

13 This tree and the larger one to its right are the **two native mesquites** of our region. Which is a **western honey mesquite** and which is a **screwbean mesquite**, or tornillo? Honey mesquite has flat seed pods and 1-2-inch thorns; tornillo has corkscrew-shaped seed pods and 0.3-0.5-inch thorns. Both were part of historic river-valley woodlands.

17 **Cottonwood-willow bosques**, or woodlands, once lined the banks of the Rio Grande for miles and were wonderful habitats for wildlife. We're working to restore an example of this habitat at Rio Bosque. We've planted some of the cottonwoods and willows here; some have come in on their own. Can you tell which are which?

18 The trees on your left are **saltcedars**. This non-native plant has replaced native riparian species along the Rio Grande and other rivers of the western United States. It was brought to the U.S. from the Mediterranean because it could prevent erosion by growing quickly in poor, salty soil. We are removing it from many areas of the park to allow native vegetation to become re-established. Extending to your right, for example, is a large open area. A 40-acre stand of saltcedar was cleared from this area in 1997.

19 **Wetlands** were once more common in our river valley. At Rio Bosque, we're bringing these valuable habitats back. This constructed wetland, built in 1997, floods when the park gets

enough water. When wet, it teems with life. Its varied habitats support organisms of all sizes with different feeding requirements. In the water, zooplankton and algae are eaten by insect larvae. Wading birds like Black-necked Stilts sift larvae and other food out of the water and mud, while insect-eating birds like flycatchers and swallows capture the adult insects overhead. Ducks float on the surface and feed on small organisms living in the water, and larger birds like herons hunt for frogs and fish.

20 Where does Rio Bosque's water come from? Some from the Rio Grande, but most of the water that maintains the park's wetlands is treated wastewater from the large structure you see in the distance, the **Roberto Bustamante Wastewater Treatment Plant**. A pipeline delivers the water to the park. Can you spot where the pipeline discharges water to this wetland cell? You are looking across the larger of the park's two wetland cells. It includes both this open area and other, more secluded areas that wintering ducks especially favor.

21 What do we keep in this fenced area? Or, more accurately, what do we keep out? Rio Bosque has a large population of black-tailed jackrabbits. This 30- by 100-meter **enclosure** was built in January 2002 to study how the vegetation develops when jackrabbits are excluded from an area. Compare the vegetation inside and outside the fence. Can you see any differences?

22 What is this big "X"? As you walk the park's trails, you'll see several of these strange structures. As the landscape at Rio Bosque changes, we are monitoring different physical and biological aspects of the environment to better understand the changes and help guide park management. The big "X" is a **pitfall trap**, for live-trapping small animals. In the middle of the X is a covered, buried bucket. Once a month, we remove the covers from the buckets at 5-6 traps and leave them open overnight. The next morning, we identify what we have caught, take some measurements and release the animals. Each individual trap gets used 2-3 times per year.

10 Maintaining wetland and riverside habitats at Rio Bosque depends on effective **distribution of water**. These water-control gates help send water where it's needed. Turning the wheel raises or lowers large metal plates that control how much water goes where.

11 As you walk along the old river channel, you'll see cages around the cottonwood and willow trees. Why are they there? **Beavers** occasionally use the park when it has water and will quickly chew down any cottonwood or willow left unprotected. Can you see any signs of beaver activity on the trees ahead of you?

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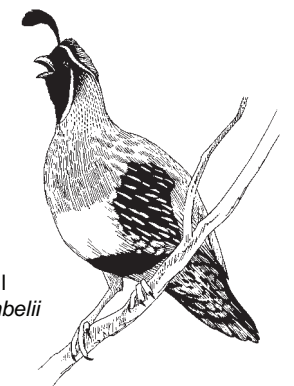
CENTER FOR ENVIRONMENTAL RESOURCE MANAGEMENT
The University of Texas at El Paso

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Rio Bosque Wetlands Park

A City of El Paso Natural Area



Gambel's Quail
Callipepla gambelii



The environment in the El Paso-Juárez Valley has changed dramatically since pre-settlement times. The wetlands, riverside forests and other highly productive native habitats that once graced the banks of the Rio Grande are largely gone. At Rio Bosque, 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.

The **Rio Trail**, at 2.4 miles, is the longest of the park's 3 loop trails. On it, you'll see the many different ecological attributes of the park and have the best views of the park's wetlands. Follow the yellow trail signs with the dragonfly logo. **Note:** The stops on this trail are not in numerical order.

16 **Water** is vital for sustaining wetland and riverside habitats. It is also a limited resource in the El Paso area. Securing water to support these habitats at Rio Bosque is a challenge. The pipe to your right delivers water to the old river channel from a well when no other water sources are available.

15 As you walk along this water channel, imagine you're walking along the **historic Rio Grande**. Guess what? You are! The channel is actually an old bend of the river, cut off when the Rio Grande was straightened and put into its current location in the 1930's. Today, many of the plants you see here are early successional species. These plants colonize disturbed areas by sprouting from seed very quickly and reaching maturity in a short time. Eventually, they will be replaced by native trees and shrubs historically found along the river. The process is already under way. Here and throughout the park, the environment is changing. As you visit in the future, you'll be able to see the changes and enjoy the results.

14 With their brown fuzzy flower heads that look like a hot dog on a stick, **cattails** may be the most familiar of all wetland plants. They provide nesting, roosting and feeding habitat for many birds and other wildlife but also present a management challenge. At Rio Bosque, the shallow wetlands and the slow-moving water in our channels quickly support cattails. The challenge: How do we create conditions that allow some cattail stands but keep these plants from completely covering the wetlands and water channels?

