

Tectonic geomorphology along the Yasaka Fault Zone: a long active fault in the area of dense population of active faults

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In the western Chugoku district (Yamaguchi prefecture, western Hiroshima Prefecture, western Shimane Prefecture), it has been thought that distribution of active faults is very sparse. However, several active faults were newly mapped by several researchers in recent years. We have been mapped active faults in the whole area of the Chugoku District by detailed air photograph analysis during the last two years. As a result, we revealed that many active faults are densely distributed in this area. In this presentation, we report tectonic geomorphology along the Yasaka Fault Zone as an example of such active faults, and discuss the characteristics of distribution pattern of this Fault Zone.

Although distribution of active fault traces in our result is similar to those of the published data in large scale view, some active fault traces are mapped in different location and some active faults traces are newly mapped. Active fault traces in our map have a tendency that shorter traces are distributed in an echelon pattern. Along the previously mapped active faults traces, many tectonic landforms (lateral offset streams, offset hills, uphill-facing fault scarplet, beheaded stream, dammed stream) are newly mapped. As a result, we clarified that the Yasaka Fault Zone is an active fault system with 55 km in length, and that the Yasaka Fault Zone have a capability of causing M7.5 earthquake.

Keywords: Yasaka Fault Zone, active fault, aerial photograph, inland earthquake, Chigoku region