



**By Glenn Guerra**

Jerry Thompson lives here in Plymouth and runs the local hobby store. In his spare time, Jerry models in S standard gauge and narrow gauge. Jerry is building a new home and, until that is finished, the layout is on hold; but Jerry keeps busy making models – both structures and rolling stock. One day while talking to him at the hobby store, I noticed some nifty looking stumps sitting on the desk. He told me he makes them and explained how. Here is how he does it.

Jerry was telling me that, first, you need to look at how trees flare out at ground level and many times the roots are exposed. On older trees, the roots can be very large, and a lot of the root is exposed. So, I took a walk down the street and took a few photos. When trees grow, the only living part is just below the bark. This layer, called the cambium, carries the nutrients and this is where the cells divide to create the growth. When the cells divide, the inner layer of cells adds more wood to the tree, making the tree larger in diameter. The outer layer of cells adds more material which becomes bark. Since the tree is getting bigger in diameter and the bark is not growing, something needs to give. This is why the bark cracks. The way the bark cracks can be distinctive. When I was doing wood working, I worked with sawn wood. I

*Note how the roots of this tree are exposed. The bark on the exposed portion of the root is not as coarse as the bark on the trunk. Also note that the root is almost at a right angle to the trunk.*







*Here is another tree near my house.  
Note how one of the roots is almost perpendicular to the trunk of the tree.*

learned to identify wood by the color and cell structure. People who run saw mills see the bark all the time and can tell what type of wood the log is by the bark. This may seem like a bunch of trivia, but it will help in making our model tree stumps. Do what I did; take a walk around and see how the tree trunks look at the ground.

Next, I was sent to the wood shed. Well, not really, but Jerry said to look for small branches on trees and bushes. So, I went to the brush pile in the back yard. In this pile, are all the trimmings from trees and bushes around my yard. Jerry said to look for the diameter of twigs that will match the size of tree trunks we want. In S Scale that is around 1/4" to around 1/2". The 1/4" twigs would be 16" trees and the 1/2" twigs would be about 32" trees. These are larger trees that have been around a while, and the soil has eroded around the roots leaving them exposed. What you are looking for is the area where new branches and shoots are. Don't agonize over how they look, just grab a hand full, and head for the shop.



*The brush pile in my back yard. I have a new view of this mess since Jerry told me how to make tree stumps. There is lots of good stuff in here.*





*This is an example before trimming. This is a cutting from the black locust tree in my front yard. Each winter, I cut a few of the lower branches off so the tree is growing up, and I can cut the grass under it.*



*These are some of the pieces I cut out of the black locust branch in the top photo. They don't look very much like tree trunks yet, but we are getting close.*

The next step is to create the stumps. I used a small model saw for this. We are looking for areas where new branches take off. Find the main branch of the diameter you want, and cut just above the joint. There is probably many more joints that look interesting, so cut them out also. Leave around 2 to 3 inches of length so you can hand hold them when trimming. Now that you have some smaller pieces to work with, start the final trimming. For me, it worked best to cut just above the joint first. That way, I could hold the twig while cutting. I used a small block of wood to cut on, and this seemed to help. When I cut the first branch, the wide end caused the twig to bend while I was cutting and pinched the saw blade. After using the small block of wood, the large end was suspended in the air and the saw cut freely through the twig. Use a fine tooth saw and it will not grab the wood while you cut. Don't force it, just let the saw do it's thing. What you want to do is cut just above the





*Compare this photo with the preceding photo and you will see where I cut the twig. Now it looks like a tree stump at the ground and not the joint of two branches.*



*These two tree stumps were made from the same small twig in the above photo. As a bonus you get some logs for scenery details.*





*After the first few times of the saw binding in the cut, I used a small block of wood for a support. Now the saw cuts through freely. Note that I started this cut on an angle as the tree would be growing on a hillside.*

branch joint. Cut straight through, roughly perpendicular to what will be the main trunk of the tree. If your tree will be going on a hillside, you will want to cut at an angle so the trunk will stand straight up. Now, you have the area of the tree trunk at the ground line. Next comes the tree trunk itself.

*These are some tree stumps and trunks I made in a few minutes. Note the difference in the bark. The reddish ones are from the black locust tree in the front yard. The others are from a box elder tree I keep trying to get rid of. Different trees have different bark, and this will show on your models. Also, since these twigs are young, the bark is smooth and not overly course for you model.*



If you are making a logged over area, or just want a cut tree trunk, make two saw cuts on opposite sides of the twig. Don't cut through, and make one cut higher than the other. Then, break the rest of the twig off. This will look like the stepped cut that a logger would make so he could fell the tree where he wanted. Jerry told me another trick about this part of the operation. If the wood is still moist, the twig will bend and not break. Jerry said that after you have the first cuts of the twigs made, lay them on a backing sheet and put them in the oven for a bit on very low heat. This will dry the wood making it brittle. Now, when you make the stepped cut and break the twig, you may get some jagged edges just like full size trees get when they break. If you want to use these trucks for tree arbors, cut them long. At this point, you can use some of the existing branches on the twigs as branches for your tree or glue other ones on. If you make the foliage of the tree dense, you may not need anything else.

This was an interesting project. Making a few tree trucks is not hard. Give it a try if you have not already done so.