

Natural Community

Freshwater Marsh



Wetlands are areas where soils are saturated or covered with water. Though we call them swamps, sloughs, marshes or potholes, these are areas where land and water meet. Freshwater marshes, like those in Swope Park, are low-lying, open areas located near creeks, streams, rivers and lakes, where water flows into the marsh. The water level ranges from one to six feet deep, depending on the season. A freshwater marsh teems with life; plants and animals co-exist in a complex many-

layered ecosystem.

Once considered useless - a miserable bug-infested wasteland - wetlands are the most productive ecosystems in the world. Furthermore, marshes are invaluable at controlling and purifying water. Marsh plants store the nitrogen and phosphorus generated by agricultural run-off and then utilize them for growth. Marshes also improve water quality because they act as settling basins for upland runoff. The thick vegetation slows the flow of water entering the marsh and suspended soil particles settle out. Wetlands are giant sponges made up of organic matter that can absorb up to 18 times their weight in water. During heavy rains, the marsh holds water and then releases it slowly back into the watershed. Because they are filled with plants, marshes stabilize soils and reduce stream velocity.

Freshwater marshes teem with life; both animals and plants flourish here. Cattails are the most recognizable marsh plant, but saw grass, pickerelweed, spike rush and bulrush all poke up through the wet soil. Water lilies float on the surface along with algae and duckweed.

Animals live in all the levels of the marsh, in the water, on the surface of the water, above the surface and on the land surrounding the marsh.

Fish like the Western Mosquito fish, the Golden Shiner, the Channel Catfish (the state fish of Missouri) and the Bowfin swim in the tranquil waters of freshwater marshes. Northern Pike, Walleye and Yellow Perch require shallow marshy areas for spawning.

Predatory larva of insects like dragonflies and damselflies stalk the bottom. Frogs and toads lay their eggs on the edges of the water; the tadpoles hatch and live in the water until they become adults. Crayfish, which are dinner for many other species, abound in freshwater marshes.

The water's surface provides yet another living area. Aquatic turtles dive into the water's depths and emerge to climb on logs, sandbanks or the stones at the edge of the water to bask in comfort. They sink down into the mud at the bottom to hibernate for the winter. Endangered species like Blanding's Turtle and the Yellow Mud Turtle depend on marshland for their survival. Insects like the waterstriders can actually walk on water; their slender bodies and long legs distribute their weight so that they don't sink. Frogs do actually sit on lily pads and catch insects.

Waterfowl nest on the edges of marshes and raise their babies in relative safety.



Millions of ducks and geese use marshes as resting places on their annual migrations. Dabbling ducks (like Mallards) graze the shallow waters at the edge of the marsh. Their beak is wide and flat, with *lamellae* to filter small plants from the shallow water and mud. Canvasbacks and other diving ducks have sharp beaks to spear their fish dinners. The Wood Duck is the only perching duck in Missouri. They nest in trees overlooking

the marsh and the babies drop out of the nest to the water right after they hatch.

Nearly half of Missouri's endangered bird species nest in marshes. The Pied-billed Grebe builds a floating nest that is anchored on rooted grasses. The American Bittern is nearly two feet tall and likes to hide in reeds, with its bill pointed to the sky. Its call is a low pumping sound that can carry for a mile. The Red-winged Blackbird is the most common songbird in the marsh; it is usually found perching on a cattail.

The animals living in the spongy areas of land surrounding the marsh depend on it for food, shelter or nesting areas. Raccoons come to the swamp's edge to dine on fish, crayfish and succulent plant stems. Snails shelter among the stems of the reeds and cattails. Herons nest in colonies (rookeries) in large trees up to a mile from the marsh; they stalk the shallow waters during the day and return to their nests at night. Deer graze the grasses and the more tender plants.



Behind the original Lakeside Nature Center at 5600 Gregory, a trail meanders around a marsh and to a bend in the Blue River. The trail is accessible except after heavy rains; check it out to see a marsh in the middle of the city.