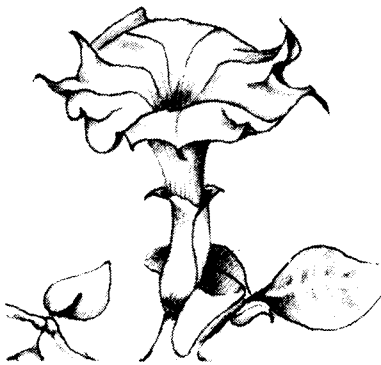


# The Confluence

The Journal of Colorado Plateau River Guides

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## Don Hatch: River Man

by Roy Webb

There could be nothing more appropriate than having a profile of Don Hatch in this first issue of *The Confluence*; Don has spent more time on the Green and the Yampa and the Colorado than probably any three of the rest of us put together, and is still one of the most ardent advocates and defenders of the Green and its lovely surroundings.

Don Hatch was born May 31, 1928, in Vernal, the second son (out of four--the Hatch families run to boys) of Bus and Eva Hatch. He literally learned to run rivers at his father's knee, as did all the Hatch boys. Don remembers that he was a teenager before he actually got to see a rapid; before that, his father Bus would make him crouch down in the cockpit of his Galloway-style wooden boat, so that all Don saw was the wooden sides of the boat and his father's knees. Later, at a very early age, Don and his brothers began to run boats for their father, on the occasionally commercial trip that occurred before the war.

Because the river running business was small in those days, the river community was a small one. Everyone on the river knew everyone else. Anyone who came to run the famed rapids of Lodore would stop at the Hatch house in Vernal, there to spend the night telling river stories. Norm Nevills, Amos Burg and Buzz Holmstrom, Roy DeSpain; all of them were guests with the Hatches at one time or another. In 1938, when the French kayakers passed through the Uinta Basin, a ten-year old Don gave up his bed for one of the party. Two years later, when Norm Nevills passed through on his way to launch at Green River, Wyoming, he stayed with Bus, and Don remembered sitting up just outside the living room, listening in wonder as tall tales were woven about rivers and canyons.

After World War II, Don entered the University of Utah, where he studied education. He graduated and obtained a teaching certificate in 1950, and began a long career as an elementary school teacher in Salt Lake City. Don chose teaching because it allowed him his summers off so he could pursue his first love--running rivers. Every summer, without fail, he was on the river with his father and brothers. At war's end, wooden boats were still the norm, but Don saw the future (like a number of others at the time) in the inflatable surplus rafts that were just then becoming available. He soon convinced his father to make the switch--no small task in itself--and Hatch pioneered the use of inflatables on the Green and Yampa. As war-time restrictions on travel eased, more and more people wanted to take advantage of their new freedoms and see more of the country. Many came to Vernal to try their hand at river running, and Don and Hatch River Expeditions was there.

(continued on page 4)

## The Confluence

...would like to be published quarterly by and for Colorado Plateau River Guides. Help us grow. Join the membership today!

Colorado Plateau River Guides is a non-profit organization dedicated to:

- \* **Protecting the rivers of the Colorado Plateau.**
- \* **Setting the highest standards for the river profession.**
- \* **Providing the best possible river experience.**

### Membership dues:

\$20 per year.  
\$100 for 6 years.  
\$195 for life.  
\$295 Benefactor.

\***Guide Membership** is open to anyone who has worked in the river industry.

\***General Membership** is open to everyone.

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## The Prez Says

by **Susette DeCoster-Weisheit**  
President, CPRG

**Lights...., Camera...., Action!**

So what happens when you get a large group of "boat yogies" together? Yep, stories, lies, gluttony, drinking, socializing, and even a little organization. As of November 12, 1993, I hadn't realized the full potential of such a gathering. I found myself among such a group of people gathered at Pack Creek Ranch interested in the possibilities of an Upper Colorado River Basin organization. As I sat looking at the group I saw both familiar and unfamiliar faces, but most exciting was what I heard--a group of people with common desires. Each person seemed to be saying what I felt: protect the rivers, join together, hear my voice. By November 13, 1993, I can say I was amazed by the energy that was put into the establishment of Colorado Plateau River Guides (CPRG).

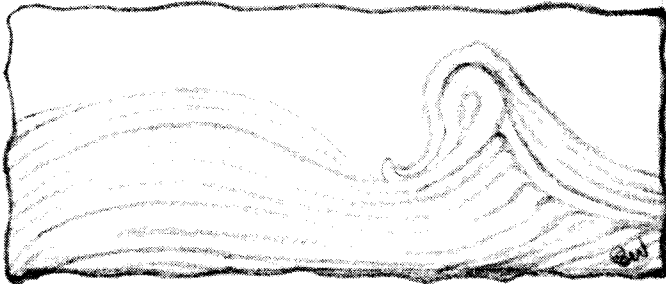
Since our first meeting when I took on the presidency, I have continued to be delighted by the interest in CPRG. I have also been somewhat overwhelmed by questions. One question in particular has been asked many times. What can CPRG do for me? My answer seemed to be growing lengthier each time I responded. Upon reflection I've found that our mission states accurately what CPRG can do for each member and also exemplifies how the rivers, where we work or play, can benefit from our membership. I believe it is through the efforts of active members that we will achieve a satisfying membership and accomplish that mission.

*The Confluence* is our seasonal contact with the membership and creates a medium for communication between professional guides, recreational rafters, outfitters, agencies, and corporations with similar goals. Look forward to articles on Colorado Plateau history, geology, archeology, and biology as well as information on current river issues and updates on available seminars and classes--not to mention some good story telling. Education is our emphasis. As guides we affect many people each season. Our passengers look to us for information and guidance. Each time we introduce someone to the river, we are the key to their education in river use and etiquette.

I am excited for CPRG. Support has come in many ways. Help in reaching more guides has been welcomed from several outfitters. Information requests have been received from recreational clubs and individuals alike. We are currently working with the National Park Service, Bureau of Land Management, and Utah State Parks and Recreation offices in hopes of assisting them to achieve our common missions.

I would like to thank the Grand Canyon River Guides (GCRG) who traveled to Moab in November. Your support has been most welcome. Thank you for providing us a common meeting grounds and for your words of wisdom. I think it is a wonderful group of people who will change their schedule by traveling some 400 miles to accommodate the possible establishment of a sister organization.

With an increasing membership, we've already been rewarded with valuable input for future growth. Each member is a voice for the river and the land. I look forward to hearing from you. See you at the spring meeting!



THE WALL

BIG DROP II

## Best Wishes from Grand Canyon

Brad Dimock, President GCRG

Amid the mid-November snows at Pack Creek Ranch, several of us who have been heavily involved with Grand Canyon River Guides over the last six year history had the odd sensation of giving birth.

We had gathered at Ken and Jane Sleight's ranch for two purposes. First was to have our fall general meeting, bringing membership up-to-date on current issues, discussing tough topics, and most importantly, telling lies and reveling. Our second purpose was to bring together some of the Northern crowd who had expressed an interest in working on upper basin issues, to try to act as sourdough starter for a new and possibly similar group.

It was a pretty tentative plan and many of us were a bit skeptical--"the upper basin is too diverse," "there aren't enough grizzled, demented old timers around," "no leadership figures have emerged," "it ain't gonna happen." What the hell, though, we thought. We'll give it our best shot. And we did.

The GCRG meeting on Saturday morning went fine. We brought folks up-to-speed on some of the things we're accomplishing in Grand Canyon. What sorts of things? Well, a much improved dialogue has been established between guides and outfitters, and between guides and the NPS; we have come to have an influence on policy in many areas and achieved equitable solutions to a few sticky problems. Co-operative programs have been established and we've helped facilitate pension and insurance plans in several companies.

We've become a strong advocate on several environmental issues and have been acknowledged by friends in Washington as having a major influence on the passage of the Grand Canyon Protection Act and the implementation of the Glen Canyon Environmental Studies through our extensive on-river letter writing campaigns. Our opinions and help are now valued and sought after. Currently we're grappling with the finalization of the Glen Canyon EIS, the overflights issue, and trying to effect reform in the way Grand Canyon

superintendents continue to be capriciously moved from one position to the next.

Community and the heritage of the boating community are a big part of what we do too, via our (in all modesty) incredible quarterly journal and projects like our oral history program. Our membership, now over 1000, continues to grow, and it looks like, for better or for worse, we're going to be around for quite a while.

We wrapped our part of the program up around noon, and after lunch launched into the Great Unknown of the alleged new group. We started with a dozen of GCRG's old hands in the center of the room, giving advice, warnings, encouragement and ideas to a room full of interested folks. Although initially the northern folk seemed a bit timid, afraid to speak up too loudly lest they get put in charge, one-by-one voices and personalities began to emerge.

Mid-afternoon someone suggested it was time for the GCRG folks to move to the back of the room and see what would happen. We did, and were amazed and delighted. Tentatively at first, then with more and more momentum, a group developed and leaders emerged. There was denial at first, of course, "I'm not leadership material," "I don't have the qualifications," "I don't have the time," "no one knows who I am"...(familiar ground for us!) But their momentum got the best of them and at 3:07 (or was it (3:08?) they made it over the hump and went ballistic. There was no turning back. We broke for dinner. They didn't.

At their first official meeting on Sunday morning, we watched from the sidelines as responsibility was delegated and accepted, and issues were discussed and dispatched in a fraction of the time it took us when we started. For us at GCRG it was exciting, rewarding and even a little emotional. Something was born there with a potential and a direction we can only guess at.

We'd like to offer our heartiest congratulations and encouragement. Sure, there will be some incredibly difficult times when a very few people are shouldering a very hugh burden. Yes, there will be naysayers, critics and obstructionists. But hold firm, be stubborn. The rewards will come, your influence will grow and the education you get along the way will amaze you. The rivers you run and the community those rivers bring together will be much richer for your efforts.

And to the naysayers: wake up! Send in your dues. Call Susette and ask how you can help. You've gotten a hell of a lot from the river over the years. It's time to start giving something back.

## So What's in a Name?

Tim Thomas, Vice-president CPRG

For some, a name is simply a description. For others, it's a reflection of self. Yet for others, it's symbolic of a cause and a larger purpose. And the origins of CPRG's name? Although it would be embellishing a bit to say the folks who gathered at the Grand Canyon River Guides (GCRG) fall meeting in Moab, last November, delved deeply into their souls to decide on Colorado Plateau River Guides as the name. There was indeed thought (albeit a bit obscure at times) and there is meaning.

Primarily we wanted to let others know what area we are concerned about - the area where we work and play. Of course, there was debate over whether we had included or excluded someone or something. But like most names it falls far short of encompassing the totality and potential latent when people come together to achieve a common purpose (like beer drinking and saving the world). An obvious example that comes to mind is our sister organization, GCRG, and their successes over the past six years, from championing causes such as the passage of the Grand Canyon Protection Act, to perhaps their crowning glory--the inception (conception) of CPRG.

So hopefully the "Colorado Plateau" gives focus and definition to our purpose, and "river guides" simply gives us a starting core of concerned individuals upon which we can build an organization open to all who wish to be involved. At best we'll succeed in our goals. At worst, we'll have a few people running around with meaningless titles tacked onto their names.

## From the Eddy

John Weisheit, Editor CPRG

At the first meeting of the newsletter committee, we decided that the name for the printed format of Colorado Plateau River Guides would be *The Confluence*. In the upper basin of the Colorado River, river guides and private boaters float the tributaries too. These tributaries increase the flow of the Colorado River at a confluence--an appropriate metaphor to connect our ideas and needs for a meeting in print.

We feel this issue legitimizes CPRG and hope it inspires readers to join the membership. A membership form is included for your convenience.

I would enjoy expressing sincerest thanks to the officers, directors, and members of Grand Canyon River Guides for sharing their "sour dough starter" and for getting CPRG in the oven. We express our sincerest thanks to Jane and Ken Sleight for allowing us to have our first CPRG meeting at Pack Creek Ranch. I also would like to thank all the contributors for the articles received in what basically was short notice. Special thanks to the guides of the San Juan River; you became the strong arm to the formation of CPRG. Thanks also to Jeanne Treadway director of Canyonlands Natural History Association and to Karla VanderZander from Canyonlands Field Institute. Thanks also to the board members of the Dan O'Laurie Museum for allowing us to use their conference room for meetings.

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(Hatch continued from page 1)

In the late 40's, when the Echo Park Dam controversy erupted and threatened to flood his beloved canyons, Don was one of the few Vernal natives to dare oppose the dam. From his home in Salt Lake, Don would keep track of the latest statements from the Bureau of Reclamation and inform his father (who also opposed the dam) so they could plan ways to thwart the Bureau. For his views he was vilified in Vernal, told he was a traitor to the community, and warned not to return. Don laughed it off, knowing that he was right and that eventually the community and the nation would come around to his way of thinking, and so they did. In the meantime, he spent more and more time on the river, as Hatch River Expeditions grew from a part-time family business to a major outfitter.

There was still time for other adventures, though; in 1952, Don climbed up

to the rim of the Canyon of Ladore with Charles Eggert, an independent filmmaker. The discussion turned to Major Powell, and Eggert mused that he would some day like to follow the course that Powell followed. Don replied, "Maybe we will someday, Charlie, maybe we will." Three years later it was a reality; Don, Charles Eggert, and various others (including a woman named Cyd Ricketts Sumner), set off from Green River, Wyoming, for a voyage that would take them all the way to Lake Mead, retracing Major Powell's route for the last time before the great dams were built. Don, however, although he was the driving spirit behind the expedition, wasn't there at the finish. At Lees Ferry, as they readied their boats for the final stretch through the Grand Canyon, Don received a message from his father Bus. Bus had been hired by Lowell Thomas to fly to Pakistan and raft the Indus River for a documentary that Thomas was making. Bus knew that he needed help

in this undertaking, so he called on Don. Don stayed with the Eggert party until Phantom Ranch and then reluctantly left them, eventually to make his way to the gloomy gorge of the Indus in far-off Pakistan.

Arriving in Rawalpindi, Don found Bus and the film crew ready to fly to Skardu, where the river voyage would take place. Since the plane was already loaded with boats and cameras, Bus told Don to wait and come on the next days flight. It was a long wait; the weather closed in the next day and Don and others of the crew were forced to wait for three weeks before a flight could get in. Once there, they found the river huge, swift and cold, but the old instincts took over and soon they were running the mammoth rapids of the Indus with alacrity, if a bit cautiously. Unnerved by his experiences on the boats, the director made them switch to the nearby Gilgit River, a tributary of the Indus. Here too Don and Bus were able to run the boats, though the rapids were gigantic. Finally, the movie was "in the can," and the film and the boat crews readied for departure. The director, however, decided he needed one more shot. The next day, as Don rowed a seven-man inflatable while Bus followed in a pontoon with the camera aboard, Don lost an oar. When it looked like the big pontoon would run him down, Bus turned the camera boat, which went sideways into a mammoth hole and flipped. Don, recovering his oars easily, rescued one of the crew, but one man, one of the actors in the film, was drowned and the body never recovered. Nor were their misfortunes over; in the meantime Don had contract typhus, and was forced to spend three weeks in a hospital in Rawalpindi, hovering near death.

In the 1960's, river running began an explosion period of growth, meaning more and more work for the Hatches, especially Don and his brother Ted. Bus was aging, a result of a hard life, and turned more of the business over to his sons. Bus died in June 1967, and shortly thereafter Don left his teaching career to move to Vernal and operate Hatch River Expeditions full-time. Also during this time he was heavily involved with the Wester River Guides Association, which he had helped start back when he lived in Salt Lake City. Don was always one of the leaders of the WRGA, and recognized early on that the association needed to become more professional if it was to respond to the many challenges that commercial river running faced in those days. Increasing regulation, burgeoning numbers, escalating competition, the private vs. the commercial debate, and the controversy over motors in the Grand Canyon were all issues that involved the WRGA, and Don was in the middle of all of them.

The first time I met Don Hatch was in 1984, when I was doing research for my



first book, a history of river running of the Green. We met at the Hatch office at Cap Mowrey's old house in the east part of Vernal, a part of town often known as Hatchland. The first thing that struck me about Don was his friendliness; even though we had never met, he welcomed me into his house like I was one of the family. As we talked, another point came to me: Don had no agenda, no axes to grind, as far as river history went. Of course he was proud of Hatch and the record they had compiled, but he was more than willing to give others their due. His only concern, and an admirable one, was for accuracy in the history I was planning to write. Having made a fair share of that history himself, he had every right to be concerned that it be recorded accurately.

During that time, a friendship developed between myself and Don, as can so easily happen with a man so open and caring. One day, as we stood outside the Hatch office, under the big cottonwood tree that shades the house, we talked of river history and his family's place in it. Don commented casually that he would like to see something written down about his father. Something clicked in me; why couldn't I be that someone? To shorten a long story, I ended up writing the biography of Bus Hatch called RIVERMAN: THE STORY OF BUS HATCH. Don worked with me throughout that process, as did his brother's Ted and Frank, and it was a better book for it. Bus had his faults, and not all found him pleasant to be with; he was quick-tempered, a perfectionist, not above chewing out a new (or old) boatman for a slight infraction. But I was able to see Bus through Don's eyes, and despite Bus' faults, it was a good portrait that emerged, of a man concerned for his family and for the rivers that were so much a part of his life.

Today Don enjoys a position of prominence in the hearts of river runners everywhere; during a recent recovery from a serious operation, he mentioned how he was amazed at how many people called and wrote to wish him well, and how old boatmen "seemed to come out of the woodwork." Anyone who knows Don wouldn't be surprised; however, in a business that still projects a macho, "strong and silent" image, Don has always been an exception. Supportive, caring, concerned, even nurturing, whether it be a novice boatman or an equally novice historian, Don Hatch has been and will remain one of the best-known and most-loved rivermen on the river.

# Canyonlands River Management Plan

by Jim Braggs

During the 1994 calendar year, Canyonlands National Park intends to rewrite its River Management Plan. The existing plan was developed and written in the late 1970's and approved by the Park Superintendent and Regional Director in 1981. It is seriously dated as management guidelines require parks to review their plans every ten years. Attitudes and issues have changed and new pressures are being exerted on the park mandating a review.

Beginning early in January, Resource Management Division staff, River District staff, and the Chief Ranger will meet to form a committee and establish task directives. This group will develop a timetable and outline the steps necessary to carry out the task. They will determine whether the plan can be completed in-house or if there is a need to hire a professional staff person.

A Notice of Intent will then be issued to the news media stating that the existing plan will be opened to public review and revision. A Public Scoping period will be established in which the park asks for comments and requests the public to provide current issues for the park to consider. Canyonlands will then develop alternatives based on the comments and issues received, and prepare a draft Environmental Assessment and River Management Plan.

The draft plan will be published and made available for review. For a period of 30 - 60 days comments will be gathered, analyzed, and incorporated in the plan. The final Environmental Assessment and River Management Plan will be developed, approved by the park Superintendent, sent to The Rocky Mountain Regional Director for final approval, and issued to the public. This plan will then become the guiding management tool used to manage the River District for the next decade.

Issues the park feels need to be looked at include, but are not limited to, the following:

- \* Limiting or not allowing motor use on the Green River.
- \* Wild and Scenic status for both the Green and Colorado rivers inside Canyonlands National Park.
- \* Carrying capacities for calm water use, particularly on the Green River.
- \* Commercial and Private allocations for Cataract Canyon and party size.

If all goes according to task directives and high water doesn't take away needed resources, the plan should be completed by the fall of 1994. Since the River District will be guided by this plan

for the next ten years and a truly public process is important, the park needs your comments. Get involved and let the park know how you feel.

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## Commercial River Guiding and Outfitting in Utah

by Tony White

Commercial river running in the state of Utah is big business with approximately 60,000 passengers being carried by commercial outfitters in 1993. The professional river guides and outfitters providing this service to the recreating public must be commended for an outstanding safety record. In preparation for the upcoming season, CPRG and the Utah Division of Parks and Recreation (State Parks) would like to share information relating to commercial river guiding and outfitting in the State of Utah.

The administration and enforcement of the Utah Boating Act is under the supervision and direction of Utah State Parks. It is the policy of the State of Utah to regulate and promote safety for persons and property in and connected with the use, operation and equipment of vessels and to promote uniformity of laws. In fulfilling this policy, State Parks developed a commercial river guide permit program and outfitting company registration program. Under Utah Boating Act, any person who operates a vessel engaged in carrying passengers for hire on any river of the state must possess a Utah River Guide Permit and be employed by a registered outfitting company.

Each year, river outfitting companies must register with State Parks. This process involves a fee, verification of a business license, verification of river trip authorization from the state or federal land managing agency, and a listing of authorized agents' signatures. The outfitting company registration procedure is an effort by the State of Utah to protect the public from unscrupulous "pirate" outfitters who would fail to have business licenses, insurance, river trip authorizations, or professionally licensed guides. Once an outfitting company is registered and recognized by State Parks, the outfitter may send guide permit applicants in their employ to one of three testing and permitting centers (Moab, SLC, and Vernal). The river guide permit application process requires that the applicant be at least 18 years of age, complete the prescribed form with appropriate signatures and registered outfitting company sponsorship, be current in the required first aid and CPR certification, pay a \$10 fee, and have operated a vessel on the required number of

river trips necessary to obtain the guide permit being sought. Lead guides (Guides I and II) are also required to successfully complete a written test on Utah Boating Laws and Rules.

State Parks believes that commercial river guiding and outfitting is a profession requiring highly skilled and knowledgeable personnel that are capable of providing a safe, recreational experience to the public. Like all true professions, personnel must meet and maintain minimal standards in order to be considered a "professional." The minimal standards/qualifications utilized by the State of Utah for commercial river guide permit requirements are based on river running experience, emergency medical training, and knowledge of the Utah Boating Act.

Persons seeking Utah River Guide Permits must complete the Utah River Guide Permit Application in full with required river running experience listed. This information should be completed prior to the authorized agent signing the application. The application is considered a legal document and the authorized agent's signature verifies that the guide is employed by a State--recognized outfitting company and has obtained the required river running experience as listed on the application. These applications may serve as a first-line defense for a guide and outfitter in court proceedings where an injured party is attempting to show negligence or inadequate skills/training.

Guide permit applicants must also present original copies of first aid and CPR certifications. Photocopies are not accepted due to the ease of falsification. Also, it is required by Utah Boating Act that guides carrying the original certification cards and river guide permit at all times while working. The carry of these certification cards is necessary due to the large number of enforcement personnel who work the rivers to insure safety and compliance with Utah Boating Act. A river guide permit may be issued in May despite a first aid certification that expires in June. By requiring the guide to carry the original certification card, enforcement personnel are able to insure that the guide has completed the appropriate training to stay certified. Failure to maintain current first aid and CPR certification renders the guide permit invalid.

Guides and outfitters are reminded that experience trips are valid only when

obtained within ten (10) years prior to the date of application for the guide permit or renewal. Guides wishing to renew a permit must meet this log requirement, complete the prescribed form with appropriate signatures, pay a \$10 fee, and present original certification cards for first aid and CPR. It is the belief of State Parks that for a person to retain professional status as a commercial river guide they must maintain a certain level of proficiency both in vessel operation and emergency medical care, be sponsored/endorsed by a State--recognized outfitting company, and have a working knowledge of the Utah Boating Act.

The information that must be provided on the prescribed River Guide Permit Application for initial, renewal, and duplicate permits is as follows:

- 1) Type of guide permit sought must be checked off at the top of the application by the authorized agent of the registered outfitting company.
- 2) Applicant's full name and permanent address. Note: Guides must notify State Parks within 30 days of any change of address.
- 3) Applicant's date of birth, height, eye color, and hair color.
- 4) Applicant's social security number.
- 5) Applicant's signature and date.
- 6) Outfitting company name and type of guide permit authorized by outfitter.
- 7) Authorized agent's signature and date.
- 8) Minimum river experience required to obtain type of permit issued or being sought. Note: Experience trips are valid only when obtained within ten (10) years prior to the date of application for the guide permit or renewal.

Guide I...must list at least 9 "whitewater river" trips.

Guide II...must list at least 6 "other rivers" trips.

Guide III...must list at least 3 "whitewater river" trips.

Guide IV...must list at least 3 "other rivers" trips.

9) River section must be listed by the name of the river and mileage/section and qualify as the proper water classification (either "whitewater river" or "other rivers" as defined by Utah Boating Act) for the type of permit issued or being sought.

(continued on page 19)



# Navajo Origins and Early Occupations

By Red Wolfe

## Introduction

This article explores the possible origins of the Navajo people, one of the most adaptable and successful cultures to inhabit the Colorado Plateau. This culture is more properly referred to as Dineh, which is a Navajo word referring to "the people." Of course one could ask a Navajo, but this article attempts to explore the question from an Anglo/European archaeological perspective and in no way attempts to substitute a traditional Navajo explanation.

## Athabascan Migrations

Today, the Navajos are the most populous native group in the United States, and occupy a reservation encompassing over 24,000 square miles. The Navajo are descended from Athabascans, a group of societies with a shared language who inhabited much of the interior of northwestern North America. Athabascans came to the North American continent across the Bering Land Bridge from Asia in fairly recent times. As these Athabascan speakers gradually moved south, they seemed to have branched off in different directions. Some of their descendants are found along the Pacific Coast of the northwestern United States, southern Canada, and also in the interior of western Canada. One group, the Apachean Athabascans, made it all the way to the southwestern United States.

By studying dental affinities between modern Asians and Native Americans, it appears that Athabascans left the forests of northeast Siberia about 12-14,000 years ago. A three-rooted molar is a common trait of Athabascans and can be traced back to specific regions of Siberia.

Understanding prehistoric migrations is difficult. Lacking written records, archaeologists must resort to material remains to reconstruct past events. A big problem with this approach is that many cultural changes occurred en-route between a hunting/gathering subsistence in Siberia to the semi-nomadic, partly agricultural subsistence of today's Navajo. Four contending routes have been suggested: Plains Border, High Plains, Rocky Mountains, or Intermontane. Three time periods of possible arrival have been suggested: AD 800-1000, AD 1200-1400, or post-Spanish (AD 1540). The most recent evidence points to the Plains as the migration route. The linguistic evidence suggests the Apachean Athabascans diverged into the ancestors of the present day Apaches and Navajos about AD 1300 and may

have entered the Southwest at about AD 1400.

Some investigators have proposed an entry into the present-day Four Corners region as early as AD 1000. These groups most likely left western Canada as a result of famine. Another possible explanation is based on known volcanic eruptions that produced large ash falls over large areas of western Canada around AD 750. This natural disaster may have made the area temporarily uninhabitable, causing Athabascans to diverge in different directions. This event occurs at a time which linguists estimate was the beginning of the separation in Athabascan dialects. Dental similarities between Athabascans and burials found in some sites in eastern Colorado, dating to AD 1000-1200, may indicate an Apachean presence close to the northern edge of the Anasazi region at about the same time as the great Pueblo Abandonment, around AD 1300.

## Spanish and Pueblo Interaction

The first arrival of the Spanish occurred in AD 1540 with the arrival of Coronado. After this point, we can begin to look at historical accounts for information of what native groups were living where. A problem with Spanish documents is they are often ambiguous when identifying groups of Southern Athabascans.

These accounts, mentioning semi-sedentary Apachean groups who practiced some agriculture, fail to acknowledge a long--time presence of these groups in the Southwest. During this time period, much interaction between the newly arrived Athabascans and the Puebloans led to the development of what we today recognize as Navajo culture. The often brutal attempt by the Spanish to subjugate native cultures in the Rio Grande Valley led to the Pueblo Revolt of AD 1680. Before this time Navajo and Spanish contacts were sporadic; however, they became more frequent and soon hostile. The hostility was in part due to the Spaniard's desire to keep the Navajo, which they obtained from the Hopi, as captives. As the Spanish defeated one Navajo alliance after another, refugees began leaving the Rio Grande Valley; some went to Hopi, some went to join the Plains Apache, and some went north into the drainage of the San Juan to join the Navajo. At this time the horse and metal objects began to become part of Navajo culture. Navajo groups teamed up with Pueblo groups in an effort to repel attempts at domination and colonization by the Spanish.

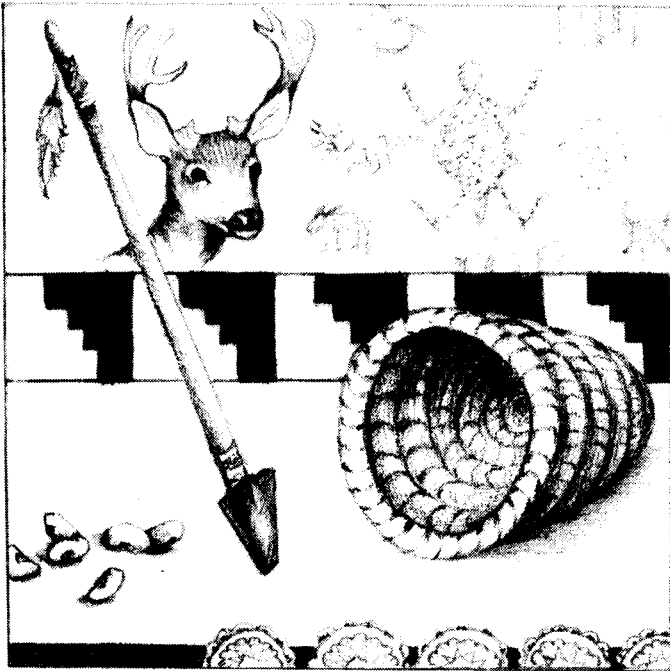
The Pueblo Revolt was a major event in Southwestern cultural history. Pueblo groups, together with other native groups including the Navajo, expelled the Spanish from the Rio Grande Valley and all of New Mexico. At this time, Navajo groups were



occupying the drainage of the upper San Juan River near the present-day Navajo Reservoir. This area is referred to as the "Dinetah" by modern Navajo who claim it as their ancestral homeland. The Dinetah contains the earliest clearly identifiable and datable Navajo archaeological remains.

### Dinetah Phase

The Dinetah Phase refers to Navajo culture prior to the intimate contact with Pueblo refugees. Many Dinetah sites have been recorded in the Navajo Reservoir area of Colorado and New Mexico as a result of fieldwork undertaken during the construction of the Navajo Dam on the San Juan River. Dates of AD 1550 to 1700 have



been suggested on the basis of tree ring dates, intrusive pottery, and accounts in Spanish documents. The Dinetah Navajo are assumed to have been non-agricultural hunters and gatherers living in mobile bands who utilized seasonally both high and low areas of northern New Mexico. The high site density around Navajo Reservoir indicates a sizeable population.

### Gobernador Phase

In 1696 the Spanish attempted the Reconquest of New Mexico, causing Puebloan refugees to flee north. It is during this time period (1696-1775) that the Gobernador Phase is observed. This period of Navajo/Pueblo interaction lasted until about 1755, when it appears the Navajo were forced out of the upper San Juan by Ute raids.

The material culture from this time period includes forked-stick, cribbed log and stone masonry hogans; pueblitos, towers, fortified sites, ramadas, sweat

lodges, rock art with Puebloan motifs and recognizable Yei figures, corn and beans, horses and sheep, and small numbers of European trade goods. Spanish documents describe wooden implements for farming of maize, beans, pumpkins, and watermelons. Domestic animals included horses, goats and sheep.

These early groups seem to be a mixture of Navajo, Tewa, Cochiti and Jemez. During this early Gobernador Phase, the Navajo underwent much Pueblo acculturation and the Navajo practice of matrilineal descent, matrilineal residence patterns, and clan structure are believed to be Puebloan in nature. It also appears that aspects of Puebloan religion were being incorporated by Navajo as part of their own belief system. The first Navajo rock art is recognized at this time. It is ceremonial in content and resembles both the Pueblo religious art of this time and modern Navajo dry-painting art.

### Post-Gobernador Phase

By the mid-18th, century severe pressures were brought upon the Dinetah by drought and intensified Ute attacks, causing conflicts between Apachean values and Pueblo values that by now were very much a part of Navajo culture. The 18th century changes seen in Navajo culture toward a more mobile and dispersed population and the raising of livestock, may have provided the ability for Navajos to escape their enemies. Economy at this time shifted to agriculture, animal husbandry, and manufacturing (primarily the weaving of woolen cloth). All of these traits are what is known as traditional Navajo culture. At this time Navajos expand to the west and south and begin to occupy Canyon de Chelly and areas of the present-day reservation. These more open areas would have offered better pasturage for their increasing animal herds. The many versions of Navajo creation stories often speak of the boundaries of their territory as being defined by sacred mountains. These correspond to the La Plata Mountains of Colorado, the San Francisco Peaks of Arizona, and Mount Taylor and Blanca Peak of New Mexico, and also correspond to the territory occupied by the Navajo during the late 18th and early 19th centuries.

### Recent Archaeological Studies

In recent years, much archaeological activity has occurred in the Dinetah country of southwestern Colorado and Northwestern New Mexico as a result of cultural resource activities associated with oil and gas production on public lands. Recently excavated occupation sites

(continued on page 19)

## Conversation with Frank Wright

by Tom Rice

Frank Wright sits underneath a wall-sized black and white photograph of the site where he camped his first night in Glen Canyon. The large, Navajo sandstone walls which loom above the camp, and the pristine beach that spills along the Colorado River, are now buried by the water of Lake Powell. Only the sound of a lake boat or a fin of an invading fish can reach them now.

He does not appear like the typical boatman we run into today. He is in the class of early river runners like Kenny Ross, Norman Nevills, Ken Sleight, and even John Wesley Powell, but uniquely individual as only an early explorer can be. No flip flops, no chrome ammo can, no rendition of his most recent death defying run through "Satan's Gut;" only stories of a seldom travelled era that almost all of us will never get to see or experience.

Nevills' name, for he had recently read about him in *The Saturday Evening Post*. Because of this article, Wright was interested in Nevills and in his trips down the river. The following week, Nevills returned for more repair work and asked Wright to join him on the float from Bluff to Mexican Hat. Frank Wright was off and floating.

Wright envisioned his day run from Bluff to Mexican Hat as a leisurely, friendly float where he would get to sit back, enjoy the scenery, and let the others do the rowing. It began that way and then suddenly changed when his turn to row the boat came up. With no experience behind the oars, Wright suddenly found himself at the oars of a wooden Nevills boat, manipulating the vessel down through the sandwavs of the San Juan River.

Wright made it to Mexican Hat, relieved but still wary of his skills at the oars. He returned to Blanding only to embark on one of many more trips with Nevills; this time from Mexican Hat through Glen Canyon. From that point, Frank Wright

became a skilled oarsman--a fact recognized by Nevills--and not simply a Nevills' boatman.

In 1948, Wright, was the 97th recorded traveller through Grand Canyon. He became enamored with the river as so many boatman do. He fell in love with the country. Associations with new people on every river trip made him aware of the uniqueness and the beauty of the land and the cultures which surrounded him.

Ingrained in Wright's head are fond memories. Said Wright, "Very few saw Glen Canyon as it was and as it still could have been." It was undisturbed, ...one of the most beautiful places on earth." As Wallace Stegner supports wilderness for the sake of being able to look into wilderness and believe in wilderness, Frank Wright claims the beauty of Glen Canyon was for the sake of being able to peer at beauty and have it peer back. The concept is summed up simply when he describes his favorite spot in Glen Canyon, "It is too special of a place to explain."

...And then humans created the lake. Up the Escalante River, in the Cathedral of the Desert, is where Wright abruptly met the fate of the country which is now choked by the silt and the water of Lake Powell. He and two others hiked into the Cathedral. A pool, a small cascade of water, and the maidenhair ferns draped on the rocks, combined with the silence and the beauty of



Mr. and Mrs. Frank Wright  
photo courtesy of Frank Wright

I sat down with Frank Wright on a sunny December morning at his home in Blanding, Utah. Memories of his river trips beginning in 1948 with Norman Nevills began to unfold. His first trip was a float down the San Juan River from Bluff, Utah, to Mexican Hat, Utah. Shortly before that trip, Wright was working in his repair shop in Blanding when Nevills stopped by to get some vehicle work done. He recognized

the event, were mesmerizing. They whispered to one another, walked silently. Even though he had visited the Cathedral many times during earlier river trips, Wright continued to be in awe of the sheer beauty. Suddenly, the bark of a dog shattered the peace, followed by yells of teenage boys running up the canyon. The lake and the lake boaters had found the beauty of wilderness and would change it forever. It was a realization that Wright and others would never be able to shake.

Frank Wright is not an environmentalist, nor an industrialist. He feels that Glen Canyon Dam was a mistake. On the other hand, he agrees with the commercial advantages--to a degree. He sees water through the eyes of someone who lived in an era when water was looked at from a different angle. Never-the-less, he does recognize the destruction that Glen Canyon Dam wrought upon the country he respected.

Wright can put a few other things on his list of accomplishments. After Norman Nevills died in a plane crash at Mexican Hat, Wright and Jim Riggs bought Nevills Expeditions. Later, he followed John Wesley Powell's route from Green River, Wyoming, through Grand Canyon, seeing not only Glen Canyon, but also Flaming Gorge, before a reservoir drowned it as well. In 1957, when flows as high as 100,000 cfs were roaring down Grand Canyon, he became one of the first boatmen to pilot a rigid wooden boat through such high water.

The high water trip of 1957, his last river trip, prompted the boatman Frank Wright to sit back and reflect upon his experiences in an industry and in canyons that will forever be out of our reach. His thoughts and memories of places once untouched should remain in the historical record. One day they will be important to those who want words of experience to accompany the pictures of lost canyons.

## Canyonlands Natural History Association

by Sharon Brussell

If you're a Colorado Plateau guide, Canyonlands Natural History Association (CNHA) can be a valuable resource for developing or adding to your own natural history library and interpretive repertoire. We carry a thorough inventory of books and maps covering area geology, hiking, biking, and off-road trips, as well as the Colorado, Green, and San Juan rivers. All books, maps, guides, and other interpretive material that CNHA sells have been approved by the NPS, USFS, and BLM. Also available are other valuable and accurate site-specific and regional information.

CNHA maintains a resource library at its main office, located at 30 South 100 East, Moab (across from the Moab library). Included in the library are Canyon Country Workshop videos which offer wonderful opportunities for self-education. Area experts cover such topics as archeology, geology, ethnobotany, rock art, resource protection, human history, history of river running, safety and hazard management, and interpretive skills. Colorado Plateau River Guides and CNHA members are encouraged to visit CNHA and use the library at their convenience.

CNHA members receive a 20% discount on purchases of a dollar or more on regular sales items, an annual newspaper, catalogue, updates on seasonal specials, and information on workshops opportunities. Initial fees are \$10, with a \$7.50 annual renewal fee.

CNHA is a non-profit organization which exists solely to assist the National Park Service, the U.S. Forest Service, and the Bureau of Land Management in their education and visitor service efforts. CNHA operates bookstores in the agencies'

visitors centers and at the multi-agency visitor centers in Moab and Monticello.

Proceeds from the sales support the many agencies' educational, interpretive, and scientific programs in Southeastern Utah.



# Paiute Falls of the San Juan River

by Gene Stevenson and Donald Baars

## The San Juan River

The headwaters of the San Juan River lie in the high San Juan Mountains of southwestern Colorado, near Wolf Creek Pass. Water from the upper basin and several tributaries are temporarily stored in Navajo Dam, located on the Colorado--New Mexico border. From Navajo Dam, the San Juan River flows unimpeded across northwestern New Mexico and into southeastern Utah where it finally converges with the Colorado River in what is now Lake Powell.

On its course below Navajo Dam, the San Juan carries enormous amounts of suspended-and-bottom-load sediments. This high stream of soils is weathered from the overgrazed plateau lands of the Four Corners Region. Spring run-off and late summer rains can rapidly change the San Juan from a docile stream to a seething river of mud. Throughout its course, the San Juan River drops an average of more than 5 feet per mile, and as much as 14 feet per mile in the lower canyons. Historically, flows vary dramatically, from a recorded high of 91,000 cubic feet per second (cfs) in 1911, to several occasions when it basically dried-up. Since the construction of Navajo Dam in the 1960's, the highest flow has been 25,000 cfs in 1971; the last decade has seen flows ranging between 15,000 cfs and 150 cfs.

Today, the San Juan River is popular for commercial and private recreational boating enthusiasts. The most frequently-run stretch of the river is from Bluff to Clay Hills Crossing in southeastern Utah, a distance of nearly 84 miles. At Bluff, the river leaves its lazy meandering course and flows through deep limestone canyons incised into the Monument Upwarp. It is there, on the west flank of the Monument Upwarp, that the high gradient, silt-laden river enters the placid waters of Lake Powell. And not surprisingly, it is there where nature is at odds with the "achievements " of man.

## Lower San Juan River Siltation

The decision to build another dam above Lake Mead, on the Nevada-Arizona border, was partly due to the tremendous rate at which this reservoir was silting-in. After exhaustive political efforts had failed to permit construction of dams in Grand and Marble canyons, the U.S. Bureau of Reclamation constructed Glen Canyon Dam near the Utah-Arizona border. Lake Powell began to fill in 1963 and power generation began in 1964. By 1980, 27 years later,

Lake Powell was finally filled and the spillways were tested for the first time. Because of a wet cycle in climate, the lake maintained a high reservoir pool until about 1988. In those nine years, the upper reaches of the San Juan River Arm of Lake Powell completely filled with sediment.

## Enter Waterfall

A waterfall now blocks navigation 2.2 miles below Clay Hills Crossing; the top is 9 feet below high lake level; the waterfall drops another 26 feet. The original course of the river flowed around a ledge of Organ Rock Shale (Permian Age) along the right-hand valley wall, and headed almost



**Aerial View of Paiute Falls**  
photo by Gene Stevenson

directly southward toward Paiute Farms. At high lake levels, silt was deposited evenly across the area, burying the Organ Rock ridge and the remainder of the valley floor uniformly nearly to the location of Paiute Farms, which at the time served as a Navajo-operated marina for upper Lake Powell and a take-out point for many San Juan River trips. The meandering current of the river lost its original course and

spread into several distributary channels that formed deltaic silt deposits where the current entered the quiet waters of the lake. As the lake lowered in the late 1980's, San Juan River currents shifted to the right (north) to circumnavigate the delta, flowing across the buried Organ Rock ledge. The currents became incised into the lake sediments as the lake level continued to drop and, upon cutting down to bedrock, encountered the Organ Rock ledge and a formidable obstacle, such that no one but the foolhardy attempted running it. With continued lowering of Lake Powell, the rapid matured into a sheer waterfall that has become a curiosity. Fishermen have enjoyed fishing the large eddies below the falls, where hundreds of fish mill around, confused that they are unable to travel upstream as before.

Trapped in the new channel, astride the exhumed rock ledge, the waterfall now forms a temporary nick point, or perched base level of erosion. Lake sediments trapped in the 19 miles of canyon above the waterfall have been temporarily suspended in the system at a level more than 26 feet, perhaps as much as 80 feet, above the new base level of Lake Powell. An artificially low gradient now moves finer sediments through the nearly 15 miles of canyon between the falls and clear water of the lake at Milepost 100.2 (1922 survey), where the second delta is necessarily forming.

As late as June 1992, the river flowed in a nearly straight path toward the waterfall; by October a huge eddy had developed above the falls. Apparently the river is trying to find its way around the rocky obstacle, and slide toward its old river course that circumvented the ledge to the south. When the waterfall is breached by erosion, or the river finds a new course around the obstacle, one thing is certain - the river will immediately re-establish its gradient and quickly erode through the unconsolidated lake sediments that have been perched upstream. This will be evident to any observer as a loud "unzipping" sound.

Once the obstacle is breached, the lake sediments will be deeply scoured, leaving the only existing boat ramp at Clay Hills Crossing high and dry, suspended 25 feet or more above the newly established river level. Take-out of the river-running equipment will be virtually impossible for several years until the lake sediments have thoroughly dried and settled. As the lake has subsided, high concentric desiccation cracks have formed along either side of the river bed. Slumping on a large scale of these unstable features will rapidly accelerate, and dangerous thixotropic conditions (quicksand) will prevail for some years following breachment. River travel, amounting to about 11,000 people each year, will be necessarily put to an end for lack of a viable take-out ramp.

## An Update

In 1993, there was a considerable increase in the pool elevation of Lake Powell due to a high spring run-off from the Rocky Mountains. The Lake Powell pool elevation for the winter of 1992-1993 was 3610 above sea level (asl), or 90 feet low. The pool elevation peaked in June, 1993, at 3667 asl, raising the lake level 57 feet. The raising pool level did not inundate Paiute Waterfall but it did manage to shorten its overall fall.

## Conclusion

When Glen Canyon Dam was built there was no study pertaining to the huge volume of silt that would be deposited at the lake-river interface on the Colorado and San Juan rivers. No apparent consideration was given to the starved beaches that would develop downstream in the Grand Canyon. Least studied were the upper marinas, necessary for the recreational objective of the project, that would be progressively silted such that continuous abandonment would be the only solution. Obviously, no consideration was given to drastically altered stream courses, the safety hazards that would result, nor of major ecologic damage that must necessarily follow.

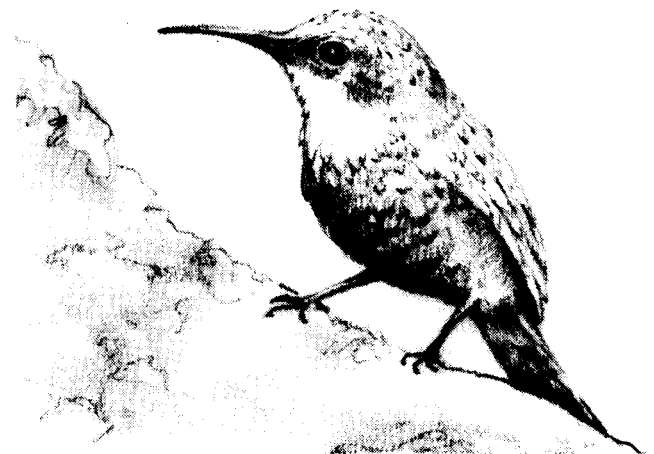
A Navajo friend once explained why the Bureau of Indian Affairs was so reluctant to recognize Native American problems and approve changes. "It all started when Yellow Hair (Custer) said: 'Don't do anything until I get back!'" Perhaps John Wesley Powell had a similar effect on his Bureau of Reclamation.

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## Quote

*"So much depends on so little, and there is no sure way to prophesy human behavior. I spent the night with almost unbearable thoughts and was glad, when at last there was a glow of light in the eastern sky."*

Clyde Eddy/Spanish Bottom, 1927



# **Endangered Fish, Endangered Rivers:**

## **Why "Critical Habitat" is Important**

by Tamara Wiggans

*"Quit thinking about decent land-use as solely an economic problem ...the last work in ignorance is the man who says of an animal or plant: 'What good is it?' If the land mechanism as a whole is good, then every part is good, whether we understand it or not... To keep every cog and wheel is the first precaution of intelligent tinkering..."*

Aldo Leopold

Q: How deep is the river and what do you do in the winter?

A: Not deep enough and this year I spent much of November and December wading through government documents and other literature about endangered fish. My answer to a third question "what kind of fish live in this river?" will never be the same.

The Colorado squawfish, bonytail, humpback chub, and razor-back sucker were once abundant throughout the Colorado River basin, from Wyoming to Mexico. These fish, which exist nowhere else on earth, are now threatened with extinction due to the combined effects of dams, diversions, introduction of non-native fish, and other human impacts.

All four species have been "listed" as endangered by the U.S. Fish and Wildlife Service (FWS) and are protected by law. But putting a fish on a list is not enough. Their numbers continue to dwindle. The bonytail and razorback sucker are extremely rare, and are not reproducing in the wild. The only ones left are the old guys who sometimes live to be 40 and 50 years old. Forty species and sub-species of fish in North America have become extinct this century, primarily due to human-caused changes or elimination of their habitat.

The Endangered Species Act requires that the FWS designate "critical habitat" when a species is listed. Under court order, as result of a Sierra Club Legal Defense Fund lawsuit, the FWS has finally come up with several sections of several Colorado Basin rivers proposed as critical habitat for endangered fish. In the upper basin, these include portions of the Yampa, White, Duchesne, Green, Gunnison, Colorado and San Juan. In the lower basin, portions of the Gila, Salt and Verde rivers, as well as the Colorado are being considered.

The proposed river stretches were chosen because they are now inhabited or are potentially habitable for use in spawning, feeding, rearing, or as migration corridors. The river reaches are all within the fishes' known historic ranges.

Why should you support critical habitat? Who cares? These fish are the dinosaurs of the Colorado--they couldn't adapt to changing times--so bye-bye fish. Besides they're just a bunch of suckers, trash fish.

Well, just remember, river runners and these fish share the same habitat--the river. How would we feel if the rivers were pumped so dry that we couldn't float a boat anymore? Could we just walk away and accept that we're the dinosaurs, just a bunch of suckers, river trash?

We live and work in a river environment unique to the planet. It took tough and adaptable fish to survive in the pre-dam Colorado basin, known for its high sediment loads, widely fluctuating flows, and turbulent whitewater.

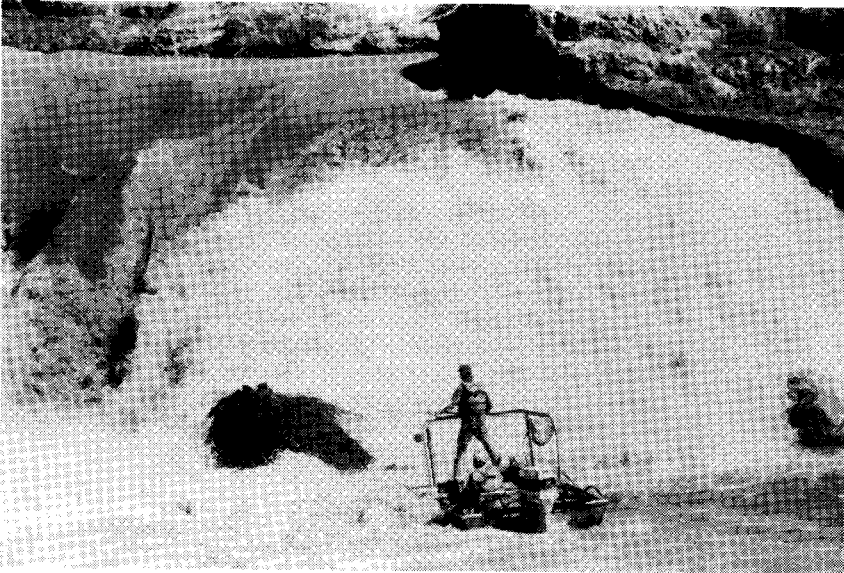
The humpback chub actually likes hanging out in rapids--sound familiar? And the voracious Colorado squawfish once reigned as the top predator in the Colorado River system. This torpedo-shaped hunter has been known to eat mice, birds, even prairie dogs. Historically, squawfish reach weights of 50-80 pounds, lengths of 6 feet, and lived to be 70 years or older. Because of its long spawning runs, the squawfish was dubbed the white salmon or Colorado salmon by early settlers, and we valued as "good eating" and a sport-fish.

We lose more than just fish if we let them go extinct. Their decline is an early warning, that something is wrong, that the delicate balance between the river, and the land, plant and animals, is upset. We're deluding ourselves when we forget that we, as human beings, are just one part of a dynamic, inter-connected system. As many of us have long suspected, the entire ecosystem of the Colorado River Basin has been so drastically altered that the health and survival of many other native species is now at risk.

The water development interests of the Colorado Basin are fighting critical habitat designations tooth and nail, and have even threatened to sue. Once a stretch of river is identified as critical habitat, the needs of the fish must be protected when any new dam, diversion, or other project requiring federal involvement is proposed.

In addition, the "re-operation" of several existing dams is being considered, so as to mimic pre-dam flows that the fish need for spawning. The absence of high spring runoffs to flood back-waters, clean out debris, and flush in nutrient has eliminated good spawning conditions and food sources. Dams block migration routes and alter temperature and sediment loads. Introduced, non-native fish often compete and prey on the young fish.

Water for fish in the arid and rapidly growing Southwest is highly controversial. The FWS held several public



**Fish Biologists at Paiute Falls**  
photo by Gene Stevenson

hearings around the region in late November and early December. A handful of river guides attended the hearing in Farmington, New Mexico, where most of the speakers were highly hostile to the idea of critical habitat. In a room full of water developers, a couple of us mustered the courage to stand up for the fish.

The issues are complicated, and the competing interests are polarized, to say the least. For example, the re-operation of dams might mean diminished hydro-electric capacity, or less water for irrigation, municipal and industrial uses. Most of us live with electricity; we also eat food grown with Colorado River water, and drink water coming out of the system somewhere. Those opposed to critical habitat for fish would have us believe that we're all going to go broke, freeze, starve and die of thirst in the dark.

Progress on these same kinds of issues regarding the Glen Canyon Dam and the Grand Canyon Protection Act is proof that people can come together and figure our new, creative approaches to water management.

FWS needs to hear from the river community. Ultimately, water for fish also means water flowing downstream in the river where it belongs, something I think we can all support. If we can save these endangered fish, we may be saving the Colorado River ecosystem for humans and other living things.

**WRITE A LETTER TODAY**

\* Urge the FWS to designate as much critical habitat for endangered fish as possible.

\* Encourage FWS to stand firm in their proposed designations. It's important that they minimize the exclusion process" whereby critical habitat can be excluded due to economic factors.

\*The dams and reservoirs are not going to go away. But with more efficient and effective management at existing facilities we can balance the health of the river with our economic endeavors.

\*Often the most valuable letters are those that present a different perspective or that provide new information. That is why I highly recommend actually reading the Draft Documents and how much information they will lack. To get a copy or to write a letter, the address is:

**U.S. Fish and Wildlife Service**  
**2060 Administration Building**  
**1745 West 1700 South**  
**Salt Lake City, Utah 84104-5110**  
**(801) 975-3630**

The deadline for comments was January 15, 1994, but they were considering extending the comment period, so write anyway ASAP.



**Quote**

*"For there are some people who can live without wild things about them and the earth beneath their feet and some who cannot."*

Louise Dickenson Rich

# The 1921 Survey of Cataract Canyon

by John Weisheit

## Background

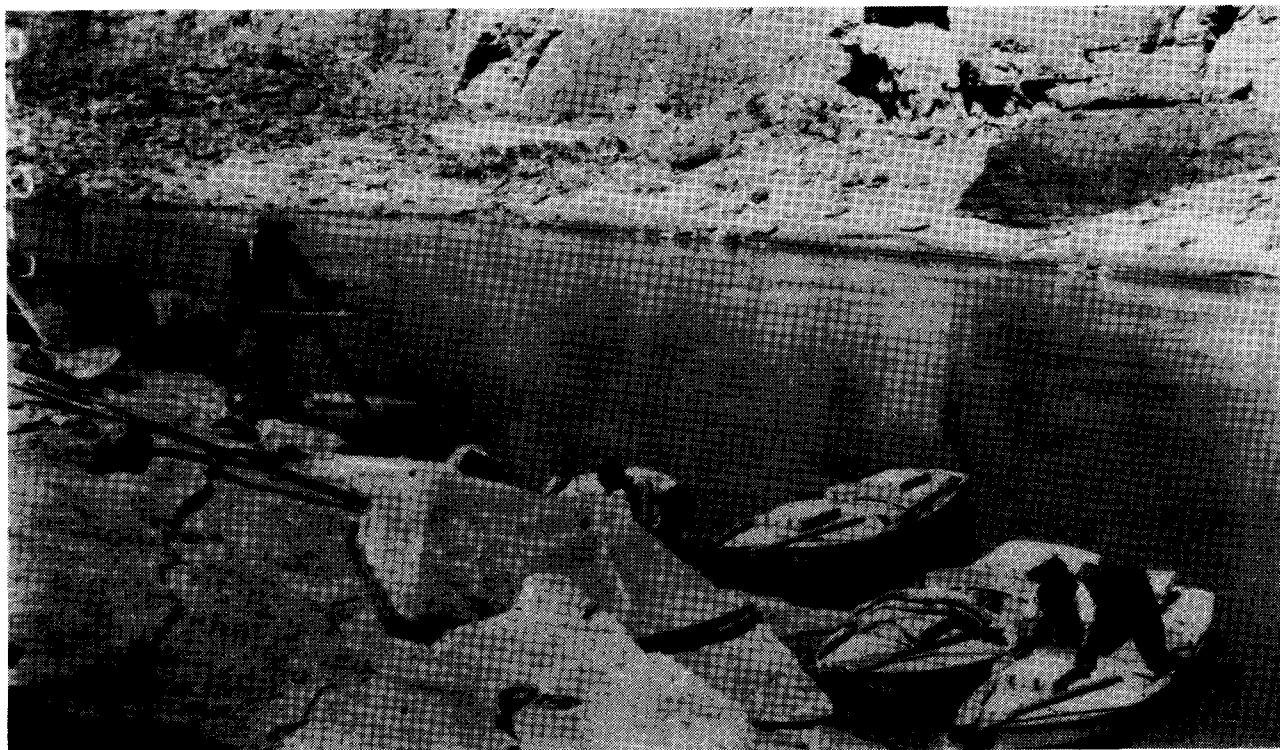
During the early 1920's, parts of the Colorado River system were surveyed by the United States Geological Survey (USGS). These surveys developed for two reasons: 1) Congress passed the Federal Power Act in 1920; 2) the city of Los Angeles and Southern California Edison Company filed applications with the Federal Power Commission for six dam sites on the Colorado River. The sites included Bull's Head Rock, Pyramid Canyon, Old Callville, Boulder Canyon, Grand Wash, and Lees Ferry.

The chief topographer for the dam surveys was Claude H. Birdseye. The chief hydrologist was Eugene C. LaRue, an employee of the United States Reclamation Service, which was originally a department of the USGS and is now known as the Bureau of Reclamation. The first surveys were proposed above the Lees Ferry Dam Site, and targeted the contour line at 3,900 feet above sea level (asl). The first assignment, which occurred in June and July of 1920, ran a line from Flagstaff, Arizona, to Lees Ferry, Arizona. Forthcoming river surveys would soon correlate with that bench marker. The lower section of Glen Canyon was surveyed by a Mr. Fowler. For instrumentation,

Fowler's team used a system called the Yoekel Precise Level. At first, Fowler's team used boats with outboard motors; however, due to the silt concentration of the river (15%), they found this form of propulsion unreliable and converted to motorized paddle wheels. The San Juan River survey was headed by Kelly W. Trimble and started in July of 1921, from Bluff, Utah. The Cataract Canyon survey started in September of 1921, from Green River, Utah, and was headed by William R. Chenoweth. For instrumentation, Trimble and Chenoweth used the plane table and alidade (see photo), making it possible to create a map on-the-spot. By October, all three surveys met in parts of Glen Canyon and eventually tied in with the established benchmark at Lees Ferry.

## Cataract Canyon Survey

The survey in Cataract Canyon consisted of the following individuals: William R. Chenoweth, topographical engineer; Sidney Paige, geologist; E.C. LaRue, chief hydraulic engineer; Leigh Lint, rodman; Harry Tasker, rodman; Frank Stouidt, recorder; John Clogston, chef; Ellsworth Kolb, lead boatman; Emery Kolb, photographer; Henry Rauch, photographic assistant. The survey through Cataract Canyon was a joint effort with Southern California Edison. The boats were appropriately named *Edison*, *L.A.*, and *Static*. The *Static* had a mounted transom



Chenowith with plane table and alidade  
Photograph by E. C. Larue

Possibly at 30 Mile Dam Site  
Coutesy of U.S.G.S., Denver



for an outboard motor to assist its progress across the flat water to The Confluence. This motor was quite possibly the first outboard motor used through Stillwater and Labyrinth canyons. A tethered line was used to tow the other boats. Later, Chenoweth decided that tying the rafts together side-by-side was more practical (as practiced by modern boatmen in similar situations). Emery Kolb and Henry Rauch actually participated on this expedition as "free-lance photographers". They were essentially guided by their own agenda, especially before entering Cataract Canyon. Emery used the "Edith," which was the boat he piloted in 1911 through the canyons of the Colorado Plateau.

1921 was an interesting year to survey the canyon, as the Colorado River peaked at its highest flow thus far for the 20th century. A modified report placed the discharge at Lees Ferry on June 18, 1921, at 220,000 cfs. However, when the Cataract Canyon survey reached The Confluence on September 6, 1921, the Colorado River flowed at a tame 8,320 cfs.

Trip photography shows incredibly high beach dunes and driftwood piles.

Two possible dam sites in Cataract Canyon were determined by LaRue during the course of the survey. Interestingly, he did not find a suitable site until the Colorado River left the Paradox Basin. The Basin is a geological sub-province with a Pennsylvanian stratigraphy of sea water evaporates (anhydrates). The dam sites were called Mille Crag Bend and 30 Mile (30 miles below The Confluence), otherwise known as Dark Canyon. On a previous expedition (1914), LaRue investigated a dam site 1/2 mile below The Confluence, which he called the Junction site. A floating steam-powered drill rig was used to determine the thickness of the river sediments to bedrock. Flood waters forced abandonment of the drilling procedure which attained a depth of 124 feet without reaching bedrock. The low water elevation of the river at The Confluence is 3,880 feet asl.

For Cataract Canyon the survey logged 39 miles from The Confluence to Mille Crag Bend with a total of 49 rapids which were titled by number, and an average gradient drop of 11 feet per mile. Rapid #45, formed by debris flows from Dark Canyon, had a measured section with the greatest gradient drop of any rapid on the Colorado River within the Colorado Plateau. Rapid #45 is now 186 feet below Lake Powell's high pool elevation of 3,700 feet asl. It was at Rapid #45 that lead boatman, Ellsworth Kolb, ran a boat between rocks,

resulting in a two-day delay. LaRue reported that Rapid #47 was formed by bedrock rather than by debris flow.

### Conclusion

Other USGS river surveys were completed in subsequent years. They include the 1922 Green River survey from Green River, Wyoming, to Green River, Utah, headed again by Kelly Trimble with Bert Loper as lead boatman. Loper was also with LaRue during the 1914 Junction dam site testing. The Grand Canyon was surveyed in 1923 by Claude Birdseye with Emery Kolb as lead boatman. LaRue was also on the Grand Canyon trip. Ironically, Hoover Dam (Black Canyon site) near Las Vegas, Nevada, was chosen as the first arch gravity dam on the Colorado River. Glen Canyon Dam was constructed 15 miles rather than 4 or 8.5 miles above Lees Ferry as recommended by LaRue. Dams were constructed at neither of the Cataract sites, which was fortunate for the town of Moab, since the impounded waters would have flooded the community. I think that Harry Tasker, rodman for the Cataract Canyon survey, summed up the experience well: "Some come here to see the work of God, but I come here to hold a rod."

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## From Canyonlands Field Institute

by Rebecca Martin

Canyonlands Field Institute (CFI), in Moab, has a number of 1994 course offerings specifically designed for professional guides. These include a variety of Safety and Medical certification courses, different levels of River Rescue training and Multi-Agency Guide Training options in addition to our regularly scheduled courses covering topics pertinent to programs on the Colorado Plateau. CFI is currently placing an emphasis on training options designed to reach "influencers," e.g., professional guides, trainers, and educational personnel, who are in positions to reach the increasing numbers of visitors who are visiting the Colorado Plateau. To help make this training available, scholarships are being offered for most guide training courses.

Coming up are, among other options, a Wilderness EMT course at Professor Valley Field Camp in March, the newly emerging Colorado Plateau Guide Institute's Field School in April and an Endangered Fish Recovery Workshop in May. For further information on CFI's Guide Training Courses, please contact: CFI, Attn: Rebecca Martin, Box 68, Moab, UT 84532. 1-800-860-5262 or FAX: (801) 259-2335.



# CURRENTS

ISSUES/TOPICS/SUGGESTIONS	NEWS/INFORMATION/MEMBERS
<p>Here's what concerned our members at the first meeting.</p> <hr/> <p style="text-align: center;">ALL RIVERS</p> <hr/> <p>Dam proposals Endangered and reintroduced species Toilets and human waste Air traffic over the rivers Guide health insurance Licensing and testing CPRG information flyers River Etiquette</p> <hr/> <p style="text-align: center;">CATARACT CANYON</p> <hr/> <p>Camp Sign in box Overcrowded lake camps</p> <hr/> <p style="text-align: center;">HORSETHIEF AND RUBY CANYONS</p> <hr/> <p>Motor restrictions</p> <hr/> <p style="text-align: center;">MOAB DAILY</p> <hr/> <p>Motor restrictions - BLM take out to Potash</p> <hr/> <p style="text-align: center;">WESTWATER CANYON</p> <hr/> <p>Take out 1994 permit changes Wild and scenic status Fence out cows</p> <hr/> <p style="text-align: center;">DOLORES RIVER</p> <hr/> <p>Seasonal water releases</p> <hr/> <p style="text-align: center;">GREEN RIVER - ALL CANYONS</p> <hr/> <p>Flaming Gorge Dam water releases Impacts and traffic</p> <hr/> <p style="text-align: center;">LABRYNITH AND STILLWATER CANYONS</p> <hr/> <p>Motor restrictions Canoe impact</p> <hr/> <p style="text-align: center;"><b>Write to let us know what you think.</b></p> <p style="text-align: center;"><b>We need articles, art work, poetry, or comments from you!</b></p> <p style="text-align: center;"><b>SPRING MEETING APRIL 9 &amp; 10 DETAILS FORTHCOMING</b></p>	<p style="text-align: center;"><b>Westwater News</b></p> <p>We need volunteers for fence building in Westwater please contact CPRG!</p> <p style="text-align: center;"><b>Public Information</b></p> <p>For a copy of <u>Operation of Glen Canyon Dam Draft Environmental Impact Statement</u> Write to/Bureau of Reclamation; Colorado River Studies; POB 11568, SLC, UT 84147 Specify summary or draft with appendices. Send comments to Colorado River Studies; Lee McQuivey, POB 11568, SLC, UT 84147 (801) 524-5479</p> <p>For McPhee Dam Operations Contact: Bureau of Reclamation/Dan Fritz (303) 385-6500</p> <p>For Animas/La Plata Dam Operation Projects Contact: Taxpayers for the Animas River Mike Black/(303) 385-4118</p> <p>Four Corners Action Coalition Mr. Jerry Swingle/(303) 247-5797</p> <p>Recovery Program for Endangered Fish in the Upper Colorado River Basin Contact: Colorado Division of Wildlife Connie Young/Public Info. Coordinator Colorado Division of Wildlife 6060 Broadway, Denver, CO 80216 (303) 291 7468</p> <p style="text-align: center;"><b>Founding Members</b></p> <p>Nancy Allemand, Bego, Bill Bishop, Sean Brown, Bill Bruchak, James Buickerood, Jake Burnett, CFI, CNHA, Doug Capelin, Dave Christensen, Tim Cooper, Susette DeCoster, Shannon Demuth, Daniel Dierker, Brad Dimock, Adam Druckman, Penny Elder, Joe Englebrecht, Walter Hajduk Garry Heinze, Dee Holliday, Marvin Jensen, Nathan Jones, Bert Jones, James Knipmeyer, Jaque Ledbetter, Tom Ledbetter, Gary Lockrow, William Love, Steve Lyons, Peter Lawson, Dave MacKay, Dave May, John Martin, Rebecca Martin, Kelly Matheson, Terri Merz, Tom Moody, Mary Moran, Nels Niemi, Don Oblak, Andre Potochinik, Clifford Rayl, Tom Rice, Lynn Roeder, Christa Sadler Steve Savage, Rachael Schimdt, Norm Shrewsbury, Keith Sleight, Karen Smith, Gene Stevenson Lew Stieger, David Stratton, Zane Taylor, Tim Thomas, Peter Van De Carr, Karla VanderZander, Jene K. Vredevoogd, Robert Webb, Roy Webb, John Weisheit, Tim Whitney, Tamara Wiggans, Red Wolfe</p>

10) Permit number (applicable only to state and federally permitted waters). Note: Permit number must be the number issued by a governmental land management agency. If the permit was for commercial carry of passengers, the guide may list the commercial outfitting company's name in lieu of a permit number.

11) Put-in and take-out dates must be listed by month/day/year.

12) Type and size of vessel operated.

13) Trip leader's name.

River guide permit applications and study guides of the Utah Boating Act may be obtained at any testing and permitting center. Applications and study guides will be mailed upon request. Numerous first aid and emergency medical training programs are recognized by State Parks as equivalent to American Red Cross training standards. A listing of these course equivalents is available upon request.

Guides and outfitters seeking further information regarding commercial river guiding activities or the Utah Boating Act are encouraged to contact State Parks at either of the following offices:

Utah Division of Parks and Recreation  
Southeast Region Office  
89 East Center Street  
Moab, Utah 84532  
(801) 259-8151  
Contact: Tony White

Utah Division of Parks and Recreation  
Main Office  
1636 West North Temple  
Salt Lake City, Utah 84116  
(801) 538-7220  
Contact: Ted Woolley

of hogan-like structures in a narrow strip along the Colorado-New Mexico border have yielded radiocarbon dates from the mid AD 1400's, but many archaeologists doubt the validity of these new early dates as truly representing a Navajo occupation. Navajo often used wood they had found laying around or wood out of preexisting structures to build their own structures.

**Conclusion**

Trying to figure Navajo origins is difficult and perhaps may never be fully understood. The culture history of the Southwest results from a complex series of interactions between various groups. The Navajo culture we know today developed from an interaction of Athabascan speakers with several cultural groups as they migrated south. These groups include Plains bison-hunters, Pueblo farmers, and later the Spanish missionaries and settlers. This process, by late 17th century, had led to a well-defined Navajo culture based on hunting and agriculture. The Navajos are a very adaptable people who have borrowed and enculturated that which has been useful to them and discarded those characteristics that were not useful. Early Navajos and Utes often incorporated Pueblo artifacts for their own use which clouds the archaeological record.

**CPRG LOGO CONTEST**

You decide the theme for the CPRG logo. Let your art work grace the cover of *The Confluence* and all CPRG correspondence. Drawing must be 2 inches wide and 3 inches long.

COLORADO PLATEAU RIVER GUIDES  
P.O. Box 344, Moab, UT 84532

Phone: (801) 259-8077

**Membership**

**Application**

\_\_\_\_\_  
Name/Organization

\_\_\_\_\_  
Years Experience/Comments/Interests

\_\_\_\_\_  
Nickname

\_\_\_\_\_  
Company/Freelancer

\_\_\_\_\_  
Winter Address

\_\_\_\_\_  
Are you joining as a...

\_\_\_\_\_  
City State Zip

( ) **Guide Member** (Must have worked in the River Industry)

( ) **General Member** (Must love the Colorado Plateau)

\_\_\_\_\_  
Winter Phone Summer Phone

**Please send annual dues of \$20 to the above address. Thank you for your support!**

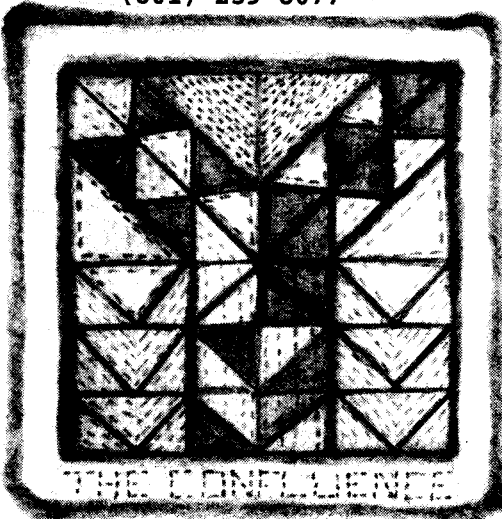
# Professional Guide Training Options for the 1994 Season

by Rebecca Martin

Some of you will have heard that we intended to publicize Guide Training Options for the coming season in this first issue of *The Confluence*. Well we received so many options, they weren't even manageable using a chart. (This is good!) Below, then, is the logical "Plan B": a listing of training source contacts where you may call/write to get specific information. Sorry you have to do further footwork, but believe me, there's a lot of great stuff out there in the offering! Call them!

<p><b>Canyonlands Field Institute</b>            P.O. Box 68            Moab, UT 84532            *Safety/Medical Certifications            Call (800) 860-5262            *Swiftwater Rescue            *Colorado Plateau Topics            Call (801) 259-7750 or            FAX (801) 259-2335</p>	<p><b>Salt River Rafting</b>            Attn: Robert Bond            7111 East First Street            Scottsdale, AZ 85251            *Safety/Medical Certifications            (602) 941-4222</p>
<p><b>Four Corners School East Route</b>            P.O. Box 1029            Monticello, UT 84535            *Safety/Medical Certifications            *Colorado Plateau Topics            Office (801) 587-2156            Basecamp (801) 587-2859</p>	<p><b>Wilderness Medicine Institute</b>            P.O. Box 9            300 10th Street            Pitkin, CO 81241            *Safety/MedicalC ertifications            *Many locations *Many dates            (303) 641-3572</p>
<p><b>George Marsik</b>            P.O. Box 686            Flagstaff, AZ 86002            *Safety/Medical Certifications            1-800-2PADDLE</p>	<p><b>Wilderness Professional Training</b>            P.O. Box 759            Crested Butte, CO 81224            *Safety/Medical Certifications            *Many locations *Many dates            1-800-258-0838 (303) 349-5939            FAX (303) 349-1049</p>

From: **COLORADO PLATEAU RIVER GUIDES**  
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FORWARDING AND RETURN POSTAGE GUARANTEED/ADDRESS CORRECTION REQUESTED