

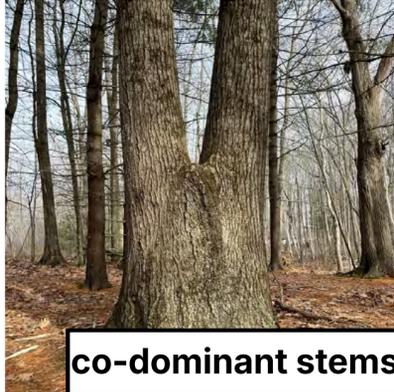
Winter Tree Bingo



cavity



leaf scar



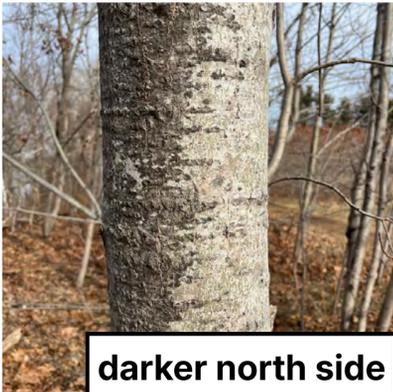
co-dominant stems



nip twigs



chewed bark



darker north side



lichen apothecia



resin



food cache



orange lichen



catkins



New York Scalewort



FREE SPACE



Birch Polypore



squirrel drey



hoarfrost



bark beetle galleries



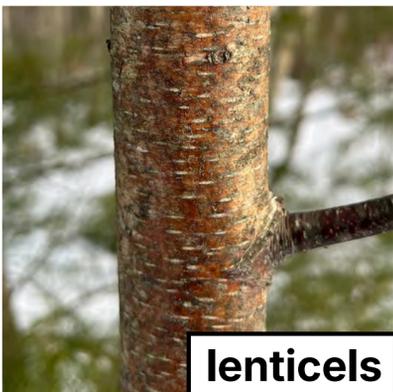
claw marks



Hemlock Woolly Adelgid



Paper Birch seeds



lenticels



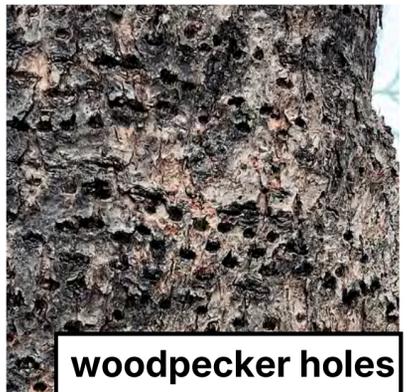
rough bark



target canker



branch scar



woodpecker holes



MAINE AUDUBON



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Winter Tree Bingo

<p>Cavities are crucial to wildlife in the winter. Animals use them as protection from the elements. Follow squirrels with mouthfuls of insulating leaves to find their winter shelters.</p>	<p>A scar is left behind after a tree like this Staghorn Sumac drops its leaves. The leaf scar's shape and other characteristics are a clue to species identification in winter.</p>	<p>Co-dominant stems diverge from a single trunk and grow at the same rate alongside each other. The join is a weak point, and it's common to see one trunk snapped off.</p>	<p>Being too heavy to walk out to the ends of branches, porcupines chew off Hemlock twigs, eat the buds, and drop what's left. Squirrels also nip off short twigs to access buds and cones.</p>	<p>Tree cambium is nutritious winter food for mammals. Squirrels often chew branches. Porcupines munch high in Hemlocks. Deer make ragged marks by ripping up bark with their bottom teeth.</p>
<p>More lichen and moss often grow on the shady north side of trees. The difference is extra striking on Quaking Aspens, which produce a white powder on their southern side as a "sunscreen."</p>	<p>Apothecia are reproductive structures created by the fungi component of a lichen. Spores are produced in & released from apothecia according to moisture, not season.</p>	<p>Resin seals wounds & traps wood-boring insects, although some can overcome it. Small circular holes & orange frass (insect poop) in and around globs of dried pine sap is evidence of Southern Pine Beetle.</p>	<p>Lots of animals store food for the winter, including mice, which often use old bird's nests as food caches. Dried mushrooms are evidence of Red Squirrels. Birds cache seeds under bark.</p>	<p>Orange lichens contain pigments that protect from UV damage. Find orange species on rocks by the ocean & on south-facing buildings, a fun (though often nuanced) tool for navigation.</p>
<p>Some trees produce flowers called catkins. Male catkins (pictured) will open and disperse pollen in the spring. Female catkins release seeds at various times of year, depending on species.</p>	<p>New York Scalewort is a liverwort. It has no roots, stems, or leaves (only leaf-like structures, one cell thick). Liverworts were some of the first land plants to evolve over 470 million years ago.</p>	<p>FREE SPACE</p>	<p>Birch Polypores appear as brown hooves sticking out from a dead or dying birch tree. Their underside is smooth and white when fresh, and gets rough and yellowed when dry in the winter.</p>	<p>Large nests made of leaves high in trees are likely squirrel dreys. Tree cavities offer more protection in the winter, but multiple squirrels may huddle together in a well-insulated drey if cavities aren't available.</p>
<p>Hoarfrost forms on vegetation like this Pussywillow when water vapor transitions directly to solid ice on a surface. Electrostatic forces deposit H2O in branching structures, similar to snowflake formation.</p>	<p>Trees with stripped bark may reveal bark beetle galleries. Females chew egg chambers under bark after mating. Hatched larvae chew tunnels off of their chamber, creating branched patterns in the wood.</p>	<p>Squirrel tracks often begin and end at trees. On smooth bark, claw marks are further evidence of their travels. Sharp claws & ankles that rotate 180° allow them to scurry up & down trees.</p>	<p>The invasive Hemlock Woolly Adelgid is seen as white tufts at the base of Hemlock needles. Infected trees can be reported to the Maine Forest Services and steps can be taken to control the insect's spread.</p>	<p>These small bird-shaped scales and round seeds fall from female Paper Birch catkins in winter. Winged seeds are dispersed by wind, blowing relatively unimpeded across crusty snow.</p>
<p>Lenticels are pores in the bark of trunks and branches where gas exchange happens. They may be visible as raised dots or lines. Young twigs have more lenticels to support rapid growth.</p>	<p>Slow-growing trees have thick rough bark, a result of pressure from growth. As bark stretches, new cells are produced from the inner phloem. Cells in the newly-forming furrows die, turning into new protective cork.</p>	<p>Target cankers are caused by a fungus, which strikes while a tree is dormant. The tree responds in the spring with a ring of callus to heal the wound. This annual cycle creates concentric rings of callus, resembling a target.</p>	<p>Young trees grow many twigs to set themselves up for success in an unpredictable world, then prune the extras, like those that can't access sunlight. Gray Birch are known for their chevron-shaped branch scars.</p>	<p>Each species of woodpecker in Maine has a recognizable shape or pattern to the holes it makes in trees. Yellow-bellied Sapsuckers are known for making straight lines of pencil-eraser-sized holes.</p>