

Second Field Survey on Yakushima Island

Katsuhiko Kimura (Fukushima University), Reona Hiramine (National Museum of Japanese History), Takehiro Tokoro, and Mitsuru Okuno (Osaka Metropolitan University), members of the “Cataclysmic Disasters and Dating Group” conducted a field survey at the Miyanoura River, Nagata River, and Yakusugi Land on Yakushima Island, Kagoshima Prefecture, from December 1 to 4, 2025.

This survey was our second field investigation on Yakushima, conducted approximately six months after the survey in June of the same year. As in the previous survey, we examined uncharred wood samples (Photo①) buried in pumiceous deposits associated with the Akahoya eruption of the Kikai Caldera (approximately 7.3 cal ka BP), which are distributed along the Miyanoura and Nagata Rivers. Over the past six months, erosion and reduced river water mass have exposed newly buried wood samples. As a result, wood samples were also identified in the Nagata River (Photo②), where none had been found during the previous survey (Photo③). During this survey, adverse weather conditions led to the cancellation of our return flight, which unexpectedly allowed us to visit Yakusugi Land, a natural recreational forest located in the Arakawa area in the southeastern part of Yakushima Island. Observations there reaffirmed that fallen trees are ubiquitous in natural forests (Photos④ and ⑤). This highlights the necessity of carefully excluding such fallen trees when estimating eruption ages based on tree-ring analyses of buried wood samples.

Acknowledgement: As with the previous survey, we would like to thank Mr. Shojiro Nakagawa of the Yakushima Geology Club for his support.



Photo①: A buried tree exposed within pumiceous deposits on the right bank of the Miyanoura River.



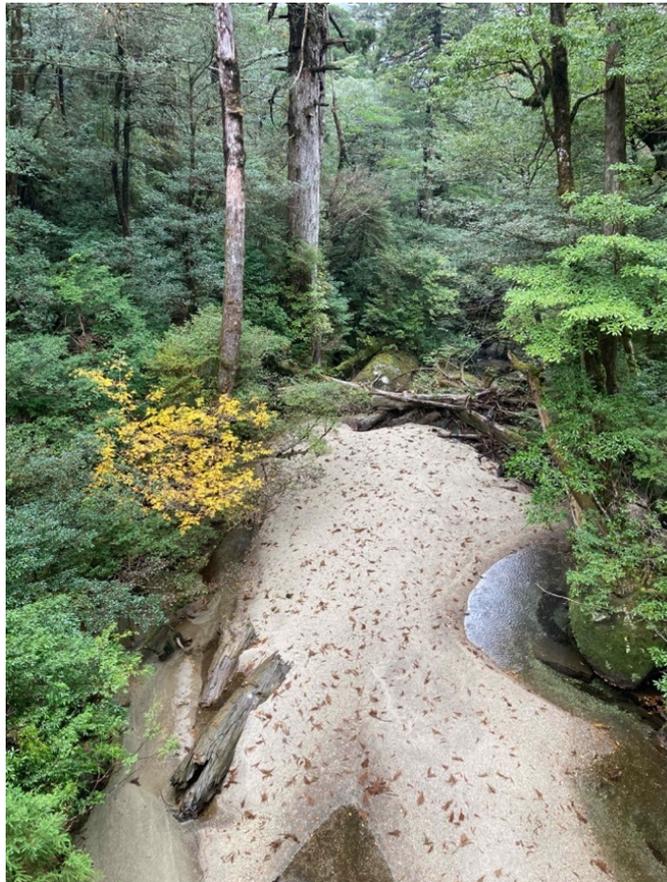
Photo②: Survey scene along the Nagata River. The river channel is mostly dominated by rounded granite boulders, but pumiceous deposits are exposed on the right bank (right side of the photo).



Photo③: Disk sample of buried trees recovered in the Nagata River. Found submerged.



Photo④: Fallen trees found on slopes within Yakusugi Land. In natural forests, seeds germinate on fallen trees, resulting in a generational change "tree regeneration".



Photo⑤: Fallen trees found in a valley within Yakusugi Land. When dead trees and living trees are intermixed, they may show significantly different ages.