



The Trip of a Lifetime

How to endow a professorship—and have the time of your life

The idea was born in the fertile minds of Lee Silver and Gene Shoemaker, and it first found vocal expression in the Houston airport one day in 1975 when, in a grounded plane, they were being pacified with cocktails and snacks while a crew of mechanics struggled to make the plane operable.

Silver and Shoemaker, who were both involved in NASA's lunar program, were on their way back from Houston to Caltech, where they are professors of geology. Ultimately, talk got around to the geology division in general and how to raise money for it in particular—and that's when the idea surfaced. Back at Caltech, they took the plan to Barclay Kamb, the division chairman, who was enthralled but a little skeptical. He called in one of the division sages, Bob Sharp, professor of geology, and tried it on him. Sharp's immediate reaction was that he wished he had been smart enough to think it up himself. Kamb then took the proposition to the Caltech development staff and several members of the administration, who

admitted it was certainly unusual but worth a try.

The idea was to raise \$1,000,000 for an endowed professorship in geology by sponsoring a special deluxe raft expedition through the Grand Canyon—a trip to be guided by four of the best geologists in the country—Silver, Shoemaker, Kamb, and Sharp. Their special reason for launching this venture was to change the situation in which the geology division, unlike the other divisions at Caltech, did not have a single endowed chair on its professorial roster.

To achieve this goal, donors would be asked to contribute \$50,000 (or \$75,000 per couple) and, in return, the geology division would offer them the trip through Grand Canyon as a gesture of thanks. The trip would provide a unique opportunity to learn about the earth's history as read by geologists from the rocks themselves. And it would all be combined with the excitement and beauty of the river and canyon.

With a flair that would do credit to Madison Avenue, the venture was christened "The Trip of a

Lifetime.” Kamb and Sharp went to work recruiting donors, with particular help from Stanton Avery, chairman of Caltech’s board of trustees, William Corcoran, vice president for Institute relations, and the development staff. Sue Walker and Gene Wilson of Development helped Sharp prepare brochures (“Although we can’t take you to the Moon, we offer the next best thing . . .”), prospectuses, and other materials, which went out to a number of potential donors.

The response was strong and enthusiastic, and one of the first to sign up, with his wife, was Stanton Avery. “I was going to Europe this summer,” said another trustee, “but this is such a unique philanthropic approach that I’m canceling that trip and going on the canyon run with you guys.” In good time there was a clutch of prospective passengers.

The first trip, from May 16 to 22, 1976, raised more than half of the needed \$1,000,000. It took two more trips to reach the goal—a second run September 25 to October 2, 1977, and a third August 20 to 26, 1978.

The four geologists—Silver, Shoemaker, Kamb, and Sharp—went on all three trips, except that Sharp missed the second when he came down with a spectacular cold. He did manage, however, to fly to the assembly point in Las Vegas and see that everything was in order for the trip. Then, as the party started out, he climbed on a plane and flew home (“one of the bitterest experiences of my life”).

The physical organization of the trips was provided by Western River Expeditions of Salt Lake City. They furnished boats, equipment, and crew, so that the Caltech geologists did not need to be concerned with the mechanics of running the river itself and could concentrate on entertaining their passengers with the natural history and geology of the Grand Canyon.

Their contributions were not all academic, however. They also added to the physical comforts of their guests by supplying such luxuries as Coleman lanterns, cots, air mattresses, and a well-stocked bar. It was Silver and Sharp who made all the arrangements and did the hard work of handling the logistics.

On the river, Sharp’s special role in the group grew naturally out of his long experience with Grand Canyon geology, dating back to his participation in the Caltech-Carnegie expedition of 1937, which was the first modern scientific expedition through the canyon since the work of John Wesley Powell and his

associates in the last century. On the 1937 expedition Sharp made a classic, widely cited study of the ancient erosion surfaces that mark the two great unconformities in the geological record of Grand Canyon. These features are among the highlights of Grand Canyon geology, and he was particularly eager to point them out and explain them to the river-trip participants. Bob’s historical perspective was an important ingredient in the intellectual fare of the trips, and he added to it by bringing along a library of books on the history and geology of the canyon, which was made available each afternoon in camp, after the day’s run was over.

Among the four guides, Gene Shoemaker has the greatest experience in river-running through the Grand Canyon, having made the trip numerous times to do geological field work. A confirmed “river rat,” he could regale the participants indefinitely with canyon lore. In 1968, on the occasion of the John Wesley Powell centennial, he led a historic three-month trip down the river from Wyoming to Lake Mead for the purpose of recovering Powell’s original camera positions and thus documenting photographically the changes that had taken place in the canyon in the 100 years since Powell’s expeditions. Gene’s current research includes stratigraphic studies, by a new paleomagnetic method, of the Triassic and late Precambrian sedimentary rocks of the Grand Canyon region, and also studies of the late Tertiary and Quaternary history of the Colorado River and the cutting of the Grand Canyon. In addition, he has prodigiously detailed knowledge of the general geology of the canyon in all its aspects, which he shared enthusiastically with the river-trip participants.



Sharp, Silver, and Shoemaker expound on Grand Canyon geology

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Travel on the river is alternately on millpond . . .

Lee Silver's special connection with Grand Canyon arose in the course of his studies of the geochronology and uranium-lead geochemistry of crystalline basement rocks in the southwest. Over the past two decades he has run the river many times to collect important basement samples from the Granite Gorge of the canyon. So he was the group's expert on the Older Precambrian rocks, and he expounded eagerly on the complexities of events that tortured these rocks one to two billion years ago. In addition, he performed expertly as bartender of the expeditions.

Barclay Kamb was the only one of the four guides who had not run the river before, and therefore functioned more as a general factotum than a scientific or historical expert. However, some years ago he had worked in the Navajo Indian Reservation east of Grand Canyon, studying the Quaternary geology in connection with the archaeology of this region, and this experience was of value in connection with archaeological sites (pueblo ruins and artifacts) that the groups encountered. Kamb also entertained with accordion and harmonica playing, and made photographic records of the trips, including helping his son Barky make movies of the first and final trips.

Each trip lasted a full week, starting with a get-together in Page, Arizona. The boats were put in at Lee's Ferry, and at the end of the run passengers were helicoptered out at Lava Falls. This 180-mile stretch is about two-thirds of the length of the Grand Canyon, the most spectacular part.

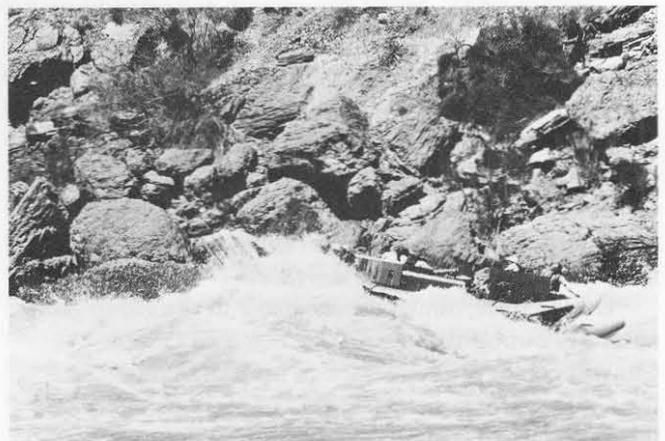
There are many sandy beaches and bars making pleasant camping spots along the river, often next to rapids. All the campsites are kept spotless; the only

thing campers leave behind them is footprints. For example, the parties carried their own portable johns, complete with small shelter tents.

A normal day on the river isn't particularly a rush-rush affair. People wake between 6 and 7. The crew has coffee ready, and soon produces a sturdy breakfast—cantaloupe, grapefruit, French toast, sausage, scrambled eggs. Then everyone helps break camp and load the rafts.

During the day, aside from a stop for lunch, which is usually something simple like fruit and sandwiches, there are often as many as half a dozen stops at different points of interest. There might be a walk up a side canyon for a quarter or half a mile. Or a stop at the mouth of the Little Colorado to go upstream a few hundred yards for a swim in the turquoise blue water. The water in the main stream is far too cold to swim in; it comes from the depths of Lake Powell—winter water that has sunk to the bottom there. Its temperature is in the low 50's. There are stops to look at fossils, Indian ruins, and an abandoned asbestos mine. Sometimes there is a major excursion taking half a day or more—up Tapeats Creek to Thunder River and the falls, for example, a round trip of about five miles. Of course, not everyone went on all of the longer trips.

Travel on the river is alternately on millpond and rapids—which are actually caused by little “Boulder Dams” built into the river by debris from the side canyons. The water above each rapid is ponded. When the boats hit the rapid, the passengers have to grab onto the tie-down ropes, because it is often a wild ride, careening down through huge churning waves.



. . . and rapids

In the excitement there is much whooping and screaming, and whenever someone gets drenched, it is cause for considerable mirth. Some even look for extra excitement by sitting forward on the rafts, where the water sprays up thick and fast. There are a great many small rapids on the river, and going through these is simply fun; but the big rapids (“sockdolagers” was what the old Powell expedition called them—and they still are) are really exciting. In fact, if the rafts weren’t so large, the rough water would be terrifying. (This may be the place to note that there was always a doctor aboard on the trips, though he never had occasion to deal with more than minor afflictions.)

There were about 15 people to a raft on the Caltech trips, with a crew of two boatmen. The powered neoprene rafts—practically unsinkable and unflippable—were made of five big pontoons, laced together and made so as to bend at two places fore and aft. Supplies were carried in big waterproof boxes lashed securely to the raft frame.

Everybody helped unload the rafts when they stopped for the evening. While the crew cooked dinner (steak, seafood, or some other delectable entree with fresh vegetables and a salad), the geologists set up the bar. Kamb would play the accordion or Sharp would get out his library, and of course there was plenty of talk—but not very far into the night. For nearly everyone, bedtime came early.

There were few formal lectures, but the four geologists were busy expounding at every opportunity on the geology to be seen along the way. The geologists themselves are so completely under the spell of the Grand Canyon and the dynamic river that they can’t help but communicate that feeling to their guests. It is strangely awesome to discover that in one trip down the river you traverse nearly two billion years of geological time. And in some places you can literally straddle a billion years by putting one foot on one side of a rock contact and the other foot on the other side. They have a saying that no one is ever quite the same once he’s experienced the Grand Canyon run.

Even the professional boatmen were appreciative of the expertise of the Caltech geologists. While waiting at Lava Falls to be helicoptered out at the end of one trip, Sharp overheard a conversation between two boatmen from another group. One pointed to a boatman with the Caltech group. “That lucky guy,” he said, “just came down the river with *four* geologists!”

Sharp was eventually baffled by his colleagues



Bob and Jean Sharp on the river

because, while he needed them repeatedly about what they were going to name the endowed professorship they were all working for, they seemed remarkably unconcerned. It was only on the third trip down the river, this past summer, that the other three geologists finally let out the secret they had been cherishing since the trips began. In fact, it was President Goldberger who broke the news. He was an invited guest on this trip, as were the geologists’ wives—Gerry Silver, Carolyn Shoemaker, Linda Kamb, and Jean Sharp.

On the third night out the party was settled in a nice campsite near Unkar Creek, and after supper Barclay Kamb called the group together. “Murph Goldberger,” he told them, “has something to say.” Beaming, Goldberger announced that this operation was now a guaranteed success. The money had all been raised. The endowed professorship was going to be named for Bob Sharp. And the first occupant of the chair would be—Bob Sharp.

Sharp was rendered temporarily speechless (“you could have knocked me over with a feather”). Now he can say, “It was a beautiful place to do it. Right on the river. Beautiful evening. In camp. With some of the people who were involved. And a *satellite* went over.” Murph Goldberger made a public announcement of the professorship in his inaugural address.

If there is one thing that distinguished this unique fund-raising effort, it was that it was fun all the way through. Everybody involved in it had a good time—not just the people who took the trips, but also the people who worked to make the trips possible. And, of course, the man who holds the new Robert P. Sharp Professorship of Geology most of all. □