

Bats and White Nose Syndrome

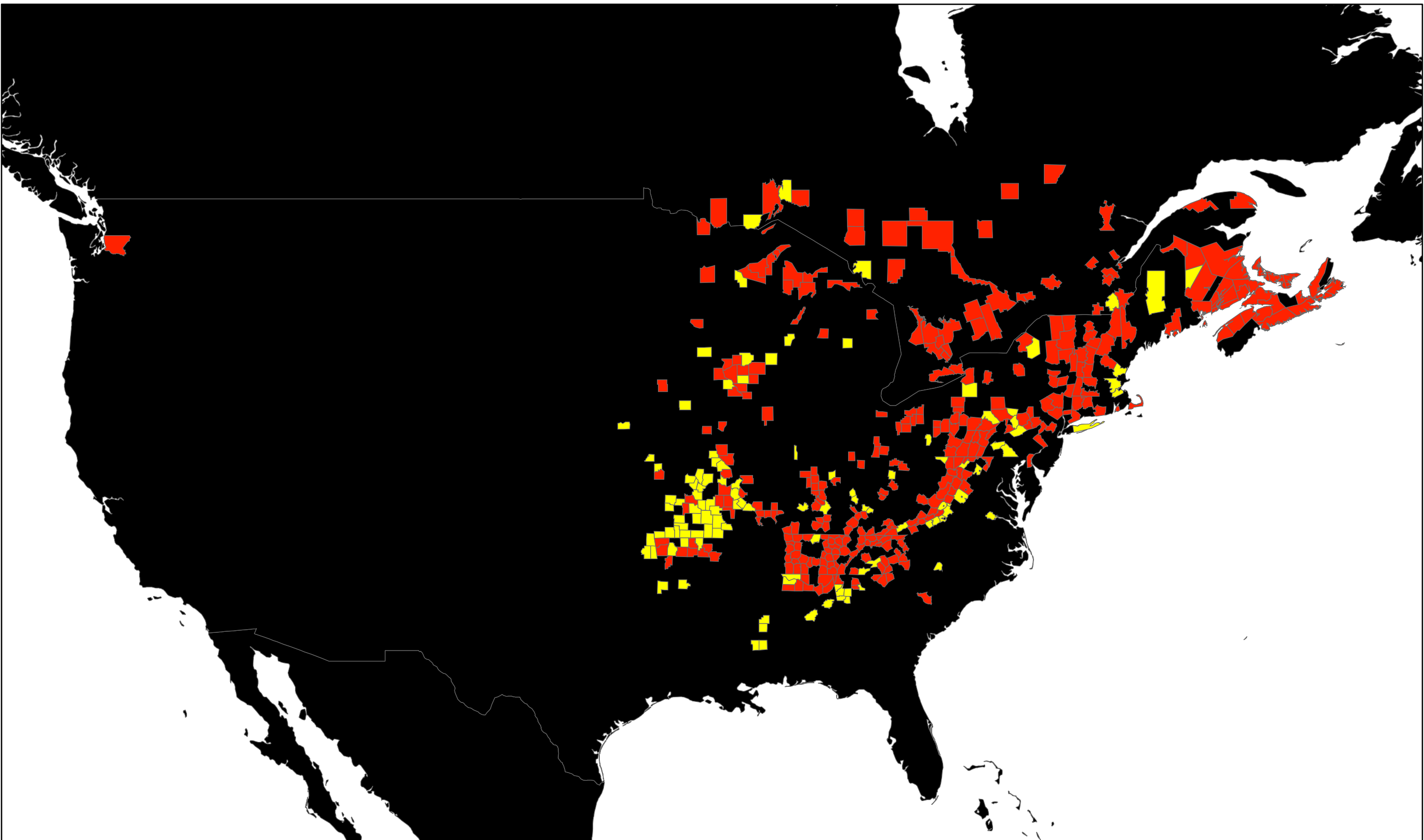
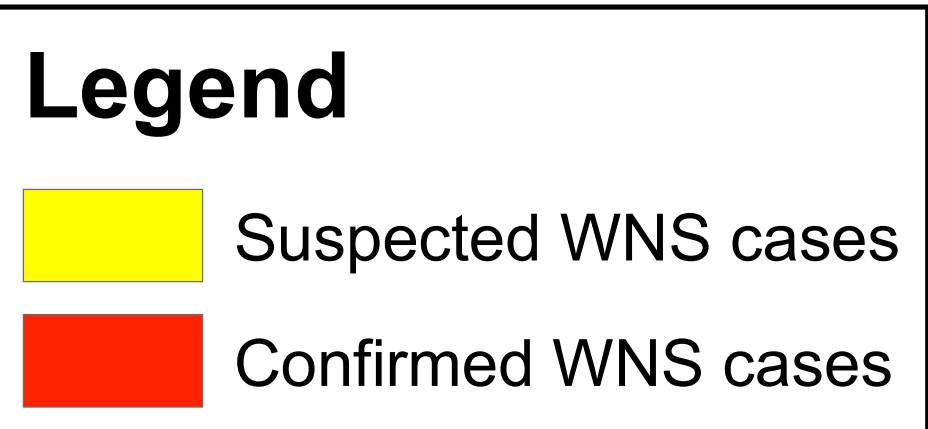
White Nose Syndrome(WNS) is a fungus that grows in colder temperatures. It grows on bats during hibernation, which interrupts their hibernation cycle. The fungus awakens the bat causing it to use unnecessary energy hunting for food that is not available during winter. In essence this leads the bat to starve to death.

All of the confirmed or detected WNS cases are in mountain ranges. The biodiversity of bat species are also much higher in the mountainous areas, which shows that these are the primary spots that bats live and hibernate. Since mountains in general tend to be colder in temperature due to higher elevations, this provides the perfect environment for WNS to grow.

Why hasn't White Nose Syndrome spread through the middle of North America?

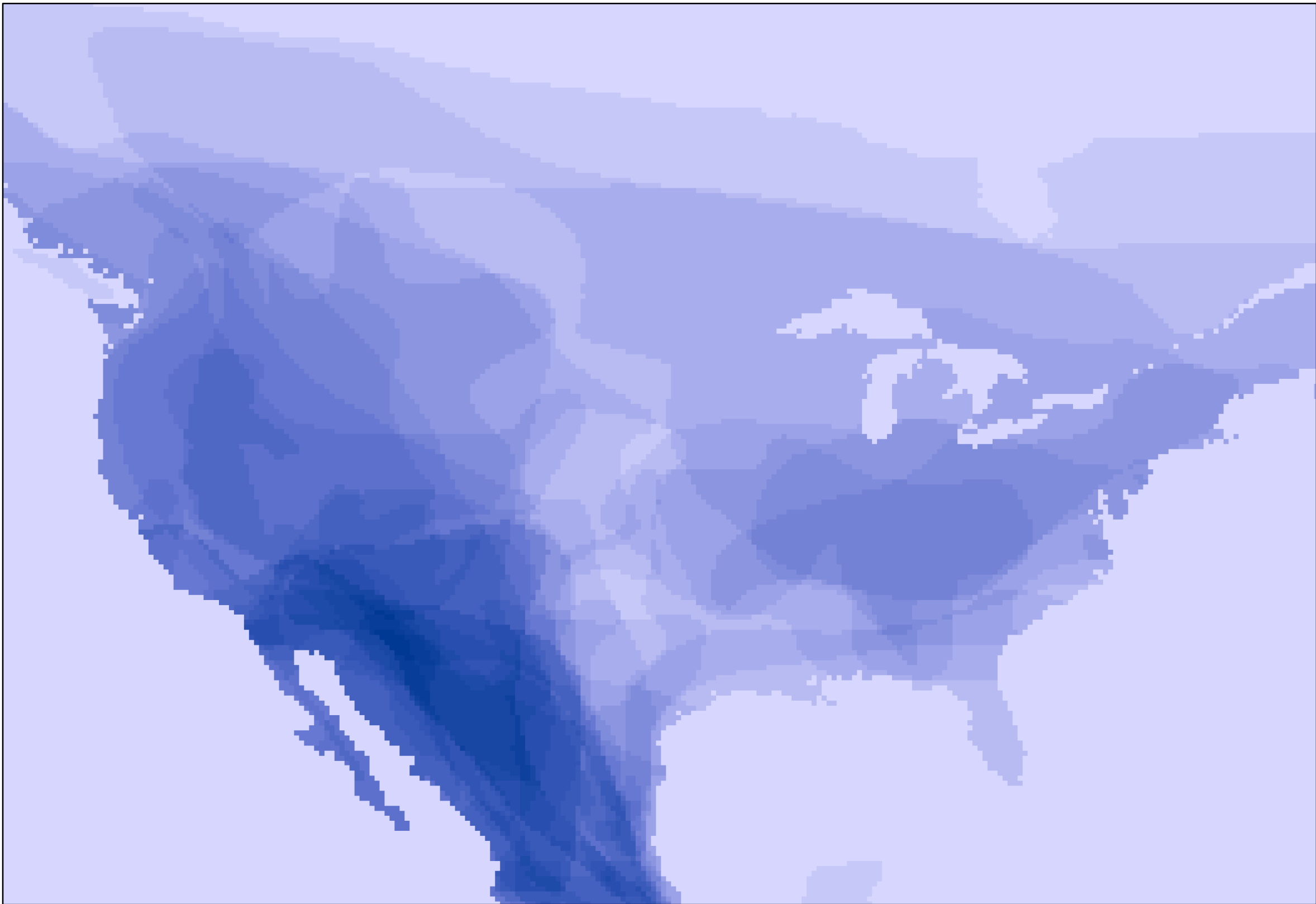
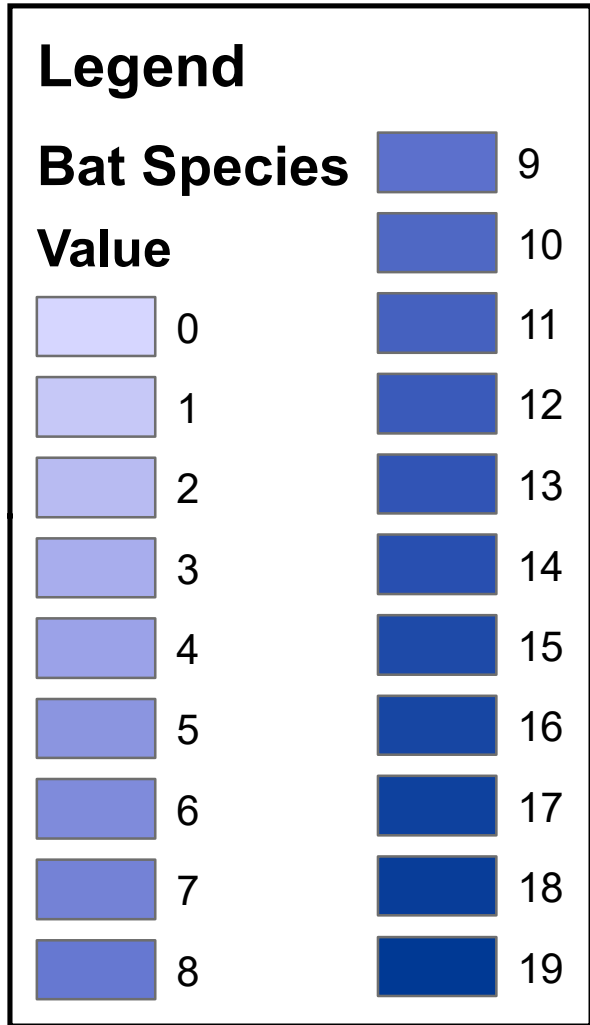
White Nose Syndrome

The red spots are areas with confirmed cases of WNS, while the yellow spots are areas where the fungus has been detected but no bats have shown any symptoms of having the disease. So far the disease has stayed in the eastern half of the US, with the exception of an area in the state of Washington.



Bat Species

The sections with lighter shades of blue are areas where there is a low variety, if any, of bat species. Sections of dark blue have very high amounts of diversity of bat species. The biodiversity of bat species are much lower through the center of the US compared to the East and the West, which are areas with very high biodiversity. These areas are covered in mountains which provide suitable environments for bats to live and hibernate. The cold temperatures often found in mountains also provide a good place for the WNS fungus to grow, leaving hibernating bats vulnerable.



Terrain

The maps have shown that WNS has stayed almost exclusively in the mountains. This can be due to the reasons that the temperatures tend to stay lower in mountains because of their high altitudes. These colder temperatures along with the mountains' protection leaves the perfect environment for bats to hibernate, and WNS to grow. In the future, WNS cases are likely to spread all over the Appalachian and Rocky mountains, and into western parts of Canada and Mexico.

