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Evidence of Quaternary and recent activity along the Kyaukkyan Fault, Myanmar

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Abstract

Cenozoic right-lateral shear between the eastern Indian margin and Eurasia is expressed by numerous N-S trending fault systems inboard of the Sunda trench, including the Sagaing Fault. The most easterly of these fault systems is the prominent ~500 km long Kyaukkyan Fault, on the Shan Plateau. Myanmar's largest recorded earthquake, M_w 7.7 on 23rd May 1912, focused near Maymyo, has been attributed to the Kyaukkyan Fault, but the area has experienced little significant seismicity since then. Despite its demonstrated seismic potential and remarkable topographic expression, questions remain about the Kyaukkyan Fault's neotectonic history.

In this study we document robust geologic evidence of fault activity along the Kyaukkyan Fault. Field investigation and interpretation of satellite imagery reveal deformation features developed along a fault system mostly indicative of Quaternary dextral strike-slip faulting. Clearly defined tectonic geomorphology, including fault scarps and linear valleys, are used to trace the northernmost and southernmost part of the fault. The fault's central section is

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