



The Neighborhood Naturalist

Connecting to Nature in Your Neighborhood



Copyright, July 2012
Lawrence Wade
Illustrations by Amelia Ladd
and Jeanette Dickinson

lwade@whalebooks.com
(952) 288-5025



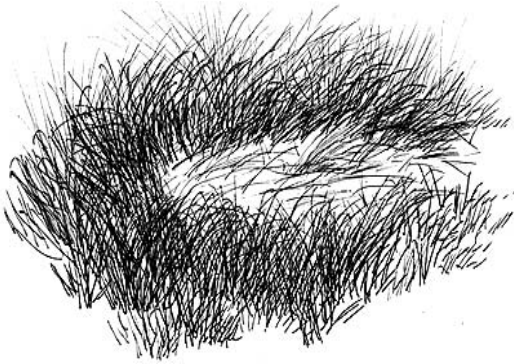
Table of Contents

<u>Topic</u>	<u>Points</u>	<u>Topics</u>	<u>Points</u>
<u>Insects</u>			
Classifying Insects	4	Planting a Nature Area.....	50
Insect Ecology.....	6	How Seeds Travel.....	53
Bees.....	10	Spring Birds.....	55
Time of Grasshoppers	15	Winter Birds.....	59
Spiders.....	21	Bird Beaks.....	62
Butterflies.....	26	Observing Geese.....	65
Wooly Bear Week.....	29	Signs of Spring.....	67
Creatures in the Soil.....	31	Total Points	
Total points for Insects.....			
<u>Midwestern Forests</u>		<u>Nature Crafts</u>	
Common Trees.....	33	Elf Baskets.....	72
Fun Names for Trees.....	35	Melon Basket.....	75
Aging Trees.....	36	Root Basket.....	76
Estimating Tree Height.....	37	Stone Necklaces.....	77
This Bud is for You.....	38	Nature Poetry.....	78
Life in the Forest.....	40	Cattail Weaving.....	81
Hidden Stars.....	41	Total Points	
Leaves, Leaves.....	42		
Leaf Collection.....	43	<u>Wetland Ecology</u>	
You are an Oak.....	44	Dragonflies.....	84
Forest Ecology.....	45	Midwestern Fish.....	89
Total points for Forests.....		Life in the wetlands....	93
		Pond Study.....	97
		Total points for Ponds.....	

White Tail Deer Population Study

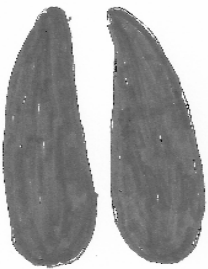
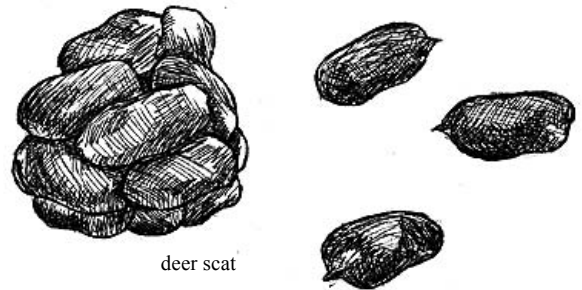
Do you have a deer herd in your neighborhood? How can find out what is the population structure of the herd? By population structure I mean: How many fawns, yearlings (one year olds), adult does and bucks are in the herd?

First it is important to be able to recognize three different white-tail signs: scat, deer beds, and deer tracks.



A **deer bed** is a sign of a deer resting area. Deer bed down in the evening and remain there most of the day. Deer will not bed in windy areas because they need to conserve their body heat in the winter. Most deer beds are found in areas protected from the wind, and on south-facing hillsides. South-facing hills are warmed by the sun sooner on cold wintry days and allow deer to conserve body heat. In the summer, it is easier to find deer beds in prairie grass because it leaves a body imprint. However, summer deer beds may have deer tick nymphs near them, so it is not a good idea to inspect them too closely.

Another important deer sign is to find **deer scat** or poop. Deer scat is very dry and there are several pellets in one poop. Many naturalists I know have made deer scat necklaces which they proudly wore with their school groups.






Another deer sign to look for are **deer trails**. Deer may use the same trail over a period of time. **Hoof prints** and scat can also be found on the trail. The spring is not a good time to follow deer trails because of the increase incidence of deer ticks and Lyme disease.

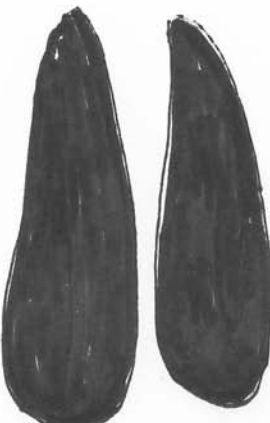
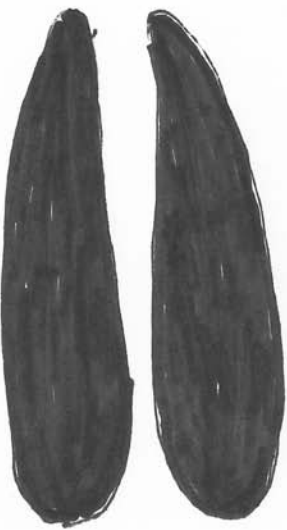

How to do a deer population study:

Go out into the woods looking for deer signs. Record some simple field observations, and you can get a good idea what age groups of deer live in the neighborhood. You will need a tape measure to determine the deer bed size. When it comes to analyzing scat, count individual clumps, not individual pellets. Make a tally for each of the signs that you find. The number of tallies that you make for each age class, will give a good idea what the population structure of white-tails is in your neighborhood.

Deer Population Study

<u>Actual Scat Size</u>	<u>Age Class</u>	<u>Number of observations</u>
	fawn	
		
	yearling or adult doe	
	adult buck	

<u>Deer Bed Sizes</u>	<u>Age Class</u>	<u>Observations</u>
22" x 35"	fawn	
24" x 40"	yearling or adult doe	
31" x 50"	buck	

<u>Actual Hoof Sizes</u>	Yearling or	buck
fawn 		
Observations		

Total points for activity: 3 points if you went out looking for deer signs. Two additional points if you found 6 different deer signs. Add two more points if you found more than 12 deer signs.

Total possible points: (7) Total points for you: _____

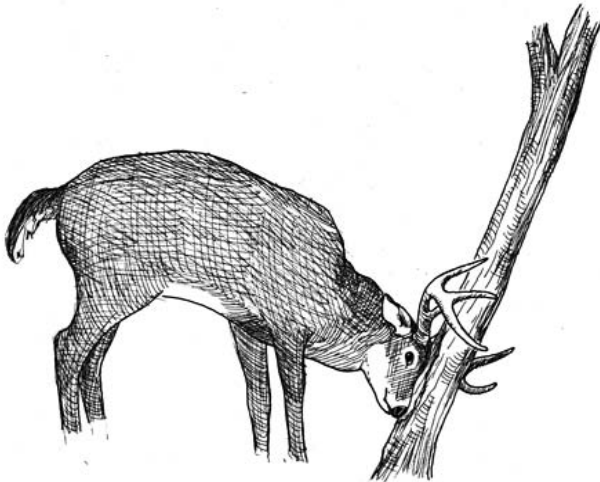
White tail Tracking and Behavior

Deer Sign



Deer browse is a sign of deer feeding in the area. Deer may browse on twigs or saplings of maple dogwood, sumac and cedar, chewing buds in the winter and leaves in the summer. During harsh winters, cedar trees, may be browsed up to 4 feet high as deer get up on two legs to eat. One indicator of the presence of deer in an area are evergreen trees that have developed a “browse line” several feet above the ground. Deer eat 2-3 pound of browse a day to survive and will eat up to 8 pounds a day, if it is available. They are ruminant mammals and have 4 stomachs. White-tails browse in the early morning and quickly fill their rumen or first stomach. Then a deer will lay down in a protected area and “chew its cud” by regurgitating the food they clipped earlier, re-chewing and swallowing it again. Other mammals that have rumens are goats and camels.

In September, at the beginning of the rutting (mating) season, a buck will **rub** against a small tree to remove the velvet (hair-like skin) from its antlers. A buck will rub off bark from a tree to warn other deer that he has established a territory in the area.

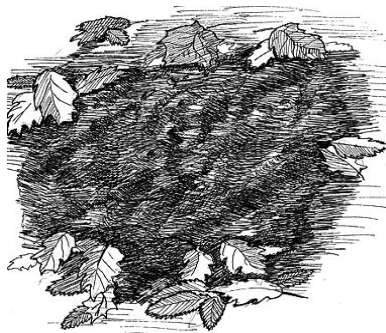


buck rub

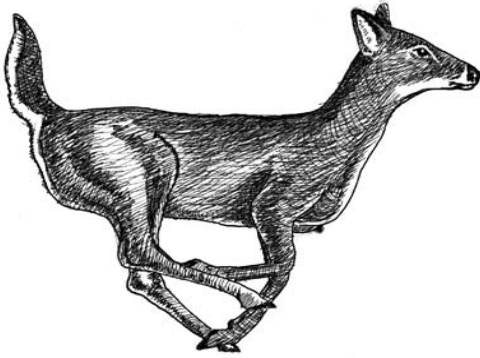


Another way that a buck will mark its territory is by making a **scrape**. The purpose of a scrape is to advertise the buck's presence. Most scrapes are made by the biggest, most dominant bucks. A scrape is about 3 feet wide and is made by the buck pawing with its front hoof. A buck will also scent mark the scrape by urinating in it.

buck
scrape



Deer Behavior

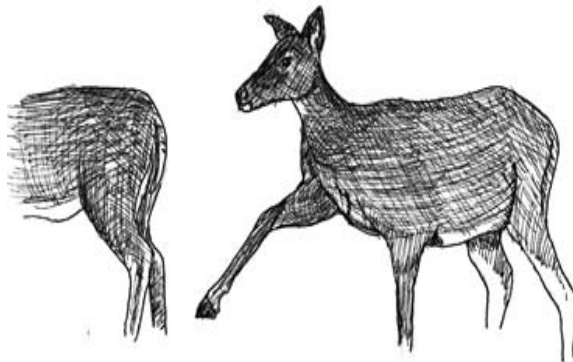


Flagging is an alarm signal to other deer in the herd, telling the herd that danger is near. The white tail of the deer goes up and the deer bounds off. Before a deer flags, it may warn others in the herd by stamping the ground with its foreleg.

Deer have developed many behaviors to determine dominance over other deer. The easiest place to witness deer behavior is to visit a nature center that is feeding deer in January and February. Deer will come in to feed before dark and you can observe a number of



interesting behaviors. The least aggressive behavior that a dominant (boss) deer communicates to another is to **drop its ears and stare directly** at another deer.



Foreleg Kick

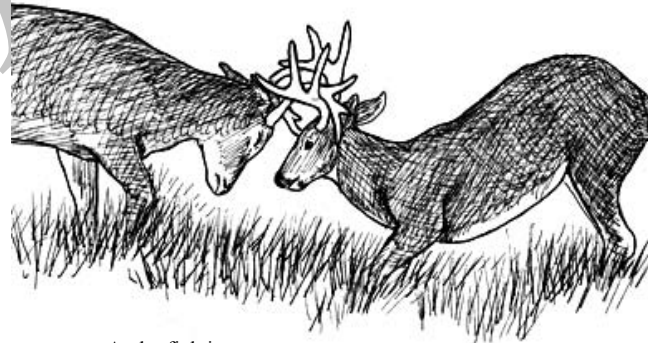
If the stare has no effect on the other deer, then it may jab at the deer with its foreleg (**foreleg kick**).

The next level of aggressive action is called "**flailing**". In this case, the deer rises up on its hind legs and slashes at the other deer with its forelegs. This can be a very aggressive interaction that can hurt the other animal.



Flailing

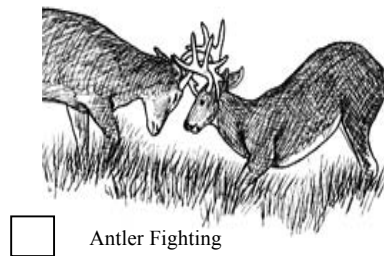
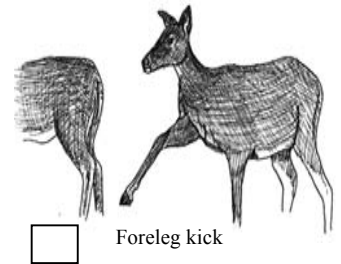
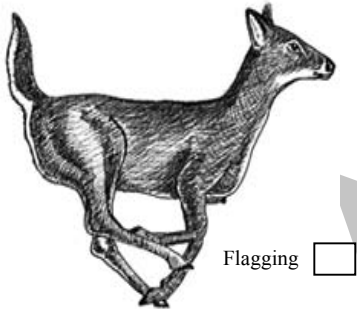
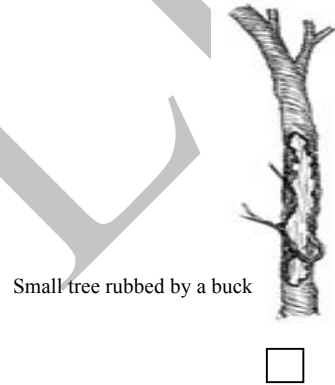
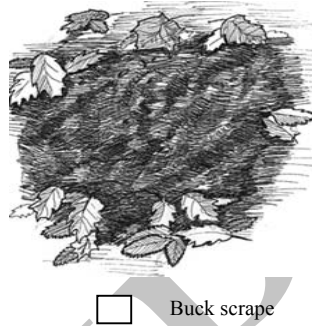
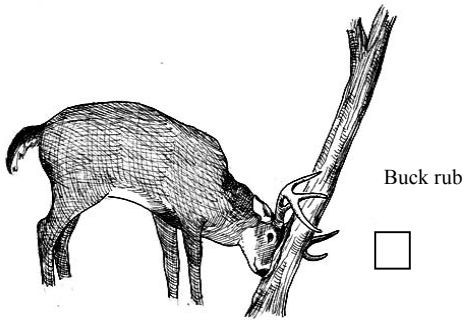
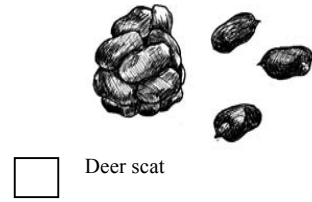
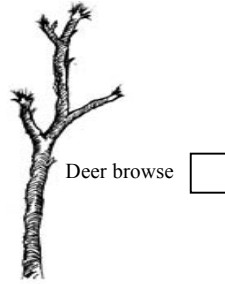
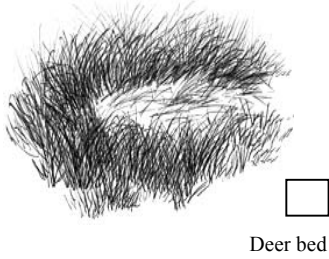
Antler fights usually occur over territories and not females. Before a fight, the bucks try to stare each other down, while circling each other with the hair raised on their backs. Most fights last one to five minutes. There is usually an initial charge and the bucks push against each other. If one deer is being pushed around, it will usually run off.



Antler fighting

What to Do: Look for deer signs and behaviors and check the ones you find.

Deer Signs and Behavior



Give yourself 3 points if you see 3 or more deer signs or behaviors. **Total possible points 11** Total points for you: _____

The Old Naturalist – Bird Beaks as Tools

Birds use their beaks in many ways and in many ways are similar to tools. What birds have a beak that is like a spear, a pair of pliers or a straw?

Cardinals, sparrows and finches have thick beaks that are strong enough to crack sunflower seeds.



Puddle **ducks**, like mallards feed on small planktonic critters by straining water through their beaks. They can often be seen “**tipping up**” their rear ends and feeding in shallow water.

Swallows are insect feeders and fly around with their mouths open feeding on flying insects. It is reported that purple martins, a large swallow, eat up to 2000 mosquitoes a day.

Hérons and egrets have a stout pointed beak which is used for spearing fish and frogs. Herons have stick-like legs and wade out into the water. A heron will wade out into the water and wait patiently for a fish to swim around them. It will slowly move its head closer to the prey, and then make a lightning-like jab, attempting to grab the prey. Herons are opportunistic, and in May, after the tadpoles have hatched, they are commonly seen in the vernal ponds. I have seen herons out in the fields during years where there were high populations of meadow mice. One day, I watched a great blue heron stand over a mouse run and snag 17 mice in less than an hour.

Have you ever watched a **robin** hunt for worms? A robin will tilt its head and listen to a worm moving beneath the surface. It is then that it will drive its stout beak into the soil and snag an unknowing worm.

Shorebirds are not as common in the Midwest as they are along the sea coast. I have seen yellowlegs, spotted sandpipers, and the illusive common snipe. They have long beaks and feed on creatures a few inches beneath the surface. Along the sea coast the diversity of shorebirds is incredible. There are sanderlings that have really short beaks and feed on creatures on the surface. There are birds with 4 inch long beaks, like a willit, who feeds 1- 4 inches beneath the surface. But the champion of the “long beaks” is the **long-billed curlew** who has a beak that is absurdly long bill (7 inches). These regal birds feed on critters very deep beneath the surface.



Hawks and owls have hooked beaks that are used for tearing the flesh off their prey. **Woodpeckers** have stout bill for chiseling wood. They also have one of the longest tongues of all birds (up to 5”). Lastly, the **hummingbird**, gets on a “sugar high” by sucking up the sweet nectar with its straw-like beak.

What to do: Match the tool description below with the bird beak on the next page:

Pliers Beak – Stout and pointed for digging and picking up insects in the ground.

Insect Net Beak – A small beak that can open wide to grab flying bugs.

Spearing Beak – Long slim, strong and pointed for spearing fish and frogs.

Nut-cracking Beak – Thick and stout beak for cracking seeds.

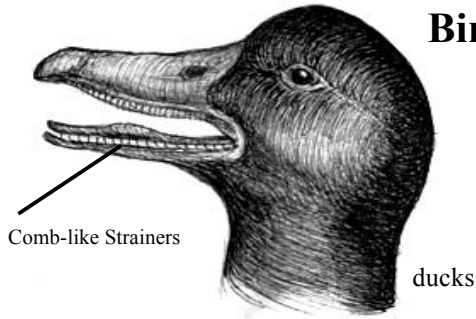
Straining Beak – Comb-like strainers on the edges of the beak to filter out bits of food in the water.

Needle-nose Plier Beak – Thin and long for picking up insects buried deep in the mud or sand.

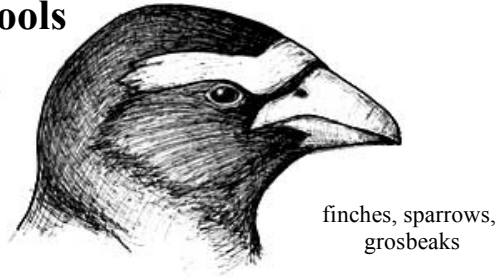
Knife Beak – Sharp and hooked for tearing flesh.

Straw Beak – A long and thin beak for sucking nectar from flowers.

Bird Beaks as Tools



1. _____



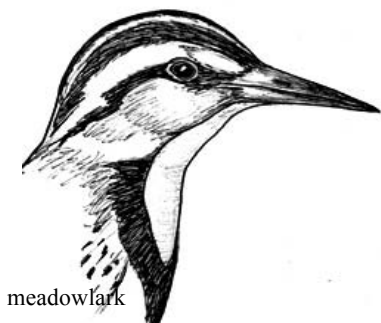
2. _____



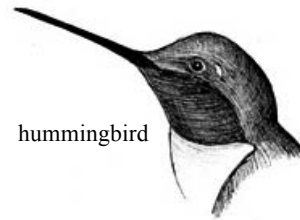
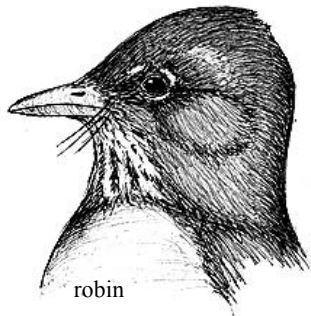
3. _____



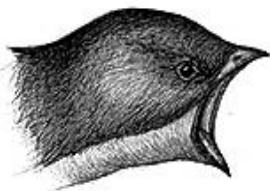
4. _____



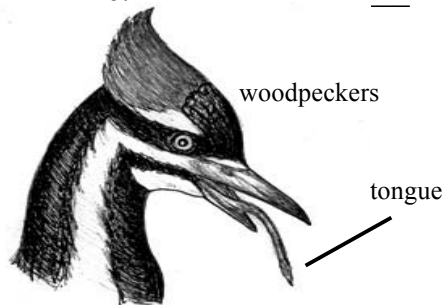
5. _____



6. _____



7. _____



8. _____

One point for completing this activity. Up to three points for observing three or more birds using their beaks as tools.
Total possible points for this activity: 4 points. Total points for you: _____

Spiders

Spiders! Most of us think of spiders as being on the “negative end” of the animal spectrum. People who are attracted to spiders, usually want to know about the most poisonous spiders, not our most common spiders. Television/internet/books and super-heroes usually focus more on spider “sensationalism”, than spider identification or life cycle.

Spiders are predators that have unique hunting styles and anatomy. In addition, spiders are very interesting to observe. For instance, the orb weavers construct a web each day, then eat the threads and recycle the silk, only to use it on another day. Also, some spiders don’t make webs and hunt their prey on the ground. Lastly, young spiders throw out silk threads into the air and the youngsters are carried on the wind to new locations (called “ballooning”).

Did you know that there are very few poisonous spiders in the Midwest? In addition, some scientists estimate that spiders eat so many insects that their prey would outweigh the entire human population.

My favorite spider reference: Weber, Larry. 2003. *Spiders of the North Woods*. Duluth, MN: Kollath-Stensaas Publishing.

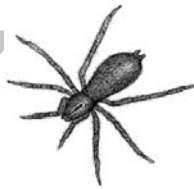
What to do: Spiders are most visible from mid July to the first frost. For every species you find, make a check in the box.

Wolf spider

Ground spider

Daddy-long legs
Or Harvestman

female
w/ eggs



Ground spider.
Large size (1 ½ inches).
Brown and hairy.
Pounces on prey.
Female carries eggs.
Does not make a web.

Very common.
½ inch in size.
Grassy areas.
Moves very quickly.
Does not make web.

Common on ground.
Not a spider!
But has 8 legs.

Jumping spider



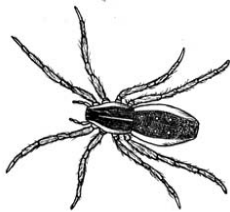
Ground spider.
½ inch in size.
Very colorful.
Excellent eyesight.
Can leap several times their size.



Long-jawed orbweaver

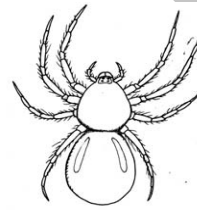
Common spider.
Over 1 inch in size.
Found in gardens and lakes.
Stretches out body to hide & hunt.
Called “stick spider”.
Makes a web.

Fishing Spider



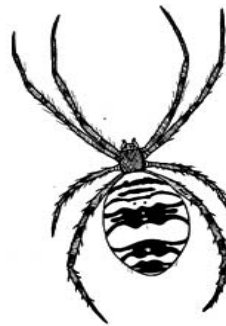
Found on lakes/ponds.
Most less than a inch in size.
Some species up to 3 inches.
Feed on insects and tadpoles.
Can remain underwater up to 30 minutes.

Crab spider



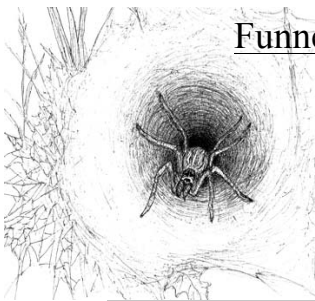
Found on flower blossoms.
½ inch in size.
Can change color from white to yellow for camouflage.
Wait on flower to ambush prey.

Yellow garden argiope



Yellow and black
Common in fields mid-summer to frost.
Beautiful web up to 3 ft.
Feed on flying insects like dragonflies and grasshoppers.
Female is 4 times larger than the male.

Funnel web spider



Ground spider.
Found in grassy areas.
Funnel web is easy to see.
Funnel traps insects walking on the ground.

Give yourself a point if you go out looking for spiders. One point for every species you find.

Total possible points 10. Total points for you: _____