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 [JJ] Evening Poster | H (Human Geosciences) | H-QR Quaternary research

## [H-QR04]Quaternary, Diachronic dynamics of human-environment interactions

convener:Mamoru Koarai(Earth Science course, College of Science, Ibaraki University), Toshihiko Sugai(Department of Natural Environmental Studies, Institute of Environmental Studies, Graduate School of Frontier Science, The University of Tokyo), Kiyohide Mizuno(国立研究開発法人産業技術総合研究所地質情報研究部門, 共同), Minoru YONEDA(The University Museum, The University of Tokyo)  
 Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)  
 Humans have attained their specific development by indigenous cultures and evolved through environmental adaptation. The session raises issues of human-environmental interactions, views from diverse changes of climate, ocean, land and biota having made striking influence on humans. It welcomes various fields from human-environment change and their chronometric dating among Quaternary disciplines.

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## [HQR04-P11]Classification of terrace surfaces and radiocarbon dating of alluvial fans at the northern foot of Minoh Mountains, Kyushu Island

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Keywords:small&ndash;scale fan, classification of terrace surfaces, radiocarbon dating, Minoh Mountains

Seventy small&ndash;scale fans are distributed at the northern foot of Minoh Mountains, located in the eastern Tsukushi Plain, Kyushu. Few geomorphological researches are published about the eastern Tsukushi Plain including Minoh Mountains area (e.g. Kuroda and Kuroki, 2004; Zaitzu, 1987). It is important to elucidate landform development of these small&ndash;scale fans for more understanding of geomorphology of the Tsukushi plain.

At first, landform classification map was created on the bases of aerial photographic interpretation and field survey. In the field survey, roamy sediments and humic deposits were sampled for dating. For five humic deposits, the <sup>14</sup>C dating with AMS technique were employed (operated by Institute of Accelerator Analysis Ltd.).

Based on the aerial photographic interpretation, the small&ndash;scale fans in this area were classified into five terraces (I, II, III, IV and V surfaces). Outcrop of I surface (highest) displays a loam layer (thickness: 40 cm) containing numerous BW type volcanic glasses just above the terrace deposits. <sup>14</sup>C age of the lower end of 10 cm of the humic sand layer (thickness; 20 cm), deposited above the loam layer, is 1,181&ndash;1,056 cal BP. BW type volcanic glasses are possible to be originated from K&ndash;Ah (7.3 ka; Machida and Arai, 2003) or AT (26&ndash;29 ka; Machida and Arai, 2003) eruptions. Outcrop of III surface displays a humic sand layer (thickness; 10 cm) just above the terrace deposits, showing that its <sup>14</sup>C ages are 7,127&ndash;7,015 cal BP at the lower end of 5 cm and 6,182&ndash;5,999 cal BP at the upper end of 5 cm. Outcrop of IV surface displays that a humic sand layer (thickness; 20 cm) just above the terrace deposits. The <sup>14</sup>C age of charcoal included in the humic sand layer is 1,408&ndash;1,320 cal BP at the lower end of 10 cm. At another outcrop of IV surface, a sand layer and a humic sand layer (thickness; 20 cm) are observed just above the terrace deposits. The <sup>14</sup>C age of the humic sand layer is 1,058&ndash;938 cal BP at its lower end of 10 cm.

The above results suggest that the timing of terracing was influenced by several factors, such as global climate change, movements of Minoh faults (Tsukushi earthquake in 679 A.D.; Matsumura, 1990) and

human activities involved in this region.

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References: Kuroda and Kuroki (2004) Proceedings of the General Meeting of the Association of Japanese Geographers, **81**, p.85 Machida and Arai (2003) University of Tokyo Press, 50&ndash;51. Matsumura (1990) Kyushu-shigaku, **98**, 1&ndash;23. Zaitu (1987) Geographical report of Oita University, **1**, 33&ndash;42.