

## ENVIRONMENT POLICY BRIEFING

## OPINION MONARCH BUTTERFLIES

## Monarch butterflies: symbol or symptom?

Environmental threats transcend borders and the prime minister is signalling that responses should too. The U.S. committed to building a milkweed corridor for monarchs along interstate highways. Joined up thinking on issues like this is needed.



JEREMY KERR

OTTAWA—It's a strange day in Ottawa when our Prime Minister Justin Trudeau, U.S. President Barack Obama, and Mexican President Enrique Peña Nieto chat about butterfly biology and conservation at a press conference. Or

perhaps not: monarch butterflies have evolved into a symbol of the North American Free Trade Agreement (NAFTA) and their populations have plummeted.

But are monarchs a symbol? Or a symptom?

One thing is certain: monarch butterflies are ultra-marathoners. Their annual migration covers a staggering distance and explains how they became the NAFTA mascot. Monarch butterflies fly north from Mexico into the U.S. in spring, using milkweed plants en route to produce new butterfly generations.

The second and third monarch generations make their way across eastern North America into Canada, brightening gardens, pollinating flowers, and delighting many. A fourth generation—great-grandchildren of last winter's butterflies—filter back to the same Mexican pine forest in the mountains. Winter is coming.

The migration isn't what it used to be. Deforestation in Mexico has imperilled the butterflies' overwintering grounds, making it harder for monarchs to survive difficult winters. Pesticide use and habitat loss have made milkweeds and other wildflowers increasingly elusive.

Climate change threatens monarchs everywhere on their migration route. Increasingly, wild weather events, like massive sleet storms in Mexican overwin-

tering sites, can bury millions of butterflies in deadly ice.

Severe droughts can dry flower nectar sources that fuel butterflies. Prolonged heat waves trigger monarch flight into "weather trap" areas that snap back to lethal, seasonal conditions. Habitat loss makes escaping risky weather even harder.

Threats like climate change and habitat loss imperil more than just monarchs.

Rates of species endangerment in Canada are similar to those in developing countries. Such evidence, communicated privately, publicly, and repeatedly, did not move the previous government to effective action.

The auditor general and Federal Court rapped their knuckles repeatedly for failing to meet even the modest, minimum requirements of the Species At Risk Act (SARA). Flouting this law became a perverse ritual, as did efforts to gut environmental protections. Citizens and scientists marshalled massive, evidence-based arguments showing such changes to be counter-productive, succeeding with SARA, but failing with most legislation and regulations. And, the previous government then quietly halted listing of new species at risk, creating a biodiversity train wreck, more than a hundred species long, that now needs urgent attention.

Biodiversity is a necessity, not a luxury. Monarch butterflies are among 300 Canadian butterfly species, 800 bee species, and a host of moths, flies, and birds that help pollinate crops and flowering plants. Different organisms, less obviously beautiful, contribute to other indispensable ecosystem services.

Scientists and economists are still grappling with pricing ecosystem services we cannot live without. As the National Round Table on the Environment and Economy expertly and repeatedly showed before being silenced, the economy and environment are ultimately inseparable.

At the North American Leaders' Summit, President Obama noted that monarch butterflies are "spectacular." As the meeting's host, Prime Minister Trudeau announced the banner commitment to negotiate an "ambitious and enduring North American Climate, Clean Energy and Environment Partnership."

There are encouraging signs that Canadian actions could match the sunny rhetoric. Evidence-based decision-making is making a convincing comeback. The badly frayed safety net for Canadian wildlife is on the mend. Species recommended for protection are being listed once again, and a series of long-awaited action and recovery plans have been posted.

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Monarch declines can probably be reversed if we can dodge the climate change bullet and manage landscapes in Canada and the U.S. to accommodate monarchs. Protecting the icon is itself a terrific signal, but this action need not come at the expense of digging deeply into the causes of biodiversity loss and acting decisively to reverse those impacts. To achieve its goals, the government must remain ambitious. It must constantly ask whether its actions are commensurate with the underlying threats to our shared environment, like pervasive habitat loss, overuse of pesticides, and climate change. And evidence must be considered carefully when taking decisions.

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