your GTS and other events. GcA will have a table set up at your GTS this spring at Marble Canyon and we will offer you great river related materials at a significant discount from retail prices. I will present a short session about who we are and why we can be a great partner to you in your career as a professional river guide. GcA, working with GCRG, will also be providing financial support to other speakers to help assure you receive the best possible training experience this spring.

I am looking forward to meeting many of you at Hatchland this spring and to the beginning of a long and meaningful relationship. Please check out our website at www.grandcanyon.org to see the variety of Grand Canyon related materials we offer.

See you at the GTs!

Brad L. Wallis
EXECUTIVE DIRECTOR,
GRAND CANYON ASSOCIATION

Kent Frost Video

E ARE FUNDRAISING for a thirty-minute video portrait of one of Utah's guiding and outfitting pioneers, Kent Frost. Kent's life is entwined with the landscape of Southeastern Utah. While growing up in canyon country, the largest tract of unspoiled American landscape in the lower 48 states, Kent explored extensively, hiking hundreds of miles and floating the rivers on homemade rafts. He got to know the country intimately long before beginning his outfitting career. As a river and jeep guide, he opened the minds and hearts of outsiders to the unique people and ecology of the Canyonlands. For approximately thirty years, Kent and his wife, Fern, operated a jeep tour company from Monticello, taking numerous people into the wild lands of Southeast Utah. They recognized the uniqueness of the Needles and Maze Districts, and quietly lobbied for their inclusion when Canyonlands National Park was designated. Kent Frost was named a "Legend" by the National Park Service and Grand Canyon Environmental Studies in 1994, for his part in helping with the beginnings of the commercial boating/ rafting industry. This video honors not only Kent, but the many unsung guides and outfitters who helped build Utah's tourism.

Kent is indeed a grandfather of the eco-tourism business and a living link to Southern Utah's past. This past comes alive as Kent tells his many wonderful stories about working and playing in the canyon country. He tells of both legendary and unremembered characters, of high water adventures and rough four-wheeling in the backcountry. During his many adventures, Kent met other pioneer explorers of the canyon country, such as legendary boatman Norm Nevills, rancher Art Chaffin and trader/ preservationist John Wetherill. Kent first met Norm Nevills as a teen and Norm soon became Kent's mentor, good friend and part time employer, hiring Kent as a boatman and boat builder for many years. This video brings to life this rich history and increases the public's awareness and appreciation for the role tourism continues to play in Utah's economic development.

Producer and director Chris Simon received a Master's degree from ucla and for the last twenty years has been working independently as a folklorist, oral historian and documentary filmmaker. Her prize-winning documentaries have shown nationally on Pov, PBS' prestigious documentary showcase, and in film festivals throughout the world. Simon's work has been supported by the National Endowment for the Arts, the Utah and California Humanities Councils, and many private foundations.

Sageland Media will distribute the video to libraries and schools throughout the state and beyond. Canyon-

lands Natural History Association, the interpretive/marketing arm of the National Park Service, National Forest Service and Bureau of Land Management in southeast Utah will assist in regional distribution and will market copies of the video in National Park outlets throughout the Four Corners region. The film will be offered to PBS, both nationally and locally, in particular KUED and stations in other Four Corners states. We expect it to be popular with tourists and locals alike.

The Kent Frost Video Project has been supported by the Utah Humanities Council, the Documentary Studies Program at the University of Utah, and by donations from private individuals. We have shot over forty hours of footage and are now trying to raise \$30,000 for the final editing costs of the project. The Kent Frost Video Project is a non-profit, educational project of Four Corners School of Outdoor Education, and donations are fully tax-deductible. If you would like to donate please make a check out to Four Corners School of Outdoor Education and send it to: Kent Frost Project c/o Sageland Media, P. O. Box 211, Moab, ut 84532. Donors over \$50 will receive a letter acknowledging their tax-deductible donation. Donors over \$100 will have their name listed in the credits and receive a free copy of the finished film!

Please help us finish this exceptional project. The Kent Frost Video Project will honor the contributions of eco-tourism to our lives in the canyon country. Please feel free to contact Chris Simon with any questions. Thank you for your consideration.

Chris Simon
PRODUCER/DIRECTOR

Susette Weisheit
Associate Producer

Lots of Great News at Grand Canyon Youth!

We're Growing!

T HAS BEEN A BUSY and exciting few months at Grand Canyon Youth (GCY)as we have been working hard to put together our 2005 river program schedule. Believe it or not, GCY has 21 river education programs scheduled for this upcoming season, which is our largest season by far! Youth from across Arizona and from as far away as Boston are joining us on the river this year.

Our programs are not just on the river anymore. Since September there have been Grand Canyon Youth Corps service learning clubs at several schools and a community club open to all youth. These clubs are a collaborative effort between Youth Volunteer Corps, Willow Bend Environmental Education Center and GCY. These clubs provide experiential education and service learning opportunities for youth in Flagstaff. So far, over seventy youth have participated in a number of projects including a house revitalization project, pottery shard washing with Elden Pueblo and working with the Flagstaff Family Food Center putting on parties for their after school program.

By the time you are reading this, Grand Canyon Youth will have reached another milestone by hiring an Assistant Director to help with the increased growth of our organization. Stay tuned in future BQR's for more news about our expanding and deepening programs.

Why are we growing? The answer is complex but in several of our parent evaluation forms this season came a plea from parents for more of Grand Canyon Youth-like programming for teens in Northern Arizona; expressing that a real need exists for positive and educational opportunities for youth. Our organization has also seen the continued return of youth participants from one year to the next who have created a relationship with community, the river, and GCY. In response to this need and to the community partnerships we have created, our program continues to grow at an exponential rate with the valuable financial backing of our donors. More information about who all these great folks are will be available in our 2004 Annual Report which is on-hand at the GCY office.

WE HAVE A NEW HOME!

Due to our increased capacity, we are thrilled to announce that we're moving into the Adventure Discovery warehouse, just a block from our current address. Jene Vredevoogd, one of GCY's long-time Board Members has been extremely helpful, creative and generous in making this a reality. The space is the perfect size with an office space and shop. We will be keeping our main office at 515 W. Birch at least until the fall.

Upcoming Programs

Some of the exciting programs we've got going on this year include a new partnership with the Authors in Schools Foundation which has been hosting writing workshops for high school students with local and regional authors throughout the school year. These workshops will culminate with a seven-day on-river writing workshop with a couple of authors called "White Water Writing." This season will also have on-river service learning programs that began last season with the Grand Canyon Monitoring and Research Center where youth effectively recorded detailed site descriptions and photo-documented over five hundred geo-referenced control points along the Colorado River for inclusion into a web accessible database. The control points are used by scientists to geo-reference data collected along the Colorado River. Youth also will again be working with the National Park Service's Below the Rim Revegetation project.

The Native American Youth Artist program continues this year with artist Bahe Whitethorne. You can check out some of last year's artwork at a Native American Youth Arts Exhibit, which is taking place at the Museum of Northern Arizona as part of the Youth Celebrate Arts and Culture Month in Flagstaff from February 25–April 3, 2005. More artwork will also be displayed at the downtown Flagstaff Library in April.

These are just a few examples of the programs we have planned for the coming season. If you'd like to learn more about these or other programs or know some middle or high school aged youth who you think would benefit, please don't hesitate to call the office or send an email our way.

Guides, Guides!

If you are a licensed guide and have a little free time in your schedule and a desire to experience a river trip with young people, we are still looking for both Grand Canyon and Utah licensed guides for the upcoming season. You don't have to volunteer anymore. We pay our guides a competitive wage for their skills, talents and experience. If you are unable to do a trip this year but would like to be included on our guide list for the future, please call or email and we can send you a schedule and more details.

Another way guides really help out at GCY is by spreading the word about our programs to passengers. We will have guide packets available at the Guide Training Seminar with brochures and other information that fit conveniently in an ammo can. If you aren't able to attend the GTS, please drop us a line with your info and we'll get a packet to you. Guides spreading the



word about GCY help raise needed scholarship money and recruit youth from other parts of the country. A heap of gratitude is extended to all the guides and passengers who help year to year to extend the impact of our program.

5TH ANNUAL ART AUCTION & RIVER RUNNERS FILM FESTIVAL

The date has been set for our annual fundraiser. Join us Friday, April 8, 2005 at the Museum of Northern Arizona from 6-11 p.m. for an evening of films, fine art, food and fun. We are now graciously accepting gifts of art, jewelry, gear, and sponsorship contributions for this great event. Volunteers are always welcomed and needed and if you know of any great films, especially shorts, we welcome those as well. So mark your calendars and tell your friends. It's sure to be a fun event with something for everybody.

GET INVOLVED-SUPPORT GCY:

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 GCRG, 515 W. Birch in Flagstaff. Again, thank you to all of our current supporters, you know who you are, thanks for all you do!

Emma Wharton
Executive Director GCY

My absolute favorite thing about being a part of GCY was being able to be in an educational, safe atmosphere where I could really be myself. I just felt really lucky that I could be in such a beautiful place with such amazing people.

-2004 youth participant

Now, That's Big Water— Lava Dam Failure in Western Grand Canyon

WER THE PAST SEVERAL issues of this journal, we have presented evidence we've found of extensive, big floods in western Grand Canyon that resulted from the cataclysmic failure of at least five separate lava dams. In this, our final chapter on our

studies of western Grand Canyon lava dams, we present to you our pièce de résistance. We have estimated the magnitude of one of the floods, the Hyaloclastite Dam flood, that occurred 165,000 years ago upon failure of the Hyaloclastite Dam, the remnants of which are found on river left at river mile 188.5. What we have called the QFD4 deposits provide the evidence of the flood following this failure. The lifespan of the Hyaloclastite Dam could be as little as one and a half years, assuming that the dam failed through piping (i.e. "leakage") before the impounded river could spill over the top of the dam. Assuming the maximum height of this dam was about 980 feet, the reservoir created by this dam would have held 300 billion cubic feet of water. Using the average discharge of 18,500 cfs for the Colorado River over the past 450 years

(Stockton and Jacoby, 1976), this reservoir could have filled in approximately 35 weeks.

Using one-dimensional hydraulic modeling, we calculated the height and discharge of the flood wave that left behind the QfD4 deposits between river mile 189 and 209 (Figure 1; Fenton et al., in preparation). Our modeling indicates that the reservoir would have drained in less than 35 hours. This "rapid release" produced a flood with a maximum peak discharge

ranging from nine to fourteen million CFS (Figure 1). This range in discharge results in part from uncertainties in channel geometry and degradation of the high-water marks (the QFD4 deposits), which, after all, have been present for 165,000 years. We produced

two flood waves whose elevations bracket the elevations of the QFD4 deposits. It is possible that the maximum elevations preserved in flood deposits at river mile 189.3 and 193.5 might be achieved by failure of a 685-foot dam if we assume that debris from the failed lava dam raised river level immediately downstream from the dam, but no evidence remains to evaluate that assumption. A minimum steady flow of 4.2 million CFS is required to match the water-surface elevation of Hyaloclastite Dam outburst-flood deposits at river mile 204–205, seventeen miles downstream of the dam failure, where the Hyaloclastite Dam flood waters approached steady, uniform flow.

We don't know exactly how long the Hyaloclastite Dam flood lasted, but dam-break floods typically have short duration times. The failure of Teton Dam

(Idaho) in 1976 drained a reservoir holding ten billion cubic feet of water in less than ten hours (Fread et al., 1998). Likewise, Russell Lake, a modern lake formed by a glacial dam in Alaska, released 1.1 trillion cubic feet of water over 36 hours following a dam failure in August 2002 (Trabant et al., 2003).

The peak discharge of the Hyaloclastite Dam flood dwarfs all known Holocene and historic floods produced by seasonal and weather conditions in the Colorado

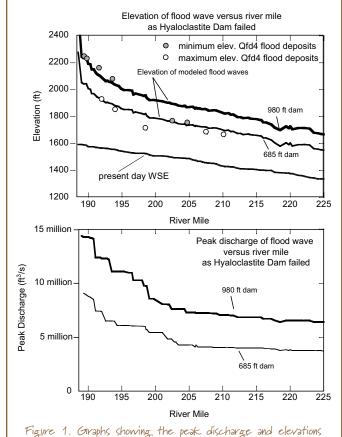


Figure 1. Graphs showing the peak discharge and elevations of two computer-derived flood waves. These flood waves bracket the elevations at which we found flood deposits left behind during the failure of the Hyaloclastite Dam. The curves were calculated by assuming a Hyaloclastite dam of two different heights (980 and 685 feet), which contained full reservoirs.

River basin (Figure 2). Our upper- and lowerbound discharge estimates of nine to sixteen million cfs are ten to a hundred times larger than both the largest Holocene runoff flood (500,000 cfs; O'Connor et al., 1994) for the Colorado River. The Hyaloclastite Dam flood was anywhere from ninety to three hundred times bigger than

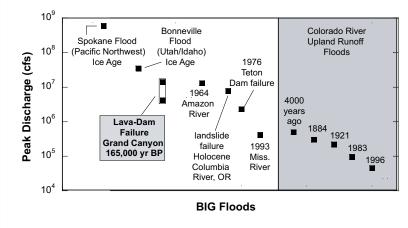


Figure 2. Comparison of Colorado River floods to other big floods. The scale is logarithmic, which means that the Spokane flood is approximately 13,000 times larger than the 1996 Grand Canyon Flood. Ice Age floods occurred during the end of the last glacial period, about 15,000 to 18,000 years ago.

the 1996 flood in Grand Canyon (45,900 cfs), fifty to seventy times bigger than the 1884 flood (300,000 cfs, USGS website; 220,000 cfs; Topping et al., 2003). The Hyaloclastite Dam was basically equivalent to sending the 1964 Amazon River flood through the Grand Canyon, or thirty of the 1993 Mississippi River floods through the Grand Canyon at once.

When people think of floods, they normally think of floods brought on by changes in the weather, such as the onset of spring runoff, or flash floods brought on by summer monsoons. Most big floods in the historical record are these types of floods, but the largest floods that have ever occurred in Earth history resulted from the rapid release of stored water during high runoff events and dam failures (O'Connor et al., 2002). For most rivers, the peak discharge of a dam-break flood is usually much larger than runoff floods (Fread et al., 1998).

Worldwide, the largest floods have been caused by the failure of ice dams, whereas comparatively few have been attributed to failure of lava dams (O'Connor et al., 2002; Walder and Costa, 1996; Baker and Nummedal, 1978; Jackon et al., 2001). All known floods with discharges greater than eighteen million cFs resulted from the rapid release of water stored behind natural dams or within glaciers (O'Connor et al., 2002). The best-known example of these is the Spokane Flood (sixhundred million cfs) in the Pacific Northwest, which resulted from the failure of a glacial-ice dam (Baker and Nummedal, 1978). Outburst floods also result from rapid melting of glaciers, failure of landslide dams, lake overflows or breaches. For example, overflow of Lake Bonneville initiated a 35 million CFS flood on the Snake River in Idaho. The 1976 failure of the Teton Dam in

ison, the Hyaloclastite Dam flood in Grand Canyon had a higher peak discharge than the 1976 Teton Dam failure, is the third-largest flood known in the continental United States (Figure 2) and is possibly the largest flood known worldwide (O'Connor et al.,

Idaho produced

the largest flood

(2.3 million cfs)

resulting from

the failure of a

dam. In compar-

human-made

fourrth-largest flood known worldwide (O'Connor et al., 2002). Now, *that's* some *big* water!

The Colorado River and lava from the Uinkaret volcanic field had many explosive, conflicting, and complicated interactions over the past 630,000 years, and those lava dams did little to stop the flowing of the river (Hamblin, 1994; Lucchitta et al., 2000; Fenton et al., 2001; 2002; 2004; Pederson et al., 2002). In the end, the river "won," eventually removing the lava plugging its downstream progress.

Cassie Fenton and Bob Webb

Acknowledgements:

We would like to take this opportunity to thank all of the many river guides who helped us over the years during our research trips, namely, Kirk Burnett, Tillie Klearman, Sam Walton, and many others. Thanks for getting us safely from points A to B and making it fun all the while! And thanks for helping us with field work and contributing your seemingly endless knowledge of the Big Ditch.

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Variations on Spring

This water comes from rock and songs arise like moss and protein;

this water comes from rock like clay like bone like fairytales that have forgotten soil, labor, and yucca blossoms;

this water comes from rock like all of us—from Redwall through green and hemoglobin to ocean and long sedimentary peace.

Craig Maier

Science Update: Instrument Stations Monitoring Weather and Eolian Sand Transport

AST YEAR, instrument stations were set up by the US Geological Survey and National Park Service to monitor eolian (wind-blown) sediment transport at several locations along the river corridor (see BQR Vol. 17, No. 1). Data from these sites has so far proved very useful in helping to predict how changes in dam operations might affect areas where archaeological sites are threatened by erosion.

Here are the highlights from this project, from data recorded over the past year...

During the "windy season" of April-May, measured rates of eolian sand transport were up to ten times higher than during other times of year. The strongest winds then (and greatest sand transport) tend to blow upstream, as many of you have probably realized while trying to row downstream during these spring winds! The highest wind velocity that we recorded was 66 miles per hour, on July 16th, 2004 near Forster Canyon. Several other days in April and May came close to that in areas of Marble Canyon, but that 66 mph was the winner. Our 2004 record for rainfall in a single event recorded within the canyon was set on the night of September 18–19 as a dissipating Pacific storm system (Hurricane Javier) passed over Grand Canyon... more than two inches of rainfall were measured in some areas, causing flash floods and blowing out arroyos. I have to admit, the scientific merit of this impressive storm was temporarily lost on me that night as I got up at 4 A.M. to move my tent away from the flooding creek at Cremation.



View facing upstream at Palisades just before the November flood, at 8,000 cfs. (November 19, 2004)



Same view, after the flood, at 10,000 cfs. (December 10, 2004)



Kirk Burnett checks out the new flood deposit at Malgosa (December 9, 2004).

Following the November flood experiment, we now have a valuable opportunity to use these same instrument stations to study how wind re-distributes the new flood-deposited sediment. All of the instrument sites experienced major new sand deposition as a result of the November flood flow. As we enter the windy season this spring, we'll be able to determine how the post-flood sand-transport rates compare with those measured last year, and to document where that sand ends up; in some locations, the new flood deposits are expected to supply new sand to eolian dunes up above the river, helping to preserve archaeological sites. Data collected at these stations can therefore help us understand how, and where, the November flood (and any future floods) will be most beneficial for archaeological resources.

Instrument stations used for this study are permitted through Fall 2005, at which time they are scheduled to be removed. If you come across any of these instruments while on a river trip, please ensure that your group respects them—they are used to help us understand how to preserve and manage valuable cultural resources. And many, many thanks for your help with this over the past year—we're really excited about the progress of this work!

Amy Draut
US GEOLOGICAL SURVEY

Many Thanks!

s this New Year Begins, Grand Canyon River Guides has so much to be thankful for. Really, Lit is astounding that we simply have the best supporters in the world, both individual members and funders. From seemingly small gestures such as paying your dues, to participating in our year-end fundraising efforts, the Circle of Friends, or program support, it heartens us to see how much you care. And in turn, that belief inspires us to do our very best for the Grand Canyon and the Colorado River.

Here is a brief overview of a few of these efforts. You'll find corresponding lists of names below. Thanks to each and every one of you (and to the rest of you who have helped us this year) for assisting with our endeavors and supporting us so generously. We apologize for anyone we may have inadvertently missed in the lists below. Please let us know.

YEAR-END FUNDRAISING

Our annual year-end fundraising drive raised over \$8,500 for Grand Canyon River Guides' coffers. These unrestricted funds provide us a great deal of flexibility as they can be funneled to any of our most pressing needs. Remember, donations such as these are tax deductible, so you can send us a contribution any time and deduct it on your taxes the following year. Large or small, each and every dollar helps! The list below reflects both solicited and unsolicited donations received around the end of the year.

YEAR-END FUNDRAISING SUPPORTERS

Cathy Althoff Betsev Arnett Steve Asadorian

David Ash

Will Barrett

Theora Barringer

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Kivomi Masatani & Garv Yamahara

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Bil Vandergraff

Gretchen & Daniel Walsh Dick Warner Shana Watahomigie Michael Wehrle Greg Woodall Tim Yanacheck Roy Young

CIRCLE OF FRIENDS

This fundraising initiative commenced in May of 2004, and we have raised over \$19,000 to date, bringing us within striking distance of our \$30,000 annual goal! This includes over \$4,000 since July 18T. As most of you know, these funds are used specifically to offset the considerable expenditures associated with the publication of this very newsletter, the Boatman's Quarterly Review. The names listed below in the Circle of Friends section are those people whose contributions were received after July 1st (the start of our fiscal year). The Circle of Friends fundraising cycle will start again in May, so look for that letter in the mail and reach for your checkbook! And it's certainly not too late to contribute right now. Any time is fine, and it's always tax deductible. Your support has made an enormous difference, and we hope we can count on you in the future as well. As I said once before, if each and every member contributed just \$20, we would reach our goal in no time. Of course, bigger donations propel us there even faster! However, we are deeply appreciative regardless of the size of the contribution.

Circle of Friends Supporters (Contributions received after 7/1/04) Stewards (\$1000 to \$2,499)

Annette & Nathan Avery

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PROGRAM SUPPORT

Our programs rely very heavily on grants from a variety of wonderful funders. The listing below reflects those funders who have joined us since the beginning of our fiscal year (July 1, as we mentioned previously). This support goes a long way to keep these programs strong and moving forward. You will note that program support is not necessarily restricted to major funders. Individual GCRG members have contributed directly to specific programs as well. You can too!

FOUNDATION SUPPORT

Arizona Humanities Council Ceres Foundation Flagstaff Cultural Partners Grand Canyon Association Grand Canyon Conservation Fund Grand Canyon Monitoring & Research Center Walton Family Foundation

Individual Contributions to Programs

Mary Repenning (Adopt-a-Beach Program) Teva (Guides Training Seminar) Richard Quartaroli (Oral History Project)

Rob Elliott

Y FIRST RIVER TRIP was when I was four years-old. That would have been 1948 on the Sacramento River. My father and mother had a double Klepper folding kayak. We put in at Redding on the Sacramento River and went thirty-two miles downstream to Red Bluff. I sat between my mother's legs in the front, my six year-old sister, Joanne, sat between my father's legs in the back, and the four of us went on a little family outing, down the Sacramento River, just us. It was fascinating, it was great fun.

My father got together with some friends, a guy named Bruce Grant, and Maynard Munger—Julie Munger's dad—and Bryce Whitmore, an early river runner in California too, and they started this group, this section of the Sierra Club called the San Francisco Bay Chapter River Outings Group, or whatever they're called. They ordered these folding kayaks from Germany. There were three brand names I remember—Klepper, Erbacher, and Hammar. They ordered them out of catalogs, and they were shipped across the Atlantic. They got these boats and put them all together and started kayaking...This

would be probably around 1946 or 1947...They ordered singles, they ordered doubles. They kayaked for about eight years or so. And then about 1955, maybe 1956, my father bought some military surplus ten-man assault rafts, and he became an Explorer Post advisor. Back then Explorer Posts had their thing, they either backpacked or they did fish or public service or climbed or whatever. My father said to his Explorer recruits, "We're going to do river running." They said, "Terrific! Sounds great!" So they built frames and got oars and put these rafts together...It's kind of like for the graduates of the Boy Scouts. They would go into Explorer Scouting, so they'd

be a little bit older; they'd be in their mid-teens. The relevancy here is they went off and started rafting on the Eel River, the Klamath River in Northern California, the Rogue River in Southern Oregon, et cetera.

Meanwhile my dad had already been boating for ten or twelve years with his Sierra Club buddies, and they were just doing one-day trips, two-days, sometimes threedays—the Tuolomne, the American, the Stanislaus. His Sierra Club buddies finally said, "Well, Lou, we want to do longer trips...but we can't carry all of our stuff. Can some of your Explorer Scouts bring along a raft or two and carry all our stuff?" So that's how that got married together, right there in the late fifties. The Explorer Scouts would come along happily for free and row all the kayakers' gear on the Klamath River or the Rogue River in Southern Oregon, just for fun. It was a hobby still at that point. Then very soon after that, I can't remember the exact year, but Stewart Kimball, who must be 82 or 83 years old right now, he was the chairman of the Sierra Club River Outings Program. He lived in Orinda, California. He just came down the Grand Canyon with us last May of 1995. Terrific old guy. He asked my dad to be the chairman of the River Outings Subcommittee. I think my father began that right when the Echo Dam stuff was going on in Dinosaur National Monument.

That's when the River Outings program of the Sierra Club really started to take off, because..."We've got to get our membership out on these rivers. We gotta get them in Dinosaur National Monument by the hundreds, if we can, so they can write their congressmen, and letters to the editor... so people can learn about the need for saving these incredible places." That was the thrust behind the Outings Program for the Sierra Club. So my father became the chairman of the River Outings Subcommittee in 1955 or 1956 and held that position for about a seven-year period. He started taking the Explorer Scouts, and instead of just

running kayak support for free, the Explorer Scouts were eighteen years old or whatever, and they didn't want to be Explorer Scouts anymore, they wanted to graduate. And what did they graduate into? Rowing boats for my



Dick Norgaard and Rob Elliott getting. their start.

father, for Sierra Club trips such as on the Rogue River in Southern Oregon, because there were no outfitters on the Rogue River suited for running twenty or thirty people down. There were little drift boat outfitters. I remember our very first Sierra Club outing on the Rogue River, one of the drift boaters came along. He was head cook and just kind of led our group down the river, because we had never run it before. But it was the Explorers that had graduated into becoming river guides at this point, for the Sierra Club Outings Program.

...I remember when I was in Boy Scouts, one year when I was a Tenderfoot, we took hardwood boards and steamed them in old five-gallon milk jugs, and bent them to the contour of our backs, and took cotton cord and laced it back and forth, back and forth, so that would go against our back. Then we put screw eyes in the hardwood boards, and then we would put all of our gear in a great big bundle of a tarp and fold it all together and put it on the backpack, and then we all learned the spider hitch for tying it on the backpack. We learned a lot, but it was incredibly antiquated.

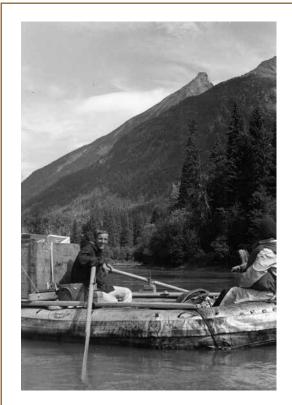
The very next year I had a paper route, and I saved up my money. The first thing I did was when I was eleven years old: I bought a life membership in the Sierra Club. That's what I wanted to do with my paper route money. I didn't tell my parents. I was kind of a private, really shy person—especially when I was younger. The treasurer of the Sierra Club, Lewis Clark, called up my dad and said, "That's a terrific thing your son did, Lou!" My dad said, "What?!" Clark said, "He just sent us a check for a hundred dollars for a life membership in the Sierra Club." My father was dumbfounded.

STEIGER: You were eleven years old?

ELLIOTT: I was eleven years old. I did that for two reasons: one was because I really believed in the Sierra Club and thought that protection of the earth and what they were doing was really important. There was another reason, Lew, and this is the businessman in me: I went, "I'm eleven years old right now. This costs a hundred dollars today. It's only going to go up. And I've got a lot of years left. I can be a member of the Sierra Club for seventy years for a hundred dollars! Such a deal!" (laughter)...Well, back to the Boy Scout story. The second thing I did with my paper route money was I bought a Kelty pack. I saw an ad for Kelty packs in the Sierra Club magazine and went, "Wow, I want a Kelty pack!"

STEIGER: What did your dad do for a living when he was doing the Explorer stuff and all that?

ELLIOTT: My dad was a small businessman and had a printing firm. He was an inventor of sorts. I remember on the second floor of his printing shop he had a darkroom, but the darkroom was also a camera. You'd walk out one door from the darkroom into this room that was



Rob Elliott on the Canoe River, British Columbia, summer 1962.

about eight by eight, I suppose, and it was a camera—it had a great big lens in one wall, and then he had a vertical pallet he would put all his information on that he was going to print. The pallet was on a sliding rod outside the lens of the camera room that we were inside of. He would just open up the camera lens and look through there at the material with flood lamps on it, and he'd push the rods along from inside this camera box room to where it was in focus. Then he'd turn the lights off and put a sheet of film behind another pallet inside the camera box room, and he'd flash it. He made his own way of making printing plates for his offset lithography. He was a real inventor. And we loved it. He also had a fireman's pole from the second floor where they did all the film developing and stripping and everything and making of the printing plates. You'd go down the fireman's pole and deliver the printing plates to five or six different press operators down on the first floor.

STEIGER: So the fireman's pole was because you had to get it there fast, or just 'cause it was fun?

ELLIOTT: Oh *both*! (laughs) I mean, why not make workin' fun?, was my dad's idea. His idea of a vacation was just a change of work. But all the river running stuff was a hobby for him. The way he made his money was with this printing company. He also printed a lot of information for the Sierra Club and he printed a lot of

brochures. So he learned a lot about advertising from running the printing business.

But really, somewhere along about the mid-fifties, he seriously lost interest in the printing business. He just kind of left it to his employees to run it, and all summer long he'd be off running river trips for the Sierra Club Outings Program. But he lost money for ten years. He lost money probably from 1954, 1955, right on up through '62, '63, '64...in the river business. And that was all just subsidized by profits from the printing business. Then he got to a point where instead of just hook, line, and sinker selling the printing business and making a big shift into river running, if he needed some rafts he'd sell off a press, which is an asset for producing profits, right? So he wasn't necessarily thinking ahead on all this stuff. He'd sell off a press and buy a bunch of rafts. Then the printing business would be a little bit smaller. He was sort of neglecting it at the same time, because his heart was really, at this point, just sunk completely into running river trips.

STEIGER: Did he get heat from your mom?
ELLIOTT: (chuckles) You bet he did! She said, "We've got four kids heading into college. We have this printing business that is making pretty decent money to pay for their college education. And now we're going to lose it all in the river running business and they won't be able to go to college?! This is nuts!" Well, his response was, "You're right, Claire, we won't be able to send them to college. But we can give them all summer jobs, and they can earn money and pay their way through college from their summer jobs." I mean, there's a whole different logic. And I'm really glad he made the decision he did. We made good money as young guides when we were seventeen, eighteen, nineteen, twenty, twenty-one. Paid our way through college and so it all worked out.

* * *

Worked out indeed. To put it mildly. The company that Lou Elliott started, ARTA (American River Touring Association) not only sent his own kids through college, it introduced people from all over the world to rivers all across the west, among other places. The Grand Canyon branch of the company, under Rob's direction and subsequent ownership (when it became AZRA—Arizona Raft Adventures) has long been in the forefront of pretty much every professional boating area there is—including innovation, equal opportunity, group participation, and labor relations...not to mention community service up the wazoo. In short, it's been a huge company that's had a huge impact on a huge cast of characters, and issues, that came down the pike in Grand Canyon and in 20th century river running. This interview took place in May of 1996.

* * *

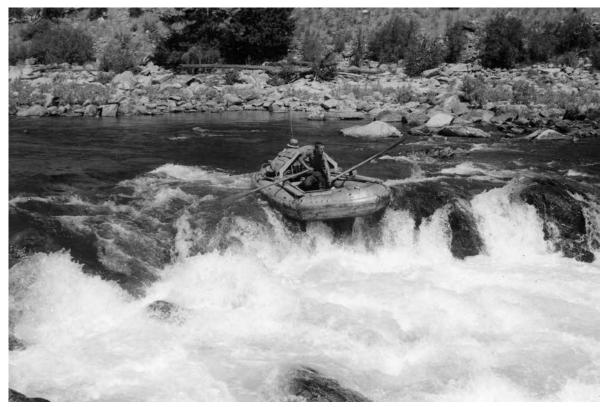
I was a little guy, so I couldn't row a boat until I was probably seventeen years-old. But the first trips I ever went on were the two summers when I was fourteen and fifteen years-old. I took a Greyhound bus from Oakland, California, to Vernal, Utah, in mid-June of 1958, to work on Hatch trips—not for Bus Hatch and Don and Ted, but for the Sierra Club. The Sierra Club had these great big trips—I mean, they were huge, like eighty people on the trip. That's how they ran things back in those days. We went on the Yampa River in Dinosaur National Monument; and on the Green River through Ladore Canyon. I'd work for six weeks, from mid-June to first of August or so, and then I'd take the Greyhound bus back home. I remember when I first arrived in Vernal...it was 2 A.M. and I didn't want to wake up Don and Ted who were, I think, living with their dad and mom at the time. Their dad was Bus Hatch, a really early river runner. And Bus came on these trips too. There was this driving hailstorm, 2 A.M. I didn't want to wake them up, so I just crawled underneath a truck in their warehouse yard and laid out my sleeping bag and went to sleep. Those were really fun trips. My job, I was called a "pot boy." My job was to haul water, wash the pots, gather the firewood, arrange it, and just be a camp helper all the way through. Those were really fun summers. I remember my mom's first advice was, "You'll need seven pairs of socks, Bob, because you'll want a clean pair of socks each day." Of course, it only took me about two days to realize that I don't need seven pairs of socks—no socks will be just fine. (chuckles)

STEIGER: Wow. So Bus Hatch was still out there doing it?

ELLIOTT: He was still out there. He rowed a boat in 1958. He was a really interesting guy. He was small, and a great storyteller. Really a fun-loving guy, kind of a Type "B" personality. I remember he had brown hair, closely cropped, and he had a very broad face and ruddy cheeks and he was a stocky little guy—smaller than Ted—Ted's much bigger than his dad, Bus, was. But Don was small, and Don took after his father, genetically, in terms of his physique, his stature.

* * *

I was sixteen in 1960, seventeen in 1961, and those were the years where we went on this circuit—"we" being my dad's company, which was the American River Touring Association, which has since become ARTA River Trips. Here's how the circuit went—and this was all through the early sixties, starting in 1961 for me: we'd do two trips for the Sierra Club on the Rogue River; then we'd move over to Idaho and we'd do maybe one trip on the Selway River; two trips on the Middle Fork of the Salmon, and then a trip on the main Salmon. We'd move up to British Columbia and do one or two trips on



Young Rob Elliott running Tappan Falls on the Middle Fork of the Salmon, Idaho. Passenger is Greg Rifle (still fishing).

the Canoe River, which came into the Columbia River at the top of Big Bend, went from Revelstoke into the Columbia and we went down the Columbia a couple of days, and then we went back to Kamloops which was our headquarters city. Then we'd come home at the end of the summer. That was the circuit. About eight or ten of us had this great big old one-and-a-half ton Dodge moving van that was open-air with a little platform on it. We'd put all the gear on the platform and in the back. We'd crawl in underneath the platform and drive all over the West, running these trips. My dad would be with us sometimes, and sometimes he wouldn't. We'd just be runnin' 'em.

* * *

My parents believing in me was certainly a fundamental thing, and I knew they believed in me. We went off and ran these river trips for people when we were sixteen, seventeen, eighteen years-old. I still remember a trip on the Middle Fork of the Salmon River where I was the head boatman. I was nineteen years-old, and there was a fifteen year-old running a boat, and a seventeen year-old, and the "old guy" was twenty-four. I forget his name right now. I added it all up and divided it by seven

and went, "Wow, the average age of this crew is seventeen and a third!" Why we didn't kill people is beyond me—other than the fact that my dad believed in us. We had this kind of unspoken thing between all of us young guides, you know, that we'd confront some major obstacle, whether it was logistical or the river or rapids or whatever, or equipment repair which we were always doing, and say, "Well, God, if Lou thinks we can do it, I guess we can. Let's do it!" There was always a presumption of solution. I mean, life was an adventure, and all of those early years in my late teens was adventure, not problems and obstacles. "Why are these trucks breaking down, and why do we have this bullshit equipment that's not working?" No, we never thought that way—it was just, "Hey, we're all kind of on the growing edge of something big here, and it's just for us to figure out."

I remember one trip we got off the Rogue River—this would have been when I was eighteen, 1962. There were ten of us, and we only had room for four in the truck with all the gear. We came off on a Friday, and we were starting a Selway trip on the following Monday. We had two days. We had already put in the food orders, and we got all the food picked up at the 16A Food Market in Grant's Pass and we're headed out. We had to call ahead to Lewiston to an 16A Market there and say, "We don't

have any meat. Can you pull together the following meat order and freeze it and we'll be there in 24 hours to pick it up?" The guy said, "Well, what kind of credit do you have?" "Credit?! We'll just bring cash when we get there." He says, "Well, how do I know you're gonna come through with it?" And we just tried to explain what we were doing. We were just kids on the phone, explaining all this. Then we got the manager of the IGA Market in Grant's Pass to vouch for us and say, "Yeah, yeah, these guys are for real," and we placed the meat order. My sister said, "There are ten of us and six of us aren't going to fit in the truck. What'll we do?" I said, "Let's divide up into three teams of two and hitchhike. The first team to get to Idaho doesn't have to wash any dishes or pots on the first trip on the Selway." We just made it a big game, and off we went.

I had Phil Norgaard in my team. He was really young then, only fifteen. I remember we got a ride in a 1962 Ford Galaxy and drove ninety miles an hour all the way to Portland. The guy had a gun in his center console, we were just like, "This is nuts! This is incredible, but we're gonna win the race!" Then it took us eleven rides to get to the Dalles, which is only about one hour east of Portland. "We're not gonna win it now." We went into the freight yard and asked when the freight train was coming through to Pendleton and the guy says, "Comes through about 11:30 P.M." We said, "Okay, thanks." Phil says, "What are we gonna do now?" I said, "Well, let's go take in a movie. It's seven o'clock. We'll just sit in the movie theater for a while until the freight comes through." So we did that, and we went over to this used car lot, waiting for the freight to come. We heard the freight coming way down the tracks, and this cop drives up across from us, his spotlight pans through the used car lot, right across our chests, and we're frozen. "Freeze! Phil, don't move." The spotlight comes back and lands right on us. We go, "Now we're for sure not gonna win the race." The freight comes through, going pretty fast but slowing down. It's going maybe 25 miles an hour, twenty, fifteen. I go, "Phil, if we don't get on this freight by the time it passes, then we're for sure not gonna win the race, we're goin' off to jail." So we throw our packs in a freight car, and there's only about five cars left on the train, it's goin' maybe fifteen miles an hour, twelve miles an hour at this point, we just start runnin' as fast as we can, and grab on about three cars from the end. (swoosh) Get onto this one freight car and ride all the way to Pendleton.

We wake up about 4:30 the next morning. I look up around this long bend of the track before Pendleton, we see all these bums. I say, "Let's go talk to the bums. I've never met a bum before." Cool. I'm thinking back to a Steinbeck novel or something I'd read a couple of years earlier, and I want to go live this thing, right? Let's go and meet these hobos...Phil says, "Well, wait, what

about our money?" He had forty bucks, I had forty bucks. I said, "Here, fold it all up small and I'll put it inside my bathing suit pocket inside my Levis." "Okay, that's cool." We go up there, and these bums are pretty benign—had a cuss word about every third word.

We finally made it to Idaho sure enough. We were the second team into Idaho, and we head off on the Selway River. We go down to the first camp, about seven miles, to a place called Running Creek. Our team has to wash pots now. The next morning, I'm the last boat to shove off, and I run back in the bushes because I have diarrhea. I take off my bathing suit, and it's really bad. I take my bathing suit, turn it inside out, wipe my ass, and just throw the bathing suit in the bushes. Put my Levis back on, push off down the river, and off we go another ten miles down the river to the next camp. Phil comes up to me and says, "Well, you got my forty bucks, Bob?" And I go, "Oh, shit!" (laughter) I say, "It's in my bathing suit." "Well, get your bathing suit." "No. no, you don't understand, my bathing suit has crap all over it in the bushes back at Running Creek." "Oh, no!" So we go to talk to the head boatman—Steve Gantner. Steve says, "Yeah, you guys can go back there." We said, "We'll walk back tonight before dark..."

STEIGER: Ten miles!

ELLIOTT: Ten miles. It gets dark about 9:30 in Idaho this time of year. "...and get the bathing suit. Roll up in a blanket, sleep overnight, then we'll get up at 4:30 in the morning, we'll be back in time for breakfast. Let's go!" And so (laughs) we go about a mile up the way, across this little bridge, start walking up this road. We said, "We didn't know there was any roads around here!" You know, it's the wilderness, right? And then we hear this Jeep coming up the road, and this guy stops and says, "Where you goin'?" I said, "Running Creek." He says, "That's ten miles, it's seven o'clock at night." "Yeah, we gotta hurry." "Okay, I'll take you as far as I can go. The road goes about a mile up here, and we can take you that far at least." "Okay." We drive down in this big long meadow with these ruts in it and half-way down the meadow he hangs a hard left turn, we go into this little clearing, there's this Cessna airplane. Mr. Henke was his name. He's from Redding, California. He says, "Hop in." We go, "Hop in?!" He says, "Yeah, there's a landing strip up at Running Creek too. If we hurry, you can get your bathing suit and swim back across the river. We'll get you back here and you'll be back in your camp in time for dessert." (laughs) We said, "Cool. This is good!" (laughs) So we hop in Mr. Henke's Cessna airplane, we fly up to Running Creek and land on this strip that's about a ten degree pitch up the hill and I run as fast as I can down to the river, take off my Levis, swim across the river, go right to my bathing suit, grab it, swim back across the river, give Phil his money, pocket my money, hop back in the plane, we get back,



Rob Elliott with his mother Claire on a Sierra Club trip run by Hatch River Expeditons through Desolation Canyon in 1956.

and Mr. Henke goes down, he buzzes our camp about a mile downstream from his little cabin area, lands us, and drives us back to the bridge. We walk down to camp, pull into camp about 9:15, just before dark, just in time for dessert. We tell 'em the story.

* * *

It must have been 1961 that my dad started running Sierra Club trips through Glen Canyon. The area manager for Southern Utah at that time was Dick Norgaard, who since has become a resource economist at uc Berkeley, and he was a great photographer. I still remember discussions with Dick in 1962, when he tried to coax me into coming down to run trips in Utah in the desert. I just said "Oh man, I like all the green trees. I like the fresh water clear as window glass that you can see fifteen feet to the bottom of the river, and it looks like you can touch it. The desert is just...You know, there's no life, it's just all the sameness to it. And I love the richness of the Idaho rivers and British Columbia." Dick just kind of...I remember seein' his face, he just kinda shook his head and realized that he wasn't gonna convince me of a thing until I saw it for myself. The first trip I ever did in desert country in canyons on the

Colorado River was in March or April—Eastertime of 1962, I think. I was nineteen years-old and I was the head cook for a fifty-two-person Sierra Club trip. David Brower was on it, Francois Leydet, and Eliot Porter. Eliot Porter was a famous photographer [published by the Sierra Club in The Place No One Knew, and In Wilderness is the Preservation of the World,] and Francois Leydet was an author. It was kind of like being on the river with Bus Hatch in 1958. I had no appreciation for the big picture implications of being on the river with David Brower and Eliot Porter back then in Glen Canyon. But I remember the trip very well. Dick Norgaard was absolutely correct. Without him trying to convince me of anything, I realized desert country was really my next thing.

I remember one part of that trip in particular, because it was absolutely pivotal for me. We got to Aztec Creek, which is the creek that came down from Rainbow Bridge. I'd talked the rest of the crew into preparing breakfast for everybody so I could run up there by myself and come back early, so I could

bake a birthday cake for someone that had a birthday that day. It's six miles up to Rainbow Bridge, so I left early, about 5 A.M., and half-walked/half-ran all the way up to Rainbow Bridge. Saw it and said, "This is really cool." Half-ran half-way back to camp. At this point it's noontime or so, I suppose. I just stopped jogging and just slowed to a comfortable walk. My head was swimming with the implications of what we were doing on this trip and why we were there. It was really only a year away, or two years at most, that this place was going to be flooded forever. No one else would ever see it this way. I just started crying. I didn't know the word at the time, but it was an epiphany: this was like a religious (chuckles) "flash of light" for me, that this place was gonna be lost, this place that was just so incredibly special. It was among the finest of all of God's expressions on the face of this earth. And right then and there I decided I needed to commit a major part of my life to saving the earth. So it was an important trip for me.

Oh yeah, it was an incredible place. I remember after dinner that night at Aztec Creek, David Brower's daughter, Barbara Brower—she was fourteen, but very old for her age, precocious. She and I sat up late that

night—believe it or not, this is a Sierra Club trip—and we used *paper plates*! Barbara and I sat around the fire after the coals had burned all down, and just threw a new paper plate on the fire, then we'd talk until the plate had burned all up, then throw another plate on the fire. We did that on into the middle of the night, just talking about this place. She was kind of chastising me for how I could possibly run up to Rainbow Bridge and run back…not even see the place? I gave her a little different slant and explained what I had been through that day.

* * *

STEIGER: So your dad...this idea of growing, what possessed him? Did he have a vision or something?

Left to right: Lov Elliott, Joanne, Jim, Claire, Rob, and Linda on a 1967 ARTA outfitted Sierra Club trip, Mexican coast.

ELLIOTT: (laughs) Did he have a vision? Oh my God, did he have a vision! He was consumed by vision...He was one of the world's great salesmen, for starters. He could tell stories. He played the banjo and the guitar and the piano all by ear. He was a great entertainer and people fell in love with him all the time, and would follow him to the ends of the earth. He was the kind of guy that could look ten years out and say, "This is where it's gonna be at ten years from now, so let's get started." And that's how he looked at river running. His favorite thing was program development. We'd be running the Rogue River and he was already thinking Idaho. We'd be runnin' the Rogue River in Oregon and three rivers in Idaho and the Selway and the Salmon— Middle Fork and main Salmon—and he'd be thinkin' British Columbia. We'd be doin' these trips in British

Columbia and he'd be thinkin' the coast of Mexico. We'd be doin' the coast of Mexico, he'd say, "Hey, these exact same rafts would work on the Colorado River through Glen Canyon." So he'd be off doin' these things, developing these programs, leaving my sister and me and my other sister, Linda, who worked as a reservationist in our office, and my brother Jim, who worked in logistics and drove trucks...the rest of us would come along behind, making it all happen, picking up the pieces.

My dad, from the very beginning, ran ARTA as a nonprofit association. Marketing. He was thinking he could get vastly more editorial support from newspapers and magazines if it was the American River Touring Association, Incorporated—a nonprofit association for river running. That was his whole idea, and that's why he set it up that way. He was a *master* at generating press coverage with major dailies and magazines...

He set ARTA up as a nonprofit for two reasons: he set it up because he honestly believed he didn't want to make any money at it, he just wanted to take the profits and turn it all back into making it bigger and turning more and more people on to river trips. If they were all turned on to river trips, and families could come together and enjoy this experience on the river, and learn about the natural world, they

were all going to, at some level, become advocates for preserving it. That was always part of his thinking, and that's why...kind of that Sierra Club model, if you will. That was why he set it up as a nonprofit.

There was also the utilitarian pragmatist, Lou Elliott, that said, "This is good sales, because we can generate this media support as a nonprofit."

So as a nonprofit association he had a board of directors. There was a guy named Grant Rogers on the board, and an accountant from Pasadena named Charlie, and each had these nice little nuclear families with a wife and two kids. They got together and said, "Hey, Lou, take us down the Grand Canyon." So he had eight people. "Sure, it'll cost you this much...I've never done it, but I went down once with the Hatches several years ago, and let's go do it!" The board members' families would underwrite the trip. Eight customers. This was August of 1965. There was

my father, there was Steve Gantner and me, and the two Hildebrand brothers, Ross Hildebrand and Kern Hildebrand—the four of us as guides or guides-in-training to run this boat in the Grand Canyon.

I'd never even seen it. I had some prior motor experience along the coast of Mexico and on the John Day River that ran south to north in the heartland of Oregon and flowed into the Columbia...

So here we are, [down] the Grand Canyon with these two families on this trip. We had a 33-foot bridge pontoon, and it was black, we didn't paint it. My father took a tractor tire tube—not the tube, actually, it is the protector between the tractor wheel and the tractor inner tube, called a "boot." It's really quite thick. He made it into an oval in the very back of the floor of the 33, and glued it into the floor so he made this well. Then he had parachute cord that was laced all around this unit, and it pulled the tractor tube now welded to the floor of the boat up off the water level and up around the whole back of the boat, so you could stick



First ARTA raft in the Girand Canyon, August 15, 1965.

an engine down inside. It didn't occur to him that. "Hey, we could just cut the floors out of these boats." He knew he didn't want to hang the motor off the back end like on the Hatch trip he was on, because it was just floppin' all over the place back there. He knew that he wanted the motor protected inside the boat. So we have a floor, we didn't cut out the floor, we still had to bail this sucker, but we stuck the motor through this engine well, inside the back of the tube, through this hole in the floor.

STEIGER: So, how come you're not rowing your ten-mans? Why did you go with a motor anyway?

ELLIOTT: I think that's probably...that's probably what everyone did, except Norman Nevills. I mean, that's what everyone was doing in the early sixties. We went, "My God, we have these two families, they have little kids, this is huge water, nothing like

we've seen even on the Salmon or anything. So let's do this big motorboat." That's how we decided to do it, and that's when we started on motors—but, about a month before the trip, these students from uc Berkeley call us up and say, "Hey, we have this little paddleboat. We want to go through the Grand Canyon." My dad said, "Yeah, we're runnin' our first trip in about a month." They said, "Can we come and bring our paddleboat? How much would it cost?" He said, "You can bring your own boat, yeah. A hundred bucks each, and you paddle yourselves down the river, and we'll provide you support. We're goin' anyway, a twelve-day motor trip." So they brought this amazing boat down the river, made up of about ten tubes. Each tube is about, oh, eight inches in diameter along the bottom of this boat, except for the outside tubes, which were about ten inches in diameter. So the floor of the boat is made up of eight tubes, the two outside tubes are ten inches. However, these tubes are all inserted inside of nylon sleeves—they're not welded together, they're inside of nylon sleeves that are



Rob Elliott hanging out on back of ARTA's first motor raft towing a paddle raft. Note the motor well which allows the engine to go through an otherwise intact floor. Lou Elliott is piloting the raft, August 1965.

all stitched together. Not only that, but there's aluminum ribs to the boat. These aluminum ribs go through other nylon sleeves that are stitched perpendicular to the nylon sleeves in which the tubes are thrust. And so this tubular arrangement is rather like the hull of a boat as it comes up around the side, and the tubes are all stitched together so they come together to form a prow in the front of the boat. In the back the tubes start to come toward each other in the stern, but instead of making a prow, they end in a little transom about three-and-ahalf-feet wide and about maybe fourteen inches deep. It's made of three-quarter-inch or one-inch plywood. In the middle of that plywood transom is an oarlock with a seven-foot oar that rudders this unit. And then you have three people on each side that are paddling. They're not sitting on the tubes, because the tubes wouldn't support them with these aluminum ribs and stuff—rather you're sort of laying down on your butt and your hip, leaning over the side of the boat with short little canoe paddles, four and a half foot-long canoe paddles, and paddling furiously along, while one guy in the center with the seven-foot oar is ruddering.

STEIGER: And you can really rudder!

ELLIOTT: Oh, this is a *great* unit! So we have a hybrid trip right from the get-go—a paddleboat and a motorboat for twelve days in the Grand Canyon, August 1965. It was an *incredible* trip, one of the finest trips I've *ever* run in the Grand Canyon. We only flipped the paddleboat twice: one was in 24 1/2-Mile and one was at the top of Hance. I wasn't in it at 24 1/2-Mile, but I was in it in Hance, and I was ruddering. (laughs) Whoops!

...But those are the only two times we flipped over, the entire trip. The other thing I remember on the trip was that we never hit a rock once. We probably had about 30,000 cubic feet per second, steady, the entire trip. We didn't have peaking flow back in 1965. I think the motor stalled on us only twice in a rapid, 'cause it kind of flooded out, and it always started on the first crank, each of those two times. It was the most flawless trip I've ever run in terms of props, in terms of the motor, in terms of everything.

The water was not fluctuating very much at all. It was pretty high, a lot higher than we expected it. So we moved. The other (chuckles) notable thing I remember is we had a Les Jones scroll map—that's all we had. But all these other trips we ran over the years up in Idaho and Oregon and stuff like that, we didn't even have as good as that. The first time I feasted my eyes on a Les Jones scroll map, I thought, "Wow, is this cool or what?!" I still have the map down in my garage. We'd write notes all along it, just like Les Jones did. This is an incredible map, but we still lost our way a little bit. (chuckles) We just set up for the little rapids at Havasu—we never even stopped at Havasu. This is a twelve-day motor trip, and we didn't even do Havasu! Oh, we were mortified.

. . .

So we headed into 1966. My father, optimistically, he thought..."Let's go to thirty people a trip and do three twelve-day trips, nine days in between each trip." ... heading for the scheduling of two boat trips, so thirty people, fifteen on a boat...we were gonna, of course, graduate to side tubes at that point. 1965 we didn't have side tubes. We just had a single unit. So we added the side tubes in 1966, so we can put fifteen people on a boat. But, my father way underestimated demand. We filled up those three twleve-day trips, thirty people per trip, by about March 15 the following spring. My dad turns to me on Easter break from college and says, "Bob, I want to schedule two nine-day trips in those two break slots between the two trips, if you think you and Steve can just run the trips all summer long. I'll have support crew, two sets of equipment, so I'll have a whole second set of equipment for the two nine-day trips." I said, "We don't have any days off at that point." He says, "I know, but this is when the people want to go, and this



Lov Elliott (without the lifejacket) hanging out in the paddle raft with the boys from UC Berkeley, August 1965.

is when we can book 'em. So you do a twelve, and the very next day you do a nine, the very day you get off you do a nine, the very day you get off you do a nine, the very day you get off you do a twelve." I said, "I'm game if Steve is. Yeah, sure." And Steve said, "Cool, we'll do it." So Steve and I ran those two boats, five trips back-to-back, so that would be twleve—nine—twelve—nine—twelve in terms of the total number of days in a row that we ran in the Grand in 1966. It was pretty incredible, because I don't know where we got the energy. Well, I do a little bit...we were so jazzed.

My dad could hardly keep up on the motor maintenance. We had Johnsons. But he also was trying out a new engine called a McCullough Ox— a great big, heavy engine that easily weighed as much as the Honda

four-strokes we're using today. They had this great big propeller, about a ten-inch diameter propeller on the bottom, and much lower RPM than the Johnsons, and he thought this would be the cat's meow. This is like for running barges. And Steve and I...we were getting tired, getting flogged by the end. We came off the second nine-day trip on this schedule, we were slated to hike out of Whitmore Wash and drive to Lees Ferry and start the final twelve-day trip. The guy we met at the bottom of the Whitmore Trail had a message from my dad: "I can't get enough engines. You've gotta bring one of your engines off." We looked at our engines,

and the McCullough was working pretty decent for us, and the other engines were really on the fritz—we thought they'd be lucky to get the rest of the trip out to the lake with our assistants runnin' 'em. So we said, "Okay, let's take the McCullough." So we took two fourteen-foot oars, because back in those days, you could have a spare engine, but you also had to have spare oars on your motor rigs, like the Hatches had... So we said, "Let's take the oars, we don't need them anyway." We took these two fourteenfoot oars, we cradled

the McCullough engine in between 'em and humped it on out the Whitmore Trail in the middle of the day (STEIGER: Oh my God!) and loaded it into the Jeep that was waiting for us at the top, and off we went for Lees Ferry to run the final twelve-day trip.

The kind of equipment we ran with was just incredible.

* * *

I'm an area manager of Grand Canyon for 1966, '67, '68...March of 1968 I turn 24. I'm out of college a couple of months, and the Vietnam era is full-crank.



The one-of-a-kind paddle raft runs the left side of Lava Falls.



Rob and Lov Elliott, August 1965.

Two weeks after my 24TH birthday I get my 1-A notice I gotta report, I gotta go. I show it to my dad and say, "I'm not going. I don't believe in this." He said, "Whatcha gonna do?" I said, "Well, I'm gonna become a conscientious objector to war. I don't think this is right." I took ten days off, went over and stayed in Dory Schwab's little cabin in Marin County. I was going to the Unitarian Church in San Francisco across the Bay. I just sat and read and read. I must have written forty pages of material. I distilled it down to the ten best pages, submitted it to my draft board (which helped that it was Berkeley, California), and two weeks later they told me I was a c.o. [conscientious objector to war. So, got out of the military. This was, oh, early or mid-April at this point, and I'm about to head down the Grand Canyon for another season—or so I think—but I get another notice from my draft board saying, "Okay, you have to do alternative service. You have four choices: carry bedpans in a mental hospital, drive trucks for Goodwill Industries..." I forget the third choice. The fourth choice was "Other," blank. Go find something to do that meets alternative service requirements. I had heard a friend was working for the Colorado Outward Bound School. We'll just call it Outward Bound from here on. His name was Chris Brown. Chris' old girlfriend was Libby Frishman, and Libby was my girlfriend as a junior and part-way through my senior year in college. Libby told me about Chris Brown and working for Outward Bound as a c.o.

for his alternative service. So I wrote a letter—"I'd like a job, here's my background..." They called me up and had about a ten-minute interview over the phone, hired me on the spot. "Okay, we need you to report July 2, 1968, at our Marble base camp in the Snowmass Maroon Bells Wilderness Area." I was jazzed.

I still remember my interview at the Marble base camp with the associate director, Gary Templin. Gary was asking me all sorts of questions about climbing and knots and what routes I'd done and where I'd climbed and how much ice experience I had up in Glacier and South America and things like that. Just really curious—he's not asking me anything about rivers. At the end of the interview he says, "Well,

Rob, we're gonna send you out for 23 days with a patrol of nine students in the Maroon Bells Snowmass Wilderness Area on a mountaineering course. I said, "That's great. But what about the river program?" He said, "Oh, man, we just need so many mountaineering instructors and we're so strapped, we're growing so fast ourselves, we decided to put off the river program for a year." So I worked for Outward Bound for the first several months as a mountaineering instructor, which was way cool and has a whole mess of stories all to itself.

The next spring I sat down with Joe Nold, the director of Colorado Outward Bound School. He said, "Okay, we want to start the river program in Dinosaur National Monument on the Yampa and Green Rivers." All we had to do was get a special use permit at the time. This would have been winter/early spring of 1969. He said, "We're gonna run it with the women's courses where there's a module. They'll run some in the mountains, some on the river, for three days, et cetera, four days. And we'll also do it with some specialty programs, management seminars, and some high school students... Let's go!" Joe told me, "I want you to design the program, Rob. The only constraint I'm really gonna give you is that it has to be all paddle." I had never paddled in my life. I had kayaked, of course, and I'd run a lot of rivers. I had never paddled a raft, ever. And I told Joe that. He said, "That doesn't matter. You've had enough river background, and you know Outward Bound now,

and I know Outward Bound. I know people, and I know how this all works. It can work paddling. Just figure out how to do it." I said, "Okay."

I bought six rafts—they were Green River rafts, built in West Virginia—from my dad, for Outward Bound. We took one of these rafts in March, I think, in Dinosaur, and took a bunch of Outward Bound instructors, some of whom had had some river background—kayaking and stuff—and we had four days to work with. I said, "Okay, the objective here is we're gonna just go figure this thing out and write a manual on how to paddle a raft. We'll have that manual written when we get off the river four days from now. Let's go." And we did it. We just figured out how to do it. That's all that Outward Bound ever ran in all of 1969 and all of 1970. But by the time I walked away from Outward Bound in the fall of 1970, we had 62 paddle instructors, fully qualified, that had gone through the training program and knew how to captain, how to paddle instruct in Dinosaur National Monument.

The other thing of note was about sixty percent of them were women. Joe Nold and I never ever talked affirmative action. We never talked male/female, the woman/man thing. We never even discussed it. We just hired and trained the most competent people we could find, and retained the most competent people we could find. It didn't matter if they were men or women—it never even crossed our minds.

So by July of 1970, technically my alternative service was up, but I made a commitment to Outward Bound to stay with them through the summer program.

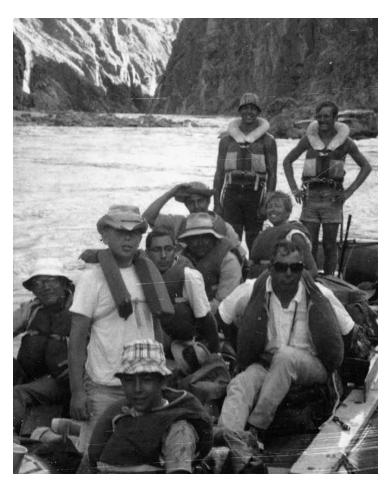
Gary was a Green Beret...Gary Templin, the associate director that hired me. And I was a conscientious objector to war. So here's this c.o. and this Green Beret trying to work things out together. He hired me for three hundred dollars a month for Outward Bound. I worked my entire first year for three hundred dollars a month—never complained, never said a thing. He said, "I'll pay you three-hundred dollars a month, Rob, because that's what a private first-class in the Army would get. And that's what you're doin' here, is alternative service." I said, "I'm just happy to be here." I never said a thing. He came to me at the end of the first summer in 1969 and said, "Rob, we want you to

stay through next summer. I know you're up with your alternative service, and it's only right that I raise your salary to seven hundred dollars a month. This private first-class bullshit doesn't really hold anymore. You've proven yourself."

STEIGER: Now you're a sergeant? (laughter)
ELLIOTT: I just said, "That's cool. I like the job, I'm
havin' a good time. Happy to do it."

* * *

Oh, summer of 1970...We were doing this management training seminar on the Green River through Lodore Canyon, four-day trip. We have a cancellation about two weeks before the trip, so there's room for one person. I went up to Gary Templin and said, "Gary, can my dad come along on this trip? I'd really like him to come and see what I've been doin' in Outward Bound." Gary said, "Sure, you bet." So I called up my dad, he came along. He had a good ole time. That was the first



Ron Grester and Rob Elliott running a charter trip for the Ernerst and Julio Gallo families in 1967.





Rob instructing "currents and eddies" to Outward Bound students, Lodore Canyon, 1969.

I learned that he wasn't really a very good boatman. (laughter)

STEIGER: You didn't know that before?

ELLIOTT: I didn't know that before. He was a great visionary, he was a great organizer, a great salesman, a great motivator of people, and he taught us all how to row, he taught us about currents and eddies, he was great at methodology, but he himself was not really a great boatman or a great guide. That's why I took the rafts down the John Day River, not him. That's why I ran Lava Falls on the first trip through for ARTA in 1965, because he wasn't all that confident.

But I didn't realize this until the management training seminar with Outward Bound. They say, "Oh, hey Lou, you have some river background, you captain." We rotated captains in the first hour on the water at Outward Bound, so that everybody was brought right into it, right from the get-go. We'd have six captains, ten minutes apart in the first hour on the water, just to kind of sort the crew out, get them sorting each other out, early on. (We could go into all sorts of methodology digressions here...) So my dad's captaining the boat with Outward Bound, and (chuckles) he's really not doing a very good job. And I kind of realized, either the old guy's kind of lost it here [he was 64 years-old at the time, or he never was really good at this—meaning reading the river. So, he did learn what Outward Bound was all about, and he learned what I had been doin' for a couple of years, which is important to the next part of the story...

* * *

Without exception, you can look at the companies running in Grand Canyon (and probably all over the world) today, and still see the fingerprints of the people who founded them. Rob Elliott went on from Outward Bound to become Operations Manager of a six-state ARTA enterprise: California,

Oregon, Idaho, Wyoming, Utah, and Arizona... more than 140 guides in all, back in the '70s. In Grand Canyon, at Rob's instigation, the company went from an all motor situation to 75 percent rowing...snout rigs, paddle rafts, finally eighteen-footers too. Furthermore, they started hiring women. Rob married Jessica Youle, and with her help and encouragement, (to make a long story short), they eventually bought the Grand Canyon operation from his dad. Much later, after they'd divorced, Rob bought Jessica out too. Since then there's been oceans of water under the bridge: hundreds of guides who've taken thousands upon thousands of people down the river, and through it all certain themes repeat themselves over and over and over again...youthful exuberance (a pre-requisite, even in the old-timers); social conscience and political activism (think Rob himself, then Don Briggs, Bob Melville, Drifter Smith, John O'Brien, etc., etc., etc...think letter campaigns, trails trips, disability trips, disadvantaged youth trips, diplomat trips...) and participatory zeal that is unending (to this day, some AZRA paddle captains start a trip by having everyone take turns commanding the ship.)

* * *

Of all the different ways that AZRA guides over the years have enhanced the opportunity for self-discovery, the number one way certainly has been participation, to let people row through 36-Mile or Kwagunt...you know, teach people how to paddle. Or encourage them—don't send them away when they offer to help in the kitchen. Participation is a key ingredient. And right up there... and perhaps even more of a key ingredient, is the opportunity for quiet, for solitude, for silence. And that takes time. AZRA was the contractor for a Bureau of Reclamation trip with the Commissioner of Bureau of Reclamation at the time, Dan Beard, that went out as a motor trip April 11, 1994. And we had a whole bunch of different people on it, including Ferrell Sekacacu [phonetic spelling]—the chairman of the Hopi Tribe at

the time. Superintendent Arnberger was on the trip, his second week on the job. John Leshy, the head solicitor for the Department of Interior, and some key figures from the private sector in the water and power communities were on this trip. We went five days to Phantom and talked all about the management of Glen Canyon Dam and the future. But especially we were talking about the future of water policy management in the West. It was a great trip. It was a bunch of heavyweights talking about some heavy issues. And what were the two things that many of the trip members came back to me and said "thank you" for? "That was a really important part of my trip!"? When from Nankoweap to the Little Colorado River we said, "We've been talking so much, let's just do no talking. It'll just be quiet, just be silence. Let's not talk." This is on a motor trip, so we turned off the motor as much as we could between Kwagunt and the LCR, and just drifted. Every once in a while we'd have to yank on the motor a little bit to get us back in the main current, and then shut it off.

And that was a high point of their experience, on a *motor* trip.

The second high point of their experience was playing like kids in the Little Colorado River and making trains, putting our life jackets on upside down and making trains to float through the little riffle on the Little Colorado River there. I have a big picture of all these water and power heavyweights going on their little train with their life jackets on like diapers, bein' like kids.

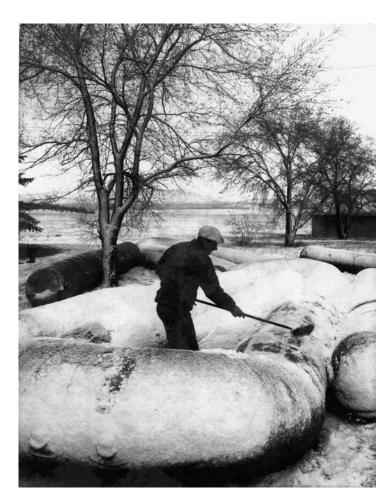
Those are the two things that they told me was so important about their trip.

STEIGER: So you made them shut up, and you guys just basically floated all the way down there, from Nankoweap?

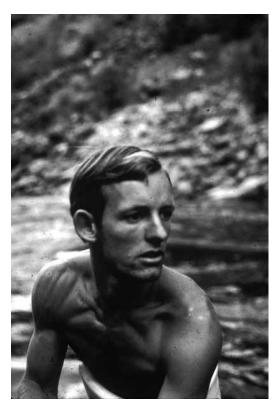
ELLIOTT: Yeah, and that's a very common thing that I can't take a whole lot of credit for. It's just hiring the right people and giving them permission to do this kind of thing. I mean, I learned this from our guides as much as I have any responsibility for teaching it to them. I was on a trip once several years ago, and David Edwards, one of AZRA's great trip leaders, not only said "We are gonna have no talking this morning," but he started off with some wonderful inspirational readings from Native Americans and poets about the value of silence in our lives. Then we pushed off on a silent float.

But there's an outfitter responsibility here too. The point I want to make, back on that Bureau of Reclamation trip, was that we could only just float with the current from Kwagunt to the Little Colorado, because we had enough time to do that. We had structured enough time on the trip to allow the guides to create that experience. I think that's an essential part of what we're doin' down there, is makin' sure we have enough time. (big sigh)

...Now, with all due respects to that "fire in their eyes" that Rod Nash speaks of...Who says that the non-commercial participant rowing his or her raft first time in the Grand Canyon, having only rowed a total of a hundred miles on a river ever before, who is pushing the envelope of experience, and hanging it all out there and discovering incredible insights about themselves in the Grand Canyon—who says that that experience has any more value than the lady coming on a trip—a commercial trip, let's say—from Chicago who's a hundred pounds overweight, and something about her experience in the Grand Canyon put her in a frame of mind to go back home and get out of that abusive rela-



Rob Elliott getting ready to paint some rubber on a snowy day at the Burnis Ranch in Flagstaff, Arizona, March 1967.



Rob Elliott on the Middle Fork of the Salmon, 1965

tionship she's been in for the last twenty years and decide, "I'm enough all by myself, and I'm gonna lose eighty pounds and I'm gonna get a whole new grip on my life." Who says that that lady from Chicago is having any less valid an experience in the Grand Canyon than the person rowing it themselves for the first time?"

* * *

The evolution of *any* person's history is not in a vacuum—it's with a whole lot of other really formative people that have either inspired them or helped them along the way. My own humble recommendation in this oral history project, is to ask everybody "Who are some of the truly influential guides?" But just as importantly, "Why? What was it about them?"...the very first person I would have told you about was Wesley Smith. I don't know if Wesley gave you any of this, but he was hired by Lou Elliott out of a gas station. He was a tire jockey and my dad was short a couple of swampers. "Wanna go on a river trip?" in Williams, Arizona. He can give you the history on that better than I can. But it's just like from there on it was just

incredible...Why? It would be humility, it would be diversity, and spirituality. Humility because Wesley knew always, from the beginning, that he wasn't making the experience for the people. He was figuring out what they were ready for, what they were looking for, but mostly what they were ready for, and helping make that happen in a really quiet sort of way... Wesley gives *value* to *every* person: no matter how old they are, what their gender is, what their experience is, no matter what their political views are, how "evolved" they are, or how high their consciousness is, or how struggling they are in their life. It doesn't matter. Everyone that Wesley spends time with is of equal value...

That reminds me of a great story about Martha Clark too, who I also count as one of the truly great guides I've ever known in the Grand Canyon. Martha and I and four other guides were at Saddle Canyon in 1985, and it was a...discovery trip, I guess. It was a trip of people who wanted to come down and experience the Grand Canyon for fourteen days with no interchanges, and also experience some Native American ritual. So there was a wonderful woman along on the trip who was a Lakota Sioux. Her name is Marilyn Youngbird. And there was another guy on the trip, that was running the trip, and he was a wanna-be Native American—he was really Anglo. Around the campfire at Upper Saddle Canyon he said, "I think it's so exciting that we're all down here together on this incredible journey to go through the Grand Canyon and discover some of the Native American rituals and be together on such a special experience." And then he started talking down all of the other trips, motor trips, or all the people that just drank a whole lot of beer and got inebriated in this incredible sacred place of the Grand Canyon, et cetera. And as he was talking along this vein, Martha Clark stood up and kind of put her hand up in the air and said, "Wait just a minute, that's not right at all. Yes, we're special, and this is a special trip, and a special opportunity for all of us, but I've done a lot of guiding in the Grand Canyon, and every trip I've been on is special, and every person that comes through the Grand Canyon is special. Every trip down here is special. That's how I look at it, and you're not gonna change my mind." It was just such a neat sort of blurting out and challenging this kind of elitism sort of notion. And that is one of the things I think that makes someone like a Wesley Smith or a Martha Clark or a David Edwards...

Steiger: Suzanne Jordan.

ELLIOTT: (chuckles) Suzanne Jordan. One of the most wonderful things about Suzanne Jordan was that yes, she just went off and followed her dream and became a guide in the Grand Canyon, but if you ever had a line-up of people from all walks of life in, say, a

New York subway and you took a person on the street and said, "Okay, see those ten people lined up against that wall over there? Okay, pick out which one is the river guide." It wouldn't be Suzanne Jordan. And yet she was one of the truly great river guides I have ever known.

We were at the mouth of Havasu Creek in this tremendous flash flood. It was raining lightly and I was up under a ledge. I was meditating—back when I meditated—and I heard this "ka-thwap!" like a rifle shot. It was the D-rings being ripped off the fronts of the rafts. This frothy, muddy flood of about five or six vertical feet was just whippin' at those rafts, and throwin' 'em out the mouth of Havasu. We had two trips, so we had ten rafts there. I jumped up and ran down the trail and went down the ledges down to where all the guides are, and there's all this commotion. Dave Edwards is standing on a raft that's starting to drift out into the main current. He says, "It's a body!" He jumps on this woman that doesn't have a life jacket. This person had been washed downstream from the last ford up inside the mouth of Havasu. I look over just in time to see Suzanne Jordan grab a throw bag that we had hung up at the tie-in spot just in case we needed a throw bag there—she grabs this throw bag and whips it out to Edwards as he's going out in the main current holding onto this woman without the life jacket that had been swept down through the narrows and underneath the rafts. She pulls them to shore. As soon as Edwards is pulled into the shore like a pendulum, there's about five or six people down there grabbing them. What does Suzanne do? She goes, "I'm not needed here anymore." She immediately looks up and asks, "Where's the next need?" I see her kind of squat down and just gun it. She just runs off the ledges, and leaps off one of the muav ledges and lands on her belly on the side of a raft. There's four rafts all takin' off down the river by themselves without anybody in 'em. "I should maybe be on those rafts," she figured. (laughter) So there she was, and she floated on downstream and she started rowing one of the rafts to try to get the whole flotilla to shore. She couldn't row four rafts full of water from the flash flood. She finally pulls in about two miles downstream on the left, and she runs ashore with a rope and puts it through a little eye of the rock and cinches it off and stops the whole flotilla from going downstream. But she's not the person you would pick out as the river guide from the lineup.

STEIGER: Great story!

ELLIOTT: She was incredible. She was terrific. You know, I almost hate to mention *any* guides, because as soon as you start mentioning names at all, you're gonna leave out a *whole* bunch.



photo by Dave Edwarrds



September 2004, in Grand Canyon.

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.



As the moon sets, the sun wakes, peeling the dark blanket off of red peaks that gently kiss the clear sky. Green water lightly splashed onto sandy beaches, and trees stretch their slender roots to suck life into their lush leaves. White waves polish rocks and embrace history; layers of fluted stones whisper their tales into mid-day silence. Wrens weep in wonderment for the beauty that they, through accustomed to, cannot even fathom, and ornery wind smiles as it roars upstream. The heat seemingly melts even the most solid of structures, cooled lava and deep ridges weld tightly together. Pools trickle down ledges and fall into springs, nourishing all that they can reach. Snakes slither, bugs buzz, and goats graze by the river; The hot and hissing cliffs begin to cast shadows; the hush is deafening. Bats beat their wings and herons nestle Into the comfort of their own fine feathers. The stream's mouth yawns as the sun bids "adieu" Behind the massive mountainous formations. The moon rises and the desert glows a dim cerulean, and, though night has come, the stars dance. The canyon never sleeps. Samantha Rist

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A New Rock Fall

ов Dye (gce boatman) and I visited Toroweap in clear but brisk conditions on December 23RD. I noticed an unusual white color on the slopes above the left bank around mile 177. On investigation we discovered that a very recent rockslide from the top of the Redwall on the right side had produced a cloud of pulverized rock sufficient to dust the left side of the canyon! Through binoculars we could see rocks protruding above the river with dust covering to within an inch or so of the water, suggesting that the rockfall had not happened very long before we discovered it at about 13:15.

Anthony Williams



Photo of a late December rock fall around Mile 177, view looking upstream. Note the white pulverized dust on the right side of the image, coming from the rock fall on the left side of the image. Photo taken by Anthony Williams.

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Statement of Intent

AJOR POWELL is often criticized for trying to pull a fast one on the U.S. Government and the American public. By combining his two expeditions into one narrative, it is argued, he not only denies credit to the members of the second expedition, but blurs the accuracy of hisreport as "science." These last two points are true. However, an obscure document brought to light by bibliographer Mike Ford indicates Powell was not trying to slip anything by his superiors and government funders. A small leaflet bearing the heading House of Representatives, 42ND Congress, 2ND Session, Mis. Doc No. 173 carries the following piece:

Survey of the Colorado River of the West. LETTER FROM THE SECRETARY OF THE SMITHSONIAN INSTITUTION, TRANS-

Report preliminary for continuing the survey of the Colorado of THE WEST AND ITS TRIBUTARIES, BY PROFESSOR POWELL.

In this letter, dated March 25, 1872, Powell summarizes his work from 1870 through the time of his writing. His second expedition had arrived at Lees Ferry and adjourned to Kanab for winter overland operations. Powell explains his future plans, asks for an additional \$20,000, and makes the following point regarding his eventual report:

"The operations of the two years are so intimately connected that it would not be possible to convey a clear idea of what has been done, with the reasons for the same, without combining the several statements in one report. I have therefore deemed it wise so to do, and will transmit a duplicate of the above to the Hon. O. Delano, Secretary of the Interior."

42b Congress, HOUSE OF REPRESENTATIVES.

SURVEY OF THE COLORADO RIVER OF THE WEST.

LETTER

FROM THE

SECRETARY OF THE SMITHSONIAN INSTITUTION,

Report preliminary for continuing the survey of the Colorado of the West and its tributaries, by Professor Powell.

PRIL 5, 1872.—Referred to the Committee on Appropriations and ordered to be printed.

SMITHSONIAN INSTITUTION, Washington, March 29, 1872.

DEAR SIR: I have the honor to present herewith a preliminary report of a survey, made in accordance with an act of Congress of March 3, 1871, "for continuing the survey of the Colorado of the West, and its tributaries, by Professor Powell, under the direction of the Smithsonian Institution."

Institution."

The region mentioned is one of the most interesting, in a geological point of view, in this or any country. The Colorado of the West, and its tributaries, traverse chasms in some places over a mile below the general surface of the country, presenting in many places, at one view, sections of the greater number of all the known geological formations of America. The importance of the exploration, however, is not confined to the advance of science, but is also associated with practical results of value, such as the discovery of coal, salt, the metals, and other resources of the country.

From the specimens deposited in the Institution by Professor Powell, which include, besides those of mineralogy and geology, illustrations of the manners and customs of the people, as well as from maps and drawings which have been exhibited to us, it appears that the work has been well and economically done, and that it forms an important addition to our knowledge of the physical geography of our continent, yet so imperfectly known.

our knowledge of the physical geograph, which is the perfectly known.

In view of the results already obtained, at a comparatively trifling expense, I would respectfully commend the application of Professor Powell for a renewed appropriation for completing the survey included in the property of the pr in his proposed exploration.

I have the honor to be, very respectfully and truly, your obedient

JOSEPH HENRY, Secretary of Smithsonian Institution.

Hon, J. G. BLAINE.

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 Norcross Wildlife Foundation, 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.

Box 1934 Flagstaff, AZ 86002

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