

boatman's quarterly review

the journal of the Grand Canyon River Guides, Inc. • volume 24 number 3 • fall 2011



Christa
Sadler

Prez Blurb • GCRHC • Dear Eddy • Gooddings Willow • Tamarisk Leaf Beetle
New Manager • Guide Profile • Hopi History • Chub Translocations • Back of the Boat
New Sup • Aluminum • Native Voices • Ancient Ones • Understanding Bedrock

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

GRAND CANYON RIVER GUIDES
is a nonprofit organization dedicated to

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

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

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

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

Deadlines for submissions are the 1ST of February, May, August and Novmeber. Thanks!
Our office location: 515 West Birch, Flagstaff, AZ 86001
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Save The Dates

GCRG FALL RENDEZVOUS
OCTOBER 29–30, 2011

NEED SOME POST-SEASON DECOMPRESSION? We're headed up to the South Rim this year for GCRG's community building event. Picture a glorified camping trip with a few speakers along to make things interesting—kind of like the GTS river trip, but without the river. We're working with Ellen Brennan, head of cultural resources at GCNP to come up with fun arch stuff like visiting the pictographs at Mallory's Grotto and other field trips. Tentative plans also include camping (and hiking) at Red Butte and learning more about Havasupai culture. The date for the Rendezvous is October 29–30, 2011. Cost is \$40 and you can pay on our website, www.gcrg.org (on the Fall Rendezvous page under Guide Resources) or send a check to GCRG, P.O. Box 1934, Flagstaff, AZ 86002. A postcard with more details will be sent out within the next month. Join us!

3RD ANNUAL MOAB RIVER RENDEZVOUS
NOVEMBER 11-13, 2011

JOIN MOAB AREA NON-PROFIT Plateau Restoration for three days of outstanding presentations by regional experts on river history, ecology, geology, ecological restoration and resource management. The three days feature both classroom and field sessions, volunteer projects and a river history film festival. For more information visit www.moabriverrendezvous.com or call 866.202.1847.

Prez Blurb

A STACK OF VIRTUAL LITERATURE crowds the desktop of this computer as I type: old BQR articles; mission statements; an email from a disgruntled fellow guide; notes from outfitters and friends answering a multitude of questions; a page of my "notes to self"; a poem; and a few bits of this and that. And after a week of wading around in my thoughts and other peoples writing, the best thing I've found came from David Brower via Jeri Ledbetter's *Prez Blurb* in 1996. "Brower warns environmental organizations to follow Rule Number 6, which is to 'never take yourself too seriously'. And, he continues, 'there are no other rules.'" In light of this, I have been taking myself (as GCRG's President) all too seriously and forgetting to laugh in the face of adverse conditions.

Most of my consternation began over the content

of the aforementioned email from a fellow boatman, a medium length letter that boils down to one or two real questions. The most pressing of which is, “Why is the President of GCRG working for the National Park Service?” In all seriousness, a multitude of reasons exist for why I have continued my service to GCRG as I begin my new career. But if I turn the seriousness off for a moment, it boils down to the fact that I am a guide, a Grand Canyon River Guide no less—and I am committed to the Canyon and its community. That’s all. That’s the reason. We all have other things we do—construction, teaching, parenting, school, masonry, etc.—I just happen to be a Ranger. And, as such, many of my “other job” goals and concerns match up with the goals and concerns of GCRG. Funny, I’m doing the same things as a Ranger that I was as a Guide... only now I have a gun and a ticket book instead of a lifejacket and a twenty-horse. This revelation brought forth a vision—Park Ranger in full uniform with a twenty-horse strapped to her side and a book of life-jackets to be handed out. Laughter restored.

So, with a much lighter heart, I have a few things for you to think about as we plunge into the next year of GCRG’s service to the Canyon and the Community. The mission statements of both the NPS and GCRG speak to the fact that these “environmental organizations” are designed with one main goal, a common goal: to protect Grand Canyon—in its entire splendor—for the enjoyment of future generations. When Kenton Grua et al founded GCRG, the goal was to create a collective voice on resource management issues in Grand Canyon. Though GCRG has expanded over the years, this remains our main focus. The National Park Service was founded with the goal of protecting our special places from resource damage. Though the approaches may differ, no doubt should linger, that in the end, each organization strives to preserve the Canyon.

Please remember that no organization has obtained perfection, but collectively we can make decisions that are best for the well-being of Grand Canyon. If, as others have, you ever find yourself asking “What has the NPS ever done for me?” remember that the NPS—whether we like it or not—is the entity with the most ability to protect the Canyon through policy change. Remember that the National Park Service at Grand Canyon is your partner in protecting the place that we love. Remember that without the umbrella of a Park Service there would be no park for us to work in—it would be a series of lakes or a huge mine or any of the other numerous things that people have wanted to do with it. Remember that NPS employees are not “Parkies,” but friends who care about Grand Canyon

equally and want our children to experience it as well.

After four years of reading and reading and reading and reading—that’s what GCRG board members do—I am passing the Presidential torch to Nikki and wishing her the very best of luck! I will see you all in the Canyon, as a Ranger and a Guide.

Erika Andersson

Changing Of The Guard— And Other Musings

TIME MARCHES ON—come September 1st, Erika Andersson will step down as President and Nikki Cooley will take the helm. Board members Laura Fallon, Jed Koller, and Beav Weaver will be finishing their terms. The guide membership will determine which enthusiastic nominees will take their places. Once again, I am so incredibly thankful for having such wonderful people involved with GCRG—such intelligence, humor, and supreme dedication. I am always humbled by the great people I get to work with over the years and honored to count them as my friends. Each and every one of these river guides really stepped up to the plate and committed their time and energy because they fervently believe in what GCRG does and the necessity for actively protecting the places they love. Please thank them next time you see them for a job well done.

I too was pondering GCRG’s mission statement and wishing that I could get a glimpse into the minds of the “GCRG founders.” So I rooted around in the back of a dusty old file cabinet and pulled out the very first issue of the newsletter, published back in April of 1988. The newsletter wasn’t called the *Boatman’s Quarterly Review* back then and it was only four pages long. Heck—the newsletter didn’t even have a name yet, GCRG had no staff and no full time central office. However, what these river guides did have was a wealth of passion and vision. The officers at that time were Kenton Grua (president), Billy Ellwanger (vice president), Denice Napoletano (secretary/treasurer) and the directors consisted of Terry Brian, Dave Edwards, Mike Walker and Tim Whitney; just to give them the recognition which they so richly deserve. Hats and visors off to all of you for putting your vision into action! I found it so inspiring to hear firsthand what they were thinking (rather than our interpretation of why GCRG exists), and I could not be more proud that we’re still on that same path that they set more than twenty years ago. As they wrote in that very first newsletter:

“Yeah, but just who is GCRG? Well, we are,

like many of you, Grand Canyon guides who want to make a difference in our favorite place, you guessed it, the Canyon. Which brings us to why. Just because it's that important a place and nobody really knows it in the way we do. Whether you motor a J-rig or row a gaily painted dory, you face the same problems and feel the same way about that big ditch. GCRG is a means to get some of our collective voice together. We are a large, scattered community and this organization can

be our clubhouse. Through the organization we will exchange information, solve many of our on-river problems, and make our views on management known to the powers that be. We've only just begun and you are needed; your input, experience, enthusiasm. The more people involved the more effective we can be. There's a lot we can do." You betcha...

Lynn Hamilton
EXECUTIVE DIRECTOR

Getting Our House In Order: GCRHC Moves Forward

YOU MAY NOT HAVE HEARD from the Grand Canyon River Heritage Coalition (GCRHC) in a while, but that doesn't mean that we haven't been very busy. As you probably know by now, GCRHC's mission is:

To assist and support the National Park Service's development of a dedicated Grand Canyon River Heritage Museum permanently housed within the historic Laundry Building at Grand Canyon National Park's South Rim Village, with the Park's historic boats and related artifacts and stories forming the core of the museum's exhibits and interpretive visitor experience.

Rather than languishing without focus during this interim period following Superintendent Martin's retirement and the arrival of Superintendent David Uberuaga, the GCRHC Executive Committee has taken this opportunity to put our house in order by laying the foundation for our organization—filing for incorporation in Arizona, drafting bylaws and organizational resolutions, and brainstorming on creative strategies for moving forward with our partners.

We are very excited to meet with the new Superintendent and share our vision of a state-of-the-art museum that will be worthy of this icon park—a dynamic link between the rim and the river and the catalyst for development of a “heritage education campus” at the South Rim of Grand Canyon National Park. As the recipient of the Department of the Interior's Cooperative Conservation Award, Superintendent Uberuaga has a proven track record of working closely and effectively with stakeholder groups, which bodes well for his tenure at Grand Canyon and for this exciting, high-road project. Welcome, Superintendent Uberuaga!

Our diverse coalition has the will, the expertise, and political savvy to move forward but we can't do it without the river community firmly behind us. Please

help us to build the advocacy we need for the Grand Canyon river heritage museum concept:

- Make a secure donation on our new website, www.gcrivermuseum.org or by mail to Grand Canyon River Heritage Coalition, P.O. Box 936, Flagstaff, AZ 86002.
- Talk to your friends, your river passengers, or anyone else who might be interested. When it comes to the fundraising stage, this will be a national and even international effort that goes far beyond the river community, which means we need to start now building a groundswell of awareness and support.
- Request some “These Boats Will Speak” brochures for your ammo can—just contact GCRG at gcrg@infomagic.net and we'll shoot them out to you. They're also great educational tools for your river passengers!

Let's work together on this exciting adventure to give the historic boats and the fascinating stories that surround them a well-deserved home at the South Rim, bringing our Colorado River heritage to life for future generations to enjoy.



COALITION MEMBERS

Grand Canyon Private Boaters Association
Grand Canyon River Guides, Inc.
Grand Canyon River Outfitters Association
Grand Canyon River Runners Association
Grand Canyon Trust
National Trust for Historic Preservation

Dear Eddy

IN RESPONSE TO THE PHOTO ON THE BACK OF THE LAST BQR,
VOLUME 24:3

THE BOAT IN THE PHOTO ON THE BACK COVER of the last BQR—the *Emma Dean*—was later renamed *Music Temple*. I rowed the *Music Temple* on four trips for Martin Litton in 1971 and then he retired the boat from service because it was too small to be very useful on a commercial trip. Several years later, Martin donated the boat to the Park Service and it is now in the historic boats collection on the South Rim. The exterior of the boat has been painted, but if you open up the hatch covers, you'll still see my handwriting inside that identifies what was stowed in each hatch. So, there is sentimental value to me in having that photo (which I'd never seen before).

When I looked at the photo again, I realized that the other boat was later renamed the *Hetch Hetchy*, nicknamed the “*Submarine*” because it plowed through the waves instead of riding over them. I rowed that boat on my very first rowing trip in 1970. It's a long story, but in a word, I broke it in half at the bottom of Unkar! You'd think Martin might have fired me on the spot, but instead he surveyed the damage and said: “Well, JB, these boats have been badly banged up before, just never all at once!” Classic Martin! Lots of good river stories to be told.

John Blaustein

IN RESPONSE TO THE PHOTO ON THE BACK OF THE LAST BQR,
VOLUME 24:3

THE PHOTO ON THE BACK PAGE of the latest BQR, was *not* taken in Green River Utah. I have shown it to a bunch of old timers, mostly lifers, and they all say that City Hall was never next to the bank. The only bank in town is a three story building on the corner of Broadway and Main, and City Hall was never next to it. One car in the photo has Wyoming plates on it and for that reason I think it may be Green River Wyoming, but it is *not* Green River, Utah.

Randy Tucker

(PROUD RESIDENT OF GREEN RIVER, UT)

EDITOR'S NOTE:

Yes indeed, the photo on the back page of the last BQR was Green River, Wyoming, not Utah. And the date is the 1969 Powell Centennial. Online metadata at NAU Cline Library has been revised. Thank you to our sharp-eyed members!

IN RESPONSE TO THE “FRED AND MARGARET EISEMAN ORAL HISTORY” IN THE LAST BQR, VOLUME 24:3

JUST READ THE LATEST BQR edition, with the Fred Eiseman article. Richard reminded me that we have one of Fred's dories. We have repainted and renamed her the *Al Quist*. Richard just took her down Desolation at 38,000 cfs. Wahoo!

The boat we have was one of the original two boats that Fred had made by Keith Steele in Oregon. He named them *Maggie* and just *Boat*, later renamed *Etsan*. We have the *Etsan*.

Richard responded to a letter from Brock Tunncliff of Phoenix, advertising two Waterman basket frames for sale in 1991. When he went to Phoenix to buy the frames, Brock also mentioned a dory he had for sale. Brock was a student of Stan Brickler, who had bought the *Etsan* from Fred in 1974. It had been renamed the *Stanley B* and was stored in Tucson. Richard bought the dory as well, and brought it to Salt Lake. It needed a lot of maintenance, which he and Clair worked on for a couple years. It's a wonderful boat—Richard and Clair have both taken it out on several trips.

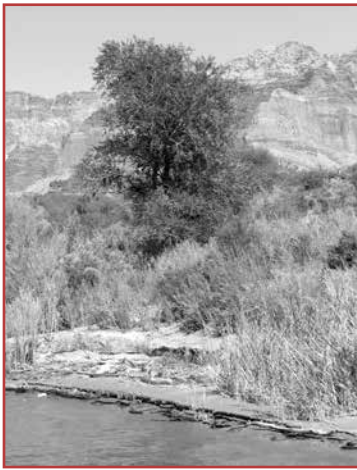
Alisa Quist



Richard Quist rowing the Eiseman dory in Desolation.
Photo courtesy Robert Kirby.

Goodding's Willow In Grand Canyon: Requiem Or Revival?

THE LOSS OF ECOLOGICALLY important species is one of the most important human impacts on ecosystems, not only in Grand Canyon, but also throughout the world (Stevens and others in prep). In 2008, Grand Canyon Wildlands Council (GCWC) was generously funded by the outfitter-supported Grand Canyon Conservation Fund to examine riparian restoration options in the Colorado River corridor, including segments of tributaries commonly visited by river runners in Grand Canyon National Park. The project addressed a significant challenge in riparian



Colorado River Mile 70L, Sept. 2008—Goodding's willow site.

stewardship in the Colorado River corridor: decline of Goodding's willow (Salicaceae: *Salix gooddingii*) and Fremont cottonwood (Salicaceae: *Populus fremontii*) along the river. During two river trips in 2008 and 2009, we examined the changing distribution and health of Goodding's willow along the Colorado River. Wildlands Council visited and photographed the 23 locations at which Goodding's willow or Fremont cottonwood trees existed along the river at and before 1963, and assessed stand health in relation to dam-influenced changes in the riparian environment. We conducted the study to provide the NPS with information relevant to riparian ecosystem rehabilitation, and also because we were concerned over the impending demise of tamarisk habitat along the river due to the introduced tamarisk leaf beetle (Chrysomelidae: *Diorhabda* spp.).

In light of this summer's tamarisk beetle defoliation of much of the Colorado River corridor in Grand Canyon, we want to share the results of that study with the river-running community. Grand Canyon Wildlands Council offered this information as a starting place for collaborative riparian restoration, in particular the recovery of Goodding's willow at these locations with good historical evidence for the presence of this characteristic, strongly ecologically interactive

species (Soule and others 2005). Like many who are familiar with the river ecosystem, we are concerned that Grand Canyon songbirds and other wildlife species may be facing a tough future with the rapid loss, at least functionally, of so much habitat. We are pleased to learn that the Grand Canyon Association recently received funding from the Nina Mason Pulliam Charitable Trust for Grand Canyon National Park (GCNP) to begin a pilot restoration effort at Granite Rapid Camp, which is one of the sites identified in this study.

GOODDING'S WILLOW

Goodding's willow is a common, native, dioecious tree (individuals are male or female) that formerly was distributed at scattered localities between Glen Canyon Dam and Lake Mead, Arizona (Clover and Jotter 1944). It commonly grows up to about 15 meters in height and occurs in areas of perennially moist, fine-grained, silt-rich soil. Individual trees can live for at least 86 years, as shown by pre-dam to post-dam rematched photography of the tree at Granite Park (Turner and Karpiscak 1980); however, the high frequency of heart rot limits its utility in dendrochronological studies (Mast and Waring 1997). This willow species provides excellent habitat cover for neotropical and other riparian birds (e.g., Carothers and others 1974, Brown and others 1987), and its population in Grand Canyon has been affected by reduced flood flows from Glen Canyon Dam and post-dam beaver (Castoridae: *Castor canadensis*) foraging. Beaver may indirectly influence site invasion by non-native tamarisk (*Tamarix* spp., Mortenson and others 2008), which can colonize the open riparian habitats.

Fremont cottonwood was rare along the Colorado River in pre-dam time; however, this species occurred occasionally along wider reaches of the river (e.g., Mile 195R, Turner and Karpiscak 1980). Gallery stands of cottonwoods are widely used by many neotropical migrant birds and other riparian wildlife (e.g., Carothers and others 1974). Seedling cottonwoods become established annually along the Colorado River; however, virtually all are lost to beaver attack and no mature plants persist along the post-dam river, except at Lees Ferry, where GCWC and Glen Canyon NRA collaborated in planting and fencing the trees to protect them from beaver attack.

INFORMATION GATHERING

Larry Stevens inquired of old-time river runners as



Colorado River Mile 75L Upper Nevill's Rapid tamarisk stand, Sept. 2008. Goodding's willow site. Inset shows beaver damaged willow stump.

to their recollections of Goodding's willow along the Colorado River in Grand Canyon. He reviewed historic literature (i.e., Clover and Jotter 1944), and examined available pre-dam and post-dam photographs and videos of the Colorado River corridor in Grand Canyon (Turner and Karpiscak 1980, Stevens and others 1995). Those sources and data were combined with riparian biological research data from the 1974–1976 Museum of Northern Arizona ecological survey of the river corridor (Carothers and Aitchison 1976), and vegetation surveys from 1980–1995 (Stevens and Waring 1985, 1987, Stevens 1989, Stevens and others 1995), and from subsequent studies (Mast and Waring 1997, Ralston 2005). In all, these sources revealed a total of 23 sites along the Colorado River in Grand Canyon that had been or are occupied by Goodding's willow or Fremont cottonwood in Grand Canyon from pre-dam time to the present (Table 1).

FIELD WORK

We visited each of the mainstream Goodding's willow and pre-dam cottonwood sites upstream from Phantom Ranch in September–October 2008, and the lower canyon sites in April 2009 (see Table 1). Photographs and georeferencing data were taken at each site, and the sites were described by counting the number of living and dead Goodding's willow or Fremont cottonwood stems, the extent of beaver damage or source of mortality (if detectable), and the estimated height of living plants. Based on Grand Canyon Wildlands/NPS tamarisk removal experiences in the tributaries and at Lees Ferry in the early 2000's with Fred Phillips Consulting, and recently at Mile -6.5R, we estimated the number of days of work by a crew of eight to cut and remove existing tamarisk at each site. The time

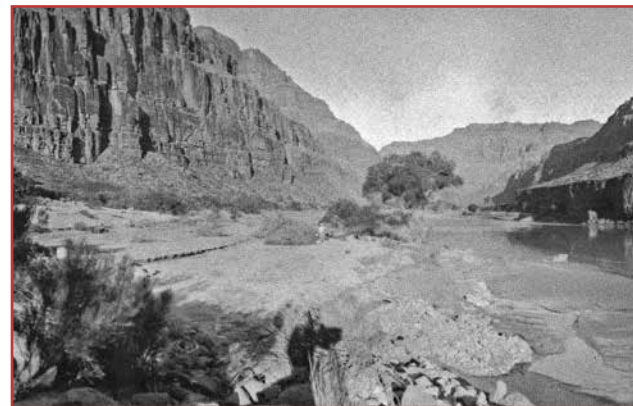
and costs required to revegetate each site with native plant species will vary in relation to the size of the site and available support for the project.

PRE-DAM AND EARLY POST-DAM GOODDING'S WILLOW AND FREMONT COTTONWOOD STATUS

Late pre-dam and early post-dam Goodding's willow and Fremont cottonwood have been greatly reduced in abundance and vitality at all 23 previously known sites in the Colorado River corridor. Goodding's willow was extirpated from at least seven (33.3%) sites along the river where it previously existed; it has been reduced to non-reproductive status (i.e., only single plants remain) at another seven (33.3%) sites; and population size has been reduced by 56.1 to 68.0% in the river corridor. No mature Fremont cottonwood remain along the Colorado River in Grand Canyon, except at the Lees Ferry restoration site.

Goodding's willow health is low at all sites, usually due to extensive beaver attack, erosion or, for trees on upper riparian terraces, low soil moisture. The Goodding's willow stand at Granite Park (Mile 209L) has been reduced to a single tree, and that tree has declined in health markedly over the past two decades (Turner and Karpiscak 1980). We detected successful recruitment of Goodding's willow (one individual) only at the Granite Rapid camp along the Colorado river since 1988, and seedlings established after the 1983 flood at Lees Ferry, Mile 55.5R, and elsewhere have perished (Stevens and others 1995, Mast and Waring 1997, Ralston 2008).

The largest stand of Goodding's willow remaining along the river is at Cardenas Marsh (Mile 71L). There, only about 21 (39.6%) of 53 pre-dam trees remain alive, and all surviving trees have been severely reduced in viability by beaver attack. We consider the potential for extirpation of Goodding's willow at Cardenas Marsh to be high and likely within the next



Colorado River Mile 195L – Fremont cottonwood site, 1923 (Turner and Karpiscak 1980)



Last remaining Goodding's willow tree at Granite Park (209L), April 18 2009.

several decades. Although willow populations in the tributaries and on the reservoir deltas of Lakes Powell and Mead remain robust, Goodding's willow has relatively quickly disappeared from the Colorado River ecosystem in Glen and Grand Canyons. Continued existence or restoration of Goodding's willow in the dam-controlled Colorado River will require direct management action, including removal of tamarisk, planting and maintaining local native willow stock, and protecting plantings from beaver. However, the 23 sites located throughout the river corridor provide the NPS with a list of places at which restoration of native riparian trees is supported by historic evidence and can help stem the loss of bird and wildlife habitat due to invasion of the tamarisk leaf beetle.

ACKNOWLEDGEMENTS

Grand Canyon Wildlands Council thanks National Park Service staff for the opportunity to compile this information within Grand Canyon National Park. The funding support of the Grand Canyon Conservation Fund, a foundation overseen by the Grand Canyon Outfitters Association, made the work possible and we thank the Fund for providing the catalyst for potential restoration efforts. Many thanks to the river runners who responded by providing historic data. We also thank Tour West, Inc. and Jeri Ledbetter and her companions for river support during two river trips in 2008 and 2009.

A link to the full report is available on the web at www.grandcanyonwildlands.org, with more detailed recommendations, information obtained through collaboration with GCNP about NEPA compliance, and the references cited.

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Table 1: Distribution of late pre-dam and early post-dam Goodding's willow and Fremont cottonwood along the Colorado River in Glen and Grand Canyons, Arizona. Some of the plants described here appear in pre-dam photographs from Turner and Karpiscak (T&K; 1980).

Site	Colorado River Mile & Side	Approximate Project Area (m ²)	Previous Number Mature Plants	Number Living Mature Plants	Number Recruits	Approx. Number Days to Remove Tamarisk with a Crew of 8	Comments
1. Lees Ferry	0R	250000	Many	ca. 15	0	30	Beaver, tamarisk invasion (T&K 1980:38-45)
2. Paria R. mouth	0.7R	15000	Unknown	ca. 5	0	5	Beaver, tamarisk invasion
3. Vaseys Paradise	32R	1225	1	1	0	0.25	Beaver impacts
4. 46R	46R	24000	1	0	0	20	Beaver or tamarisk invasion?
5. 69R	69R	1500	2	1	0	0.5	Beaver, tamarisk invasion
6. 69.3L	69.3L	1200	Unknown	9	0	3	Beaver, tamarisk invasion
7. 70L	70L	400	1	1	0	2	Decadent
8. Upper Cardenas Eddy	71L	1600	Unknown	5	0	5	Decadent; beaver, tamarisk invasion
9. Upper Cardenas Creek	71L	5000	Unknown	4	0	10	Decadent; beaver, tamarisk invasion
10. Cardenas Marsh	71L	7000	53	21	0	30	Decadent—beaver impacts
11. Cardenas Island	71.5 C	10000	5	1	0	3	Beaver & erosion
12. Upper Unkar Camp at 72R	72R	3000	1	1	0	4	Decadent
13. Old Unkar Camp at 72R	72R	2000	1	0	0	2	Debris flow Aug 1983
14. Upper Unkar Shoreline	72.2R	2000	8	1	0	2	Beaver impacts
15. Upper Nevills Rapid	75L	800	1	0	0	7	Beaver impacts
16. Bright Angel Creek	88R	2000	ca. 5 cottonwood	0	0	2	Beaver & erosion? (T&K 1980:76-78)
17. Granite Rapid Camp	94L	1200	0	0	1	5	New recruit
18. Lower Bass Camp	109R	600	3	0	0	1	Beaver & erosion
19. 110 Mile Camp	110R	2500	1	0	0	1	Erosion
20. 195L	195L	1000	1-2 cottonwood	0	0	5	Unknown (T&K 1980:98-99)
21. Granite Park	209L	2000	ca. 16	1	0	4	Beaver impacts
22. Across from Granite Park	209R	100	1	0	0	0.5	Erosion
23. 222.6L	222.6	250	2	0	0	2	Erosion? T&K 1980:110-111
Total	All	338,575	ca. 200	ca. 64	1	ca. 150	All

Tamarisk Leaf Beetle Update: Stepping Up Monitoring Efforts

SATELLITES CIRCLING THE EARTH have captured images of ribbons of green along the Colorado River corridor in Grand Canyon, with over 900 acres of that green dominated by invasive, exotic tamarisk trees (*Tamarix* spp.). Most of you have seen these trees up close and know them intimately. In the past two years, you may have noticed that they are losing their foliage earlier than usual. This is a direct result



Tamarisk leaf beetle. Photo courtesy NPS.

of tamarisk leaf beetles' arrival in the park. While purposefully imported into the U.S. to manage tamarisk, National Park Service managers did not actively release them in Grand Canyon. However, we now have the opportunity to proactively, comprehensively, and thoughtfully prepare for the future.

This watershed-scale change brings with it amazing opportunities for multiple stakeholders to be involved in how we respond to this change, to have input into various management actions, and also for people from varied backgrounds to work in the field together. As this will definitely require a team effort, NPS staff wants to express our gratitude for the early offer of help and support that GCRG leaders have expressed. We have a great relationship to build on. Many GCRG members, commercial companies, private boaters, affiliated tribes, and individuals have worked alongside NPS staff to restore native vegetation at campsites, excavate archeological sites, remove invasive plants from the corridor and side canyons, monitor wildlife, delineate trails, and implement recovery actions for endangered fish. This could indeed be one of our capstone, multi-stakeholder, large-scale efforts, truly expanding on

what we have done in the past and taking it to the next level—that of the watershed!

In an effort to get accurate information to the public and answer questions from the field in a timely fashion, we will provide bi-annual updates on beetle movement and response planning in the BQR. Look for a map of the beetle's current distribution and a summary of the 2011 movement in the next issue!

For now, here is the quick update:

- The first beetle larvae were detected in the park in 2009, but their manner of arrival is uncertain.
- In 2010, beetles were found at stock tanks near Tuweep, up major drainages (e.g. Stone and Kanab Creeks), and non-continuously from Glen Canyon Dam to Pearce Ferry. Tamarisk defoliation was visible by late August.
- In 2011, beetle sampling was implemented on every possible science work trip; to date we have sampled beetles on five river trips; seven trips total by the time you read this article.
- The gaps in distribution from the 2010 map are starting to fill in this year, with beetles spreading to at least River Mile 208.



Tamarisk leaf beetle copulation. Photo courtesy NPS.

- No adult beetles or larvae have been detected between Diamond Creek and the park's boundary with Lake Mead, but they are very abundant upriver from Lees Ferry in Glen Canyon National Recreation Area.
- In theory, it should take three to five years for tamarisk mortality, so expect to see defoliated

stands greening up again in the spring with mortality underway in the next few years.

- Tamarisk beetles are not known to eat or damage native vegetation, although they cluster and spend time on natives. There are other beetles that look very similar to tamarisk leaf beetles—in particular, one that was found in abundance on spiny aster plants in 2011. If you see beetles on native vegetation, *please* take photos and get them to Lori Makarick via mail or email.

So, from here, what is the plan? The park's new Watershed Stewardship Program, lead by park ecologist Dr. Todd Chaudhry, is taking a leadership role with large-scale restoration planning and implementation. Dr. Chaudhry (see companion article on page 12) has a strong and passionate NPS team working alongside him, providing technical expertise and moral support to the program, and some solid baseline information from the river corridor. We have southwestern willow flycatcher and avian surveys results, and we have maps of overall vegetative community distribution thanks to the GCMRC mapping efforts. We also know which areas had good riparian habitat and high biological diversity in the past, so we will incorporate those data into the planning. We have started growing riparian plants at the park's nursery, and staff and volunteers will continue to collect seed and cuttings next year. We are looking for funds to expand our nursery to meet the needs of large-scale restoration and also to support volunteerism in the field. Todd will be coordinating workshops in the future, and he will definitely contact GCRG for participation.

In order to move forward progressively, the next step is truly to have a pilot project. Here is one bit of great news on that front:

On July 13, 2011, the Grand Canyon Association, in partnership with the National Park Service, was awarded a grant from the Nina Mason Pulliam Charitable Trust for \$104,500 to support a two-year pilot project aimed at testing ecosystem restoration methods and mitigating impacts to cultural resources at Granite Camp and Monument Creek in Grand Canyon National Park. These sites are very popular with backpackers and river runners; however, like many sites within the Colorado River corridor, they have been adversely impacted by the operation of Glen Canyon Dam, high recreational use, and the introduction of non-native species, particularly tamarisk. Project goals include developing methods to restore native riparian plant communities and wildlife habitat, recovering data and stabilizing a threatened prehistoric archeological site, and enriching our visitor experience. In light of the



Mile 6 tamarisk defoliation. Photo courtesy NPS.

likely impacts that the introduced tamarisk leaf beetle (*Diorhabda* spp.) will have on tamarisk-dominated riparian ecosystems, the proposed work at Granite Camp will be of particular value in assessing the feasibility of proactively replacing tamarisk with native riparian shade trees along the mainstem. An interdisciplinary team of park staff will conduct assessments of both sites this September to identify specific restoration potential and begin to develop strategies.

This site was chosen because we can access the site on foot (versus river), making volunteer participation easier both logistically and financially. The park is also interested in working in portions of the watershed that are valued by multiple recreational users. This winter, staff will focus on NEPA compliance and preparing an implementation plan. We will build upon the lessons learned from the Lees Ferry restoration project, the work at Soap Creek and Owl Eyes, and other projects in similar environments. There will be *lots* of ways individuals and groups can help—with the planting, watering, collecting plant material, transporting supplies, coming up with creative solutions to complex logistical challenges, and giving input and suggestions along the way. Stay tuned for more news from our Watershed Stewardship Program!

For more background information on the tamarisk leaf beetle, please refer to “Grand Canyon Assault” in the Winter 2009–2010 issue of the *Boatman's Quarterly Review* and “The Tamarisk Leaf Beetle—What it Means to You, the Colorado Plateau & Grand Canyon” presentation from the 2011 Guides Training Seminar available under Guide Resources / GTS Library from the www.gcr.org website.

Lori Makarick
VEGETATION PROGRAM MANAGER GCNP
lori_Makarick@nps.gov

GCNP's New Watershed Stewardship Program Manager

IN 2010, GRAND CANYON NATIONAL PARK received additional funding to support resource management efforts along the Colorado River. This opportunity allowed park managers to embrace a new, watershed-based approach to inventory, monitoring, restoration and mitigation within Grand Canyon National Park. Leading this effort is newly hired ecologist Dr. Todd Chaudhry, Watershed Stewardship Program Manager for the park. Last month, Dr. Chaudhry sat down with Jane Rodgers, one of Grand Canyon's Deputy Chief of Science & Resource Management, for an informal interview to give the boating community insight into the newest member of our team.

JR: So Todd, can you tell me about your new position at Grand Canyon National Park and how this program came about?

TC: I was hired in November 2010 to serve as the Watershed Stewardship Program Manager. It's a new program at Grand Canyon National Park within the Division of Science and Resource Management, with a particular focus along the Colorado River corridor. The overall intent is to take an integrated, watershed-scale look at natural and cultural resource issues throughout the park and identify priority conservation targets, threats and restoration strategies.

JR: What caught your eye when applying for this job/new challenge?

TC: I think that one of the things that really caught my eye was that there was a strong focus on restoration within the park, and having the opportunity to implement tangible restoration actions really appeals to me. The Colorado plateau area, based on previous travels, has always appealed to me both from a professional and personal perspective.

JR: How do you know the plateau?

TC: Hiking, rafting, general sightseeing. In high school I took an Outward Bound trip hiking in the

Henry Mountains and rafting Cataract Canyon for three weeks. That really hooked me on desert landscapes.

JR: I understand you come with a strong background in conservation biology, tell us a bit more about your background and experience.

TC: My first experiences in college working on wildlife ecology studies really piqued my interest in applied conservation biology. After working for the EPA for many years on contaminant issues, I was finally able to get a full time position with the United States Fish and Wildlife Service. I was doing Endangered Species consultations and managing a watershed stewardship grant program doing restoration work on private lands in Northern California. I decided to attend graduate school and earned my doctorate in avian fire ecology at the University of Tasmania in Australia. After that I returned to the states, where I worked as the eastern Washington forest manager for The Nature Conservancy, focused on restoration of fire adapted dry forests in eastern Washington.

JR: What's it like to switch from Australia to the

Pacific Northwest to Grand Canyon?

TC: Well, my perspective on ecology is that the most important thing to understand is processes. No matter where you are in the world, those processes don't change, the components of those systems do. So the real challenge is becoming familiar with those species and understanding how they interact in those environments. A lot of environmental issues that are here at Grand Canyon are very similar to those that exist in other parts of the world where I have worked. The issues are characterized by human-induced degradation of ecosystem patterns and processes, and the associated challenges of trying to restore ecosystems in the face of different stakeholders with different interests and ideas about how these places should look.



JR: What have been your challenges so far?

TC: The biggest challenge is that the Grand Canyon has a long history with people who have been involved in working within the canyon for decades, in some cases. It will be exciting to tap into that knowledge base and perhaps a challenge to long-standing perspectives with new ideas. It is very humbling to come into such a complex ecological context but also one that is equally complex when it comes to the sociopolitical environment. Another challenge is knowing that any work that we try to carry out will be scrutinized by a lot of different people who love the canyon and care deeply about what happens there. That also results in kind of a tragedy of the commons where people's love and interest in the canyon has both direct and indirect impacts to the canyon. The challenge is to try and balance the protection of resources with their use. To make sure this makes sense but is also accepted by the majority of stakeholders is a challenge in most cases, or impossible in others.

JR: What do you hope to accomplish in the next year?

TC: We plan to initiate a watershed-scale planning effort that will include multiple stakeholders to identify priority areas for restoration. We'll be working at the site scale to evaluate methods for restoring riparian communities at Granite Camp and within the Monument Creek sub-watershed. This project is being funded in partnership with Grand Canyon Association and the Nina Mason Pulliam Charitable Trust. In addition, we're initiating a feasibility study on reintroducing northern leopard frogs within Grand Canyon National Park in partnership with U.S. Fish and Wildlife Service, Arizona Game and Fish Department, U.S. Geological Service and Glen Canyon National Recreation Area.

JR: Since the BQR speaks directly to the boating community, what would you like to say to boatmen?

TC: I think the most salient issue is with the obvious impacts that will occur from the spread of the tamarisk leaf beetle from within the river corridor of the canyon. There will likely be extensive areas of dead tamarisk. We're presented with one of the greatest challenges in terms of how to manage, particularly riparian communities, and we encourage the boating community to share their thoughts and interests in how we manage this from both an ecological and recreational perspective. I look forward to meeting you on the river and at next year's Guides Training Seminar where I'm hoping to present more on the program.

A Big Thanks To All — You Know Who You Are!

ON BEHALF OF THE Southern Paiute Consortium we would like to take this time to say "Thank you" to all who have kept the Anvil clean.

Over the last fourteen years the Southern Paiute and other Tribes have spent countless hours doing presentations at the GTS and other gatherings, talking about how respect needs to be shown to the different places and sites along the Colorado River corridor.

From Southern Paiute work in the past, we are aware that the Anvil has had a lot of small and large trinkets placed for good luck before Lava Falls. This is really been a concern and caused a lot of imbalance within our Tribal communities. Our history with the Anvil goes back thousands of years and is shared with the Hualapai Tribe as well, and we greatly appreciate the efforts made by all of you who have helped us get our message out.

In closing, Thanks (Ai yuuk)!

Southern Paiute Consortium

SOUTHERN PAIUTE



CONSORTIUM

Guide Profile

Nate Jordan, Age 33



WHERE WERE YOU BORN & WHERE DID YOU GROW UP? I grew up in Piqua OH. It is a small town just north of Dayton.

WHO DO YOU WORK FOR CURRENTLY (AND IN THE PAST)? I have worked for Wilderness River Adventures since 2000.

WHAT KIND OF BOAT(S) DO YOU RUN? 37-foot motor rig, 18-foot oar boat and a 14' paddle boat.

WHAT OTHER RIVERS HAVE YOU WORKED ON? I have worked in Costa Rica on the Pacaure, Reventazon, and Payibe rivers.

WHAT ARE YOUR HOBBIES/PASSIONS/DREAMS? My hobbies are running different rivers with my good buddies. I also like to travel as much as I can in the off season. As far as my dreams go, I have them every night. :)

MARRIED/FAMILY/PETS? I am not married, for that matter I have never been close to being married. As far as family goes, my father still lives in Ohio and I have a little sister who lives in Savannah, Georgia. I do have a couple pets. Their names are Lorenzo MacGregor and Richard Adkins. Sometimes I have to hit Lorenzo with a newspaper when he makes a mess on the carpet. Sometimes he growls at me.

SCHOOL/AREA OF STUDY/DEGREES? I studied Fish and Wildlife at Hocking College in Southeast Ohio.

WHAT MADE YOU START GUIDING? My Aunt got me into the whole guiding thing. She had done some trips for Diamond in the mid 90s. I did my first trip as crew and was hooked.

WHAT BROUGHT YOU HERE? You get to meet so many interesting people on that river.

WHO HAVE BEEN YOUR MENTORS AND/OR ROLE MODELS? I have been trained by some of the best people I have ever met. Butch Hutton comes to mind; he took me on a bunch trips early on in my career. He taught me a lot about running rapids and many other tricks to

make your trip go smoothly.

WHAT DO YOU DO IN THE WINTER? I have done many different things since I have my winters open. I first started off as a snowmobile guide up in Tahoe. Then moved to Winter Park Colorado, and worked for the Ski School on that mountain. Then I got tired of the snow and moved to Costa Rica for a winter. I did a winter of backing in South America. Then spent a good part of a winter in Africa, the southern parts—South Africa, Namibia Botswana and Zambia. This winter I plan on going to Southeast Asia.

IS THIS YOUR PRIMARY WAY OF EARNING A LIVING OR DO YOU COMBINE IT WITH SOMETHING ELSE? I also work for Adventure Partners, a guiding outfit where I do hiking and climbing trips for Amangiri. It is a new hotel spa just north of Page.

WHAT'S THE MOST MEMORABLE MOMENT IN YOUR GUIDING CAREER? I guess my most memorable moment would be when I had a swimmer in Lava. Her name was Connie; she was 68 years old and 110 lbs. soaking wet—which she was. Connie came out in the V-wave. She was hanging on to the chicken line with her eyes closed and she would not let go. The boat was heading for the Black Rock at the bottom sideways, with Connie right in the path of the boat and the rock. I thought she was going to be squished. At the last second I was able to pull her on to the boat. I jumped back into the seat to row the Kahunas, and she was laying in the well not moving or saying a word. I thought I crushed her. Then we pulled into the eddy above lower Lava and she came to. She stood up on the deck of the raft and jumped onto my lap and she made out with me. I will never forget that.

WHAT'S THE CRAZIEST QUESTION YOU'VE EVER BEEN ASKED ABOUT THE CANYON/RIVER? Well, we all know we get some of the silliest questions down there. Here is one that comes to mind, a lady asked me if my ice was cold or if it was frozen. I said "both". She said "oh".

WHAT DO YOU THINK YOUR FUTURE HOLDS? I do see some more river running in my future but who knows.

WHAT KEEPS YOU HERE? I guess it is the beauty of the whole thing. The people I get to work with, and all the other guides I get to meet along the way. Some of the best people I have ever met live and work down there.

Hopihiniwtipu: Hopi History

ESKWEĪ, THANK YOU, to Lynn Hamilton at Grand Canyon River Guides (GCRG) for helping Mesa Media to spread the word about our most current project to revitalize Hopi language. Many of you received the email alert from Lynn that Mesa Media was working to raise \$5,000 for a match on another grant to the Arizona Humanities Council. Nearly fifty people donated! Without you, we never would have made our goal!! Thank you to all who believe in our efforts. EskweĪ!



Mr. Andy Selestewa drying peaches on the mesas near Supawłavi Village, photograph by Milton Snow, 1944.
Courtesy of the Hopi Cultural Preservation Office, HCP.O.P.H.:2005.1.HH3.37.

Mesa Media is a Hopi non-profit organization dedicated to revitalizing the Hopi language through the creation of CD's, DVD's and books by Hopi people in Hopi communities. Anita Poleahla and the late Ferrell Secakuku co-founded Mesa Media in 2004 because they believed that all Hopi people deserve the opportunity to understand the richness of the Hopi language and its teachings. To date, Mesa Media has produced four CD's, four DVD's and three books, all in the Hopi language with English translations (www.mesamedia.org).

The *Hopihiniwtipu: Hopi history* project is designed to examine history from a Hopi perspective in Hopi and English and in both written and spoken forms. The following is an excerpt from the booklet. This piece was taken from an interview with Ferrell Secakuku, who tells us in his own words how peaches became a major part of the Hopi diet (Kelley, 2005).

Kastila pay so'onqe kye tsatsaymorit kiyva. Pu piw pakwt tsivot lööp sunat yaasangwuy ang haqe Kastila piituqe kwayawatngat enang kivaya. Puma kawayvatngat kivayaqw pay Hopit put piw enang natwan-

tota. Pu sipalat, hiihintaaqat enang kivaya. Pu Hopi pay sustep uuylawngwu, pay hisatngaqw, pu pay hiita alöngöt enangw aw tuwantangwu. Pay hiita aniwnangwu, ispi tutskwat aw maatsi'yтактыangw pu' piw qatsiy. Pay oovi Hopi sustep natwantangwu. Pangqaq Hopit kawayvatngat pu sipalat noonva. Piw a'ne aniwnayangwu. Nu' tsay niique, ura nu' uumumi maatakna ayanw Supawłangaqw. Pang sipal tsot-sokit oopokiwta, nu' tsayniqw. Ikis ina nuutum sipal uuy'yta.

When the Spanish came, of course they brought some beans, too—maybe the tepary beans. But when the Spanish came back in the 1540's, they brought along some fruits that we didn't have—like for example watermelon. They brought the watermelon, and that became adopted, I guess, by Hopi, becomes adopted food for Hopi. And then peaches of different varieties. And because Hopi has always been a farmer from the beginning of time, they [don't hesitate to] always try new things. And they've always been successful because they know their country, they know the weather patterns, and they know which ground is suitable for certain plants, and they're always experimenting. So the peach and the watermelon have become the primary food chain of the Hopi. And that was adapted and added to the Hopi diet soon after the Spanish introduced peaches and watermelon. So we've been having that. And it was abundant. When I was a kid—I showed you the valley from Sipaulovi—that whole valley was full of peach orchards when I was a kid. My father even had a peach orchard.

Kristin Huisinga Harned

NOTE: Please contact Kristin if you would like more information or would like to donate to this project. All donations will be used to compensate Hopi people and other project staff to write, record and produce a booklet and audio CD that will be available to the public at the end of 2011. In addition, we are creating a free, web-based timeline with photographs, bilingual written accounts and audio recordings in the Hopi language. Kristin can be contacted via email at Kristin.Huisinga@nau.edu or by phone at (575) 536-3274.

REFERENCES:

KELLEY, SHAWN KELLEY. October 15, 2005. Oral Histories interview with Ferrell Secakuku. Reprinted with the permission of Northern Arizona University, Cline Library, Ecological Oral Histories Course (MLS 599): NAU.OH.2005.111.7. The video of the entire interview can be found by searching Ferrell Secakuku's name at the link: <http://archive.library.nau.edu>.

More Flying Fish: Humpback Chub Translocations To Havasu And Shinumo Creeks

ON JUNE 28TH, 243 juvenile humpback chub were translocated to Havasu Creek. The translocation followed years of planning and tribal and agency consultation, and built on lessons learned from translocations to Shinumo Creek and above Chute Falls in the Little Colorado River. A group of 300 chub was also released into Shinumo Creek on June 21; these fish were the third group to be translocated there. The goal of these conservation actions is to increase the understanding of efforts that must be undertaken in order to ensure that this native fish continues to survive in Grand Canyon. The translocations are led by the National Park Service (NPS), with funding from the U.S. Bureau of Reclamation (BOR), and are in cooperation with the U.S. Fish and Wildlife Service (USFWS), Arizona Game and Fish Department (AGFD), the U.S. Geological Survey (USGS), the University of Missouri (UM), and other partners.

GRAND CANYON'S NATIVE FISH

Historic fish communities in Grand Canyon National Park consisted of eight species, six of which are endemic to the Colorado River Basin. Today, only four native species occur in Grand Canyon, including the humpback chub (*Gila cypha*), which is federally protected under the Endangered Species Act. The humpback chub is adapted to the river's natural conditions—high turbidity, and seasonally variable flows and temperatures. The Colorado River in Grand Canyon contains the largest remnant population of humpback chub, as well as the only stable or increasing population in the world. Nevertheless, significant threats remain to this population of humpback chub and other remaining native species, including the presence of non-native fish and parasites, and altered temperature and flow regimes. In addition, the Little Colorado River, the primary spawning area for humpback chub, is threatened by watershed-wide impacts. Impairment to this critical spawning area will threaten the entire Grand Canyon population.

Humpback chub translocations are a key part of a multi-faceted native fish recovery program for the Colorado River in Grand Canyon. The ultimate goal of these programs is to restore native fish populations in the park.



The release of endangered humpback chub into Havasu Creek on June 28, 2011. Photo by M. Trammell.

TRIBUTARY TRANSLOCATIONS

To address some of the threats to the humpback chub, the National Park Service and cooperators initiated a series of humpback chub translocations into Colorado River tributaries. These translocations may contribute towards the establishment of a second spawning population of humpback chub in Grand Canyon, thereby providing the “population redundancy” of another spawning population outside of the Little Colorado River. If humpback chub instead leave the tributaries, creeks may act as rearing, or grow-out, habitat for juveniles, allowing them to grow larger in the warmer food-rich tributaries before they reach the river, increasing their chances for survival. These fish that leave tributaries may in turn increase the numbers of humpback chub that live in the mainstem below the Little Colorado River.

Prior to the translocations, researchers identified the Grand Canyon tributaries most likely to support humpback chub. Tributaries were evaluated on the basis of non-native fish presence, water quality, temperature, flow, fish barriers, and proximity to the reaches of the Colorado River where wild humpback chub are found. Havasu Creek and Shinumo Creek were identified as the Grand Canyon tributaries most suitable for humpback chub. Next to the Little Colorado River, Havasu Creek is the deepest and widest tributary, and it has the

most similar hydrologic and geomorphologic features. Shinumo Creek, the site of three humpback chub translocations to date (2009, 2010, and 2011) was ranked as the second most favorable tributary. Shinumo Creek has hydrologic and foodbase characteristics suitable for humpback chub, and the barrier waterfall just upstream of the Colorado River protects the tributary population from non-native fish in the river.

Martha Hahn, Chief of Science and Resource Management at Grand Canyon National Park said, "Translocation of humpback chub into Havasu Creek, the second drainage for translocation in Grand Canyon National Park, helps us better understand the role that tributaries can play in the recovery of the species. The results from Shinumo Creek have been encouraging to date, and I'm excited to see how well the young chub in Havasu Creek do."

The humpback chub that were recently released in Shinumo and Havasu Creeks were collected in November 2010 from the Little Colorado River, flown out via helicopter, and driven to the Bubbling Ponds Native Fish Facility operated by the Arizona Game and Fish Department in Cornville, Arizona. There the fish were treated to remove parasites and kept overwinter. Prior to translocation they were given flow training to reacquaint them to river life, weighed and measured, and implanted with unique PIT (passive integrated transponder) tags to individually identify them and track their growth and movement. On translocation day humpback chub were flown via helicopter to the release sites in Shinumo and Havasu Creeks where they were acclimated to creek water and released.

NOTICE:

There are no closures at Havasu or Shinumo Creek because of these translocations. Anglers in these creeks should become familiar with the identifying characteristics of humpback chub to avoid any accidental capture of the translocated chub. Young humpback chub are silver and have small eyes and large fins, but have not yet developed the pronounced hump behind their head. If any humpback chub are accidentally caught, they must be immediately released unharmed.

HAVASU CREEK TRANSLOCATION

The Havasu Creek translocation was the first of three planned releases to take place from 2011–2013. Young humpback chub were released in Havasu Creek below Beaver Falls in Grand Canyon National Park. Crews will monitor post-translocation fish populations in Havasu Creek in October. Unlike in Shinumo Creek

where a PIT tag antenna array was installed to monitor movement and survival of the translocated fish, no array was installed into Havasu Creek. Instead, fisheries crews will use portable PIT tag sensors during monitoring trips.

Prior to translocation, fisheries biologists completed a baseline survey in 2010; native bluehead suckers and speckled dace were captured along with non-native rainbow trout. While humpback chub have never been reported above the mouth in Havasu Creek, eight were caught during pre-translocation surveying in June. It is unknown whether these wild fish were spawned in the river or in the creek itself. Fin clip samples were collected to provide information for foodbase studies and may provide insights about the



Humpback chub were translocated below Beaver Falls in Havasu Creek, Grand Canyon National Park. Photo by D. Whiting.



A previously translocated humpback chub underwater in Shinumo Creek.
Photo by M. Trammell.

origins of these humpback chub.

Logistics of the fisheries work in Havasu Creek were designed to minimize interference with boaters at the mouth of Havasu Creek and with the wilderness characteristics of the area. Crews will either be dropped off at the mouth by an already-scheduled river trip and hike out to Hualapai Hilltop, or hike in and out of the field site. Helicopter transport of the humpback chub and fisheries equipment was determined to have the least impact to park resources and visitor experience, while minimizing stress to the fish.

SHINUMO CREEK TRANSLOCATION

The third translocation of 300 humpback chub to Shinumo Creek occurred on June 21, one week prior to the Havasu translocation. This translocation is the third in a three-year project. A total of 902 humpback chub have been released in Shinumo Creek to date.

Data are currently being analyzed, providing early insights into the success of the translocations so far. Based upon data from the PIT tag antenna, approximately half of the released chub have left the creek since translocation. Most leave within the first ten days, and most leave at night. Humpback chub translocated at smaller sizes seem more likely to remain in the creek than larger ones. While the barrier waterfall keeps non-native predatory fish from the Colorado River out of Shinumo Creek, it also prevents humpback chub that go over the falls from returning. Emigration and losses due to predation by non-native rainbow trout in Shinumo Creek remain a concern for

long-term success of the project.

Growth rates of translocated humpback chub are higher in Shinumo Creek than in either the Little Colorado River or the Colorado River. Hahn said, "I was with the field crew during the monitoring in Shinumo Creek in June. It was heartening to see that some of the chub translocated in 2009 and 2010 were already starting to develop little humps! The next milestone that we hope to see in Shinumo Creek is spawning behavior by the translocated fish."

Data collected last fall also suggest that fish translocated to Shinumo Creek have added to the number of humpback chub found in the Colorado River. In September 2010, Grand Canyon Research and Monitoring Center (GCMRC) and USFWS found that 28 percent of all tagged humpback chub

captured in the river were from the Shinumo Creek translocations. Some translocated humpback chub that leave the tributary are surviving, and potentially adding to the number of humpback chub in the mainstem below the Little Colorado River. They also seem to maintain the higher growth rate of Shinumo Creek, even after they have entered the mainstem.

While monitoring activities and data analysis continues, the NPS is determining the next steps for Shinumo Creek. One important tool in this process will be a model recently developed by researchers from the University of Florida, working with personnel from NPS, BOR, USFWS, AGFD, USGS, and SWCA, to evaluate translocation protocols as well as other management activities. This model, together with results from Shinumo Creek and Havasu Creek monitoring, will assist the NPS' efforts to restore the canyon's native fish communities.

*Emily Omana Smith, Allyson Mathis,
and Brian Healy*

NOTE: Emily Omana Smith and Brian Healy are fisheries biologists and Allyson Mathis is the Outreach Coordinator for the Division of Science and Resource Management for Grand Canyon National Park. Emily can be reached at Emily_Omana@nps.gov. A podcast video about the 2010 translocation to Shinumo Creek is on YouTube at http://www.youtube.com/watch?v=R9I6D_PdTTs.

Back of the Boat— The Whale Foundation News Bulletin

KENTON GRUA MEMORIAL SCHOLARSHIP

THE WHALE FOUNDATION is proud to announce that Kristin Huisinga (AZRA) and Kent Wagner (CanX) are this year's scholarship recipients. Kristin is continuing her Master Herbalist certification program (see her article this issue) while Kent is starting at NAU this fall semester with an interest in photo journalism and film production. Congratulations to the recipients and thank you to all applicants. The competition was especially high this year and the committee faced some difficult decisions.

Support from the community has allowed the Foundation to award up to three \$2,000 scholarships annually. We encourage all guides with at least five years experience here in the Grand to apply. Grants are awarded to guides with traditional and non-traditional educational paths. All applications are blinded before a rigorous review to insure impartiality. See our website for more info: Whalefoundation.org.

The next application deadline is June 1, 2012.



THE 2012 WHALE FOUNDATION CALENDAR

The new calendar is here! This year we highlight the three-dimensional artists in our community—from sculptors to boat builders, glass workers to carpenters. The cover image is Christa Sadler's photo of Fritz's Oar Chairs at Lees Ferry. I was absolutely mesmerized by this photo. I finally realized it is the Grand Canyon version of the two empty chairs on the beach overlooking the ocean that you find in many vacation advertisements. Who wants to be at the stinky

ocean when you could be at the Ferry ready to launch downstream instead? Check out our Facebook page to see a couple more of the amazing images you will find inside the calendar: www.facebook.com/WhaleFoundation. Calendars are \$12 each and \$3 per calendar for shipping. Order now through the website, mail, or email at: whale@whalefoundation.org. You can also pick one up at our office at 515 W. Birch, Flagstaff, AZ 86001 or retail stores in Flagstaff that carry it (a list of these will be provided on our Facebook page as well.)

Special thanks to Derik Spice, Dave Edwards, Christa Sadler, Mary Williams and all the contributing artists who made it a very cool calendar this year. If you are thinking about giving them as gifts, that is a fantastic idea! There are discounts for orders over ten.

10TH ANNUAL WING DING

Mark your calendars! Better yet buy a 2012 Whale Foundation calendar and then mark it. We will hold our Tenth Annual Wing Ding on Saturday, February 25TH, 2012 from 6–11 P.M. at the Coconino Center for the Arts in Flagstaff. We are planning a couple of special activities and cool items commemorating ten years of Wing Ding celebrations. Plan ahead and don't miss this one, it's going to be *big*.

BOARD OF DIRECTORS

We would like to welcome Ann-Marie Bringhurst to the board. Both Ann-Marie and her husband Adam have volunteered their time in the past, mostly helping with the Wing Ding. It is a privilege to have her on our board.

I want to thank all the board members and look forward to working with you all in the upcoming year: Bronze Black, John Crowley, Alida Dierker, Dave Edwards, Bert Jones, Trevor Lagers, Pat Rose, Christa Sadler, Tracy Scott, Derik Spice, Alex Thevenin.

VOLUNTEERING

If you are interested in volunteering for the board or in other capacities, please get in touch. We still have one board position open and we sure could use a little more help with planning the Wing Ding this year. Volunteering for something big or small, either way we would certainly appreciate it. Contact us through our website, Facebook or email me directly at bigdanhall@gmail.com.

Welcome New Superintendent!

GRAND CANYON RIVER GUIDES would like to welcome David Uberuaga to Grand Canyon. In June, he was appointed to be the new Superintendent of Grand Canyon National Park. We look forward to meeting him and working with him on the many issues affecting Grand Canyon.

THE FOLLOWING HAS BEEN TAKEN FROM A NATIONAL PARK SERVICE INTERMOUNTAIN REGION PRESS RELEASE ON JUNE 1, 2011, ANNOUNCING DAVID UBERUAGA'S APPOINTMENT:

Intermountain Regional Director John Wessels today announced that Mount Rainier Superintendent David Uberuaga has been named Superintendent of Grand Canyon National Park. Uberuaga will begin his duties in mid-July.

"I am extremely pleased that we have someone of Dave's character, experience and ability at Grand Canyon National Park," Wessels said. "He has all the skills necessary to take on the many complex issues that are part of managing a park the size and stature of Grand Canyon."

Uberuaga is currently the Superintendent of Mount Rainier National Park in Washington state, a post he has held for the past nine years. During that

time he served for more than a year as Acting Superintendent of Yosemite National Park. He has spent 37 years in federal service and has been with the National Park Service since 1984.

"I am humbled to have been selected as Superintendent at Grand Canyon," Uberuaga said. "I look forward to working with the park staff, the many stakeholders who care so deeply about the park, and the local community. Grand Canyon National Park is a truly spectacular place, one that has inspired people around the world."

Uberuaga has a Bachelor of Science degree in Biology and a Masters in Business Administration from the University of Idaho. Among his many awards, he is the recipient of the National Parks Conservation Association's Stephen Tyng Mather Award for promoting environmental preservation in parks; the Department of Interior Cooperative Conservation Award; and the Department of Interior Superior Service Award. In 2008, he was named Federal Land Manager of the year by the Department of Interior.

Born and raised in Boise, Idaho, he and his wife Barbara have three grown children, Mark, Michelle and Amy.

Aluminum People?

THANK YOU ALUMINUM! On river trips, aluminum offers many advantages. Aluminum pots and dutch ovens are lighter than their cast iron counterparts. For some of our backs, they offer a respite from lifting a commissary box that could crush a small farm animal. Alum (hydrated potassium aluminum sulfate) allows us to settle dishwater within minutes when we arrive at camp just before dark. And don't forget our beverage cans. How many bags full of aluminum cans do we bring to the recyclers after each trip? On and off the river, we see aluminum in baked goods mixes, frozen dough, antacids, shampoos and cosmetics, deodorants, pickled foods, processed cheese and the "buffered" coating on pills such as aspirin. Aluminum is ubiquitous and is the third most common element in the Earth's crust.

However, is using aluminum really worth the risk? Have you heard claims that aluminum can cause adverse health effects in humans? Have you wondered when scraping the caramelized onions off the bottom

of the aluminum dutch if you are releasing bits of aluminum into our food? Can aluminum in deodorants and vaccines really cause Alzheimer's? Do metals like aluminum really accumulate in the cells, tissues and organs of our bodies?

Former boatman, Nicci Preston Wiley shared some thoughts about the potential risks of aluminum exposure on the river. She explained that her undergraduate research showed that acid rain makes aluminum in the soil more soluble, which caused some tree species to die because of excess uptake of aluminum. Nicci hypothesizes that our bodies react similarly. When the body is too acidic (for example, because of excess alcohol consumption or insufficient nutrition), mineral and vitamin uptake may be disrupted. In addition, when certain minerals, vitamins and nutrients are lacking, the body will absorb similarly charged elements instead.

Does aluminum harm humans? Aluminum toxicity in the human body is not well understood but it is

believed that aluminum may compete with other beneficial ions such as calcium and magnesium. Although the body has no physiological need for aluminum, Dr. Jose Bernardo believes that when it is present in the body, it can inhibit the absorption of calcium, iron and magnesium, because of their similar charges and sizes (<http://emedicine.medscape.com/article/165315-overview>). This may mean that if our levels of calcium and magnesium are low, that aluminum could replace these elements in places such as our bones. This may play a role in osteomalacia, a softening of the bone. If a significant load exceeds the body's excretory capacity, the excess can be deposited in various tissues, including the bones, brain, liver, heart, spleen and muscles (<http://emedicine.medscape.com/article/165315-overview>). When aluminum is absorbed, our kidneys are the primary site for aluminum excretion although the colon also aids in elimination. Aluminum is, therefore, more likely to be toxic to those with severe renal disease.

How are we exposed? The principles of toxicology state that in order to have an adverse effect we must not only be exposed to aluminum we must be exposed to a level that causes unwanted effects. According to the Agency for Toxic Substances and Disease Registry, cooking in aluminum containers often results in a statistically significant, but not biologically important, increase in the aluminum content of some foods (<http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=34>). The increase of aluminum in these foods is affected by the acidity of the foods cooked and how long they are cooked. Absorption of aluminum through our gastrointestinal system is extremely low and is in the range of 0.1 to 0.4 percent. One factor that may increase absorption is the presence of citrate, a common food additive (check your food labels).

What this means is that aluminum could be accumulating in our bodies, causing symptoms such as fatigue, depression, migraines, malabsorption, joint pain, cramps, autoimmune disorders and chronic illness. The media has linked Alzheimer's disease with aluminum consumption (http://alzheimers.org.uk/site/scripts/documents_info.php?documentID=99). The etiology of Alzheimer's is complex and not well understood but does likely have a strong genetic component. There is evidence that our environment may modify this risk. According to Dr. Kambria Holder, environmental factors are likely to play a more significant role in triggering diseases like Alzheimer's even though these factors are not well studied. Whether there is clinical agreement on the potential affects of aluminum, is our health worth the risk?

There are some simple strategies that may help us

to navigate the adverse effects of aluminum.

- First, reduce your exposure by purchasing ceramic, non-coated stainless steel or cast iron cookware. Use aluminum foil sparingly. Consider switching to an aluminum-free deodorant (www.herbalix.com). Begin to read ingredient lists on food packaging.
- Second, it may be wise to take a calcium-magnesium supplement to aid the body in defending itself from potential aluminum exposure. Nicci Wiley recommends the ionic forms, which can be purchased in individual packets, one for each day on the river (www.pureessencelabs.com or purchase in Flagstaff at Winter Sun), but presumably any magnesium supplement would work well.
- Third, eat calcium- and magnesium-rich foods such as broccoli, leafy greens, fish, seeds and molasses. Mostly, eat fruits and/or vegetables at every meal, many of which contain magnesium and calcium, to ensure adequate supply of minerals and enzymes. Vegetables also help to alkalize the body. Reducing red meat, milk products, bananas and grains in the diet can also help balance pH to ensure the body does not become too acidic.
- Fourth, help the body become more efficient at eliminating toxins by eating plenty of fiber (in fruits and vegetables), which binds to toxins and prevents reabsorption of toxins. In addition, boost the liver's function and production of bile, which allows for optimal removal of toxins, by using liver supportive herbs such as turmeric and milk thistle (which actually prevents the reabsorption of toxins).

The human body has an innate capability to heal itself. Small changes in our daily lives, such as eating nutrient-rich foods, will undoubtedly help balance the body and could prevent serious illness as well. May you be healthy and vibrant!

Kristin Harned & Kim Fawcett

ABOUT THE AUTHORS:

Kim Fawcett is a fulltime guide for AzRA and a registered nurse at Flagstaff Medical Center. She also has an M.S. in toxicology.

Kristin Huisinga Harned is currently training to be a Master Herbalist, colon hydrotherapist and cancer patient consultant (using the Gerson therapy). She believes there are simple things we can do as Grand Canyon boatman to enhance our health. She will be co-authoring a series of articles on natural healing topics. Please email with questions or comments Kristin.Huisinga@nau.edu

Former boatman, Nicci Preston Wiley provides healing sessions in both massage and cranial sacral therapy. She can be reached at 928-853-3487.

Native Voices Of The Colorado River Grand Canyon

“HOW MANY TRIBES ARE AFFILIATED WITH THE GRAND CANYON AND COLORADO RIVER? ARE THE HAVASUPAI, HUALAPAI AND YAVAPAI RELATED? HOW IS THE GRAND CANYON SACRED TO THE TRIBES?”

THESE ARE THE TYPES of questions often asked by folks during commercial river trips of river guides including the clientele and some newbie river guides. A common response is to look up information in a book that might be found in the trip library box. Unless of course, the river guide has heard it first hand from their friend, family or cohort who

in their newly minted Colorado River Management Plan that states the requirement for enhanced interpretation about Native American perspectives of the Grand Canyon. The Commercial River Operating Requirements specifically states, “A guide must possess the following skills, as verified by the Concessioner... [C] Knowledge of American Indian perspectives on Grand Canyon resources, Grand Canyon natural and human history, points of interest encountered, and the ability and willingness to impart this knowledge to clients.” This specific mandate gave birth to the *Native Voices* program to work with the eleven affiliated tribes of

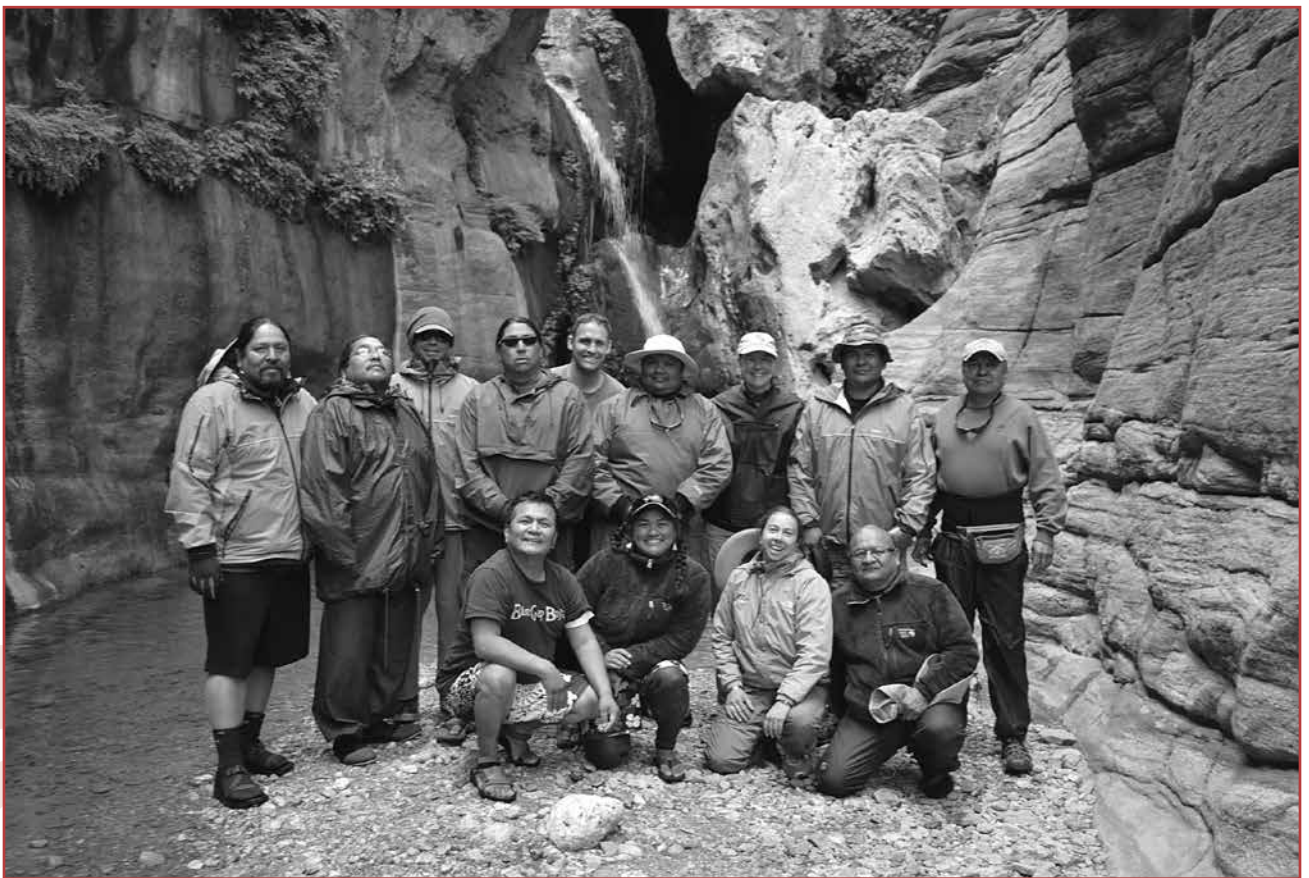


Photo courtesy of Native Voices.

happens to be a Native American. Another option is to reference materials created by *Native Voices of the Colorado River (Native Voices)*, a program created by the Grand Canyon River Outfitters Association (GCROA) and affiliated tribes.

The program was initiated in late 2007 in response to the Grand Canyon National Park Service’s mandate

the Grand Canyon: Havasupai, Hopi, Hualapai, Diné, Kaibab Band of Paiute Indians, Paiute Indian Tribe of Utah (representing the Shivwits Paiute), Las Vegas Paiute, Moapa Band of Paiute Indians, San Juan Southern Paiute, Yavapai-Apache (representing the White Mountain, San Carlos, Yavapai and Tonto nations), and the Pueblo of Zuni.



Photo courtesy of Native Voices.

Shortly after the initiation of the program, an advisory board was created and included representatives from commercial river outfitters, tribal affiliates, Northern Arizona University, Native American River Guide Training Program, and Grand Canyon National Park. Together the group worked on creating the initial *Native Voices* logo, website (www.native-voicesgrandcanyon.org), which was designed by Geri Hongeva, Diné; a tribal series of one-page flier about each tribe; and other programmatic events that would benefit the average river guide's knowledge base about the local tribal historical and contemporary relations and perspectives regarding the Grand Canyon and Colorado River.

A series of one to two day events were generated by the *Native Voices* program to give interested river guides and outfitters the opportunity to directly interact with tribal members on and off tribal lands. These events included but were not limited to volunteer opportunities to plant corn with Hopi, participate in cultural workshops held in Salt Lake City, Hopi, Hualapai, and Zuni, and interact with tribal members during the annual Grand Canyon River Guide's Guide Training Seminars (GTS) where *Native Voices* has provided cultural presentations; Hualapai agave roast, native foods celebration and individual tribal presentations.

Most of these events and workshops took place multiple times over the span of the last four years with a focus on building partnerships with tribes. These partnerships are critical in developing interpretive materials from tribal perspectives, which has lead up

to the recent spring river trip, which will all be featured in a series of articles written exclusively for the *Boatmen's Quarterly Review* (BQR) by the directors of the *Native Voices* program, and with a majority written by our beloved writer and fellow river runner, Wendy Himelick (of Canyon Exploration/Expeditions). Wendy was invited onto the *Native Voices* river trip to observe and document the interactions and discussions between the tribal members and river guides. One such interaction took place between Clarence John (Southern Paiute) and the GTS river trip trainees and seasoned "trainers" on their annual pilgrimage downriver at Deer Creek patio.

Gaining the trust of tribal members is no easy feat considering the overall tainted history between historical and contemporary non-native researchers, educators, and the government officials. The *Native Voices* program has strived to gain trust and confidence in the program from affiliated tribes and tribal members. Our ultimate objective is to *teach* commercial river guides, a majority of whom are non-native, the accurate cultural knowledge and perspectives of the Grand Canyon and Colorado River, and respective tribal lands. This program is mainly for the river guides but the tribes are benefiting in the sense that they are learning more about the river industry, and perhaps most importantly, the tribes are learning that the non-native river guides/outfitters want to learn the correct cultural knowledge about their respective tribes. The tribes are learning that the guides/outfitters want to tell their clientele the *appropriate* knowledge and etiquette when they are in the Grand Canyon, a sacred and majestic place many tribes and river guides alike call home. *Native Voices* is a unique partnership and program that can only positively benefit those who want to continue to learn about this spiritual and grand place.

Stay tuned to the changing *Native Voices* website and for a series of *Native Voices* articles sharing some of the information we gathered on our spring river trip in the upcoming BQR's!

Nikki Cooley (Diné), Joelle Clark (French)
and Lyle Balenquah (Hopi)
NATIVE VOICES PROGRAM DIRECTORS

The Ancient Ones Of Grand Canyon

FINE, POWDER DUST. My running shoes land like imploding meteors with each footstep, sinking an inch into confection-sugar earth. A million years of desiccated desert, blown in by the random dust-devil through the subway tunnel-sized cave opening.

Poof. Poof.

We breathe hard, not from the dizzying speed-climb up through the Redwall Limestone verticality, hearts and spirits leaning towards this. No, we're young and fit. Heroes in our world of guiding. "Bronzed River Gods", as they say: half naked in shorts and torn t-shirts, floppy sunhats, mirrored sunglasses and runners. Daypacks half-full: a liter water bottle, headlamp, high-carb snacks, a band aid. Nothing else.

Nothing else is necessary. If we peel, we die. Twist our ankle, we wait for our pards to jog back for help, or limping slowly, cling to each razor-sharp handhold and stumble down in the dark. Or not. Like in a fire-fight or class five rapid—your comrade will absolutely have your back. It is, however, dumber than snot to kill yourself whilst also failing miserably to save your pard, like in those bad news clips. You're on your own in the final assessment to get your ass there and back again.

Or not.

What do we seek? What indeed. Might as well ask the meaning of reality. Well, *we're* going to the mountain cave, for real.

Hans told me not to tell, all those years ago. Not anyone. Secret.

Promise.

But he told me. Probably others as well?

I promise.

And Wesley. He's going to die young. Wants it, in fact. A wounded spirit, killing himself with liquor to be crouching back through the jungles of Vietnam, sensing the tripwires for comrades who no longer need that. I cannot give this man much, he who gives all, like a Shaman demanding nothing but your acceptance of his mischief and understanding for his failures. I try not to enable, but like most, cannot help it. Tripwires.

So, I cannot help but show him this. The "Ancient Ones" left the "split twiggers" here in this chilly darkness five thousand years ago. Shrine? Probably. Magic. Definitely. They didn't like caves, it is said. Scary. Where the dreadful flying mice hang upside-down. Dark.

Wesley says of these things: "They're trying to show

you something. Trying to give it to you. Take it. It's OK."

He hangs with the local natives, smokes their pipes, sweats, sings. Nothing pretentious. He just needs that camaraderie. The deeper kind he had back there. Why he's with us, as well.

Along with us there's this other river guide. One I trust less. We work together, have shared whitewater and whiskey and adventure. I cannot show Wesley and not show her. You just don't do that. So I exact a promise I myself have already broken: do not share this.

Especially with a mutual friend who couldn't keep a secret in his child-like, irrepressible soul if his life depended on it. One who moved a basket once to keep it from being "collected" by Park archeologists, promptly forgetting where he put it. (I *told* him there were too many rocks in this land of rocks.) He accused me of stealing it myself, then found it again, then gave it up for the dead museum up there on the swarming South Rim. What else did he give up?

Don't tell anyone, I pleaded. Especially that one. Made her promise, spine tingling, sensing a wrong stroke. Into the rocks.

I do not have many regrets in my life. Life is too short, too full, too demanding. Like Crystal Rapids I suppose, you shouldn't make a move that you will later regret mightily. We all do it, though. Fragile, just like our crafts.

We three feel the power, here and now. My heart thumps my chest, though I've been here before. No one speaks. I've been there, before, too. Thundering river in the desert oasis amidst sand and rock. Cliffs blazing in the hot desert sun, everything ashimmer. Food. Life. What *can* you possibly say?

Split-twig figurines. You take a willow stem, river-fed and green and pliable as only youth can be. Tear it right up the middle, but not the whole way, like being born. Then weave life into it, forming a sheep, a deer. Food. Life. Maybe stick a sliver of jasper or obsidian through its heart like a spear. Will the hunt bring meat? Will my children survive another winter? My clan? Will I?

Where to leave it? Out there in the sun, most likely gone in a few years at best, eaten by mice for the salt or dried and blown like an old man's bones. Under a rock? Hard to find in such a land of rocks. Constellations of them, forever shifting with the wind and water. Kinda like us boatmen.

No wind. Sacred silence. Most fear to tread here,

so less chance of being fiddled with. Cool and dark. Things last better in such places. Maybe some mice, the ground kind, but if we bury it...

So, from the river two thousand feet below and maybe three miles away, they brought the woven willows, up those unmarked cliffs, careful to leave neither footprint nor cairn, half naked in breech-cloths, braids, water gourds, some high-carb pemmican, black paint under eyes and yucca sandals. Nothing else.

Nothing else was necessary.

I know where to look, yet still I must hunt. They look to me, the one who's been before, and I am confused. I put my weakness out of my mind, as usual. I just know they're here, somewhere.

We stand motionless, no lights, adjusting to the dark, the scant illumination from the world outside forming shadows and ghosts. Somehow electric lights will spoil this, and we have no living flame save in our breasts. The cool on the skin, the quiet. So quiet I can hear my own blood coursing through my veins. It smells, what? Not musty. Something cleaner, older. I can feel the burden of rock above, pressing in. *I am not afraid.*

Ah! That rock pile. Just there. And there.

So, gently, with respect, I lift, one at a time, trying to remember their exact placement as best I can so as to try and fix things afterwards. I feel like an interloper, desecrating an ancient church. This doesn't stop me. I *have* to look. I *have* to see. *They're trying to give it to me.*

And all our breaths catch at once. It is too much. Too powerful. I have said these words before. Will say them again. My heart lies in the desert, thus too much and too powerful is the air I breathe. I hunt for a little of that very thing deep inside where it's dark, am usually disappointed. But not always.

The piles of rock are the size of a coil of bowline, each rock shaped like a rough grinding stone. They are piled in a spiral pattern. Dusty.

I remove them, placing them gently around the perimeter. Underneath are sheep. Deer. Woven spirits with spears through their hearts. Bigger than I expected—about the size of my calloused hand.

Eyes wide, we look. We touch—maybe like the Indians seeing their first looking glass—carefully. What's in there? It might blind us or steal our spirit. Or nour-

ish it. Also, the salt and oil from our fingertips might attract hungry rodents. Put them back. Bow your head in thanks and request forgiveness. Return whence we came, to food and sleeping pads and a quiet scotch by the rushing moonlit river, leaving no more than footprints in the dust.

As it turns out, the hungry rodents will have two legs and floppy hats.

Three years later, I hear the tales. I myself have left the place I love for a time, needing to regroup. Stir up other dusts a bit. Share my love with a human who

I have seen pots, painted with the reds, whites, blacks of the earth, stuffed in cracks. Woven baskets, hidden in caves. Bits of this, pieces of that. Badgerpaw prints and sheep, all hand painted with hematite-red and ochre-black, a little fat and blood mixed in to preserve for the great-great grandchildren, under protective overhangs (how could they have known our skin would be pale and unworn?). Airy routes pocked with "Moki steps", gouged out of improbable heights. Tiny spray-painted white handprints haloed by mouth-blown chewed plant roots. They're still there, for the intrepid. Garbanaries with imprints of newborn's feet in the mortar, perfect rock doors that once kept out intruding thieves—mice and men alike, laid aside, no longer needed.

More recently I found some digging sticks, untouched for millennia. Not even the archeologists have ever seen such treasure. I show the unfound to no-one, leaving their spirits undisturbed, my atonement. However, a great deal can be digested from bones already picked over. Ask any Raven.

Much remains, despite our intrusions. All over the Great Southwest, throughout all the Canyons of the Colorado. Enchanted New Mexico. Magic Utah. And, of course, in my Canyon. As guides, we will take you there, show you things, try and explain the surface of it all. Like Wesley, the reluctant Shaman, it's up to you to dig deeper, shadows and ghosts, sitting by that same rushing, moonlit river.

needs me. Who I need as much as my river. *Anywhere else, I am something less.* She is not my compromise, she is my love, my food. My Life. I gladly share with her my morsels. But my entrails and bits of hair and skin blow in the wind of my desert.

Shrine Cave? Yes. I know it. There's a trail to it, now. Two guides were leading clients there on hikes. But not to worry. Nothing left, anyway. Those split twiggers are gone forever.

Five thousand years. Poof.

I am wretched and sorry, Hans. Sorry, ancient ones. My heart is desolate—which is not anything at all like

a desert. Deserts flourish—its just harder to see. I will return there, find a hidden, dripping spring in a shady alcove, some maidenhair fern dancing in the afternoon breeze. Wash away the dust.

Jeffe Aronson

Announcements

LOST

Nikon CoolPix camera in a silver case. It is about 2 1/2 x 4 inches. It was probably lost on May 25TH at the Ross Wheeler campground, or possibly on May 26TH at the Upper Blacktail campground. My biggest desire in recovering the camera is that it contains the only photos of our wedding which was the day before we left on the river. Please contact Neil at 858-952-8880 or email neil@charitymania.com

LOST

I flipped in the ledge hole at Lava on the July 17TH. With the help of two commercial companies most of our stuff was returned with the exception of one gray dry bag with “Sigourney” written on the side, a mesh perception bag containing a couple of wetsuits and a Z-drag kit, two yellow Canyon REO rental oars, and one Canyon REO cooler cover. Any information on this stuff would be appreciated! Please contact Steve Williams 480-628-6053.

LOST

Hualapai River Runners (HRR) is missing a blue frame boat from our pontoon operation at Quartermaster. This boat went missing on June 21ST. We want to know if anyone saw anything. The boat had PFD's, ice chest, bottled water, buoey, bow lines and throw ropes. Please let me know if you hear anything. Thanks. Please contact Earlene Havatone, HRR Operations Manager at 928-769-2266 or email earlene_havatone@grandcanyonresort.com.

LOST

Unfortunately on our June 16–23 trip we lost our green waterproof Fuji camera at Havasu Falls. Our first picture on the memory stick is a picture of the raft with the company name (GCE) on the red banner at Lees Ferry so if any one finds it and checks they will see the banner. If found, please reply to Nan McCormick at GCE, 800-544-2691 or gcec@xpressweb.com.

LOST

One of our clients lost a diamond ring on May 27TH, when camped at Mile 192, “Fat City.” It was dropped in the sand at the upper reaches of the camp away from the river. Can you please get the word out? If anyone finds the ring, please ask them to contact CRATE at 800-253-7328. Thank you.

LOST

A pair of regular prescription glasses was lost at 186 mile camp (River right) on May 8TH. They are in a hard grey case with either “Ocean Pacific” or “carrera” on the case (couldn't remember which). If found, please contact: Walt McGourty at w.mcgourty@comcast.net.

LOST

Hatch Trip June 20–26TH, turquoise blue digital camera approx 3 1/2 x 3 inches with strap. Waterproof to three meters. It was lost Friday June 24TH at Matkat. If found please send to Dave Gledhill, 26780 Sunnyview Lane NE, Kingston, WA 98346.

FOUND

A bag of very nice women's outdoor clothing not far downstream of Lees Ferry, around 7/26. Contact Beth at 971-241-7366.

Understanding Bedrock Rapid

SO, WHAT IS THERE TO UNDERSTAND? You just have to keep to the right of the bedrock, and you should only go down the left side if you like living dangerously. But why is this so difficult? Most river runners talk about “not getting caught in the current”, and this is one way of looking at it. But why do you get caught in the current, and what holds you there? There are some important hydrodynamics involved that cause this.

The bedrock splits the river current into the right side and the left side. The river elevation at the top of the rapid is identical for both sides of the river, and the river elevation at the bottom of the rapid is the same for both sides. So the descent is the same for both sides, and the flow caused by the force of gravity is identical. But the left side is constricted and the right side is much wider and open.

For the water to flow through the narrower constricted left side, it must increase its velocity so that it is faster than the water flow on the right side. The same amount of water that enters a constriction also exits it, and to maintain this flow, the velocity speeds up in the constriction. By the same token, when the river widens or becomes deeper, the velocity slows down. But in all cases, the same volume of water flows above the constriction, through it, and below it. (See footnote).

Now the question is, “Where does the force come from that makes the stream on the left side increase velocity and flow faster?” It is not because of gravity, because the descent from the top of the rapid to the bottom of the rapid is the same for both sides of the bedrock. There is no external force, like a pump forcing the water to speed up. So where and how does the force originate?

The Bernoulli theorem gives us the answer. The energy to increase the velocity on the left side comes from an exchange in the water flow where the internal pressure of the stream decreases in order to supply the energy to increase the velocity. This then results in the water above the bedrock splitting into a faster current on the left with low pressure and a slower current on the right with high pressure. It is a no brainer to understand that things move from high pressure to low pressure, and anyone who has struggled to get their boat to the right understands that they are battling a force that is trying to push them to the left. The closer one comes to the upstream side of the bedrock, the stronger this force is, and the tougher it is to pull to the right. One is “caught in the current!”

but in reality one is being forced to the left by higher pressure water on the right. We all know that to make a successful right side run, one must anticipate these forces and start moving to the right as far upstream as possible where the pressure differential is still small. But of course, this is not all that easy because of the debris fan protruding into the river on the right side. It is a bit of a puzzle, trying to keep from hitting exposed rocks on the right while trying to stay as far right as possible so as to avoid getting into a position where the pressure differential is stronger than one can overcome.

Experienced guides understand what is waiting ahead as you approach the bedrock. They look ahead and plot the best available route on the right side, get into ferry position, and as soon as possible, make that strong effort to overcome the pressure gradient that is trying to push the boat to the left. This is the time for strong, well planned strokes if you are using oars. When done correctly, you can feel the moment at which you have made the cut and are out of the grip of the force explained by Bernoulli’s theorem.

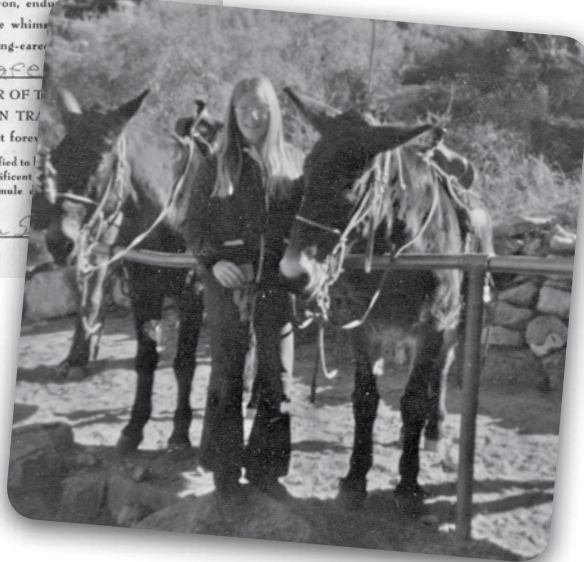
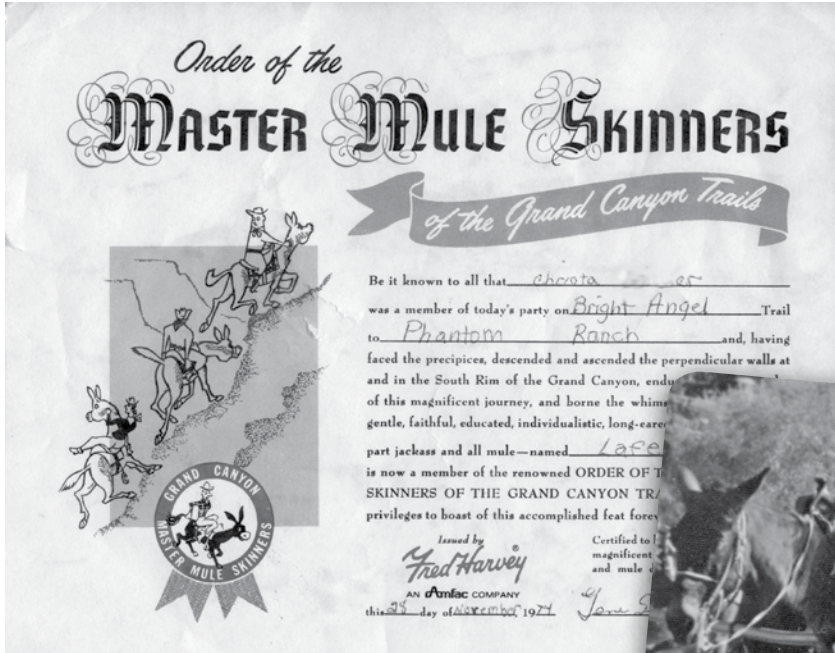
Bill Mooz

FOOTNOTE: As an example, if the river is flowing 14,000 CFS, it has a speed of about four miles per hour when the river flows through a 2,400 square foot cross section. If the river has this cross section both above and below the constriction, it will flow at four MPH both above and below. But if the constriction has a cross sectional area of 1,200 square feet, the velocity through the constriction must be about eight MPH so that it can maintain the 14,000 CFS flow below the constriction.

Christa Sadler

MY INTRODUCTION TO THE Grand Canyon came when I was twelve, I think. My mom and dad and I took the mules down to Phantom Ranch for Thanksgiving, and I just completely fell in love with it. We were down at the bottom of the Canyon, and I remember picking up a piece of the schist—or it probably was a piece of the granite—and the ranger telling me how old it was. Of course I pocketed it. I took it away...I stole a rock from the Grand

studied physical anthropology...all the east African... you know, Lucy, and Neanderthals and all that really cool stuff. So physical anthropology and archaeology. Just as I graduated, I started to date a guy who his parents and grandparents and the whole family decided to take a Colorado River trip through Grand Canyon. And I was like the big expert on Grand Canyon—right?—because I'm the only one that had actually ever been there. But all I could tell them was, "Wow, it's a really cool place. What an amazing trip, I'd love to do something like that." So they invited me along. It was seventeen members of their family, and it was a huge Hatch three-boat motor trip. We took up one boat, and then there were two other boats filled with other families and other people. And that was it! That was it. I'd just started to study geology at U.C. Santa Cruz, for graduate school. And Ted was a geologist—the guy that I was seeing—so we were kind of the trip geologists, and we'd sit there and pour over the Hamblin books, the mile-by-mile guide, and we'd tell everyone, "This is what



Canyon! I was twelve! What did I know? I was just so blown away by the whole place, and we kind of hiked around a little bit, and then took the mules out the next day. I still remember my mule's name. "Lafe." I still have my muleskinner's certificate. I'm an official muleskinner from the Grand Canyon! But that was kind of my big introduction. When we got to the bottom, it's not like I looked at the river and said, "Wow, I have to come back!" The river was just something we crossed to get to Phantom Ranch. I was more interested in the mules and the ranch and the cowboy lifestyle than I was in the river...

* * *

I didn't actually think about river running until 1985. (reflecting) Was it 1985? Okay, I graduated high school in '80, I went to college, I went to U.C. Berkeley and I

you're seeing." I just remember sitting on the front of that boat, this big motor-rig. I was sitting on the front the whole time just, "Okay, this is it, this is where I'm supposed to be." It was really cool.

I remember I wrote about this, one of the most vivid experiences—other than falling out at Unkar, which was really fun...

STEIGER: You fell off

the motorboat in Unkar?

SADLER: Well, I was sitting on the front; which is, I know, where you're not supposed to be. And we hit a big wave. It was high water. It was '85, so it was 45,000 or 50,000 [CFS]. It was still the high water after the big year.

STEIGER: Yeah. There's a wave there, in particular, that comes to mind. That one that feeds you left at the top.

SADLER: Yeah, that's probably the one we hit. I remember falling off the front, and just as I went over, I

grabbed...they had a chain around the front that you could barely get your fingers on... Ted grabbed my wrist, and I remember looking up at him and saying, "Don't let go of me!" And he pulled me back in. So that's a vivid memory—But the one that really hit me was we got to the Little Colorado, and when the water's that high, it pushed all the Little Colorado up into this unbelievable, blue... It was June, right? So before the rains. It was just this incredible blue color. And it was like this huge Olympic pool. There wasn't a rock showing, and we motored a ways up and parked. We were standing there with these little orange boats, little orange Rogue Rivers—didn't know it at the time—but they came puttin' on through, comin' on down the river. And there's just this bronzed, blond goddess in one of these boats, and she's got these four guys in her boat, and they kind of waved at us, and she went on out. I just remember looking at her and saying, "Wow, I wanna do that!" And that was Fritz.

* * *

Yeah. I loved the trip. It was a six-day trip. I remember seeing those little rowing boats and thinking, "I wanna do that!" I did ask Ted Hatch for a job. I was, what, twenty-three? He did the sort of metaphorical equivalent of patting me on the head and saying, "Thank you. Now run along and be a good girl." I wrote to him and asked for a job, and luckily he didn't give me one, because he might have, and then who knows, I might not have ever discovered rowing.

STEIGER: Do you remember who the crew was on that trip?

SADLER: Jim and Jane Blackburn were the two that really come to mind. I think they were from Alabama. They were the ones who were running the boat I was on most of the time. And there was a woman named Barbara. A guy named Dennis—he just had this wild red hair. I remember him because he had a t-shirt that I think it was one of those geology pun t-shirts that said something like "subduction leads to orogeny." And then I don't remember the other two, but there were six crew. I still have a picture of all thirty-some odd of us sitting for our group photo on the boats. Oh my God, that was a lot of people! I mean, I didn't think anything of it at the time. It was kind of like, "Oh, isn't this how all the trips are?" I remember we got to the end, and we flew out at Whitmore. I'm in my town jeans and my town shirt, and we're waiting for the helicopter, and I... God, it makes me sad even now to think about it. I just could not stop crying. I went down by the water, and I was kind of pretending to wash my hands. I was standing on a rock and kneeling by the water, and I

remember I was just crying, like, "I do not want to leave. I have to come back here." So that was my first experience with the river. I mean, I know a lot of boatmen have had the same experience, either started out as passengers, or brought along by an older brother, sister, friend, whatever. I know it hits everybody—or a lot of us—just the same way, just right between the eyes, like, "This is what you're supposed to be doing." In all honesty, I don't think anything ever in my life has been as clear as that, before or since.

STEIGER: Yeah, me too: three-boat motor trip, cried and cried and cried at the end. I didn't think I was gonna be doing it for the rest of my life. I did think, "I'd sure like to do that again."

SADLER: Yeah, I didn't think of it as a career, I just figured it'd be something I'd really like to do. And then you start and you can't imagine doing anything else. But when you start, you're in your early twenties—who's thinking about the rest of your life in your early twenties?! Two years from now was the rest of your life. I mean, all you know is that you're loving this more than anything. You're truly, incredibly, amazingly happy, and so just keep going. Then all of a sudden you've been doing it twenty years, or thirty years... or forty years!

STEIGER: Yeah. And then one day they don't let you do it anymore. Then you're really fucked!

SADLER: So you've got to find something else to do while you're doing it. Yeah. So that's my not-so-thumb-nail sketch.

* * *

Luckily for the entire Grand Canyon boating community, Christa Sadler has managed to find plenty of other stuff to do throughout her boating career. In addition to working for CanX, AZRA, Expeditions, OARS/Dories, Tour West and others, Christa did a stint as president of GCRG in the mid-'90s, and published a collection of stories written by Grand Canyon boatmen: "THERE'S THIS RIVER..." that now gets read aloud from or handed out on the river on a daily basis. Another book: "LIFE IN STONE," is a classic text on the fossil history of the entire Colorado Plateau.

This Adopt-a-Boatman interview was recorded in two sessions—September 24, 2007 and February 8, 2011.

* * *

Well, I was born in California and grew up kind of all over northern and southern California. My mom was a librarian, which now seems remarkably appropriate. My dad was a businessman, he did lots of different things. For a lot of my life he would be a general man-

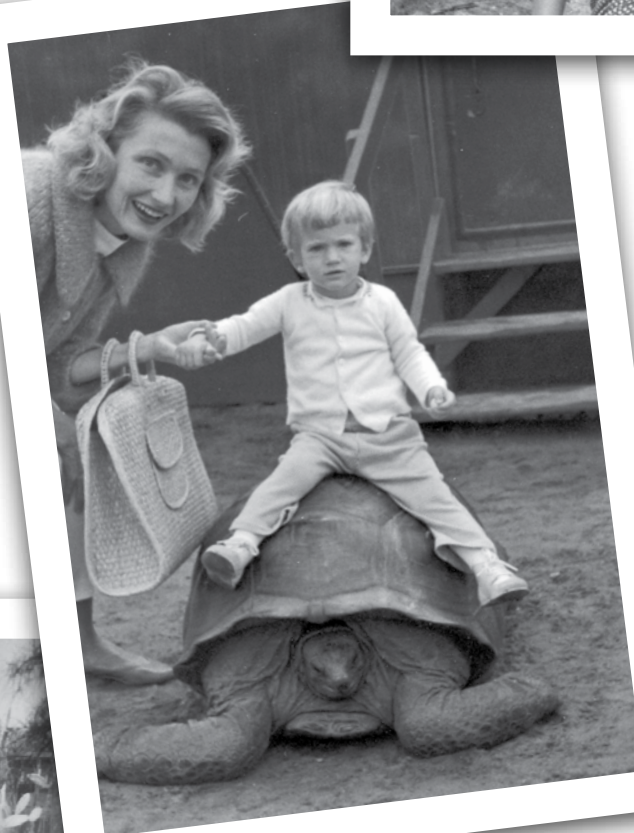
ager or manager of some sort of radio or TV stations, things like that. It was only in the last maybe ten years of his life that he became a real estate broker. I have one sister, so it's kind of a small family. I grew up as an incurable tomboy. I mean, probably some of my earliest memories are of me getting in trouble for having gone into the ocean when I wasn't supposed to, fallen into the water, gotten muddy. There's all kinds of pictures of me completely bedraggled as a little kid with a little bowl haircut. So I think it kind of made sense that I would end up doing something like this. I spent most of my life just outdoors. We grew up in the suburbs of these towns, so it wasn't like we grew up in the country, but I was outdoors as much as I could

be. Even when I was a kid, I remember being really interested in archaeology. My mom would take me to local archaeology digs from the community colleges and stuff like that.

My mom and my sister and I spent two and a half years in Tucson when I was seven, eight, nine—right in there. She and my dad were separated, so we moved to the desert, and I loved it there. I was really sorry to leave. When they got back together, we went back to California. I was very sorry to leave, I loved it



2.5 year old, Mt. Diablo CA



San Francisco Zoo, 1964.

in Tucson. But that was kind of my first introduction to this part of the world. My parents had met at the University of Arizona, so they knew about it, but that was kind of my introduction.

My mom would always take me to Indian dances. I grew up going to the Hopi mesas for dances, and going out to New Mexico for the pueblos there and going to their dances. My mom loved this part of the world so much. Her interest in it was really cultural. Mine just

sort of started to evolve into more of a natural history interest. So I was just fascinated by the rocks and the plants and that kind of stuff.

* * *

STEIGER: How did you get from that first Hatch trip to actually gettin' a job?

SADLER: Well, that fall I entered Santa Cruz for grad school, and I wanted to study geology, but kind of



Christa, age 5, with her sister in Tucson, 1967.

started studying it sort of on my own beforehand. I just said to myself, “Okay, I have to learn how to row.” So I started lookin’ around, and I checked into all these different schools: Friends of the River had a school... ARTA, yeah. And the one that... I don’t know why I ended up with this school—maybe because it sounded like I would get more hands on than anywhere else, but I don’t know if that’s actually true. It was a little school run by a company called Sierra Whitewater Expeditions. They’re now out of business, but it was just a mom and pop organization out of Springfield, Oregon. They offered a school that was basically a week long, or five days, something like that. You spend a day on land learning how to tie knots and load a boat and read water, doing all the ferry angles, the little “football” diagrams... Yeah, they drew it out. And how to read rapids. Then we went and did a four-day trip on the Rogue. So I drove up there with my little blue 1972 Datsun pickup, and did it! And it was fantastic! I was not a star student, by any means. I’ve never been a water baby. I’ve never been one of those people that just—you know, you hand them oars when they’re fifteen, like Katherine MacDonald [Spillman]. Brad said she was just a natural. Well, that’s not me. But I loved it, and I made some good friends there. And they hired eight people out of that class, to work for them that summer, and I was one of those people. So I went up in the summer of ’86 and ran the Rogue, the Deschutes, the McKenzie River. I ran a bunch of rivers, which is actually really good, because I didn’t get stuck on one river, only learning one style of

water. Because they ran so many different rivers, while I never got really good at one river, I learned—like the Rogue is pool and drop, so I learned about pool and drop. And then the Deschutes is kind of pool and drop as well. But some of the other rivers were more—like the McKenzie was a lot more continuous whitewater. I got to do the Upper and Lower Klamath, and those were really fun. That’s some good whitewater. I’d like to go back and do it now and see how well I do! The whole time, everybody’s talking about all the places they want to run, and they’re talking about the Selway, and they’re talking about the Illinois, and they’re talking about all these gnarly whitewater rivers. I’m like, “I want to go back to the Grand Canyon.” And it’s so funny, because everybody’s going, “Grand Canyon?! That’s not very hard!” “I don’t care about hard, I just want to go back to the Grand Canyon.” So I spent that season, and the next year, in ’87, I went back to school, but then I decided, “Okay, I gotta get to Arizona,” and I quit. I came out here with the... Oh, what was it? The excuse I gave my parents is that I wanted to continue my master’s here in Flagstaff. (laughs) So I got a job at the museum [MNA], and I went back to school, but basically I just started knocking on doors all around the different companies. I had one season’s experience on these rivers in Oregon. It was the right time, and I must



1986 training trips on the Rogue.

have talked a good line or something, or they were looking for women, or whatever, but I got four companies to give me four different baggage boats, so my first season I did four trips. I worked for AZRA, Expeditions, Dories, and CanX. And of the four of them, CanX was the one that had a job for me. They were just starting, and they were looking for women, and they seemed to really appreciate the fact that I came with this natural history background, that I just wanted to do interp and talk to people. They seemed to value that, which was nice. I think in retrospect, all of them do. So I guess I just bugged people enough to get a job. And I'm not sure that would work these days. I think the late eighties might have been this middle ground between the women of the seventies—Ellen Tibbetts and all the people Louise [Teal] wrote about in her book [*Breaking Into the Current*—and then all the young gals now, seems like every company has a few. But it's like the eighties were sort of this weird time when a lot of the women from the seventies were kind of pulling out of it a little bit, but the new generation hadn't come in yet. So I guess I just got there at the right time. I don't know if you could do that now, just show up, "Hey, I've got a half a season's worth of experience in Oregon. You wanna hire me?" I mean, now you've gotta have all this first aid and CPR and food handlers and six years of experience somewhere else.

STEIGER: Yeah, you've gotta be pretty committed, don't ya'?

SADLER: Yeah. It was great, it was the best thing. God, it was just the best few years. You had to do six trips before you could get your guide's license. Well, I think I did seven trips, and my eighth trip was as a guide, with passengers in my boat. Really exciting! My parents were mystified. I think they were mystified until the day they died. I think they understood it sort of at one level, but their need to make sure I was gonna be safe, and have enough money, and be able to take care of myself, was overriding all the rest. They're like, "Why don't you stop fooling around and get a real job?!" And I'm sure every boatman's heard that, too—or a lot of 'em. They never got it, because they never went down the river with me. They got it in the sense that my mom certainly understood how much I loved the desert, and how much I love the outdoors. But that was just so alien for them. It's not that they expected me to get married and find some nice man to take care of me—it's just that they thought I would take a little bit more traditional...maybe a professor...or working in a museum somewhere, or something like that.

STEIGER: Something that has a pension and health benefits.

SADLER: Exactly!

STEIGER: A salary. (laughs)

SADLER: Oh, that! Yeah! A paycheck. My story, I don't think, is all that unusual.

STEIGER: Yeah, sounds pretty familiar. My dad: "You goin' down there again?" (laughter) "Didn't you already do that?"

SADLER: "How many times do you need to do it?!" Think about how many times you've had a passenger say the same thing to you. It's like, "Well, I've done the Grand Canyon now. I think next year I'll go to..." wherever. And then there are the ones who come along and they're like, "Oh God, I've gotta do this again!" And they try to come back every year. And then they turn into boatmen!

* * *

STEIGER: I want to hear what it felt like the first time you actually rowed a raft down the Grand Canyon. What trip was that, and how did that feel?

SADLER: I was rowin' a baggage boat for AZRA, and I was so completely out of my element and overwhelmed. I mean, I thought I knew something from working in Oregon. So in Oregon I'm working with fourteen-foot Domars, bucket boats, with eight-foot oars. And I climb into a Havasu 3—bucket boat, but still... You know, absolutely big fat tube, no kick to the bow and stern, and I'm rowin' with eleven-foot oars. I mean, it felt like I had telephone poles in my hands, literally. I was so completely overwhelmed. I could not move that thing! And I had no concept. I thought I knew something about ferry angles. Well, they don't teach you a downstream ferry on the rivers of Oregon! You're tuckin' behind rocks and things, so you're usin' an upstream ferry, and you've got these little tiny rivers. I was so overwhelmed the entire trip. There were very few moments where I wasn't just like, "Oh my God, what am I doing here?!" I mean just classic, get to Horn Creek and they're like, "Okay, it's the right-to-left run." It was fairly low water, it was probably like 8,000 or something. They're like, "You see that right horn there? You want to cut as close to that thing as you can, pulling as hard as you can." I'm like, "What if I hit it?" "Trust me, you're not gonna hit it." "But what if I hit it?" because where I came from, you could have hit that rock if you tried.

STEIGER: Oh, I think you still can.

SADLER: Yeah, if you know where to start, you could hit it. But I wasn't gonna hit it, I was nowhere near. I was used to "wait, wait, wait, wait—tuck!"

STEIGER: You gotta get some strokes in, yeah.

SADLER: And I had no concept of momentum at all. Of course, you know, just right into the guts of

the whole thing, hit the rock at the bottom, sideways, almost flipped. I had a tear in the bottom of the boat where the cooler buckles were below the cooler—the strap buckles. So I was up on the rock like that. I mean, I was so overwhelmed. I felt like a five-year-old kid trying to handle this boat. Honestly, my memory now is that that's how I felt the entire trip: because again, I wasn't a natural, I wasn't a water baby, and I was working with some people who were a little bit trial-by-fire kind of guys—no names! (laughs) But they were sort of, (gruffly) "If you want to be a boatman down here, you gotta know how to do it!" (laughter) You know, we get to Lava and... You know how at the very top of the right run, the water does this thing where you're following it along, and then it kinda sweeps left, but then it goes back right, and you just have to wait it out. I still wasn't reading the water really well. I remember we're up there scouting, and I'm like, "Oh my God! This is horrible!" We get back in the boats, and we're pushing off, and one of the boatmen yells to me, "Hey, just watch out at the top, 'cause the water's gonna do something you're not expecting," and then he's gone. I'm like, "What?! What's it gonna do?! Could you be a little more specific?!" And so I went down there, and the water started to sweep left, and I thought, "Oh my God, we're going into the ledge hole." Because it was the only thing I could see the entire scouting time, was this massive...

STEIGER: "Don't send me in there!"

SADLER: Of course so then I spun the boat backwards, because if I'm going into the hole, I'm gonna go in straight, not sideways, and I was set up more to spin backwards. And we floundered down the right, just like you always do, but completely out of control. It wasn't until my next trip, which was days later with Expeditions, that I... I mean, it wasn't like a month later, or three months later—it was three days later, or like two days later, that I went up with you guys to do that. And that's when I find, "Oh, okay, I recognize some of this stuff." And I was rowing a Rogue River, which was like a Cadillac.

STEIGER: So that boat seemed easy after that AZRA boat?

SADLER: Oh, it was totally easy, even with the dance floor. Remember how their baggage boats had....

STEIGER: I remember it totally. Don't get me started!

SADLER: It had enough diamond plate to build a spaceship out of! And even with all that, it felt so much easier than that Havasu.

STEIGER: I thought those little Expeditions boats were pretty heavy. Well, you're a good bluffer, because you seemed totally comfortable on that trip.

SADLER: I remember a few times when I'd sort of

wake up in the morning and I knew there weren't any rapids for the day, and I just felt a little more relaxed and just finally able to look around and see the canyon, instead of this overwhelming feeling of whitewater all the time. And those moments, I think, got me through. I won't say I was terrified the whole time, but I felt really out of my element and really overwhelmed. But it slowly got better. Oh, man.

STEIGER: I didn't have it in my mind that that was your second trip ever.

SADLER: That was my second trip ever.

STEIGER: Who was on that? That was like....

SADLER: With Alan Hayden, and the Jeffs, Dennis Harris, and you.

STEIGER: Alan Hayden, Geoff Gourley, Jeff Behan, Dennis Harris, and me. Yeah. Oh my God.

SADLER: I came off of that trip and like, "Wow! Boatmen can be fun!"

STEIGER: Yeah. Those guys were always so much... I don't remember ever doin' an Expeditions trip where you weren't just holding your sides, rolling on the sand, laughing the whole time.

SADLER: Do you remember—I'm sure they did this a lot—but I remember I think it was the pre-Lava party, Dennis was doing the weather reports, and this is when he talked about Diamond Creek flash flooding and Peach Springs was at the bottom of Diamond Creek Rapid. But they all took magic markers, and they labeled everything on one of the boats—everything! You know, the rubber—front right tube, front left tube—all the boxes, the oars, the spare oars—they labeled everything. Oh, God, I still remember that.

STEIGER: I can't believe we did some of those trips and anybody ever hired us again!

SADLER: (laughs) It was very fun. I think being with the boatmen.... I mean, it was truly the freest that I've ever felt. I had some kind of wild times. Just I'd never grown up in a community like that, and never been part of a community like that, where everything was just so much fun, and everybody was just—they worked hard, they played hard, and it was just really refreshing to me. Even the people who were hard to get along with were working hard and playing hard, and there was just this true sense of being in this rather dysfunctional, but fun nonetheless, family. (laughs)

* * *

You know, again, my story isn't all that different from any of the boatmen. To start with, I was in the most beautiful place I could ever imagine being in. I've always been a great lover of manual labor. I mean, that's part of the tomboy in me, I love manual labor. So to

spend your days just working, in such an incredibly beautiful place, it was like heaven. Who needs to die to go to heaven—I'm here! And the river was this wonderful presence. She... I always think of the river as a "she." I suppose a lot of people do. The river stopped being The River and became this personality. So the river is kind of the ever-present mother, teacher, lover, friend, whatever it is. So there was this wonderful presence. And then, I'm not gonna lie, there is something so incredibly wonderful and powerful about having all these people look at you and say, "Wow! You're so incredible! Look at you! You can row this boat! And you can cook! And you can hike! And you climb around in your little flip-flops! You're just so amazing!" I guess I'm as vain as the next person. It was like complete and utter acceptance for whatever it was you were doing. You come from a world where, for whatever reason, you need to get better grades, or you need to do this, you need to do that, or you're not quite pretty enough, or you're too whatever—just all the stuff that we have in our world up here. Then you go down there, and it doesn't matter what you look like, doesn't matter how well you did in school, or what you might end up doing for a living with your life, or how much money you make or don't make, you're just loved. That, at first, was really powerful. I think in more recent years I've come to recognize that we're not any more special, I'm not any more special than anyone else, we're just good at what we do, and we're doing it in such an amazing place. I think Tim Cooper said it really well when he said the actions of the men and women down there take on the grandeur of their surroundings. And it's true. Nobody says, "Wow! thank you so much!" when you open the door at the post office. So I think that's faded a lot, but in the beginning it was just an amazing sense of confidence. I mean, I was beautiful down there. Why do all those boatwomen wear these great dresses, and they put on all their best jewelry? It's because we're beautiful down there, and the men are incredible. It's just this wonderful—in the beginning. You start to see a lot more later.

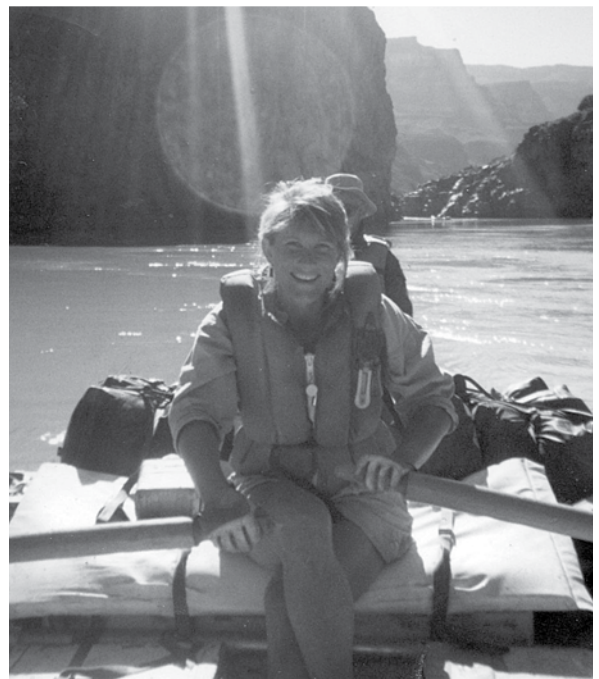
STEIGER: How's that Vaughn Short poem go? "Girls get prettier, the men get wittier!"

SADLER: Exactly. Obviously I'm exaggerating, but I did, I felt so beautiful down there, just using my body all day long, using my muscles and hiking. And then you're in this incredible place, and you're meeting people under the best of circumstances, which is both a positive and a negative thing in a way. I mean, they're on vacation, so they're free, they're not worried about the usual things that make people grumpy. But they're also in your care, and so that makes them a little more likely to... what's the word? It makes it a little easier to sort of mold the trip as you want it to...

You watch people, and they're doing things they've never done before—or maybe they did when they were seven, but now they're forty-seven and they're not doing it anymore. And they come to you in the morning, "I couldn't believe the stars last night! I haven't seen stars like that since I was a kid." Or, "I've lived in New York City my whole life, I've never seen stars like that." There's something really powerful about that. I think that's part of what kept me going all those years. It was probably selfish, I was having fun and loving it. But it was also just watching this place through these people's eyes, and knowing that that's what they were here to do. So anything I did to help them do that was great.

* * *

I had a guy on a trip many years ago, his name was Dave, and he was, I think, probably in his early thirties. He was blind, and he'd lost his sight slowly over time, but by the time he was about thirteen, it was pretty much gone. I think he had the ability to see some weird shapes from the corners, but nothing that you could actually see. And this guy hiked everywhere. We got him to the top of Tabernacle. He went up and over Surprise Valley. I mean, he was incredible. I ended up being one of the people who hiked with him most times, and I think it might have been a combination of my height and.... But what he would do is basically



First paid guiding trip with CanX.

I would go in front of him, and he would hold onto my backpack. At first, I find out I've got a blind guy on my trip, I'm like, "What kind of experience is he gonna have? How can we possibly do anything with this guy? It's the Grand Canyon, it's a visual experience." And it was so amazing to me, because his experience of the place obviously was very different from mine. When I was hiking with him, I started off by trying to explain every rock in the path, "Oops, go to the left here, oop, we're gonna step down." And after a while he said, "You don't have to tell me that much, I can usually feel it pretty well." And it got to the point that towards the end of the trip we'd hike for hours and we would never say anything about the trail. We'd have conversations, or we'd be in silence, but I just learned how to slightly exaggerate my movements, if I was stepping off a rock, so that he knew there was a downstep, or step to the left slightly. And the only time I would ever need to say anything was, "Oh, you've got about three inches between a prickly pear and an agave, so go really carefully." And he loved it. He would come back just filled with cactus spines, beaten up, scraped up. We'd pull the cactus spines out of him and bandage him up. I think that's where I kind of—it really gelled, that my job is not to do everything for these people. My job is not to be everything, or keep them safe from everything, or make sure that they have this particular kind of experience. My job is to be there, and help them have whatever experience it is they are gonna have. I asked him at the end of the trip if he wouldn't mind describing to the group what did you "see," experience, while you were here? And he described the sounds, how he could tell the differences between the side canyons by the way they sounded, or the way the walls felt. It was just a really powerful thing, because I wasn't...I mean, I was part of that in the sense that I helped him hike to those places, but I wasn't part of it in the sense that he had completely his own experience. I really appreciated that, I loved that. To me, that was one of the best trips I've done as a guide. It was like the true meaning of being a guide is to just be there to facilitate, but not to have the experience for the person.

* * *

STEIGER: After *There's This River...* you've published a couple of others. I'm sorry that I don't know your whole bibliography, but I know I've seen several books.

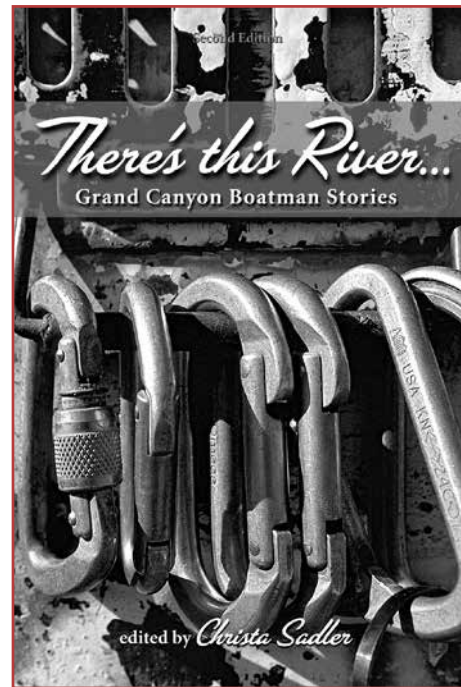
SADLER: You haven't been following my career?!
(laughter)

STEIGER: I can barely remember my own, much less those of my friends!

SADLER: Well, I've got the book *Life in Stone*. That's

basically sort of the history of life on the Colorado Plateau, so I've got that out. And then just a lot of journal articles and magazine articles and things like that. I like natural history writing, because it never felt to me like I was going to be

one of those people who was out there doing primary research, being the P.I. in an investigation, and scientific research, and teaching at a college, and getting tenure and all that. I love research, but I like the kind of research that goes with writing to translate things for the public. That's always been my love. I'm glad I have the training that I have [a Masters from NAU in Earth Sciences], because it allows me to talk to researchers and translate their research, translate their results, and then turn it into something that hopefully is useful to people who aren't trained. I don't know, I think geology's really interesting. (laughs) And I think when people say, "Oh, geology, that's really boring," it's probably because they had really boring teachers, or nobody ever helped them connect the dots. I mean, especially if you're spending all your time in a place like the Grand Canyon. But everywhere, it's really fun to know what this place used to look like before we got here, and what it might look like in the future, and just to know how mountains were formed, or oceans were formed, or things like that. I think that's kind of become more of my focus with the river trips now, is doing like I mentioned, these educational trips, because there's nothing saying you can't do that while you're also going downstream and having a blast. So you can have the water fights and the hikes and doing all that kind of stuff, and having a wonderful time, and just sitting and enjoying the scenery, but it's also, I think it's really wonderful for people to have a sense of the place they're traveling through as well—all aspects of it, the biology, and how the river works, and the Indians that





used to be there, and the miners...and the geology. That, to me—and I think I’ve seen from my guests as well, it just adds to the place, it makes the experience richer and deeper. Now maybe they won’t remember the age of the Tapeats, or exactly what John Hance was doing there, but while they’re there, I think it enriches the experience for them. I like doing that, and that’s what I do with the writing as well—I hope.

I’ve just finished the first draft of a new book which is about the beginning of the age of dinosaurs, petrified forest, and the Chinle Formation, the Painted Desert, all that stuff. So it’s not to do with Grand Canyon, but all that stuff was at Grand Canyon—it’s just eroded away.

STEIGER: Just above.

SADLER: Yup, just above Grand Canyon.

* * *

STEIGER: I want to hear one more river story, and then I’ll get off of that.

SADLER: Oh man, I’m tryin’ to think. Obviously, most river stories that people remember are the calamities. I’ve had a few of those. I haven’t had probably as many as some people.

STEIGER: I count the story you just told about the blind guy.

SADLER: Yeah, Dave.

STEIGER: I mean, tell me a guiding story.

SADLER: I’m thinking of one in particular that I think in a nutshell it maybe helps explain part of why I’ve stayed there all these years. It’s not so much about the Canyon, but I guess it’s about what the Canyon can do

to you. It was, again, many years ago, and there was a doctor from Montana and his wife, on the trip. They were just great folks—young couple, I really enjoyed them a lot. Had a really good time with them. But I remember around day ten something really specific happened—I met Jay at the coffee table in the morning, and he was drinking his coffee. I said, “What happened to you? You look absolutely amazing.” And he did. I mean, it’s like I never noticed it before. It’s not like when he came on the trip he was all tense and nasty or anything, but his whole face had just softened, relaxed, and his eyes were clear, just incredibly clear and blue. And he just gave me this huge grin and kind of laughed and didn’t really describe it. We went on

down the river, and the last day he’s in the ducky, and you know that little rapid just above 220? Trail Canyon. That real swirly thing up against the wall. He was like, “What should I do here, Christa?!” I said, “Jay, you’ve been in that thing the whole trip. I can’t help ya, you’re on your own now!” And he blasted on through. Okay, trip’s over, we all go out to the trip dinner, everything’s great. About two months later I received a letter from him, and he told me about just all these things that had happened to him in the last few years of getting his schooling and becoming a doctor, and the tenseness. I don’t want to divulge any details, but basically he said that that trip had completely broken him open. It was partly the Canyon, but what he told me, he said it all came together when at the very last day I told him, basically, “I’ve told you everything I can about duckying, and there’s not much else I can do. Now you’re on your own.” And again, I know this happens with every guide, it’s not unique to me—but he said, “You helped heal a healer.” I saved that letter, I still have it. This is like twelve, thirteen, fourteen years later. Again, I realize it wasn’t so much about me, but I was so honored to have been present at that transformation for him. Because it’s lasted, we’ve stayed in touch and it’s lasted, and he’s a really happy person now. I was just so incredibly honored to have been present in the room when that happened. And whatever role I played in that, I just felt really grateful. I think there’s something about the simplicity of life down there, that allows people to get a glimpse of who they really are, or who they want to be. And whether they stick with it or not isn’t our job to determine, but to be present when those things happen is really an incredible honor.

* * *

STEIGER: Well, you got a master plan now where your guiding's concerned?

SADLER: (laughs) Oh, God, the question. Obviously, I still absolutely love what I do, and I would love to continue to do a few trips a year—not a few in Grand Canyon, maybe one or two in Grand Canyon, and then one or two somewhere else. What I'm finding as I am at this point in my guiding career is that I want to give back a little bit more than I think I've been doing. And I know that as a guide you're giving to people, you're providing a service, but I think that I'm finding...I've been incredibly lucky to live my life exactly the way I've wanted to, up until this point. And there are a lot of people who haven't had those opportunities in their lives—whether it's little kids or people in other countries. I think that I want to go and try and find a way to use some of the skills that I've learned here—whether it's organizational skills or teaching skills or whatever—and do that. So I'm looking at some different opportunities.

I want to keep writing, because I love writing, but you can't make a living writing—unless you're Stephen King or somebody like that.

* * *

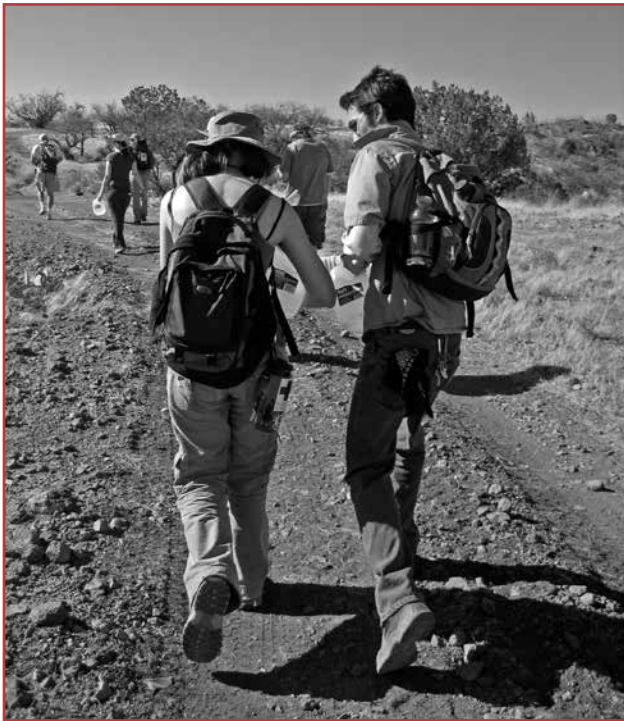
I remember one of my favorite things to say as a kid to my dad was, "It's not fair!" You know, my dad would always say, "Well life ain't fair, kid." But that little refrain, "It's not fair," has been with me ever since I was a kid, and I just see these things happening that aren't fair, and I want to try and help. So that's kind of what I'm [also] doin' these days...

I really started working pretty...well, sincerely, for lack of a better word...with a group that does humanitarian aid on the border with Mexico—the Arizona-Mexico border. The group is called No More Deaths. "No mas muertes." What we do is try and offer direct humanitarian aid—water, food, medical help—to people crossing the desert, coming up into this country, who are in danger of dying because they've been pushed into the most inhospitable parts of the desert by our government's policies and by the wall that we're building. Between that and going to—we run an aid station in Nogales, and we help manage a clinic there to give medical help to people who've been deported, either as migrants crossing the desert, or they've been picked up in this country, in raids, after living here for



ten, fifteen, twenty, thirty years. They've been picked up in raids and then sent back to this place that isn't even home for them anymore. So we go there, and work with them, and do everything from medical help to helping them get their belongings back that have been taken away by Border Patrol. In Mexico, we have a phone they can use to call family members to let them know they're okay. Things like that. And to me, that is one of the most important things that I do. It's not right what's happening out there, and people should not have to die to take care of their families. And that's what—99 percent of the people we run into are just really simple, basic, genuine folk, country people, and they're trying to take care of their families.

You know, the causes for all this are huge, and we try and address some of that. We do a little bit of political activism, but the biggest thing the group does is just direct humanitarian aid, and I feel real strongly about that. It's kind of weird to say it brings me joy to do this, because it's the saddest thing, I think, that I've ever had to do, but I can't imagine not doing it. Some of the people I've met are the kindest, most genuine, gracious people. I would have any one of them as a neighbor, happily. They've gotten the short end of the stick their whole life—started out poor, and it's only getting worse. And that's some things our government has done, some things their government has done. So that's one of the things that I've been doing lately... I think our logic behind this is no matter what you think about somebody doing this illegally, or how they should do it, or what our government should be doing about immigration, nobody should have to suffer and die to take care of their families. The reason they're



Working along the U.S.-Mexico border with humanitarian group No Nore Deaths.

coming through the way they're coming through now, is because we've made it impossible for them to come through in the cities. I mean, we built these walls and created an absolutely impossible situation. When people look at us and say, "Well, why don't they do it legally?" they have not looked at all of the facts. It is basically impossible for any of these people to do it legally. It requires so much money, and so much time, and you have to have an address, which many of these people don't have—a mailing address. You have to have property to go home to. You have to have friends or relatives who have enough money to sort of vouch for you. I mean, these are the poorest of the poor. And now we're also making it impossible because when they get caught they're charged with a misdemeanor crime of illegal entry. If they get caught a second time, it becomes a felony, so they're now felons, and we don't allow criminals into our country. We don't allow known felons. I'm not sure, but I think even the misdemeanor crime, we don't allow those people into our country for "X" number of years if it's a misdemeanor. And for a felon, I don't think we allow them in. So now we've created a whole criminal class of people that we can't let in, we won't let in. We need to come up with a system that allows people to come in to work. Most of the time all they want to do is work. They don't want to come here, they don't want to take over our world, they don't want to have all their babies and make citizens in the United States. Most of them, the vast majority of them

don't want to stay here. They want to go home to their families and their culture and their friends. They just want to come up and earn a little money.

* * *

STEIGER: Now earlier—I don't know if we got this recorded or not—but... Okay, we are recording.

SADLER: (laughs) Great! I'm not saying all that over again!

STEIGER: Just kidding. (laughter) But you said that lately you've felt reconnected to the river as well. You felt like you were kind of, like it was time to...

SADLER: Well, I noticed a few years ago—and it wasn't just about the river, I think it was about everything in my life. There were a lot of things going on that were really hard—a relationship that just went Antarctica south—that's how far that one went. And age, health issues, whatever. I was just not really... I was doin' not so great in my life. I was still doing a lot, and people looking at me on the outside wouldn't have thought that, but inside I was really not doing well, and it was showing on the river. I was tired of it, I was cranky, I wasn't getting along with some of my best friends on the river. The only reason I was able to maintain it with the passengers is because I was getting paid to. But sometimes I just wanted to snap at them. I just felt cranky and impatient. I didn't find beauty in it anymore. And so I was thinking, "Well, I'm prob-

ably gonna have to leave if this keeps up. I am gonna get forced off, if it doesn't change, and if I don't move myself off the river."

I finally kind of accepted that I was depressed, suffering from depression. I still didn't want to do anything about it, because of course river guides can handle everything! And I couldn't drink because I can't drink, I'm allergic to it or whatever, but it makes me sick, so I didn't have that to go to. I'm not really into drugs. So I didn't have anywhere to go, but I'm just like, "I can do this myself, I can take care of it myself," only I wasn't getting any better. And finally a really, really dear friend of mine sat me down on this one trip where I was just in bad shape. He sat me down and he said, "Look, Christa, if you were a diabetic, you wouldn't refuse insulin, right?" And luckily I'd just taken an online psychology class, and in the book they talk a lot about—one of the chapters is about depression and the physiological underpinnings for depression, and that sometimes... I mean, granted, our country tends to overmedicate—we'll overmedicate for the slightest thing, and we'll take pills for depression when maybe all we're feeling is a little bit sad about a particular event or whatever. But this chapter was talking about there's pretty compelling evidence for a physiological underpinning for some depression, that your body just can't—the neurotransmitters are not working right in your brain. And I thought, "Okay, I'll give it a try." I actually went to the Whale Foundation, and that's how I got involved with the Whale Foundation, which is the other thing I'm working with now—yet another thing. I went to them, because I partly thought, "Okay, confidentially, whatever, I don't care about that," but I figured that they would understand, because it's a bunch of boatmen, and it's boatmen and people who know the boating community and working for boatmen. "Okay, I'll..." whatever. So I called them and they put me in touch with some people. The upshot of the matter is that it was kind of a lifesaver in a way. I kind of rediscovered my love of the river, and maybe that happened at the same time as I started just rediscovering a love for my life. It all sort of came at the same time. I love my life now, and I love being on the river, and if I have to leave the river I'm okay with that, but I want to do it on my own terms, I don't want to be forced off because I'm too much of a bitch, or I'm not enjoying it, or whatever. And probably for the first time in my life, in the last couple of years I've found things that matter to me as much as the river does, and that gives me as much joy as the river does, which is crazy, you never think that'll happen, but...

STEIGER: So tell me again what those things are?

SADLER: Well, working on the border, working in

Nicaragua with this little house-building project. I've gone three years now.

STEIGER: That's a different thing?

SADLER: That's a different project. I'm loving my writing again. I'm loving my teaching again. I've started this scholarship program that I just got this idea for it when I was in Nicaragua this last time in January—a scholarship program to provide aid for young women in other countries to go to either better schools, or any school, if they don't have the money to do that in their towns. We just got our non-profit status. We'll see how that goes.

STEIGER: Yeah, and you showed me a picture of this. You have a beneficiary already picked out.

SADLER: I have a beneficiary.

STEIGER: And you're just gonna write her a check, huh?

SADLER: Well, no, that's not how it works. Okay, so three years ago I got involved with a little project in a town in Nicaragua, a little town called El Sauce, which is spelled like "sauce." It's a little project called the Four Walls Project, and we go down, we work with local families, really poor families, to help them repair or build homes. We raise the money to buy the materials, and they have to provide as much of the labor as they can, some of the materials. It's a real joint effort. So I've been doing that for three years now, and this last time I was down there, one of the young girls who was working on a house with us, she's thirteen, and her name is Ana Regina Davila Mendoza. And we all just fell in love with her. She was helping us every step of the way. She's smart and talented and she was... with us every step of the way. She was mixing mortar and placing bricks and filling joints. This is not something she's done before, she just picked it up in a heartbeat. My first thought was, "Oh God, I want to adopt this little girl." I mean, she has a mother, and she has a grandmother. She's living with her grandmother. But I realized that her mother had her when she was fifteen. Her grandmother had her mother when she was fifteen. And I realized, here she is, she's thirteen, she's gorgeous, and she's probably going to be pregnant by the time she's fifteen or sixteen. And I realized in five years we're going to be raising money to build her house. It's just going to be this cycle that continues and continues and continues. And it's wonderful, it's important, it's absolutely necessary to help these people have more secure, more private homes—safer, stronger homes—but somehow there has to be a way to break out of this cycle of poverty and women. Women are the ones that hold these communities together, and they just have babies. They just keep having babies at the age of fifteen and sixteen. You see these little girls with



Building houses in Nicaragua.

babies. And so I talked to some friends in town, and got the idea that...I just asked them, “What could I do to help this little girl? Could I get her English classes? What could I do?” A friend of mine recommended that I see about paying for private school for her in town, which would be a much better education, and it’ll put her in contact with people who know about a future, who know about an alternate future. So I went and talked to the grandmother and the mother and I talked to Ana Regina all together, and I said...I kind of lied in the beginning and I said, “I’m part of a group in the United States that provides scholarships...” Because the one thing you don’t want to do is kind of pop into these towns and be the fairy godmother, that you’re this individual person who provides money for things. It’s better if it’s an actual group—even though it was just me. (laughs) And they were very excited, because the first thing was, “Do you even want to do this? Is that something you would want to do?” And she had a grin on her face a mile wide. It was so beautiful to see. She really wanted to do it. So over the course of the next few weeks, I got her set up, I paid her tuition, I bought her uniforms and her school supplies, and shoes, and a backpack, and all the stuff she needs to go to school. And she needs a little extra tutoring to get caught up with the level that they’re gonna be at. And the total whopping price for an entire year, all her clothing, school supplies, everything, plus extra tutoring, was

about \$300—a little less than \$300.

So on the way home—well actually, even before I started going home, I was there, and I thought, “Okay, this time it is just me, but why not start an actual group, an actual program? Why not get donations, maybe even turn it into a nonprofit so people can donate and it’s tax deductible.” So I decided to do that. We’re called One at a Time, with ONE standing for One New Education. It’s not just for Latin America, it’s not just for Nicaragua, it’s for anybody, if anybody meets somebody when they’re traveling, a young woman—I really want this to be for young women, because they really are the glue that holds these communities together, usually, and they don’t have a lot of op-



Ana Regina

tions other than having babies—which is fine, but I think that it would be wonderful to have an education first and see if there’s other things you want to do before, or in addition to having babies. So anyway, we’re going to see where it goes, and I’m just super-excited about it, and Ana Regina will be our poster child if it works out. And it

may not, maybe she won't do very well in the school. Or maybe she'll fall in love with a boy when she's fifteen and get pregnant—I don't know. But I just feel like we go to these countries and say, "Oh my gosh! you could do whatever you wanted!" But not without our money, they can't; and not without an education they can't; and not without some help. It's one thing to tell somebody that there is a future out there, and that there are other things out there, but then to not offer the resources to take advantage of that future, is crueler than not letting them know there's another future out there. We come in with our gadgets and our toys and our nice clothes and our ability to just fly in for a thousand-dollars... I mean, my ticket to Nicaragua would basically put her through her whole years of essentially high school in this private school. It's basically going to be about \$200 a year. This year was a little more expensive because of the extra tutoring, but most people spend \$200 a month on Starbucks in this country. (laughs) I mean, a lot of people do—I don't, but a lot of people do.

STEIGER: Or beer, at least.

SADLER: Yeah!

* * *

SADLER: You're gonna have fun trying to go through all this.

STEIGER: Yeah. Oh well. Let's just take a deep breath and think about what else you might want to fit into this document.

SADLER: Oh gosh... I don't know. I just feel really lucky that I rediscovered my love of the river.

STEIGER: How's that lookin', where are you at with the river, say, for this year?

SADLER: I've got one trip in the Canyon, my Grand Canyon Field Institute trip that I do in April. And I am really happy to do that trip, I'm very excited about it. I've got one or two trips up in Alaska, and I'm really excited about those. And if that's all I do, that's okay, because I want to take another biology class, and I want to get back to the border, and work on my book. And maybe I'll do another trip in the Canyon. Maybe I'll find room for another one. But I've got an EMT class I'm taking in July and August, and I'm busy, and feeling really, just excited about everything. I don't have to be on the river all summer and all the time. But I did get my private permit for 2012, which is the year I turn fifty. I'm doing a solo thirty-day trip in February.

STEIGER: That'll be interesting!

SADLER: I just thought that would be an exceptionally wonderful way to celebrate my fiftieth year on the planet, would be to spend 20, thirty days alone with the

Canyon.

STEIGER: Now what kind of boat do you have?


SADLER: I have a little fifteen-foot Avon Expedition, self-bailer. It's a great boat, I've rowed it in the Canyon before. She's so maneuverable, and she's light, and she's got big tubes so she's real stable. And I can get to places to avoid things if I need to. (laughs)

STEIGER: Yeah, there's a couple places that come to mind.

SADLER: Yeah, exactly. Well, and I've got it all planned out. I have a dry suit, and I have it planned out that I'll have kind of my survival pack under my dry suit. I'll have a sat phone and fire and a little bit of food—maybe a space blanket, something like that—in case I flip and get separated from my boat and can't get my boat back, I'll at least have that stuff with me, strapped to my body, under my dry suit.

I mean, I'll have a flip system. I just don't know if I get thrown away from my boat and I can't get back to it... I mean, if I flip and I get my boat to shore and I have an upside-down boat, somebody will come along, no problem.

STEIGER: In February?!

SADLER: Yeah, February is so busy these days, it's amazing... Somebody will come along and help me re-right my boat. But actually, I'm hoping to bring a come-along, so that if I flip my boat—I won't be able to flip it back over by myself, it's gonna be loaded for a month—but if I can attach the come-along and use that, I might be able to pull it back over—or I can "Z-drag" it—something like that. I'll figure it out. Knock on wood. I hope I don't. I'm really excited, because... My only "rule" per se—"rule" in quotations—for myself is that I can't camp anywhere I've ever camped before. Yeah. So I'm gonna pick some really weird camps. Maybe half the time I'll be just chocked into the wall. So I'm excited about that. I think it'll be a new... There's all these things I want to see and do, like I want to get up... You know that ponderosa pine that's above Horn Creek, when you look up and see it at the top of the schist? I want to climb up to that. I think you can—it's just a crack in the schist. I'm sure somebody has. But I want to climb up to it, and I want to see that pine tree. I've just got all these little places that I've been looking at. 

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July 1, 2010 – June 30, 2011

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Pete Gibbs interview:

Bego Gerhart Mark Braden

Brian Hansen interview:

Steve Lonie Mark Braden
 Loren Swartley

Amily Quayle interview:

Anonymous

BOATMAN'S QUARTERLY REVIEW

Kevin Fedarko Phil Smith
 Allyson Mathis Vince Welch

GUIDES TRAINING SEMINAR
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GENERAL CONTRIBUTIONS (\$5,000 AND UP)

Chaco

GENERAL CONTRIBUTIONS (\$1,000 – \$4,999)

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Tides Foundation advised by Mr. Drummond Pike
Martha Gaines & Russell Wehrle Memorial Foundation
Vanguard Charitable Endowment Program, advised by
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Grand Canyon River Guides, Inc.

Statement Of Activities

Fiscal year ending 6/30/11

INCOME	
Foundation grants	\$ 33,500.00
Membership income	30,696.00
General contributions	24,556.83
Government grants	20,359.00
Circle of Friends	20,041.00
GTS income	18,680.00
Sales (t-shirts, hats, etc...)	5,050.03
First aid income	4,020.00
Non-cash contributions	3,600.00
Memorial contributions	1,825.00
Fall Rendezvous income	700.00
Interest Income	484.57
Cost of goods sold	(3,351.15)
Total Income	\$ 160,161.28
EXPENSES	
Payroll & benefits	\$ 42,819.21
Contract labor	42,023.25
Printing	17,236.22
Postage	8,583.10
Rent	8,400.00
Food	5,308.41
Outside services & outfitters	4,272.33
Payroll taxes	3,402.20
Equipment rental	2,686.05
Liability insurance	2,621.02
Office expenses & supplies	2,606.12
Telecommunications	2,251.09
Meeting	2,062.06
Travel & per diem	1,997.97
Utilities	1,668.78
Depreciation expense	1,508.00
Professional fees	1,358.19
Honorarium	1,230.00
Repairs & maintenance	741.31
Other (bank charges, subscriptions)	495.10
Merchant fees	379.76
Donations & sponsorships	200.00
Total Expenses	\$ 153,850.17
Net Income	\$ 6,311.11

Grand Canyon River Guides, Inc. Statement Of Financial Position

	June 30, 2011	June 30, 2010
ASSETS		
Cash in checking/savings	\$ 51,891	50,907
Postage & security deposits	2,126	1,986
Total Current Assets	\$ 54,017	52,893
 FIXED ASSETS		
Computer & office equipment	\$ 41,265	41,265
Field equipment	5,025	0
Database	1,088	1,088
Website	4,863	4,863
Less depreciation	(42,614)	(41,106)
Net Fixed Assets	\$ 9,627	6,110
 LIABILITIES & EQUITY		
Accruals	\$ 0	1,741
Payroll liabilities	829	757
Restricted funds	278	278
Equity	62,538	56,227
Total Liabilities & Equity	\$ 63,645	59,003

Care To Join Us?

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

You can pay securely on the GCRG website at www.gcr.org or send a check to: Grand Canyon River Guides, PO Box 1934, Flagstaff, AZ 86002-1934. Note whether you're a guide member or general member.

\$30 1-year membership	\$16 Short-sleeved t-shirt size _____
\$125 5-year membership	\$18 Long-sleeved t-shirt size _____
\$277 Life membership (A buck a mile)	\$12 Baseball cap
\$500 Benefactor*	\$8 Insulated GCRG 20th Anniversary mug
\$1000 Patron (A grand, get it?)*	

*benefactors and patrons get a life membership, a silver split twig figurine pendant, and our undying gratitude.

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100+ Years And Only The Clothes Change



(5) In the Canyon's Depths, Looking up to Zoroaster Tower, From the Colorado's Brink, Grand Canyon of Arizona.
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*Universal View Co. Publishers
Studio Philadelphia*



—Venturing a little too near the Yawning Chasm, Grand Canyon, Arizona, U. S. A.

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