

BRIEFING ON WILD BEES AT RISK IN CANADA

What You Can Do

The “Let It Bee” campaign calls for dramatic changes in commercial landscaping and domestic gardening to create safe habitat to protect wild bees. It also calls on citizen scientists to help deliver census data for bumble bees through the first annual Great Canadian Bumble Bee Count.

Nature designed distinct roles for each wild bee species to play in pollinating plants and we need them all. But they’re up against big stresses like habitat loss, climate change, pesticides and diseases.

A key example is the Rusty-patched bumble bee, once abundant in southern Ontario and now almost extinct and officially designated as endangered. Six more bees have declined to such an extent that scientists have advised the federal Minister of Environment to take steps to protect them.

There are over 800 confirmed species of wild, native bees in Canada with little proper monitoring. Few people can actually recognize wild bees even though there may be up to 50 species in a typical backyard.

What You Can Do – 3 ways to help save wild bees

1. Watch the new short documentary, “A Ghost in the Making: Searching for the Rusty-patched Bumble Bee”. If you agree that it’s a powerful motivator, then organize a viewing with your family, neighbours and friends. Why not make it the feature of a family picnic or barbeque?
2. Sign the petition asking the Federal Environment Minister to act now to protect wild bees. While Canada has already listed the Rusty-patched bumble bee for protection, there are six more native bees needing immediate protection. Find 10 people to sign the petition. Ask them to make a donation to the Bee Cause Campaign to help keep the pressure on. Can you ask for \$10/person to make up a generous donation of \$100. to save the bees?
3. Sign up to participate as a citizen scientist at bumblebeewatch.org – click for the Great Canadian Bumble Bee Count when you register. Then, take a bumble bee picture and upload it to the site. Go out to parks, gardens, meadows, cottages and backyards – anywhere urban or rural – to find bumble bees.

The Six At-Risk Wild Bees as of June 2016

Gypsy Cuckoo Bumble Bee (*Bombus bohemicus*)

Recommended Status: Endangered (COSEWIC 2014)

Range: Yukon, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador

Main threats: decline of host species (Rusty-patched Bumble Bee, Yellow-banded Bumble Bee, and Western Bumble Bee), pesticide use, habitat loss, climate change and the escape of non-native, pathogen infected bumble bees from commercial greenhouses

Additional information: the Cuckoo Bumble Bee is a nest parasite of other bumble bees; there has been a large observed decline of over 90% in relative abundance in the past 20-30 years in areas of Canada where the species was once common, with the most recent records coming from Nova Scotia (2002), Ontario (2008) and Quebec (2008)

Source: COSEWIC 2014. COSEWIC assessment and status report on the Gypsy Cuckoo Bumble Bombus bohemicus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 56 pp. (http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1232#ot18).

Yellow-banded Bumble Bee (*Bombus terricola*)

Recommended Status: Special Concern (COSEWIC 2015)

Range: Yukon, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador

Main threats: pesticide use, habitat loss, climate change pathogen spillover from managed bumble bee colonies

Additional information: this species has recently declined by at least 34% in areas of southern Canada

Source: COSEWIC. 2015. COSEWIC assessment and status report on the Yellow-banded Bumble Bee Bombus terricola in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 60 pp. (http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1288).

Western Bumble Bee Occidentalis (*Bombus occidentalis*)

Recommended Status: Threatened (COSEWIC 2014)

Range: British Columbia, Alberta, Saskatchewan

Main threats: has among the highest parasite loads (particularly the microsporidian *Nosema bombi*) of any bumble bee in North America; pathogen spillover from commercially managed bumble bee colonies, increasingly intensive agricultural and other land use practices, pesticide use and climate change

Additional information: Once considered one of the most common and widespread bumble bees in western Canada, this subspecies has experienced a significant (>30%) decline in recent years and has been lost from a number of sites in the southern portions of its range where it was once abundant.

Source: COSEWIC. 2014. COSEWIC assessment and status report on the Western Bumble Bee *Bombus occidentalis*, *occidentalis* subspecies (*Bombus occidentalis occidentalis*) and the mckayi subspecies (*Bombus occidentalis mckayi*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 52 pp. (http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1267).

Western Bumble Bee mckayi (*Bombus mckayi*)

Recommended Status: Special Concern (COSEWIC 2014)

Range: Yukon, Northwest Territories, British Columbia

Main threats: this species has among the highest parasite loads of any bumble bee species in North America; unknown transmission of disease from exotic bumble bee species introduced for pollination in greenhouses (ongoing in the Yukon), pesticide use, habitat loss, climate change

Source: COSEWIC. 2014. COSEWIC assessment and status report on the Western Bumble Bee *Bombus occidentalis*, and the mckayi subspecies (*Bombus occidentalis mckayi*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 52 pp.

(http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1256).

Macropis Cuckoo Bee (*Epeoloides pilosulus*)

Recommended Status: Endangered (COSEWIC 2011)

Range: Nova Scotia

Main threats: Loss and reduction of *Macropis* nesting sites, isolation and fragmentation of the population (reduces gene flow), mating complications, decline in *Lysimachia* vegetation due to natural and anthropogenic causes

Additional information: this rare species is a habitat and host species specialist; at imminent risk of extinction

Suitable host: *Macropis* bees (requires sunny, sandy slopes for nesting and specific plants for foraging)

Source: COSEWIC. 2011. COSEWIC assessment and status report on the Macropis Cuckoo Bee *Epeoloides pilosulus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 25 pp.

(http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1142).

Sable Island Sweat Bee (*Lasioglossum sablense*)

Recommended Status: Threatened (COSEWIC 2014)

Range: Sable Island, Nova Scotia

Main threats: Increased frequency and severity of storms, climate change and related sea level rise, are expected to drive change which will further decrease the quality and quantity of bee habitat on the island. Habitat on the island is also susceptible to invasive plant species, introduced horses, and seawater flooding.

Additional information: Sable Island has only 13 km² of vegetated area that can provide forage and nesting sites, Sweat bees generally do not travel long distances to forage

Source: COSEWIC. 2014. COSEWIC assessment and status report on the Sable Island Sweat Bee *Lasioglossum sablense* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 38 pp.

(http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=1279).