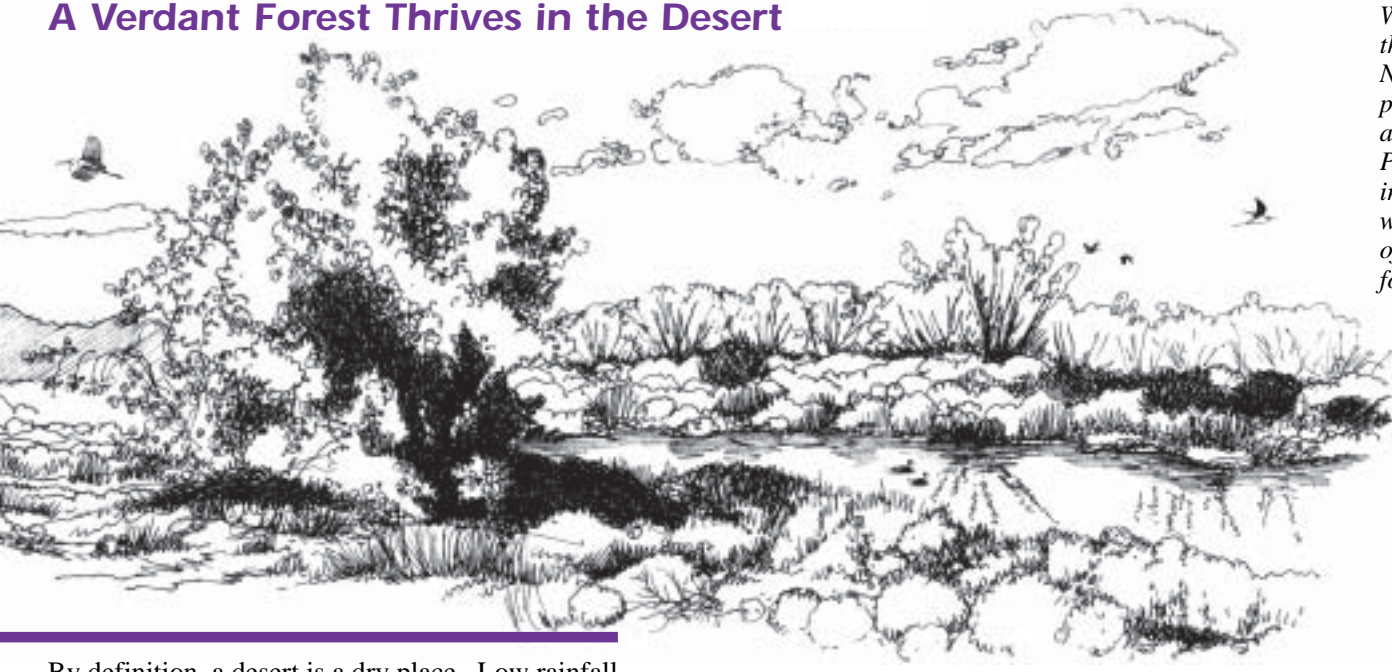


## A Verdant Forest Thrives in the Desert



By definition, a desert is a dry place. Low rainfall coupled with high evaporation foster sparsely vegetated landscapes that we call deserts.

Yet within these arid expanses are found pockets of surprising lushness. Green oases materialize wherever water is present on or near the surface in quantities sufficient to support vegetation very different from that of the surrounding desert. Springs and seeps, streams and rivers form the core of such habitats. Spaniards who explored the region called these places “bosques,” and we still use their word to refer to riparian woodlands of the Desert Southwest.

A bosque encompasses a mosaic of habitat types. Truly aquatic plants and animals live in the deepest waters of a pool or stream. Emergent plants like cattails and rushes grow in the shallower margins. On the banks, above the waterline but within the zone of regular seasonal flooding, water-loving cottonwood and willow trees form a dense, shady canopy. Moving up shore, as the water table recedes and the incidence of flooding decreases, we find more drought-tolerant species like arrowweed, tornillo and four-wing saltbush. Each vegetation zone is finely tuned to its specific water regime, and each contributes to the rich productivity and species diversity of the bosque.

Many animals from the nearby desert are attracted to the bosque in search of food, water and shelter, but some make it their permanent home. Fish, of course, and certain amphibians require a steady water supply. Some mammals like beaver and muskrats, and birds like vermilion flycatchers are found almost exclusively in riparian areas.

In addition, bosques provide very important habitat for migratory birds. The Rio Grande Valley, once the site of extensive bosques, is a major flyway for thousands of birds on their way to and from breeding and wintering grounds.

The bosques of the Southwest have been heavily impacted by human activity in recent times. Water diversion for irrigation, stream channelization for flood control, livestock grazing and the felling of trees for firewood and building materials have all contributed to the steep decline of bosque health and expanse. Fortunately, in many areas efforts are underway to restore these unique ecosystems and recall some of their former vitality and verdant beauty.

*Wetlands and riverside forests once graced the banks of the Rio Grande in the Paso del Norte region. They were the area's most productive natural habitats, but today they are virtually gone. At Rio Bosque Wetlands Park, the environment is still changing, but in a new way. Here, a diverse partnership is working to bring back meaningful examples of the unique and valuable ecosystems once found in our river valley.*

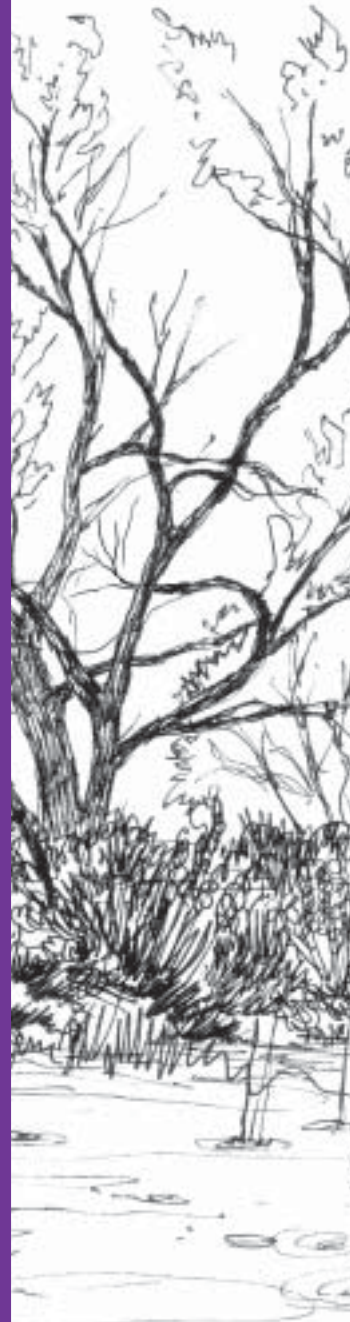
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*Educational programs of the Texas Forest Service are open to all people without regard to race, color, sex, disability, religion, age, or national origin.*

# WHAT IS A BOSQUE?



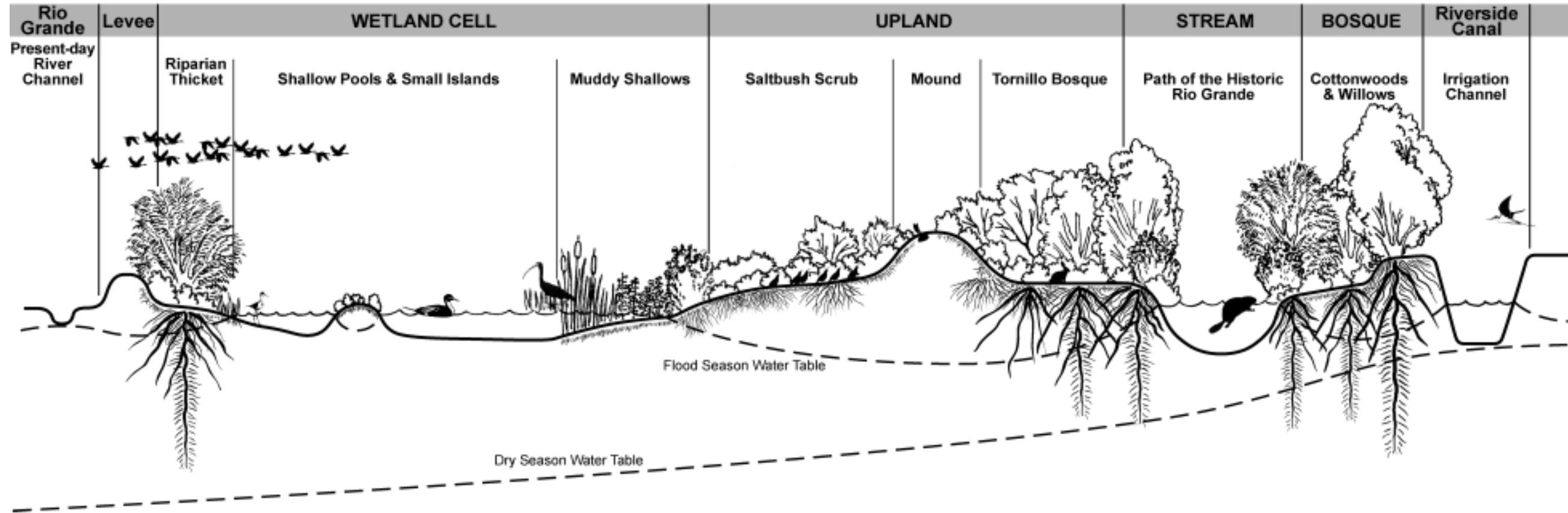
Rio Bosque Wetlands Park

El Paso, Texas

## What is a Bosque?

This illustration represents an idealized cross-section of the different habitat types found at Rio Bosque Wetlands Park.

It highlights the close relationship between water above and below the ground surface, and the impact that very slight elevation changes can have on the kinds of plants and animals living in an area.



## A Glossary of Wetlands Vocabulary

**Bosque:** A riparian woodland of the southwestern United States.

**Diversity:** The number of different kinds of organisms and the relative abundance of those organisms in a given area.

**Ecosystem:** All organisms and their nonliving environment within a defined area; the sum of the interactions and energy transfers between a given set of organisms and their environment.

**Floodplain:** Any area near a body of water that is, or was, occasionally or periodically flooded.

**Groundwater:** Water beneath the Earth's surface; water that flows or seeps downward and saturates soil or rock, supplying springs, wells and aquifers.

**Habitat:** Home; the type of environment in which an organism usually lives.

**Hydrologic cycle:** The ongoing movement (recycling) of water between the atmosphere, the land, freshwater systems and the oceans. The process usually follows the path of: condensation, precipitation, runoff, soil absorption, evaporation, evapo-transpiration from plants, and release through combustion and animal respiration. Wetlands mediate the hydrologic cycle by making water available to lifeforms that would have otherwise missed out as water sped along to the ocean.

**Riparian area:** The land adjacent to streams, rivers, or other bodies of water that directly affects, or is affected by, the water; a unique habitat that exists in mutual balance with the river channel.

**Stream:** A body of water flowing in a natural channel and containing water at least part of the year. The "stream" at the Rio Bosque is designed and managed to emulate the natural flow of the historic Rio Grande as closely as current conditions allow.

**Upland:** A well-drained, sloping area uphill from a wetland.

**Water table:** The upper level of the groundwater; the level below which the soil is saturated with water. In a wetland the water table may be at or near the ground surface.

**Watershed:** Any area of land that surrounds and drains precipitation into a common body of water, whether it be a stream, river, lake, or ocean.

**Wetland:** A lowland habitat, such as a marsh, swamp, or bog that has periodically waterlogged soils or is covered with a shallow layer of water, yet it still permits standing vegetation. It is an area where land and water meet, that is wet for an ecologically significant part of the year.