

Floodplain Ecology

A **floodplain** is made up of the level land along the edge of a river and is formed by the deposition of mud and sediments on the banks during periodic floods. Over time, these sediments build up to form unique ecosystems providing habitat for a diverse community of plants and animals. In fact, floodplain habitats can contain as much as 100x greater species diversity than the river itself! Floodplains are generally very fertile due to the nutrient-rich sediments that are deposited during flood events. Additionally, the frequent flooding speeds up the decomposition of organic material and supports a healthy microbial community. Floodplains are therefore very good for farming and agriculture.

Along the banks of the river is the **riparian zone**, an area of vegetation adapted to wet growing conditions. Some water-loving plant species include the silver maple, sycamore and eastern cottonwood trees. Well-developed riparian zones are important to the health of the river itself. When it rains, runoff flows downhill towards the river. Riparian plants act to create a **buffer region**, catching the water before it reaches the river. Not only do the plants slow the river's rate of flooding by absorbing and slowing the runoff water, but they also filter the water before it reaches the river. This helps to keep harmful chemicals and toxins out of the water. It's a lot like a water filter on your faucet, cleaning the water before it fills your glass.

Riparian zones are also important to the wildlife living in the floodplain habitat. The plants provide nesting sites for birds, cover for small mammals and food for grazing animals, such as deer. Along the Ohio River live small mammals, such as the fox squirrel, white footed mouse, beaver and meadow vole, the white-tailed deer, and many birds including the pileated woodpecker, wood duck, heron and migratory songbirds.

