

Junior Snow Ranger Booklet

Winter Series 2011



Galena Creek Regional Park

The Great Basin Institute and Washoe County Department of Regional
Parks and Open Spaces

Dear Parents:

Welcome to the Junior Snow Ranger Program at Galena Creek Regional Park! This exciting program was developed by Park Ranger Marie D. Fong, and we're proud to be able to offer it again through Galena Creek Visitor Center! Get ready to have a great time with your family learning, exploring, sharing, and playing in the diverse environment of Galena Creek Park Regional Park. Don't worry; there is no need for you to have all the answers to these activities. These activities are designed to be exploratory, while challenging all participants to take a closer look at their surroundings. While accompanying your children you may need to help with some explanations or read the directions to younger Junior Snow Rangers.

The Junior Snow Ranger Program has been created to give children and parents an opportunity to start or continue enjoying Galena Creek Park during the unique winter months. If you are new to the area or are just discovering the park for the first time, you are in for a treat. Galena Creek Park is a 420-acre park operated by Washoe County's Regional Parks and Open Spaces Department. The new visitor center at Galena Creek is operated by the Great Basin Institute, in cooperation with Washoe County and the Forest Service. Located on the eastern slope of the Sierra Nevada this park is full of diverse natural, cultural, historical, and recreational resources. There are a variety of recreational opportunities throughout the year; hiking, fishing, picnicking, and horseback riding are warm weather favorites; snowshoeing, cross country skiing, and snowplay are popular activities during the winter.

Be prepared for cold winter weather! Wearing appropriate winter attire in many layers and warm boots will not only protect you from the weather but will also make completing the activities more enjoyable. Pay attention to local weather reports and know you and your children's physical abilities and limits. Carry water, extra gear, and be aware of trail conditions and distances before setting out.

As you complete the activities of the Junior Snow Ranger program at Galena Creek Park enjoy the park and please remember that all plants, wildlife, geological, and historical objects are protected by law. Please do not disturb or remove any of these items from the park. The park's winter hours are 8am-5pm daily. Beginning Saturday April 2, 2005 the park is open from 8am-7pm daily.

We would love to hear any comments you wish to share with us regarding your experience with the Junior Snow Ranger Program. Have a great time!

The Naturalists at Galena Creek Visitor Center & Washoe County Rangers

Questions or comments, please contact:
Community Outreach Coordinator : Katie Osborn
Galena Creek Visitor Center *on the Mount Rose Byway*
(775) 849-4948 or kosborn@thegreatbasininstitute.org





Welcome to the Junior Ranger Program!



How to become a Junior Snow Ranger:

You must be between the ages of 6-12 years old. Using this activity book as your guide, complete the checklist below. When you complete each activity a parent or guardian must initial the item on the checklist below. There is no time limit or deadline for completing the activities.

When you have completed all of your requirements present this booklet to any staff member at Galena Creek Visitor Center or Park Ranger John Keesee at Galena Creek Park. You may also mail this page of the booklet to: Galena Creek Visitor Center, 18350 Mt. Rose Highway, Reno, Nevada 89511. When a Visitor Center naturalist or park ranger has checked off your list you will be presented with your certificate. If you have mailed your information, your certificate will be mailed to you. You will be invited to an End-of-the-Winter Party after earning your certificate!

Please fill out the following information:

Name _____ Age _____ Birthdate _____

Address _____

City _____ State _____ Zip _____

Level I Approved _____ Date _____

Level II Approved _____ Date _____

Level III Approved _____ Date _____

Check the Junior Snow Ranger Level You Want to Achieve!

(only one badge may be earned at a time)

Level I-Recommended for ages 6-7. Must complete at least 3 activities at this level.

Level II-Recommended for ages 8-10. Must complete at least 5 activities at this level.

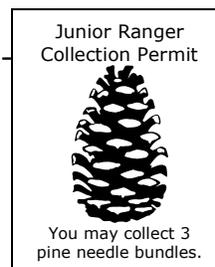
Level III-Recommended for ages 11-12. Must complete at least 7 activities at this level.



Junior Snow Ranger Checklist		
Activity Title	Page	Parent's Initials
Galena Creek Trees	4	_____
Take a Hike	5	_____
Keeping Warm	6	_____
Outdoor Activities	7	_____
Wild Treasures	8	_____
Meet a Ranger	9	_____

Galena Creek Park Trees

Galena Creek's forest has many different species of trees, mainly coniferous trees. Coniferous trees, such as pines and firs, are characterized by having specialized leaves called needles and by the cones they produce. Coniferous trees can be identified by measuring the length of their needles and counting the number of needles bundled together. Three different kinds of coniferous trees grow in this park.



Identify the Trees

Level I: Find and identify at least one type of coniferous tree.

Level II: Find and identify at least two types of coniferous trees.

Level III: Find and identify all three types of coniferous trees.

Collect and attach a group of needles next to the name of the tree. To measure the length of the needles refer to the ruler on the back cover.

Name of Tree Attach Needle Above

Name of Tree Attach Needle Above

Name of Tree Attach Needle Above

Common Nevada Coniferous Trees

Species	# of Needles in Bundle	Length of Needles	Cone Size	Height	Bark Color
Jeffery Pine*	3	5"-10"	5"-8"	60'-170'	Dark Brown
Lodgepole Pine*	2	1"-2¾"	1"-1¾"	50'-80'	Pale Reddish/Gray
Ponderosa Pine*	3	5"-10"	3½"-5"	60'-225'	Red/Brown
Sugar Pine	5	2"-3½"	6"-18"	100'-180'	Cinnamon/Purple
White Fir*	1	½"-1½"	1"-5"	60'-200'	Gray/Drab Brown
Red Fir	1	½"	1¾"-2¾"	60'-175'	Dark Red

* Located in Galena Creek Regional Park

Take a Hike

Take a self-guided nature hike on the Galena Creek Nature Trail. Make sure to take a trail guide with you before you start. You can find a trail guide at the Galena Creek Visitor Center, located at the new North entrance of the park, or at the Park Ranger office, located on the south side of the park, or at the Information Board by the creek.

Finding all the markers might be a challenge in the snow, but usually you can follow the trail in the snow if you look for the markers, follow the map, and observe where people have been hiking. Match the numbers on the posts to the numbers in the trail guide and read each section.

Start Hiking

Level I: After your hike, answer 3 of the following questions.

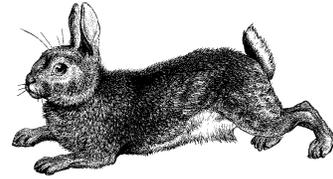
Level II: After your hike, answer 5 of the following questions.

Level III: After your hike, answer 8 of the following questions.

Try to answer the questions without using the trail guide!

1. What is Nevada's state flower? _____
2. What is the most common pine tree in Galena Creek Park? _____
3. Did you see the Fish Hatchery? _____
4. What plant produced the seeds that Native Americans in this region boiled to make a violet dye? _____
5. Is mistletoe good for a tree? _____
6. Is frost wedging still happening in the park? _____
7. On what mountain does Galena Creek begin? _____
8. Why is the park so full of large rocks? _____
9. Did you see any erosion that could have been caused by flooding? Where? _____
10. Are dead trees still helping the forest ecosystem? _____

Keeping Warm



Have you ever wondered how the animals of the forest stay warm during the long, cold winter months? Animals that live in cold habitats have made many adaptations or changes throughout a long time period. These changes help them survive the cold winters, often where less food is available.

Some animals migrate to warmer climate in the fall and return to the forest in the spring. Some animals hibernate or go dormant in the winter. However, some animals remain active in their homes year round. These animals make many changes in the fall, as the weather grows colder. They usually grow more fur or feathers. Some animals such as the Long-tailed weasel will change the color of their fur to blend into the snow. Many animals such as birds and rodents will store or cache food for the lean winters. Other animals will consume enough food in the fall to gain extra weight, which keeps them healthy when there is less food to be found.

Keeping Warm

Level I: Complete and check off two of the following activities.

Level II: Complete and check off four of the following activities.

Level III: Complete and check off seven of the following activities.

___ Find a bird that has remained at Galena Creek Park this winter. Write the name of the bird or a good description so that a visitor center naturalist can help you identify the bird. _____

___ Discuss which birds have migrated from Galena Creek Park. Write the name of a bird you think lives in the park in the summer months and what month it returns from its migration. _____

___ Look for some seeds that an animal could find and eat in the winter.

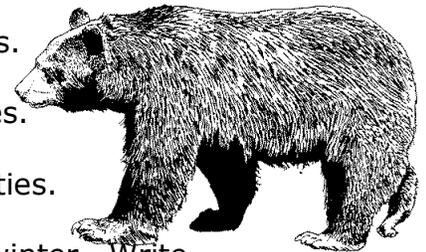
___ Name an animal that is hibernating in the park this winter. _____

___ Look for a bird fluffing up its feathers to stay warm and insulated.

___ Name a predator in the park that is non-migratory. _____

___ Find a sign that an animal has been active in the park this winter. What did you find? _____

___ Name an animal that changes its fur color to be camouflaged in the snow (other than a long-tailed weasel). _____



Outdoor Activities



Every park has something different and special you can do on your visit. Look at the list below of activities you can do here at Galena Creek Regional Park. Match the activity to the appropriate icon and circle the activities in which you have participated today. For each circled item write where you participated in the activity.

Playing in the Park

Level I: Match all activities with icons and participate in at least 2 activities.

Level II: Match all activities with icons and participate in at least 3 activities.

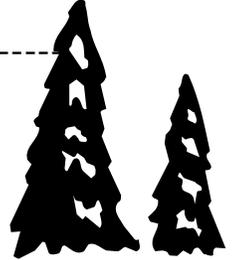
Level III: Match all activities with icons and participate in at least 4 activities.

Icon	Activity	Where you Participated
	Snowshoeing	_____
	Fishing	_____
	Self Guided Hike on the Nature Trail	_____
	Picnicking	_____
	Hiking	_____
	Sledding	_____
	Wildlife Viewing	_____
	Dog Walking	_____
	Cross Country Skiing	_____
	Meet a Park Ranger	_____

Wild Treasures

Galena Creek Park is home to many different species including trees, shrubs, animals and more. It is getting harder and harder to find them in the wild. Many of these species are in need of protection. See if you can find the names of the diverse living treasures in the search below.

Find the Different Words in the Search



Level II: Find and circle all the items in the word search

Level III: Find and circle all the items in the word search. Highlight the shrubs in yellow, the trees in green, the animals in blue, and the birds in red.



Note: The words in Parentheses are not included in the word search.

- Sagebrush
- Jeffrey (Pine)
- Red-tailed Hawk
- Cottontail (Rabbit)
- Quaking Aspen
- Coyote
- Elderberry
- (Green Leaf) Manzanita
- Steller's Jay
- Mule Deer
- Ponderosa (Pine)
- (Hairy) woodpecker
- (Ground) Squirrel
- (Yellow-bellied) Sapsucker
- White Fir
- Bitter (brush)
- (Bushy-tailed) wood rat
- Mahogany
- (Mountain) Chickadee
- Lodgepole (Pine)

S	R	Q	Z	X	W	O	O	D	P	E	C	K	E	R
T	E	C	U	V	B	O	N	M	L	K	J	W	H	C
E	K	L	I	A	T	N	O	T	T	O	C	H	S	H
L	C	G	F	D	K	S	A	D	Q	E	O	I	Q	I
L	U	W	R	T	Y	I	U	O	R	I	Y	T	U	C
E	S	M	A	N	Z	A	N	I	T	A	O	E	I	K
R	P	Z	J	P	X	C	V	G	B	F	T	F	R	A
S	A	G	E	B	R	U	S	H	A	U	E	I	R	D
J	S	T	F	A	W	L	D	B	C	S	J	R	E	E
A	K	V	F	N	M	L	O	D	G	E	P	O	L	E
Y	X	O	R	E	E	D	E	L	U	M	K	E	J	S
G	Y	P	E	L	D	E	R	B	E	R	R	Y	N	X
A	S	D	Y	N	A	G	O	H	A	M	F	H	J	L
P	O	N	D	E	R	O	S	A	R	E	T	T	I	B
F	A	R	E	D	T	A	I	L	E	D	H	A	W	K

Meet a Ranger or Naturalist

Park Rangers and Naturalists work around the world and do many different jobs. Some Park Rangers work in Africa to protect endangered animals such as elephants and rhinoceroses. Others work in Costa Rica helping visitors spot the hard to see sloth and other jungle animals. Naturalists may conduct research on threatened species, or bring nature to the classroom.

All Park Rangers and Naturalists have similar goals no matter where they work; from protecting the plants and animals, as well as other resources, in their parks, to helping park visitors enjoy each park they visit.

Interview a Park Ranger/Naturalist

Level I: Interview a ranger or visitor center naturalist at Galena Creek Park using 4 of these questions.

Level II: Interview a ranger or visitor center naturalist at Galena Creek Park using 5 of these questions.

Level III: Interview a ranger or visitor center naturalist at Galena Creek Park using all of these questions.

****Please use an extra sheet of paper to write down the responses.****

Name of Park Ranger/Naturalist: _____ Date of Interview: _____

Location of Interview: _____ Their Employer is: _____

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1. What does the ranger/naturalist like about his/her job?
 2. How many years has the ranger/naturalist worked in the field?
 3. Why did the ranger/naturalist choose to work in this field of study?
 4. How did the ranger/naturalist prepare for their job?
 5. What is one problem the ranger/naturalist has to work with regularly?
 6. What is one thing the ranger/naturalist would like you to learn from this interview?
 7. What is the most rewarding thing about being a ranger/naturalist?
 8. What is the ranger/naturalist's favorite wild animal in the park?

Take a Closer Look

As you walk, hike, or ride through Galena Creek Park it is easy to forget to take a closer look around. Taking a scavenger hunt can help you observe many small details that you might otherwise miss. Get ready to start searching.

Go on a Scavenger Hunt

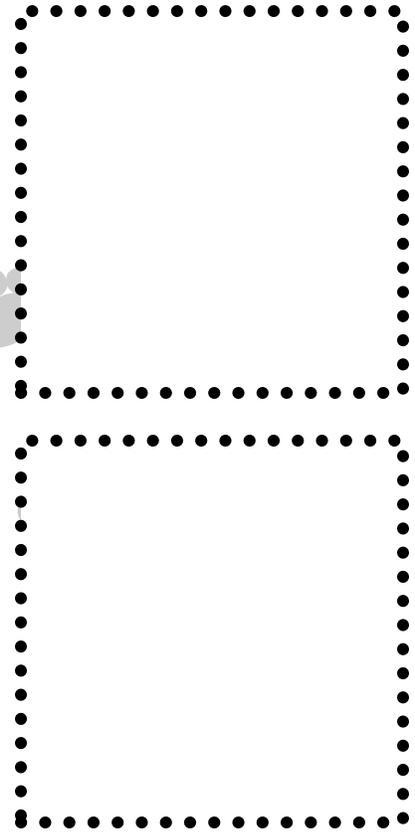
Level I: Find at least 10 of the following items and draw 2 items you found.

Level II: Find at least 15 of the following items and draw 2 items you found.

Level III: Find all of the following items and draw 2 of the items you found.

Put an X next to each item you find, but remember collecting the items is not allowed. Make sure you do not disturb or destroy any of the plants, animals or their homes.

- A feather
- Exactly 10 of something
- Two different textures
- Exactly 3 of something attached together
- A thorn, sticker, or barb
- A cloud in the sky
- Something triangular in shape
- Something round
- Something that is human-made
- Signs left by an insect
- A track not left by a human
- Something that tells you the wind is blowing
- Find two bushes with similar leaves
- Collect three pieces of litter to throw away
- Three signs of erosion
- Something naturally found in the park that is the color of your shirt
- A plant that has lost its leaves for winter
- Snow melting into the creek or into any other water source
- An area where snow has melted because of the sun





Geology is the study of our amazing, ever changing planet. That includes the study of earthquakes, volcanoes, tsunamis, and the formation of mountains, rivers and valleys. Studying rocks and land formations is an exciting activity especially when the rocks are capped with snow. Not only that but you can actually observe the slow process of frost wedging.

Rock Hunting

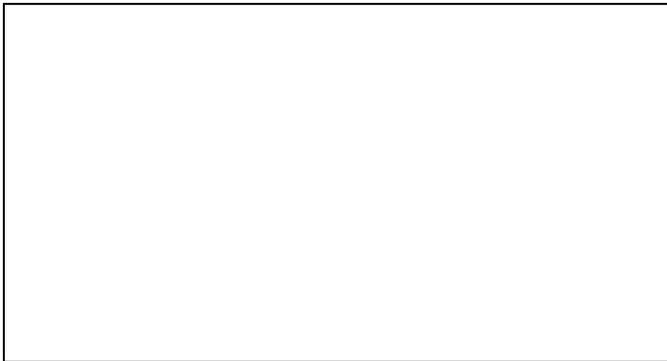
Level I: Complete one of the following activities.

Level II: Complete one of the following activities and one observation.

Level III: Complete both activities and the observation.

Rock Observation Activity

Find a rock and draw it here:



Now look at your rock and ask yourself the following questions: What does your rock feel like? Is your rock smooth and rounded, like rolling through a stream has shaped it? Does your rock have any hard edges, breaks, or cracks that might have happened when the rock fell? Does your rock have layer that you can see?

Frost Wedging Rock Activity

Frost wedging has changed many rocks at Galena Creek Park. Frost wedging happens when small amounts of water gets into cracks in the rock. When the water freezes and turns to ice, it expands. After this happens many times, over a long period of time, the rock splits! Did you know water is that strong? Find a rock that appears to have been split by frost wedging. There is a frost wedged rock so large that you can walk between it on the Nature Trail.

Looking for Lichen Observation

Look for scaly blotches of color on a rock. This is lichen. Lichen is a union between fungus and algae that coexist in a symbiotic relationship. Symbiotic means they help each other live. Algae make food and share it with the fungus and the fungus provides shelter for the algae. Find 5 examples of lichen. Are there different colors of lichen?

Sit in the Woods

Take a moment and enjoy what the park has to offer. On this journey, all you have to do is be quiet, sit under a tree, beside a rock, or anywhere you think is good. Look, listen, and enjoy the many different creatures you may have missed while busy playing or being active. Spend some time in the spot you have picked, without moving too much and without talking to friends. Make sure and tell your parent/guardian about what you are going to do and where you are going to stay to gaze at your surroundings. Have fun and be sure to keep your ears and eyes open.

Enjoying Nature

Level I: Draw as much of the environment, in as much detail as you can.
Level II & III: Answer the questions and draw as much of the environment, in as much detail as you can.

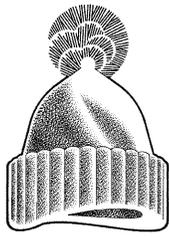
1. How long did you spend in your spot? _____
2. Where did you spend your time? (near a pond, creek, meadow, etc.)

3. List five sounds you heard while sitting in the forest? (birds, wind, squirrels, bees, etc.)

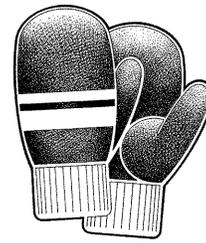
4. What animals or signs of animals did you see? _____
5. Tell us about what you learned from sitting quietly in the woods.

Draw all of your surroundings. Make sure to include insects, rocks, trees, animals, and anything else that you may have seen.





Wilderness Safety



There are a lot of things you will learn as you explore the natural world. But it is very important that you learn safety skills and practice them each time you go outdoors. One of the most important things you can do is always bring water and wear the right clothes. The other most important thing you can do is tell an adult where you are going, how long you will be gone, who you are going with, what you will be doing, and when you will be back (then stick to those plans)!

Get Thinking and Planning

Level I: Answer 3 of the following questions.

Level II: Answer all of the following questions.

Level III: Answer all of the following questions and underline what you already knew.

There can be more than one right answer, circle the correct answer(s).

You are planning a day hike. You should bring:

- a. a bottle of water
- b. a snack to eat
- c. a tent
- d. a radio with headphones

When you pick a jacket to wear hiking it should be:

- a. camouflaged
- b. a bright color to be easily seen
- c. pink
- d. hooded to keep your head warm

You should always keep these things in your day hike backpack:

- a. a whistle
- b. a shiny lid that would reflect sunlight
- c. a pack of soda
- d. a trash bag to use as a raincoat

It is always best to hike, ride, snowshoe, or sled:

- a. just before dark
- b. with a friend or adult you know
- c. in a marked area
- d. alone so you can enjoy the quiet

If you get lost you should:

- a. stay in one place
- b. turn around and try to find the way back
- c. start a fire
- d. blow a whistle every once in a while

If you are lost and you hear someone yell your name, you should:

- a. yell back to them
- b. start walking and try to find them
- c. blow your whistle
- d. hide because they will be mad you got lost

When you are going outside in the winter you should wear:

- a. a hat and sunglasses
- b. boots and gloves
- c. sunscreen
- d. clothes in layers



When hiking in a group each person should:

- a. go a different way
- b. have a map
- c. stay together
- d. have their own daypack



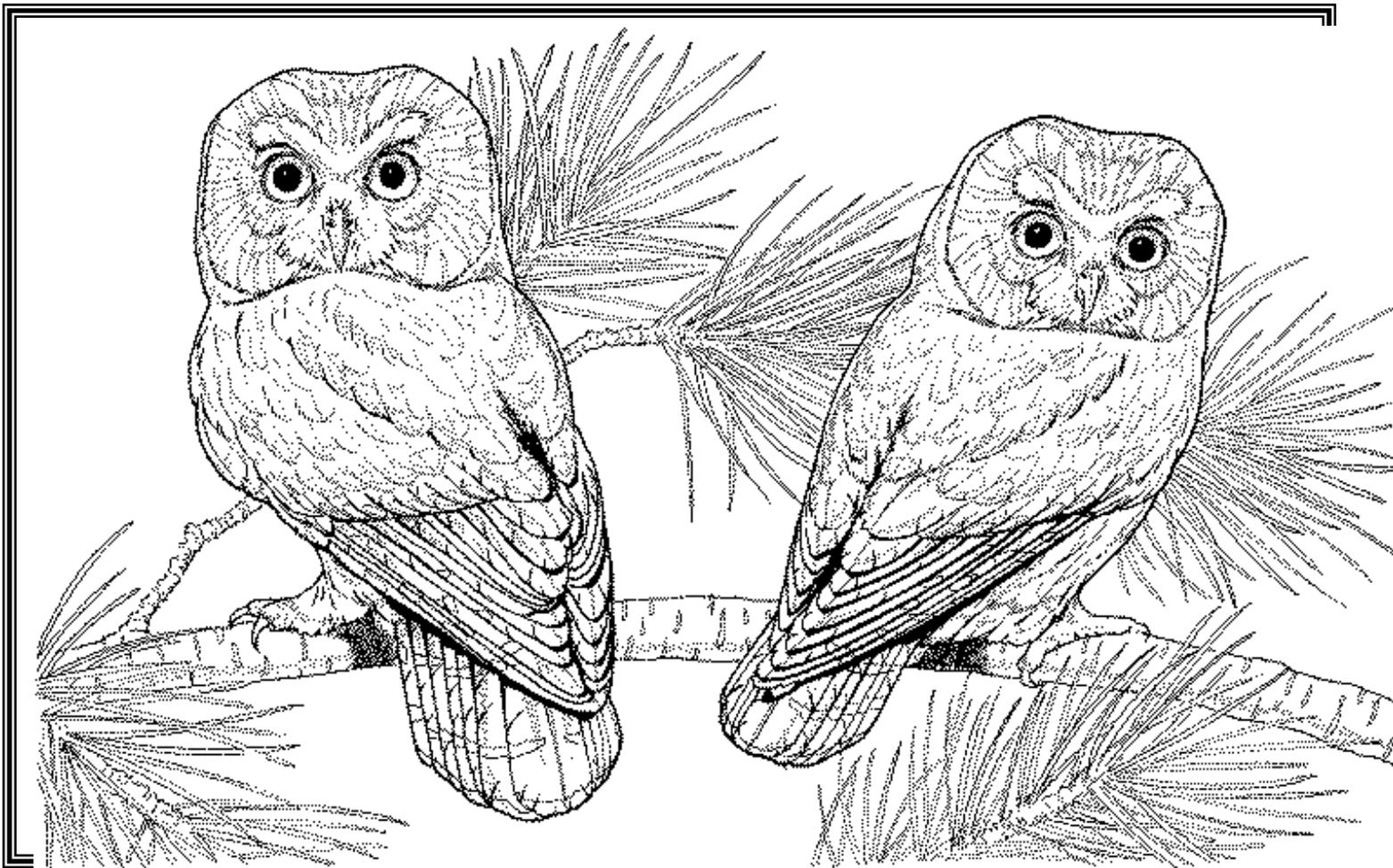
Did you Saw-whet?

Galena Creek Park provides an excellent habitat for many different species of birds, especially owls. Most owls rely on a diet of small rodents, reptiles and insects, which are easy to find in the park.

The Northern Saw-whet is a common winter visitor to this area. Their two different calls can be heard in late winter through the early spring. One is a monotonously repeated, single note whistle and the other is a raspy call which sounds like a saw being sharpened. If you cannot hear their calls, look for them roosting in dense evergreens, near the end of the branch. That is their favorite winter resting spot.

Color the Owls

Level I: Read or listen to the colorful descriptions of the Northern Saw-whet owl, then color one as an adult and the other as a juvenile.



Color Description: The adult owls are reddish-brown above, with white below that is streaked with a reddish color. Their bills are dark and their faces are also reddish, with white around their beaks and yellow eyes. The juveniles are mostly reddish above and a tawny-rust colored below. They also have dark beaks and yellow eyes, surrounded by white feathers.

