NEW ENGLAND WILDLIFE CENTER

Raccoons

By Greg Mertz, DVM New England Wildlife Center February 19, 2008

My first encounter with raccoons was in the middle of the night. They certainly had the advantage. They were up and awake. I was sleepy, barely able to keep my eyes open. I was ten and looking out the screened window of a 1950's canvas tent. There on our campsite picnic table were three grunting, growling raccoons who were busily taking apart all we owned on this trip. Slices of bread were being tossed like Frizbees, marshmallows (my favorite) were being stuffed into one raccoon's mouth, and the third was rooting through the lunchmeats, bananas, apples and milk.

My father, being the main breadwinner in my family, was not happy about what was happening to the bread he'd won. He had armed himself with the marshmallow stick I had whittled the campfire before. My father was swinging his weapon sword-like at the three raccoons. You can't trust ten year olds to come up with the sturdiest of sticks, and so the first time he came close to whacking a coon, the stick broke in two. The raccoons were unhappy with his assault and feinted a charge in his direction. My father, in his underwear boxers retreated barefoot back through the tent screen door swearing about the quality of marshmallow sticks and the uppity-ness of wildlife.

I learned four important things that night. Raccoons, and a lot of wildlife, are nocturnal. This had been an academic concept until this encounter. Now, worldly wise, I was ready for nighttime excursions into secret woodlands. Second, raccoons were omnivores. Everything I ate, raccoons ate. I wore this concept even more intensely than the nocturnal stuff, because I went hungry the next day till mid-afternoon. The third was don't leave food out at night for animals to forage. The fourth was pick your marshmallow stick carefully, you never know just how handy a stick can be.

Raccoons are one of North America's best wild animals. As pesky as they may at times seem, raccoons are native to our fields, woodlands, streams and lakes. They represent a history that spans a million years or so. They have enjoyed glaciers, historic episodes of global warming, near arctic, temperate, sub-tropical, and tropical climates. Like most successful species they do well in a variety of climates, a variety of habitats, and with a variety of food sources. When these three characteristics are coupled with native intelligence, you end up with a species that can outwit most of us.

There-in lies a conflict with humankind. Not so many people like being out-witted by what are perceived as evolutionary inferiors. Many people are disconnected from what lives and happens outside their windows, especially after dark. Putting out garbage for pick-up,

creating bird feeding stations, closely mowing lawns, creating sand boxes, building sheds and gazebos, and maintaining swimming pools seem peculiarly human, but catch the attention of some of our wildlife. Raccoons think these things are quite useful especially for rearing offspring, and often move their families in right along side of us. I know that if I was a raccoon I would move right in to a suburban neighborhood, no problem. I think some people should think more like raccoons when planning their houses, yards, maintenance and activities.

I include myself in this group, because I have a family of raccoons that right now are living in my attic. When raccoons move in it is not so much wildlife gone wild as it is a carpentry problem. I saw the hole in my eve last fall, I knew it needed repair, but I thought 'I'll do it next spring'. What animal is going to see this hole and move in this winter? I am so much smarter than animals and I can barely figure out how to get to this spot on my roof.

From the rumpus I hear inside my bedroom I know that there are more than raccoons in my attic. I hear the rumble of loud heavy feet, the scurry of little tiny feet, the shrieks of annoyed raccoons, and the chatter of angry squirrels. This all happens just before day break. The squirrels are getting up ready for breakfast and the raccoons are coming home from a night out in the neighborhood. And I lay there wondering if they will break through the ceiling and land in my bed.

I can see how this might catch some people off guard. My god, what will these animals do next? And for crying out loud, what diseases must they be carrying and giving to my children? Well these are good questions. It is only rarely that you hear about raccoons breaking through walls and landing on people's beds. Still, knowing about their diseases is a beneficial thing any way you slice it. The more knowledge you have the better you can navigate all the seedy little viruses, bacteria and parasites that are after your body. Raccoons suffer some of the same diseases we people do. Raccoons suffer from some diseases that we do not.

In the category of devastating diseases, distemper and rabies are perhaps the most deadly to raccoons. Distemper makes raccoons be disoriented, have seizures and susceptible to respiratory infections. So raccoons with snotty noses and eyes that are out wandering around disoriented are probably infected with distemper virus. This is quite unfortunate for it is fatal in raccoons. Because raccoons are so gregarious this is a virus that rapidly spreads through colonies and regions of raccoon communities. People don't get distemper but their dogs do(so do ferrets, skunks, seals, etc.) Cats do not get distemper although you often hear that they do. This distemper virus is very volatile and can be transferred from one animal to another through sneeze droplets and even foot prints. That is why your veterinarian insists that you get your dogs and ferrets vaccinated every year. (Cats are vaccinated every year for different reasons).

Rabies is a disease that people can get. The best protection that any of us have from this deadly virus is vaccination of pets and other domestic animals in our homes or vicinity. Raccoons with rabies are disoriented, lethargic and have seizures. This sounds a lot like distemper and is in fact virtually indistinguishable without laboratory testing. You can't tell if a raccoon (or other animal) has rabies by just looking at it. So the rule of thumb is do not approach wild mammals. Mammals are the only animals that get rabies, but virtually any mammal can get it and it is almost uniformly fatal. It certainly is in humans, dogs, cats, horses, cows, skunks, and raccoons.

Then there is a parasite that raccoons get that does not cause disease in raccoons, but is a devastating and even fatal disease in humans. It is called raccoon round worm by most people, but for the overly academic it is known as *Baylisascaris procyonis*. It is generally accepted that about half of the raccoons in North America are carrying raccoon roundworm in their stool. Holy crap! That means that just about every other raccoon in America can give us a disease that might kill us. Although this is technically true the contamination route is unlikely. To get it you have to eat raccoon poop that is 30 days or so old.

There are some occasions when this has happened. The most common occurrences are usually associated with firewood that has been contaminated with raccoon feces being stored in a house with a young child or person who puts everything in their mouth. It has also happened with individuals who have close association with raccoons like wildlife rehabilitators who raise them and care for them. There has been less than twenty cases over the past twenty years when the disease was first described. Nevertheless keep your firewood clean, don't raise raccoons in your house, if you have raccoon feces that you need to clean up in an attic or shed, do it by wetting it down and carefully bagging it while wearing a face mask and disposable gloves.

I guess I am lucky to have avoided theses diseases because years ago I lived in a house with a raccoon. This guy, which we named Coon, did not live in the attic or walls, but right down among us humans and dogs in the living room, bedrooms, kitchen, bathroom, and closets. He was fairly well littered trained, actually outdoor trained, and would take his business out doors once he was old enough to figure out how to open the sliding glass door. Nevertheless his idea of hygiene was like he was a wild animal.

Coon came to us in a small cardboard box left on our doorstep before his eyes were open. Somehow we figured out that he needed milk replacement and from there on it was downhill gliding, so to speak. Coon grew up bright and strong. Coon had a mind of his own.

I learned a lot about raccoon biology living with Coon. First raccoons have twenty-four hours a day to think about their next meal. I guess we do to, but we complicate it all by going to work to make the money so we can go to grocery stores to buy the food that we take home and prepare. Then we sit down to eat it. And some of us even take time to bow our heads to give thanks for the food in front of us. This is a big mistake if you live with a raccoon, because by the time you open your eyes and lift your head your dinner is gone.

Raccoons work on a very different principle. If you are there first, it is yours. So while you have been wasting your time going to work, earning money et cetera et cetera, raccoons are honing skills on how to get to the food first. They practice all day long jumping on things and growling. Coon leaned that attacks from the floor were lengthy and met with a lot of yelling, kicking and hitting. (I defy even the most ardent animal rights welfare humane activist to sit passively by while the raccoon in your dining room takes every delicious dish made, meal after meal after meal. You will come to blows). Coon instead attacked from above. He would hide in the kitchen cabinet until the proper moment. I would sit down with my meal, after careful planning and psyching out where he was. He's nowhere in sight. I can eat. Wham! He would fling himself from above airborne right onto the plate of his fancy. Which always was mine. No one else's. His "mother's" plate was never landed on. She was immune from any of his attacks. He could not have been sweeter. With her, he shared food, cuddles and laughs.

This mirrors what actually happens in the wild. In the wild raccoons distribute themselves according to mom-based territories and in patterns that optimize chance meetings between males and females during mating season. A female's territory is narrow but elongated like a finger. Next to that finger is another finger with another female raccoon. Within each stripe is a family of raccoons that adhere to a matriarchy. Mom's the boss and the baby raccoons flock to mom as long as they are in her care. The family cluster is cozy and non-aggressive unless you are an outsider from another family or a wandering male. Coon perceived me as a wandering male.

Babies stay with the mom for as long as she is needed. This need varies from baby to baby. Assertive, and your-not-my-boss babies leave the family stripe first. This can be as early as five months and can take as long as a year when Mom is finally chasing lazy baby off her turf because she is trying to take care of her new brood. Coon was one of these latter babies. He stayed with us for one and a half years before moving on.

The adult males are more stand-offish and live in territorial stripes that run perpendicular to the mom's. So, during courting season, around January, if you are out wandering the woodlands and yards there is a chance that on any one evening you might run into three or four of your best girl friends. This keeps the gene pool hardy and jumping.

The area within these territories are not static. From week to week, or from storm system to storm system raccoons will change their denning area. Coon changed his sleeping space every 10 to 14 days. For a while he would sleep in the bed, then he would sleep in my shirt drawer, then he would move into the hamper, then the kitchen cupboard, and then back to shirt drawer. During periods of storms Coon would sleep for days at a time. During rainstorms he was simply lazy, during blizzards he was almost comatose. During one severe blizzard he did not surface for days and we began to wonder if he was all right. But when the air cleared he hit the ground running. He loved cold air. It was the best time to explore. You could feel his energy and curiosity vibrate in him especially on a cold, winter's evening. Hot weather made him groggy.

Exploring the neighborhood was his best thing. We lived in a vacation community on the North Shore of Long Island, New York. It was replete with left over summer dogs and year round owned dogs, who wandered from inhabited house to inhabited house. One in five houses had winter inhabitants. In a loose, unstructured way we all looked after the strays. Coon became the Hollywood dog star. Every dog in the neighborhood, whether they were owned or stray, found Coon to be an object of fascination, attraction, or down right love. Coon was pack leader, and on the average day five to seven dogs would be seen walking behind Coon on his forays. Whatever he was interested in, all the dogs were interested in, too. He would go to the rocky beach to forage among mussels, all the dogs would follow him there and rifle around in the tide pools.

If Coon found a pile of garbage, they all would tear the garbage apart. Nobody messed with Coon. He did have some limited protection from our own dog George. George was a cross between a sheltie and a whippet. George and Coon were inseparable by day. At night George slept in the bed and Coon in his den of the week.

Coon had his funny flat hands which gave him an opportunity, and consequently the dogs an opportunity, to do things they might never have been exposed to. Coon could open

doors! Coon could open refrigerators! Coon could open bottles! What dog do you know that wouldn't give his or her eyeteeth to get the refrigerator open?

I was working in a lumberyard during the day and a donut shop in the middle of the night. I would come home from the lumberyard tired, ready for a bit of dinner, bed and then off to the donut shop by 2:00AM. Five days out of seven I would come home and find Coon and his buddies in my house. We are talking five to seven dogs here, lolling around the living room sofa, lounge chair, and bed. And they would bark at me like I was somehow intruding on their turf. This was my house we are talking about not theirs. Coon would be in the middle rolling marbles. There were marbles everywhere. They were one of his favorite things. There were marbles on the floor, in den areas, out in the front yard, down the street, and unfortunately for us in the next-door neighbor's empty swimming pool. Coon discovered that if you launched a marble off poolside it would bounce and roll around like crazy on the empty cement pool bottom. This was sheer delight.

Unfortunately, for us, the drain was not covered with a strainer and the marbles, one by one rolled into the below ground drain filling the pipe. This, when they figured it out, unsettled the next-door neighbors. This was the straw that broke the landlords back, and we got evicted.

These handy little front feet that raccoons have are an incredible piece of biological adaptation. There are more nerve fibers running from the feet to the brain in a raccoon than there are from the eyes, nose, and ears. Their feet are exquisitely sensitive to feeling whatever they are touching. In a strange symbolic way it is almost like they are feeling things in a manner that is similar to the way we see them. We see in color. Raccoons see in black and white. Perhaps raccoons feel in color and we feel in black and white.

Why are such things needed in raccoon world? Well raccoons are not the smallest creatures in the woodland but they are also not the largest. A coyote, wolf, bobcat or jaguar might take on an adult raccoon. The little guys, though, are easy to pick off by any of these predators and by a whole lot more like great horned owls, barred owls, and even some of the woodland hawks.

Even though raccoon eyes are not the best they are the first line of defense in an attack from other animals. So by having touchy feely feet raccoons can continue to fish, root and gather while keeping their eyes pointed upward and outward. Splashing in the water and washing their food is like using binoculars or a microscope to us. By using these added lenses we can see things that are not normally seen. Coating your feet in water allows you to feel things that are not normally felt.

Coon's hands were always busy. Every activity was accompanied by feel-touch. One of his favorite things to feel was my belly button. I would be lying on the sofa watching TV and Coon would attack my belly button. First he would pull up my shirttail, stick his nose into my belly button, snort and then rub it with his foot, and then tear at it with his toe nails. Real cute the first time, but after two or three thousand times I could see it coming and would grab his front foot. This would make him scream and jump away. He would bare his teeth and growl at my hand. Raccoons have some very fine dentures. They have pretty much the same dentition as people. They have top and bottom incisors, canines, premolars and molars much the same as we do. Their digestive tracts are parallel to ours too. We have the same kind of esophagus, stomach, small and large intestines. They have a liver

and a pancreas just like us. In fact the insides of them are much as the insides of humans. That is why we eat the same kinds of foods. In fact, generally, that is why we can relate to them and their behaviors so well.

I do not know what we were thinking the December of that year, but we put up a Christmas tree. It had shiny balls, tinsel, lights, popcorn, and stars; just not for very long. He had the Christmas tree down on its back in five minutes, every ball crushed, tinsel in the bed, sink and toilet, popcorn wet in his food and water bowl, and lights wrapped around the foot stool and lounge chair.

As Coon began to drift away from us, he became quite independent and began to stay out all night. One night he came home humbly with bite wounds all over his rump. Fortunately, this was back in the good old days before rabies was a number one freak out worry. (Coon was vaccinated against rabies any way, but...) My guess is that he was bested by another raccoon into whose territory he had wandered. Coon lost, evidenced by the bites on his rump and not his face. This is how raccoons control their territories. If someone wanders over your territory be ready to run fast, or beat them up and then take over. I worry about human rehabilitated raccoons that eventually go out into the world. If they have not been raised with other raccoons they grow up not knowing the social cues that tell the wild raccoons to back off.

I saluted Coon for all his efforts of transitioning from human world to wild world. He taught me a lot. Now, years later I run a hospital for wild animals. Each year the New England Wildlife Center in Weymouth, Massachusetts becomes a temporary home to 65 or so raccoons. About fifteen arrive after being run down by cars, or sick from distemper or rabies. We do what we can for them and release only a couple. The rest are humanely euthanatized.

About fifty come to us as babies just like Coon. Now instead of living in my house they live in my work space. There is no end to the mess. You can imagine what havoc fifty can create, when you reflect on what Coon did. Here, at the Center, we have veterinarians, veterinary technicians, animal caretakers, rehabilitators and about 50 undergraduate students who help us care for these baby raccoons and about two hundred other species of wildlife. It is a rewarding and at times overwhelming job.

Raccoons are one of North America's treasures. They do not deserve to be hung up as coats, or killed because they are at times simple nuisances. Henry Beston, author of the Outermost House, wrote in 1949 ..."We need another and a wiser and perhaps a more mystical concept of animals." To paraphrase Henry Beston's incredible insight into humans sharing this planet with the other million or so species, perhaps we need a wiser view of raccoons. They have the same birthright to this planet that we do. If our carpentry or lack of it provides a place for them to live and it is not what we want, then the onus is on us. Otherwise raccoons are cleverer than we are. And perhaps that is the point.

Greg Mertz, DVM New England Wildlife Center February 19, 2008