

A male yearling moose walks near Moosehead Lake.

Tick

Continued from Page C1

cies crawling around in its forests, terrorizing the townsfolk and spreading disease. And ticks all have three life stages: They hatch as larvae, later become nymphs and finally reach adulthood. During each phase, they seek a blood meal from a host.

But the winter tick is unique in an important way, according to Kantar.

"The big deal about winter tick is that it spends all those life stages on the same host. This one tick gets a blood meal on that same animal in this case a moose — as a larvae, as a nymph and as an adult," Kantar said. "So you have one tick getting all of its blood from the same animal, which is different from other ticks, which are taking blood from many ani-

Winter ticks aren't new to Maine, and exist across the nation, Kantar said. And there's really no way to know whether there are more winter ticks on the landscape now than there were 10 or 15 years ago. Hunters and outdoors enthusiasts have been reporting dead moose with high tick loads on them for years, and that's part of the reason biologists are studying their effect so closely now.

The winter ticks begin their life cycle lying on the ground as eggs through the summer. Then they hatch into larvae in the fall, climb a shrub and wait for an unsuspecting host.

"Another thing that's different about winter tick in this stage, the female lays thousands of eggs, en masse, so when they hatch out, they hatch out en masse," Kantar

And when they hop onto a passing moose, they also do ber of ticks on a small that as a large group.

"The animal comes by, [the ticks] sense that animal tar said. "People have been going by, and they all attach together, like a barrel of monkeys," Kantar said.

Some potential hosts, like deer, sense those larvae and try to rid themselves of them. Others, like moose, don't, Kantar said.

So the ticks go for a ride that can last for months.

They're on the moose, thousands of [larvae], and they'll travel their way to

different parts of the moose and take a blood meal," Kantar said. "Then they essentially hang out there, on the back of the moose, and molt. They'll shed their exoskeleton and become a nymph."

Then the process continues, until that nymph eventually turns into an adult, and the adult chooses to feed just before the females drop off to lay their eggs. By May, the adults are dead, but the next generation is on the ground, awaiting their own journey on the back of a moose.

How many ticks?

Anyone who's plucked a tick from their pet, child or themselves can understand the dread that accompanies the discovery of the creepycrawly critter. Humans' concerns typically center on the possible transmission of tick-borne illnesses like Lyme disease.

For moose — especially young moose — there's a different hazard: They can essentially be sucked dry by thousands of winter ticks who each eat three blood meals off their host.

How many thousand ticks does it take to put a moose in severe danger?

Kantar said biologists are still studying that, but researchers in New Hampshire have established a baseline estimate that may surprise you.

"They're doing a whole hide count [of ticks on deceased moose]. What we found, when talking with them this week, is that we're talking about about 50,000 ticks being a threshold," Kantar said. "And they have counted up to 90,000 ticks on a single animal, feeding.

Kantar said with tick loads like that, younger animals are in particular dan-

"If you have a high nummoose, it could result in the death of that animal," Kantrying to wrap their brains around it. It's hard for me to wrap my brain around the fact that an animal of that size could die from winter tick. But when you say there's 50,000 ticks removing blood within a very short time period, usually in the later winter and early spring, that moose is losing so much blood that it can't replace that."



Willa Sarnacki, 4, walks along the 1-mile Carson Trail recently at Rachel Carson National Wildlife Refuge in Wells.

Hike

Continued from Page C1

Before exploring the trail, pick up a brochure at the trailhead kiosk. These brochures include a detailed trail map and information about the refuge that can be read as a self-guided tour. The brochure text, numbered to match with 11 stations along the trail, touches upon topics including salt marsh restoration, phenology, waterfowl and shrubland management.

Published in 1962, "Silent Spring" was a call to society, focusing on the harmful effects of pesticides

Also along the trail is a memorial plaque for Rachel Carson (1907-1964), an environmentalist and marine biologist who is best known for her influential book "Silent Spring." Published in 1962, "Silent Spring" was a call to society to take responsibility for other forms of life, focusing on the harmful effects of pesticides, such as DDT, on the natural world. The controversial book pushed the federal government to order a complete review of its pesticide policy and ban DDT.

Born in rural Pennsylvania, Carson had a knack for writing about nature and science in an engaging and poetic way that spoke to the general public. In addition to "Silent Spring," Carson taught people about nature — and especially the ocean through newspaper articles, radio programs and her work as an aquatic biologist and editor-in-chief for the U.S. Fish & Wildlife Service.

Carson died from cancer in 1964 at the age of 57. The ref-

uge, named in honor of her in 1969, is near Carson's summer home on the coast of Maine.

In addition to the Carson Trail, there are two other public trails maintained by the U.S. Fish and Wildlife Service on divisions of the Rachel Carson National Wildlife Refuge: the 1.8-mile Cutts Island Trail in the Brave Boat Harbor Division in Kittery, and the 1.25-mile Timber Point Trail in the Little River Division in Biddeford.

People also can enjoy the refuge by boat. There are three areas within the refuge where nonmotorized canoes and kayaks can launch and land during daylight hours only. These areas are Chauncey Creek, on Seapoint Road in Kittery; Little River, at the end of Granite Point Road in Biddeford; and Spurwink River, at the fish pier on Route 77 in Scarborough.

Wildlife enthusiasts can find a variety of wading birds, waterfowl and songbirds, including saltmarsh sparrows, throughout the refuge. While people are permitted to enjoy designated visitor use areas on the refuge year round, sunrise to sunset, it's important to note that many areas of the refuge are closed to the public. These areas are marked with boundary signs that read 'Area Closed" or "Unauthorized Entry Prohibited.'

Hunting, fishing and recreational shellfishing are specific permits and licenses. The special regulations for these activities are listed at fws.gov/refuge/rachel_ carson/.

Leashed dogs are allowed on the Carson Trail only, and horses are not permitted anywhere on the refuge.

The U.S. Fish and Wildlife Service asks that refuge visitors follow "Leave No Trace" principles. Carry out all trash (including dog waste) and stay on designated trails to

AISLINN SARNACKI I BDN Willa Sarnacki, 4, walks along a boardwalk which leads to a platform and bench with a view of Branch Brook and a surrounding salt marsh. avoid trampling plants and in the views of the marsh and coming into contact with poilook at all the different ferns

and artifacts is prohibited. Camping, ATVs, bikes and fires are also prohibited on the property. Restrooms are located near the Carson Trailhead at the refuge headquarters in Wells and near the Cutts Island

son ivy and ticks. Disturbing

or collecting plants, animals

Harbor Division in Kittery. For information, call the refuge office at 646-9226 or visit fws.gov/refuge/rachel_ carson/.

Trailhead in the Brave Boat

Personal note: Earlier this month, I had a girls weekend in southern Maine with my mom, big sister and 4½-year-old niece. We stayed at a hotel in Portland, permitted on the refuge in shopped, ate at Sebago Brewcertain areas and only with ing Co. and drove a bit farther south to visit the Rachel Carson National Wildlife Refuge in Wells.

> My niece, Willa, snagged the trail brochure from my hands and led the way as we walked the Carson Trail. Wooden signs marked with numbered stations on the trail, so we had her identify the number on each sign, then find it on the map. She got so excited about finding the next number that we had to remind her to slow down, take

and trees At some of the stops, my sister, Jillian, read the matching text on the brochure so we could learn more about the salt marsh and the wildlife we might see. Mimicking her mother, Willa decided to do the same and "read" to us about butterflies. While standing on a wooden platform in the sun at a beautiful overlook by Branch Brook, we

learned that butterflies like to

fly and swim, eat and drink,

and watch people.

The sparrows and tree swallows also slowed Willa down. Once I pointed out the birds, Willa was fascinated. Beside the trail, she crouched beside me as I photographed a tree swallow from afar as it fed its young in one of the nesting boxes that were posted throughout the marsh. By the end of the hike, Willa was doing her best to "talk back" to the birds she heard in the forest, tweeting and screeching as she skipped down the smooth trail.

For more of Aislinn Sarnacki's adventures, visit her blog at actoutwithaislinn.bangordailynews.com. Follow her on Twitter: @1minhikegirl.

Holyoke

Continued from Page C1

While preparing dinner, I looked on the floor and saw a \$10 bill. It had been chewed ... half-eaten, actually.

And like parents everywhere - even dogtionalize what I saw.

Maybe he's sending us a message. The kids have been singing songs from "Hamilton" for weeks. Maybe Teddy doesn't like musical theater, so he decided to take a bite out of the only picture he could find of Alexander Hamilton.

Maybe the cat did it. Maybe the kids did it.

tle money-eater too much credit from the beginning.

I suspect the final conclusion is the correct one (in part because I know for a fact that Teddy loves musical theater). Teddy has an appetite for money.

And as my wife points out, Teddy also ate her Visa card earlier this year, proving that he does, in fact, ac-

Last night, I posted a photo to Facebook, and told the story from Grand Lake Stream ... the one about the day we first met Teddy. It didn't take long for McEvoy to send along a message.

"Where is the other half?" he asked.

McEvoy, of course, knew exactly where the other half of the bill was. Then he asked another question.

Not a chance.

After sharing this story with friends, I have learned that I'm not alone. Our pets eat some weird stuff. A few weeks back, in fact, a man told me that his hefty lab had eaten 57 sandwiches (along with the plastic wrappers) that he'd made for an event. This pooch ate every-

"Are you going to try to thing in sight (except tuna). recover it?" So tell us: What's the odd So tell us: What's the odd-

est thing your dog, cat or parakeet has decided to eat? If the replies are funny enough, you may find them in a future column or blog.

John Holyoke can be reached at iholyoke@bangordailynews.com or 990-8214. Follow him on Twitter: @JohnHolyoke.



