

## RICHIE'S COMMENT TO EPA 11-11-2023

I have monitored bird populations on the upper Mississippi River since the early 1990s. I have also lived in a boathouse on the river at Winona MN since 1987, and have experienced firsthand the decline of insects and aerial insectivores. When I turned on a light in the boathouse 20 years ago, insects swarmed windows. Now only a few caddisflies and midges land on the lighted windows at night. Common nighthawks swarmed the sky above the river in spring and summer during dusk and dawn. Their population here has not merely declined. It has all but vanished, and the same is true for tree swallows and other swallows that once swarmed about sloughs, backwaters, bays and lakes in the area. Flocks once numbered in the hundreds or even thousands, now there's only handfuls.

North American bird populations have declined by nearly three billion birds since 1970, about 29% of their abundance just five decades ago.<sup>1</sup> Scientists claim insectivores such as nighthawks suffer the continent's largest population declines and link the losses to insect declines.<sup>2</sup> Birds can die outright when they eat seeds coated by neonics, and scientists suspect that neonics prevent and diminish the emergence of mayflies, butterfly larvae, moths and other insects, and so rob birds of food for their young.<sup>3</sup>

The Midwest is particularly at risk, since nearly all its corn and most of its soybeans are treated with seed-treated neonics.<sup>4</sup> Prairie biome in the Midwest, now

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<sup>1</sup> Rosenberg, Kenneth V. et al. Decline of the North American avifauna. Science Oct. 4 2019. Vol. 366, Issue 6461, pp 120-124.

<sup>2</sup> Tallamy, D.W., Shriver, W.G., 2021. Are declines in insects and insectivorous birds related? Ornithological Applications 123, duaa059.  
<https://doi.org/10.1093/ornithapp/duaa059>

<sup>3</sup> Kern, Hardy. Mineau, Dr. Pierre. Neonicotinoid Insecticides: Failing to come to grips with a predictable environmental disaster. 2023 American Bird Conservancy report.

<sup>4</sup> Xerxes Society. Insecticide Seed Treatments Threaten Midwestern Waterways. Fact Sheet. 2021.

mostly cropland, has likely become a migration barrier in autumn for birds, due to agricultural intensification and probably pesticide pollution too.<sup>5</sup> Neonics have been found in Midwestern wetlands and waterways at levels unsafe to essential biota of the food chain.<sup>6 7</sup> The upper Mississippi River appears to be losing essential biota of the food chain—burrowing mayflies declined 52% 2012-2019 and are described as “vital for supporting the commercial fishing industry and recreational anglers.”<sup>8</sup>

This info reflects only a small amount of the evidence against pesticide-treated seeds and neonics. Because neonics and other pesticide-treated seeds are systemic, they contaminate the pollen and nectar of non-target plants and kill and impair pollinators necessary to the food web: honey bees, bumble bees, blue orchard bees, leafcutter bees, alkali bees, red mason bees etc. The loss of pollinators has led to a reduction in apple, blueberry, cherry and other fruit crops. Residues of neonics are

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<sup>5</sup> Guo, Fengyi et. al. Autumn stopover hotspots and multiscale habitat associations of migratory landbirds in the eastern United States. PNAS 2023 Vol. 120 No. 3 e2203511120.

<sup>6</sup> Hladik, M., S. Corsi, D. Kolpin, A. Baldwin, B. Blackwell, and J. Cavallin. 2018. Year-round presence of neonicotinoid insecticides in tributaries to the Great Lakes, USA. *Environmental Pollution* 235:1022–1029. Schepker, T., E. Webb, D. Tillitt, and T. LaGrange. 2020. Neonicotinoid insecticide concentrations in agricultural wetlands and associations with aquatic invertebrate communities. *Agriculture, Ecosystems & Environment* 287:1066.

<sup>7</sup> Schepker, T., E. Webb, D. Tillitt, and T. LaGrange. 2020. Neonicotinoid insecticide concentrations in agricultural wetlands and associations with aquatic invertebrate communities. *Agriculture, Ecosystems & Environment* 287:106678.

<sup>8</sup> Stepanian, P., S. Entrekin, C. Wainwright, D. Mirkovic, J. Tank, and J. Kelly. 2020. Declines in an abundant aquatic insect, the burrowing mayfly, across major North American waterways. *Proceedings of the National Academy of Sciences* 117(6):2987–2992.

not only found in aquifers that humanity relies upon, they also contaminate honey, apples, cherries and other fruits and vegetables.<sup>9 10</sup>

For these and many other reasons, I support the recommendations of American Bird Conservancy's 2023 report, *Neonicotinoid Insecticides: Failing to come to grips with a predictable environmental disaster*.

- Suspend all applications of neonicotinoids pending independent review of effects on birds, terrestrial and aquatic invertebrates, and other wildlife.
- Ban the use of neonicotinoids as seed treatments and include coated seeds as unexempt pesticides under Federal law.
- Require that registrants of acutely toxic and systemic pesticides develop the tools necessary to diagnose poisoned birds and other wildlife.
- Develop regulatory language to govern safe disposal and storage of neonicotinoid-coated seeds and require a prescription from an agronomist before use of neonicotinoids as seed coatings is considered.
- Ultimately, we recommend passage of laws and regulations at the Federal and State level to prohibit the use of neonicotinoids as a seed treatment.<sup>11</sup>

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<sup>9</sup> Lindwall, Courtney. Neonicotinoids 101: The Effects on Humans and Bees. Natural Resource Defense Council. May 25, 2022.

<sup>10</sup> Xerxes Society. How Neonicotinoids Can Kill Bees: The Science Behind the Role These Insecticides Play in Harming Bees.

<sup>11</sup> Kern, Hardy. Mineau, Dr. Pierre. Neonicotinoid Insecticides: Failing to come to grips with a predictable environmental disaster. 2023 American Bird Conservancy report.