

Curvemeister 101: Week 6

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Dan Margulis's "Man From Mars" Procedure

In his Lab book, Dan Margulis demonstrates what he calls the "Man from Mars" workflow. Surprisingly, this technique has nothing to do with little green men, so much as outlandishly exaggerated colors. It's intended as a quick – less than a minute per image – method to juice up the colors in an Lab image. In Curvemeister, it goes like this:

1. Start by "pinning" a representative color in the image, such as a neutral or other "middle of the road" color, by ctrl-clicking on it,
2. Switch to Lab, and use the saturation slider to the point where the colors reach such a point of outlandishness that they look like they are from Mars.
3. Fade the result until it comes down to Earth.

Curvemeister makes it easier to perform the Man from Mars workflow by using the saturation slider to rotate the a and b curves around a *pivot* color whose control point you have first created by ctrl-clicking on the image. Here's an example image of a dragon, where we've selected a neutral area on the dragon's body as the pivot point for the a and b curves.



[right click here and use your browser to save the original image](#)



Top: the original image bottom left: intense Martian version, Bottom Right: Martian blended with original


The ultra-colorful image on the left is the dragon from Mars, with colors aggressively bumped after setting a neutral point as shown. The dragon on the right was obtained by using Curvemeister's mask feature to blend the original with the martian version of the image.

You may be wondering, at this point, how you decide on the pivot point. The answer is that it is a subjective decision. You do want to pick a point that you think is in the middle of the range of colors that the image has to offer, so that you achieve an interesting variation of colors. Often – not always – this is a neutral. If, for example, the entire image turns green, or the colors look boring, pick a different pivot point and try again.

Our old friend, the K channel mask, is used to *fade* the effect of the outlandish curve. To do this, first click on the wgCMYK radio button, and set GCR to *No Black*. If you check out the Mask Carte, you'll see that the K channel to be filled with white. Then set the Mask to K, and drag the black end of the curve vertically upward, forming a straight, horizontal line. Control click on the other end of the line, and *voila*, you have a functional vertical fade slider that will control the amount that the martian curves will actually affect the image. Slide the horizontal K curve vertically to about a third the distance from the black (zero percent) end of the curve to the white (100 percent) end, and you'll be pretty close to terra firma.

Once you get the hang of it, this is a very fast, very fun way to add zing to an image. You can get much the same effect with just the pivot point, and moving the saturation slider by itself.

Example 1: Dragon, Koxinga Park, Tainan

 This example has a [video hint](#).



[original image]

Watch the [video](#) and do the above example. Feel free to pick a different pivot color, as long as you keep the basic bronze look of the dragon. There is plenty of room for variation, and we invite you to be more or less outlandishly "Martian" than shown in the example.

Example 2: Pagoda of the Five Concubines, Tainan

You're on your own here with the Man from Mars method. Try to jazz up the colors as much as possible, and then some. Then use the K channel fader trick to return home without leaving the planet Earth behind in a trail of star dust. Feel free to brighten up the place with a little Lightness curve.



[original]

Man from Mars, on Steroids

In this example, we'll be bending Lab's a and b curves. Until now, we've been able to get by with rotating the a and b curves to add or remove color, moving one end or the other to remove a color cast or set a skin tone using the hue clock as our guide. We've also pinned a neutral or skin tone, which occasionally puts a gentle bend in the a and b curves. Now we're going to start bending the a and b curves like there's no tomorrow.



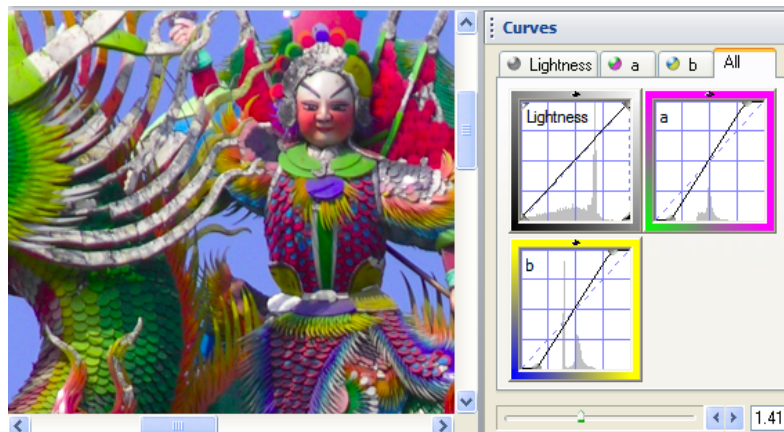
[original]

The craftsmen who made this ceramic dragon did their best to make clean, saturated colors. What do you say we help them out...

The a curve contains two miniature curves. One corner of the a curve controls magenta, and the opposite corner controls green, magenta's complimentary color. This means you can control all of the green in your image by bending only the green half of the a curve – if you flatten that half of the curve, all of the green is squeezed out of your image. If you make that half of the curve steeper, any green already in the image is amplified. Likewise the b curve controls blue and yellow, with each corner of the b curve devoted to these colors. There are therefore not three, but four primary colors in Lab: magenta, green, blue, and yellow. This provides, as you can imagine, a lot of control over color. This is particularly true when all we want is intense, saturated colors, as with the ceramic dragon image above.

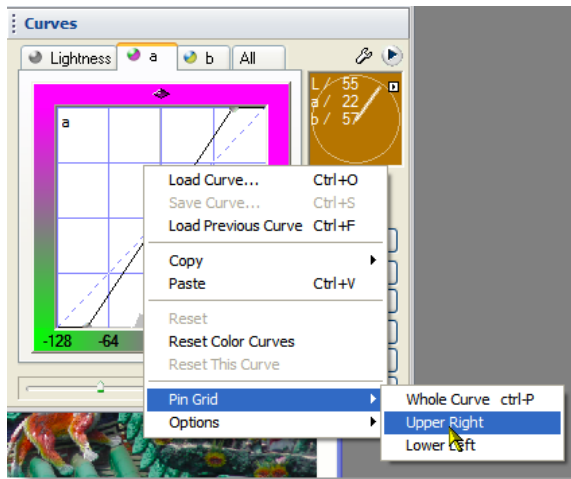
Throughout this procedure, be very careful to keep the middle points of the a and b curves in the exact center of the graph. Failure to do so will create a color cast. Normally, the rotate and pin commands will take care of this for you.

This image has no meaningful shadow or highlight, since the brightest object is not white, and no shadow of any significance. Likewise there is no neutral, or skin tone to think about. The sky is the only color we need to keep believable, and anything goes with the rest of the colors. Let's start with the saturation slider and bump the colors until we see problems:

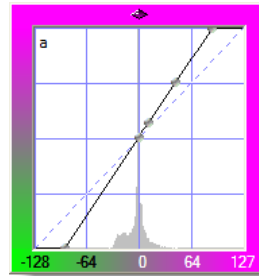


As is often the case, the magenta fuse is the first to blow. Stop when you just start to see detail go away in the most brightly colored areas. Increasing the slope past this point makes the flags behind the warrior blend together .

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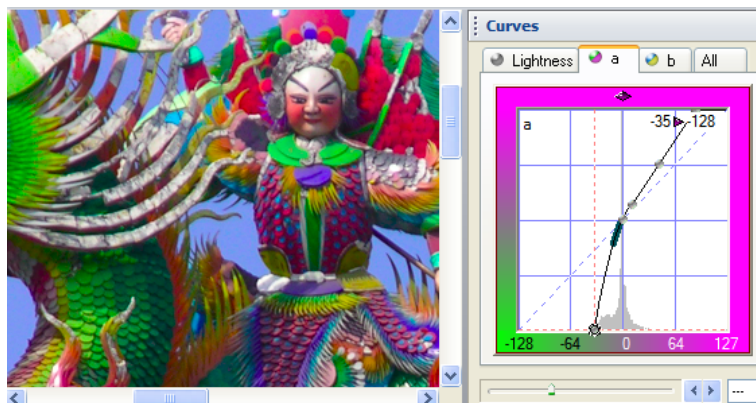
(see left) Use Curvemeister's *Pin to Grid* command to lock the magenta half of the a curve in place.



After the Pin Grid command

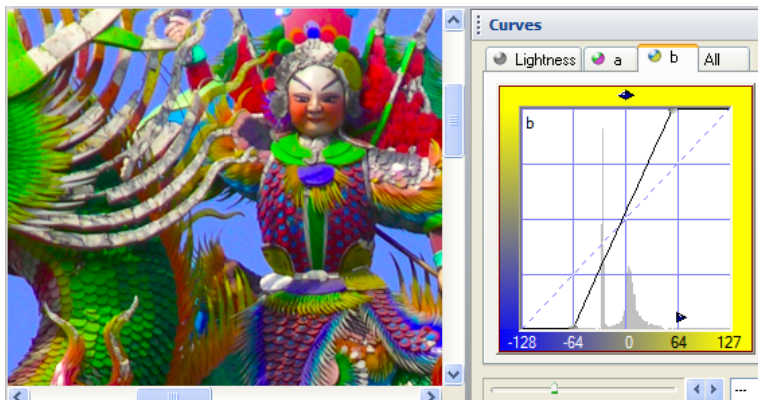
The Pin Grid command locks the magenta half of the a curve in place.

Now we're going to manually adjust the end of the green curve, until the green becomes too saturated.



The green half of the a curve is bent until detail starts to fade from the man's collar.

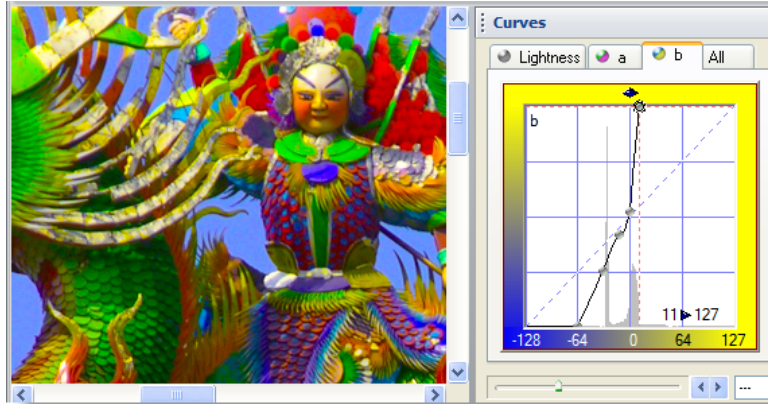
Pursuing our goal of ever richer and juicier color, we start by manually rotating the b curve, until we get either too much blue, or too much yellow. The blue goes ballistic first and we stop just short of making every blue object in the image, including the sky, pop off the screen like little kernels of popcorn in heat.



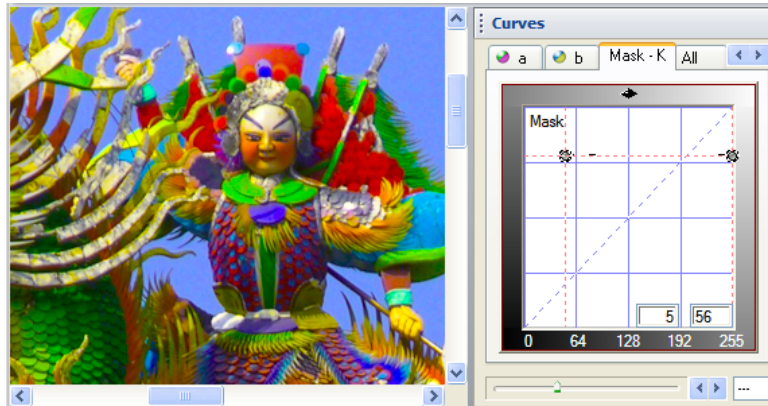
Much further with the b curve, and the man's outfit will start to merge with the sky.

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Now, we pin the lower left half of the b curve, and proceed with adding as much yellow as the image will take without imploding. The result, in all its golden glory, is shown below.



Ok – the final step of Man from Mars is to return to Earth by fading the effect. This is done, as shown in the previous [hint vide](#) by applying a special flat curve to a pure white K channel.




In this case, I kept almost all of the colors in the exaggerated image.



Here's the final result, next to the original. If these were postcards on a stand, which one would you buy?

Example 3: Temple Dragon, An Ping, Taiwan

 [This example has a video hint.](#)



[original]

Recreate the above exercise, using Pin Grid to lock in the amount of magenta and blue, and the K channel trick to fade the effect back a bit.

Using the A and B Channels to Drive Colors Apart


This is another variation on a Dan Margulis technique, from *Photoshop LAB Color*, adapted for Curvemeister.

Drab or muddy foliage colors are a common problem. In many cases, increasing contrast and bumping saturation is enough to bring foliage to life. There is another, often more effective, way to liven up foliage, and that's to drive the greens and yellows that make up the foliage color apart, increasing color variation using the a and b curves. This takes a bit more time than bumping the saturation, and can produce a more visually interesting result. Let's get real with a specific image – a mountain stream with foliage covered hills (containing monkeys, by the way).



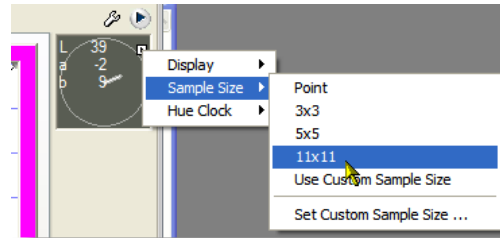
[original]

A potentially interesting image, with muddy greens.

 There is a [video version](#) of this section.

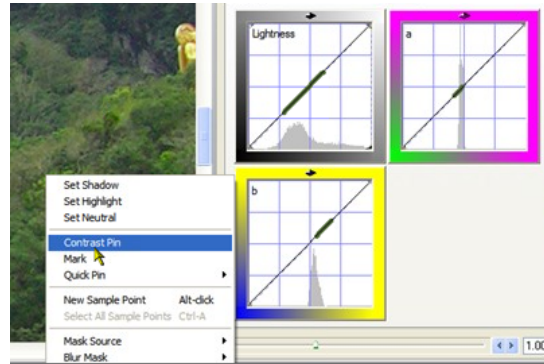
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Start Curvemeister, and make sure that the sample size of the built-in hue clock is 11x11. This will allow the color worms to cover a reasonably large sample of greenery.



Setting the sample size of the built-in Hue Clock.

Use the color worms to find an area of foliage that has a fairly large range on the a and b curves. Right click at this point, and select the Contrast Pin command. This will create control points at the ends of the color worms on each curve, and you'll be using these as "handles" for increasing color variation and contrast specifically for the foliage.

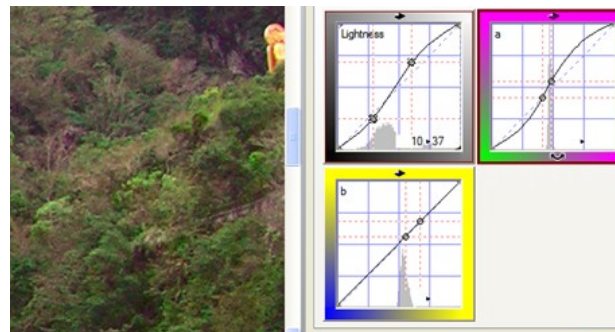


You may also choose to ctrl click on two differently colored areas of foliage.

Test your sea legs by clicking in the margin of the Lightness curve (the cursor changes to a curved arrow), and dragging to make an S curve – this increases the contrast of the foliage. You'll be doing about the same thing to the a and b channels.



As we curve the a channel, we see a dramatic increase in color variation, but wait – something is wrong. Some of the trees are changing to magenta ... unacceptable!



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Hey, no problem. All we need to do to fix this is to use the keyboard arrow keys to move the two selected points downward, out of the magenta, and into the green where they belong.

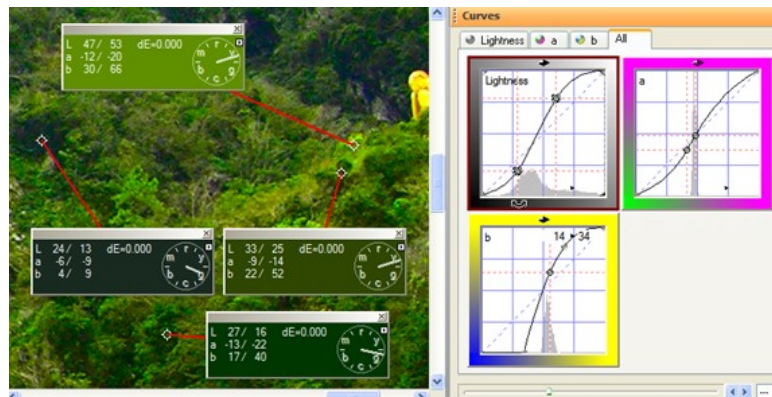
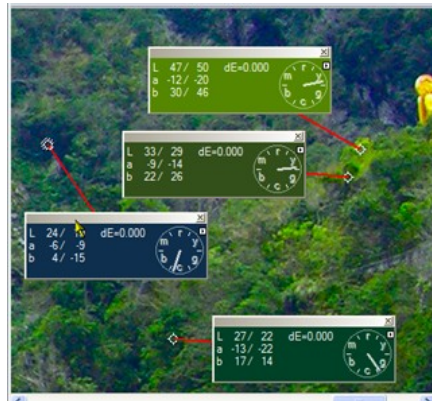


Now it's time to bump the yellow distance. Again, if necessary, use the arrow keys to move both of the selected points up a few notches, to keep the foliage out of the blue, and in the yellow.

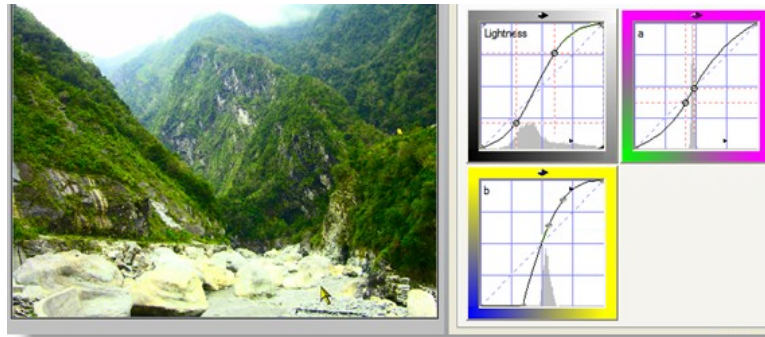


Let's check our work with a few hue clocks. Do not trust your eyes for this sort of check – rely on the numbers.

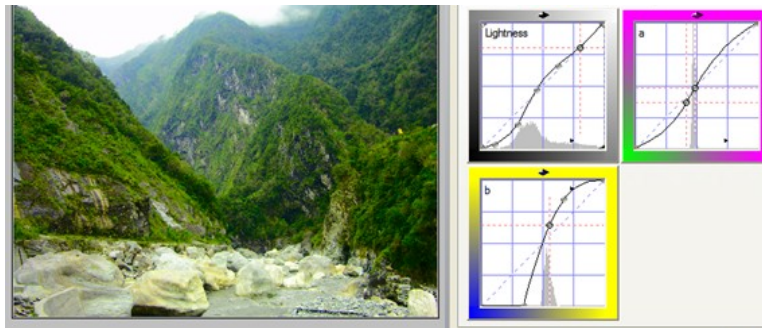
. The rule for foliage is that it needs to be on the yellow side of green, the closer to yellow the better. The brighter areas are OK, but the two darker hue clocks have an unacceptable cyan cast. I'll fix this by juggling the blue end of the b curve, and compromising slightly on some of the brighter foliage.



Here's the final a and b curves. Gorgeous foliage. Just try doing that with an uncola nut! The hue clocks are all within the acceptable range. Now let's zoom out and check the whole image.



The stones in the foreground have lost an unacceptable amount of detail, due to the rather steep S curve in the Lightness channel. This can be, and was, solved by reducing the amount of curvature at the top of the Lightness curve, bringing the stones, and the sky, back to acceptable amount of detail.



The final result. Foreground detail was restored with a new Lightness curve, keeping the same a and b curves.

Example 4: Taroko Gorge, Taiwan

This is an optional exercise. It is entirely possible that you could do better than my result. It is fully demonstrated in the [video](#) from the previous section.



[original]

Use contrast pinning on a representative patch of foliage (or two control clicks on two patches of foliage), then move the points apart to increase contrast and color separation, creating a more interesting foliage pattern. keep the stones in the foreground fairly neutral (the water is dead gray), and retain their detail. How does this treatment differ from the Man from Mars approach, or simply bumping the saturation slider?

Example 5: Temple Bridge, Taroko Gorge

This is a similar problem to Example 4, with the same goal of making the foliage colors more interesting. Do a first pass in Lab to remove the cyan cast from the main structural span of the bridge. The statue in the upper right corner and the small square building near the middle of the image are also neutral. Keep in mind that there are other colored objects to concern yourself with – mainly the red lanterns and gold railing on the bridge. This may affect your strategy and require a bend in the a curve, similar to the Lu Gong dragon example.

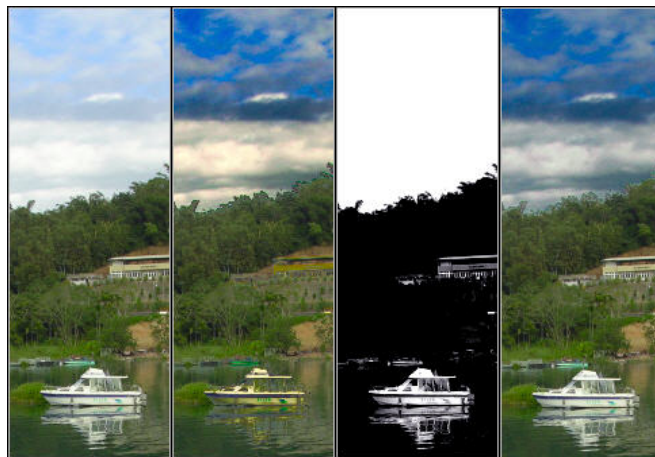


[original]

A temple with its own "suspension" bridge.

Using Masks With Selections

Masks can save a lot of work, but in some cases they need a little help. In the previous session, we ran into a minor problem with the boat harbor image, where darkening the sky caused more or less darkening of a light colored boat. This affected our choice of the channel to use – we used the K channel instead of the blue channel to minimize this effect. The three images below illustrate the problem, and the solution you will be using in this section.

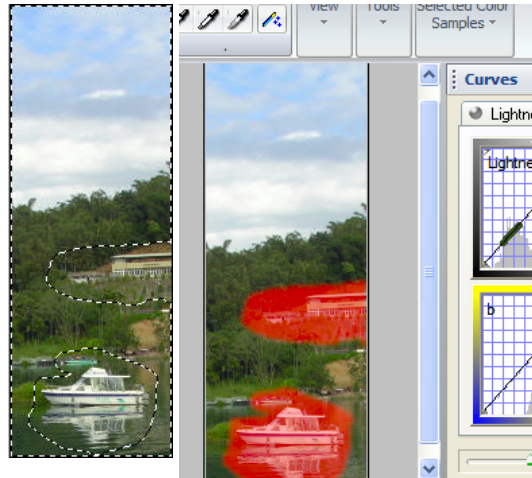


1): original image, 2): sky and (oops) boat darkened, 3) the culprit is unwanted light areas of the B mask,

4): our goal, with the sky darkened and not the boat retaining its full retail value.

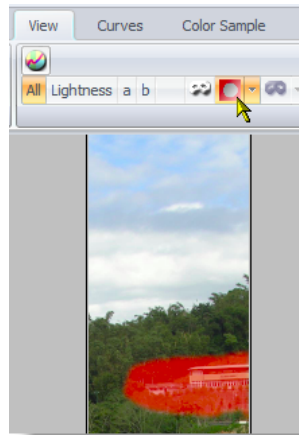
One quick way around this problem is to isolate the boat with a selection before starting Curvemeister. The procedure is the same in Photoshop and Elements. Start by selecting the boat, and any other light colored objects you want to retain, using the lasso tool, with feather set to 10 pixels or so. While in Photoshop or Elements, don't forget to invert the selection before starting

Curvemeister. Ctrl–shift–I is the keyboard shortcut.



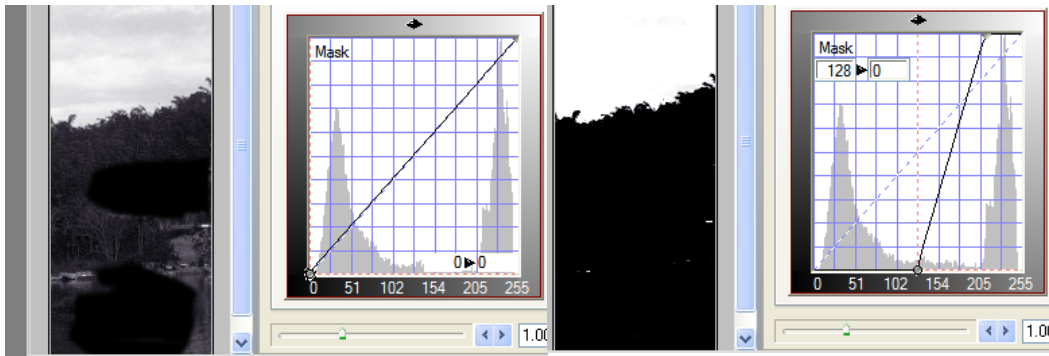
Left: boat and building are protected by selecting them, then inverting the selection, *Right:* masked areas are red in Curvemeister

Once in Curvemeister, you will see something like the above, right–hand image, with the protected areas covered with a red *rubylith*–style mask. The red mask can be distracting, so you may want to disable this feature while you are working. To do this, click the *Hilite Mask* button under the View tab, as shown below.



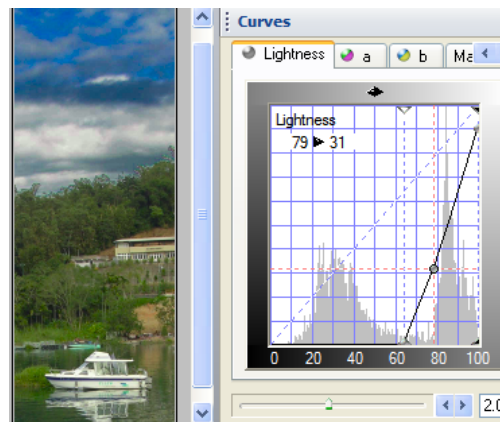
Hide the red mask, if you prefer, by clicking on the *Hilite Mask* button.

Before we can cash in on our hard work and curve the image, we need to tune up the mask with a bit of curving.



The first B channel before and after curving. Ding dong, the boat is gone!

Notice that the boat and building are shrouded in blobs of pure black. The blobs go away once the mask is curved by making the sky completely white, and most of the foreground black.



There you go! Removing the boat from the color correction equation means that we can darken the sky even more.


Using an Alpha Channel as a Mask

Although Elements does not support the alpha channel directly, saved selections are available as alpha masks in Curvemeister.

Elements supports some alpha channel functionality because the *Save Selection* command saves into an alpha channel. This provides a certain amount of versatility over a simple selection because several alpha channels are available in Curvemeister, and an alpha channel can be combined with a selection. Unlike a selection, an alpha channel may also be inverted after the fact in Curvemeister.


In Photoshop, alpha masks may be modified using all the commands and tools available for general image manipulation, including blurring, filtering, painting, noise removal, and so forth. The alpha channel therefore provides a means of modifying a mask arbitrarily, to solve a variety of complex problems. For example, if the mask produced within Curvemeister requires a bit of cleanup, you may copy the mask to the clipboard, return to Photoshop, save the mask in an alpha channel, and modify it. When Curvemeister is run again, the new modified mask will be available as an alpha channel.

Example 6: Harbor View, Sun Moon Lake

 This example has a [video hint](#).



[\[original image\]](#)

This is your chance to verify that you understood the previous sections by retracing the steps on the same image. Pick a different channel if you want, and make your own decision on whether to also darken the reflection of the sky as well as the sky itself. Use an alpha mask if you want. The image can also use a second pass to improve the non-sky areas. Compositionally speaking, is there any advantage to selecting objects individually before inverting the mask, or should the entire non sky be de-selected? This example has a [video hint](#) 

Example 7: Temple Figures, Taiwan

This image is an upside down version of the previous example with the boats. The lower half of the image is significantly brighter than the upper half. Use an alpha mask if you want. The final image will probably look better if the two halves are matched somewhat, as was done with the image on the right, which was done using the B channel as a mask. Your job is to do this, but without sacrificing the highlights on the gold figures. You will probably need to use Curvemeister's blur setting, and de-select the gold figures. The right hand image shown below is a bit on the dark side, after you have made the lighting more even, do a second pass to brighten it all up a bit.



[\[original\]](#)

The bottom half of this image is too bright. Use the B channel as a mask, and de-select the gold figures to keep them bright to avoid dimming them down, as happened in the image on the right.

Class is Almost Finished

There remains a week of discussion of these examples, and any other topics you may choose to bring up, and the video solutions for the examples presented here. Beyond that, I look forward to hearing from you in the [Curvemeister forum](#), and in other venues including shows and future classes.

On behalf of Greg and myself, thank you. This class has been an extraordinary experience. Frankly, in preparing these examples, I've already gotten some ideas on how to improve Curvemeister. Add to that your input and enthusiasm, and the last six weeks have been an experience we will not forget. Thank you for being part of that experience.



For best viewing, adjust your monitor until you can see all the squares.



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