

## **Hawk Migration Association (HMA) Position Statement on Raptors and Rodenticides**

Rodenticides are used in residential, agricultural, and non-agricultural settings to control a variety of rodent pests, but are also highly lethal to raptors and other aerial and ground scavengers. HMA supports the position articulated by the American Bird Conservancy that anticoagulant rodenticides (first and second-generation) should never be used, that non-chemical methods of rodent control are preferred over chemical ones, and, if synthetic chemical pesticides are used, it must be in an Integrated Pest Management (IPM) program.

Raptors (eagles, owls, falcons, hawks, vultures, and others) are bioindicators, meaning they shed light on the overall health of the ecosystems in which they reside. Understanding the impacts of rodenticide use on raptor populations is critically important.

“Raptors—and other predatory wildlife—are our best natural, non-toxic form of rodent control.” (Owens Viani, 2021 in [intobirds.com](https://intobirds.com) interview). But as such they are susceptible to the effects of ingested rodenticides, a form of pesticide. Most in use are second-generation rodenticides anticoagulants (SGARs), such as brodifacoum, which cause uncontrolled bleeding and death over a period of days or remain stored in body tissues indefinitely at toxic levels. When raptors prey upon the poisoned animals, they too become poisoned.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6395208/>

Unless an injured or dead raptor is specifically screened for rat poisons, the sublethal impacts of rodenticides on birds of prey have often been often missed or overlooked. In the last decade, toxicologists have begun to focus on sublethal effects on birds and other vertebrates. Among the documented impacts: prolonged time for blood clotting, reduced bone and feather growth, internal hemorrhaging of organs, reduced weight, reduced ability to thermoregulate, immune dysfunction, reduced reproductive success, and increased likelihood of car collisions. (Raptors are the Solution, 2024).

A study by the Tufts Cummings School of Veterinary Medicine showed that nearly 100% of Red-tailed Hawks brought into the Tufts Wildlife Clinic had rodenticides in their systems, some of which were at lethal levels. And Cooke, et al (2023) found that:

- Anticoagulant rodenticides were detected in 92% of nocturnal avian predators.
- Multiple rodenticide exposures in an individual increased the likelihood of mortality.
- Predators with largely non-rodent diets were also heavily exposed to rodenticides.
- Predators from different landscape types were exposed to rodenticides.
- Regulation of rodenticides is critical for the conservation of native predators.

There are many safe methods to reduce, if not completely eliminate, the presence of rodents and thus protect both raptors and human health. HMA supports:

- Using live traps, non-toxic repellants, habitat modification
- Eliminating potential food sources, e.g., trash, open compost bins, fallen bird seed, outdoor pet food
- Sealing off potential entry points into buildings
- Removing thick vegetation around houses and other buildings
- Encouraging natural avian predators of rodents through the provision of perches and kestrel/owl nest boxes.\* (Gomez, 2022)
- Educating yourself on the different types of rat poisons, including first-generation and second-generation anticoagulants, as well as the neurotoxins. Visit your local hardware or garden store to read some labels of the rat poisons sold there. Consider educating the store manager about their impact on birds of prey and other wildlife.
- Looking up studies on impacts of some of the more popular chemicals, for example, Warfarin, Brodifacoum, Chlorophacinone, Diphacinone, and Bromethalin on birds of prey.

By implementing these simple measures, an individual homeowner or business owner can make a demonstrable contribution to the health and ongoing viability of raptors without sacrificing human health in doing so.

\* If you do decide to place nest boxes in your yard for kestrels and owls, that you must also canvas the neighborhood -- as much as ¼ mile away from the nest site -- to make certain that your neighbors and businesses are not deploying rat poisons. You can visually scan for rat poison boxes in yards and along buildings, but many poisons are placed without a container, so knocking on doors and signage is often required. Although this process takes some effort, the act of you caring to educate your neighbors, and your concern for local wildlife, may have the greater long-term impact. (Allen Fish, 2024)

Compiled by members of the Conservation Committee, HMA Board; reviewed by Laurie Goodrich, Ph.D., Director of Conservation Science, Hawk Mountain Sanctuary Association; and Allen Fish, Director of Golden Gate Raptor observatory, Golden Gate National Park Conservancy

The Hawk Migration Association's official mission is to conserve raptor populations through the scientific study, enjoyment, and appreciation of raptor migration. As a scientific, educational, and conservation organization, HMA collects data from hundreds of affiliated raptor monitoring sites throughout the United States, Canada, Central and South America, and publishes a journal *Hawk Migration Studies* that includes data from participating hawk watches as well as articles on raptor conservation and other issues impacting raptors

For more information *visit HMA.org.*

### References

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Cooke, R., Whiteley, P., Death, C., et al. (2023) Silent killers? the widespread exposure of predatory nocturnal birds to anticoagulant rodenticide. *Science of the Total Environment*: Vol. 94. December.

Gomez, E., Hindmarch, S., Smith, J. A., Conservation letter: raptors and anticoagulant rodenticides. (2022). *Journal of Raptor Research*, 56(1):147-153.

Hewitt, R. Ditch poison for prevention to save our birds of prey. *Intobirds.com*.

<https://now.tufts.edu/2020/09/16/understanding-risks-rodent-poisons-birds-prey>

Raptors are the Solution, 2024 [RATS fact sheet on sublethal impacts \(raptorsarethesolution.org\)](https://raptorsarethesolution.org)