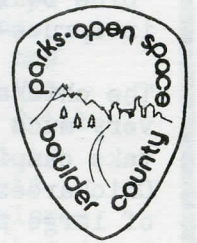


SPRING
1985

Nature Detectives



"Who's been here?" "What were they doing and why were they doing it?" "When did it happen?" Nature Detectives try to answer questions like these by looking for clues and evidence of the activities of creatures in the outdoors.

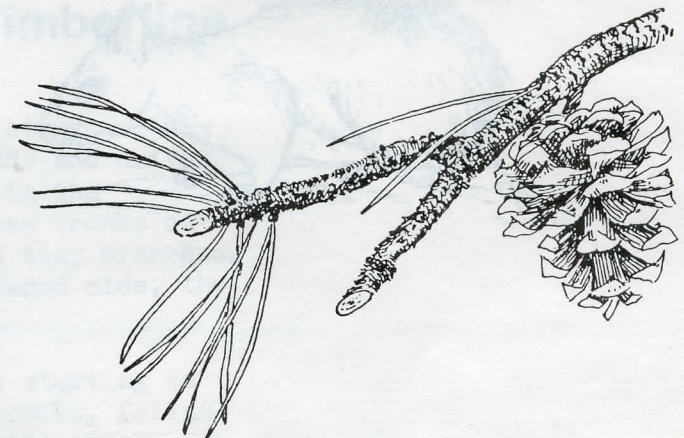
Have you ever wondered about teeth marks on the trunk of a tree, or strange footprints in the snow or mud? If you have, then you are already a nature detective.

THEME:



FORESTS

When you were young and heard the story of Little Red Riding Hood walking through the forest with a basket of goodies for her grandmother, how did you imagine that forest? I imagined a dark, gloomy, rather scary place, with the shadowy old wolf lurking nearby! But in real life there are all kinds of forests. Some are very dense and shady, others open and light with wildflowers beneath the trees. Each forest has its own kind of trees, plants and animals that like to live there. Ponderosa



Ponderosa Pine

pine forests in the foothills are quite open, with meadows among the trees. Porcupines live there, munching on berries, twigs and pine tree bark. Douglas fir forests grow on the colder and shadier north slopes of the foothills. Higher up in the mountains where winter lasts longer, and there is more snow, Englemann spruce and subalpine fir form miles and miles of dense woodland—Red Riding Hood forests—but no wolves live there anymore! All of these are evergreen forests. The trees never shed all their leaves at once. Aspen leaves turn golden in fall and shed their leaves before the winter (deciduous trees), so aspen forests are quite different from evergreen forest—in summer light and airy with lots of nesting birds, in winter stark and bare, but still giving shelter and food to elk herds which come down from the high country.

Think of it, one word—FOREST—used for all these different places to explore!

Chickaree Icebox

One of the forest mammals is not the least bit shy about letting you know where it is—in fact you are likely to hear a loud chattering scold when entering the territory of the chickaree or "pine squirrel." This small, grayish squirrel is found most often in spruce-fir, douglas-fir, and lodgepole pine forests.

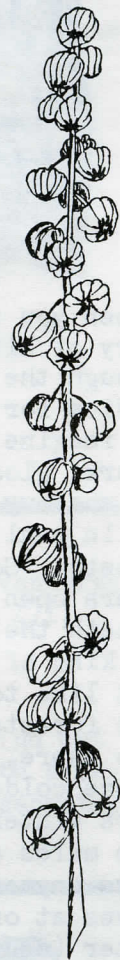
The chickaree has a special storage place for its food which works very much like the refrigerator in your home or the icebox you take camping which keeps your favorite food cold and unspoiled. Chickarees store fresh cones of evergreen trees in middens made of large piles of old cone scales. The squirrels bury a few cones together in many places in the midden. The midden is built in a moist, shady spot. The cold, wet shreadings keep the cones closed so the seeds are not lost and do not rot. Later, the hungry chickaree returns to the midden, unburies a cone, takes it to a high, open spot on the midden, and eats the seeds adding the leftover scales to the evergrowing mound.

On forest trips listen for the chattering chickaree and look for the reddish-brown middens—iceboxes for cones.



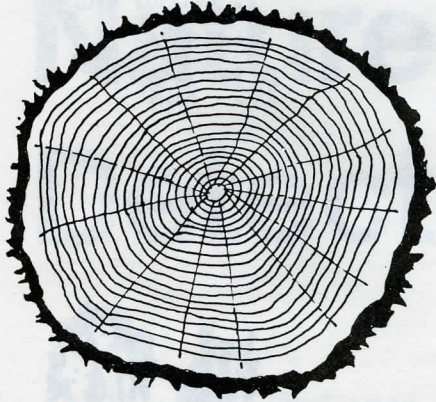
Ghost Plants

Plants make food from sunlight by having green "chlorophyll" in their leaves. But there are a few strange "ghost plants" of the forest that have no green. They are pale yellow, or white, or brown, and can't make food for themselves at all. Instead they use food stored in rotting wood or leaves from the trees they grow among. Look for the tall, dried stems of pinedrops and the delicate speckled flowers of the coral-root orchid next time you are wandering in the woods.



Pinedrops

How Old?



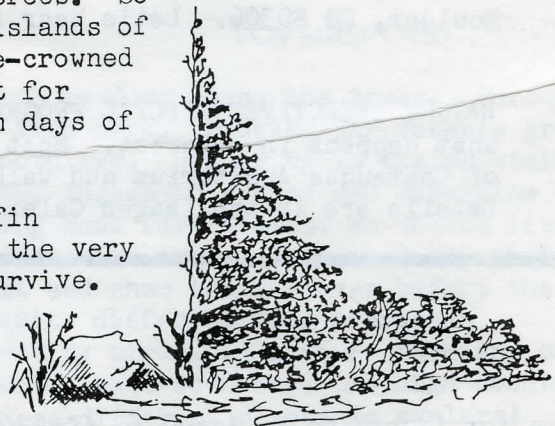
Most trees grow quite slowly in our dry climate. The forest you camp in may be a hundred years old or more. One way that scientists find out the age of a tree is to bore halfway into its trunk with a special kind of drill that saves a "wood sausage" as it is pulled out of the tree again. This doesn't harm the tree. Under a microscope the wood sausage or "core" has lines of different color that show the tree growth for each year and can be counted to give the tree's age. You can see this on a tree that has been cut down. On the cut surface, count the rings. Rings close together show slow growing years—perhaps a drought. Wide apart rings happen in wetter growing seasons.

Elfin Forests of Timberline

Way up at timberline the trees struggle to survive in the harsh winter winds and driving snow. Sharp ice crystals blow in the blizzards and can pierce the tree trunks on the windy side, killing all the tiny branches. With branches only on the sheltered side, the trees look like flags.

Tree seedlings have a hard time starting to grow, except in the shelter of rocks, fallen tree trunks or the already growing trees. So tree islands dot the mountainside— islands of life that shelter the nests of white-crowned sparrows and provide a safe hide-out for resting elk or mule deer in the warm days of summer.

YOU may even be taller than the "elfin timber" of these forests growing at the very limit—treeline—that forests can survive.



In the Woods



Can you unscramble the names of these woodland dwellers?

- | | |
|--------------|-----------------|
| 1. HKARICCEE | 6. NPIE DLENEES |
| 2. WLO | 7. AYRG YAJ |
| 3. CPSREU | 8. SMOS |
| 4. ORUPCNEPI | 9. KNCIPUHM |
| 5. UJPREIN | 10. KLE |

Take Home Tree Trunks

Have you ever hugged a tree? Put your arms around that great trunk and felt its very special texture? Each kind of tree has its own kind of bark (outside layer). Some, like aspen, are smooth and quite soft. Others, like cottonwood, are chunky and rough with deep grooves. In fact, looking at the bark is one way you can learn to identify different kinds of trees. One way to remember bark is to make your own bark rubbing collection. Use thin typing paper and a colored crayon, pastel, or charcoal. Put the paper over the section of bark you wish to copy, holding it in place with one hand. Gently scribble over the whole paper to show the texture of the tree. (You can use the side of the crayon to work a wider line.) Write the tree name on your rubbing and start a collection of "take home tree trunks!"



locust
Bark

Mailbox

Please send pictures or stories about your forest adventures to Nature Detectives, Boulder County Parks and Open Space, P.O. Box 471, Boulder, CO 80306. Let's hear from you!

NATURE DETECTIVES SPECIAL PROGRAM: FOREST WALK—Look at clues to find out what happens in a forest. Meet at the picnic tables behind the south side of Chataqua Auditorium and walk through the woods to discover its secrets. Details are in the Images Calendar.

ANSWERS: 1. Chickaree, 2. Owl, 3. Spruce, 4. Pouncpine, 5. Juniper, 6. Pine needles, 7. Gray Jay, 8. Moss, 9. Chipmunk, 10. Elk.

