

A TRAIL FOR THE FIVE SENSES: SUMMER

Washington Crossing State Park, Titusville, N.J.

Dorothy Hoppack - ^{was with} Brooks Co.
Tell- 215-968-3435 ^{Blind}

Blind Commission of
Newark

A TRAIL FOR THE FIVE SENSES: SUMMER

Washington Crossing State Park, Titusville, N.J.

Welcome to A Trail For the Five Senses, located in the Nature Centre of the Washington Crossing State Park, Titusville, New Jersey. This trail was sponsored and constructed by the Hopewell Township Lions Club, with the assistance of Mrs. Rachel Horne, Director of the Nature Centre. As you proceed through the trail, each post along the way has a number on top. In addition there are markers along the guide wire between the posts.

1. The trail begins as a path through a thicket of weeds, shrubs, and trees that make a very tightly woven living fence at the edge of the lawn.

Surrounding the archway which announces the trail are wild sunflowers. Many of their orange-yellow blossoms will, as summer progresses, lean over from five or more feet high. Their long leaves, shaped like a donkey's ears, cast a deep shade which kills off many plants below. So the ground may be just about bare beneath them.

On the left side smooth sumacs overshadow the sunflowers there as does a wild cherry on the right. Such a tangle is typical of thickets, which provide plenty of shelter and food for animals.

At the first marker beyond post 1 several smooth sumac shrubs rise above the wild sunflowers. They have begun to reach their maximum height of 6-8 feet. Each year as they grow new twigs the skin along them comes in slick and smooth, giving them their name. At the end of twigs grow clusters of fruits. Pluck off one if the date is August or later and suck it to taste the "Indian lemonade." The soil must be fairly dry here, up on the hill, or smooth sumac wouldn't be doing so well.

2. Just down the trail at the first marker after post 2 is a staghorn sumac which also dominates the sunflowers. Its twigs have fine hairs which make the surface feel softly furry, like stag deer's antlers when they are developing in the spring. You can make "Indian lemonade" from this species also - both are pink drinks from the scarlet fruit.

At the second marker, but to the right side of the trail, is a Viburnum bush with large rough-surfaced leaves. Grape leaves along with them are smooth and have a deep indentation at the base. The limbs of this viburnum are often so straight that the Indians used them for arrow shafts - so this has also been called "arrowwood." The tips of many of these twigs are producing rather flat plates of blue fruits.

Overhead grape vines are crossing the trail, travelling up the Viburnum and ending on a red cedar at post 3. Some of the tendrils, strings which they grow and hold on with, are curling down freely within reach.

3. Just after post number 3 two red cedars, or juniper trees, are crowding each other. Each one, where the side is near the other, has very few branches. The needles are as different as they seem, the spikey ones being the younger ones. The wood is quite red and is quite free of burrowing insects. It once made very fine log cabins, and it is still used for closets, chests, and as chips in animal cages to keep insects away....a natural moth-proofing! Some birds strip off the bark for their nests, apparently repelling insects this way.

At the base of the first red cedar a young Virginia creeper vine is taking hold. It uses short tendrils with flat pads or "feet" at the tip. Virginia creeper has 5 leaflets to the leaf, making it a "compound" leaf. Poison ivy has three and climbs by means of fine roots which arise along its stem. The vine that is twisting its way up the cedar trunk is Japanese honeysuckle, which chooses a strangling method of getting a trip.

4. Just to the left of post 4 grows a small tree with leaves that are each divided into 5 or 7 leaflets. It is a white ash. Just beyond post 4 grows a young dogwood which is entangled by a vine. Dogwood leaves have curving veins; these rather oval leaves belong to the flowering dogwood, which is justly famous for its large white blossoms of spring.

From post 5 through 18 we are in a transition zone in which this thicket of weeds and shrubs will become a fields and then a woods. All down the trail now you will find weeds invading at your shoetops. Tall ones with long-stemmed broad leaves, arising from the stem opposite each other, are white snakeroot. It is poisonous to cattle, horses, and other mammals that eat it, and the poisons are passed along in the animals milk. Its white foam of flowers on the top appears about late July and lasts well into autumn. Other tall ones with fairly slender long leaves which often have "teeth" along the margins are goldenrods. Their golden color brings a glow to fields in mid to late summer and they are perfectly good food for browsing animals. These two, white snakeroot and goldenrod, perhaps stand for some of the worst and best attitudes we take toward "weeds." In fact a weed, botanically, is simply a non-woody flowering plant that grows swiftly where there is an opening and manufactures a lot of seeds, which help perpetuate its kind. Corn, like many of our crop plants, is a weed by this definition.

At the first marker between posts 5 and 6 is a good example of the struggle that occurs when the woods invade. A young oak, no higher than your knees, is sprouting at the base of a red cedar. Notice how large the leaves are, typical of young oaks and those in the shade. In this part of the United States red cedars commonly take over weedy fields and oaks, then often overshadow and kill off the cedars. A few spindly cedars can be found just inside the woods; their lower branches are dead and without needles.

At the second marker but across the trail to the right do you recognize the leafy tree at waist and chest height? It is a white ash.

7. At post 7 sunflowers are showing the effects of shade, being shorter than those in the open sun near the entrance.

Overhead is an archway of grape vines. Threads hanging from them are the tendrils by which they hold to branches. Cedar waxwings coming in and plucking cedar fruit, which is a cone that has a fleshy cover like a berry does, also pick the grapes.

9. To the right of the trail at post 9 is a branch of a young white ash, struggling up through a heavy veil of vines - grape, virginia creeper, and honeysuckle. White ash wood makes good baseball bats, adding that extra zing to the hit. Ash rises swiftly and will outlast the cedars but not the oaks.

Just behind the ash but with branches projecting through it and to the path within easy reach is a box-elder tree. Its leaves have 3 to 5 leaflets to the leaf, somewhat like the ash but the trees are a species of maple! Like the ash and some other maples, box-elder or "ash-leaved maple," likes damp soil - such as this often is. Because it grows so swiftly, landscape architects often use it around developments.

10. At post 10 we turn left to go around a small square in which there are four seats for those who would like to sit in the sun and yet be surrounded by trees and sounds of the thicket.

11. Turn right at post 11. Two feet down the trail is a marker, partly hidden by a small arrowwood viburnum, and just behind it is a small dogwood whose trunk has been compressed into a corkscrew twist by a Japanese honeysuckle.

12. Post 12 is another corner where we turn right, but just behind it is a small tree with very irregularly shaped leaves, quite indented along the margins. It is a mulberry. The fruit ripen in July and can make a mess of walking places.

13. Turn left at post 13 and continue on the straight-away. Now the field opens on your right, and you can hear the sounds of meadow insects. Male crickets chirp from their burrows in the soil while grasshoppers make a crackling sound with their wings that hit their legs as they fly away. A verse about male crickets goes: "Happy are the crickets' lives, because they all have voiceless wives."

14. Above the first marker beyond post 14 is a young tree...which one? As a help, note the veins. There are no leaflets, only single or so-called "simple" leaves.

At the second marker another young tree rises close to two cedars. Possibly something going up the cedars put this tree in. Notice the broad leaves. It is an oak, and its acorn may have been planted by a squirrel. That is about the natural range of spread of oaks, the distance which acorns are carried by squirrels or possibly blue jays.

15. At the marker beyond post 15 is a cedar. About 5 feet above the ground, growing as part of one of the prickly branches, is a lumpy ball, about an inch in diameter. Called a cedar-apple gall, it is produced by a fungus on the cedar and sends off minute pieces called "spores," which fly away with the wind and land on apple leaves and fruit and make rusty yellow splotches. These in turn give off spores which infect cedars with the ball galls. Both trees will survive, but the apple crop doesn't sell as well. The disease can be stopped by eliminating one kind of tree or the other.

16. Below and just to the right of the first marker beyond post 16 a rose bush is just getting up to ankle-height. The stems of its leaflets have spikes, which can be annoying. Together with the rose, however, are both strawberries and cinquefoil weeds. The strawberries have three leaflets, the cinquefoil five - *cinque* means five in French and "foil" refers to the leaflets. The grass here is "sweet vernal grass," which has a sweet odor after mowing.

At the second marker, but to the right side of the trail, a young shagbark hickory is sending its sandpapery leaves just about over the trail. Some of the branches arise close to the ground in back, where there may have once been damage. A vertical indentation here indicates where the trunk may have been divided at one time and since has grown back together. The 5 to 7 leaflets, usually 5, are a reminder of an earlier tree, the white ash, but these are larger and rougher.

17. At the marker past post 17 is a tree which you can identify by the leaves alone. The simple leaves come out opposite each other, which is true of dogwoods, maples, and viburnums here as well as of the compound leaves of ash. Not hickory, where they appear alternately along the stem.

18-19. Between posts 18 and 19 an old horse path cuts through the woods. We have put a chain here clipped onto the posts to keep horses out while people are using the trail. The horses do cut up their pathway, and even though the leaves above break up rains this path has eroded pretty badly, exposing red shale bedrock. As we enter the woods, notice two distinct changes...one is temperature, the other sound. The temperature drops, the sounds of birds in front of you become louder as they call through the darkness and their voices echo off the trees.

21. Just beyond post 21 stands a clump of spicebushes. The leaves have a distinctive odor. The dried and crushed fruits were once used as a liniment and also as a substitute for allspice--hence the name "spicebush."

At the marker beyond post 21 but to the right of the trail an old dogwood shows borings made in the wood by beetle larvae. The best examples occur about $5\frac{1}{2}$ feet up the trunk where a fair chunk of bark has peeled off.

22. Below the marker just beyond post 22 is a low stump, hollowed out so that it forms a ragged crater. Your feet will probably touch its side. A number of nuts and parts of nuts lie in its bowl. Some seedlings have come up inside, for the wood is changing to soil and is making this a "nursery" stump. White-footed mice make their nests under the stump while squirrels use the top as a breakfast table, accounting for the chipped nuts and shells.

23-24-25. Posts 23, 24, and 25 form a triangle in the middle of which is a fine straight oak tree with a trunk that is 3 feet 4 inches around at chest height; it is branchless for some distance up, typical of oaks grown so close together. Just beyond post 25 an old cherry tree presses close to the path and a bulge a foot or so up the trunk seems like a great sore. Actually this is virus-caused and is called a "burl," in the past these were often cut off and smoothed into bowls. The cherry bark is dark and flaky, especially on older trees, and has horizontal ridges. The flakes have sometimes been referred to as "burnt potato chips." The ridges belong to "lenticels," openings for gas exchange along the trunk that compare to the openings in leaves - and even needles as well!

27. At post 27 the trail makes a left-hand turn, and at 28 it turns right again.

28. Just beyond post 28 stands another tree stump. At the base are many holes between the roots, showing where white-footed mice have nested and run.

29. At the marker just beyond post 29 is a young shagbark hickory which is just beginning to peel. Careful you don't jab your fingers on the bark. It has been said that squirrels cannot climb these trees because of getting spiked on the shagging bark.

31. At the marker just beyond post 31 the wire passes among three trunks of an oak that was once probably blown down and then recovered by sprouting these new parts. Only one trunk is in the way of this path, touching the wire. Though it is doing the best of the three, it is still small and no problem to get around. All three trunks arise from a hood of new growth that partially covers the dead heartwood of the old stump below.

Beside the next marker is a young beech tree. Its smooth grey, almost silver, bark stands out in the woods and tempts some people to cut their names and so on into it. The effect is like slitting a person's skin, ranging from a punctured tattoo to a raw infected rip. If such wounded trees survive, in which direction if any do you think the scar will grow? Outward with the bulging trunk? Up with the higher canopy of leaves? How do young branches move? Actually both scars and branches remain at the same height, since trees gain height only at the branch tips. But a tree does grow fatter. The beech scar will expand outward, getting larger over the years. Limbs elongate, though they leave cores of wood behind in the trunk as "knots." What do you notice about the leaf veins? They are straight and parallel to each other.

32. At post 32 we make a sharp left-hand turn.

33. Just beyond post 33 a young dogwood with three trunks has several zig-zags that start about 4 inches above the ground. The pattern here suggests that these stems were coming up through a fallen tree and were dodging past its limbs and torso.

On the right side of the trail about 4 yards further on one small limb of a dogwood has jogged around the main stem and then turned toward the woodland edge where there is more light. The main stem has some bulges where branches have died off, here in the shade.

To the right of the trail at the next marker, stands a fair-sized tree. Can you guess what kind it is? It is a white oak.

34. What is the kind of tree growing by the marker after post 34. Another oak.

35. At post 35 we come to a sharp right-handed bend, and the trail is about to slope downward to recross the horse path. To the right of the trail at the marker ahead is a young tree whose bark is just beginning to divide, making identification by bark alone somewhat difficult. Can you tell? Well, according to the leaves this is an oak.

36-37. A chain has also been slung between posts 36 and 37 to keep horse traffic out. On moist days following use of the path by horses, the odor of dung hangs heavily here. Sometimes the surface of such manure has minute comma-shaped fungi which arch and hurl black sticky spores into the air.

37. At the two markers beyond post 37 we come to a grove of three small trees: on the left oak and to the right and behind two shagbark hickories. The bark of the oak has rough vertical ridges, while the young hickory bark stands out for being smoothly vertical and net-like. Here and there down the shagbark flanks you will note rather elongate pustules or eruptions; these indicate where the bark is beginning to break and become shaggy...as though the

trunk were bursting at the seams and in need of repair! Rounded craters along the trunk are actually repair spots, where branches have come off and new growth is beginning to cover up the wound.

Slightly to the right and behind the second tree, a shagbark, is a large old grapevine - itself with fraying bark. Though it twists and turns as if seeking support, grape holds on by means of curling threads or tendrils - near the top, the youngest part above ground, so the middle of the vine swings free like rope.

Down the trail a few steps another marker indicates a small ragweed. It is only about a foot tall and has recognizable indented leaves.

38. At post 38 stands a larger shag which has a soft coating of green algae on its bark. To the lower left, with its branches touching the post, is a small young tree. What kind is it-----an oak. Considering its bends, imagine what it will look like when older----before it falls over from being off balance!

As you pass post 38, you are leaving the woods. Notice the difference in bird sounds. On this tape the heavier crunching sounds...come from purple grackles, a large black-bird with metallic blue, green, or purple head and neck area. The light tripping notes, seeming to say "Drink your tea,".... belong to the rufous-sided towhee. Both birds nest here, sometimes even on the ground, using weeds and grasses - the grackle reinforces its neat bowl with mud. From the deeper woods behind us come the calls of crows, reflected down as it were from a ceiling, the high canopy.

39. Post 39 is truly out in the open fields. Field sparrows often sing from the topmost perches here, such as on the upper feathery tips of red cedars. Their song,...consists of three quick whistles followed by a trill.

During the 1920's this field was a productive farm plot on which corn was grown. When it was abandoned, nature started to reclaim it. Weeds and grasses moved in, covering any bare soil and killing off remaining crops. Eventually brambles, shrubs, and red cedars followed, as did tree seedlings. As you walk along, you will encounter some of these. Less likely to be discovered are the white-footed mice, cottontail rabbits, and white-tailed deer...though you may hear an occasional deer crashing away through the woods. Ground hogs or woodchucks have also dug burrows on the property, but none near the trail. A mound of soil and stones forming a lower lip to the entrance identifies the main door - secondary ones are likely to be hidden away under shrubs.

39-40. Down and to the left of the marker beyond post 39 you will find some small grey dogwoods, whose topmost long, pointed leaves are as yet as high as your knees. Grey dogwood typically does well along the edge of oak woods, as long as oaks are dominant. Once shadier trees like elms and maples come in, though, its thickets are among the first to die out. From August or September on, spiky clusters of white berries stand out, often remaining long after the leaves have fallen. Soon pheasants, bobwhites,,,,, and other birds clean them off - pheasants are apt to be particularly dependent on them.

To the right side of the trail here you will also find a very young cedar, at the most now only 14 inches high. You can measure its growth rate over the years by comparing it to cuts along the stake beside it. This stake has a notch every inch and a groove encircling it at the beginning of each year.

41. Behind post 41 stands a tall cedar, about the height of the majority of them here. You can notice how deer have browsed on this tree in the winter and cut it well back up to above five feet high, the height of their heads. Above this reach, the foliage is full and bushy - so much so that many of us have been able to take shelter under it and similar ones when caught unexpectedly in the rain - and felt most grateful to the deer!

41-42. Along the path beyond post 41 you are passing clumps of broomsedge, a grass whose long slender stems arise in bunches. From late August on it is a conspicuous grass for its straight red stems, which were in the past used in brooms.

42-43. Beyond post 42 grows "sweet vernal grass," with soft heads of seeds. It has a pleasant odor when mowed.

43. Around post 43 grow several kinds of goldenrod. Their leaves vary from slippery smooth to hairy rough. Insects can tell the difference between them readily enough, certain insects using only certain kinds. For instance the larva of one species of fly lives inside a marble-sized tumor it incites the plant to produce on its stem. The only goldenrod chosen for this "gall," however, is the so-called "tall goldenrod" common here.

44-45. On the right hand side of the trail just beyond post 44 a large bushy shrub called "bayberry" threatens to close the path. The leaves have a flavorful odor when crushed and are used as cooking herbs. The berries are much appreciated by the little myrtle warbler, a small brownish or greyish bird with a bright yellow patch on its rump. Once the berries were boiled until the wax on their surface melted off - and was collected to make candles. Now only the birds demand the wax, which is valuable to them.

47. To the right of the trail at post 47 stands an 8" tall sassafras tree. The leaves vary on the same tree from elliptical blades to two and three-lobed specimens. From the root bark can be brewed a delicious tea; oil distilled from this bark goes into candy and medicine flavoring and root beer. The young leaves can be dried and powdered to thicken soups. The wood lasts very well, even when in contact with damp soil.

49. Beside post 49 the tall stem with a dozen or so flowers or seed boxes belongs to a weed called moth mullein. The name moth refers to those insects that come to the blossoms at dusk.

50. At post 50 but to the right side of the trail rises a tall cluster of daisy fleabane. Daisy fleabane is one of the first wildflowers to come into field openings, bare spots, but it is also one of the earliest to thin out in numbers as competing grasses arrive.

52. About 12" to the left of the base of post 52 is a weed with leaves which are made up of 3 parts or leaflets. It is called "trefoil," with "tre" meaning three and "foil" meaning leaf. Trefoil adds nitrates to the soil and is a "legume," a relative of peas and beans - all three carry their seeds in pods. The pods of trefoil, which appear toward the end of summer, are indented along one side, which makes them look like a jaw of teeth.

53. About a yard to the left of post 53 common mullein spreads its large soft leaves all down a tall stalk. It begins as a flat spray of leaves which need plentiful open space to survive, and so it occurs only rarely in thick fields like this one.