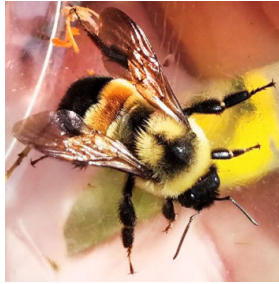


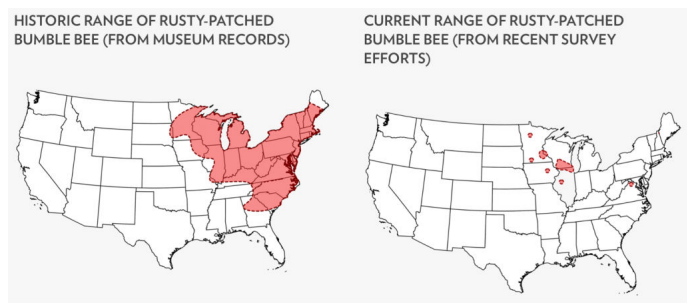
Stop Bombing on Bombus Affinis!

Did you know that 35% of the rusty patched bumblebee population lives in Minnesota, or that there are only 471 left as of 2018? The rusty patched bumblebee (*bombus affinis*), is federally endangered, and lives mostly in the midwestern United States. As stated in its name, it has a small rust colored spot on its second abdominal segment. Yes, *bombus affinis* populations are rapidly dwindling. Today, we will learn about what the *bombus affinis* is, why it's endangered, and what we can do to keep the *bombus affinis* from going extinct.



The rusty patched bumblebee that lives in North America. As its name suggests, it has a small, rust-colored spot. Its size is usually about 1-1.5 centimeters in length. This is how you can distinguish *bombus affinis* from other species of bumblebees. Queens can grow up to 2.5 centimeters. Rusty patched bumblebees were historically found from southern Ontario in Canada down until the southern tip of the Appalachian mountains, and from Minnesota and Iowa to the east coast,

but now live mostly in the Great Lakes region. The rusty patched bumblebee lives off of nectar, and spreads pollen from plant to plant, helping the plants grow. As you can see, the *bombus affinis* is important to the ecosystem it lives in. They pollinate plants with fruits and vegetables, which helps us and animals to stay healthy and strong. However, if the *Bombus Affinis* is so important, then why is it endangered?



There are several reasons why the rusty patched bumblebee has become federally endangered. Pesticides and insecticides may play the biggest role. These chemicals can impact the bees directly by poisoning them, but it can also impact them indirectly by killing off milkweed and other wildflowers, limiting the bees ability to collect pollen and nectar. There are other things also hurting the *Bombus Affinis* such as habitat degradation and climate change. Both of these events hurt the rusty patched bumble bees ability to function. Yes, the *Bombus Affinis* has several things working against it, and they can't fight it on their own. That's where humans come in.

Finally, the part we've all been waiting for. How do we protect the *Bombus Affinis*? We can all start by doing the opposite of what endangers the species. This includes protecting and restoring the habitat, limiting or getting rid of pesticides, and reducing carbon emissions. How can you protect or restore the habitat? If you own a large property, consider planting a meadow or a prairie. If you have a small property or an apartment, try leaving a small section of your lawn unmowed, or you could plant a flower pot on your porch or balcony, but don't forget to leave it without pesticides. On top of that, try reducing carbon emissions. How? Think about

riding your bike or walking to short distance places if possible. Consider also using public transportation. Additionally, mull over keeping as many items out of the landfill as possible, and only using necessary energy at home. When we all make an effort, we can make a difference in protecting the rusty patched bumblebee.

At the end of it all, *bombus affinis* populations are rapidly depleting, and we should all be concerned because the bees are vital to the earth's ecosystem. If the *bombus affinis* goes extinct, the ecosystem where it lives will suffer, including us! Many people and animals would go hungry, and plants would suffer also. We can prevent that from happening by protecting the *bombus affinis*. We can save the world a lot of trouble by protecting rusty patched bumblebees.

Resources

Bombus affinis historical range (left) and current range (right).. 2020, fruit.wisc.edu/2020/05/26/rusty-patched-bumble-bee-a-beloved-bumble-bee-that-needs-our-help/.

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