

Pleistocene and Holocene Fluvial Systems of the Lower Pearl River, Mississippi and Louisiana, USA

Paul V. Heinrich

Louisiana Geological Survey, 3079 Energy, Coast, and Environment Building, Louisiana State University,
Baton Rouge, LA 70803

ABSTRACT

The terraces of the Lower Pearl River Valley and adjacent Prairie Allogroup exhibit the paleochannels of four Pleistocene fluvial systems of the Pearl River. The oldest of these fluvial systems consists of relict sinuous courses and channel segments that form meander belts exhibited by the Hammond alloformation of the Prairie Allogroup west of the Pearl River. Associated with these relict river courses is a large crevasse splay complex. On the Mississippi side of the Pearl River, the surface of the Prairie Allogroup exhibits younger, but poorly preserved fluvial ridges. Within the southeastern corner of St. Tammany Parish, an isolated, deeply-incised, relict channel course appears to represent another even younger Pleistocene fluvial system. The youngest of the Pleistocene fluvial systems consists of relict courses and channel segments exhibited by the terrace surfaces of the alloformations comprising the Deweyville Allogroup. Channel widths and radii that greatly exceed those of the modern Pearl River characterize these relict courses and channel segments. Within the Lower Pearl River Valley, the modern Pearl River exhibits an anastomosing channel system.