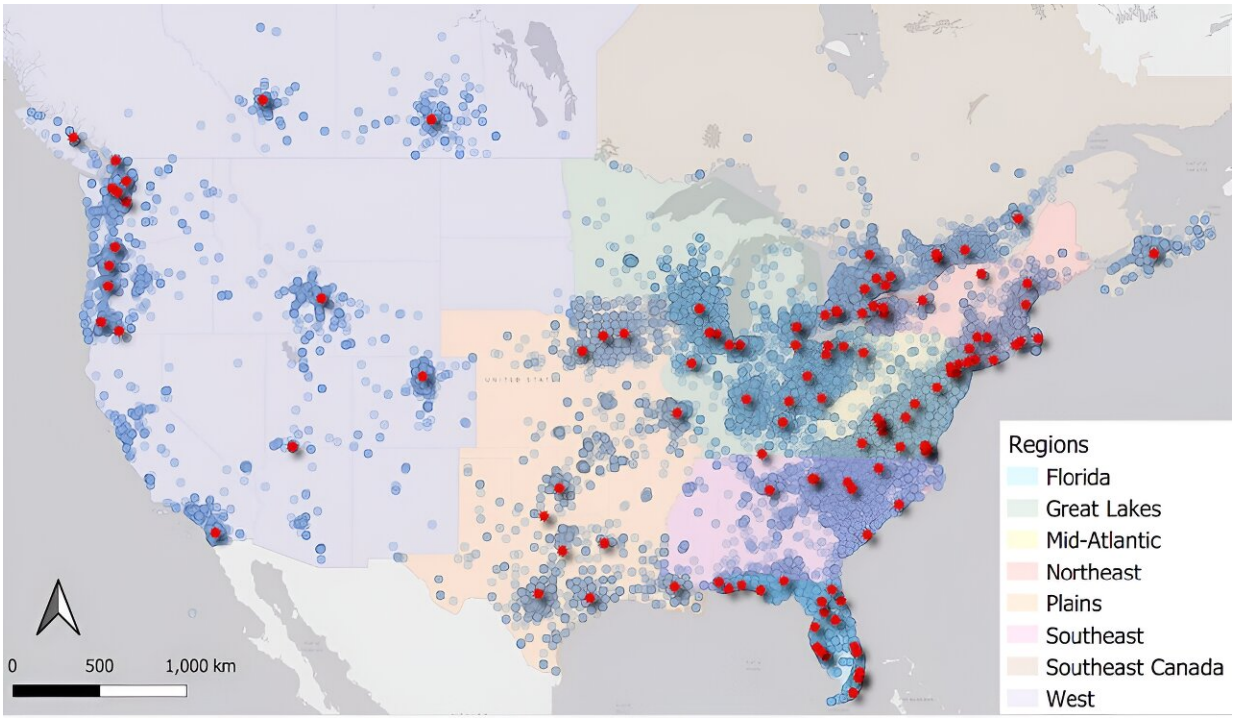
Digitized records from wildlife centers show the most common ways that humans harm wild animals

November 22 2023, by Tara K. Miller and Richard B. Primack



Locations in the U.S. and Canada where animals were found (blue dots) before being brought to wildlife rehabilitation centers (red stars) included in Miller et al., 2023. Credit: Miller et al., 2023, CC BY-ND

At hundreds of wildlife rehabilitation centers across the U.S., people can learn about wild animals and birds at close range. These sites, which may

be run by nonprofits or universities, often feature engaging exhibits, including "ambassador" animals that can't be released—an owl with a damaged wing, for example, or a fox that was found as a kit and became accustomed to being fed by humans.

What's less visible are the patients—sick and injured wild animals that have been admitted for treatment.

Each year, people bring hundreds of thousands of sick and injured wild animals to wildlife rehab centers. Someone may find an injured squirrel on the side of the road or notice a robin in their backyard that can't fly and then call the center to pick up an animal in distress.

We study ecology and biology, and recently used newly digitized records from wildlife rehabilitation centers to identify the human activities that are most harmful to wildlife. In the largest study of its kind, we reviewed 674,320 records, mostly from 2011 to 2019, from 94 centers to paint a comprehensive picture of threats affecting over 1,000 species across much of the U.S. and Canada.

Our findings, published in the journal *Biological Conservation*, point to some strategies for reducing harm to wildlife, especially injuries caused by cars.

Tracking the toll

Humans are responsible for the deaths and injuries of billions of animals every year. Bats and birds fly into buildings, power lines, and wind turbines. Domestic cats and dogs kill backyard birds and animals. Development, farming, and industry alter or destroy wild animals' habitats and expose wildlife to toxic substances like lead and pesticides. Extreme weather events linked to climate change, such as flooding and wildfires, can be devastating for wildlife.

Most Americans support protecting threatened and endangered species, and recognize that human activities can harm wildlife. However, it is surprisingly difficult to determine which activities are most harmful to wildlife and identify effective solutions.

Information from wildlife rehab centers across the U.S. can help fill in that picture. When an animal is brought into one of these centers, a rehabilitator assesses its condition, documents the cause of injury or illness if it can be determined, and then prepares a treatment plan.

Wildlife rehabbers may be veterinarians, veterinary technicians, or other staff or volunteers who are certified by state agencies to treat wildlife. They follow professional codes and standards and sometimes publish research in peer-reviewed journals.

A growing data pool

Until recently, most wildlife rehab records existed only in binders and file cabinets. As a result, studies drawing on these records typically used materials from a single location or focused on a particular species, such as bald eagles or foxes.

Recently, though, rehab centers have digitized hundreds of thousands of case records. Shareable digital records can improve wildlife conservation and public health.

For example, the Wildlife Center of Virginia has worked with government agencies and other rehab centers to establish the WILD-ONe database as a tool for assessing trends in wildlife health. This will be an exciting area of research as more records are digitized and shared.

Threats vary by species

Using this trove of data, we have been exploring patterns of wildlife health across North America. In our study, we identified key threats affecting wildlife by region and for iconic and endangered species.

Overall, 12% of the animals brought to rehab centers during this period were harmed by vehicle collisions—the single largest cause of injury. For great horned owls, which are common across the U.S., cars were the most common cause of admission—possibly because the owls commonly forage at the same height as vehicles, and may feed on road kill.

Other threats reflect various animals' habitats and life patterns. Window collisions were the most common injury for the big brown bat, another species found in many habitats across the U.S. Fishing incidents were the main reason for admission of endangered Kemp's ridley sea turtles, which are found in the Gulf of Mexico and along the Atlantic coast.

Toxic substances and infectious diseases represented just 3.4% of cases but were important for some species. Bald eagles, for example, were the species most commonly brought to centers with lead poisoning. Eagles and other raptors consume lead ammunition inadvertently when they feed on carcasses left in the wild by hunters.

In southern Florida, hurricanes and floods resulted in spikes in the numbers of animals brought to rehab centers, reflecting the impact of climate-driven extreme weather events on wildlife health.

About one-third of animals in the cases we reviewed were successfully released back to the wild, though this varied greatly among species. For example, 68% of brown pelicans were released, but only 20% of bald eagles. Unfortunately, some 60% of the animals died from their injuries or illnesses or had to be humanely euthanized because they were unable to recover.

Spotlighting solutions

Our results spotlight steps that can help conserve wildlife in the face of these threats. For example, transportation departments can build more road crossings for wildlife, such as bridges and underpasses, to help animals avoid being hit by cars.

Wildlife management agencies can ban or limit use of ammunition and fishing gear that contain lead to reduce lead poisoning. And governments can incorporate wildlife into disaster management plans to account for surges in wildlife rescues after extreme weather events.

People can also make changes on their own. They can drive more slowly and pay closer attention to wildlife crossing roads, switch their fishing and hunting gear to nonlead alternatives, and put decals or other visual indicators on windows to reduce bat and bird collisions with the glass.

To learn more about animals in your area and ways to protect them, you can visit or call your local wildlife rehab center. You can also donate to these centers, which we believe do great work and are often underfunded.

The scale of threats facing wild animals can seem overwhelming, but wildlife rehabbers show that helping one injured animal at a time can identify ways to save many more animal lives.

Provided by The Conversation

Citation: Digitized records from wildlife centers show the most common ways that humans harm

wild animals (2023, November 22) retrieved 29 April 2024 from https://phys.org/news/2023-11-digitized-wildlife-centers-common-ways.html