Palynofloral and environmental change of Korean central region since the mid-Holocene

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Mid- and Late Holocene changes in vegetation, climate and depositional environment have been deduced from pollen records taken from the Gwangtong Trench-A in Cheonggye stream, the tributary of the Han River, with time control provided from three radiocarbon ages. A mid-Holocene hypsithermal occurred between ?7000 and 5000 yr BP, when evergreen and deciduous broadleaved trees flourished at mountainous slope surrounding the lowland riverine area. Afterward climate became cooler until 1700 yr BP. During this period, evergreen and deciduous broadleaved trees were replaced by conifers and cool-loving deciduous broadleaved trees of *Picea*, *Pinus* (*Diploxylon*), *Larix/Pseudotsuga* and *Betula*. Since 1700 yr BP, the local vegetation change from alder woodlands to sedges caused by human impact has been identified. The depositional environmental change from lowland riverine to fluvial at 1700 yr BP may allow the people to cultivate crops on dry-field. Human activities are recognized by the first occurrence of buckwheat (*Fagopyrum*) associated with a sudden increase in maize (*Zea*) pollen and pioneer tree, *Pinus* (*Diploxylon*) with arboreal pollen concentration decrease at 1700 yr BP.