Backyard Bird Counting in Edmonds and County

By Alan Mearns

House sparrows circa 2004

Rock pigeons

Three billion North American birds have disappeared since 1970, per 2019 reports, drawing on multiple studies of declining bird populations in North America since 1970. The figures were published in Science magazine (science.org).

The scientific literature is full of studies documenting the changes and exploring causes. Among them are climate change-related weather extremes, pesticides, development, feral cats and disease outbreaks.

I didn't think these stories had anything to do with the birds and wildlife around my Edmonds home, at least not until my wife and I started doing our own "backyard bird" counting in 2003. We have kept near-daily records of backyard birds and wildlife over the past 22 years. We take a few minutes each day to count and jot down the birds and other wildlife that appear at the backyard bird feeders and around the house. It's not rocket science. Dozens of residents do backyard bird counts. I am a retired biologist and keeping track of bird and wildlife populations is what a biologist does, even in his sleep!

I enter the count data into a giant spreadsheet. Here's what it reveals: the abundance of birds at our location have declined by nearly 50 percent during the past two decades. The numbers of species have also declined. We used to see a total of more than 50 species every year; that number has dwindled to 30 to 35 species in the past two years. On an *average day* in 2005 we would count about 11 species. In the past two years we've only counted an average of five or six species a day. More in winter, less in summer.

At least a dozen common species are becoming less abundant. Three species have become locally extinct or nearly so. House sparrows disappeared from our Maplewood neighborhood in 2007 and haven't returned. Rock pigeons disappeared in 2010 after being abundant and common for six years. Once-common starlings became very rare in 2013. So did House finches (following a disease outbreak), though a few have made a small comeback in recent years. Other less abundant birds are also appearing less often.

More than 70 species of birds have passed near or over our residence since we started counting birds and wildlife in 2003. The local near-extinction of three once-abundant birds might not seem like a big deal. After all, they are not native species. European birds were introduced to North America over a century ago. The House finches are native and may be starting to make a comeback. But for me, the former abundance and then their disappearances in recent years, are signs that something has been adversely affecting our birds and wildlife, both locally and regionally.

I wanted to find out more. First, were these changes happening only at our house? I looked up data for the Edmonds Christmas Bird Count (CBC), conducted annually since 1984. One day every December, dozens of volunteers fan out across southern Snohomish County, recording what they see.

And here is my first answer: Between 2003 and 2024 House sparrows declined about 95 percent, Rock pigeon sightings plummeted 98 percent and starlings dropped 73 percent county-wide. Sharp declines occurred about the same years as what I've seen at my house. House finches declined but then increased again in recent years. What was happening at my house for these birds was a reflection of their changes across southern Snohomish County.

Next question, why? I can only speculate. Increasing development? Increased use of pesticides? What about climate change? Climate change is not a slow creep. It exacerbates events, including heat waves, arctic atmospheric episodes and atmospheric river deluges.
Climate change falls on top of natural events such as El Niños and La Niñas. We had a moderate El Niño in 2009-2010, a very strong one in 2015-2016 and a strong one last year, 2023-24. A strong La Niña occurred in 2008-2009 and again in 2010-2011. An unprecedented marine heat wave baked the North Pacific Ocean from 2014 to 2016, and of course we had the unprecedented Pacific Northwest heat wave in the summer of 2021. During our early bird count years, 2003 to 2007, when our backyard bird populations were seemingly stable, there were no strong El Ninos or La Ninas. Then came the back-and-forth weather-related extremes, including drought-fueled wildfires dumping smoke in the Puget basin.

I don't know if the increased weather extremes since 2006-07 had anything to do with the local or regional crashes of the House sparrows, Rock pigeons or starlings. But extreme weather and other events, including diseases, could certainly alter bird survival by affecting their food, breeding and migration. They likely have also impacted other species, but I haven't attempted to look more closely at my home data or the CBC data, or any other data. And, two decades of bird counts is hardly enough.

But there are a lot of data out there, largely in the hands of all those who count birds and also on the eBird.org website, and citizens are continuing to count in increasing numbers. I wish we had an activity that brings local and regional bird count data together under one umbrella, so that citizens and city and county planners could actually see how things have been, are and will be changing with respect to birds, as well as other urban, suburban and rural wildlife. Leaders of the Pilchuck Audubon Society have expanded their programs and outreach and could play a guiding role in developing regional monitoring.

I would be remiss if I didn't end on a happier note. Knowing our birds is a joy, no matter what species come and go. We may have some pleasant surprises as species move further and further north.

European starlings

House finch

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