

3199 Walworth Road  
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[REDACTED] My name is Carrie and you wrote me about why rabbits turn white during the winter. I'd be happy to explain the reasons for that. In New York State, there are only three different kinds of rabbits that we leave to run around in the wild. One is the "Eastern Cottontail Rabbit". This is the rabbit I see mostly which come into my center for care. They are a common brown bunny that got their name from the underside of their tails looking like white cotton as you can see as they hop or run away.

The second rabbit in New York State that lives in the wild is called the "New England Cottontail Rabbit". If you placed this rabbit right next to a cottontail rabbit, you would see that they are almost identical to one another. The way scientists can tell that they are different kinds of rabbits is by testing their blood and seeing different things, like chemicals, in their blood that make them much different scientifically. There are only a small number of New England Cottontails left in the wild. However, there are nice people who are using their smarts to increase the number of rabbits in captivity and outside in the wild.

The third rabbit is really not a rabbit at all. It's a "hare". Hares look a lot like rabbits. However, if you go out west in our country in states like Wyoming, Nevada, places like those, you will be able to easily tell the difference between a "hare" and a "rabbit". Hares have much longer and bigger ears – sometimes they look too big for the hare, especially for its head! The rabbits are much smaller and have much smaller ears that look more normal on their head. Hares also bigger than rabbits and have a different body shape than the rabbits do.

In New York State, we do have a hare that is found in the wild areas and seen by people once in a while. It is called the "snowshoe hare". While the rabbits and hares I mentioned above do not change colors with the seasons, the snowshoe hare does! The snowshoe hare is a fluffy bright white in the winter and a brown color from mid-Spring to late-Fall. When the snowshoe hares are brown, it's very hard to tell the difference between them and the Eastern and New England cottontails.

The snowshoe hare, unlike the hares out west, have much smaller ears. The reason for this is because here in New York State, we have colder weather and more rain and snow than western states. As a result, the rabbits and hares, who all use their ears to keep their body temperature where it should be, grow bigger ears in the western states because there is more dry heat in the environment. The bigger ears help the hares and rabbits get rid of extra body heat that is too much for their bodies – especially in summer months. New York State has more moderate temperatures so the rabbits and hares in our wild areas don't need as big ears.

I have some pictures and videos for you, your teacher and your class if they would like them. Below are pictures of different kinds of hares. These hares below don't live in our state so I don't know what kind of hare each one is but they are similar as you can see. Look at those ears! They are almost as big as their heads, don't you think?



The following are rabbits and the one kind of hare that we have here in New York State.



**Eastern Cottontail Rabbit**

**New England Cottontail Rabbit**

**Snowshoe Hare**

The Snowshoe hare in the picture above is brown and looks like the other ones doesn't it? Well, below you can see the snowshoe hare and how it looks in the cold winter months.



Snowshoe Hare with full winter coat.

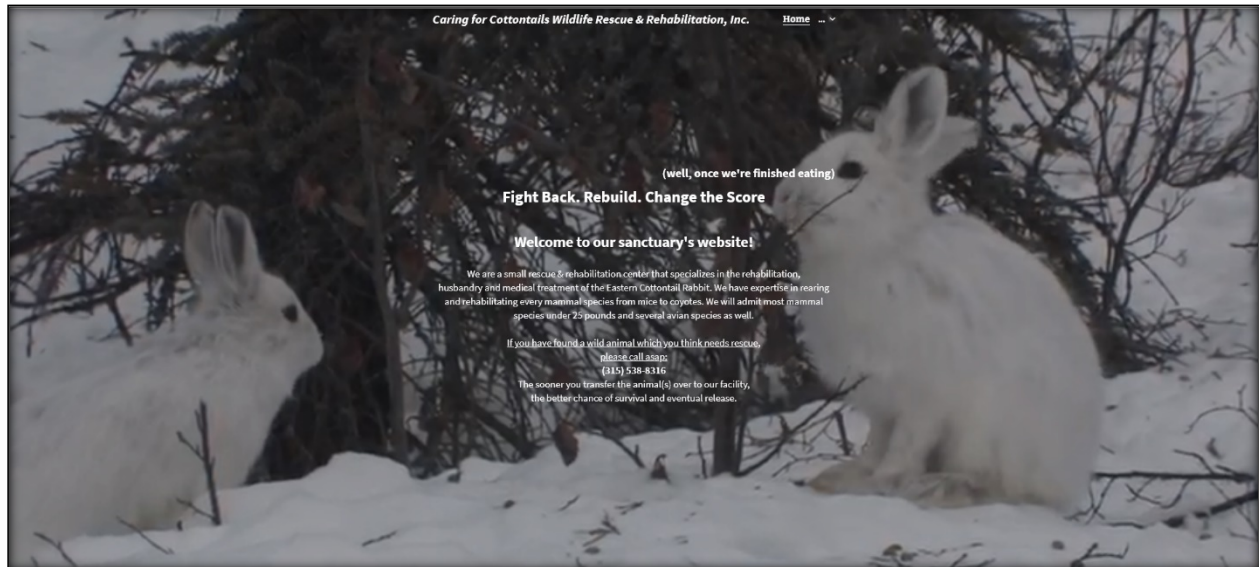


Above is a snowshoe hare that is both white and brown. This happens when the hare is either turning white for the winter months or turning brown for the warmer weather. Their color change happens slowly but it happens every year around the same times.

You asked about why the snowshoe hare changes colors. In the pictures above you can see that each bunny almost matches in color the environment it is in. The white one blends in with the snow and the brown and white one, although partly white, blends in with the low grass and dirt landscape it lives in. The reason for the different colors is because it is easier for them to hide from animals that hunt them. By blending into their surroundings, it is harder for the hunting animals to see them. The reason why other rabbits, like the Eastern and New England Cottontail Rabbits, don't change colors for

protection like the snowshoe hare does is not known by scientists. One reason could be that the snowshoe hare is an invasive species that hopped down from Canada and into New York. So the biology of the animal had evolved in a much colder climate than the one we have here in New York. Other states "above us" on the map (more northerly) than New York State, like New Hampshire, seem to have greater numbers of snowshoe hares.

I hope your questions have been answered. If not, you are welcome to write back anytime. You are also welcome to visit our new website page located at <http://caringforcottontails.strikingly.com>. You can see a video there of snowshoe rabbits eating and chasing each other.



Because I wasn't able to print this letter in color I'm also going to post a link to it on the page I mentioned above so you can click on the link and it will bring you to a color version which your teacher or parents can print off for you on a printer that supports color printing.

Thank you so much for your interest in wildlife. I wish you well in all your future endeavors. From one rabbit lover to another, take care and have fun in the upcoming warmer months. I know the rabbits will! 😊

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