

Great Nepalese quake of 1255 points to Himalayan risk

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A mega-quake in 1255 that wrecked Kathmandu, pictured here on November 21, 2012, wiped out a third of the population of Kathmandu Valley and killed the country's monarch, King Abhaya Malla, was of a kind that may return to the Himalayas, seismologists reported on Sunday.

A mega-quake in 1255 that wrecked the Nepalese capital, wiped out a third of the population of Kathmandu Valley and killed the country's monarch, King Abhaya Malla, was of a kind that may return to the Himalayas, seismologists reported on Sunday.

Experts from Nepal, France and Singapore mapped deposits of [river sediment](#) displaced along part of the [fault line](#) where the Indian subcontinent slams into the Asia tectonic plate at up to 50 millimetres (1.97 inches) per year.

With the help of carbon dating, they found that the soil movement in one place was caused by a huge [quake](#) that coincided with the great event of July 7 1255.

More than six centuries later, there was another surface-breaking event, correlating to a magnitude 8.2-event in 1934.

The finding is important because until now there had been no evidence of surface ruptures from the collision of these plates.

Surface ruptures are not only extremely violent—they also tend to release most or all of the accumulated strain. "Blind" quakes are ones that do not break the surface, and tend to be more frequent.

The study says it takes probably takes centuries for the strain to accumulate before another bust occurs, if the evidence of the surface turnover is a guide.

This long timespan is worrying as the previous event may be undocumented or poorly understood because it is so ancient.

The scientists do not rule out the possibility that other potential monsters could be lurking elsewhere on the fault, as no-one has looked for the evidence for them.

"Two great earthquakes 679 years apart contributed to the frontal uplift of young river terraces in eastern Nepal," says the paper, published in the [journal Nature](#) Geoscience.

"The rare surface expression of these earthquakes implies that surface ruptures of other reputedly blind great Himalayan events might exist."

More information: [DOI: 10.1038/ngeo1669](https://doi.org/10.1038/ngeo1669)

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