EC22.5 - Rat Response Plan, Lenka Holubec, ProtectNatureTO

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Toronto City Hall 100 Queen Street West Toronto, ON M5H 2N2

Via email: councilmeeting@toronto.ca

RE: EC22.5 - Rat Response Plan, City Council consideration July 23,24, 25 2025

Dear Mayor and Members of City Council,

On behalf of ProtectNatureTO, I am writing to express concerns regarding tabled Rat Response Plan along with many other nature-oriented organizations and individuals.

This is a Request to Re-Evaluate the City's Rat Response Plan to Prevent Lethal Impacts on Wildlife, Pets and Human Health and consider only Environmentally friendly alternatives as suggested by e.g. Nature Canada.

Toronto over the past years not only has become the fastest growing city in the North America but also "the "rattiest" in Canada" according to recent research.

"A new study of 16 major cities published Friday found that climate warming, increasing urbanization, and human population density are linked to rising urban rat populations."

Apparently, there is a price to pay for the growth in terms of environment:

"When the scientists analyzed the relationship between these trends and the urban environment, they found that the biggest influence on rat growth was climate warming: the cities that saw the biggest temperature increases over their historical baseline average also saw larger booms in rat numbers. Study co-author Bobby Corrigan, a rodentologist who leads New York City's Rat Academy, said that when green space is replaced by buildings, it creates more "subterranean infrastructure" — underground pipes, sewer lines and crevices — where rats thrive.

The study authors said their findings make a case for cities to commit more resources to rat mitigation and start collecting reliable and systematic data. Urban rat strategies should focus on Integrated Pest Management, which emphasizes monitoring, removing food sources (namely, trash) and shoring up infrastructure weaknesses as first steps, with chemical tools such as rodenticide baits meant to be a last resort, said Corrigan." Toronto is finally beating New York at something: rat growth. A new study reveals a key factor behind the rodent boom, Jan. 31, 2025

This Study also stresses that the use of chemical tools, such as rodenticide baits, should be a last resort.

Anticoagulant rodenticides are a group of poisons that kill rodents by impairing their ability to stop bleeding. They are part of many poison rodent baits available for sale to pest control professionals and to the general public. Unfortunately, rodenticides often poison non-rodent species who either eat the poison or who feed on rodents that have consumed poison.

The use of rodenticides leads to weakening of wildlife's, such as coyotes', immune system which significantly increases developing of mange:

"While mange does occur naturally, recent research suggests that the widespread use of anticoagulant rodenticides – a type of rat poison – weakens the immune systems of animals and makes them more susceptible to mange" https://sunnyweber.com/lessons-from-a-mangy-coyote-why-anticoagulant-rodenticides-must-go/

Before too late, we need to break away from a deadly cycle of impacting environment by growth, urbanization and habitat destruction resulting in rise of invasive species, such as rats, phragmites, etc. and then resorting to the use of toxic chemicals such as rodenticides or pesticides (glyphosate) to fix the problem.

Sincerely,

Lenka Holubec, on behalf of ProtectNatureTO

Background:

https://www.ctvnews.ca/toronto/article/rats-why-torontos-rat-population-is-growing-and-will-likely-continue-to-do-so/

Rats! Why Toronto's rat population is growing, and will likely continue to do so By Alex Arsenych, Published: February 12, 2025

Toronto even squeaked past New York City – whose rat problem became so severe that it now employs a "rat czar" – for third.

"I'm not really surprised. There have been rats since, I think the earliest reports were back in the early to mid-1800s," Burton Lim, assistant curator of mammals at the Royal Ontario Museum, told CTV News Toronto.

A recent analysis by non-profit research group, Climate Central, suggested Toronto lost nearly two weeks' worth of freezing winter days due to climate change over the past decade from 2014 to 2023. To determine this, they counted the number of above-freezing days over the last decade compared to a world without fossil fuel emissions. Globally, the peer-reviewed rat study noted the average rate of warming has been 0.2 C per decade since 1975 and while it is accelerating, that same rate is not felt universally.

Sinia explains cold winter weather is like a "natural pest control." Though rats can regulate their body temperature, they cannot maintain it in freezing temperatures and are forced to take cover in freezing conditions.

Since the winters are milder, Sinia says rats don't have to hide and can stay above ground for longer to scavenge for food.

"That means they're able to expand in other areas, and they're able to forage longer, they're able to reproduce longer and able to produce more litters, and that drives up the population," Sinia said.

Outside of climate warming, the study found population density and urbanization as other major contributors to how rats thrive in a city.

Toronto and the surrounding region's population cracked more than 7.1 million as of July 2024, according to a Statistics Canada, up nearly four per cent from 2023.

"We know that population growth goes hand-in-hand with resources, so when there's food, the rats are able to reproduce faster because that means the resources are able to sustain that population," Sinia said.

Sinia also pointed to the increased construction in Toronto as a breeding ground for rats.

https://sunnyweber.com/lessons-from-a-mangy-coyote-why-anticoagulant-rodenticides-must-go/

By Guest Blogger Will Falk, Environmental Activist, Lawyer, Writer Edited by Sunny Weber, Author, Behaviorist, Humane Educator

"While mange does occur naturally, recent research suggests that the widespread use of anticoagulant rodenticides – a type of rat poison – weakens the immune systems of animals and makes them more susceptible to mange. A 2017 study linked anticoagulant exposure to mange in bobcats, for example. Notoedric mange – which affects felines and is closely related to the sarcoptic mange that affects coyotes – ravaged the population of urban bobcats at Santa Monica Mountains National Recreation Area in southern California from 2002-2005. After mange was detected in 2001, the average annual survival of these bobcats plummeted by 49%. Mange-infected bobcats were necropsied and 98% of infected individuals had been exposed to anticoagulant rodenticides. These bobcats also had greater amounts of anticoagulant rodenticides than bobcats who did not die with mange."

Anticoagulant rodenticides are widely used as a cheap and effective means for killing rodents. These rodenticides disrupt coagulation and cause fatal hemorrhaging. In simple terms, rodenticides cause the creatures who eat them to bleed more easily. Similar to the way a minor wound to a human taking a blood-thinner can cause a human to bleed out, rodents who have ingested anticoagulant rodenticides bleed to death.

Rodents exposed to anticoagulant rodenticides don't just bleed to death – they bleed to death slowly. Rodents are very intelligent. They are so intelligent, in fact, that the use of toxins that immediately harm a rodent have proven to be completely ineffective because rodents learn not to eat things that instantaneously kill their kin. Anticoagulant rodenticides are effective because they can be mixed with rodents' favorite foods as bait and the 3-7 days it takes for exposure to kill rodents makes it very difficult for them to understand what is killing them.

Anticoagulant rodenticides have been in use since the late 1940s, and by the early 1980s, genetic resistance to what are now called "first-generation anticoagulant rodenticides" was reported in rats and mice around the world. These first-generation anticoagulant rodenticides include the chemicals diphacinone, warfarin, coumatetralyl, and chlorophacinone and they killed rodents only after prolonged or repeated exposure. Due to genetic resistance, second-generation anticoagulants developed. These chemicals – which include difenacuom, brodifacoum, bromadiolone, difethialone, and flocoumafen – are much more potent, have a longer half-life, and can kill rodents after only one feeding. This potency poses an increased risk of harm non-target species.

Predators of the Victims

Inevitably, predators who eat rodents are exposed to the rodenticides ingested by their prey. In one study, 70% of mammals tested in California were found to have been exposed to anticoagulants. Anticoagulant rodenticides were detected in 49% of the raptors tested in New York City, including in 81% of the great horned owls tested. A study of three species of owls in British Columbia and the Yukon detected anticoagulant rodenticides in 62% of barn owls, 92% of barred owls, and 70% of great horned owls. In sum, the Canadian researchers detected anticoagulant rodenticides in 70% of 164 owls. They also confirmed that rodenticides killed two barn owls, three barred owls, and one great horned owl.

Rodents usually do not die for several days after consuming a lethal dose. This means they may continue to move through habitat shared with predators and they may continue to feed on poisoned bait. Additionally, rodents — exposed to anticoagulant rodenticides and who may be hemorrhaging internally — spend more time in open areas, stagger as they move, and sit motionless before death. All of this makes them easier prey for predators.

Coyotes, and especially urban coyotes, rely heavily on rodents for food. And, it appears anticoagulant rodenticides are harming coyotes. Scientists in the Denver metropolitan area, for example, researching the effects of anticoagulant rodenticides on coyotes, found a dead juvenile male with no obvious external injuries or other signs of trauma. However, when they necropsied the young coyote, they "found free blood in the abdominal cavity" and "a puncture wound [that] was present on the left side of the body overlying the spleen but not penetrating the abdominal wall." They determined that the coyote died from "acute severe hemorrhage, disproportionate to the amount of trauma observed." The coyote's liver tested positive for an anticoagulant rodenticide. In other words, it's likely that the rodenticide in the coyote's body turned a minor injury lethal.