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KILLER RIVER,
MONSTER DAM



COURTESY OF HOLMES ROLSTON III

China's Three Gorges Dam is by most counts the largest dam in the world. It is 1.3 miles wide and impounds more water than any other dam in the world.

THE YANGTZE'S PERIL, PROMISE

Exploring above and below China's Three Gorges Dam

By Holmes Rolston III
For the Coloradoan

The Three Gorges Dam, spread out before me across China's Yangtze River is by most counts the largest dam in the world. This gargantuan dam stretches more than 1.3 miles wide and impounds more water than any other dam in the world, creating a lake 400 miles long, about the length of Lake Superior. The dam generates more hydro

power and provides more flood control and agricultural water than any other dam. Three Gorges is regarded as China's most ambitious project since the Great Wall. The Yangtze River, along with the Yellow River, are China's two major rivers. Both are vital but killer rivers. Chinese peasants have needed to live close to the rivers for their rice paddies. The close proximity to such a mighty river has left them especially vulnerable. A 1998 flood killed 4,000 people and left 15 mil-

lion homeless. That pales in comparison to Yangtze floods in 1931 that killed 3.7 million people by drowning, water-borne diseases and starvation. It is among the worst natural disasters in the last century. The Yellow River has killed more people than any other river in human history. Millions of people were forced to move to make room for the dam.

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COURTESY OF HOLMES ROLSTON III

Holmes Rolston III poses for a photo with the Three Gorges Dam behind him.

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Peril and promise along the Yangtze » Xplore • 1C



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China

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Thirteen major cities, 140 smaller cities and towns and 1,352 villages, 1,600 factories and 700 schools were submerged. The relocation project was gigantic and included building 13 replacement cities, sometimes with their famous temples dismantled and reconstructed.

I saw many newly built apartments, chiseled into the mountain sides just above the present lake level.

The dam is placed below three narrow gorges: the Xiling Gorge, the longest and most perilous; above that the Wu Gorge, the deepest; and most upstream the Qutang Gorge, only five miles but the most beautiful.

There are cliffs 2,400 feet high, fantastic rock towers, crags with ferns and trees growing in cracks on ledges. The canyons are weird and grotesque. I saw remnants of this above the lake, but most of it is now drowned.

I took a cruise on the lake, named Emerald Drop Lake. Since the lake is filling gorges, it is never wide but is quite long. The cruise is scenic, but you have to imagine the spectacular lower gorges now drowned. There is a stark draw-down line a couple hundred feet high, leaving no vegetation anywhere near the lake.

We got as far as the Xiling Gorge, which earlier was the most dangerous. Only a few years old, the lake is already seriously polluted by pesticides, fertilizers and sewage from boats. The river is loaded with sediment, caught by the lake and deposited in the still water. This could fill the lake in less than 50 years.

In the city of Wuhan, a couple hundred miles downstream, where I was invited to speak at a conference on Chinese environmental aesthetics, my hosts showed me riverside apartments. These were recently built and expensive and located on land that previously would have been regularly flooded.

One of the overlook sites displays a huge granite boulder taken from the bedrock on which the dam is constructed. The granite was found to be especially well-suited for situating the dam and for use in building the foundations of the dam. They claim this excellent granite makes the Three Gorges "a divine dam site," which is an interesting turn of phrase for a Communist government.

From there, I walked to another site above the dam where I could see two ships in the locks. There are two sets of five-step locks, which take half a day to navigate. Also there is what they call a shiplift, a huge elevator that can lift a large ship up to 574 feet in less than an hour. This is used mostly for passenger ships.

Earthquakes in China have killed almost as many people as their rivers. The official line is that the dam is in an area with quite infrequent and low-level earthquakes.

An appraisal by the U.S. Geological Survey reached a different conclusion.

The dam is situated near six fault lines. One, the Zigu-Badong fault, 50 miles upstream, is considered likely to produce earthquakes that could impact the dam area.

The huge weight of the reservoir may trigger fault lines. After the reservoir began filling in 2003, there was a Richter scale 3.4

earthquake along this fault. There have been scale 5 to 6 quakes in the past. The dam is built to withstand a scale 7 quake.

Before the Tangshan earthquake in 1976 in northeast China, no significant tremors there had ever been recorded. Suddenly a massive quake measuring 7.8 on the Richter scale occurred, killing more than 242,000 people.

Such a dam was first proposed in 1916 by Sun Yat-sen. Especially since previous governments proved unable for the task, the Communist government enjoyed celebrating the achievement. They preserved huge bulldozers and earth-moving equipment used to build the dam, praised the laborers and engineers in memorable photographs and art and pointed to still bigger landscape management envisioned.

Any nation would celebrate such a dam, and rightly so. But Three Gorges is a perfect model for Communist glory in heroic labor. This masterpiece of human construction has replaced and tamed three gorges, masterpieces of nature.

The Communists envision what they call an "ecological civilization," by edict of their government, and much admired in the conference I attended. Well and good, but meanwhile I

never saw more than a small patch of blue sky in the omnipresent gray haze the eight days I was there.

A Chinese environmental activist, a young mother named Chai Jing, reported Chinese skies are so hazy from pollution that she found grade school children who hardly knew the sky is blue and had never seen white clouds. Nor had they seen a star.

She made a documentary film on pollution in China, first with the backing of the environmental ministry, but after two days of its showing it was taken off the Internet in China.

The Chinese have lived in harmony with nature for thousands of years, sustaining themselves, as they like to say, by careful management of a landscape they love. Capitalist development has brought serious challenges.

In this new millennium, with the Three Gorges super-dam, they envision new frontiers of management and control of this fertile, killer river.

My hosts were cordial and excited about their future. I left hoping they are right.

Holmes Rolston III is a Fort Collins resident and CSU distinguished professor and professor emeritus who enjoys traveling.