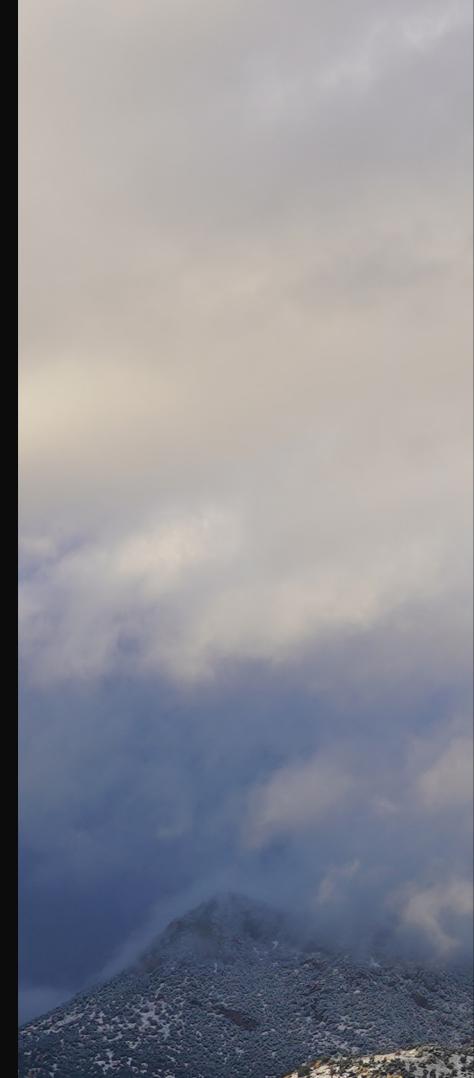




**July, 2025**  
**Center for Biological Diversity**



A report by  
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# Destruction of a **JAGUAR CORRIDOR**

Impending Border Wall Will Sever Vital Pathway  
for Wildlife in Arizona's San Rafael Valley



*San Rafael Valley grasslands and southern foothills of the Huachuca Mountains. Credit: Russ McSpadden / Center for Biological Diversity*

## EXECUTIVE SUMMARY

Hundreds of miles of border walls have already severed much of the Arizona–Sonora borderlands, blocking wildlife corridors, fragmenting ecosystems, and pushing endangered species closer to extinction. In the Sky Islands region — one of the most biologically rich and ecologically interconnected wildlands in North America — only a few unwalled cross-border corridors remain. One of the most important of these, the San Rafael Valley, is now in the crosshairs of the Trump administration for immediate new border wall construction.<sup>1</sup>

The San Rafael Valley, a sweeping grassland basin cradled between the Huachuca and Patagonia mountains, is one of the last vital pathways for wildlife movement between Arizona and Sonora. Jaguars, ocelots, black bears, pronghorn and many other species rely on this corridor to move freely between the U.S. and Mexico. The San Rafael wildlife corridor is an ecological lifeline connecting the transboundary Sky Island Mountains.

At least 17 large wildlife species have been documented crossing through existing vehicle barriers or cattle fencing in the San Rafael Valley. This region has seen the highest number of modern jaguar detections anywhere in the U.S. and is home to 17 threatened and endangered species including Sonoran tiger salamanders and Mexican spotted owls, and 9 species with designated critical habitat.

Armed with waivers that override bedrock

environmental laws, Trump's Department of Homeland Security (DHS) is moving at breakneck speed to wall off the San Rafael. In June 2025, U.S. Customs and Border Protection (CBP) awarded a more than quarter of a billion dollar contract for border wall construction<sup>2</sup> across the San Rafael Valley to Fisher Sand & Gravel Co — a company with a long record of environmental and regulatory violations, including air quality infractions, criminal charges and millions in fines and settlements — raising serious concerns about the impacts to wildlife and ecosystems in this vital bioregion.<sup>3</sup> The proposed wall would cut across the transboundary watersheds of the San Pedro and Santa Cruz Rivers, fragmenting the hydrology of the corridor.

A barrier here would block species movement, destroy protected habitats, and inflict irreversible damage on critical ecological linkages. It could also bring a wall of artificial light to this Dark Sky landscape — stadium-bright illumination that would disrupt nocturnal pollinators like bats and insects, disorient migratory birds, and degrade the valley's natural light-dark cycle, which governs critical behavioral and physiological processes in wildlife.<sup>4</sup>

This report documents the San Rafael Valley's biodiversity, the species it sustains, and its indispensable role in the survival of endangered wildlife. It details nine key protected areas linked by the San Rafael Valley wildlife corridor. Finally, it also outlines the severe harms posed by new border wall construction and makes the urgent case for protecting this irreplaceable corridor before it is destroyed.



*A black bear obstructed by the new 30-foot-high border wall at the nearby San Pedro River. Credit: Sky Island Alliance*

## BORDER WALL HARMS

During Trump's first term, approximately 458 miles of new 30-foot-high, concrete and steel bollard-style border walls were built. In many areas, these new walls replaced existing vehicle barriers, which generally did not impede wildlife movement. A significant portion of this construction occurred on federally protected lands in Arizona and New Mexico, including the San Bernardino, Buenos Aires and Cabeza Prieta national wildlife refuges, National Park Service lands like Organ Pipe Cactus National Monument and the Coronado National Memorial, designated wilderness areas like the Pajarito Wilderness, and National Forest Service land. The result has been dire, sealing off most of the federally protected wildlands between the U.S. and Mexico, with only a few corridors — like the San Rafael Valley — remaining.

Scientists recognize border walls as ecological stressors that destroy habitat, divide genetic interchange and impede wildlife migration.<sup>5</sup> In 2018, more than 2,500 scientists published a paper detailing the harm that border walls cause, raising alarm about the barriers' threats to animal health, migration and dispersal.<sup>6</sup>

Border walls in Arizona and across the borderlands have inflicted extensive, well-documented harm to wildlife, blocking migratory routes, destroying habitat, isolating vulnerable populations and disturbing wildlife during construction. These harms are particularly severe for species like jaguars and ocelots, whose populations north of the U.S.-Mexico border depend on interconnected habitats to breeding grounds in Mexico for survival.<sup>7</sup>

Without permeable cross-border wildlife corridors, these species could face extirpation from the United States.

To fast-track border wall construction, the Trump administration invoked a little-known section of the 2005 Real ID Act to bypass dozens of environmental laws. As a result, ancient saguaro cacti were bulldozed, groundwater aquifers were depleted to mix concrete for construction, and critical migration corridors for species were severed. Tribal nations like the Tohono O'odham saw sacred sites dynamited and ancestral lands scarred, with no legal recourse to challenge these actions.

DHS's use of sweeping legal waivers to fast-track border wall construction across the San Rafael Valley bypasses bedrock environmental laws like the National Environmental Policy Act, Endangered Species Act, and Clean Water Act. This action strips local communities, Tribal nations and ecosystems of protections guaranteed elsewhere in the country. This unchecked waiver authority raises serious constitutional concerns by concentrating legislative power in the hands of a single executive official and denying borderland residents equal protection under the law. In the absence of judicial review or enforceable mitigation requirements, the San Rafael Valley's fragile wildlife corridor is left vulnerable to irreversible harm without public accountability or legal recourse.

With large portions of the borderlands now sealed off by barriers, the few remaining corridors serve as lifelines for species that require vast, interconnected landscapes to hunt, breed and adapt to climate change.

Scientists, local communities, and government agencies in the United States, Mexico and the United Nations (via UNESCO) have called for the restoration of ecosystems damaged by wall construction, urging policymakers to preserve wildlife corridors and protect transboundary biodiversity.<sup>8</sup>

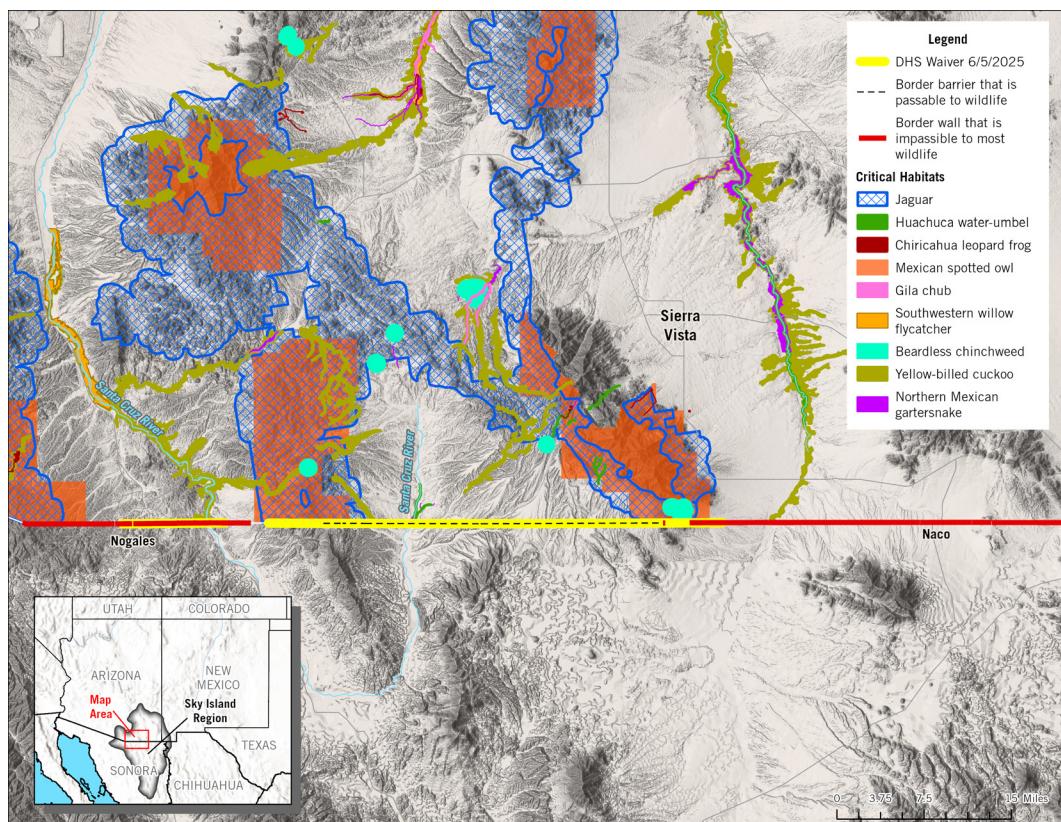
To achieve these goals, decision makers have to prioritize protecting the last remaining wildlife corridors linking Arizona and Sonora. These transboundary pathways are vital for the survival of migratory species, the health of ecosystems and the cultural integrity of borderland communities. To do this, we must stop the Trump administration's plan to wall off the San Rafael Valley and take decisive action to permanently safeguard this irreplaceable wildlife corridor for generations to come.

## BIODIVERSITY IN THE SAN RAFAEL VALLEY AND SKY ISLANDS REGION

For millennia, the region now known as the U.S.-Mexico borderlands has been a sanctuary of interconnected ecosystems, shaped by a confluence of biogeographic, geologic and evolutionary forces.<sup>9</sup>

This biodiversity is especially rich in the Sky Island mountains.<sup>10</sup> Here, northern taxa like pines and junipers intermingle with subtropical agaves and Mexican oaks, forming a globally recognized biodiversity hotspot.<sup>11</sup>

This remarkably rich flora provides for an exceptional diversity of wildlife, from endangered jaguars and ocelots to elegant trogons, black bears, Monarch butterflies, coatimundis, mountain lions and more than a dozen hummingbird species. The Sky Island region holds the highest diversity of reptiles, mammals and ant species anywhere in the United States.<sup>12</sup>



*Map of San Rafael Corridor and Critical Habitat. Kara Clauser / Center for Biological Diversity*

A recent survey of a six-square-mile stretch of arid borderlands desert straddling southeastern Arizona and northeastern Sonora documented 497 species of bees — the highest bee diversity recorded anywhere on Earth.<sup>13</sup> This extraordinary diversity rivals that of entire European nations.

Across the U.S.-Mexico borderlands, at least 93 threatened and endangered species make their homes on both sides of the border.<sup>14</sup> The health of many of these species relies on core populations in one country to sustain their presence in another. For example, jaguars<sup>15</sup> and ocelots<sup>16</sup> have breeding populations only in Mexico, which sustain individual populations in the U.S., while species like Mexican gray wolves,<sup>17</sup> bighorn sheep<sup>18</sup> and black bears have larger, healthier populations in the U.S. that help sustain those south of the border.

And now, the Trump administration is targeting the few remaining wildlife corridors — including the San Rafael Valley — for wall construction.<sup>19</sup> These last corridors between Arizona and Sonora play a crucial role in maintaining biodiversity, facilitating gene flow and ensuring species survival in increasingly fragmented landscapes.



Images above left to right: The jaguar El Jefe (credit Conservation CATalyst and Center for Biological Diversity); the jaguar O:shad Ñu:kudam (credit Sky Island Alliance); the jaguar Yo'oko Nahsuareo (credit Ft. Huachuca).

## SAN RAFAEL VALLEY CORRIDOR AND ADJACENT PROTECTED LANDS

Cradled by towering Sky Island mountain ranges and federally designated critical habitat for endangered jaguars, the San Rafael Valley provides the best connectivity for myriad species between Arizona and Sonora. This corridor spans 32 miles of oak woodlands, grassland savannah and mountainous slopes, where the border is currently marked only by vehicle barriers and cattle-fencing, neither of which poses substantial barriers to transboundary wildlife movement. Cross-border smuggling and human activity in this area have been extremely rare. Trail cameras posted just north of the border documented just two instances of human activity in five years of monitoring.<sup>20</sup>

Protecting the San Rafael Valley Corridor is crucial for the survival of jaguars and ocelots. Notably, this region has seen the highest number of modern jaguar detections anywhere in the U.S., including El Jefe, a jaguar extensively observed in the Santa Rita Mountains, Yo'oko Nahsuareo (Yo'oko for short) — a name meaning “jaguar warrior” in the Yaqui language, given by students on the Pascua Yaqui Pueblo and O:shad Ñu:kudam (O:shad) — a name given by students on the Tohono O’odham Nation meaning “jaguar protector.” Yo’oko was spotted in the Huachuca Mountains in 2016 and 2017. O:shad has been documented more than a dozen times since 2023 and is likely still present in the region. In total, since 1904, at least 31 jaguar sightings have been recorded within this corridor.<sup>21</sup>

Multiple endangered ocelots have also been detected in this corridor. Researchers have confirmed the

presence of a breeding population of ocelots at Rancho El Aribabi in northern Sonora, just 30 miles south of the border. This population consists of at least 18 individuals, including both males and females, with photographic evidence of reproduction.<sup>22</sup>

A 2024 study by the nonprofit Sky Island Alliance documented 17 large wildlife species crossing through existing vehicle barriers or cattle fencing in the San Rafael Valley, including black bear, mountain lion, pronghorn, mule deer, white-tailed deer, javelina, coyote and bobcat.<sup>23</sup>

The same study analyzed wildlife camera data from areas with and without border walls, establishing that border walls decrease transboundary wildlife crossings by 86% — entirely blocking migrations of deer, pronghorn, black bears, Gould’s turkey and other large mammal species.

## KEY PROTECTED AREAS LINKED BY THE SAN RAFAEL VALLEY CORRIDOR

### 1. Rancho Los Fresnos, Sonora, Mexico

Rancho Los Fresnos is a 10,000-acre conservation ranch in the southeast corner of the San Rafael Valley. Acquired by The Nature Conservancy in 2005, Rancho Los Fresnos preserves fragile native grasslands and vital riparian habitats, including one of the largest remaining ciénagas (desert wetlands) in the upper San Pedro River basin. These habitats support nearly 400 species of migratory birds, 68 species of amphibians and reptiles, and 87 mammal species including jaguars, ocelots, black bears and coatimundis.<sup>24</sup>



Rancho Los Fresnos. Credit: Russ McSpadden / Center for Biological Diversity

Rancho Los Fresnos forms a critical link between Sky Island mountain ranges and the riparian systems of the upper San Pedro basin. Through the reintroduction of natural fire regimes, reduced grazing pressure and wetland restoration — including the reintroduction of beavers that build ponds, which slow the flow of water and enhance habitat for birds and amphibians — Los Fresnos has become a model of ecosystem recovery. Its proximity to other protected areas like the Ecosistema Ajos-Bavispe and Northern Jaguar Reserve to the south and the San Pedro Riparian National Conservation Area to the north makes it a cornerstone of a broader transboundary conservation network.

## 2. Ecosistema Ajos-Bavispe, Cuenca Río San Pedro, Sonora, Mexico

Ecosistema Ajos-Bavispe is a Mexican Natural Protected Area spanning nearly half a million acres across three Sky Island mountain ranges between Cananea and Moctezuma, Sonora. Forming the headwaters of the San Pedro River, Ajos-Bavispe was designated under the Ramsar Convention on Wetlands of International Importance in 2017. This ecosystem encompasses the vast Sky Island mountains and a mosaic of ciénegas and ephemeral and perennial streams that provide critical water resources in an otherwise arid region of Sonora. As one of the few undammed river systems in the North American Southwest, the upper San Pedro River originates in this area near Cananea and flows northward into Arizona, making it a lifeline for biodiversity across the U.S.-Mexico border.

Established in 1936, Ajos-Bavispe is the largest federally protected area within Mexico's portion

of the Madrean Sky Islands region. This expansive protected habitat strengthens cross-border ecological connectivity, supporting seasonal migrations and genetic exchange for species ranging from river otters and beavers to apex predators like jaguars.

## 3. San Pedro Riparian National Conservation Area, Arizona, U.S.

Covering nearly 57,000 acres, the San Pedro Riparian National Conservation Area protects one of the last undammed river ecosystems in the desert Southwest. This rare river corridor supports more than 400 species of birds — nearly 45% of North America's 900 bird species.<sup>25</sup>

It also provides essential water and cover for large mammals like jaguars and ocelots moving between the U.S. and Mexico. Remarkably, the San Pedro River Riparian National Conservation Area supports more native vertebrate species than Yellowstone National Park (which is 39 times larger), underscoring its unmatched biodiversity and ecological value.

## 4. Huachuca Mountains, Arizona, U.S.

The Huachuca Mountains rise dramatically from 3,000 to 9,466 feet, supporting a rich mosaic of vegetation types and one of the most biologically diverse landscapes in the Sky Islands. The range is home to nearly 1,000 documented plant species and at least 78 mammal species, including 11 species of bats and a diverse array of reptiles and amphibians. The mountains also sustain an array of threatened and endangered species like the Chiricahua leopard frog, Mexican spotted owl, jaguar and ocelot.<sup>26</sup>

The Huachucas are part of the designated Jaguar Critical Habitat Unit 3, identified by the U.S. Fish and Wildlife Service in 2014 for its rugged, forested terrain and strategic connectivity to breeding populations in Sonora, including those within the Northern Jaguar Reserve. Ephemeral and perennial streams and remote canyons offer ideal conditions for wide-ranging carnivores. Notably, the jaguars Yo'oko and O:shad were detected in the Huachucas in recent years — in 2016–2017 and 2023–2024, respectively — confirming the range's role as a vital link for recolonization of the species' historical U.S. range. Ocelots have also

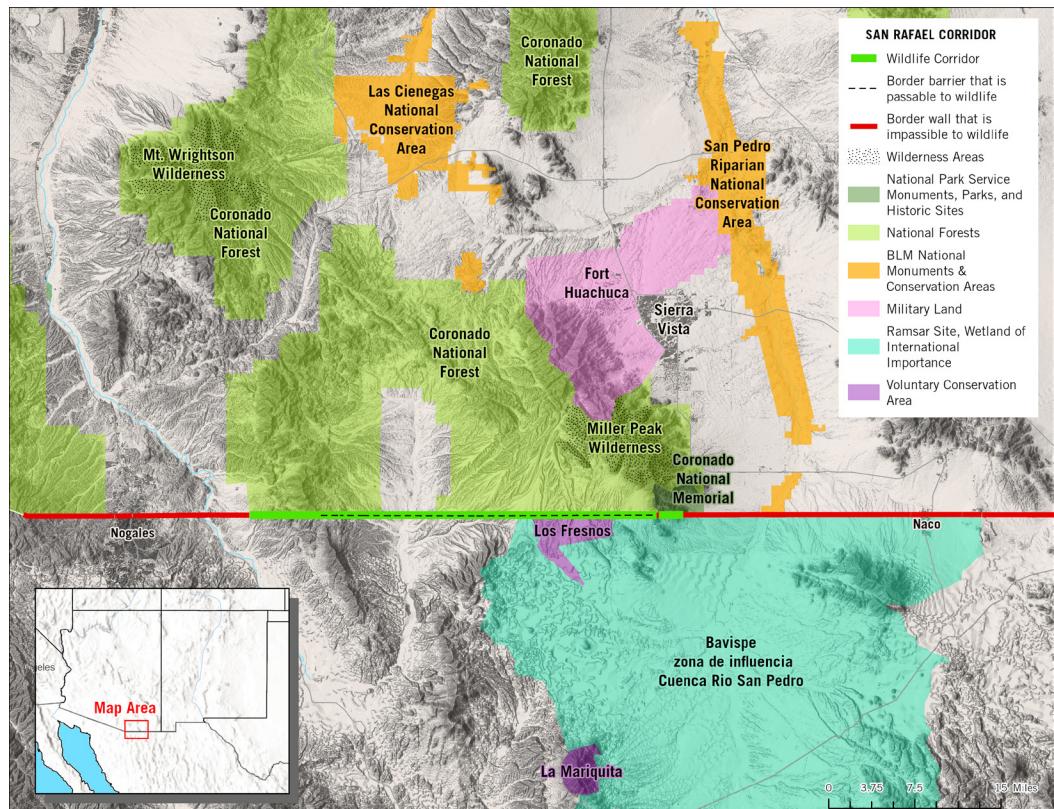
been photographed in the range's oak woodlands and riparian zones, further affirming the Huachucas' importance for binational carnivore conservation. Ocelots have also been detected in the nearby Santa Rita and Whetstone Mountains.

## 5. San Rafael Grasslands, Coronado National Forest, Arizona, U.S.

A vast expanse of high-desert savannah along the U.S.–Mexico border in Arizona, the San Rafael grasslands, managed by the U.S. Forest Service and a mix of state natural areas and conservation easements, serves as critical foraging and breeding grounds for a wide array of wildlife. It hosts extensive populations of pronghorn, mule deer, white-tailed deer, Gould's turkey and javelina — all important prey for large carnivores like jaguar. The grasslands are especially vital for wintering grassland bird species, including chestnut-collared longspurs, Baird's sparrows, savannah sparrows, and Sprague's pipits. Recognized as a Global Important Bird Area, the region supports exceptional avian biodiversity.

## 6. Fort Huachuca, Arizona, U.S.

Fort Huachuca, a U.S. Army base in southeastern



*Map of San Rafael Corridor and Key Protected Areas. Kara Clauer / Center for Biological Diversity*

Arizona, contributes to conservation efforts through its involvement in the Sentinel Landscapes Partnership, a federal partnership aimed at preserving wildlands and biodiversity around military installations. In coordination with The Nature Conservancy, the Arizona Game and Fish Department, and other agencies, the base supports efforts to protect and restore wildlife corridors used by mountain lions, deer and wide-ranging species like jaguars. The fort has supported efforts to remove barriers like fencing and roads to improve ecological connectivity.<sup>27</sup> Fort Huachuca's electromagnetic quiet zone, maintained for military intelligence missions, creates an unintended but highly effective buffer against urban sprawl and habitat fragmentation. The jaguar Yo'oko was detected on Fort Huachuca in 2016.

## 7. Sierra la Mariquita Sky Islands Reserve, Sonora, Mexico

The Sierra La Mariquita Sky Islands Reserve spans nearly 50,000 acres of pine-oak forests, oak woodlands and desert grasslands, rising to elevations of 7,500 feet. Just 16 miles south of the Arizona border within the upper San Pedro River watershed, the reserve plays a critical role in connecting the Sierra Madre



*Huachuca Mountains. Credit: Laiken Jordahl / Center for Biological Diversity*

Occidental to the Sky Islands of southern Arizona. Situated between the Sonoran protected areas of Ajos-Bavispe and Rancho Los Fresnos, Sierra La Mariquita strengthens a transboundary wildlife corridor that links core habitats for wide-ranging species, including jaguars, ocelots and black bears.<sup>28</sup> Its designation — driven by Sky Island Alliance and local conservation partners — recognizes the reserve as both a biodiversity hotspot and a key migratory passage across the U.S.-Mexico borderlands.

#### **8. Rancho El Aribabi, Sonora, Mexico**

Rancho El Aribabi, located 31 miles south of the U.S.-Mexico border, is a 10,000-acre conservation ranch in northern Sonora that has been a vital hub for transboundary wildlife in the region. Since 2000, ranch owners have shifted priorities from intensive cattle operations to conservation, protecting more than 447 plant species, 170 bird species, and critical wildlife like jaguars, ocelots and black bears. El Aribabi hosts the northernmost population of breeding ocelots in the world, with at least 18 individual cats documented.<sup>29</sup>

Jaguar sightings, documented by projects like Cuatro Gatos and Sky Island Alliance, underscore its role

in cross-border wildlife movement — including individual jaguars like “El Jefe” reappearing in central Sonora after traversing the border.

Sadly, the Mexican government has bypassed environmental regulations to build a massive, industrial-scale train through the Río Cocóspera basin, damaging portions of the ranch. While the protected status of these lands is threatened and the landscape has been significantly degraded by construction, they still hold vital riverine habitat for endangered spotted cats and other species in the borderlands.

#### **9. Northern Jaguar Reserve, Sonora, Mexico**

Spanning more than 56,000 acres, the Northern Jaguar Reserve represents the largest private sanctuary dedicated to jaguar conservation in northwestern Mexico. Located in rugged mountain terrain interwoven with river corridors, this reserve provides a vital habitat for breeding jaguars and their prey, ensuring genetic flow between populations in Mexico and those moving into the southwestern United States. The diverse ecosystems within the reserve—from riparian habitats to Sinaloan thorn scrub, native palm forests, and grasslands—create an ideal environment

for jaguars, which rely on both dense cover and access to prey species to thrive. The reserve's strategic placement helps protect an array of other wildlife, including ocelots, mountain lions, and neotropical migratory birds.<sup>30</sup>

In 2021, a trail camera in Sonora, near the Northern Jaguar Reserve, photographed the famous jaguar El Jefe, who was last seen in 2015 in Arizona's Santa Rita Mountains. The Santa Ritas lie north of the San Rafael Valley and are a key part of the broader wildlife linkage. The sighting provided compelling evidence of habitat connectivity between the San Rafael Corridor and the breeding population near the Reserve.<sup>31</sup>

## CONSERVATION IMPERATIVES

The San Rafael Valley is one of the last intact cross-border corridors for endangered species in the Sky Islands region. If the Trump administration succeeds in walling it off, migration routes for jaguars, ocelots, black bears and a host of other species will be permanently severed, leading to genetic isolation, habitat fragmentation and an increased risk of extirpation.

Congress must act now to stop this irreversible destruction. Lawmakers should immediately rescind funding for border wall construction and pass explicit legislative language prohibiting the Department of Homeland Security from using federal appropriations to build barriers in the San Rafael Valley or otherwise requiring that border security measures provide for transboundary wildlife permeability.

For species like jaguar, walling off corridors will block animals dispersing from source populations in Sonora



*A dead mule deer stuck along the new 30-foot-high border wall at Organ Pipe Cactus National Monument.*

into the U.S. This is likely to foreclose the natural re-establishment of a breeding population in the U.S., thereby requiring reintroduction or population supplementation for recovery success.

During the first Trump administration, Congress included language in FY19 appropriations and subsequent appropriations bills to block wall construction in four ecologically sensitive areas of South Texas, including the Santa Ana National Wildlife Refuge and Bentsen-Rio Grande Valley State Park. With time running out, the same tool must be used to protect the San Rafael Valley. Without swift and decisive congressional action, this irreplaceable corridor — and the species that depend on it — may be lost forever.

The San Rafael Valley is one of the very last functional ecological arteries connecting the Sky Islands of Arizona and Sonora, a vital conduit for species and ecosystems of extraordinary conservation concern. Its continued permeability for wildlife is essential to the survival of species in the United States and Mexico. The ecological cost of landscape-level modification in the form of a massive, wildlife-impermeable border wall could be devastating and irreversible. With construction threats looming, Congress needs to act now to stop further destruction and permanently protect this last remaining artery before it is sealed shut forever.

## ENDNOTES

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