Beavers are primarily nocturnal and are most likely to be observed in the evening. They are well adapted to living in the water with webbed hind feet that allow them to swim up to six miles per hour. Their tails serve as rudders, and their front feet can hold objects or push aside debris. Beavers can stay underwater for up to fifteen minutes before they need to surface for air. When they are underwater, valves close off their ears and nostrils, clear membranes cover their eyes to protect them from debris, and skin flaps seal their mouths shut around their incisors. With their incisors exposed, they can still use them to carry wood and other objects to their dam, lodge, or burrow. Since beavers are active year-round, they have a thick layer of fat beneath the skin to provide insulation from frigid winter water. Beavers are not nearly as suited to life on land as they are to life in the water. Their awkward waddle proves this, as well as their tendency to stop their activities on land often to sniff the air and look around for signs of danger.

Beaver trapping was popular into the 20th century because of the desirability of beaver pelt. One of the steamboat industries started on the Red was to facilitate the transportation of beaver pelts. This unregulated trapping caused the beaver to disappear from much of its original range. Eventually, regulations were placed on beaver trapping and hunting, allowing the animal to reestablish itself over most of the continent. The pervasiveness of beavers today has caused them to become a pest in some regions. Their dams may block the upstream movement of fish to their spawning areas. Beavers also kill many trees. Trees along riverbanks help stabilize the banks against erosion because their deep root systems hold the soil in place. When beavers take trees from along the banks of the river, those trees lose much of their ability to prevent erosion. Beavers do slightly mitigate this damage, since their dams also help reduce erosion, and the ponds formed by their dams create habitat for insects and fish.

Beavers are plentiful along the shores of the Red River. They are very bulky rodents, usually between three and four feet in length and weighing 45 to 60 pounds in adulthood. They have rounded heads and small, rounded ears. Their fur is soft and dark brown. They have flattened, black, paddle-shaped tails and large, dark orange front teeth that are used for felling trees.

Beavers generally live in a lodge that they build out of branches and mud. In some rivers and streams they build dams to provide a stable depth of water. In a river such as the Red with frequent flooding, beaver-built dams are ineffective. Therefore, beavers that live along the Red River and other large moving bodies of water make their homes in burrows along the banks. These burrows usually have an underwater entrance, but the burrows can oftentimes be seen above the water level as the river level drops.

It is very easy to tell if a beaver has been in the area by looking at the surrounding trees. To fell a tree, the beaver gnaws around it, biting out chips in a deep groove. The result is a distinctive point at the end of the stump or log that the beaver cut down. The piece of wood on display below has been cut by a beaver. Beavers usually choose small trees with a diameter of two to six inches to cut down, such as the one on display here. However, beavers can fell larger trees with diameters as wide as 33 inches. Beavers that build dams cut down trees more often than bank beavers because they need the timber to build their dams. However, bank beavers cut down many trees as well because tree bark is a large part of their diet.