



NEWSLETTER

SOUTH LAKE SIMCOE NATURALISTS

SLSN is an incorporated not-for-profit Member of Ontario Nature.

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Research Partner with The Zephyr Society of Lake Simcoe (www.zephyrsociety.ca)

Member: Rescue Lake Simcoe Coalition

Member: Ontario Greenbelt Alliance

Note: Please renew your membership to receive future Newsletters

Meetings and Outings

Meetings: All Meetings start at 7:30 p.m. at the York Region Police Building Meeting Room (Baseline Road between McCowan and Civic Centre Road) unless noted otherwise. Members events (insurance compliance). Visitors welcome.

York Regional Police, 3 District Community Meeting Room
3527 Baseline Road, Georgina.



Tuesday, Jan. 10 Arctic Whales of Canada: Whales still remain one of the least known and understood of Canada's mammals. In spite of the fact that our country has three ocean coasts of the longest

extent of most counties in the world what lies below their surface is truly incredible. Narwhals, Right whales and other species will be investigated. Their characteristics, ecology and conservation will be explored. Club members research and presentation.

Tuesday, Feb. 14 **The Amazon:** One of the true “Lungs of the world” the Amazon is a great warm up subject for the February depth of the winter meeting. Club members research and presentation. Also, this is the club Annual Meeting and administration review and election of offices will be undertaken.

Tuesday, Mar. 14 **Mining-The environmental Cost:** Mining of rock, ore and precious stones is an activity well known to Canadians. Infact it is responsible for much of our historical and contemporary wealth. Much of this activity occurs in Canada but also and increasingly in other countries in the world by Canadian Mining companies. This meeting will be a broad brush look at mining and practices and what impact this activity has on natural ecosystems, wildlife, water and other things here in Canada and abroad.

Tuesday, April 11 **Milkweed:** The milkweed plant is now well-known for its importance to Monarch butterflies. But it was not long ago that it was more well known as a pest plant and noxious weed. We will take a detailed look at this actually beautiful wildflower in our area, and consider recent efforts to encourage its introduction and expansion in Ontario as a grassland prairie meadow plant species.

Phone Paul 905-722-8021 or Norma 905-476-4747 for further information about meetings.

NOTICE about Meeting hours – 7:30 to 9:30 p.m. only.

Outings: All regular outings – Note: **Paid-up members may participate (for insurance compliance).**

2017 WINTER

Saturday, Feb. 18 **Winter Trail Outing:** A traditional club afternoon adventure in a Regional Forest location in the South Lake Simcoe area. Actual details of the trip will depend on weather and existing conditions snowshoeing, skiing, hiking. Meet at Coffee Time, Highway 48 south of Baldwin at 1:00 p.m. Dress for the weather. Phone 905-722-8021 if you plan to participate.

Date late February **Deer Census in Rouge Park National Park:** Call to register 905-722- 8021. Date to be announced later based on winter weather conditions.

**Members please consider writing and submitting an article to the Talon Newsletter.
Submit to one of the Executive members.**

Sutton Christmas Bird Count (CBC) 2016-12-31 Report

South Lake Simcoe Naturalists

More than twenty-five birders in the field and many feeder watchers in the Georgina, East Gwillimbury and northeast Uxbridge areas participated in the annual 30th Sutton CBC on Sunday December 31, 2016.

A provisional total of 50 species on the day (higher than most years) has been recorded, but due to some data coming in later than expected and a few rare species review the actual total species seen on the count day could be 48. Highlights for the count day at this point were Snowy owl (3), Bald eagle (12) Brown creeper (5), Eastern bluebird (1) American wigeon (2), American Black duck (2), Great Black-backed gull (2). A further update will be provided at the January meeting.

International Conservation News

Growing mega-cities will displace vast tracts of farmland by 2030, study says

Cropland losses will have consequences especially for Asia and Africa, which will experience growing food insecurity as cities expand



New Delhi, India. Between 1991 and 2016 the population of India's capital and its suburbs ballooned from 9.4 million to 25 million. The United Nations Report on World Urbanisation projects that Delhi will have 37 million residents by 2030. Photograph: OLI/Landsat 8/USGS/NASA

[Emma Bryce](#)

Tuesday 27 December 2016 22.18 GMT Last modified on Tuesday 27 December 2016 22.20 GMT

Our future crops will face threats not only from climate change, but also from the massive expansion of cities, [a new study warns](#). By 2030, it's estimated that urban areas will triple in size, expanding into cropland and undermining the productivity of agricultural systems that are already stressed by rising populations and climate change.

Roughly 60% of the world's cropland lies on the outskirts of cities—and that's particularly worrying, the report authors say, because this peripheral habitat is, on average, also twice as productive as land elsewhere on the globe.

“We would expect peri-urban land to be more fertile than average land, as mankind tends to settle where crops can be produced,” says Felix Creutzig from the Mercator Research Institute on Global Commons and Climate Change in Berlin, and principal author on the paper. “However, we were ignorant about the magnitude of this effect.” The agricultural losses they calculated in the study, published in Proceedings of the National Academy of Sciences, translates to a 3 to 4% dip in global agricultural production.

This may not appear to be a huge figure at first glance, but on the regional scale the picture changes. Across countries and different crops, the effects of this loss vary and become more intense. In Africa and Asia especially—which together bear 80% of the projected loss due to rising urbanisation in these regions—urban expansion will consign farmers to an even tougher agricultural reality.

To arrive at the estimates, the researchers combined datasets on cropland location, productivity, and projected urban expansion by 2030. By superimposing these layers of information on one other, they could highlight the locations where cropland and urban spread are expected to intersect in the future. These projections reveal hotspots of loss in countries like Egypt, Nigeria, the countries that flank Lake Victoria in East Africa, and in Eastern China. (China alone is expected to experience one-quarter of the global cropland loss.)

A major worry surrounding the disappearance of this productive land is the impact it will have on staple crops such as maize, rice, soya beans, and wheat, which are cornerstones of global food security. Many of

these crops occur in areas that will be consumed by urban spread in years to come. “Due to urbanisation in Nigeria, 17% of rice production and 12% of maize production will be hampered,” Creutzig says. “Egypt will lose more than 40% of its rice, and more than 60% of its maize.” In Africa, there will be a 26% continental loss of wheat. Rice is forecast to suffer the most, with a 9% global decline, occurring predominantly in Asia where the bulk of this crop grows.



A high-speed train runs across farmland in Binyang County of Nanning, capital of south China’s Guangxi Zhuang Autonomous Region. Photograph: Xinhua / Barcroft Images

Creutzig notes that some of this loss can be compensated for by agricultural expansion and intensification. But again, this isn’t possible everywhere on the planet: many regions are already limited by their inability to adapt to urban encroachment.

For instance, in South Asia farmland can’t simply spread elsewhere, because fertile land is already running out. In India, agricultural expansion would force crops into habitats like wetlands that act as important buffers against flooding and sea-level rise. And in North Africa, worsening conditions driven by climate change will make the land that is available less suitable for farming. “Urbanisation pressure adds to other stresses on the food system, notably climate change,” Creutzig says.

This will undermine food security, with countries worst affected by urban expansion experiencing rising dependence on imports. That will leave them vulnerable to global fluctuations in food supply, and could also price crops out of reach of poorer populations.

Creutzig sees other subtler food security impacts at play as well—like the ousting of millions of smallscale farmers, as cities expand. These farmers produce the [majority of food in developing countries](#)—and so are instrumental to global food security. “As peri-urban land is converted, smallholders will lose their land,” he says. “The emerging mega-cities will rely increasingly on industrial-scale agricultural and supermarket chains, crowding out local food chains.”

“In cases where farmers have no formal land rights, such as in Africa, governments may expel farmers from their land,” commented Anton Van Rompaey, a geographer from the Katholieke Universiteit Leuven in Belgium, who was not part of the study but has done research on urban spread and its agricultural impacts in China. “In the past this has led to social instability and deadly conflicts between farmers and government.”

Facing this disturbing future food map, Creutzig predicts that growing food within the city’s margins—urban farming—could be part of the solution. “Urban agriculture is of course utterly insufficient to feed

the urban population, but it is very important to maintain local supply chains and provide livelihoods and subsistence for urban farmers,” he says. However, regulations on expansion, to keep urbanisation as compact as possible, will be the bigger prerogative of cities, Creutzig says.

After the COP22 climate conference in November this year, there was a call to shift power from the national level [to cities](#), which will be key players in curbing emissions and fighting global climate change. With croplands on the periphery of these urban hubs in peril, ensuring food security is set to become an important part of that mandate, too.