Slip distribution during the latest two earthquakes on the Sekidosan fault along the southeastern margin of the Ouchigata Plain

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The Sekidosan fault is a NE-trending 33-km-long active reverse fault along the southeastern margin of the Ouchigata Plain, central Japan. We carried out topographic profiling across the tectonic scarps at 37 points, including 33 points on geomorphic surfaces younger than the last glacial maximum. On the basis of this observation, we estimated the slip distribution during the latest two surface-rupturing earthquakes. The distribution indicates that the middle part on the Sekidosan fault exhibits nearly the same amount of slip for the latest two surface-rupturing earthquakes and so does the northeastern part. The vertical offset during individual earthquake is estimated at about 2 - 3 m along the middle part and at about 1 - 2 m along the northeastern part. In addition, subsurface stratigraphy and radiocarbon ages revealed by drilling survey across a flexure scarp 4 - 5 m high on geomorphic surfaces of Holocene age suggests that more than two surface-rupturing earthquakes occurred after about 6000 years B.P.