

Slip rates and Holocene activity of Matsuyama fault in the Shonai Plain, Northern Japan

Tadaki Mizumoto[1]; Toshifumi Imaizumi[1]; takaaki iwasaki[2]

[1] Geography Sci., Tohoku Univ.; [2] ias

The authors present the rate of slip and Holocene fault activity of Matsuyama fault in the Eastern boundary fault system of Shonai plain by tectonic geomorphology and detail drilling survey. Twenty-nine arrayed drilling holes were carried out about four hundred meters long across the flexure zone of a Holocene terrace. The drilling-hole data were collected as twenty meters intervals in the most intensive examined place with five to ten meters depth.

The upper layer mainly composed of gravel and silt including sand, mudstone, and clay facies about 4m thick was recognized from the top to downward. Just below this layer, we found a respectable peat layer, which have probably deposited at about 5000 to 6000yrs.B.P. The deformation of the peat layer indicates that the vertical offset of the top of this layer is estimated 3.5 to 4.0 m. According to vertical offset and possible determined age suggest that vertical slip rate of Matsuyama fault is 0.6 to 0.8 mm/yr.