



Formative processes of uphill-facing scarps by gravitational flexural toppling.

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We made a thorough geological and geomorphic mapping in a slate area with distinct linear depressions in the Abe River catchment, where many landslides were induced by previous strong earthquakes. We found that the linear depressions were made by the displacement along steeply-dipping faults during the flexural toppling of slate with steeply dipping cleavage. If the faults are not developed, there would be no distinct linear depressions and the flexural toppling of slate would make rounded convex slopes. The flexurally toppled slate would be susceptible to earthquake shaking because of seismic amplification normal to the openings made by the toppling.