Audubon Society of Rhode Island

House Committee on Municipal Government and Housing
HouseMunicipalGovernmentandHousing@rilegislature.gov

9 March 2025

RE: HB 5704 – Pesticide Control

Dear House Committee on Municipal Government and Housing,

The Audubon Society of Rhode Island strongly opposes the use of Anticoagulant Rodenticides (ARs) and supports HB 5704. The body of literature on the negative impacts and unintended consequences of the use of ARs is extensive and continues to grow. The effects of ARs on non-target species such as raptors, non-raptor birds, reptiles, mammals, amphibians, and invertebrates are well established and it is apparent that these chemicals are pervasive and long-lived in the environment and their use can negatively impact local wildlife populations, degrade water, soil and plant communities and reduce local and regional biodiversity (Regnery et al. 2019).

After developing resistance to first-generation ARs by target rodent species, second-generation rodenticides were developed that exhibited greater potency and persistence, resulting in an even greater capacity for these chemicals to impact non-target species, such as raptors. Indeed, high exposure rates in wild raptor species have been documented globally, including here in the Northeast, throughout North America and in Europe, Asia and Australia (Gomez et al. 2022, Hopf-Dennis et al. 2022).

Studies in the United States documented AR exposure in over 75% of Barred Owls (*Strix varia*), Great Horned Owls (*Bubo virginianus*), and Red-shouldered Hawks (*Buteo lineatus*) tested, with 69% of sampled raptors containing levels of rodenticides that exceeded a threshold of acute toxicity (Weir et al. 2018). These findings suggest that AR exposure is common and often at a level that causes direct mortality. These data elucidate the pervasiveness of these chemicals as all three raptor species studied prefer forested, undeveloped habitats, where exposure to ARs would seemingly be far lower. Species that forage in open habitats and agricultural zones, such as the Red-tailed Hawk (*Buteo jamaicensis*), are known to be particularly susceptible to ARs. In New York, 68% of Red-tailed Hawks sampled contained anticoagulant rodenticides. Additional studies documented that 100% of Red-tailed Hawks sampled in the Northeastern United States tested positive for the presence of ARs (Murray 2020), and 89% of Red-tailed Hawks that died between 2012 – 2018 in New York City tested positive for ARs (Okoniewski et al. 2021). Further afield, 64% of raptors sampled in Canada and 45% of birds sampled in France tested positive for the presence of ARs (Thornton et al. 2022 and Lambert et al. 2007, respectively).

The issue of poisoning of non-target wildlife species by ARs has been so concerning that a total of 30 papers have been published on the topic between 1998 – 2015 (Nakayama et al. 2019). Since then, the number of peer-reviewed publications documenting the negative impacts of ARs on non-target wildlife and humans has grown tremendously. Out of 4,891 non-target animal species tested, 2,694 (55%) had detectable limits of ARs in their livers, supporting the finding that the impact of ARs extends well beyond the rodent species they target. In birds, these studies documented AR exposure in Turkey Vultures (*Cathartes aura*; 100%), Short-eared Owls (*Asio flammeus*; 83%), Long-eared Owls (*Asio otus*; 78%), Barred Owls (*Strix varia*; 68%), Bald Eagles (*Haliaeetus leucocephalus*; 83%); Cooper's Hawk (*Accipiter cooperii*; 36%); Peregrine Falcons (*Falco peregrinus*; 33%); Northern Saw-whet Owls (*Aegolius acadicus*; 33%); American Crows (*Corvus brachyrhynchos*; 100%), Common Ravens (*Corvus corax*; 100%), and Great Horned Owls (*Bubo virginianus*;

62%) (all of which are species that breed in or migrate through the state of Rhode Island). In addition to birds, mammals with detectable levels of ARs included Striped Skunks (*Mephitis mephitis*; 100%), Bobcats (*Lynx rufus*; 88%), Raccoons (*Procyon lotor*; 100%), Red Foxes (*Vulpes vulpes*; 100%), White-tailed Deer (*Odocoileus virginianus*; 100%), Eastern Gray Squirrels (*Sciurus carolinensis*; 100%), and Eastern Chipmunks (*Tamias striatus*; 100%).

Of those species with detectable levels of ARs, many do not consume rodents as a primary food source, suggesting that ARs accumulate in non-target prey species as well, including birds, reptiles, invertebrates, amphibians, and mammals. In Scotland, Eurasian Sparrowhawks (*Accipiter nisus*), which prey primarily on small birds, had similar rates of exposure to ARs as Red Kites (*Milvus milvus*), which predominantly forage on rodents, further demonstrating the capacity of ARs to infiltrate and persist in non-target wildlife species (Hughes et al. 2013). The fact that even herbivorous species, such as White-tailed Deer, have detectable levels of ARs in their system, suggests a broad and unrecognized pathway of exposure to non-target species and should be cause for concern.

Globally, there are 557 raptor species, including owls, hawks, eagles, falcons, and vultures. Over half (52%) of all raptor species exhibit declining populations (McClure et al. 2018). In Rhode Island, 19 species of raptors are permanent residents or breed in the state and many more species overwinter here or move through during migration.
The considerable body of literature documenting the pervasive nature of ARs in non-target species, including many raptors, suggests that the use of these chemicals is having a severe negative impact on our local biodiversity and appropriate risk management and adequate measures to protect non-target species is severely lacking. The use of ARs is counterproductive to efforts aimed at the conservation of our wildlife populations, and the mission of the Audubon Society of Rhode Island. It is because of the wide-ranging unintended consequences of the use of ARs that the Audubon Society of Rhode Island opposes their use across the landscape.

Sincerely,

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