Backdrop Painting Tutorial

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 My Piedmont & East Blue Ridge Railroad serves a soapstone operation in Nelson County, Virginia. I want the backdrop for the layout to help convey a sense of location and rural, isolated context.

The process of painting my backdrop began with visits to the Blue Ridge during autumn, on a hazy day. The haze increased the sense of distance:

Once I had these pictures at home in my computer, I edited them in order to more clearly see certain aspects.

In order to see how value translates into distance, I converted some of them into grayscale:

In order to see how tone and color translates into distance, I manipulated the color in a few shots to remove the "gray component" in the photo. My layout room is illuminated by relatively low level incandescent lights, and I know that in order for the colors in the backdrop to show up, they need to be punched up a little:

I printed a few of these out to have on hand while painting.

I started the installation of the new backdrop on this wall.

You can see where the roadbed comes through the wall from the Piedmont section, which is already under construction.

I put up furring strips to bring the Masonite backdrop off the wall so it would be able to cross smoothly over the window and door trim.
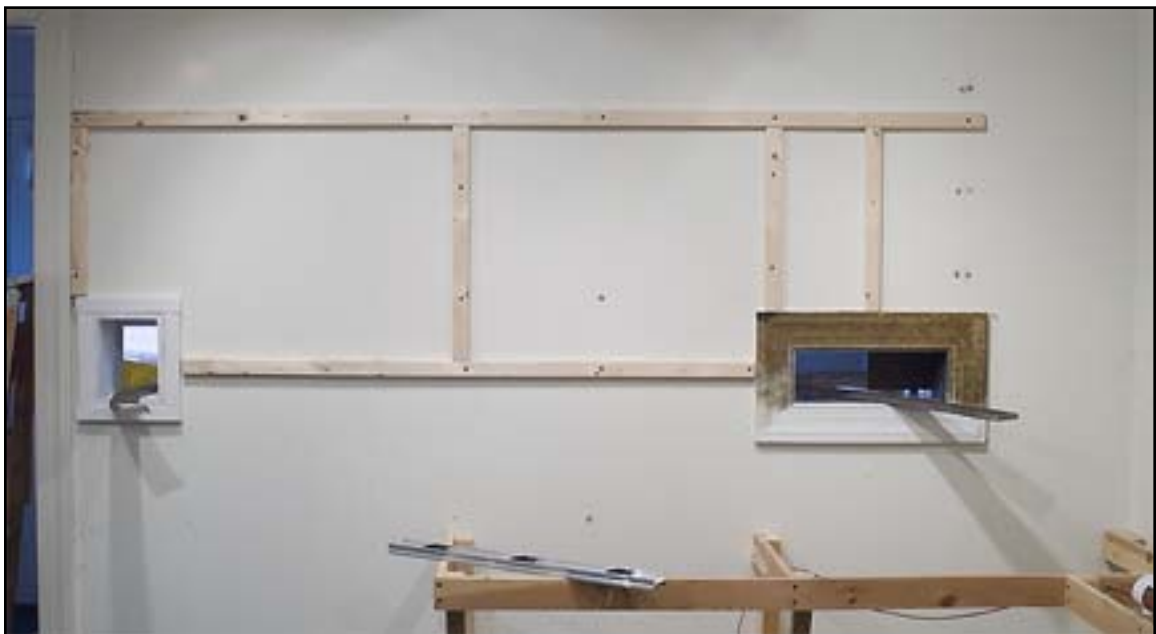
No need to run the furring strips all the way into the corner, since the corner of the backdrop will be coved.
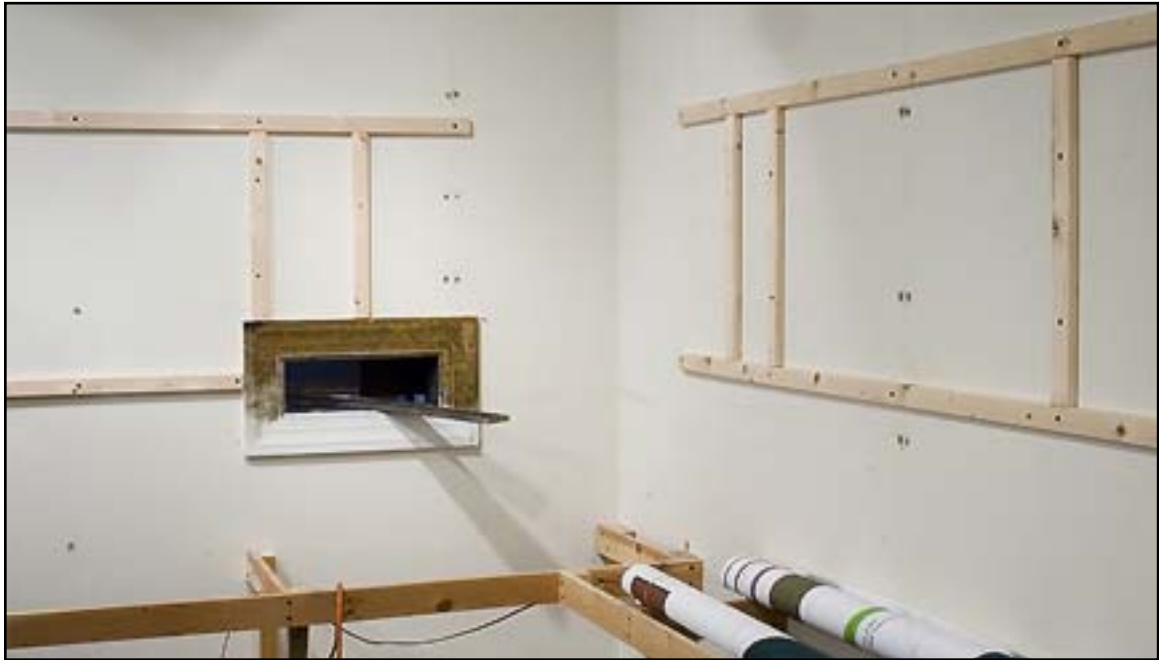
I ripped 4 by 8 pieces of .125 inch Masonite into 2 by 8 sections. I cut a 4 foot long piece to start with so the breaks would fall in convenient places. When I hung the sections, I kept the factory edges up so I would be able to drop a level on top of them to keep the backdrop from creeping up or down as it circles the room. The Masonite was bent in the corner so that it touches both walls about 21 inches out of the corner.

I hit the seams and screwheads with some vinyl spackle. I did not use tape on the backdrop seams. I paint a lot of texture and tonal variations into the backdrop, so my typically sloppy job at mudding screwheads and seams is OK. If I were going to paint the backdrop predominantly smooth blue sky tone, I would have to be a lot more careful about surface leveling, and might use tape.

Before I got much deeper in this project, I thought it would be a good idea to take a few painting lessons. I already had some experience painting a backdrop with acrylic paints, so I started searching for instructional material that complimented my techniques.

I came across information about an architectural painter named Hugh Greer:

http://www.courtyardgallery.com/artists/hgreer/hugh_greer.htm

Several things impress me about Hugh Greer's paintings. His style is straightforward and realistic. He doesn't "overwork" the background areas, yet they look just fine to me. Hugh is a student of tone and value. He teaches that getting the tone and value correct in a landscape painting is far more important than rendering the details.

Hugh has a wide range of instructional books and videos available:

http://www.ccpvideos.com/Merchant2/merchant.mvc?Screen=PROD&Store_Code=CCP&Product_Code=HG1d

I think watching an instructional video about painting is a lot like watching an instructional video about playing the piano; it is only going to help you if you already know how to do it. My experience of painting the backdrop for my previous layout was enough practice to allow me to get a lot out of Hugh's instructional materials. He very directly addressed a few of the shortcomings of my earlier efforts.

Doing architectural renderings for a living has made Hugh Greer an efficient painter. The quicker he can get acceptable results the better. His Kansas City cowboy drawl and laid back demeanor make it easy to watch his videos, and his quirky sense of humor shows up in his books. I would recommend him to anyone looking for intermediate level instructional material on backdrop painting.

3 quick coats of gesso on the Masonite. Gesso is primer that is specifically formulated to protect canvas from oil paint, which is acidic and would otherwise destroy the canvas over time. Obviously, the protective qualities of gesso are not particularly important when painting acrylics on Masonite, but it is a good base paint to start off with. Any good, white primer paint would probably do the job.

With the gesso on the Masonite, I was able to start sketching my plans for the backdrop directly on it. I like to plan ... I spend too much time planning. I am always quick to snatch complexity from the jaws of simplicity. But I know from experience that if I don't plan the composition of a backdrop, I will naturally create a very symmetric line of round hills; bump, bump, bump. Like a Chinese dragon in a parade. What I try to plan into the backdrop are shapes that will compliment the 3D items on the layout, and lead the eye toward the completed scene's point of interest. Also, it's important to design the elements that fall in the cove section of the backdrop to be long, horizontal lines that continue through the entire curve.
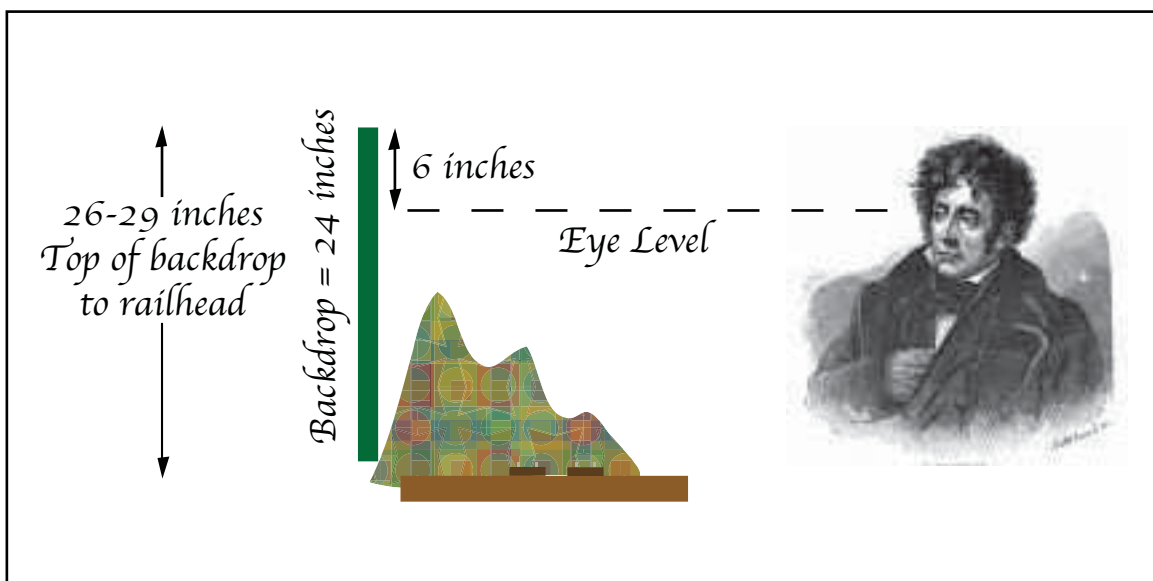
I have found that putting the horizon line on the backdrop at or near my standing eye level is the least distracting height for it to be. This is about 18-20 inches above railhead height. There may be some places on the layout where the 3-D scenery climbs up high enough to reach my standing eye level, but that will not happen very often.

When I operate the layout, I plan to sit on a drafting height stool with casters. This worked out well on my previous HO layout. This drops my eye level about 10 inches. Now the horizon on the backdrop is considerably higher than eye level. This is not a problem as long as the backdrop contains irregularly shaped ridges and hills. It becomes a problem when you put structures on the backdrop, because they have to be rendered from a specific point of view. If my rail head height were closer to my standing eye level, that would be less of an issue.

I reviewed how this section of backdrop looked on the mockup I built of the layout. This showed that the hole where the roadbed comes through the backdrop on the left would be exposed, while the hole where the roadbed comes through the backdrop on the right would be hidden under a ridge. And I spread out the full size trackplan I had printed out in order to see the depth of the benchwork and the position of the buildings and trackwork planned for this scene.

I sketched a scale drawing of what I wanted to paint on the backdrop. This identified planes, or as Hugh Greer calls them "value curtains", starting from the sky in the extreme back to the closest hills in the front.

I planned 4 distinct value curtains for this section of the backdrop, which is pushing it. 3 or even just 2 will suffice in most areas, so I don't plan on making the entire backdrop this complex.

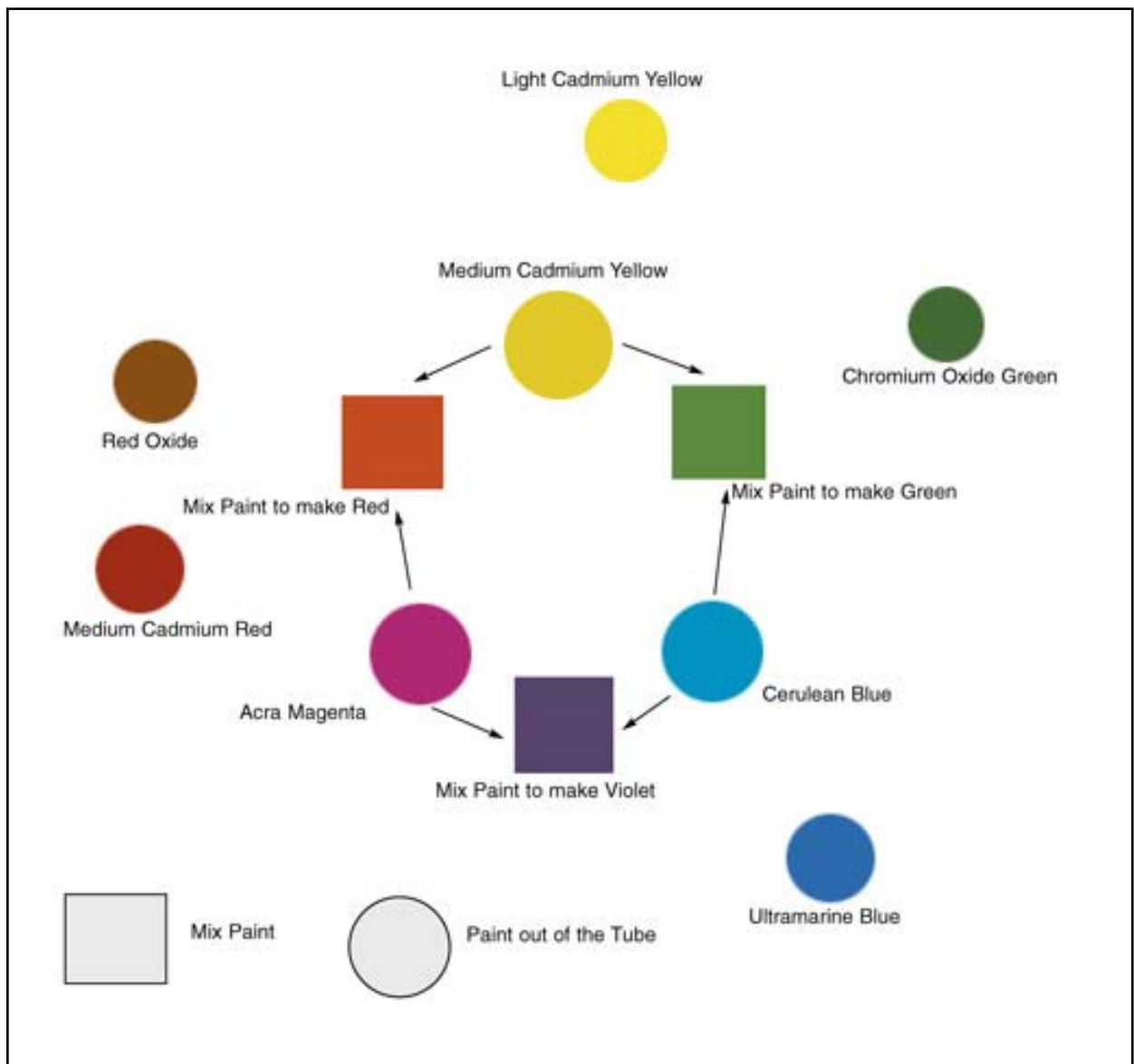The materials I have on hand to begin painting:

- easy access to a lot of water. Clear the way to the nearest utility sink, hose, 5 gallon bucket, or whatever you are going to use as a water supply.

- drop cloth. As you can see from the photos, I use rolls of kraft paper as drop cloths.

-hair dryer. Speed up the drying process.

- bucket. The photo shows a bucket of water with a paint paddle laid across it. This is a convenient way to set brushes down as you are using them.

- paper towels. I go through a lot of these.

- spray bottle. I use 2; one is a garden variety sprayer for laying down lots of water, and one is more of an atomizer for a more controlled misting.

- brushes. I have a wide assortment, but I use the ones shown for 90% of the brushwork; a 3 inch wide brush, a 1 inch wide "one stroke" brush, and a couple "0" to "0/2" size "script" brushes. I also use foam brushes that you can buy by the bagful. 1 inch and 3 inch are my favorite sizes.

- sponges. I use sea sponges for a great deal of the painting. I buy these at a craft store, and if I am lucky there might be 1 sponge I can really use in an entire bag. I look for sponges that have large areas of consistent surface texture.

- palette. I use a plastic cutting board I bought at a kitchen outlet. I use the spray bottle to keep it and the paints wet while I work.

- yogurt cups. I use to mix up a larger amount of paint than would be practical to do on the palette.

- palette knife. I use this as a paint paddle to mix paint on the palette and in the yogurt cups.

- Q-tips and alcohol. A very cool way to create tree trunk and branch detail on a backdrop.

-gel medium. The jar in the lower right. Used to create an "isolation coat" of color on the back-drop.

- and the paint itself. You notice very few colors of paints. White, magenta, yellow, and blue are all you really need. Use absolutely no black.

Light Cadmium Yellow

Medium Cadmium Yellow

Chromium Oxide Green

Red Oxide

Mix Paint to make Red

Mix Paint to make Green

Medium Cadmium Red

Acra Magenta

Cerulean Blue

Mix Paint to make Violet

Ultramarine Blue

Mix Paint

Paint out of the Tube

Mixing all the colors you use on the backdrop from a very limited number of primary colors will cause all the colors to be "related" to each other ... they will have a basic uniformity, just like all the colors in a real landscape are related by the uniform angle and color of light.

The full gamut of possible colors are pretty much limited to colors that appear to be "reasonable and proper" on a backdrop. Mixing paint to achieve a certain hue takes practice. By including more of one color and less of another, you create colors that imply that an object is far away or close up, in direct sunlight or in shadow. You create a "mood and atmosphere" for your layout by controlling the colors on the backdrop.

I show on the chart how the primaries of yellow, magenta, and blue are mixed to create all your reds, greens, and violets. Outside that ring a few other colors are shown. These are "convenience colors", and are included to save you time. For instance, on my backdrop I use a lot of browns and reds. I can and do mix a lot of them by starting with white, then yellow, then adding magenta, and then "toning it down" with blue until I get the color I want. To save myself some trouble, I bought a tube of Red Oxide paint, which gets me to the brown shades I am looking for with less trouble. Red Oxide falls within the gamut of colors attainable by mixing the primaries, so it doesn't look unnatural on the backdrop when I use it. The same is true of all the outer colors shown.

 I transferred the basic design of the backdrop for this scene to the Masonite. Working out of the yogurt cups, I mixed 2 batches of blue paint, one with more red in it. I also mixed 2 batches of warm yellow paint, again one with more red in it.

It is easy to put too much water in the paint, which will make it runny and cover poorly. I made these first batches of paint about the consistency of melted ice cream.

I painted these first blue and yellow tones on the backdrop with a 3 inch wide brush, worked fast, and didn't worry too much about sticking with my sketched lines.

After this had dried, I painted over it all with a nice even coat of acrylic gel medium, applied with the 3 inch brush. This clear coat will in effect isolate these base coats of color from the rest of the painting. The base colors will help brighten and unify the colors painted in successive layers on top on them. This will help keep the paints from looking bleached and anemic, which can happen when mixing a lot of water and white into acrylics.

After the isolation coat dried, I painted the sky portion of the backdrop using foam brushes. Foam brushes are good for feathering and smoothing out edges. Working with a wet foam brush on a wet surface, I used thin white washes to work in some simple cloud shapes. I just wanted flat, thin clouds like you see near the horizon on a slightly hazy day.

When the sky was dry, I sprayed water on my paint palette and started mixing white, yellow, red oxide, blue, and magenta to come up with the colors to use for the back, middle, and foreground areas, or "value curtains", on the backdrop. I smeared the paint on the backdrop using a wet sea sponge.

These basic colors were painted on quickly to see if I still liked the composition, and to help determine how I was going to use color and contrast to define the distances portrayed on the backdrop.

Time to start paying attention to how the color and lightness in a scene give clues as to the relative distance of objects

At this point I thought I would try my hand at painting some tree trunk and branch detail on the backdrop:

BAD IDEA! These is definitely a failed attempt. Fortunately, these burned sticks faded away under successive layers of paint.

Moving forward from the sky, I started layering more paint on the distant ridge line. Since I want to give the impression that my railroad is running in tight creek valleys and through very hilly scenery, I want all the scenery on the backdrop to be portrayed as being relatively close to the viewer. There will be few places where you can actually see any further than the hillside immediately behind the right of way. So my "value curtains" of receding distance will actually be pretty close together.

I mixed the paint for the back ridge with a high portion of white, blue and magenta in the basic mess of autumn colors. I wet the backdrop, and applied the paint with a wet sponge. The effect of wet on wet softens edges, and makes the paint more transparent.

No dark colors ... just a few sunlit highlights showing out of a haze created with white, blue, and magenta.

Once the distant ridges had dried, I got a little fast and loose with the paint.

After getting the color and texture of the distant ridge about where I wanted it, I began to fill in the balance of the landscape on the backdrop with paint applied with a sea sponge

Once I had gone over the middle and foreground areas with a mixture of paint that was warmer and brighter than the distant ridges, I stepped back to look at how it was going. I did not like what I saw.

The backdrop was beginning to flatten out, and was loosing the sense of depth I wanted to achieve. My original plan called for 3 distinct distances to be represented on this section of the backdrop.
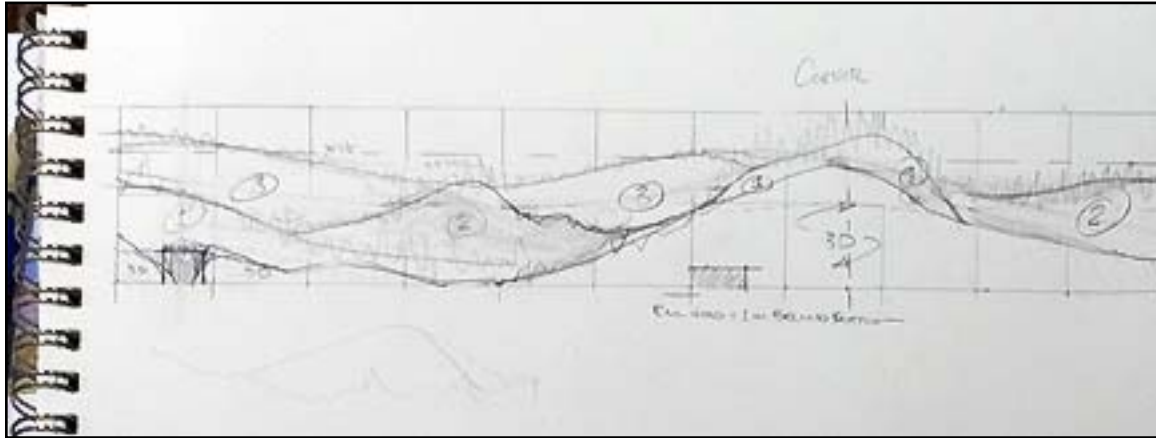
Long, roughly parallel curving lines were supposed to lead the viewer's eye into the center of the scene, where the machine shop will be. A low central ridge provided a complimentary curve to break up the longer main ridge lines.

So, I rather rudely slapped in values that defined the distances I was afraid I was going to lose. First, I used a foam brush to apply a thin violet/white wash to "knock back" the most distant ridges.

Then I applied a blue gray tone with a foam brush to define the middle ridge, and mixed dark olive and brown tones to block in the foreground hills, using the 1 inch brush.

NOW you can see the ridge lines, even if things do look sort of heavy handed at this point.

I needed to do something to the blue gray middle ridge to make it look better. I mixed colors with intention of matching pretty closely the same colors that were in the trees on the distant ridges. I kept dabbing the new mix on the backdrop until it started looking close, then wet down the middle ridge and applied a wet overcoat of tree color.

I wanted the blue gray undercoat to show through enough to keep the middle ridge separated from the distant ridges, so I was careful not to overdo it.

Then I turned my attention to the foreground ridge, which at this point was all dark shadows. The shadows would be the bottom layer of paint. On the shadows I wanted to render the trunk and branch detail, and then layer the highlight detail over that.

To create trunk and branch detail, I used my Qtips and alcohol. I wet one end of the Qtip with alcohol, and made a thin, vertical streak of alcohol on the backdrop where I wanted a tree trunk. I let that set for a few seconds, then used the dry end of the Qtip to gently scrub the paint off the backdrop right down to the isolation coat.

MUCH better looking tree detail than my first attempt.

I went along the foreground ridge and randomly added tree trunks and large branches using the Qtip technique. I then mixed up a range of warm gray values of paint from near white to near black. I used my tiny "0" and "0/2" sized brushes to add more branch detail.

This Q tip trick is one of the great tips for acrylic landscape painting I learned from Hugh Greer. Hugh also has great luck adding small branch detail to his trees using a ruling pen, but I have not gotten the hang of using a ruling pen on a backdrop. I think the ruling pen would work better on a horizontal surface, but I might give that technique another try in the future.

It is surprising how little trunk and branch detail is necessary to cause your eye to "assume" there is a lot more detail in the scene than there actually is.

I went over the trunk and branch detail with several thin layers of paint patted on with one or two of my favorite sea sponges. First I laid down more of the brown and olive shadow tones to completely hide the choppy brush strokes I used to block the foreground ridge in.

After that dried, I began to mix lighter and brighter paint, using more primary yellow and less water. The lighter colors tend to cause the repeating pattern of the texture of the sponge to show more. I had to work several surfaces of several different sponges to prevent repetitious patterns.

Closing in on the end of the project, now. I am using almost straight yellow, with magenta and medium cadmium red mixed to create deep reds and oranges. I am trying to use color to define the shapes of individual trees. Very dry sponge used to apply paint to completely dry backdrop.

And that is it. The foreground ridge is still dark, but I imagine almost all the foreground ridge will be hidden behind the 3-D scenery, anyway.

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Notes