The white-tailed deer is both a charismatic and an influential species. Deer can affect their own habitat, the habitat of other species, and the forest ecosystem overall. Browsing by deer can affect the kinds and numbers of plants present in an area, the ability to grow new trees, and the overall structure of the forest. By changing the structure of the forest, deer also may change the quality of the forest as habitat for other wildlife species.

As selective browsers, deer prefer certain species over other, less desirable species. Many of the species deer prefer are valued for timber or as wildlife food trees (e.g., oak, maple). Deer also eat many wildflower and understory plants like trillium and lady slipper, but tend to avoid ferns and other plants. By feeding on certain species and leaving others behind, deer can actually change the plant species growing in a forest.

In addition to changing the types of plants, deer can also cause changes in the vertical structure of the forest. For example, over-browsing of tree seedlings and shrubs creates open, park-like stands with few preferred food species near the ground and little or no forest understory. Loss of forest understory affects other wildlife, particularly those songbirds that rely on the forest understory for nesting and feeding. Some species may become less abundant in heavily browsed areas, while others may disappear completely.