Could the Colorado River once have flowed into the Labrador Sea?

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A figure stands on Esplanade surface opposite Vulcan's Throne volcano, Grand Canyon, USA. Photo by J.W. Sears. Credit: James W. Sears

In the November issue of *GSA Today*, James W. Sears of the University of Montana in Missoula advocates a possible Canadian connection for the early Miocene Grand Canyon by arguing for the existence of a

"super-river" traceable from headwaters in the southern Colorado Plateau through a proto–Grand Canyon to a delta in the Labrador Sea.

Sears proposes that the river flowed first toward the southwest corner of the Colorado Plateau, and then, in a shift initiated by uplift of the Rio Grande Rift, turned north into Paleogene rifts in the vicinity of Lake Mead. He posits that it then followed northeast-trending grabens across the Idaho and Montana Rockies to the Great Plains and joined the pre-ice age "Bell River" of Canada, which discharged into a massive delta in the Saglek basin of the Labrador Sea.

In this scenario, tectonic faulting beginning 16 million years ago dammed the Miocene Grand Canyon, creating a large lake that existed up to six million years ago. Then volcanism, including the action of the Yellowstone hotspot, cut the river off in Idaho about six million years ago, leading to the eventual capture of the Colorado River by the Gulf of California.

More information: Late Oligocene–early Miocene Grand Canyon: A Canadian connection? James W. Sears, DOI: 10.1130/GSATG178A.1

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