

Encyclopedic Entry

swamp

bog, wetland, marsh

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A [swamp](#) is an area of land permanently saturated, or filled, with water. Many swamps are even covered by water. There are two main types of swamps: freshwater swamps and saltwater swamps.

Swamps are dominated by trees. They are often named for the type of trees that grow in them, such as [cypress](#) swamps or hardwood swamps. Freshwater swamps are commonly found inland, while saltwater swamps are usually found along coastal areas. Swamps are transition areas. They are neither totally land nor totally water.

Swamps exist in many kinds of climates and on every [continent](#) except Antarctica. They vary in size from isolated prairie potholes to huge coastal salt marshes. Some swamps are flooded woodlands. Some are former lakes or ponds overtaken by trees and shrubs.

Freshwater Swamps

Freshwater swamps form around lakes and streams. Rain and [seasonal flooding](#) cause water levels to [fluctuate](#). In the wet [soil](#), water-tolerant [vegetation](#) grows and helps maintain a moist, swampy condition.

In many freshwater swamps in the southeastern United States, cypress and [tupelo](#) trees grow. [Spanish moss](#) may hang from the branches, and tiny plants called [duckweed](#) may cover the water's surface. Shrubs and bushes may grow beneath the trees. Sometimes poking as much as 4 meters (13 feet) above the water are angular knobs called cypress knees. They are outgrowths of the trees' root systems.

Alligators, frogs, and many other animals live in these swamps. These animals are adapted to fluctuating water levels. The shadowy tree root system and cypress knobs provide a rich, sheltered habitat for nesting birds, as well as fish, amphibians and reptiles.

The freshwater swamps between the Tigris and Euphrates Rivers in the Middle East are so rich in [biodiversity](#) that the area is called the "[Fertile Crescent](#)." The abundant wildlife, agricultural opportunities, and ability for communication and trade fostered human technological development. The Fertile Crescent is recognized as the birthplace of [civilization](#) and the site of the first cities. The earliest recorded written language and the first recorded use of the wheel occurred around these swamps.

The [Everglades](#), in Florida, is one of the largest swamp complexes in the United States. Called the "[River of Grass](#)," this [freshwater swamp](#) is actually a wide, slow-moving river flowing from the Kissimmee River near Orlando to the Straits of Florida. The Everglades is 97 kilometers (60 miles) wide and 160 kilometers (100 miles) long. A rich collection of wildlife, from alligators to panthers, calls this freshwater swamp home.

Saltwater Swamps

Saltwater swamps form on tropical coastlines. Formation of these swamps begins with bare flats of mud and sand that are thinly covered by seawater during high tides. Plants that are able to [tolerate](#) tidal flooding, such as mangrove trees, begin to grow and soon form thickets of roots and branches. Mangrove trees often grow on tall, thin roots. The roots anchor sand and other sediments. The growth and [decay](#) of the roots increase the accumulation of soil.

Among these mangroves live animals that feed on fallen leaves and other material. Crabs, conchs, and other [shellfish](#) are abundant in mangrove swamps. The swamps are also home to a huge variety of birds, whose droppings help fertilize the swamp.

Because the young of many [marine](#) animals find food and shelter in saltwater swamps, these wetlands are sometimes called the nurseries of the ocean. Many ocean species enter coastal wetlands to [spawn](#). Fish swim into salt marshes to lay their eggs. When the eggs hatch, the young find plenty of food and some protection in swamp grasses or among tree roots. Other species spawn in the ocean, and the young swim into the wetlands and live there until they mature.

People and swamps

Swamps are among the most valuable ecosystems on Earth. They act like giant sponges or reservoirs. When heavy rains cause flooding, swamps and other wetlands absorb excess water, moderating the effects of flooding. Swamps also protect coastal areas from storm surges that can wash away fragile coastline. Saltwater swamps and tidal salt marshes help anchor coastal soil and sand.

The swamp [ecosystem](#) also acts as a water treatment plant, filtering wastes and purifying water naturally. When excess nitrogen and other chemicals wash into swamps, plants there absorb and use the chemicals. Many of these chemicals come from human activities such as [agriculture](#), where fertilizers use nitrogen and phosphorus. Factories, water treatment plants, and homes also contribute to [runoff](#). Chemicals not absorbed by plants slowly sink to the bottom and are buried in sand and [sediment](#).

For most of history, wetlands were looked upon as wastelands, and as homes for [insect](#) pests such as mosquitoes. (Swamps are home to a wide variety of insects, which feed on the wide variety of [plants](#).) People thought swamps were [sinister](#) and [forbidding](#).

In the United States, filling or draining swamps was an accepted practice. Almost half of U.S. wetlands were destroyed before environmental protections were enacted during the 1970s. Most of the Everglades have been reclaimed as agricultural land, mostly sugar plantations. Draining swampland also created valuable real estate in the San Francisco Bay Area in California.

Federal and state authorities drained much of the wetlands at the delta of the Mississippi River in Louisiana as part of a massive system of [river management](#). When [Hurricane Katrina](#) blew in from the Gulf of Mexico in 2005, the spongy swamp that traditionally protected the city of New Orleans from destructive weather patterns was diminished. The city was hit full force with a Category 3 hurricane.

Eradicating swampland also threatens economic activity. Two-thirds of the fish and shellfish that are commercially harvested worldwide are linked with wetlands. From Brazil's varzeas, or freshwater swamps surrounding the Amazon River, to saltwater swamps near the Florida Keys, commercially valuable fish species that depend on wetlands are threatened with extinction.

In the early 1970s, governments began enacting laws recognizing the enormous value of swamps and other

wetlands. In some parts of the United States, it is now against the law to alter or destroy swamps. Through management plans and stricter laws, people are trying to protect remaining swamps and to re-create them in areas where they have been destroyed.

VOCABULARY

Term	Part of Speech	Definition
accumulate	<i>verb</i>	to gather or collect.
agriculture	<i>noun</i>	the art and science of cultivating the land for growing crops (farming) or raising livestock (ranching).
alligator	<i>noun</i>	reptile native to the southeast United States and parts of China.
amphibian	<i>noun</i>	an animal able to live both on land and in water.
biodiversity	<i>noun</i>	all the different kinds of living organisms within a given area.
bird	<i>noun</i>	egg-laying animal with feathers, wings, and a beak.
civilization	<i>noun</i>	complex way of life that developed as humans began to develop urban settlements.
climate	<i>noun</i>	all weather conditions for a given location over a period of time.
coal	<i>noun</i>	dark, solid fossil fuel mined from the earth.
commercial harvest	<i>noun</i>	agricultural produce sold for profit.
conch	<i>noun</i>	marine animal (mollusk) with a large spiral shell.
continent	<i>noun</i>	one of the seven main land masses on Earth.
crab	<i>noun</i>	type of marine animal (crustacean) with a flat body, hard shell, and pincers.
cypress	<i>noun</i>	type of evergreen tree.
cypress knee	<i>noun</i>	root growth that sticks up above the water in a cypress swamp.
decay	<i>verb</i>	to rot or decompose.
diminish	<i>verb</i>	to become smaller or less important.
duckweed	<i>noun</i>	type of small plant that floats in great numbers on still water.
ecosystem	<i>noun</i>	community and interactions of living and nonliving things in an area.
eradicate	<i>verb</i>	to destroy or remove.
Euphrates River	<i>noun</i>	river in Southwest Asia (the Near East).
Everglades	<i>noun</i>	vast swampy region flowing south of Lake Okeechobee in Florida.
Fertile Crescent	<i>noun</i>	region extending from the eastern Mediterranean coast through Southwest Asia to the Persian Gulf.
fluctuate	<i>verb</i>	to constantly change back and forth.
forbidding	<i>adjective</i>	scary or dangerous.
fossil fuel	<i>noun</i>	coal, oil, or natural gas. Fossil fuels formed from the remains of ancient plants and animals.

freshwater swamp	<i>noun</i>	wooded area that is at least partially flooded with freshwater for most of the year.
frog	<i>noun</i>	animal (amphibian) with smooth skin and long hind legs for jumping.
hardwood swamp	<i>noun</i>	region of hardwood trees, such as oak or maple, that is at least partially flooded for most of the year.
high tide	<i>noun</i>	water level that has risen as a result of the moon's gravitational pull on the Earth.
Hurricane Katrina	<i>noun</i>	2005 storm that was one of the deadliest in U.S. history.
insect	<i>noun</i>	type of animal that breathes air and has a body divided into three segments, with six legs and usually wings.
knob	<i>noun</i>	rounded bulge.
lake	<i>noun</i>	body of water surrounded by land.
marine	<i>adjective</i>	having to do with the ocean.
mud flat	<i>noun</i>	area left bare by receding lake or tidal waters.
oxygen	<i>noun</i>	chemical element with the symbol O, whose gas form is 21% of the Earth's atmosphere.
pothole	<i>noun</i>	deep, usually steep, depression in a natural or man-made surface.
purify	<i>verb</i>	to cleanse thoroughly.
reptile	<i>noun</i>	animal that breathes air and usually has scales.
reservoir	<i>noun</i>	natural or man-made lake.
river management	<i>noun</i>	the art and science of controlling the flow, path, and power of rivers.
River of Grass	<i>noun</i>	Everglades, a vast swampy region flowing south of Lake Okeechobee in the U.S. state of Florida.
runoff	<i>noun</i>	overflow of fluid from a farm or industrial factory.
saltwater swamp	<i>noun</i>	wooded area near a tidal basin or a protected ocean shore that is partially flooded with seawater for most of the year.
saturate	<i>verb</i>	to fill one substance with as much of another substance as it can take.
seasonal flooding	<i>noun</i>	overflowing of a body of water from its banks, usually predicted by yearly rains or storms.
sediment	<i>noun</i>	solid material transported and deposited by water, ice, and wind.
shellfish	<i>noun</i>	any aquatic animal that has a shell.
shrub	<i>noun</i>	type of plant, smaller than a tree but having woody branches.
sinister	<i>adjective</i>	evil or threatening.
soil	<i>noun</i>	top layer of the Earth's surface where plants can grow.
Spanish moss	<i>noun</i>	type of flowering plant with long, fuzzy leaves that droop over tree branches. Spanish moss is not a moss.
spawn	<i>verb</i>	to give birth to.

storm surge	<i>noun</i>	abnormal rise in sea level accompanying a hurricane or other intense storm. Also called a storm tide.
stream	<i>noun</i>	body of flowing water.
swamp	<i>noun</i>	land permanently saturated with water and sometimes covered with it.
thicket	<i>noun</i>	small, intensely wooded area.
Tigris River	<i>noun</i>	river in Southwest Asia (the Near East).
tolerate	<i>verb</i>	to endure, allow, or put up with.
tupelo	<i>noun</i>	type of tree native to the southeast U.S.
varzea	<i>noun</i>	freshwater swamp near the Amazon River.
vegetation	<i>noun</i>	all the plant life of a specific place.
wetland	<i>noun</i>	area of land covered by shallow water or saturated by water.
woodland	<i>noun</i>	land covered with trees, usually less dense than a forest.

For Further Exploration

Websites

- EPA: Wetlands—Swamps



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