GRAND CANYON GUIDE no. 3

... excerpted from Grand Canyon Explorer … Bob Ribokas

AN AMATEUR'S REVIEW OF BACKPACKING TOPICS

FOR THE

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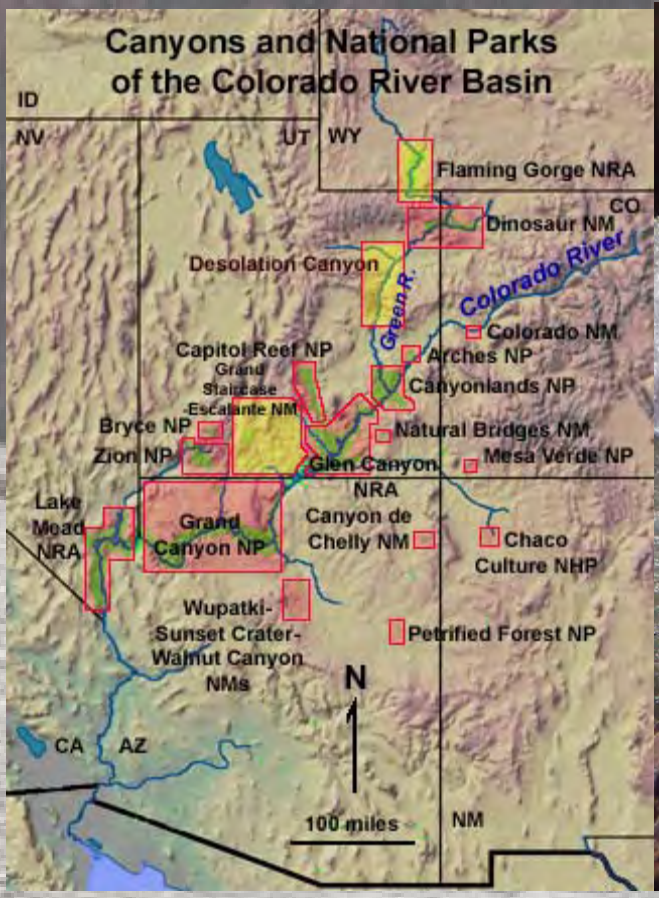
THE COLORADO RIVER

The Colorado River is the primary river of the American Southwest, draining somewhere in the vicinity of 242,000 square miles of land, from the states of Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada and California.

The **headwaters of the Colorado River** are located in **Rocky Mountain National Park** in Colorado. From here, at an **altitude of 9,010 feet**, the Colorado begins its flow southwestward toward the Gulf of California and the Pacific Ocean. By the time the river **enters the Grand Canyon, at Lee's Ferry**, its altitude has fallen to **3,110 feet**, **dropping over one mile** since its beginning. The river will **drop another 2,200 feet before it reaches the other end of the Grand Canyon**, the **Grand Wash Cliffs, 277 miles away**.



The river contains alternating sections of rapids and calm sections. The **depth of the river varies from 6 feet to 90 feet, with the average being about 20 feet**.

The Colorado River was originally named Rio Colorado or "Red River" by the Spanish. The reddish-brown color that originally gave the river its name became a rarity upon completion of the Glen Canyon Dam in 1963. The silt and sediments that gave the river its color are now trapped behind the dam in the bottom of Lake Powell.

Before construction of the Glen Canyon Dam the river would carry 500,000 tons of silt and sediment per day, in an average day, through the Grand Canyon. The peak flow rate of the Colorado before construction of the dam would normally be around 85,000 cfs for the month of June. By examining river sediments, scientists have determined that on a number of occasions over the past 4,000 years, the river reached peak flow rates of over 250,000 cfs. The peak flow rate through the Grand Canyon after construction of the dam was reduced to 50,000 cfs on rare occasions and is normally around 30,000 cfs. The primary purpose for construction of the Glen Canyon Dam was to prevent silt from building up behind another dam, Hoover Dam, on the other side of the Grand Canyon, at the head of Lake Mead.

Construction of the Glen Canyon Dam has adversely affected the ecology of the Grand Canyon. Flash floods that would at one time scour the inner-canyon clean and deposit fresh sand along the beaches no longer occur. The water temperature, which used to get as warm as 80 degrees F, is now icy-cold all year and averages around 42 degrees F.

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The 1,360 miles of its route in the United States makes it the nation's fifth longest river. It drains a large portion of the North American continent covering 242,000 square miles in the United States and 3,000 square miles in Mexico. The Colorado and its tributaries drain southwestern Wyoming and western Colorado, parts of Utah, Nevada, New Mexico and California, and almost all of Arizona. Three fourths of the basin is federal land devoted to national forests and parks and Indian reservations.

For more than 1,000 miles, the upper and middle portions of the Colorado River and its tributaries -- the Virgin, Kanab, Paria, Escalante, Dirty Devil and Green rivers from the west; the Little Colorado, San Juan, Dolores and Gunnison from the east -- cut a spectacular labyrinth of deep gorges. The longest and most spectacular of these canyons is the magnificent Grand Canyon, extending from the mouth of the Paria to Grand Wash Stream. Canyonlands National Park encompasses another of these regions at the juncture of the Green and Colorado rivers in southeastern Utah.

The lower Colorado River separates two great deserts, the Mojave on the California (western) side and the Sonoran on the Arizona (eastern) side. The Gila River drains the Sonoran. South of the Mojave Desert lies the Salton Basin, a large structural depression 235 feet below sea level, extending 150 miles northwest from the head of the Gulf of California.

In 1905, floodwaters caused a levee to break on the Colorado River near Yuma; its waters rushed into the Salton Basin. This created the Salton Sea, about 70 feet deep, 50 miles long, and 15 miles wide, with a total water area of some 300 square miles. Since the break threatened the agriculturally rich Imperial Valley and a major railroad route, the levee was finally repaired in 1907, but the Salton Sea remains.