

The TEA's Monarch and Swallowtail Rearing Permit: Highlights of 2023 Reports

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Since 2010, the TEA has had a permit for the rearing of monarchs and various swallowtail species issued by the Ontario Ministry of Natural Resources and Forestry (<https://www.ontarioinsects.org/permit/>). One of the conditions of the permit is that we provide an annual report on the activities of each TEA member who has asked to be included in the permit. This year I am providing for the first time a few details about the information people supplied for this report.

Currently there are about 125 people covered by our permit. That's not very many, compared to the Ontario population of about 15 million people; about one out of every 100,000 people in Ontario is listed on our permit. Other groups also have permits, but the vast majority of people in Ontario rearing these butterflies must be doing so without benefit of legal authorization. As a result, when a new person on the permit apologizes for their prior lack of compliance with Ontario law, I tell them they are in good company. It's good to be following the law, and the TEA permit allows them to do so.

The TEA permit has some limits: only 100 monarchs can be taken from the wild (for example, your backyard) and reared 'in captivity' in any year; lesser numbers apply to swallowtails. The purpose of this rule is to ensure that someone doesn't rear too many monarchs in the close quarters that the average home provides, and thereby spread disease; the per-household rule is more consistent with that goal.

About 20% of the people listed on the current permit did not rear any of the covered species in 2023. This is to be expected, as many people are on the permit only because they might come across a monarch or swallowtail they would like to raise.

Of the approximately 100 people who raised some of the covered species this year, almost 90% raised monarchs, 30% raised black swallowtails, and 5% raised giant swallowtails. Only two people raised spicebush swallowtails, and only one person raised eastern tiger swallowtails. Nobody raised Canadian tiger swallowtails, pipevine swallowtails or zebra swallowtails. Of course, zebra swallowtails are quite rare in Ontario; none have been reared under the permit since it started more than ten years ago.

Of the 91 people who reared monarchs, the average person reared just under 30. About a quarter reared ten or fewer, and about a quarter reared 90 or more.

Since the legislation that specifies that a permit is required — the *Endangered Species Act, 2007*; current as of December 1, 2023 — refers to any activity in which the relevant butterflies are held 'in captivity' (without any specified time period), a permit is also required for tagging monarchs. About 20 people are involved in tagging monarchs under the TEA permit. The vast majority of these were tagging monarchs that they themselves had reared; and so the numbers tagged were mostly only a few dozen. However, a few people tagged wild monarchs, and one person (reporting for a group) tagged over a thousand monarchs. There is no limit as to how many monarchs may be tagged under the TEA permit.

The TEA permit also allows people to check adult monarchs for the protozoan parasite *Ophryocystis elektroscirrha* (OE). This can be done using a microscope or a 40-magnification lens for immediate results. Alternatively, you can use a free kit supplied by Monarch Health (www.monarchnet.org) to test the butterflies; samples are then submitted to Monarch

Health, who issues the results by mail a few months later. About 10% of the people raising monarchs tested for OE. Of the ten people testing for OE, two had some that were positive for OE (a small minority in each case). This data confirms the results of a paper published in the Canadian Journal of Zoology in 2021 found that only 1% of the tested monarchs were positive for OE (<https://cdnsiencepub.com/doi/10.1139/cjz-2020-0175>).

Several people reported that monarchs were late arriving in their areas this year. A couple of people wondered if that could be due to the wildfire smoke in their areas. I am not aware of any current studies of this possibility.

Some people also mentioned that they raised a number of lepidoptera species for which no permit is required (a permit is only required for monarchs and swallowtails, as well as some rare butterfly species that most people are not likely to see; a permit is not required for any species of moth).

Some people on the monarch permit are rearing monarchs as part of a program for their community library, school, or long-term care home.

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