U.S.-Mexico Border Wall Severely Impacts Movements of Large Wildlife, Reducing Successful Wildlife Crossings by 86%

- Data from wildlife cameras along 100 miles of the border demonstrate that only 9% of wildlife interactions with the border wall led to successful crossings – an 86% reduction in crossings when compared to vehicle barriers, including a 100% reduction in crossing for large animals like black bears, mountain lions, deer, and wild turkeys.
- Small wildlife openings in border walls facilitate 16.7 times more movement for some animals like the javelina, mountain lion, and coyote, but more frequent and larger openings are urgently needed.

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A distressed American black bear paces for hours, unable to cross through the four-inch-wide spaces between steel posts in the border wall or the 8.5” x 11” wildlife opening at the bottom right.

Editors, please note this image and others are available for media use. Access the collection here.

Tucson, AZ, November 21, 2024 – A first-of-its-kind study published today in Frontiers in Ecology and Evolution reveals that the U.S.-Mexico border wall has significant ecological consequences on wildlife movement. The research pulls from years of camera data along a 100-mile section of the border composed of steel border wall and vehicle barriers, that runs through a world-renowned biodiversity hotspot and is home to many threatened and endangered species including jaguar, ocelot, and Mexican wolf. The study documented dramatic reductions in wildlife crossings through border walls compared to vehicle barriers and highlights the urgent need for mitigation strategies to preserve biodiversity and restore wildlife connectivity in the region.

The study collected 100s of videos of large wildlife species like American black bear, mountain lion, mule deer, and white-tailed deer attempting to cross with zero success through the bollard-style steel wall that now covers more than 630 miles of the U.S.-Mexico border, including more than 60% of Arizona's border. These border walls are between 18 and 30 feet tall, with spaces only four inches wide between steel posts. The walls are designed to keep humans from crossing but effectively block the passage of large wildlife as well.

Researchers from Sky Island Alliance and Wildlands Network deployed 36 motion-activated cameras along 70 miles of bollard wall and 30 miles of vehicle barriers on both sides of the wall between the Patagonia Mountains near Nogales, Arizona and the San Bernardino National Wildlife Refuge near Douglas, Arizona. The authors collected and evaluated nearly 13,000 videos of wildlife to understand the ability of 20 terrestrial species to cross through the border barriers. The results shed light on the detrimental effects of border walls on wildlife movement.

Small wildlife openings measuring 8.5"x11" were installed in some sections of the border wall and improved crossing rates for species like the American badger, mountain lion, javelina, and coyote. However, these passages were ineffective for many species and extremely scarce, with only 13 installed across a 70-mile stretch of continuous border wall. The study found that these small wildlife openings provided no crossing opportunities for the American black bear, white-tailed deer, mule deer, or wild turkey.

"Clearly, more and larger openings must be installed to help wildlife move across the landscape to access food, water, shelter, and mates," said Eamon Harrity, wildlife program manager for Sky Island Alliance. "We are likely to see more border wall construction in the future, and even small increases in the spaces between the border wall posts would be a lifeline for species that have been stopped in their tracks and left in distress."

This research underscores the need for more wildlife passages and larger openings to facilitate movement and maintain genetic diversity among wildlife populations. The study's authors call for additional research to further understand the impacts of border barriers and develop effective conservation strategies.

"In a rapidly changing climate, animals need more space, not less, to survive. Doing whatever we can to allow wildlife more freedom to move is not just sound science to preserve biodiversity, it's also a moral imperative," said Myles Traphagen, Borderlands Program Coordinator for Wildlands Network.

For more information and to access the full study, visit www.frontiersin.org.

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About Sky Island Alliance: Sky Island Alliance is a non-profit organization dedicated to the protection and restoration of the rich natural heritage of the Sky Island region in the southwestern United States and northwestern Mexico.

About Wildlands Network: Wildlands Network is a conservation organization focused on reconnecting, restoring, and rewilding North America's wild places to ensure the survival of wildlife and the health of the planet.

By the numbers:

- **Crossing Rates Summary (averaging across all 20 study species):**
  - 9% of interactions resulted in successful crossings at the border wall.
  - 41% of interactions resulted in successful crossings at small wildlife openings in the border wall.
  - 65% of interactions resulted in successful crossings at vehicle barriers.

- **Key Findings:**
  - Dropping from 65% (vehicle barriers) to 9% (border wall) is an **86% reduction in crossing rates**.
  - **0% of all interactions** for deer, bear, mountain lion, and turkey at the border wall featured a successful crossing.
    - In contrast, **72% of interactions** with these species at vehicle barriers featured a successful crossing.

- **Crossing rates** were **16.7 times higher** at small wildlife openings than at the border wall without openings.
    - Differences were particularly pronounced for:
        - **Javelina**: 24 times higher crossing rates at wildlife openings than the border wall.
        - **Coyote**: 5.6 times higher crossing rates at wildlife openings than the border wall.
- **Small wildlife openings** were the **only permanent crossing opportunities** for mountain lions.