THE CHANGING RAPIDS OF THE COLORADO RIVER

Brown Betty Rapid (Rapid 1)

By Jayne Belnap, Bob Webb and John Weisheit

There were many strange aspects to what Frank M. Brown planned for his expedition down the Colorado River in 1889. First, the premise: he was planning the construction of a water-level railroad from Grand Junction, Colorado, to Yuma, California. Second: Brown had a bipolar crew of friends and hired surveyors, and none of them had significant river experience. Third: he was either cheap, or financially strapped, and brought equipment unsuited for the expedition. Finally: he allowed his chief engineer, Robert Brewster Stanton, to bring his family's personal servants, H.C. Richards and G.W. Gibson, who had the titles of "Steward" and "Cook" (Smith and Crampton, 1987). Was this a serious business trip or a cheap outing by wealthy westerners?

In part because they were black, and possibly because they were servants, Richards and Gibson were given their own boat, which had an interesting history. Brown hired a second engineer, Frank Kendrick, to survey the railroad route from Grand Junction to the Confluence (Stiles, 1964). Kendrick and his crew portaged Westwater Canyon (by wagon and road), but they rowed an open dory made of oak down to the Confluence and upstream to Green River, Utah, where they gave it to Stanton. This boat, named the *Brown Betty* after a favorite desert of the time, became the cook boat. Because Brown and Stanton hadn't accounted for the voluminous baggage in the other boats, the kitchen—packed in water-proof compartments that were removed from the other boats—was towed as a "float" behind the *Brown Betty*.

The water level was high—40,000 ft^3/s is our estimate from the photographs taken on the trip—and the float made the *Brown Betty* difficult to maneuver. When the group reached Rapid 1, they were on the left side of the river, where the railroad line was supposed to be. Brown ordered the crew to cross the river, possibly to begin a portage and surely not to camp since the better camp is on river left at this point. As Richards and Gibson reached midstream, they knew their float would drag them into the rapid and potentially to their deaths. They cut the rope, saving themselves but losing valuable provisions.

Because of this boating accident, river historian Dock Marston decided that Rapid 1 should be called Brown Betty Rapid. This is highly ironic, because the *Brown Betty* survived the accident and was destroyed downstream in Rapid 6. Like Capsize Rock in Rapid 15 (Hell to Pay), which is not the rock that the Best Expedition wrapped on, the name of Brown Betty Rapid does not coincide with where the boat sank. Perhaps Rapid 1

Figure 1. Rapid 1 from River Left. (files s2908-1889.tif and s2908-1994.tif)
A. (May 31, 1889). While Stanton surveyed and Brown ordered the boats carried around rapids, Franklin Nims photographed Cataract Canyon. This downstream view shows Rapid 1 at about 40,000 ft^3/s. Shortly after this photograph was taken, the raft attached to the *Brown Betty* was cut loose and swept into the rapid (Nims 40, courtesy of the National Archives).

should be renamed "Richards' and Gibson's Float Rapid" (we're kidding). A better renaming would be to call Rapid 6 "Disaster Falls," since Powell flipped there (in 1869) and Brown-Stanton wrecked the *Brown Betty there* (in 1889).

Few river trips, other than the Brown-Stanton expedition, have had problems in Brown Betty Rapid. Most of the early expeditions seemed to run the rapid without troubles. Despite the fact that a debris flow has entered the upper right side of the rapid, little appears to have changed in its hydraulics. The little, thrashing hole that appears at right center at low water (5,000 to 10,000 ft^3/s) appears in several early photographs, the few rocks have been moved from the river banks. So, other than a strange and inappropriate name, why would anyone be interested in Brown Betty Rapid?

Rapid 1 is the beginning of the longest sustained drop in the profile of the Colorado River downstream from Grand Junction. Upstream from this point, debris flows—if they occur at all—are small and don't significantly affect the channel. Downstream from this point, all the way to Dark Canyon, debris flows dump significant amounts of rock into the river, creating all those wonderful rapids. If you look high up in the cliffs above Rapid 1, you will see a reddish brown ledge of soft rock that isn't visible in the strata upstream. This rock, the first outcrop of Halgaito Shale, is one of the primary reasons why Cataract Canyon exists as a whitewater run. Mix 1 part Halgaito Shale with 10 parts sand to boulders and 2 parts water, dump it off a cliff, and voila! debris flows result. The red-stained gullies that scour the slopes just downstream from Rapids 1 and 2 and mute testament to the influence of Halgaito Shale on Cataract Canyon. In that sense, Rapid 1 is perhaps more a testament to the influence of debris flows in bedrock canyons than a reminder of a trivial incident in river history.

REFERENCES

Smith, D.L., and Crampton, C.G., 1987, The Colorado River survey: Salt Lake City, Howe Brothers Books, 305 p.

Stiles, H.J., 1964, Down the Colorado in 1889: The Colorado Magazine, v. 41, p. 225-246.

B. (March 28, 1994). Despite the water-level differences, the beach below Rapid 1 is larger now, and tamarisk lines the bank. A debris flow from river right has slightly changed the head of the rapid (Steve Tharnstrom, Stake 2908).

CPRG's Fiscal Sponsorship A Board Meeting Report

The board of Colorado Plateau River Guides met on February 10th with Brad Wallis, the executive director of CANYONLANDS NATURAL HISTORY ASSOCIATION (CHNA). CPRG is fiscally sponsored by CHNA, which is strictly an educational non-profit organization.

CPRG has established itself as an educational organization by publishing articles in THE CONFLUENCE and providing various programs for river guides. CPRG is dedicated to continue this line of educational programming. However, CPRG is changing by becoming more involved with river protection issues and has sponsored or organized environmental advocacy programs, such as the campaign to decommission Glen Canyon Dam and the campaign to mitigate the Atlas tailings pile. The CPRG board feels it is very important to walk the talk.

The board felt that CPRG should endeavor to establish autonomy and obtain its own 501(c)(3). As such a step takes time and money, the board decided to accomplish this by Dec. 31, 2004. In the meantime, LIVING RIVERS, a non-profit advocacy organization based in Moab, has offered CPRG temporary fiscal sponsorship. The CPRG board accepted the proposal with the blessing of CNHA. All involved in the discussion felt it was a logical step to make. The action goes into effect on May 1, 2002.

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CPRG Secretary

Figure 2. Rapid 1 from river left (files s3575-1909.tif and s3575-1994.tif)

A. (October 18, 1909). The little hole at right center of Brown Betty Rapid is crashing in this view. (Cogswell 485, courtesy of the Bancroft Library, University of California Berkeley).

This article is a result of investigative work that began in 1992 and completed in 2001. Look forward to more such articles appearing in **THE CONFLUENCE**. The work will be published as a book entitled, Cataract Canyon: A Human and Environmental History of the Rivers of Canyonlands National Park.

B. (March 30, 1998). The water level is much higher, drowning out the beach. A debris flow has swept into the right side of the rapid, scouring the talus cones and depositing a few new boulders in the river. (Dominic Oldershaw, Stake 3575).