

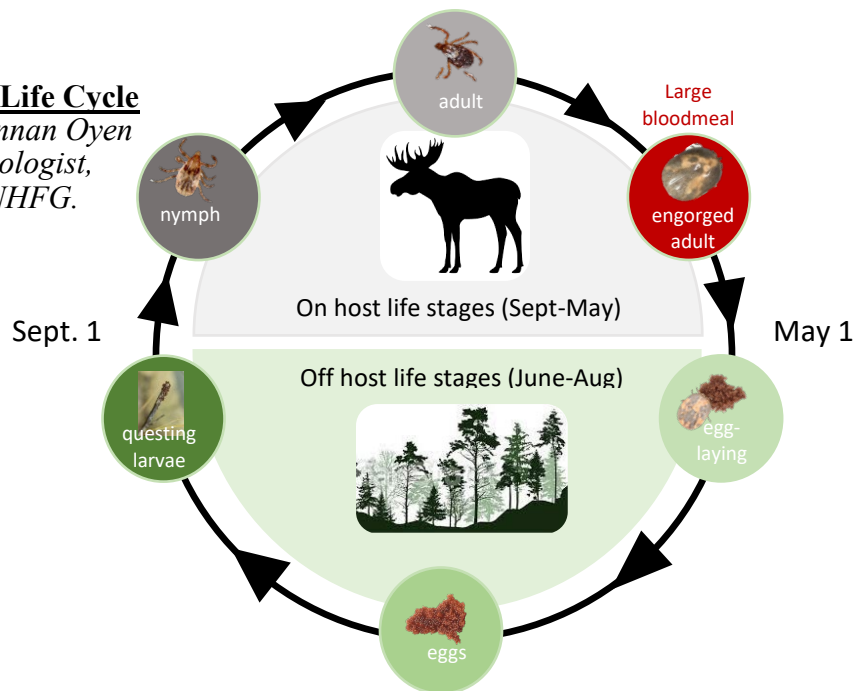
# Winter Ticks and Moose



Unengorged adult winter ticks on a moose. Photo copyright D. Ellingwood.

Winter ticks (*Dermacentor albipictus*) are a different species of tick than people typically get on them and they have a very different life cycle. Winter ticks are native to New Hampshire.

**Winter Tick Life Cycle**  
Figure by Kennan Oyen  
USDA Entomologist,  
modified by NHFG.



## How do winter ticks affect moose?

Blood loss to tens of thousands of winter ticks in March/April may causes mortality in moose. Smaller-bodied animals, such as calves, are most vulnerable but yearlings and adults are also impacted. Tick infestations can cause adult cows to be in poor condition, thereby lowering reproductive fitness, resulting in the birth of fewer calves.



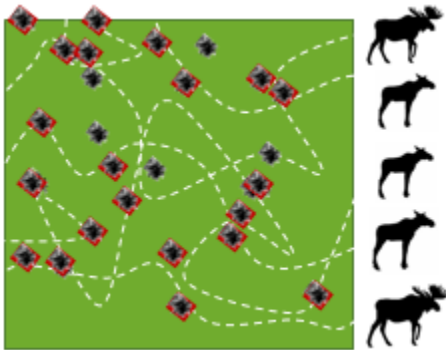
Cow moose in late April with hair loss due to winter ticks. Photo copyright Dan Bergeron.

Moose try to rub the ticks off during winter/spring due to irritation caused by feeding ticks and damage their coats. These same moose will look “good” (fully haired, undamaged coats) in summer and fall.

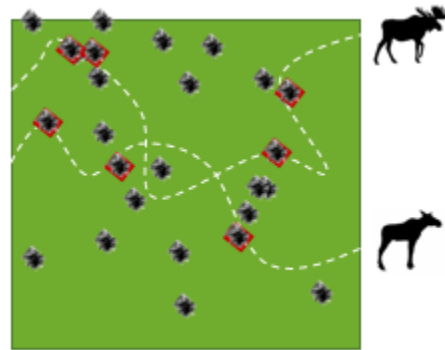
**Why are winter ticks such a problem for moose?**

HIGH LOCAL MOOSE DENSITY Winter ticks do not move much when they are not on moose so they need a moose to brush against them when they are questing. Once attached to a moose, winter ticks survive and reproduce, and the cycle repeats the next year.

Many moose in a small area = many winter ticks getting on moose and reproducing = many ticks the next year.

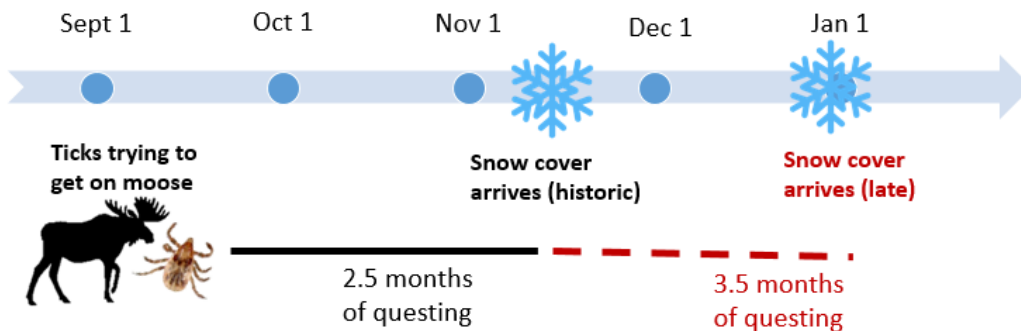


Fewer moose in a small area = fewer winter ticks getting on moose and reproducing = fewer winter ticks the next year.



Green squares are plots of land. Dotted lines are moose tracks. Red boxed ticks attach to a moose and survive, non-red ticks do not attach and die. Graphic modified from content created by VT Fish & Wildlife.

SHORT WINTERS Winter ticks try to get on moose from September 1<sup>st</sup> until there is lasting snow on the ground. New Hampshire is at the southern edge of moose range so snow arrives comparatively late and this gives winter ticks more time to attach to moose. Climate change is likely to cause snow to arrive later giving winter ticks more time to attach.



### **What can be done to reduce winter ticks on moose?**

Maintain low/moderate moose density. Moose that live in areas with low moose density (southern NH, MA, CT, and Adirondacks of NY) have relatively few winter ticks. Regulated hunting is a potential tool for keeping moose populations low (and less-“ticky”) where there is really good habitat (lots of young forest).

Many people wonder if pesticides or natural fungi can be used to kill winter ticks because this is how we control ticks on ourselves and pets. However, this not realistic because:

- Treating enough moose or the landscape is prohibitively challenging and expensive. Moose are difficult to catch/treat, most pesticides require repeat treatments, and ticks can develop resistance. Large tracts of land would need to be treated continuously.
- The ecosystem effects of pesticides that kill winter ticks have not been studied.
- Pesticides are a temporary fix and as soon as they stop the winter ticks will return.

### **What should you do if you see a moose infested with winter ticks?**

Moose infested with winter ticks will be most apparent in February, March, and April. At this time moose may have substantial hair loss and be lethargic. Give these moose as much space as possible so they can conserve energy.

If you see a moose that is acting lethargic near a busy road please contact NH Fish and Game as soon as possible.

General reports can be submitted to the NH Fish and Game Wildlife Division: 603-271-2461; [wildlife@wildlife.nh.gov](mailto:wildlife@wildlife.nh.gov)