

WHO EATS WHAT

A GUIDE TO FOOD WEB CLUES IN SCHOOLYARD HABITATS

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ANIMALS AND THEIR FOODS

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1. ANIMAL SIGNS

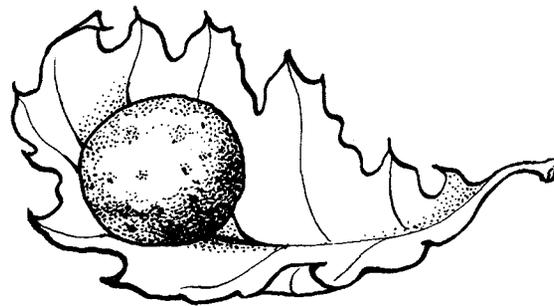
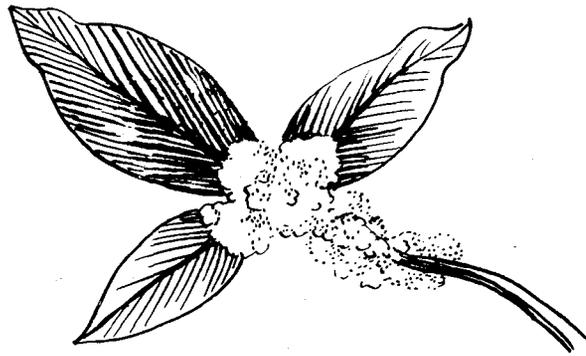
ABOUT THIS SECTION

KNOWING WHERE TO LOOK

When searching for animals and their signs, students tend to look only on the ground. The "Where to Look" page helps them expand their focus. It provides tips on what animals and signs they might find in many locations.

KNOWING WHAT TO LOOK FOR

The "Signs of Animals Eating Plants" and other animal signs pages help students develop search images for evidence of animal activity. Although the signs illustrated on these pages are only a sampling of those likely to be found at your study site, they provide a starting point to help your students notice things they often overlook. This new perspective will help them piece together clues about interactions among animals and their food sources.



FINDING THE "WHAT" AND FIGURING OUT THE "WHO"

Once students have found an animal sign, they'll need to figure out who made it. The signs illustrated in the animal signs pages are labeled with the names of the animals that make them. If students find a sign that's not included here, they can compare it to the illustrations to try to narrow down the type of animal (e.g., an insect, a bird) that could have made the sign.

Some animal signs, such as a nibbled leaf or a seed-filled scat, are direct evidence of what an animal is eating. Other animals signs, such as a nest or a track, simply reveal an animal's presence. Once students trace either of these kinds of signs to the animal who made them, they're ready to consult the "Animals and Their Foods" chapter to complete their detective work!

WHERE TO LOOK

IN THE AIR

- up high for flying or soaring birds
- around plants for flying insects

IN SHRUBS, CACTI, AND TREES

- on branches, arms, and twigs for galls, eggs, nests, browse marks, insects, spiders, mammals, tree frogs, snakes, and bird droppings
- on trunks for woodpecker holes, scratch marks, cocoons, webs, and ant trails
- in holes, pleats, and crevices in bark for nests, scorpions, pseudoscorpions, beetles, daddy-longlegs, and other small organisms
- on flowers and fruits for insects and signs of eating
- on leaves, stems, and vines for tree frogs, insects, insect eggs, snails, galls, and signs of eating

AMONG LOW PLANTS

- in moss clumps for tiny animals
- in grass for trails, clipped leaves, and matted bedding
- in thickets for signs of rabbits, such as droppings, and clipped twigs or grass leaves
- on stems and leaves for insects, spiders, galls, insect eggs, bird droppings, and signs of eating
- on flowers for bees, flies, butterflies, moths, and spiders



ELSEWHERE

- on and around tree stumps, fence posts, and rocks (perches) for scat, nutshells, and other leftovers
- on fence posts and walls for birds, spiders, lizards, small mammals, snails, and insects
- in sunny areas for animals basking
- on building ledges and windowsills for birds, nests, and bat roosts
- in drainpipe ends, and holes in bricks and cinder blocks for spiders and insects
- on pavement and in sidewalk cracks for insects and other animals
- in wet areas for animals drinking

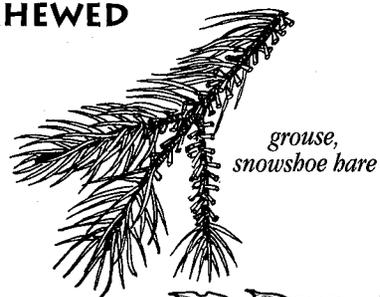
ON THE GROUND

- between plants for scat, worm castings, bird droppings and pellets
- under rocks, boards, logs, bricks, and trash for salamanders, toads, skinks, sow bugs, centipedes, millipedes, ants, snakes, scorpions, and beetles
- in leaf litter and surface soil for seed caches, earthworms, sow bugs, millipedes, beetles, and other small animals
- in sandy or muddy areas for tracks
- under plants for bird nests, mammal tunnels, mouse holes, rabbit dens, tracks, snakes, lizards, salamanders, and other animals
- in rotting logs, stumps, and under bark for termites, beetles, insect larvae, ants, skinks, and lizard eggs

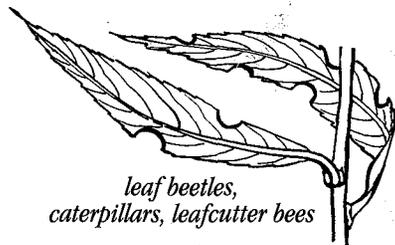
SIGNS OF ANIMALS EATING PLANTS

LEAVES

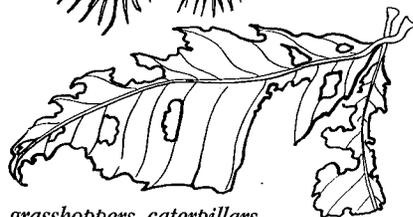
CHEWED



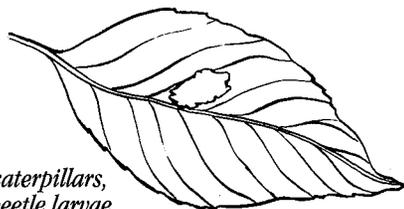
grouse, snowshoe hare



leaf beetles, caterpillars, leafcutter bees



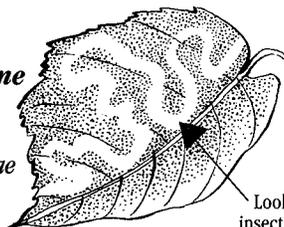
grasshoppers, caterpillars



caterpillars, beetle larvae

MINED

*serpentine mine
fly and moth larvae*



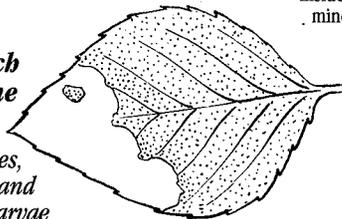
Look for insect larvae inside the mines.

*blotch mine
fly and moth larvae*

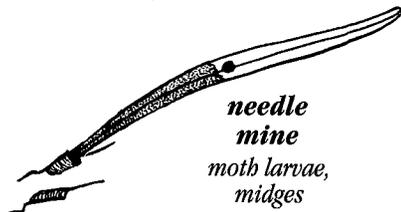


patch mine

beetles, moth and beetle larvae

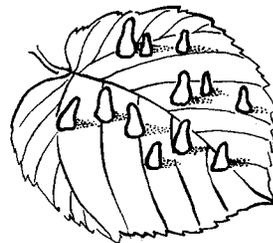
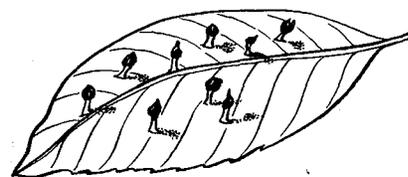


*needle mine
moth larvae, midges*

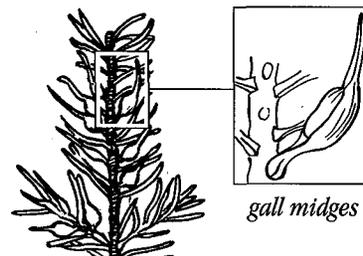


GALLED

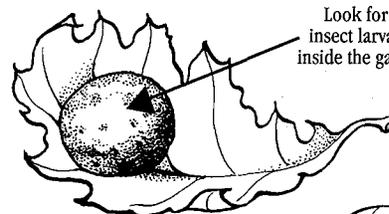
mites



gall midges, aphids, mites



gall midges



Look for insect larvae inside the galls.

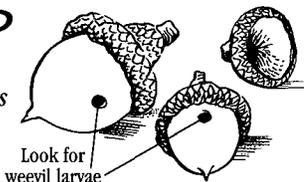
oak gall wasps



SEEDS, NUTS, AND FRUITS

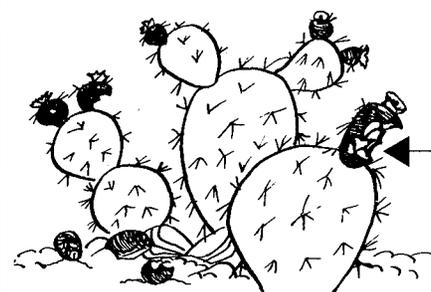
BORED

weevils

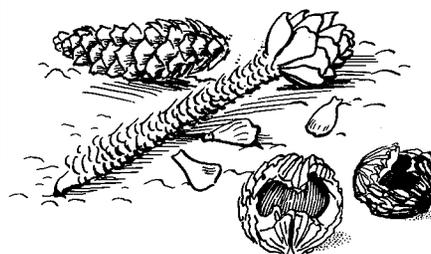


Look for weevil larvae inside the acorns.

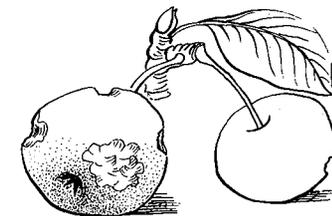
CHEWED



kangaroo rats, orioles, coyotes

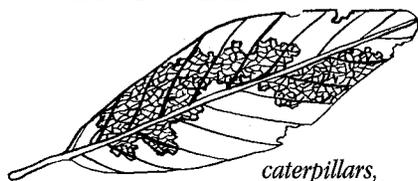


red and gray squirrels, chipmunks, jumping mice, white-footed mice, deer mice



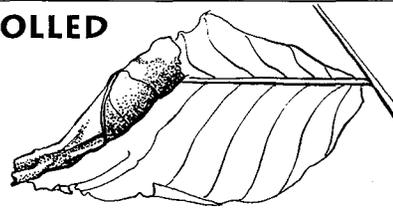
white-footed mice, deer mice, fox, deer, opossum, woodchucks

SKELETONIZED



caterpillars, leaf beetles, earwigs

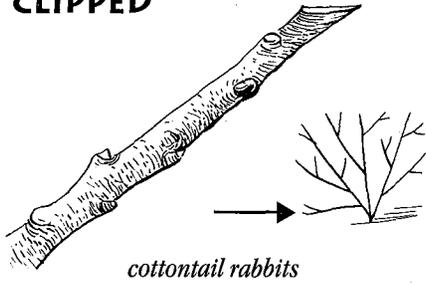
ROLLED



moths, butterflies, beetles

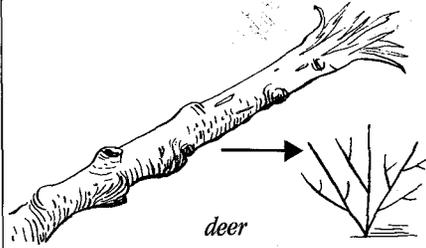
STEMS AND TWIGS

CLIPPED



cottontail rabbits

CHEWED



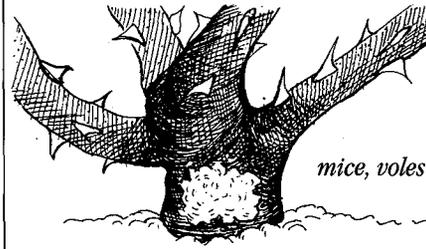
deer

PRUNED

*porcupines,
red squirrels, beetles*



GNAWED

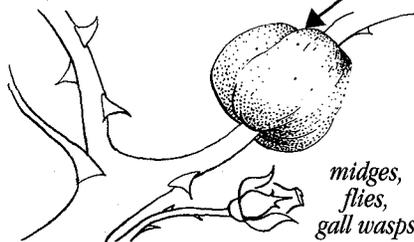


mice, voles

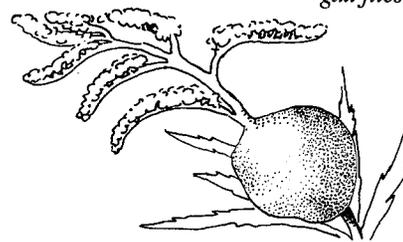
GALLED

Look for insect larvae
inside the gall.

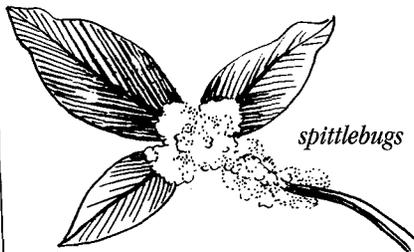
*goldenrod
gall flies*



*midges,
flies,
gall wasps*

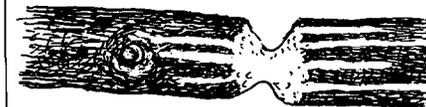


FROTHED



spittlebugs

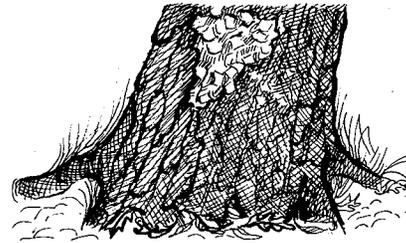
GIRDLED



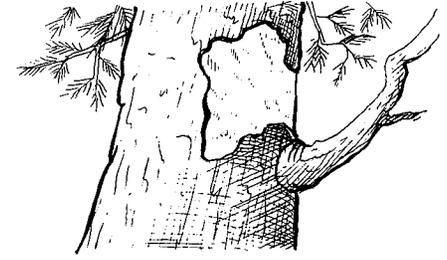
twig pruner beetles

TRUNKS, LIMBS, AND LOGS

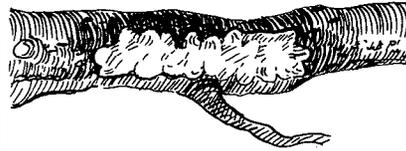
BARK STRIPPED



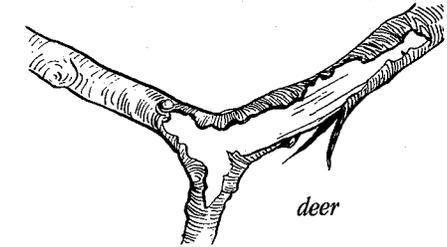
woodchucks, squirrels



porcupines

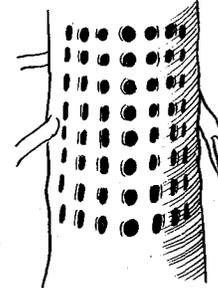


rabbits, hares

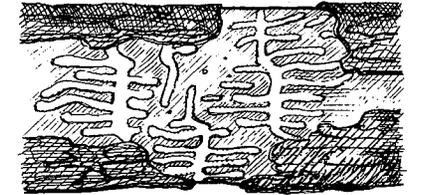


deer

BORED

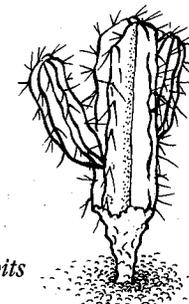


sapsuckers

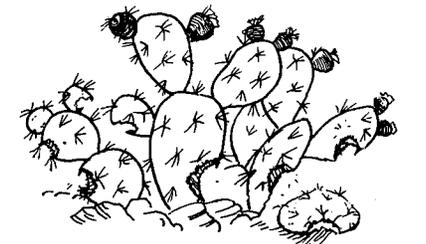


bark beetles

CHEWED



cottontail rabbits



*cottontails, jackrabbits, ground squirrels,
tortoises, woodrats, pocket mice*

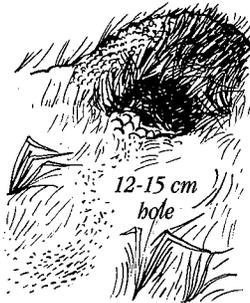
HOMES, TRAILS, AND SCRATCHINGS

BURROWS AND NESTS



2.5-7.5 cm hole

shrews, voles, moles, mice, chipmunks, red squirrels, prairie dogs, ground squirrels, lizards, pocket gophers



12-15 cm hole

woodchucks, skunks, raccoons, rabbits, foxes, opossum



deer mice, voles



mice, gray squirrels



woodrats



deer mice

TRAILS AND TUNNELS



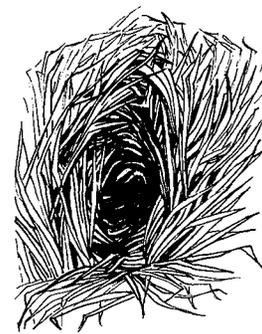
voles



shrews



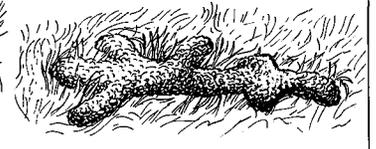
shrews



rabbits

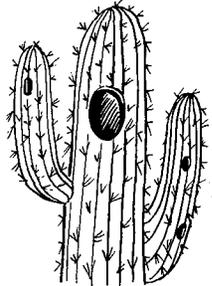


moles



gophers

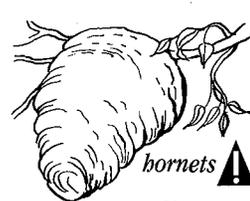
OTHER ANIMAL HOMES



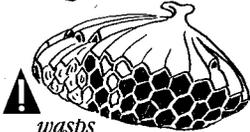
woodpeckers, owls, flickers, rats, mice, lizards



raccoons, opossum, squirrels, white-footed mice



hornets

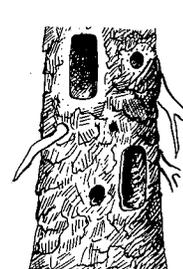


wasps

DIGGING, SCRATCHING, AND PECKING



squirrels, opossum, porcupines, raccoons



woodpeckers



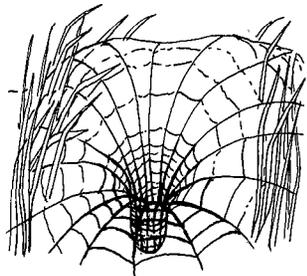
skunks, squirrels, chipmunks



skunks

WEBS, EGGS, AND COCOONS

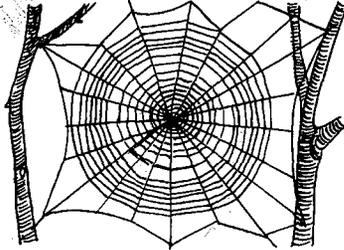
WEBS



funnel web spiders



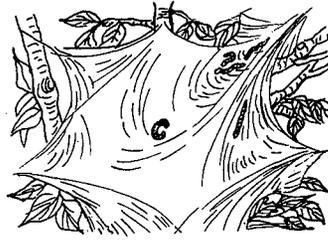
hammock spiders



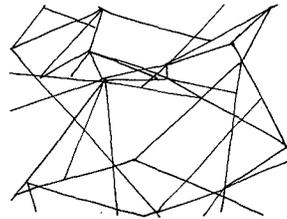
orb spiders



webworms
(wide v-winged moths)

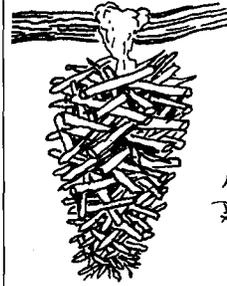


tent caterpillars
(wide v-winged moths)

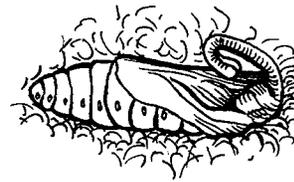


comb clawed spiders

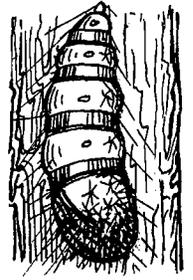
COCOONS AND CHRYSALIDES



bagworm moths
(narrow v-winged moths)



hawk moths
(wide v-winged moths)



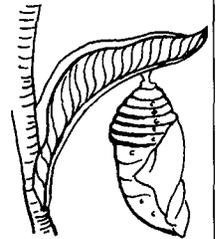
gypsy moths
(wide v-winged moths)



polyphemus moths
(large silkworm moths)

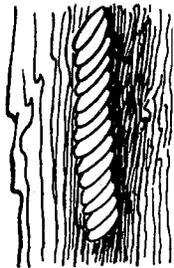


cecropia moths
(large silkworm moths)

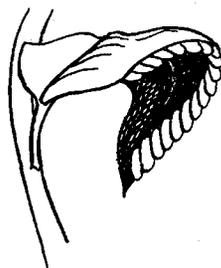


monarch
butterfly larvae
(other large butterflies)

EGGS



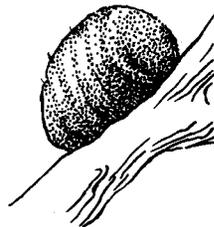
cicadas



katydids

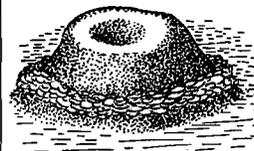


gypsy moths

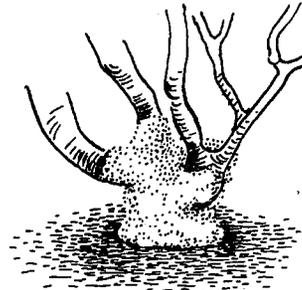


mantids

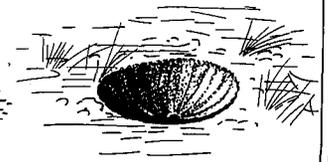
MOUNDS AND PITS



ants

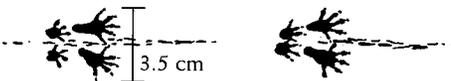
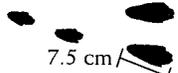
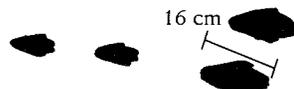
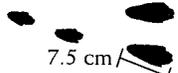
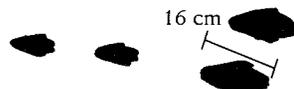
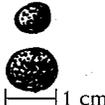
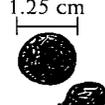
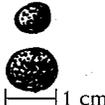
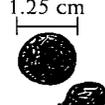
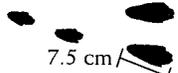
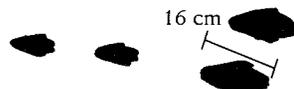
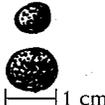
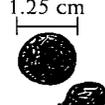
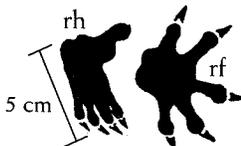
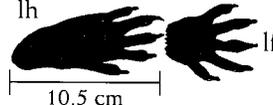
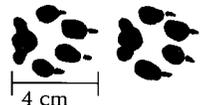


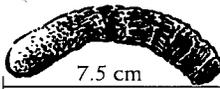
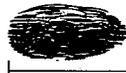
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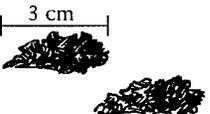
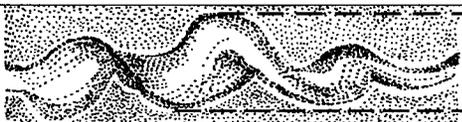
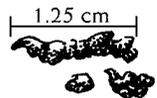


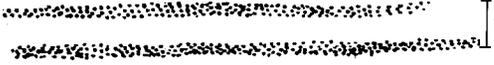
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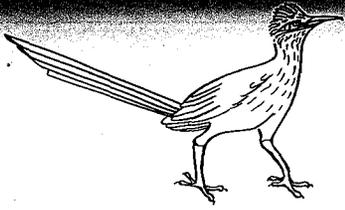
TRACKS AND SCAT

MAMMALS											
TRACKS		SCAT 									
<i>mice and shrews</i>											
<i>rats</i>											
<i>squirrels</i>											
<i>rabbits</i>	<table border="0"> <tr> <td></td> <td></td> </tr> <tr> <td><i>cottontail</i></td> <td><i>jackrabbit</i></td> </tr> </table>			<i>cottontail</i>	<i>jackrabbit</i>	<table border="0"> <tr> <td></td> <td></td> </tr> <tr> <td><i>cottontail</i></td> <td><i>jackrabbit</i></td> </tr> </table>			<i>cottontail</i>	<i>jackrabbit</i>	
											
<i>cottontail</i>	<i>jackrabbit</i>										
											
<i>cottontail</i>	<i>jackrabbit</i>										
<i>opossum</i>											
<i>raccoons</i>											
<i>foxes</i>											
<i>coyotes</i>											
<i>deer</i>											

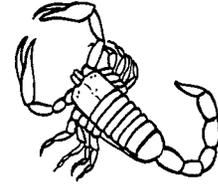
BIRDS		
TRACKS	SCAT 	
<i>grouse</i>		
<i>wild turkeys</i>		
PELLETS <i>regurgitated pellets of nondigested hair, bones, and fur</i>		
		
<i>hawks</i>	<i>ravens</i>	<i>owls</i>

REPTILES		
TRACKS	SCAT 	
<i>turtles</i>		
<i>snakes</i>		

ANIMALS WITHOUT BACKBONES	
	
<i>centipede tracks</i>	<i>earthworm castings</i>



2. ANIMALS AND THEIR FOODS



ABOUT THIS SECTION

FINDING THE "WHO" AND FIGURING OUT THE "WHAT"

When students find an animal, they can use the "How to Figure Out What an Animal Eats" page to hone in on clues to the animal's food sources. By observing the animal's behaviors and body parts, students can speculate about the type of food the animal is suited to catch and eat. Since animals spend most of their time near their food sources, students can look around the area where they find an animal to pick out plausible foods.

This section also includes charts of information about six major groups of animals: Insects, Other Animals Without Backbones, Amphibians, Reptiles, Birds, and Mammals. Within each of these major groups, the charts are divided into subgroups of related animals.

When students find an animal, they can consult the charts to try to confirm what type of animal they've found and what it eats. Each chart provides information on the general and specific habitats of each animal, and on the animal's foods.

Habitat. Each chart includes a key to icons for six habitats that occur within or near schoolyards:

- ▣ Vacant Lots
- Lawns
- ⊕ Fields
- ⊗ Wooded Areas
- ☀ Deserts
- ☪ Grasslands

Students can tell which habitat(s) each animal is found in by looking at these icons under the "Habitat" column to the right of the animal name. Help your students decide

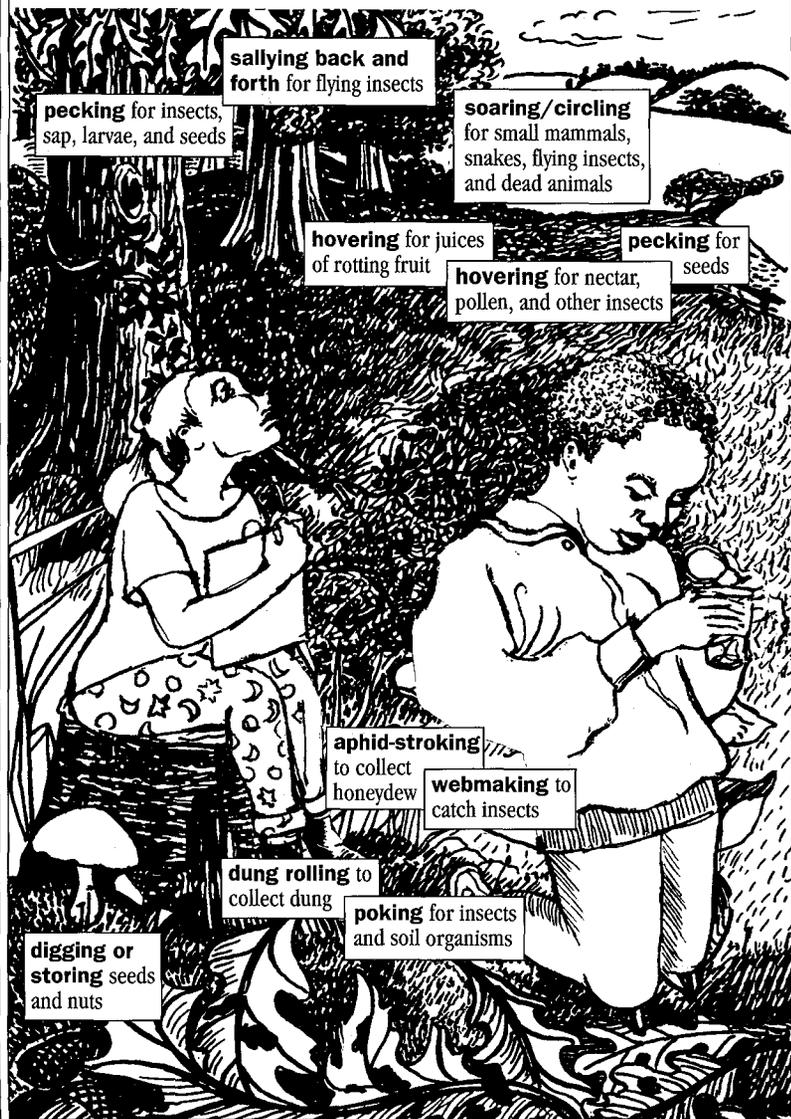
which one or two habitats characterize your study site so that they can scan the charts for these icons. The "Where Found" column provides more detailed habitat information for each animal.

Food Sources. These columns list the plants, animals, and other foods eaten by the entire family or genus of animals within a row. The word "herbs" refers to herbaceous plants, such as wildflowers. Your students' job is to determine which food sources the animal is likely to eat within the habitat they're exploring. Students will also want to take into account the seasonal availability of foods. A jay, for instance, will consume acorns in the fall and insects in the spring and summer. Students should also keep in mind that the food source lists are not always exhaustive. Many animals are opportunists, so although their main diet consists of certain foods, they'll often eat many other things in order to survive.

HOW TO FIGURE OUT WHAT AN ANIMAL EATS

FEEDING BEHAVIOR AND LOCALE

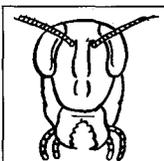
An animal's activities and whereabouts are often related to feeding. Where was the animal and what was it doing when you found it?



BODY PARTS FOR FEEDING

How does the animal get and eat its food? Look carefully at the animal's body parts. What action does the body part look suited for?

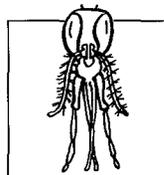
MOUTHPARTS



chewing

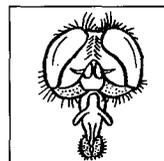
for grasping, tearing, and crushing parts of other animals, plant roots, stems, wood, leaves, buds, and seeds (*grasshoppers, crickets, katydids, beetles*)

note: some insects have mouthparts for chewing and for lapping flower nectar (*bees, wasps*)



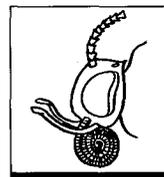
piercing

for piercing leaves, stems, seeds, or the bodies of other animals, to slurp sap or body fluids (*true bugs, leafhoppers, treehoppers, aphids, mosquitoes, some flies*)



sponging

for sponging up microorganisms and liquids from decaying foods (*houseflies, bees*)



sipping

for sipping nectar from flowers (*butterflies, moths*)



grabbing

for grabbing small, delicate insects and worms (*robins, thrashers, wrens, orioles*)

note: some birds have beaks that can crack seeds and grab insects (*chickadees, blackbirds, jays, doves, bluebirds*)



drilling

for drilling into tree bark for insects (*woodpeckers, nut-hatches*)



cracking

for cracking seeds (*grosbeaks, cardinals, sparrows, finches*)

APPENDAGES



digging (front legs)

for digging into soil to suck plant root juices (*cicadas, mole crickets*)



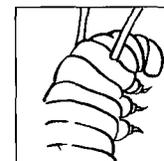
digging (back legs)

for digging into wood for pulp (*beetles, wasps*) or digging into soil for organisms (*spadefoot toads, beetles*)



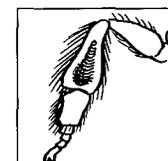
grabbing

for grabbing smaller, weaker or quick-moving prey (*mantids, assassin bugs*)



hooking

for attaching onto food plants (*moths, butterflies, beetle larvae*)



collecting

for collecting pollen (*bees*)

INSECTS



GRASSHOPPERS

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Cockroaches		between or under plant leaves; indoors							moist human food, pet food, organic matter
Crickets		under moist soil; in high grasses and herbs; on the ground, bushes, and trees		seeds, roots, seedlings, berries, leaves	seeds, roots, seedlings, berries, leaves			other crickets, aphids, caterpillars	dead insects
Grasshoppers <i>(illustrated above)</i>		in high grass or sparse vegetation; on or below shrubs and trees; on the ground	stems, leaves	stems, leaves	leaves				
Katydid		on the ground; in grass; on herb stems and leaves; on leaves of trees and shrubs		flowers, leaves	flowers, leaves	leaves			
Mantids		on herb leaves, flower heads, and low shrubs						grasshoppers, caterpillars, flies, butterflies, bees, wasps, moths, spiders	



HOPPERS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Aphids		on plant stems and twigs	stem sap	stem sap	twig sap				
Cicadas		in tall trees			root juices (l), limb sap, twig sap (a)	root juices (l), limb sap, twig sap (a)			
Leafhoppers <i>(illustrated above)</i>		on leaves	leaf sap	leaf sap	leaf sap	leaf sap			
Scale Insects		on bark, twigs, leaves, pads, and stems of plants			stem sap, twig sap, leaf sap	stem sap, twig sap, leaf sap	sap— <i>cochineal bug only</i>		
Spittlebugs		in a froth of bubbles on herb stems and shrub twigs		stem sap	twig sap				
Treehoppers		in trees and shrubs; in grass	leaves (l)	leaf sap (a)	leaf sap (a)	twig sap, fruits (a)			



FLIES

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Blowflies and Houseflies <i>(illustrated above)</i>		near flowers, animal carcasses, dead plants, feces, and trash		nectar					feces, decaying animals and plants, fresh food

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

		FOOD SOURCES							Animals	Other
		Plants					Animals	Other		
	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees			Cacti	
FLIES <i>continued</i>		Frit Flies	on low herbs; on highest node of grass stems (l)	stems (l)						dead herb and grass leaves
		Gall Midges and Gall Flies	on rotting plant material or fungi (l); in galls on herbs and shrubs (l); in termite or ant nests (l); near herbs and shrubs (a)		stems, leaves	leaves				dead plants, fungi
		Hover or Flower Flies	hovering over flowers		nectar (a)				aphids, larvae of scale insects (l)	
		Mosquitoes	near damp places		fruit juices, flower nectar— <i>males only</i>				blood of birds and mammals— <i>females only</i>	
		Robber Flies	resting on leaves and flowers at the edges of woods and fields						leafhoppers, beetle larvae, bees and other flying insects (a), grasshopper eggs (l)	



		HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
BEEES, WASPS, ANTS		Ants <i>(illustrated above)</i>	in mounds and underground nests; under stones; on the ground; on tree twigs and trunks; in dead trees	seeds	nectar, pollen, berries, seeds	nectar, pollen, berries, seeds			termites, liquid from aphids, other small insects, body parts of large insects	fungi
		Bees	in large patches of flowers; near hollow or dead trees; flying low over ground; nesting under cactus arms		nectar, pollen	nectar, pollen	nectar, pollen			
		Hornets and Wasps	around edges of woods; on the ground; on flower clusters; near food, trash, and picnic sites; in underground nests, mud nests, or aerial paper nests; in canopies of dead trees; nesting under cactus arms		nectar (a)	nectar (a)	nectar, juices from crushed or rotting fruits (a)		pre-chewed insect larvae, crickets, grasshoppers (l), insects, juices of beetles (a), spiders	

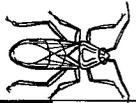


		HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
BEEETLES		Bark Beetles	in dead trees, seeds, and roots of plants		seeds, roots (l)		inner bark (l), fruits (a)			
		Firefly Beetles	clinging to leaves; on tree trunks and branches; under bark; in decaying plants; in moist places						insect larvae, slugs, snails	
		Ground Beetles <i>(illustrated above)</i>	deep in the soil near plant roots (l); at the ground surface; under leaves or rocks; in rotting wood (a)						caterpillars, fly larvae, cutworms, other insects, snails, slugs, earthworms	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

FOOD SOURCES

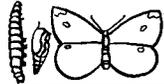
	HABITAT	WHERE FOUND	Plants					Animals	Other	
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti			
BETLES <i>continued</i>	June Beetles		in soil in grassy fields	roots (l)	roots (l), pollen, leaves (a)	pollen, leaves (a)				
	Ladybug Beetles		on plants with insects on them						aphids, scale insects, mealybugs, mites	
	Leaf Beetles		in weedy, open areas; in bushes; hiding on the ground; (rarely) on trees		leaves (l), flowers (a)	leaves (l), flowers (a)				
	Longhorned Beetles		on flowers; near fallen trees or logs		leaves, fruits, sap, roots, twigs (a)	leaves, fruits, sap, roots, twigs (a)	wood (l)		dead wood (l)	
	Rove Beetles		on tree leaves, flowers, and mushrooms; under bark; in leaf litter; under stones and logs; around decaying matter						fly larvae, springtails, mites, worms	fungi, dead animals, dung
	Tiger Beetles		in sunny spots with dry soil and sparse plants						ants, flies, other small insects, caterpillars	
	Weevils		on or in dead branches, stumps, and logs; on tree leaves; on woody fungi; on or in acorns, nuts and other fruits; on all parts of herbs		roots, stems, seeds, flowers, fruits	roots, stems, seeds, flowers, fruits	wood, needles, other leaves			dead wood, fungi



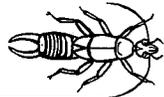
	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
TRUE BUGS	Ambush Bugs							flies, honeybees, butterflies, moths, true bugs	
	Assassin Bugs							honey bees, caterpillars, beetle larvae, other insects	
	Boxelder Bugs		on tree trunks and buildings in sunny locations				leaves, fruits		
	Damsel Bugs		near plants with insects on them						aphids, leafhoppers, tree-hoppers, small caterpillars
	Plant Bugs		on herb and shrub leaves; near the edges of woods; on chainlink fences		leaf sap	leaf sap, small fruits			
	Seed Bugs <i>(illustrated above)</i>		in thickets; on herb leaves; in leaf litter		seeds				
	Stink Bugs		on plants	seed juices	seed juices	berries, other fruits	fruits		

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

INSECTS *continued*



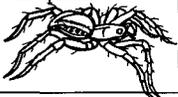
			Plants					Animals	Other
	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
BUTTERFLIES AND MOTHS	Gossamer-winged Butterflies	in open sagelands; around trees, shrubs, and flowers		leaves (l), nectar (a)	leaves (l), nectar (a)	leaves (l)			
	H Hairstreak Butterflies	in open wooded areas; in fields; at the edges of fields; around trees, shrubs and flowers		leaves (l), nectar (a)	leaves (l), nectar (a)	leaves (l),			
	Other Large Butterflies	around trees, shrubs, and flowers		leaves (l), nectar (a)		leaves (l), sap (a)			
	Satyr Butterflies	flitting about grasses and shrubs; weaving close to the ground	leaves, sap of sedges (l)	nectar (a)		sap, fermenting fruits, leaves (a)		liquid from aphids (a)	
	Skippers	visiting flowers; on wet mud	leaves (l)	leaves (l), fermenting fruits (a)	fermenting fruits (a)				
	Sulfur and White Butterflies <i>(White illustrated above)</i>	in sunny areas; around flowers		leaves (l), nectar (a)					
	Swallowtail Butterflies	around damp spots and flowers		leaves (l), nectar (a)	leaves (l)	leaves (l)			
	Large Silkworm Moths	on leaves (l); near flowers (a)		leaves	leaves	leaves			
	Narrow V-winged Moths	on low herbs and cacti; in trees		leaves (l), nectar (a)		needles, other leaves (l)	pads (l)		
	Wide V-winged Moths	camouflaged on tree bark; on lichen-covered rocks	leaves (l)	leaves (l)	leaves (l)	needles, other leaves (l)	pollen (a)	lichens (l)	



	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
OTHER INSECTS	Antlions	in pits in dry sandy soil especially under building eaves and bridges						ants, other small insects (l)	
	Earwigs <i>(illustrated above)</i>	in damp places under bark, logs, and stones; in soil and leaf litter; on plants, shrubs and trees		nectar, leaves				mites, aphids, insect larvae, pupae	
	Springtails	in leaf litter; in mosses; in rotting wood; in soil; on snow		germinating seeds, roots				fungi, dead herb and grass leaves	
	Termites	in dead wood or soil; in cactus carcasses and dead yucca stalks	leaves			wood		dead leaves, roots, vines, wood, cacti	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

OTHER ANIMALS WITHOUT BACKBONES

	HABITAT	WHERE FOUND	Plants						Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti			
Daddy-longlegs 	  	on open ground; in tree bark cracks; in wood piles; in grass							aphids, leafhoppers, beetle larvae, spiders, snails, centipedes, earthworms	dead insects
Mites and Ticks  	   	in leaf litter and surface soil; in soil under shrubs; on plants and animals							aphids and their eggs, animal fluids	fungi, bacteria
Pseudoscorpions 	   	in dry sand mixed with oak leaf litter; on mosses; under loose bark; in leaf litter; under stones; in tree hollows; in decaying cactus boots							springtails, ants, flies, mites, termites, caterpillars, daddy-longlegs, spiders, sow bugs, pill bugs, earthworms	
Scorpions  		in dark crevices; under bark of desert trees and shrubs; under stones and leaf litter; in small, underground burrows							insects, spiders, (occasionally) young lizards and snakes	
Spiders Comb Clawed Spiders 	 	among fallen branches; under trash; in sheltered corners of buildings							insects	
Crab Spiders 	  	on tree bark; among debris on ground; on leaves and stems of low shrubs; in tall grasses; in flower heads							insects	
Hammock Spiders 	 	in shrubby areas; near buildings; in sheet webs spun in the grass; between fence posts or buildings; on lower branches of trees							insects	
Jumping Spiders 	  	in tall grasses and low herbs; on tree trunks; on desert shrubs and flowers							insects	
Orb Spiders  	   	in tall grasses and low shrubs; hanging in or below webs; on stone walls							insects	
Wolf Spiders 	  	on the soil surface between grasses; in burrows; under leaf litter or stones							insects, beetle larvae, earthworms, centipedes, millipedes, sow bugs	

KEY:  Caution  Vacant Lots  Lawns  Fields  Wooded Areas  Deserts  Grasslands (a) adult (l) larva / nymph

OTHER ANIMALS WITHOUT BACKBONES

continued

FOOD SOURCES

	HABITAT	WHERE FOUND	Plants						Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti			
MOLLYSKS	Slugs 		on soil surface; on herbs and grasses	leaves	leaves					dead leaves
	Snails 		on soil surface; on herbs and grasses	leaves	leaves					fungi, dead leaves
MANTY-LEGGED	Centipedes 		in rotten wood and leaf litter; under stones and logs						insects, sow bugs, earthworms	
	Millipedes 		in leaf litter at ground surface; in soil; under stones and logs; on and under desert shrubs							dead leaves, bark, cactus pads
	Pill Bugs and Sow Bugs 		in damp places; under logs, boards and stones; in leaf litter		leaves, stems					dead stems, wood, leaves
WORMS	Earthworms 		in soil and leaf litter				fallen fruits, seeds			soil, dead leaves, dead animals, feces, fungi, bacteria

KEY:  Caution  Vacant Lots  Lawns  Fields  Wooded Areas  Deserts  Grasslands (a) adult (l) larva / nymph

AMPHIBIANS



FROGS AND TOADS

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Chorus Frogs and Peepers		on the ground; in damp leaf litter						insects, spiders	
Spadefoot Toads		in areas with gravelly or loose, sandy soil						insects, spiders	
Tree Frogs		in leaf litter, tree cavities, and underground crevices; on tree limbs						ants, beetles, grasshoppers, katydids, spiders	
True Frogs <i>(illustrated above left)</i>		in grassy areas; on the forest floor						beetles, caterpillars, grasshoppers, crickets, flies, mosquitoes, spiders, centipedes, millipedes, earthworms	
True Toads <i>(illustrated above right)</i>		under logs, boards, and flat stones; in leaf litter						ants, beetles, spiders, centipedes, millipedes, earthworms	

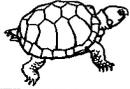


SALAMANDERS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Lungless Salamanders <i>(illustrated above)</i>		under trash, logs, bark, stones; in leaf litter; on moss						ants and other small insects with stingers and odors, beetles, earthworms	
Mole Salamanders		in leaf litter; in underground burrows in loose soil; in logs; under logs, boards, and flat rocks						large insects, insect larvae, sow bugs, earthworms, small mice, other amphibians	
Newts		under logs, boards, rocks, and leaf litter; along trails						springtails, aphids, earthworms	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

REPTILES



TURTLES

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Tortoises		on rocky hillsides and dry sandy areas; in open wooded areas with an understory; in dens	leaves	flowers, berries	leaves, berries		pads		
Box & Water Turtles Box Turtles (illustrated above)		at the edges of woods; in dens	leaves	fruits	berries	fallen berries		grasshoppers, cicadas, beetles, caterpillars, slugs— <i>grassland and desert species only</i>	dead animals, mushrooms

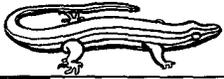


SNAKES

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Brown Snakes		in moist places; in areas with sparse plant growth; under trash; under debris on hillsides						soft-bodied insects, slugs, snails, earthworms	
Garter Snakes (illustrated above)		under logs, boards, or plants; in leaf litter and on the ground; sunning on grassy slopes.						insects, spiders, slugs, centipedes, earthworms, frogs, toads, fish, mice, moles, shrews	
Gopher Snakes		in dry areas; in mammal burrows; under rocks, logs, or boards; in areas with grasses and shrubs; in trees						lizards, baby birds, bird eggs, rats, gophers, ground squirrels, rabbits	
Hognose Snakes		in sandy areas						other snakes, lizards, toads, salamanders, birds	
King Snakes		in shrubs; on rocky hillsides; under rocks						other snakes, lizards, birds, eggs, mice	
Milk Snakes		under logs, boards, and leaf litter in sunny places; in crevices						beetles, insects, slugs, other snakes, lizards, eggs, chipmunks, mice	
Racer Snakes		in open, brushy areas, or sparsely wooded areas; hibernating on rocky hillsides						grasshoppers, crickets, moths, other snakes, toads, tree frogs, lizards, birds, eggs, rodents	
Ringneck Snakes		in moist places beneath boards, rotting logs, stumps, rocks; (occasionally) out in the open						insects, earthworms, other snakes, skinks, tree frogs, salamanders	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

REPTILES *continued*



FOOD SOURCES

	HABITAT	WHERE FOUND	Plants						Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti			
LIZARDS	Skinks <i>(illustrated above)</i>	 	in rocky areas with low shrubs; in grassy areas; in moist areas with loose soil and trees; under rocks, leaf litter, logs, and trash						beetles, grasshoppers, crickets, leafhoppers, adult and larval moths, wasp pupae, spiders, sow bugs, earthworms, small lizards	
	Geckos		in rock crevices, sand dunes and flats; under bark, dead cactus pads, logs, rubbish, and yucca stems; near buildings and trash						insects, spiders	
	Whiptails	 	in dry, disturbed, open areas with sparse plants; in leaf litter; in ditches; near gravelly soil; under shrubs; near trash; on fences						termites, ant lions, wasps, mantids, beetles, grasshoppers, daddy-longlegs, scorpions, spiders	
	Iguanids Anoles	 	on trees, fence posts, walls, and shrubs; in tall grasses and palm fronds; in shady areas						flies, beetles, moths, spiders	
	Collared Lizards		basking on large rocks; in rock crevices; in hilly areas; near small rock piles						other lizards, small snakes, grasshoppers, locusts, crickets, beetles, moths, spiders	
	Fence Lizards	 	in sunny, brushy, rocky areas; near old buildings; on woodpiles and fences; in old woodrat nests; in banks with rodent burrows; in burrows under brush						ladybug beetles, ants, wasps, leafhoppers, aphids, caterpillars, spiders, snails, sow bugs, millipedes	
	Horned Lizards	 	basking on rocks; in dry, open areas with shrubs and loose soil; in sandy, gravelly drainage areas; on open patches of hard-packed sand; near sunny anthills						ants, beetle larvae, butterflies, spiders, snails, sow bugs	
	Spiny Lizards		on rocks in sandy areas; in burrows under bushes; on tree trunks and sides of buildings			buds, leaves			ants, bees, wasps, flies, grasshoppers, caterpillars, true bugs, lizards	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

BIRDS



RAPTORS

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Falcons (illustrated above)		in open areas; on exposed poles and trees; soaring along large cliffs						grasshoppers and other insects, birds, rodents	
Hawks		in trees near roadsides; on telephone poles and fence posts; flying low over trees or desert shrubs; near edges of woods; nesting in cacti						grasshoppers, snakes, frogs, lizards, birds, mice, prairie dogs, squirrels, rabbits	
Vultures		circling high above open areas; nesting in caves, hollow logs, and under abandoned buildings; roosting on cacti							dead animals



OWLS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Owls (illustrated above)		on living and dead trees, or telephone poles; on the ground near abandoned gopher or prairie dog burrows; nesting in cactus arms						large insects, scorpions, centipedes, birds, mice, moles, shrews, squirrels, skunks	



GROUND BIRDS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Grouse (illustrated above)		in small depressions in the ground beneath shrubs; near thickets and trees; at the edges of woods; nesting in brush	leaves	seeds, leaves	blossoms, leaves, buds, twigs, berries, fruits	acorns, nuts, seeds		grasshoppers, crickets [ants, ladybug beetles— <i>sage grouse only</i>]	
Prairie Chickens		in tall grass	seeds	seeds	fruits, buds, leaves	fruits, buds, leaves		grasshoppers, beetles, caterpillars, ants	
Quail		along grassy roadsides; near thickets; under trees		seeds	seeds	acorns		ground beetles, leaf beetles, weevils, caterpillars, grasshoppers, crickets, spiders, snails, centipedes, sow bugs, [true bugs, leafhoppers, ants— <i>gambel's quail only</i>]	
Wild Turkeys		in wooded areas with scattered clearings; at the edges of woods	seeds	seeds	seeds, fruits	seeds, cones, acorns		beetles, grasshoppers, crickets, ants, wasps, bees, flies, true bugs, caterpillars, spiders, snails, millipedes, centipedes, salamanders	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

BIRDS *continued*



DOVES

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Doves <i>(illustrated above)</i>		in places with trees and shrubs; searching on ground for seeds; nesting on cactus arms, or low in shrubs	seeds	seeds, [berries— <i>Inca doves only</i>]	berries, [nectar— <i>Inca doves only</i>]		nectar— <i>Inca doves only</i>		
Rock Doves (pigeons)		near food trash; nesting on rock ledges, window ledges, and overhangs	grain in bird feed	seeds, berries				insects, earthworms	



OTHER BIRDS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Roadrunners		on the ground near shrubs; nesting in cactus arms						grasshoppers, large crawling insects, scorpions, spiders, small snakes, lizards, young ground-nesting birds, bird eggs, mice, rodents	
Woodpeckers <i>(illustrated above)</i>		on living or dead tree trunks and branches; in areas with low shrubs; in, on, or near cacti; on the ground near anthills— <i>flickers only</i>			berries	acorns, nuts, seeds, berries, [sap— <i>sap-suckers only</i>]	fruits	ants, adult and larval beetles, termites, crickets	



PERCHING BIRDS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Blackbirds, Orioles, and Meadowlarks		in thick brushy areas, open areas with sparse shrubs, wet areas, and parking lots; moving through tall trees; feeding on the ground; near buildings and trash— <i>grackles only</i>	seeds		berries— <i>orioles only</i>	berries— <i>orioles only</i> ; cones— <i>meadowlark only</i>		bees, grasshoppers, crickets, caterpillars, sow bugs, snails, earthworms, bird eggs, [ants, grubs, weevils, cankerworms— <i>red-winged blackbirds only</i>]	
Chickadees, Titmice, and Verdin		in edges and interiors of wooded areas; on low branches; nesting in rotting tree stumps; nesting in cacti— <i>verdin only</i>			berries, seeds	seeds, cones, nuts		moth and butterfly adults, larvae, and eggs, katydids, weevils, flies, wasps, scale insects, leafhoppers, treehoppers, aphids	
Grosbeaks, Sparrows, Finches, and Cardinals <i>(sparrow illustrated above)</i>		near edges of deciduous woods; in brushy undergrowth of wooded areas; in weedy, brushy, or grassy fields; perched on tips of herb stalks or tree branches; among small saplings; near buildings and orchards; in desert shrubs and thickets	seeds	seeds	fruits, berries	seeds, cones, fruits, berries		beetles, ants, bees, wasps, grasshoppers, caterpillars, flies, [aphids— <i>finches only</i>]	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

	HABITAT	WHERE FOUND	FOOD SOURCES						Animals	Other
			Plants							
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti			
PERCHING BIRDS <i>continued</i>	Jays, Crows, Ravens, and Magpies									
	Jays		in dense thickets; pine and oak woods; perched high in trees; on the ground			berries	acorns, cones		caterpillars, grasshoppers, wasps, beetles, bird eggs, young birds	
	Crows and Ravens		near roadsides and orchards; in open wooded areas; feeding in grass; near trash; nesting in trees or cacti			seeds, berries	acorns, berries, fruits		cutworms, beetles, grasshoppers, caterpillars, cicadas, scorpions, spiders, lizards, amphibians, bird eggs, young birds, small mammals	
	Magpies		in open country and pine woods; near heavy brush and brush piles; nesting in trees; on telephone wires			berries	berries, fruits		weevils, ground beetles, wasps, bees, grasshoppers, rodents	
	Larks		in open areas with brushy borders; nesting in grass or open patches of bare soil between desert shrubs		seeds				adult and larval beetles, caterpillars, grasshoppers	
	Mockingbirds and Thrashers		in brushy areas; on dry hillsides; nesting in desert shrubs; flying between bushes; on ground picking through leaf litter		berries	berries, fruits	berries, fruits		beetles, ants, bees, wasps, grasshoppers, crickets, lizards, salamanders, [frogs— <i>thrashers only</i>]	
	Nuthatches		on tree trunks and branches; nesting in tree cavities				acorns, cones		beetles, weevils, ants, wasps, moth and butterfly adults, larvae, and eggs, caterpillars, scale insects, spiders	
	Robins and Bluebirds		near abandoned orchards and roadsides; in open woods, clearings, and lawns; on fence posts; nesting in tree cavities— <i>bluebird only</i>			berries	berries, fruits		ground beetles, weevils, caterpillars, ants, snails, millipedes, sow bugs, [earthworms— <i>robins only</i>]	
	Starlings		near orchards; on building ledges; nesting in cactus cavities			berries	berries, fruits		ground beetles, grasshoppers, caterpillars, cicadas, millipedes	
Swallows		in cacti; near buildings and cliffs; flying overhead						flies, bees, wasps, moths, ground and other beetles, weevils, ants, grasshoppers, spiders		
Wrens		on or near ground with leaf litter; in partly brush-covered areas; in rocky, brushy ravines; nesting in tree cavities; nesting in cactus arms— <i>cactus wren only</i>			seeds, berries	acorns, cones, seeds	fruits	beetles, grasshoppers, crickets, caterpillars, ants, wasps, flies, millipedes		

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

MAMMALS



GNAWING MAMMALS

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Jumping Mice		in shrubs; under grasses; near wooded, rocky areas	seeds	seeds, fruits	berries			caterpillars, beetles	mushrooms
Mice and Rats Deer Mice		in open or dense areas; in abandoned bird nests in trees; in hollow logs; under tree stumps; in rock piles; under low bushes		seeds			seeds, nuts, cones, acorns, seedlings	crickets, grasshoppers, beetles	
Rats		in burrows along foundations of buildings; in rubbish piles and ravines; (occasionally) in fields near buildings							garbage, household grains
Voles		in matted grass; in burrows; underneath shrubs	leaves, seeds	leaves, seeds			bark, leaves, seeds, acorns	insects	mushrooms
White-footed Mice		in thick, brushy, wooded and rocky areas; in trees; in hollow logs; under tree stumps; in rock piles					seeds, acorns, nuts, cones, fruits, roots, seedlings	grasshoppers, beetles, moths, craneflies, caterpillars, pupae, cocoons, snails, centipedes, millipedes	
Woodrats		in cone-shaped nests near cacti; in stick nests on the forest floor; in crevices in cliffs and rocky areas			seeds		acorns, cones, nuts, berries	pads	ants, beetles, termites
Pocket Gophers		in underground burrows in loose, slightly moist soil	roots	tubers			roots of seedlings		
Pocket Mice, Kangaroo Mice, and Kangaroo Rats		in sandy areas with sparse vegetation; in hardpacked soil; in wooded or grassy foothills; in tiny burrows with entrances under shrubs and cacti	seeds, [leaves— <i>kangaroo rats only</i>]	seeds, [leaves— <i>kangaroo rats only</i>]	seeds, [leaves— <i>kangaroo rats only</i>]			insects— <i>pocket mice only</i>	
Squirrels Chipmunks		in brushy and wooded areas; on stone walls; near trash cans		berries, bulbs	berries		cones, acorns, nuts, seedlings	beetles, slugs, cankerworms, earthworms	mushrooms
Squirrels (<i>illustrated above</i>)		on branches of trees; on the ground; sitting on boulders			berries		acorns, seeds, nuts, cones, buds, inner bark, galls	beetles, caterpillars, bird eggs, young birds	mushrooms
Ground Squirrels		on sandy flats near plants; on partly wooded slopes; in open grassland; on fence posts	leaves, seeds	leaves, berries, seeds, bulbs	seeds, leaves		fruits, seedlings	fruits, flowers	insects, eggs, birds
Woodchucks		near plants; in open woods and fields; in ravines; along roadsides	leaves, roots	stems, flowers, leaves, roots	twigs		fruits		

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

FOOD SOURCES

	HABITAT	WHERE FOUND	Plants					Animals	Other
			 Grasses	 Herbs	 Shrubs/Vines	 Trees	 Cacti		
GNAWING Porcupines	 	on or in trees; in rocky dens; near desert shrubs		leaves, stems, fruits		roots, leaves, seeds, acorns, twigs, inner bark, buds, berries, fruits, cones			

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
 INSECT-EATING Moles	   	underground in loose soil		bulbs				insect larvae, spiders, worms, centipedes, millipedes	
Shrews <i>(illustrated above)</i>	   	in other animals' nests; in large masses of plants; at the base of desert plants; under logs; near rocky places; on dry hillsides; in brushy areas		seeds, fruits		fruits, seeds, cones, nuts, roots		springtails, gypsy moths, moth and beetle larvae, grasshoppers, crickets, spiders, snails, slugs, centipedes, sow bugs, worms, mice, voles, salamanders, birds, small snakes, young rabbits	

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
 RABBITS, HARES Rabbits and Hares Cottontails <i>(illustrated above)</i>	   	in forests and dense thickets; sitting in small, scratched-out areas among clumps of grass; in desert trees	leaves	stems, leaves	twigs, bark, buds	twigs, sapling buds, bark	pads		
Jackrabbits	 	sitting in small, scratched-out places in shrubby areas; under desert shrubs	leaves	leaves, stems	leaves, twigs		pads		
Snowshoe Hares	  	in small, scratched-out areas in thickets; near logs under trees; in hollow logs	leaves	leaves	leaves, buds, twigs, fruits	leaves, sapling twigs, bark			

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
 HOVED Deer <i>(illustrated above)</i>	   	near brushy edges of woods; in fields	leaves	leaves	leaves, twigs, buds	leaves, twigs, buds, bark, fallen fruits			mushrooms

KEY:  Caution  Vacant Lots  Lawns  Fields  Wooded Areas  Deserts  Grasslands (a) adult (l) larva / nymph

MAMMALS *continued*



FOOD SOURCES

FLESH-EATING MAMMALS

	HABITAT	WHERE FOUND	Plants					Animals	Other
			Grasses	Herbs	Shrubs/Vines	Trees	Cacti		
Doglike Mammals Coyotes		in dens; along brushy edges of woods			berries	fallen fruits	fruits	snakes, frogs, grouse, mice, squirrels, rabbits, livestock	dead animals
Foxes		in brushy fields and dense, rocky woods; in dens; in trees			berries, fruits	fallen fruits		insects, scorpions, snakes, lizards, frogs, toads, ground birds and their eggs, mice, voles, shrews, skunks, rabbits, squirrels, porcupines, deer	
Raccoons <i>(illustrated above)</i>		in trees; near trash; near streams, rivers, and lakes			berries, fruits	fruits		insects, slugs, snails, turtles, toads, frogs, salamanders, crayfish, eggs, muskrats, moles, mice, shrews, young rabbits	garbage
Skunks Spotted Skunks		in brushy or rocky areas; eating in trees; in hollow logs; in woodpiles		berries	berries, fruits	berries		beetles and their larvae, spiders, centipedes, millipedes, small snakes, lizards, birds, salamanders, eggs, crayfish, mice, rats, young rabbits	dead animals
Striped Skunks		in dens; on rock and brush piles; in hollow logs on sunny slopes; near trash; in grassy areas		berries	berries, fruits		fruits	crickets, grasshoppers, beetle larvae, moth larvae, spiders, centipedes, millipedes, turtles, eggs, snakes, frogs, toads, voles, mice, rats, chipmunks, moles	garbage



OTHER MAMMALS

	HABITAT	WHERE FOUND	Grasses	Herbs	Shrubs/Vines	Trees	Cacti	Animals	Other
Opossum <i>(illustrated above)</i>		in wooded areas; near city trash and brush piles		berries	fruits	acorns, fruits		insects, lizards, bird eggs, mice	garbage
Armadillos		in shrubby, open woods; in underground burrows					fruits	beetles, spiders, centipedes, millipedes, snakes, lizards, toads, salamanders, birds and their eggs	dead animals
Bats		in rocky outcrops; on building ledges; in hollow trees; hanging from tree branches		nectar, pollen	nectar, pollen	nectar, pollen	nectar, pollen	moths, crickets, ants, other insects	

KEY: Caution Vacant Lots Lawns Fields Wooded Areas Deserts Grasslands (a) adult (l) larva / nymph

REFERENCES

Information presented within the *Who Eats What* guide was drawn from the following sources:

Benyus, J. 1989. *The Field Guide to Wildlife Habitats of the Eastern United States*. New York: Fireside/Simon & Schuster.

Benyus, J. 1989. *The Field Guide to Wildlife Habitats of the Western United States*. New York: Fireside/Simon & Schuster.

Brown, L. 1985. *The Audubon Society Nature Guide to Grasslands*. New York: Knopf.

Burt, W. 1964. *A Peterson Field Guide to the Mammals*. Boston: Houghton Mifflin.

Conant, R. 1958. *A Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America*. Boston: Houghton Mifflin.

Macmahon, J. 1992. *The Audubon Society Nature Guide to Deserts*. New York: Knopf.

Martin, A., Zim, H., & Nelson, A. 1989. *American Wildlife and Plants: A Guide to Wildlife Food Habits*. New York: Dover.

Murie, O. 1954. *A Peterson Field Guide to Animal Tracks*. Boston: Houghton Mifflin.

Stebbins, R. 1954. *Amphibians and Reptiles of Western North America*. New York: McGraw Hill.

Swan, L. & Papp, C. 1972. *The Common Insects of North America*. New York: Harper & Row.