

Hibernation/ Torpor

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The game camera situated in our yard helps us be aware of critter visitors. Purely for enjoyment, it led us to question which animals hibernate or use torpor to get through harsh New Hampshire winters.

The Camera: The attached solar panel has worked well. It kept our camera operating without a change of batteries. Our camera has adequate “speed” to “catch” good images of fast moving animals. We needed secure viewing locations; a deer initially nuzzled/ knocked over our mini tripod. Now situated, we use the camera’s flash card to store pictures. A laptop reveals who ventured nearby in the evenings. It’s entertaining to see who pops up on the video display.

The Visitors: We have Opossums visiting regularly since fall. We read that Opossums do not hibernate. They remain active throughout the winter. Sometimes, they become less active during periods of extreme cold. Our first impression was that they are scrawny in appearance. We were happy to learn they’re well-adapted to survive low temperatures. Thick coats of fur helps insulate them. They lower their body temperature slightly to conserve energy. Our visitors continue to forage for food and we occasionally supply dry cat food (always after bears are in hibernation). These opportunistic omnivores find that quite satisfactory. Because Opossums eat ticks, we’re pleased to have them around!

Occasionally solitary raccoons show up or arrive in small groups. The masked group exhibits a bit of playfulness and can venture very close to the camera. They do not truly hibernate, but enter **torpor** during the winter.

Torpor is the dormant, inactive state of an animal. It is a much lighter state than hibernation. Ruby throated hummingbirds go into torpor in the evenings or during cooler times while here in the summer. Other birds experience torpor and even some marsupials. It is involuntary and conserves energy.

Hibernation: When winter takes hold, after fat-loading, some animals retreat into a state of suspended animation known as hibernation. It is a voluntary action and is brought on by food scarcity paired with cold. Hibernation conserves lots of energy. Low body temperature, lower metabolism and slowed breathing are signs. We might think of it as a deep sleep.

A few New Hampshire animals hibernate to survive winter. According to NH Fish and Game- the most common ones are black bears, groundhogs, chipmunks, woodland mice and several species of bats. Of those, mice and chipmunks may experience brief awake times during mild weather. Occasionally an animal will wake to drink, eat or defecate. Since energy is scarce – wake states are not seen very often.

Richard “Dick” Proenneke who spent 30 years surviving alone in remote Twin Lake, Alaska was featured in books and documentaries shown on public TV. He cautiously ventured inside a bear’s empty hibernation cave and remarked how clean and devoid of smell the area was. That fact is surprising given the amount of time bears hibernate.

For hundreds of years, human hibernation was an idea noted by science fiction writers and scientists alike. The ability to slow metabolism and functions to survive extreme cold conditions or long journeys has tantalized us with possibilities. Maybe a trip to Mars in the future? There are some new advances in understanding this.

New Research into Torpor: I read an online report published by the Focused Ultrasound foundation (published in 2023).

A study had been done at Washington University in St Louis.

The research team led by Hong Chen, PhD attempted to send rodents into an unusual metabolic condition or torpor. “Controlled torpor” suggests a possible future application of assisting patients with heart attacks or stroke. Slowing down metabolism and disease progression in patients may be a real possibility. That breakthrough would change many lives and may become reality in our lifetimes.

Books about hibernation/ torpor:

- For children :

A fascinating children’s picture book that describes the winter lives of animals is:

Over and Under the Snow by Kate Messner. Published in 2011.

It is an adventure tale with great illustrations. Available at the Littleton Public Library- Children’s Room upstairs.

- For Adults:

Winter World: The Ingenuity of Animal Survival by Bernd Heinrich. Available at the Littleton Public Library.

Deciding to monitor wildlife using a game camera can lead to a few surprises and greater respect for what animals endure during the long, cold winter

Please visit our website at: <https://www.littletonnhgardenclub.org/>

to learn more about our club and our meetings. We welcome new members!