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Effect of the Artificial Embankment on the Sedimentary Environment of Sihwa Lake

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Effect of the artificial embankment on the sedimentary environment of Sihwa Lake was studied. Core sediment sample collected in former intertidal flat area of Sihwa Lake was compared with that from typical intertidal flat near embankment in number of shells, grain size distribution, organic carbon contents, sediment phosphorus speciation. Intertidal flat area, the density of live bivalve (*Potamocorbula amurensis*) is 12,016/m² and in lake Sihwa, 1979 dead shells/m². Live bivalve was not found in the former intertidal flat area. Sediments in the both environments range from silty sand to sandy mud, but mostly sandy silt in Sihwa Lake, and intertidal flat area silty sand. Organic carbon contents of surface layer in the lake is 0.838% and intertidal flat 0.529% respectively. Adsorbed and nonapatite inorganic phosphorus in lake sediment are higher than those of intertidal flat sediment. Biology, sedimentary texture, phosphorus chemistry of former intertidal flat area in Sihwa Lake have been presumably disturbed since bank constructed.

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The seasonal changes of phytoplankton community structure on Togyo reservoir in Chulwon, Korea

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To elucidate the seasonal changes of phytoplankton community structure on Togyo reservoir from April 1995 to April 1996, some basic physical factors, phytoplankton standing crops and phytoplankton composition were investigated. As a results of those, total 182 species were identified, and the phytoplankton standing crops ranged from 17,000 cells/l on July 1995 at 0 m layer to 773,000 cells/l on April 1996 at 4 m layer. Dominant species were *Peridinium inconspicuum*, *Peridinium cinctum*, *Gymnodinium* sp., *Chlorella homosphaera*, *Crucigenia tetrapedia*, *Cyclotella pseudostelligera*, *Cyclotella comta*, *Asterionella formosa*, *Aulacoseira granulata* v. *angustissima*, *Synechococcus eximus*. Compared with other water systems in Korea, Togyo reservoir has a distinctive feature that dinoflagellates *Peridinium inconspicuum* dominated phytoplankton community in April 1995, December 1995 and April 1996.