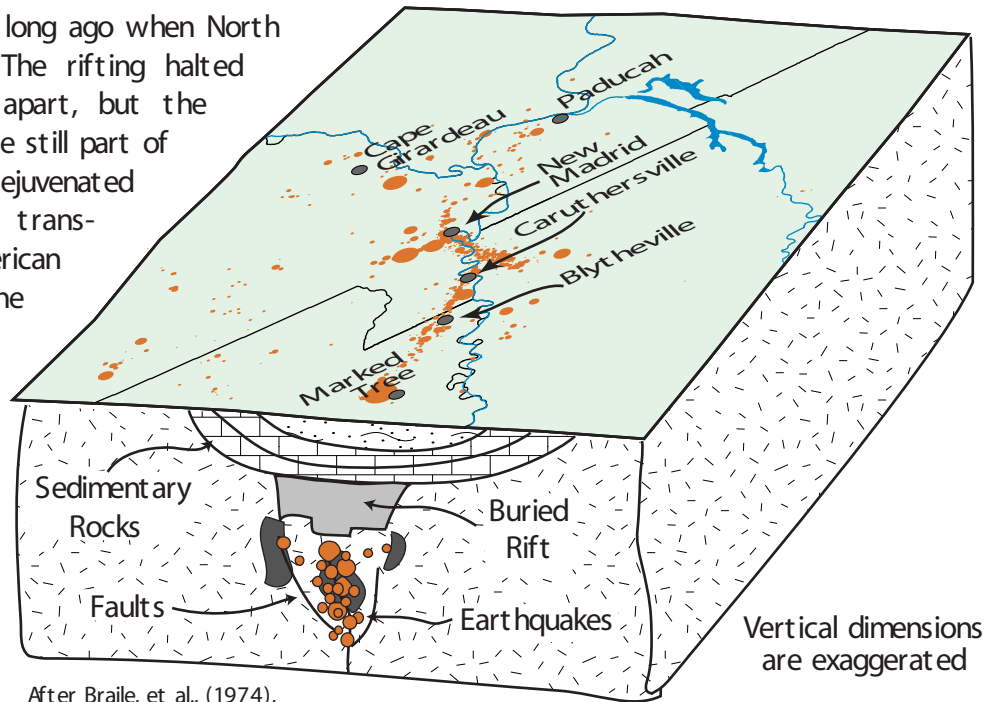


The New Madrid Fault System

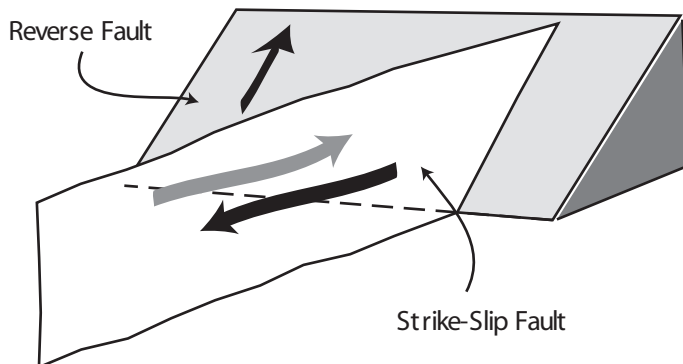
The Reelfoot Rift

The New Madrid Fault system is a collection of reactivated faults that formed long ago when North America began rifting apart. The rifting halted before the continent broke apart, but the structures that formed then are still part of the crust and they have been rejuvenated by the present-day stresses transmitted through the North American Plate. Little evidence of the existence of these faults is visible at Earth's surface but the main structures are outlined by earthquake activity such as that indicated by circles on the map to the right. Most of the seismicity is located between the depths of 5 and 25 kilometers, well beneath the surface.



After Braille, et al., (1974),
U. S. Geological Survey
Open File Report 84-770.

The Geometry of the Main Fault Segments



The fault system actually contains two types of faults, a strike slip segment oriented to the northeast, running from Marked Tree, AR to Caruthersville, MO, and a northwest trending reverse fault that rests below the New Madrid region. Material on the northwest side of the strike-slip fault moves northeast, and up the ramp.

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EARTHQUAKE CENTER

The New Madrid Fault System

Earthquake activity in the New Madrid region is concentrated in an area of weak ancient crust called the Reelfoot Rift. About one billion years ago the continent began to rift apart in this region, but the rifting never completed. What remains is a weak zone in the continent which has been reactivated by present-day stresses in Earth, resulting in seismic activity.

For more information, visit
http://www.eas.slu.edu/Earthquake_Center

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