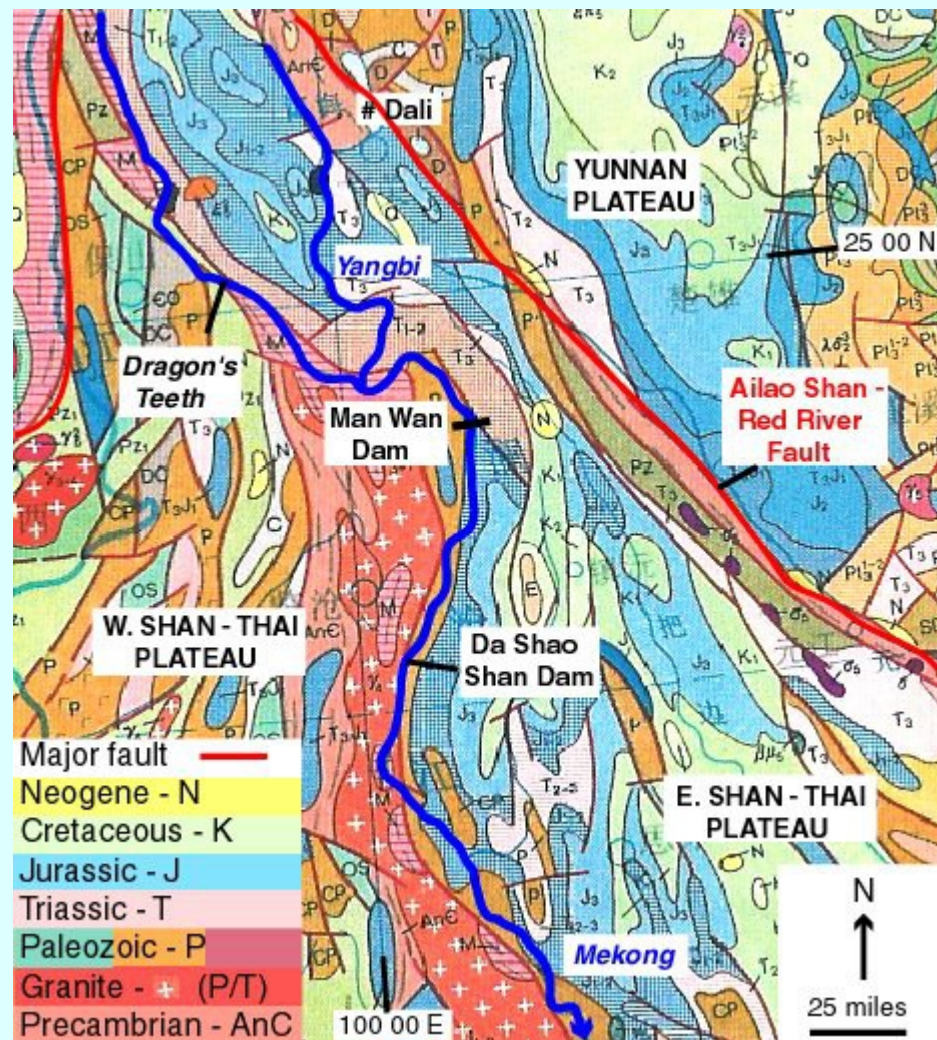


## Geology and Geography of the Mekong in Yunnan

### Geologic Map of SW Yunnan



Map produced by the Chinese Ministry of Geology and Mineral Resources  
Original scale 1:1,000,000

Neogene rocks are young valley fill sediments. There are few older Cenozoic rocks - this was a period of uplift and erosion as India pushed into Asia. Mesozoic rocks represent the continental margin in this area prior to India's collision with Asia. Cretaceous, Jurassic and Triassic rocks are primarily shallow marine mudstones and carbonates and continental red bed clastic sediments. Paleozoic rocks are massive carbonates characteristic of deeper marine environments. Granitic rocks are monzonitic and intruded at the end of the Paleozoic and beginning of the Triassic, while Precambrian rocks are schists, quartzite and marble. Both are indicative of earlier continental collisions.

In the upper part of the Three Gorges area in NW Yunnan, the Mekong follows the western boundary of the Yunnan Plateau, then passes into the Shan-Thai structural block. This block has been "squeezed" southward as India moved north into Asia. Within the block, the Mekong tends to follow older NW, then NS trending strike-slip faults. Both the Man Wan and Da Shao Shan dams are located near these faults. South and west of the Mekong, the Shan-Thai block is characterized by younger N and NE trending dip-slip faults bounding elongated blocks of Paleozoic to Precambrian rocks. To the north and east it is characterized by NNW trending

broad folds in Cretaceous and Jurassic sediments.

A north trending branch of the NE trending Nanding River fault intersects a NW trending fault paralleling the river at Dragon's Teeth Rapids, which was caused by landslides from high on the south slope associated with two large earthquakes on the Nanding River fault system in 1988. The photo below shows debris from the toe of the slide preserved on the north bank. For scale, the black spot in the wave in the center of the picture below is a very nervous kayaker.



Photo by David Hettig

The Mekong and Yangbi carry huge amounts of sediment from Tibet and Yunnan during monsoonal floods. As a result, major reservoirs on the Mekong will fill in a relatively short time period - certainly less than a century. The sandbar in the picture below is less than 100 miles from the source of the Yangbi. For scale, the bright spot at the lower right end of the sandbar is two 16 foot rafts.



Photo by Ben Foster

