

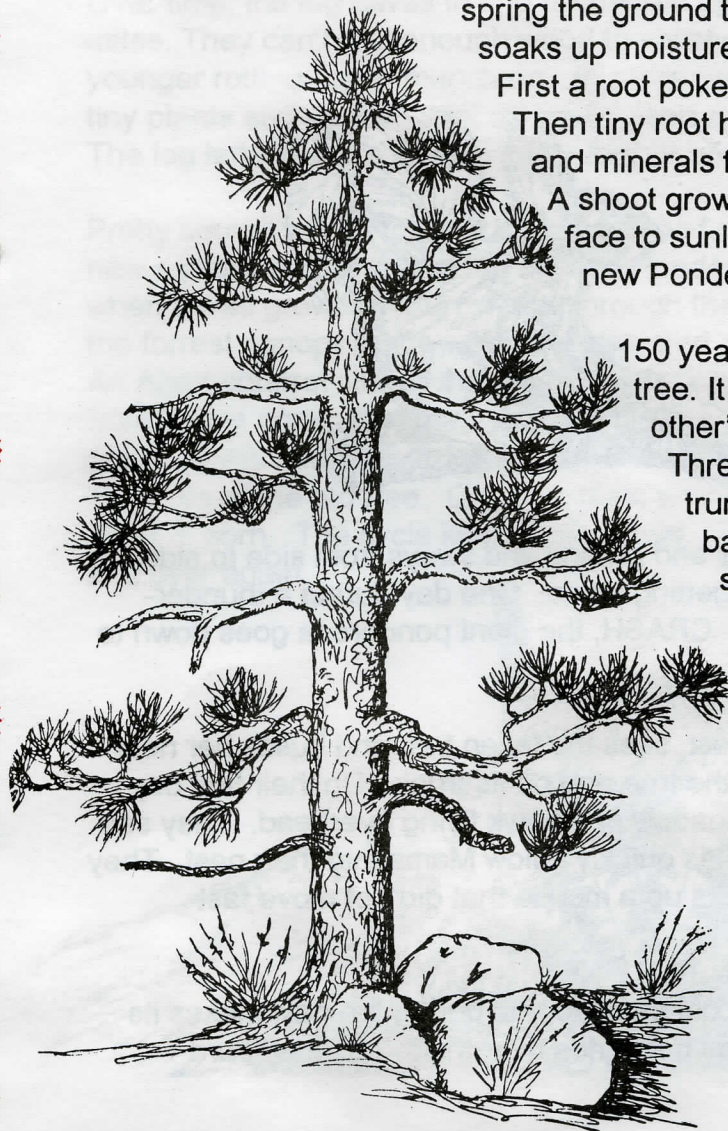
NATURE DETECTIVES

FALL 1996

The Life of a Ponderosa

It is a crisp fall day with sunshine and a chilly breeze. A tassel-eared Abert squirrel drops one of the seeds he is eating from a Ponderosa pine cone. The seed lands in a sunny patch of coarse dirt among grasses and wild flowers. The hoof of a bounding deer tamps the seed down into the earth; it rests there throughout winter. In spring the ground thaws and snow melts. The Ponderosa seed soaks up moisture and the baby pine tree inside starts to grow. First a root pokes through the seed coat, digging into the earth. Then tiny root hairs sprout along the root. They absorb water and minerals from the soil and send this sap to the seedling. A shoot grows up and up, breaking through the soil's surface to sunlight. Slender green needles unfold as this new Ponderosa pine tree starts its life.

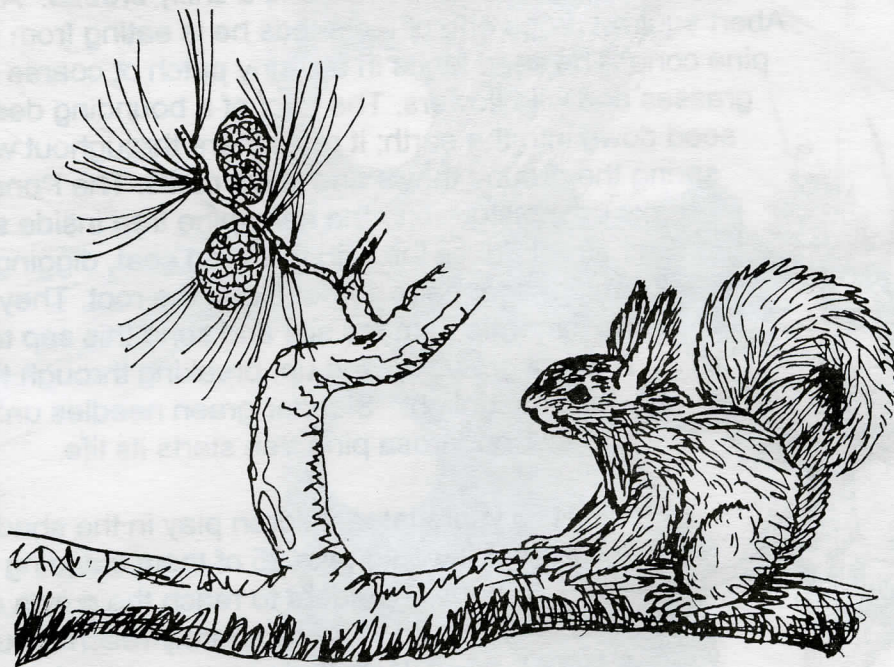
150 years later children play in the shade of this same tree. It would take 25 of them standing on each other's shoulders to reach the crown of the old tree. Three of them can barely reach around its huge trunk. With their noses pressed against the rough bark, the children take in its rich butterscotch smell. Not too far above their heads a White-breasted Nuthatch scurries down the trunk picking ants and spiders from the bark. A Brown Creeper spirals up the trunk looking for a similar meal. Nearby an Abert squirrel is building a nest. A mountain pine beetle lays its eggs in excavated tunnels beneath the bark. A brightly colored Western Tanager brings twigs to its nest on an outer branch of the tree. A Steller's Jay squawks and looks for seeds in a cluster of pine cones. The Ponderosa offers shelter and food to so many animals.



One summer a bolt of lightning strikes the ancient tree. After the tree dies, sap no longer runs in its trunk and no green needles grow. The roots still hold up the snag's dead trunk and branches. Birds still think of it as a super market because it still supplies a large amount of food -beetle larvae, wood wasps, and many other insects that live in the rotting wood.

The flicker has hollowed out several nesting holes in the pine tree's trunk. After a season, the flicker moves to another home. Bluebird and Raccoon each choose a vacated cavity to call home and raise a family.

The Halloween moon silhouettes an owl perched high on the pine tree's branch- a perfect look-out for finding a nighttime meal. Watch out mice!



Every time the wind blows, the old snag creaks and groans and sways from side to side. Its roots, which had anchored it firmly, are not getting loose. One day during a thunderstorm a strong wind comes through the forest. CRASH, the giant ponderosa goes down to rest on the forest floor as a fallen log.

A rabbit, looking for a safe place to build her nest, sees the fallen tree and builds her nest under it. Soon her babies are playing around the tree and on its trunk. On their first day out, the bunnies are startled to see the black shadow of a hawk flying overhead. They see a squirrel dive into a hole in the log. The bunnies quickly follow Mama into their nest. They are just in time. The bird swoops down and picks up a mouse that did not move fast enough.

A tiger salamander, looking for a dark, damp, cool place to rest during the day, makes its burrow in the log. As the sun sets and darkness descends over the forest, the lizard comes out of its burrow to hunt for food.



Bugs start moving into the log too. Termites, sowbugs and bark beetles come to dine on the log's bark. Spiders come to dine on the sowbugs. Slugs and wasps come to lay their eggs on the soft decomposing wood, while click beetles choose the log to sleep away their winter.

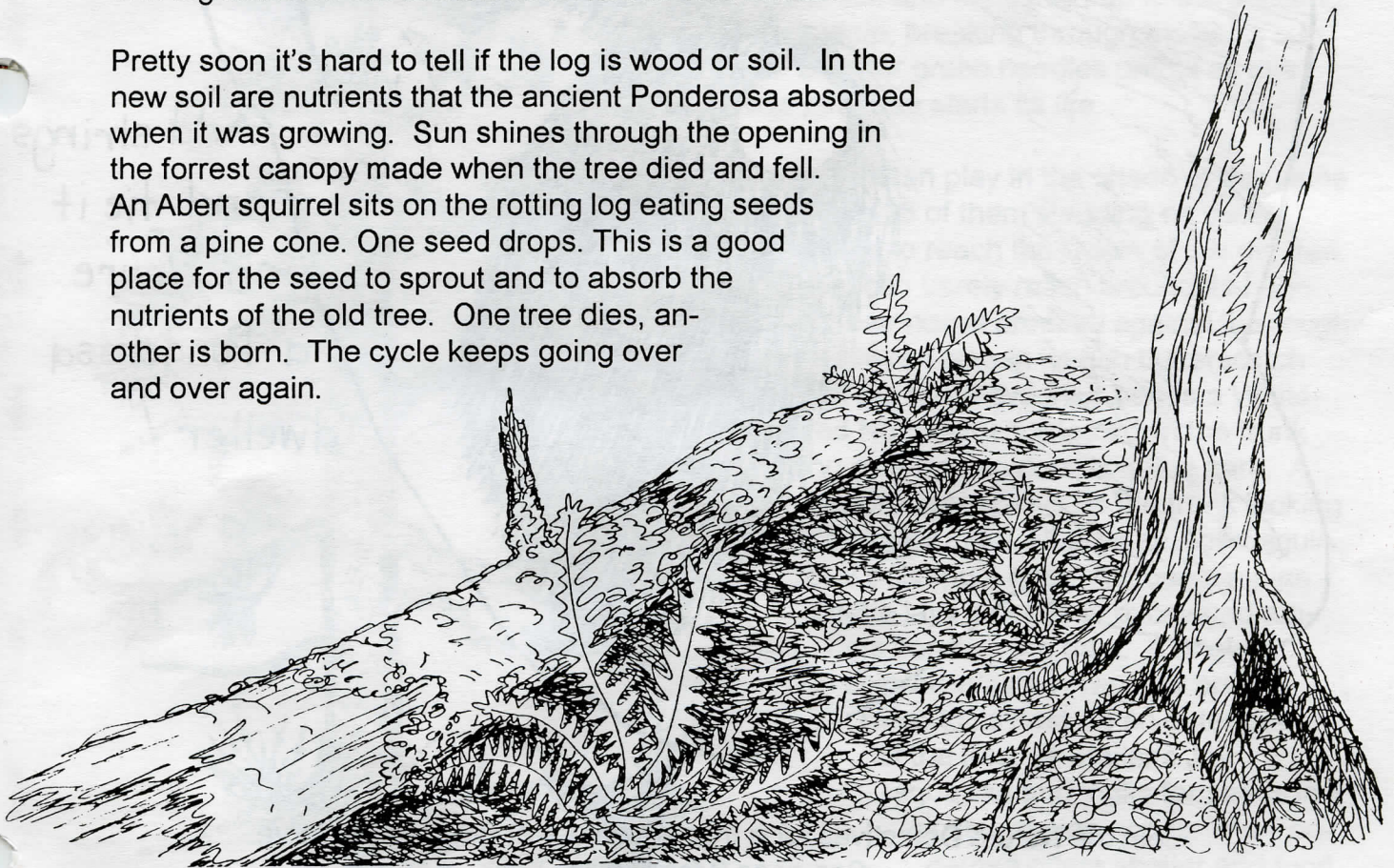
Soon a hungry Hairy woodpecker comes upon the fallen log. It uses its beak to drill a hole so it can eat the insects living in the log. At night, skunks visit the log to get their dinner of insects.

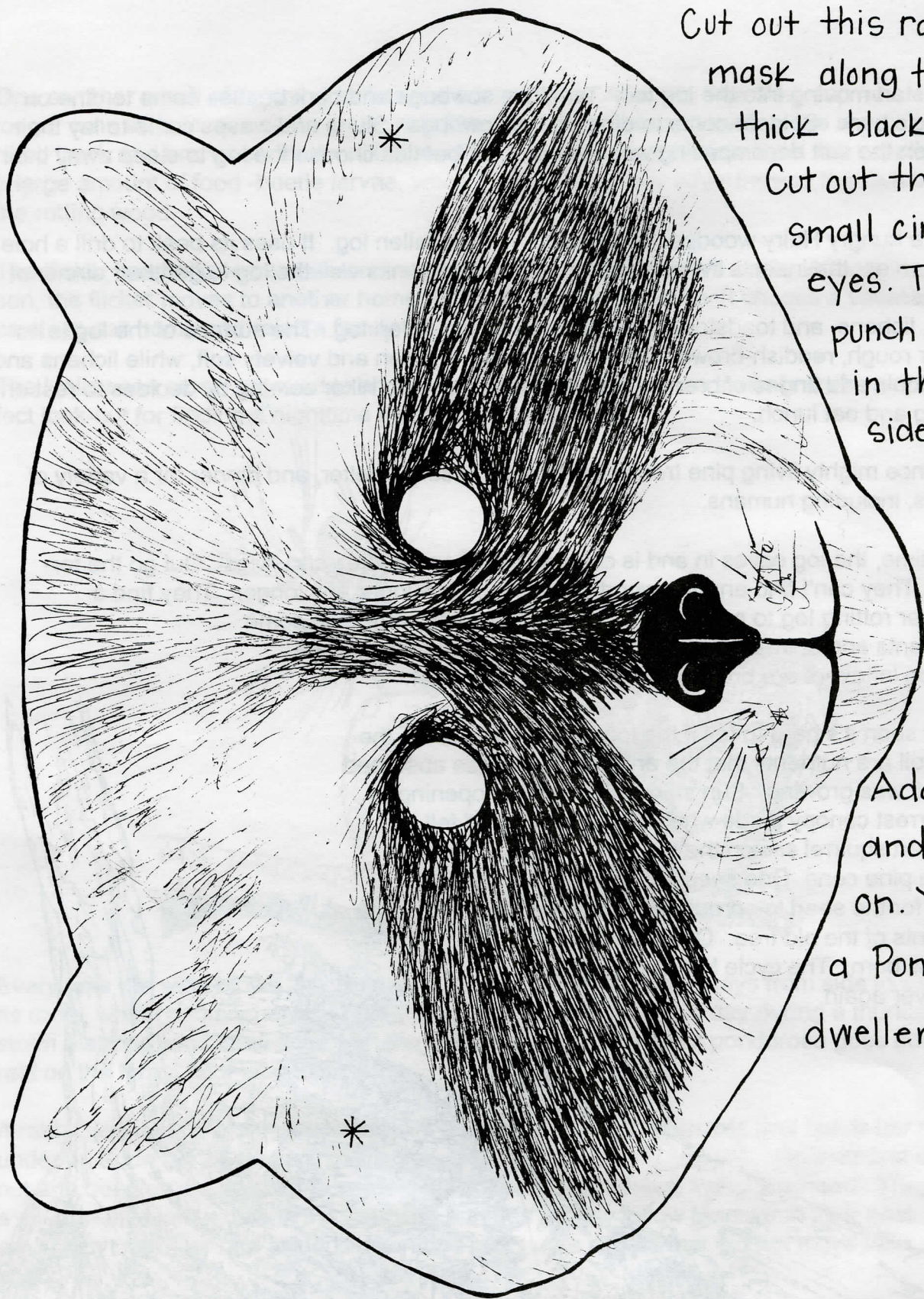
Moss, lichens, and toadstools start growing on the fallen log. The surface of the log is no longer rough, reddish-brown. The mosses make it green and velvety soft, while lichens and toadstools add tinges of orange, red, and white. A tired hiker coming by decides to rest on the log and eat lunch.

The once mighty living pine tree still is home, nursery, shelter, and dinner for a variety of critters, including humans.

Over time, the log caves in and is covered by fallen needles and twigs. Out go the termites. They can't find enough wood to satisfy their hunger any longer. They find a younger rotting log to munch on. In come the earthworms. In come tiny plants and animals that we could need a microscope to see. The log leftovers are broken down further and further.

Pretty soon it's hard to tell if the log is wood or soil. In the new soil are nutrients that the ancient Ponderosa absorbed when it was growing. Sun shines through the opening in the forrest canopy made when the tree died and fell. An Abert squirrel sits on the rotting log eating seeds from a pine cone. One seed drops. This is a good place for the seed to sprout and to absorb the nutrients of the old tree. One tree dies, another is born. The cycle keeps going over and over again.





Cut out this raccoon
mask along the
thick black line.

Cut out the
small circle
eyes. Then
punch holes
in the two
side stars.

Add strings
and tie it
on. You're
a Ponderosa
dweller!

Join the Nature Detectives for a tree adventure at Betasso Preserve.
See page 9 for details.

