

Nature Takes the High Road

How Wildlife Crossings Save Animals and People

By Alina Bradford



Most streets, roads, and highways offer no protection for crossing animals. ©kavran/istock

Most people have seen a hapless turtle, deer, or skunk trying to scuttle to the other side of a road or highway. As urbanization and infrastructure expansion continue to encroach on natural habitats, man-made wildlife crossings [[see video](#)] or “green bridges” have emerged as a vital solution for wildlife.

These innovative structures help ensure safe passage, thus reducing roadkill and preventing fatal or crippling collisions between animals and vehicles.

Green bridges also help animals move freely, ensuring they can find food, mates, and new territories. This movement is crucial for keeping wildlife populations healthy and diverse.



Hedgehog in danger. ©Leoba/istock

What Are Wildlife Crossings?

Wildlife crossings are special structures designed to help animals safely cross busy roads, highways, and railways. The main goal of wildlife crossings is to reduce the number of wildlife-vehicle collisions, which can be dangerous for both animals and humans.

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According to the National Conference of State Legislatures (US), an estimated 1 million to 2 million motorists collide with large wildlife each year. These collisions cause around 200 human deaths, 26,000 injuries, and \$8 billion in property damage.



Aerial view of wildlife crossing over superhighway in Israel. ©Wikimedia

Wildlife crossings can take the form of overpasses, underpasses, bridges, or tunnels. Overpasses often look like natural bridges covered with soil and plants, giving animals a safe path over the road. Underpasses and tunnels that run beneath the road are perfect for smaller animals or those that prefer enclosed spaces. These crossings are often paired with fences to guide animals to the safest routes and keep them off the roads.



Deer using wildlife underpass beneath US 85 near Sedalia, CO. (Another highway underpass can be seen in the background.) ©CO Dept of Transportation

Animal bridges aren't just government initiatives. Conservation groups and organizations work with local governments to devise the best plans for local wildlife. One organization that is a driving force in wildlife crossings in North America is the Pacific Forest Trust. It has been preserving, restoring, and managing forests in the Cascade-Siskiyou region in Oregon for more than two decades.

"Our belief in the importance of wildlife crossings has only grown stronger, especially as climate change pushes species to adapt and find cooler spots to call home," said Laurie Wayburn, co-founder and president of Pacific Forest Trust. "Take our projects, like additions to the Cascade Siskiyou National Monument, Mountcrest Working Forest, and Mount Ashland Demonstration Forest. They're not just forests, they're lifelines for wildlife, connecting them to other protected areas and giving them safe pathways to migrate."

There are thousands of wildlife crossings globally, including over 600 green bridges in the Netherlands and over 1,000 in the United States.

How Common Are Wildlife Crossings?

Wildlife bridges started as just an idea in the 1950s in France and have since become increasingly common as countries recognize their benefits for both wildlife conservation and public safety. While exact numbers are hard to determine, there are thousands of wildlife crossings globally, including over 600 green bridges in the Netherlands and over 1,000 in the United States.



Wildlife crossing at Bloemendaal, the Netherlands. ©Thankful Photography/istock

One of the most iconic wildlife crossings is the Banff National Park's series of overpasses and underpasses in Alberta, Canada. These vegetation-covered structures blend into the natural landscape and provide safe passage for wolves, grizzly bears, elk, and other species. According to a

2007 research article, the crossings reduced large animal wildlife-vehicle collisions in the area by over 80%.



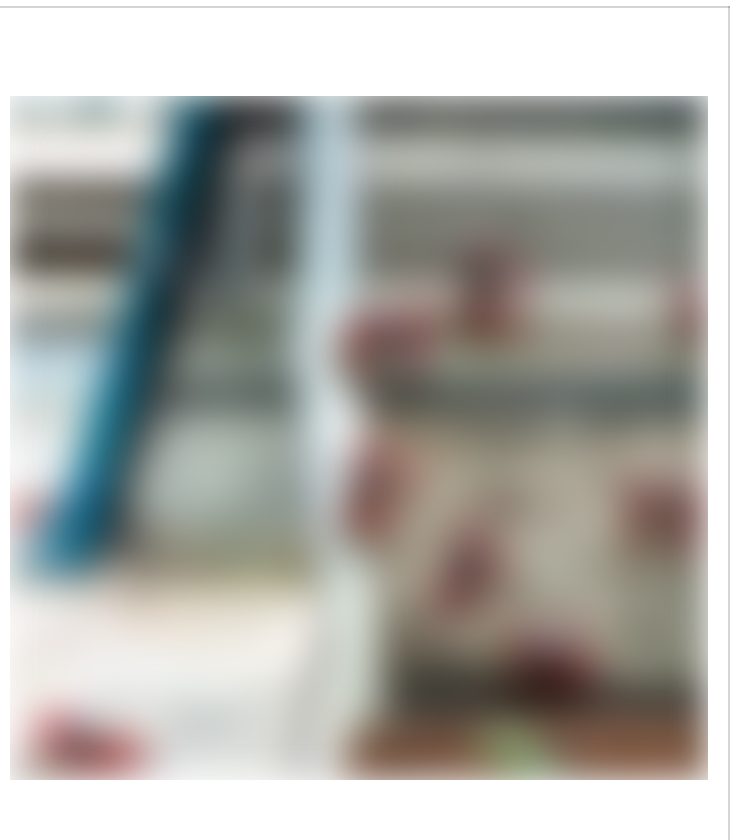
Banff National Park Wildlife Overpass in Alberta, Canada. ©Wikimedia CC BY 2.5

Another impressive example is Utah's \$5 million Parleys Canyon wildlife overpass. Spanning six lanes of Interstate 80, this overpass is specifically designed for large animals like deer and elk. In 2021 alone, the bridge had over 1,200 animal crossings.

In Australia, the Christmas Island crab bridges protect millions of red crabs during their annual migrations. These unique, mesh-like crossings, which allow crabs to easily climb and walk over roads, have become an essential part of the island's ecosystem management.



Christmas Island, Australia, crab bridge. ©Neil Bowman/istock



Crabs on Christmas Island bridge. ©Leah Noble (left) Sarah Coote (right). Parks Australia

The Cost of Wildlife Crossings

While wildlife crossings save lives, they can be quite expensive. Successful wildlife crossings include fencing to funnel animals toward the crossings, signage to alert drivers, and landscaping to make the structures more attractive to wildlife.

Wildlife crossings vary in size depending on the species they are designed to accommodate. Overpasses are typically 165 to 230 feet wide, providing enough space for animals to feel safe. Underpasses come in various dimensions, but they are generally designed to mimic natural conditions to encourage wildlife use. Generally, overpasses can cost between \$1 million and \$7 million to construct, while underpasses range from \$250,000 to \$600,000.

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Research has shown that building these crossings is actually less expensive than the animal and car collisions that happen without them. For example, before the construction of the wildlife crossings, the Wyoming Department of Transportation estimated that wildlife-vehicle collisions at Trapper's Point, Wyoming, were costing over \$500,000 each year. The state estimates that the wildlife crossings—which, for example, cost \$2.5 million to \$7 million for a double span overpass—will pay for themselves in about 17 years, according to The Center for Large Landscape Conservation in Bozeman, Montana.

Effectiveness of Wildlife Crossings

Wildlife crossings have proven highly effective in reducing animal-vehicle collisions. Studies show an average reduction of 80% to 90% in collisions in areas where these crossings are installed.

The Interstate 5 wildlife crossing in Oregon is a prime example of a successful project from start to finish. "Since 2020, we've been working as part of the Southern Oregon Wildlife Crossing Coalition to champion safe passage for animals across Interstate 5 in the Siskiyou Crest, one of the most heavily traveled roads in the nation and a major 'kill zone' for wildlife in both Oregon and California," said Wayburn. "Wildlife deaths have fallen by nearly 86% in other parts of Oregon where wildlife corridors have been built. That's why we're excited about the Interstate 5 wildlife crossing, as it will foster habitat connectivity and protect elk, deer, mountain lions and many other species, large and small."

New Developments in Wildlife Crossings

Exciting developments continue in this field. For example, the Pacific Forest Trust is working on creating "wildways," natural corridors that bridge public and private lands. "While man-made wildlife crossings over roads like bridges and tunnels under highways have garnered significant attention, Pacific Forest Trust is at the forefront of a growing movement toward creating natural corridors—we like to call them 'wildways'—that bridge public and private lands to ensure safe passage for wildlife across property ownerships," said Wayburn. "This is especially important as wildlife are increasingly on the move due to challenges posed by climate change, such as extreme heat, wildfires, and increased fragmentation from development pressure."

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An example of this approach is a project to conserve 7,500 acres of private forest on Mount Shasta's slopes that involves the landowner, forest management group, the Pacific Forest Trust, and the State of California. This project aims to protect forest health, create a climate-resilient habitat connecting public lands, and support around 250 species, including the gray wolf and Pacific fisher.

"With nearly 60% of US forests being privately owned, replicating such 'super wildway' projects nationwide becomes crucial for reducing fragmentation and facilitating secure wildlife migration amid climate and environmental challenges," said Wayburn.

Going Beyond Traditional Boundaries

Wildlife crossings are a crucial innovation in preserving biodiversity and enhancing road safety. As more countries and states recognize the value of these lifesaving structures, it is expected that there will be an increase in their number worldwide.

"Our ideas about habitat protection need to evolve from a 'fixed boundary' or zoo-like approach that expects animals and plants to remain within designated places," said Wayburn. "Public lands alone cannot protect these species," she added. "To ensure we have this amazing diversity of plants and wildlife, we need to embrace private lands, including those managed for financial return, as part of the solution. Since biodiversity loss is closely linked with climate change and forest loss, we must integrate more active, private lands conservation into our strategies."

**Alina Bradford is a safety and security expert who has contributed to CBS, MTV, USA Today, Reader's Digest, and more. She is currently the editorial lead at SafeWise.com.*