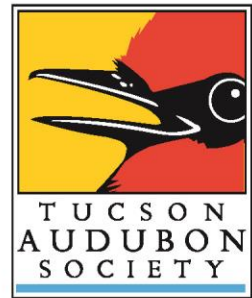


August 18, 2014

To Mayor Rothschild and Members  
Tucson City Council



*Leaders in conservation  
and education since 1949*

Tucson Audubon promotes the protection and stewardship of southeast Arizona's biological diversity through the study and enjoyment of birds and the places they live. Tucson Audubon represents a membership of more than 5,000 households throughout southeast Arizona. Birding is an important economic driver in our region that should be celebrated and safeguarded. In August, many people travel to Tucson from around the nation to take part in the Tucson Bird & Wildlife Festival, spending money while here.

Southeast Arizona is a hotspot for bird and bee diversity. In *The Forgotten Pollinators*, Steve Buchmann and Gary Nabhan highlight the globally significant bee diversity found in the greater Tucson area: "The Desert Museum's flora, including the adjacent Tucson Mountains, comprises more than 580 species of plants—and these plants may harbor almost 1,000 species of native bees in the same mountain range. That would make it the richest known parcel of bee real estate anywhere in the world."<sup>1</sup>

Tucson Audubon strongly recommends that the Tucson City Council ban the use of neonicotinoid insecticides ("neonics") on city-owned properties as well as on any plants it purchases from third parties. A recent BBC News article reports that researchers who have carried out a four-year review of the scientific literature say the evidence of damage from neonics is now "conclusive." The article goes on to compare the current widespread neonic use to the threats "once posed by the notorious chemical DDT."<sup>2</sup> Neonic chemicals can persist for many months in soil, pollen, nectar and other plant tissues – resulting in the harm or death to non-target species such as earth worms, freshwater snails, butterflies, birds and a host of beneficial insects.

Neonics are a threat to biodiversity and agriculture. Pollination is a vital ecosystem process crucial for flowering plants and for the

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<sup>1</sup> Buchmann and Nabhan. 2007. *The Forgotten Pollinators*. Island Press / Shearwater Books

<sup>2</sup> BBC News: Widespread Impacts of Neonicotinoids 'Impossible to Deny'. Available online at: <http://www.bbc.com/news/science-environment-27980344>

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propagation of many agricultural foods. A comprehensive review of the current research indicates that there is a link between neonic pesticides and die-offs of pollinators such as honey bees, native bees, butterflies, moths, and other insects.<sup>3</sup> Research suggests that the negative impacts from neonics can work their way further up the food chain. This finding is logical, considering that insects form the base of many terrestrial and aquatic food webs.

For example, a study at Radboud University in the Netherlands recently published in the journal *Nature* compared concentrations of the neonicotinoid pesticide imidacloprid measured in lakes and other surface waters around the Netherlands to local changes in 15 farmland bird species from 2003 to 2010. Where concentrations of the pesticide were more than 20 nanograms per litre, researchers found populations of insectivorous birds such as Barn Swallow, Tree Sparrow and European Starling fell 3.5 per cent a year, compared to the average population trend for their species. Hans de Kroon, one of the study's researchers concluded: "Neonicotinoids were always regarded as selective toxins. But our results suggest that they may affect the entire ecosystem."<sup>4</sup>

In addition, some plant nurseries pre-treat their plants with neonics. Neonics are systemic chemicals, and as such they are absorbed by the plant and are transferred through the vascular system, making the pre-treated plants and their floral resources toxic to pollinators that feed on them.<sup>3</sup> This fact makes it important that the city ensure any plants the city purchases from third parties are sourced from neonic-free facilities.

Studies that have demonstrated the harmful effects of neonics on bees have prompted the European Commission to introduce a ban on three kinds of neonics, including imidacloprid. The United States Fish and Wildlife Service (USFWS, Region 1) recently announced a new ban on neonics for the lands it manages and in its agricultural practices. The USFWS ban, which is anticipated to eventually be instituted nationwide, is a very positive step in the right direction, and sets an example for other governmental agencies that continue to use neonics, or for those that do not yet have an established policy governing their use.

Tucson Audubon is in support of bans on neonics by municipalities, public land agencies and wildlife management agencies. We were pleased to learn that the City of Tucson staff and its contractors do not currently use neonics on city-owned properties. We would like to ensure that it stays that way into the future. We ask you to formalize this policy and institute a ban on all use of neonics. The City of Tucson should join other forward-thinking cities such as Eugene, Oregon and Spokane, Washington that have

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<sup>3</sup> *Xerces Society: Are Neonicotinoids Killing Bees? A Review of Research into the Effects of Neonicotinoid Insecticides on Bees, with Recommendations for Action.* Available online at: <http://www.xerces.org/neonicotinoids-and-bees/>

<sup>4</sup> *Nature*. 511, 341–343, 17 July 2014, doi:10.1038/nature13531. Available online at: <http://www.nature.com/nature/journal/v511/n7509/full/nature13531.html>

already instituted such bans.<sup>5,6</sup> We thank you for your consideration of this important issue. Please contact us with any questions or concerns.

Thank you for your consideration.

Sincerely,



Dr. Paul Green  
Executive Director



Christina McVie  
Conservation Chair

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<sup>5</sup> Seattle Times: Spokane bans chemical that may kill bees. *The City Council voted to ban the city's purchase and use of neonicotinoids. The ban covers about 30 percent of the land in Spokane and doesn't apply to private use.*

Available online at: [http://seattletimes.com/html/localnews/2023996148\\_spokanebeesxml.html](http://seattletimes.com/html/localnews/2023996148_spokanebeesxml.html)

<sup>6</sup> Eugene Weekly: Save the Bees. *Neonics Spell Disaster*. Available online at:

<http://www.eugeneweekly.com/20140306/lead-story/save-bees>