

## localnews

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Editor JIM HENDRY jim.hendry@sunmedia.ca 745-4641 ext. 242

## LIVING

# Monarchs at all-time low

Plight of butterflies one of several stories *Drew Monkman* is keeping an eye on

This week, I'd like to provide summaries of recent research findings and endangered species news that should be of interest – and concern – to anyone living in Peterborough and the Kawarthas.

## MONARCH POPULATION BOTTOMS OUT

World Wildlife Fund-Mexico has announced the results of the status of the monarch butterfly populations that overwintered this year in the oyamel fir forests west of Mexico City. Measures of the areas occupied by each of the nine monarch colonies in the states of Michoacan and Mexico totaled 1.19 hectares or 2.5 acres. This number represents a decline of almost 59% from the area occupied in 2012. It is also the smallest population ever recorded since the monarch colonies came to the attention of scientists in 1975.



**DREW MONKMAN**

### OUR CHANGING SEASONS

Obviously, we have to ask ourselves why this is happening. While some of the present decline can be blamed on weather conditions last summer, the main reason is the loss of milkweed plants. The butterflies that migrate to Mexico are particularly dependent on the milkweeds that used to grow in soy and cornfields of the north-central U.S. The use of herbicides to eradicate this plant, however, has reduced the amount of available milkweed by up to 58%. Eradication of milkweed has become possible because of the adoption of seed varieties that have been genetically modified to tolerate treatment with herbicides such as Roundup.

The good news is that we can do something about it – we can plant milkweed or, at the very least, not eradicate the plant. It is my understanding that the Ontario Ministry of Agriculture does not have a problem with anyone growing milkweed in their garden unless it is close to horticultural or agricultural crops. I believe that our Ontario Weed Control Act is in serious need of revising, given that milkweed is still on the list of noxious weeds in the province.

## FLYING SQUIRRELS AND CLIMATE CHANGE

If you love the “purity” of the flying squirrels that visit your feeder, here's another reason to be concerned about global warming. Jeff Bowman, a population ecologist with the Ministry of Natural Resources, and Paul Wilson, a wildlife geneticist at Trent University, believe they are starting to see the fingerprints of climate change when it comes to strange mating behaviour on the part of local flying squirrels. First, there



STEVE RYAN Special to The Examiner

The southern flying squirrel has migrated north with climate change and is breeding with the northern flying squirrel, believed to be the first case of climate change driven crossbreeding.



Wikipedia Commons

A feral kitten devours a cotton-tail rabbit. A new study indicates cats kill 20.7 million small animals annually.

are now two separate species of flying squirrel in the Kawarthas: the southern flying squirrel and the northern. Southern flying squirrels are a smaller animal and have pure white belly fur, while the larger northerners have two-toned gray-white bellies. As warmer temperatures change habitats, the southern flying squirrel has been extending its range northwards. The two researchers found that 1995 marked the start of a series of unusually warm winters that saw the southern flying squirrel creep north 240 kilometres, and it now appears that the southern is mating with the northern. When these species crossbreed, their babies are southern-sized with mottled grey-white belly fur. Wilson's DNA analysis shows roughly 4% of the squirrels within the study area are now hybrids.

Wilson and Bowman believe that this is the first documented example of crossbreeding following the expansion of a species' range due to modern climate change. Squirrels aren't the only sexually adventurous mammals. The local scientists are also studying two different species of mice in Ontario for

similar signs of hybridization. Although the consequences of interbreeding are not well understood, “one could look at these hybrids as a creative reshuffling of genetic material for a changing landscape,” Wilson said. “Climate change isn't going to go away . . . maybe these hybrids are emerging as the most adapted flying squirrel for the changing landscape and climate.”

## PREDATION BY CATS WORSE THAN THOUGHT

A study released in January entitled “The impact of free-ranging domestic cats on wildlife of the United States,” estimates that free-ranging domestic cats kill 1.4 million to 3.7 billion birds and 6.9 million to 20.7 billion mammals (e.g., mice, voles, chipmunks) annually. Unowned or feral cats, as opposed to owned pets, cause the majority of this mortality. The findings suggest that free-ranging cats cause substantially greater wildlife mortality than previously thought and are likely the single greatest source of human-related mortality for U.S. birds and mammals. The study also concludes that cats kill more birds and small mammals in the U.S. than any other predator. Led by Scott Loss of the Smithsonian Conservation Biology Institute, the study drew from past research on predation by cats. We've always known that cats are

responsible for huge numbers of small creature deaths, but the most recent estimates are significantly higher.

Similar research published last summer from the University of Georgia showed that owned house cats spend their nights looking for birds, chipmunks, voles, frogs and reptiles to kill. This is not happening because the cats are hungry, however. The cats ate what they killed only about one-third of the time. Half of the time they left their prey where they killed it and only about one-fifth of the time did they bring the fruits of their hunting home. The research was carried out by putting “kitty cams” – small, lightweight cameras with LED



Wickimedia Commons

Free roaming house cats kill millions of birds each year.

lights – on pet cats to record activity at night. The conclusion? If you value wildlife and want to do your part to protect it, please don't allow your cat to roam freely outside. Ask that your neighbours follow suit.

## LEADING CAUSE OF GRASSLAND BIRD DECLINES

A new study led by Dr. Pierre Mineau,

a highly respected Canadian toxicologist, identifies acutely toxic pesticides such as organophosphates and carbamates as the most likely leading cause of the widespread decline in grassland birds in the U.S. These include birds such as bobolinks, meadowlarks, vesper sparrows and upland sandpipers, all of which are declining precipitously in Ontario as well. The study challenges the widely held assumption that loss of habitat is the main cause of those population declines.

The study, which looked at data over a 23-year period, was published in February in PLOS One, an online peer-reviewed scientific journal. Five other potential causes of grassland bird declines were considered but pesticides were found to be nearly four times more likely to be associated with population declines than the next most likely contributor, namely changes in croppage pasture. “What this study suggests is that we need to start paying a lot more attention to the use of pesticides if we want to reverse, halt or simply slow the very significant downward trend in grassland bird population,” Mineau said.



KARL EGRESSY Special to The Examiner  
The eastern wood-pewee is now listed as a species of Special Concern.

## TWO NEW BIRDS ON ENDANGERED LIST

The status of two of eastern Canada's most common and widespread forest songbird species was assessed at the fall meeting of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) held in Ottawa in November. As a result of significant and persistent population declines that have been taking place over the past 40 years, COSEWIC assessed the wood thrush as Threatened in Canada, while eastern wood-pewee was assessed as of Special Concern.

Wood thrush populations in Canada have declined by as much as 83% since 1970. Pewees haven't fared much better, with populations having dropped by about 70%. For both species, assessments were greatly informed by examination of data gathered by many skilled volunteers engaged in a variety of Citizen Science bird monitoring programs. In the Breeding Bird Survey route (Lasswade south to Havelock) that I have been doing for the past 15 years, the decline in wood thrushes has been particularly noticeable.

Drew Monkman is a retired Peterborough teacher and author of *Nature's Year: Changing Seasons in Central and Eastern Ontario*. He can be reached at [dmonkman1@cogeco.ca](mailto:dmonkman1@cogeco.ca). Visit his website and see past columns at [www.drew-monkman.com](http://www.drew-monkman.com)

Karl Egressy is a Guelph nature photographer. To see more of his work and to contact him go to [www.kegressy.com](http://www.kegressy.com).