

Depositional Environment and Origin of Human Intervention in the Flooding Plain of Puyeo Area (부여지역 범람원의 퇴적환경 및 인간간섭 기원 고찰)

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The litho-sequence of Puyeo coastal plain is divided into three sedimentary deposits. These are bluish gray flatmud layers, gray organic mud layer and/or cultural layers, and several other layers of flood plain deposits in the ascending stratigraphic column. As to the origin of these litho-sequence, the lowermost bluish gray flatmuds are associated with prevalent sea-level rising episode. The organic muds are related to old wet land formed due to the migration or shifting of old tidal flat and tidal channel in response to fluctuation of mean sea level in the coastal area. The uppermost floodplain deposits with or without pedogenetic horizons were resulted from the repetition of fluvial floodings, periodically accreted and synchronized with flooding water and rising tide level. The organic muds deposited in the old wet land were dated for their ¹⁴C ages, and resulted as 2,000±50yrsB.P(wood stalk of 5.0-5.1m, msl), 2,212±77yearsB.P(organic mud of 5.15m, msl). Therefore the oldest flooding episode over the old wet land had begun since ca. last 2,300years B.P in Puyeo area. The coastal flooding episodes buried many old human settlements and cultivating crop lands which were installed and developed during the Bronze age, the Iron age, and even ancient to middle age, encompassing in the Silla, Koryeo and Chosun Dynasties. In comparison to the ages of organic muds of coastal plain of Han river mouth, organic muds of Puyeo area is much younger than those of Han river mouth. But organic muds of Anjung coastal plain are widely distributed in ¹⁴C age, but younger organic muds of the Anjung area are similar or slightly younger than those of Puyeo coastal plain. Those of Hampyung coastal plain show very similar age with those of Buyeo coastal plain.

In general the flooding episodes in the west coast made ancient people move toward hill side, fill the wet land with earths, install wood fences to prevent flooding water from overflowing into wet land and make a new settlement for securing life and assets. The evidences of human settlement migrating into higher landscape can be exemplified and supported by lots of cultural remnants found in old human occupation around the periphery of the Gungnamji

archaeological site in Puyeo coastal plain area. In modern time, heavy human management and practices of the floodplain, including construction of artificial embankment, played a significant role to reduce flooding damage on the one hand. But it has also aggravated local flooding damage and enhance local flooding hazards mainly caused by over-management of fluvial system, i.e., construction of banks and dams, and by an excessive exploration of sand and gravel aggregate resources in the coastal plain area.