

CONVERTING IMAGES TO
BLACK & WHITE IN
PHOTOSHOP

ELEMENTS AND CS2 METHODS

Grayscale

- Quick and easy, but often least appealing. Flat.
- Open image and select *Image* -> *Mode* -> *Grayscale*. You may be prompted to discard all color information. You must click OK.
- It is always a good idea to keep the original image. You will not be able to convert this image back to color as all the color information has been discarded.

Adobe Photoshop

File Edit **Image** Layer Select Filter View Window Help

Mode

- Bitmap
- Grayscale
- Duotone
- Indexed Color...
- RGB Color
- CMYK Color
- Lab Color
- Multichannel

- 8 Bits/Channel
- 16 Bits/Channel
- 32 Bits/Channel

Color Table...

Duplicate...

Apply Image...

Calculations...

Image Size... Alt+Ctrl+I

Canvas Size... Alt+Ctrl+C

Pixel Aspect Ratio

Rotate Canvas

Crop

Trim...

Reveal All

Variables

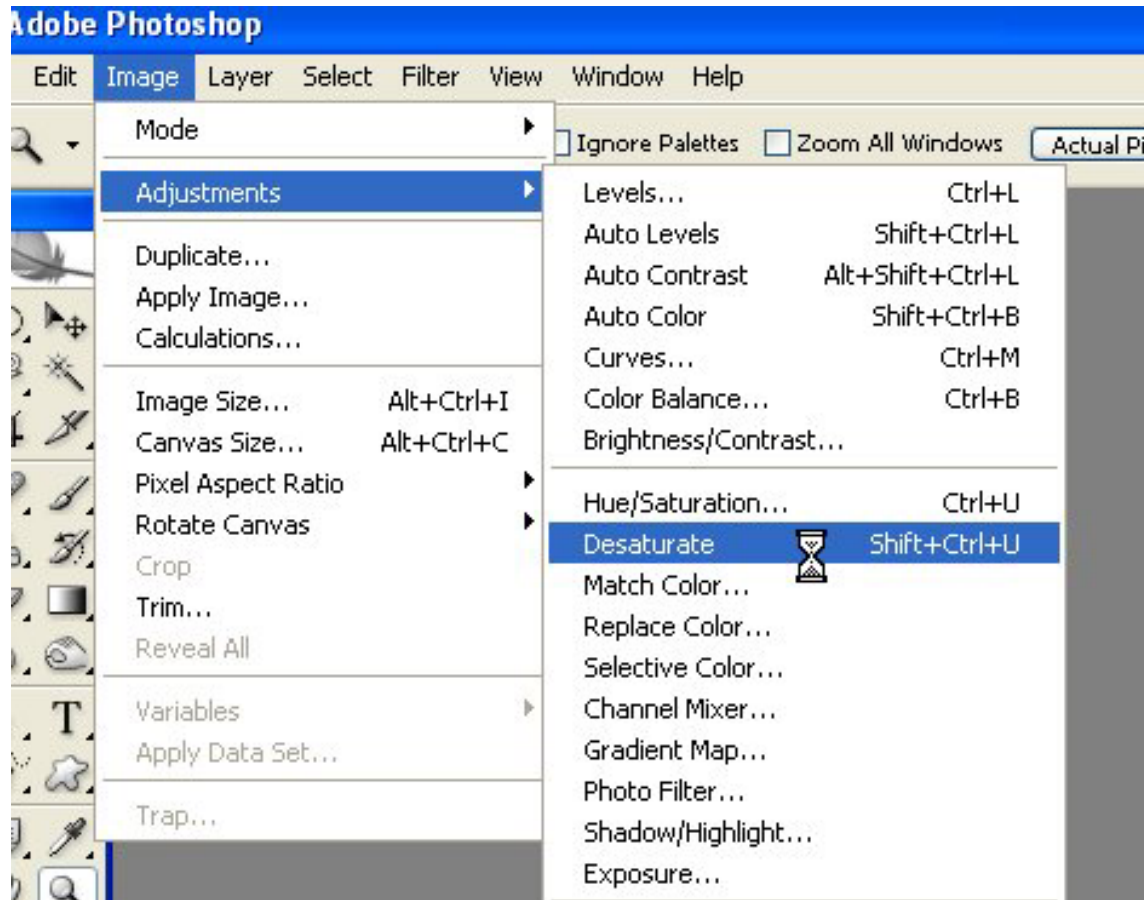
Apply Data Set...

Trap...

Flow: 100%

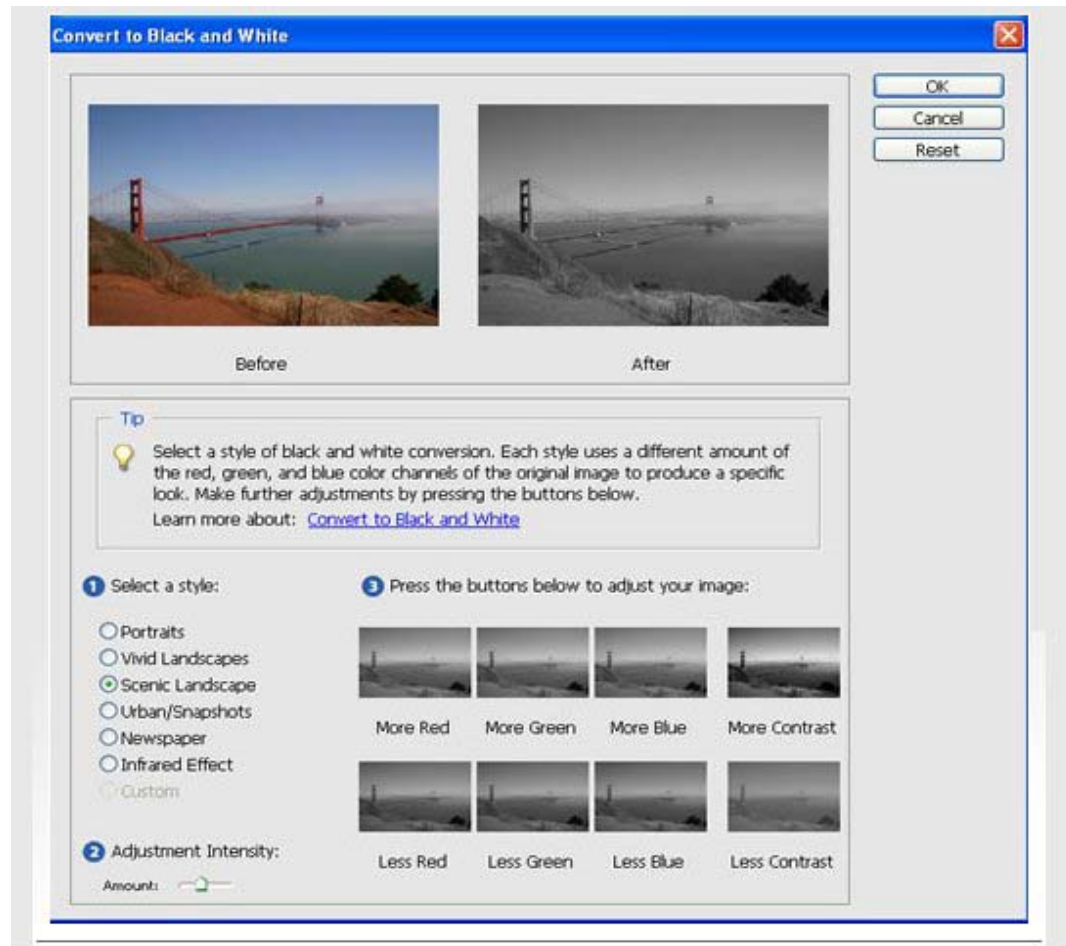
Desaturate Command

- Quick and easy but also not very effective.
- Open image and select *Image -> Adjustments -> Desaturate*. This operation has the effect of making all the colors look tonally very similar.
- The desaturate conversion results in a standard grayscale conversion using a Channel mix of 30% Red, 60% Green and 10% Blue.



Other Options in Elements

- Elements 5 offers a dedicated workspace to convert color images into black and white. Select *Enhance->Convert to Black and White* and the workspace window opens. You can select a style type such as portrait, vivid landscape, scenic landscape, urban/snapshots, newspaper and infrared. You can choose an adjustment intensity amount and work with buttons to add more or less red, green, blue or contrast. Not available in CS2.

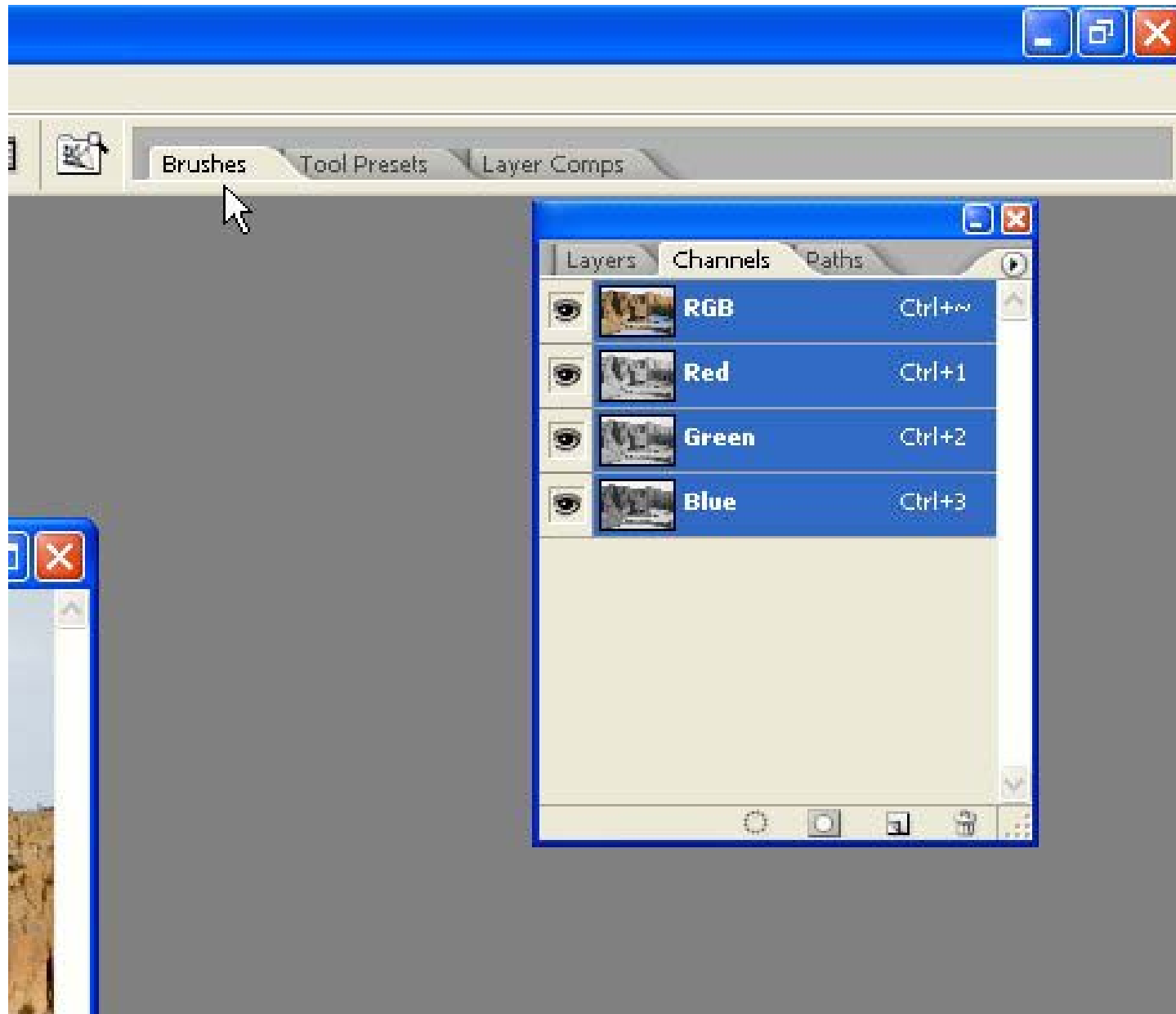


•You can also go to *Enhance*->*Adjust Color*->*Remove Color*.

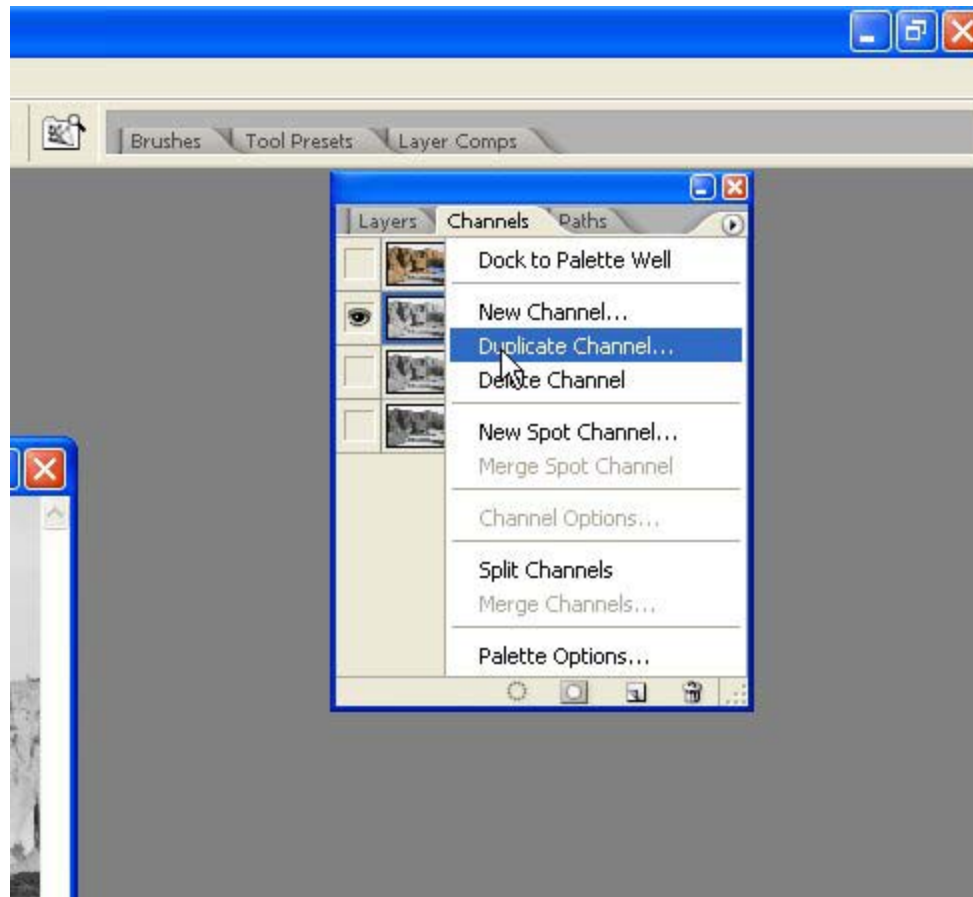
PHOTOSHOP CS2 METHODS

Channels-RGB Mode

- Open image then open Channels palette. Click on each channel to check to see which offers the best option for conversion. Can often combine a couple or all of the channels, but would need to accomplish that with some layer masking.



- Take best one and in the Channel fly-out menu select Duplicate Channel. Click on Select->All and then copy the new channel. Click on the image on the top line of the Channels palette to select all channels, then click on the Layers tab and paste the new layer into the image. Adjust to taste using levels or other adjustment tools.



Select Filter View Window Help

Mode: Normal Opacity: 100% Flow: 100%

Brushes Tool Presets Layer Comps



Layers Channels Paths

Normal Opacity: 100%

Lock: Fill: 100%

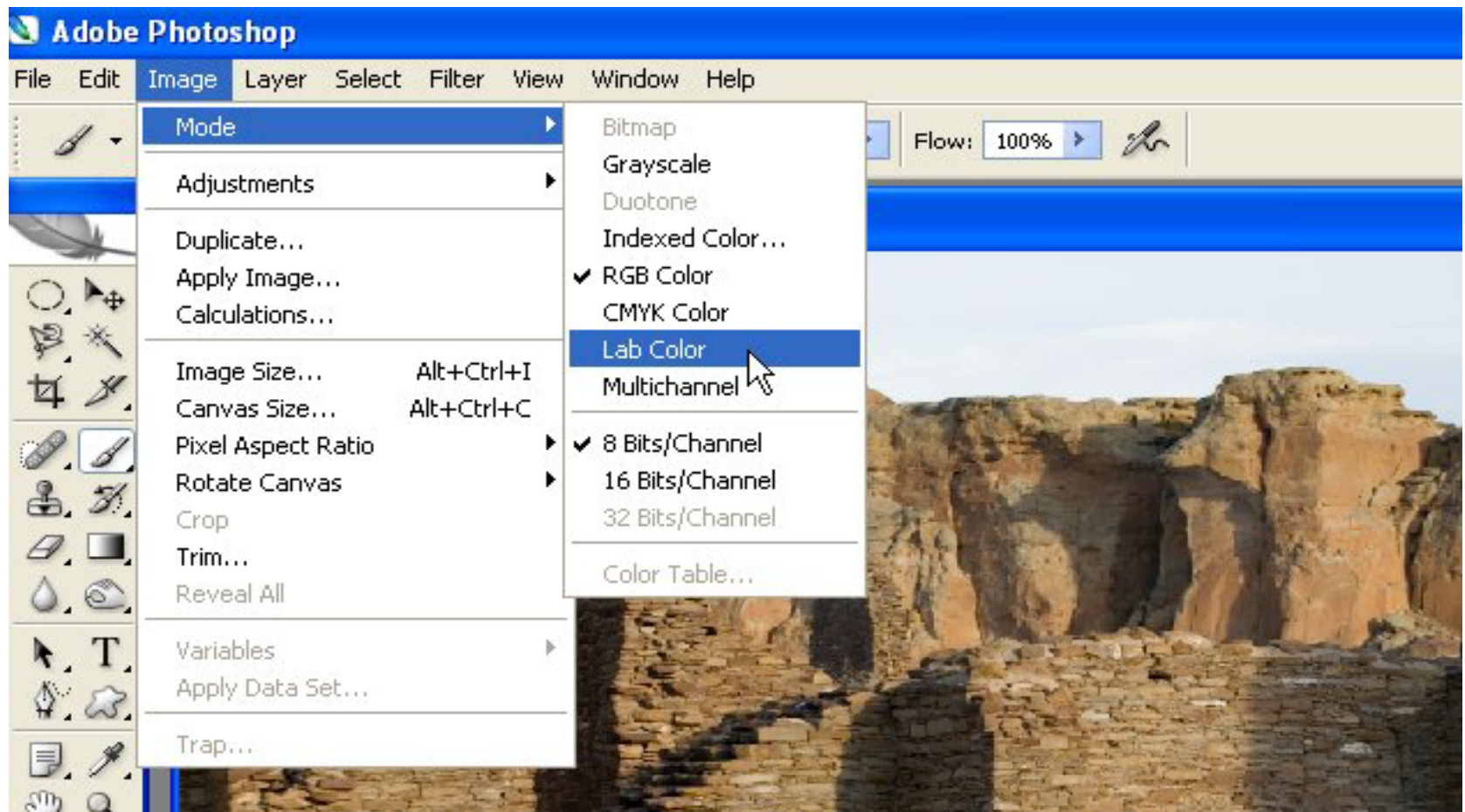
- Green Channel
- Background

Bottom icons:

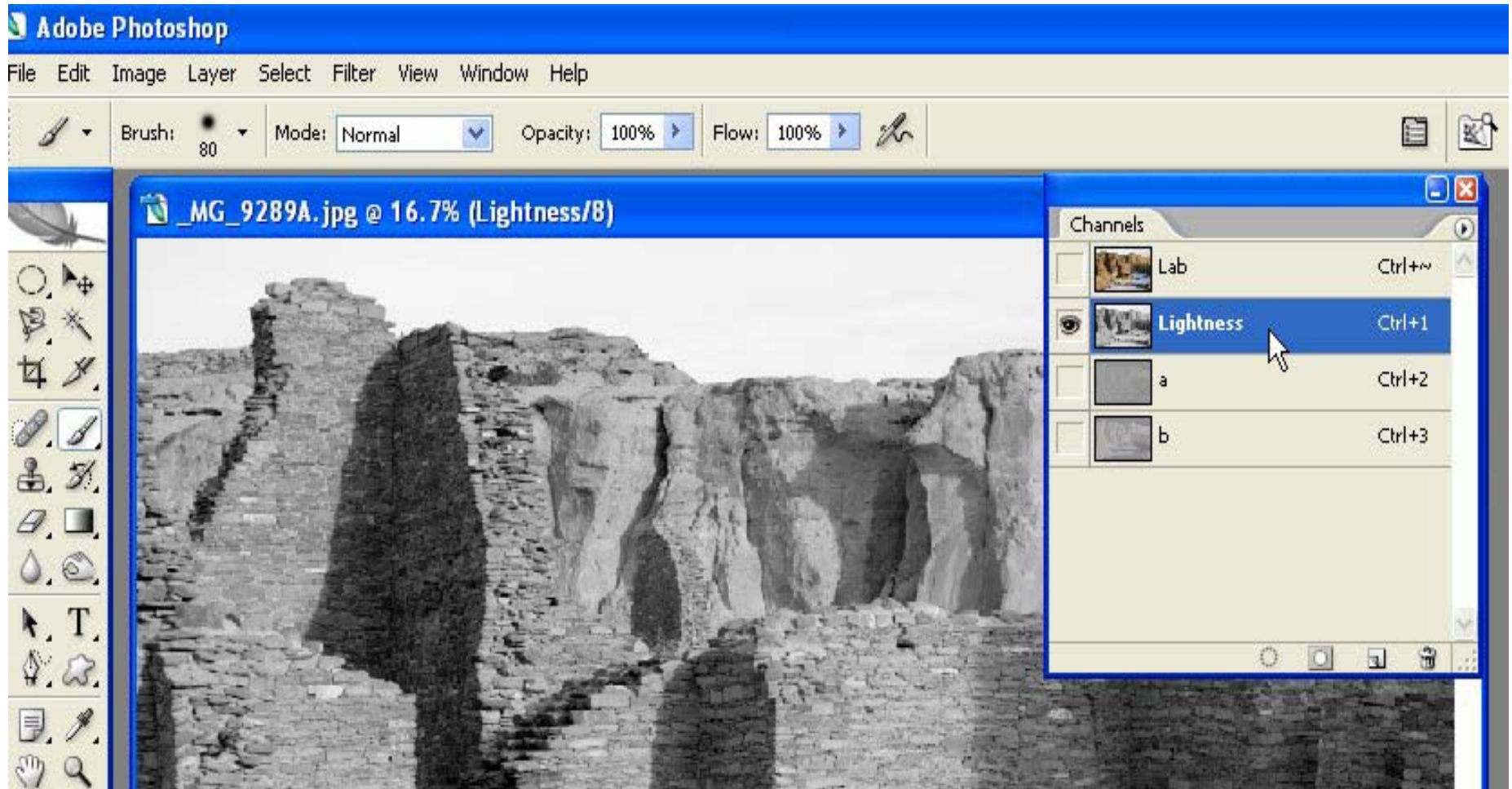
The Layers panel on the right side of the interface shows the current layer stack. It includes tabs for 'Layers', 'Channels', and 'Paths'. The 'Layers' tab is active, showing a 'Normal' blend mode and 100% opacity. There are two layers: 'Green Channel', which is currently selected and has its visibility icon checked, and 'Background', which is locked and has its visibility icon checked. The bottom of the panel contains standard Photoshop navigation icons.

Channels-LAB Mode

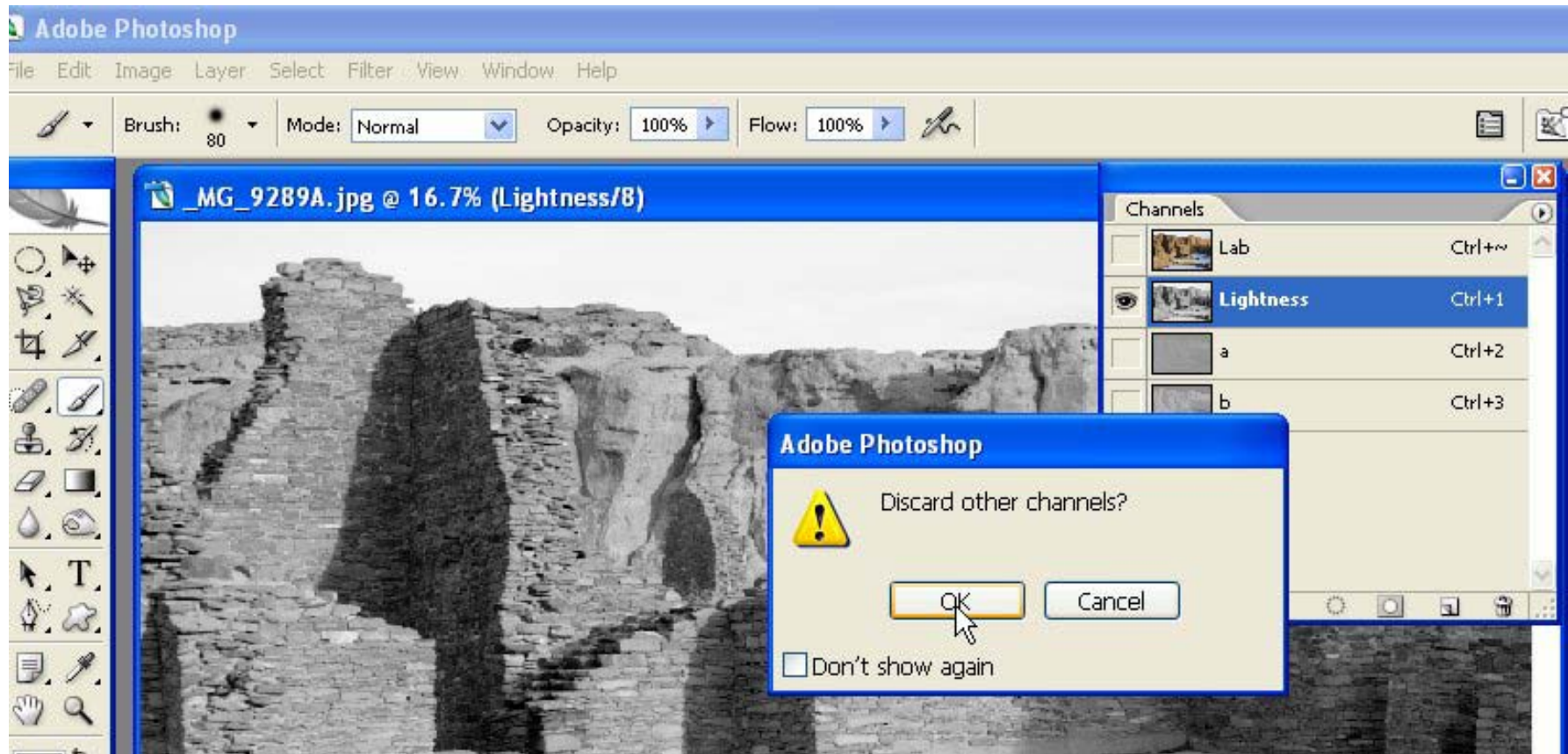
• This method is slightly more complex, but is very quick and results generally give better tones. However, you need to remember to convert back to RGB mode after you're done. With the image open, click the *Image* -> *Mode* -> *Lab Color* menu entry.



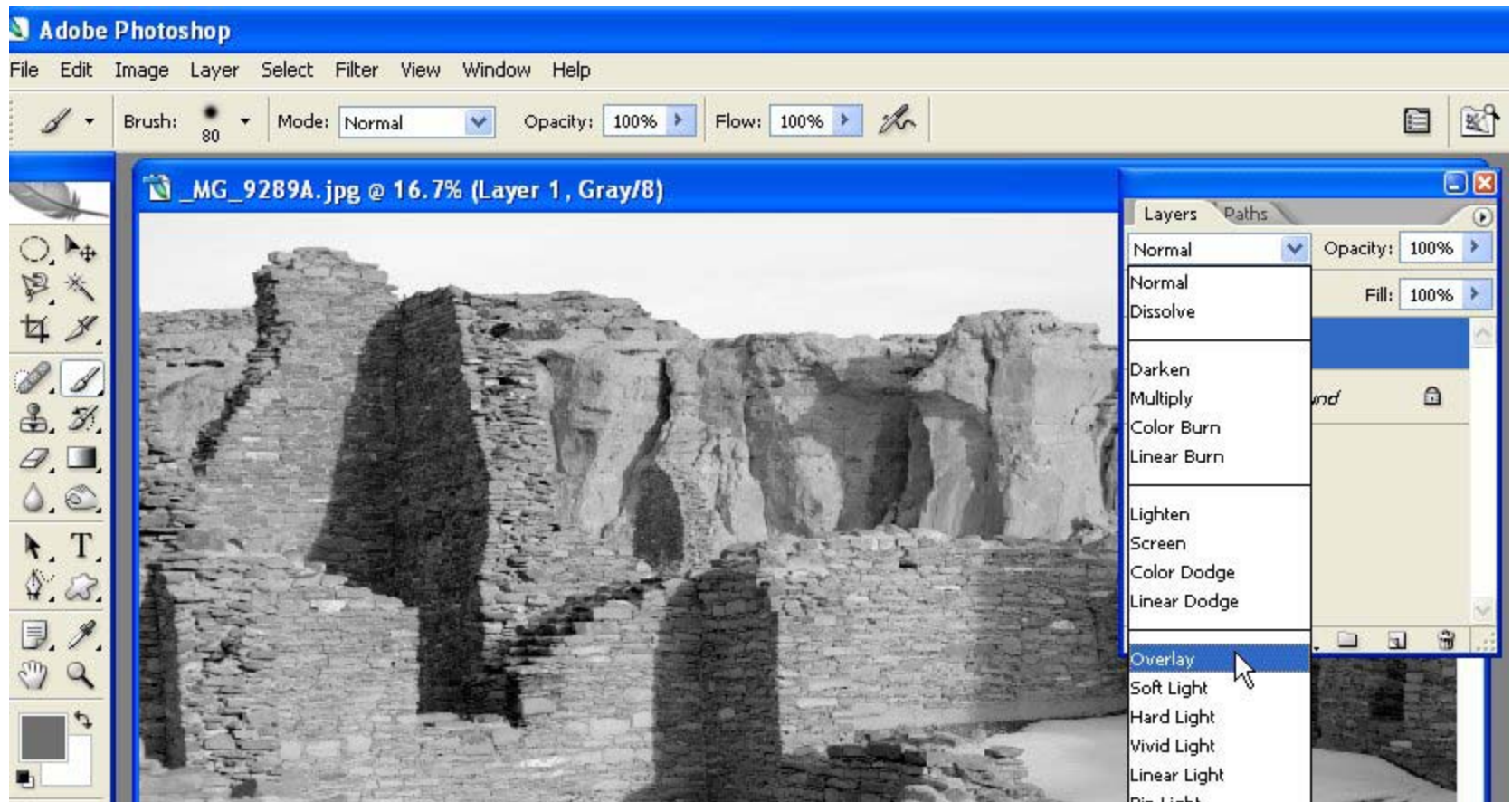
- In the Channels palette, instead of the Red, Green and Blue channels, you will see a Lightness and a and b color channels.
- Select the Lightness channel



- Next convert the Lightness channel to Grayscale by selecting *Image->Mode->Grayscale*. It will ask you if you want to discard other channels. Click yes.



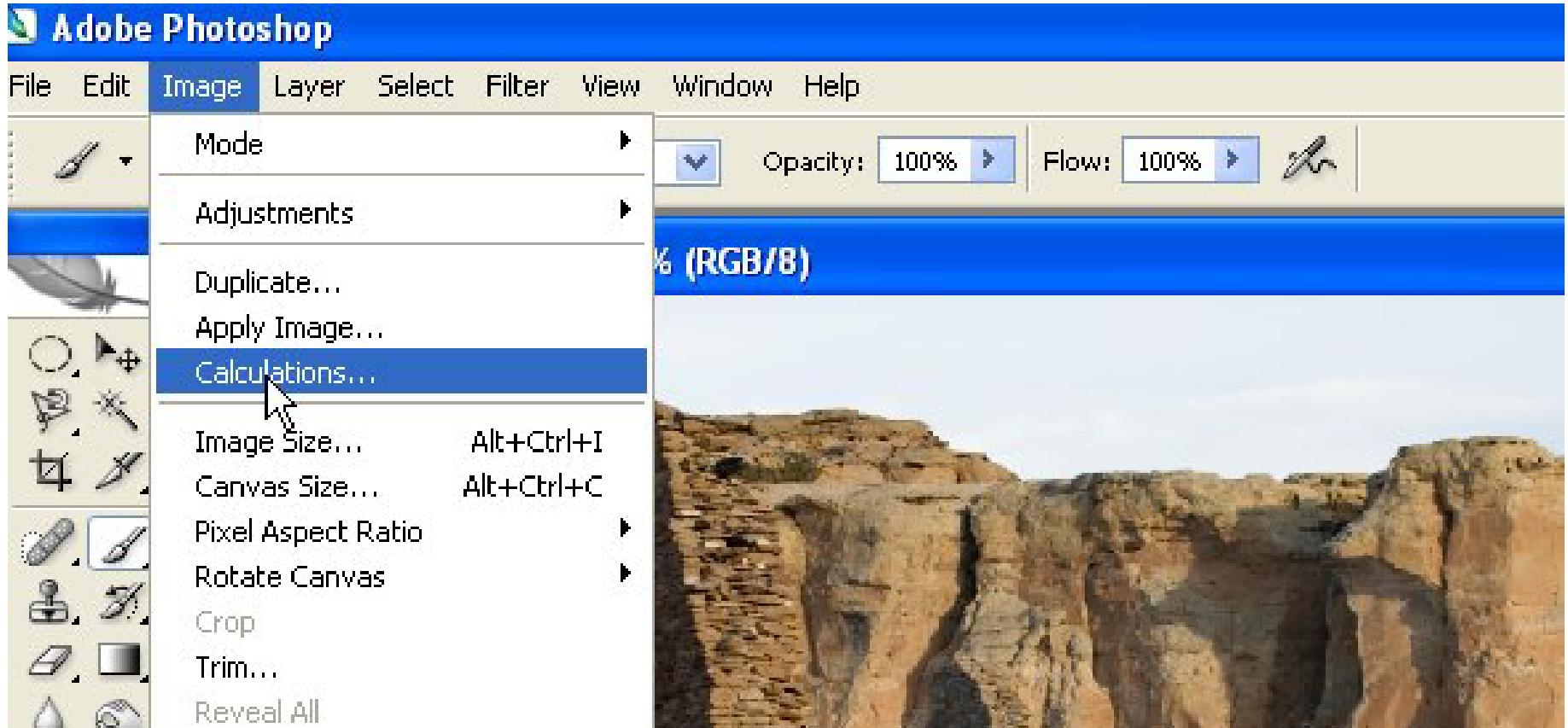
- You can go further by duplicating the Lightness channel and pasting it onto its own layer in the image. Click on the Lightness channel and then *Select->All* and copy the channel. Click on the image on the top line of the Channels palette to select all channels, then click on the Layers tab and paste the new layer into the image. Convert the image back to RGB mode using *Image -> Mode -> RGB*. Then go to the Layer Blend Mode drop down tab and choose Multiply if image is too light, Overlay if too dark, or just experiment.

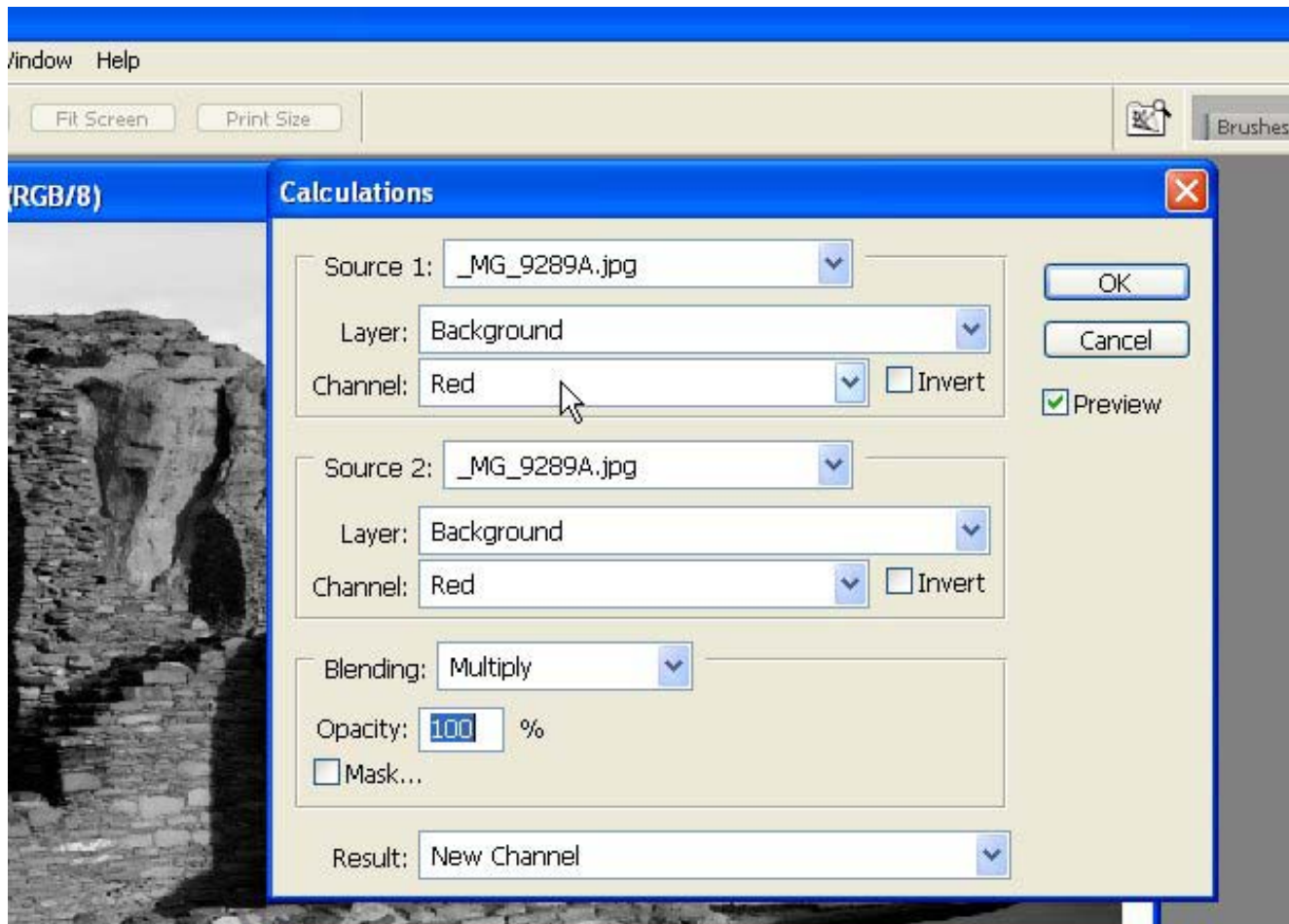


- The image converted in the Channels-LAB method generally separates colors better and has lighter tones which some people prefer.

Calculations Method

- Open the image and select *Image -> Calculations...* The Image Calculations dialog will be displayed.

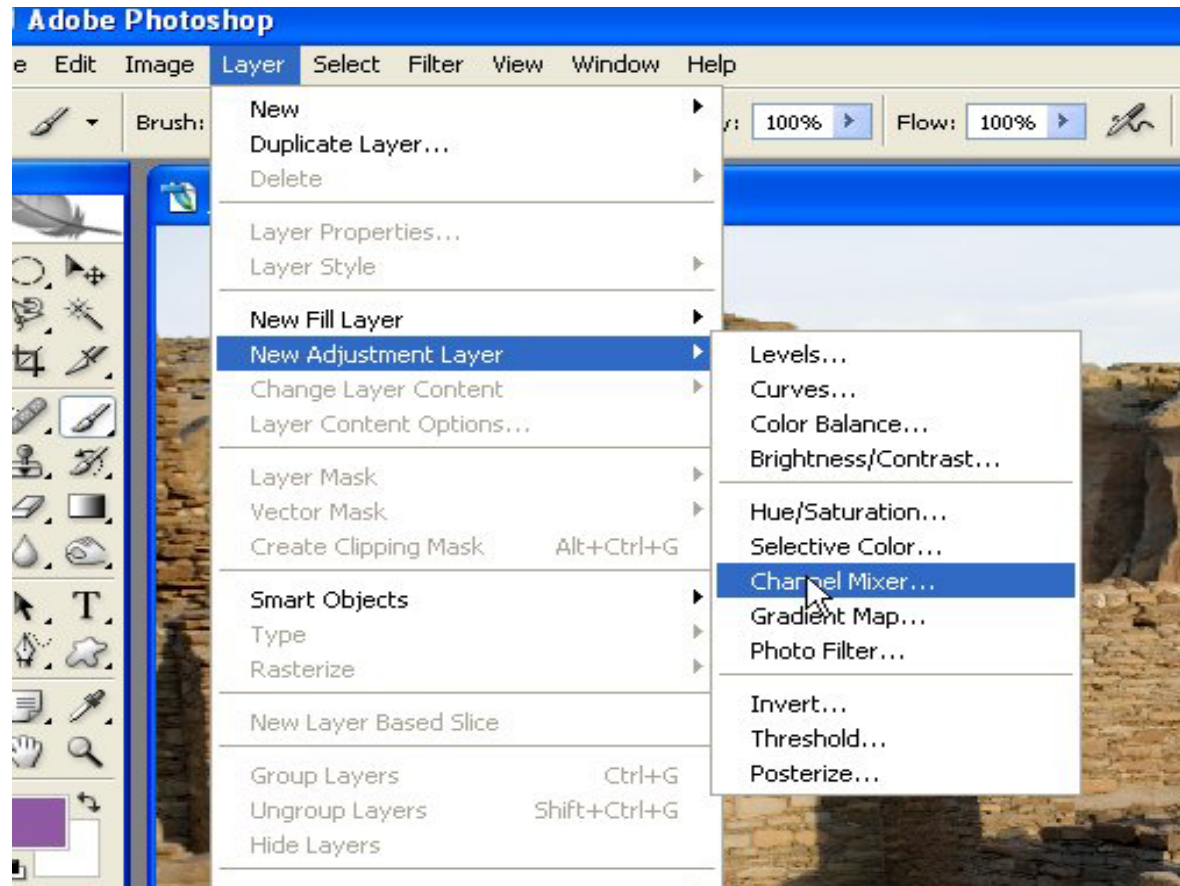




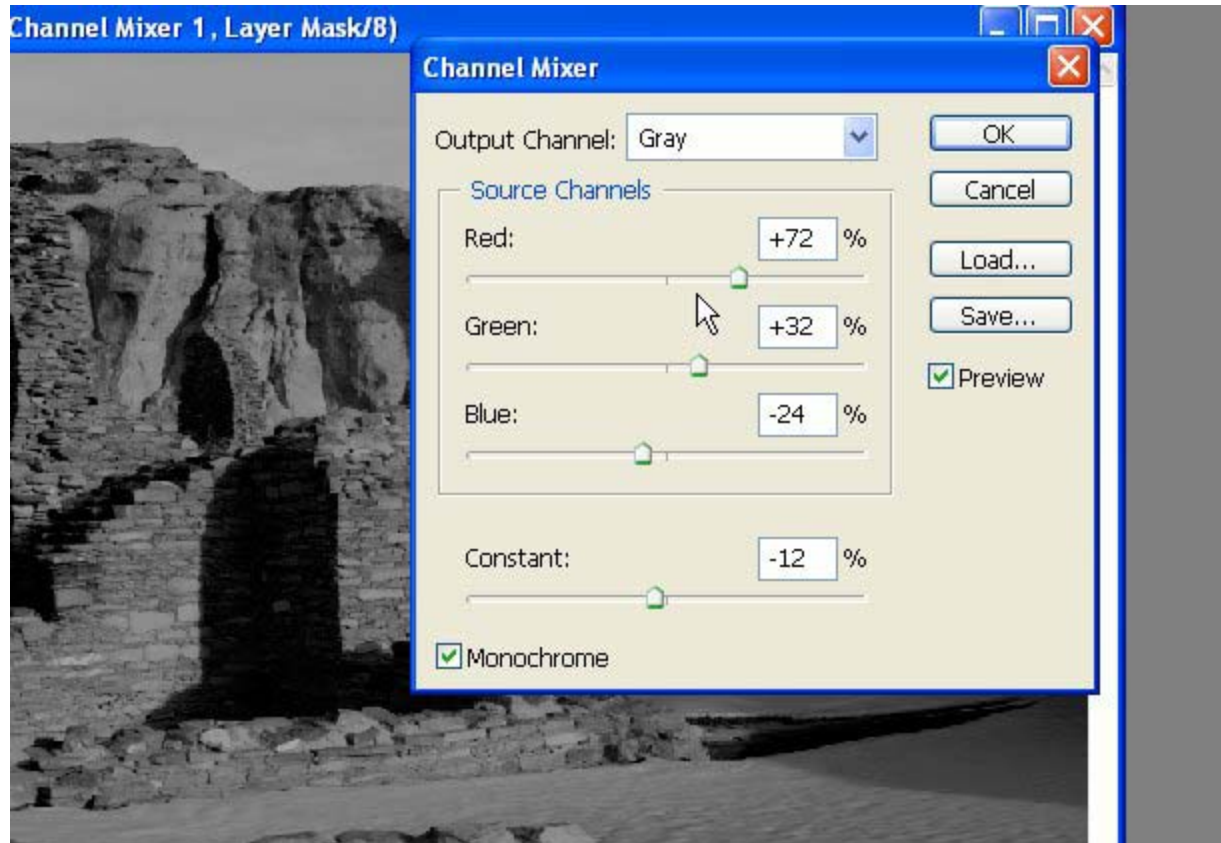
- Combine Channels from Source 1 and Source 2 (i.e. Red-Green, Red-Blue, Green-Blue) and try various Blending Modes (Multiply, Soft Light, Overlay primarily). You can also change the opacity if overdone.
- This method is good for creating black and white images with high contrast that emphasize texture (particularly useful for enhancing skin texture).

Channel Mixer

- Provides the most flexibility. Allows you to mix together the contributions of the Red, Green and Blue color channels in any combination to get the black and white image you like.
- Open the image and select *Layer->New Adjustment Layer->Channel Mixer*.



- The Channel Mixer dialog will be displayed. By default, Photoshop sets the Red channel to 100% with Green and Blue at 0%.
- Check the Monochrome box. Now you can adjust the percentage of Red, Green and Blue channels to mimic the effect of various traditional filters.
- The Constant slider controls the overall brightness with a positive value making the image lighter.
- Work with the sliders until you find what you like (Generally want to keep the total number around 100).



Traditional Filter Equivalents in Channel Mixer

<u>Filter</u>	<u>Red</u>	<u>Green</u>	<u>Blue</u>	<u>Constant</u>	<u>Filter Affect</u>
Red	100	15	0	-15	Lightens red, darkens blue & green
Green	35	55	20	-10	Lightens green, darkens red & blue
Blue	15	15	80	-10	Lightens blue, darkens yellow
Yellow	60	30	10	0	Lightens yellow, darkens blue
Orange	75	20	20	-15	Lightens orange, yellow, red
Yellow\Green	25	65	15	-5	Lightens green, darkens red

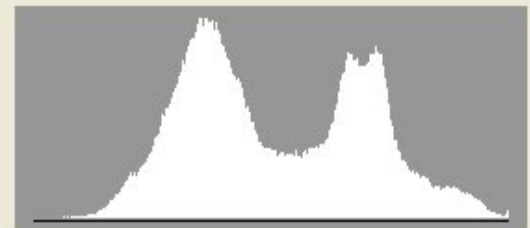
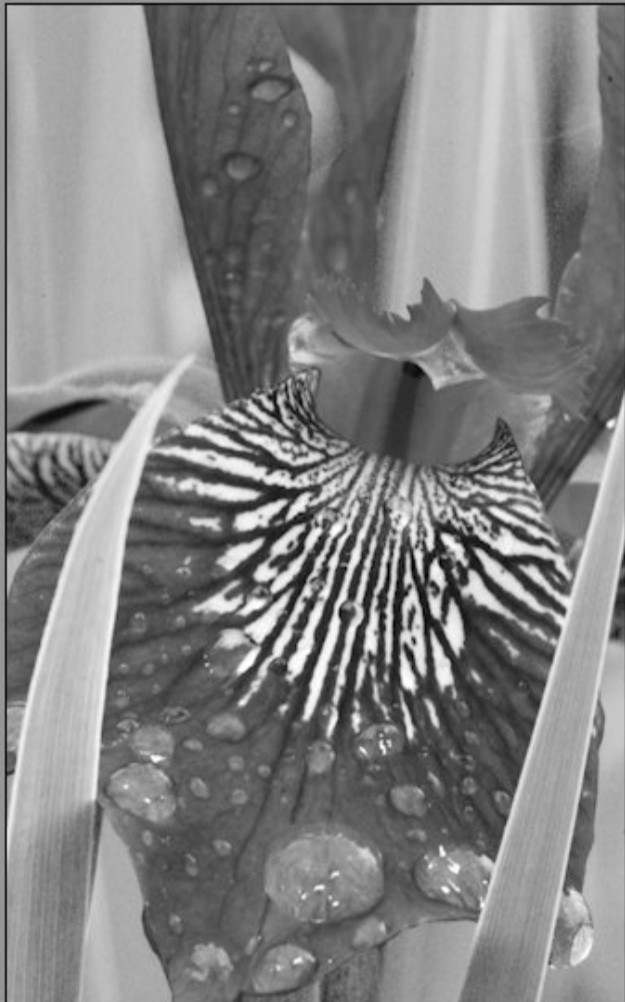
CS2 RAW Converter

- Open RAW file in RAW converter.
- Under the Adjustment tab, move the Saturation slider all the way to the left to -100.
- Then under the Calibrate tab, move the various sliders to taste.



Preview Shadows Highlights

R: --- G: --- B: ---



Settings: Custom

Adjust | Detail | Lens | Curve | Calibrate

Camera Profile: ACR 2.4

Shadow Tint: +41

Red Hue: -65

Red Saturation: +60

Green Hue: -60

Green Saturation: -23

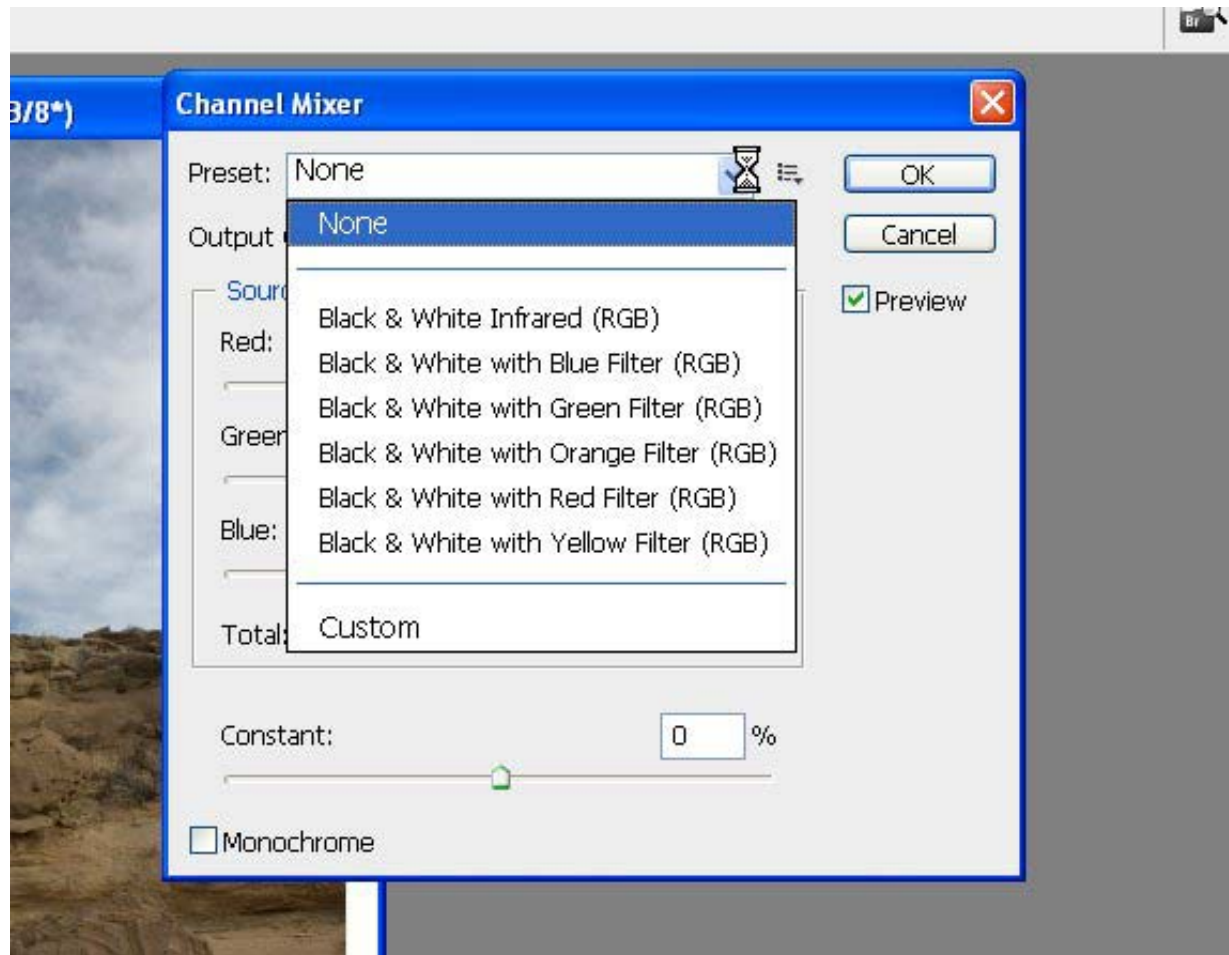
Blue Hue: +88

Blue Saturation: 0

PHOTOSHOP CS3 (Beta) METHODS

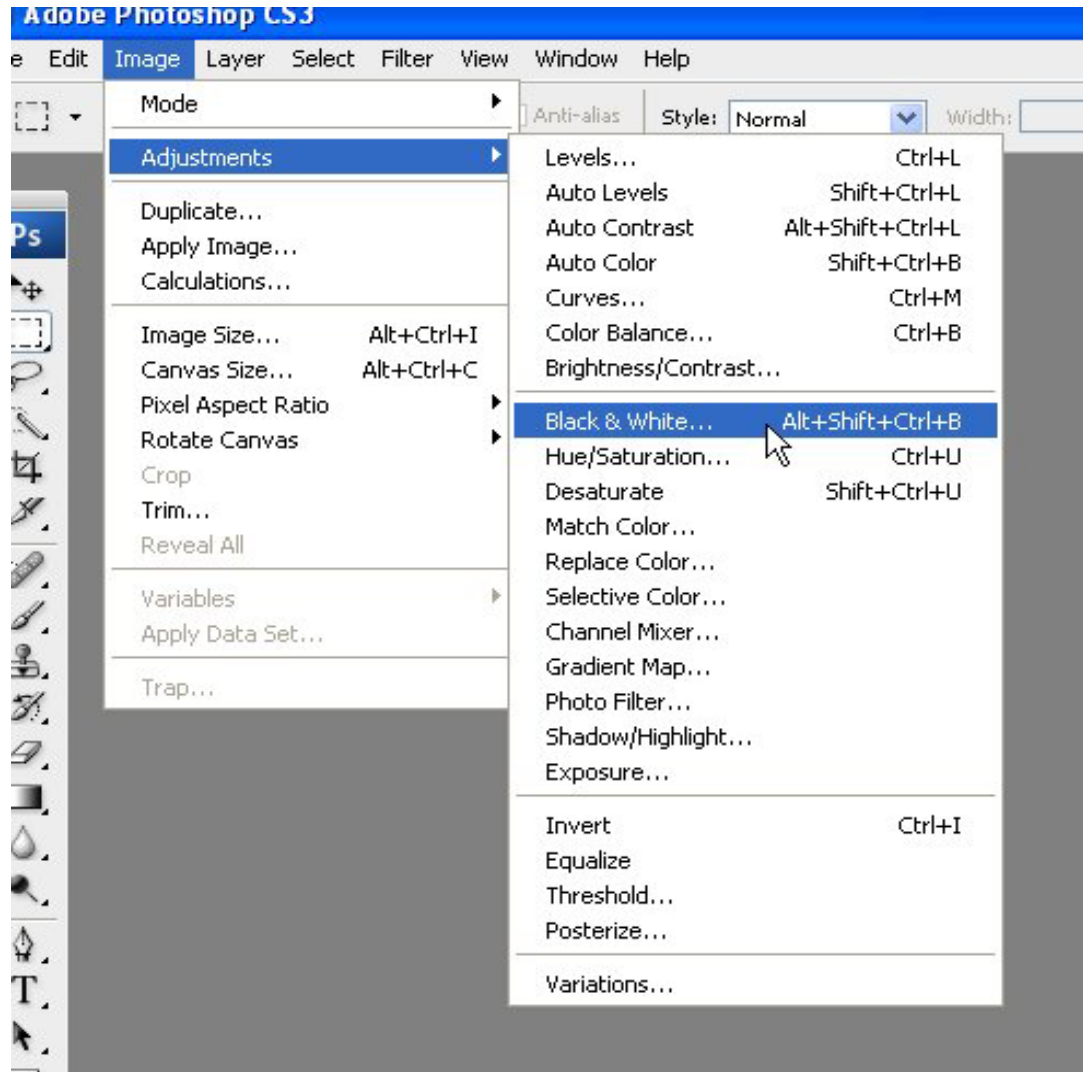
New Channel Mixer Options

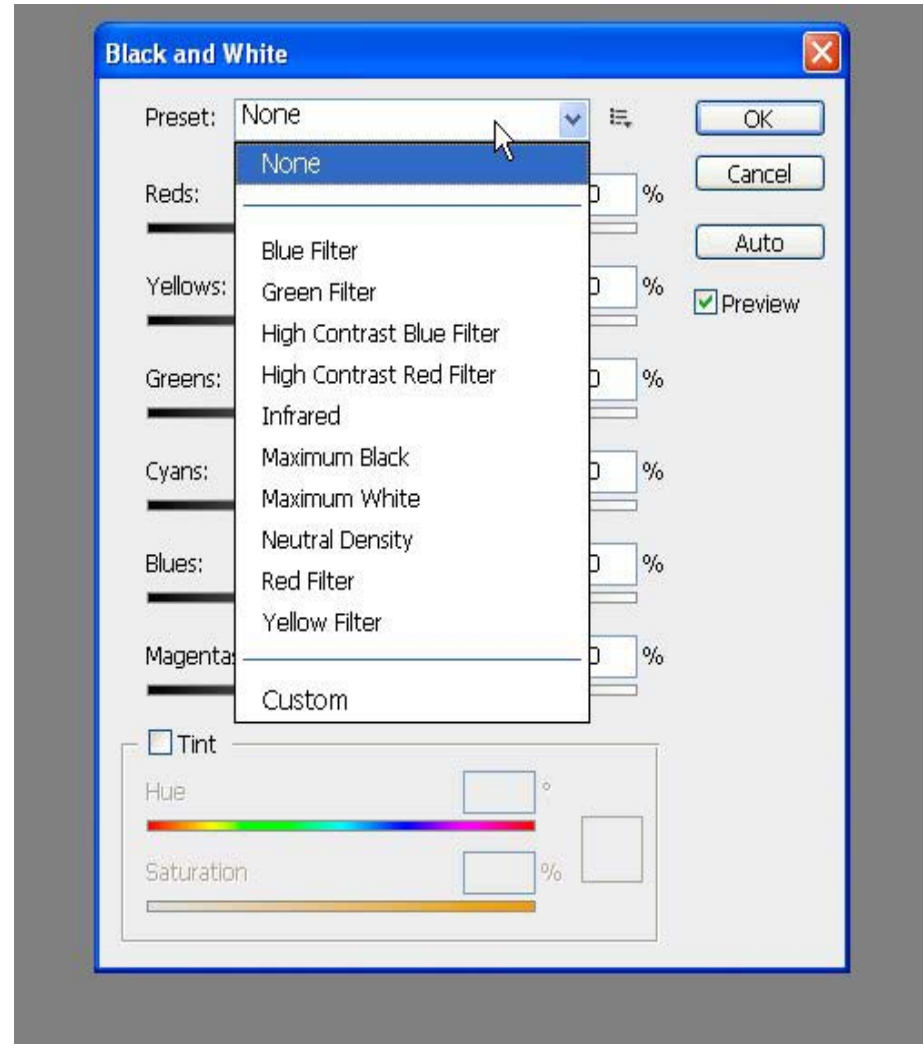
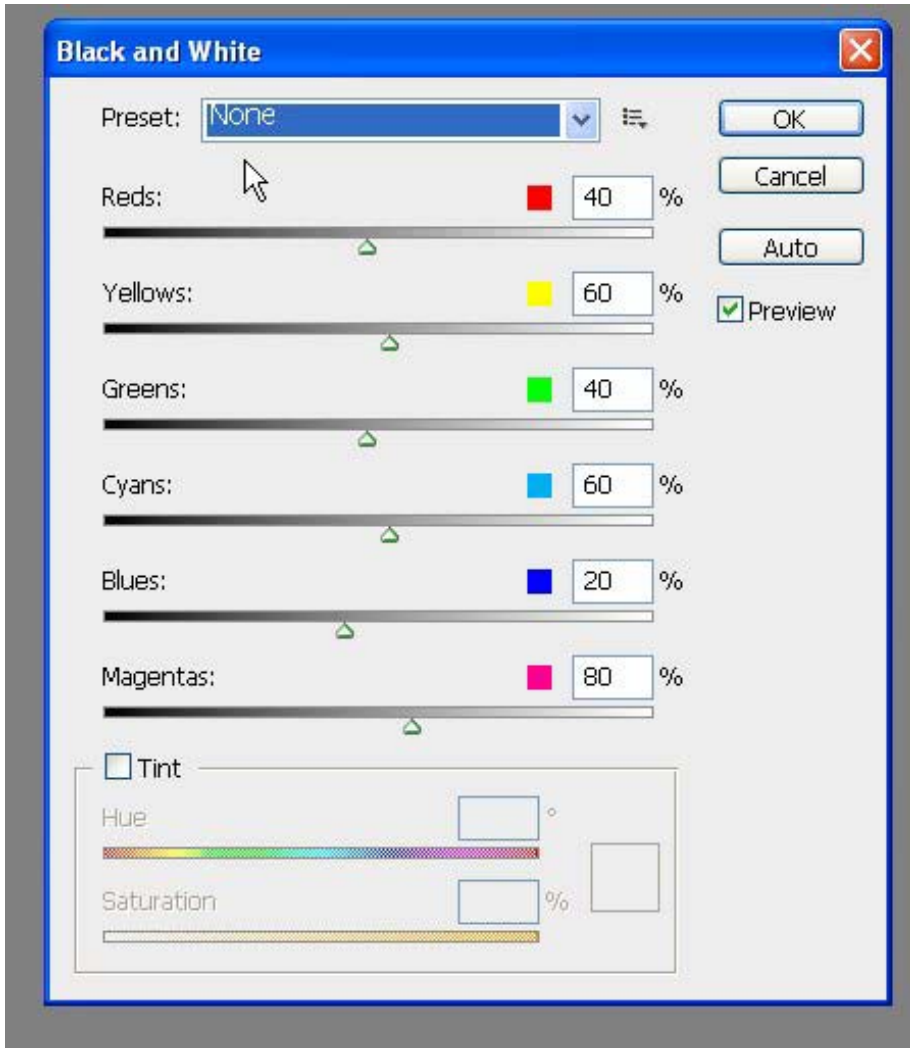
- Offers presets for black and white conversion.



New Image Adjustments Options

- Offers presets and intuitive adjustment sliders as an adjustment layer.

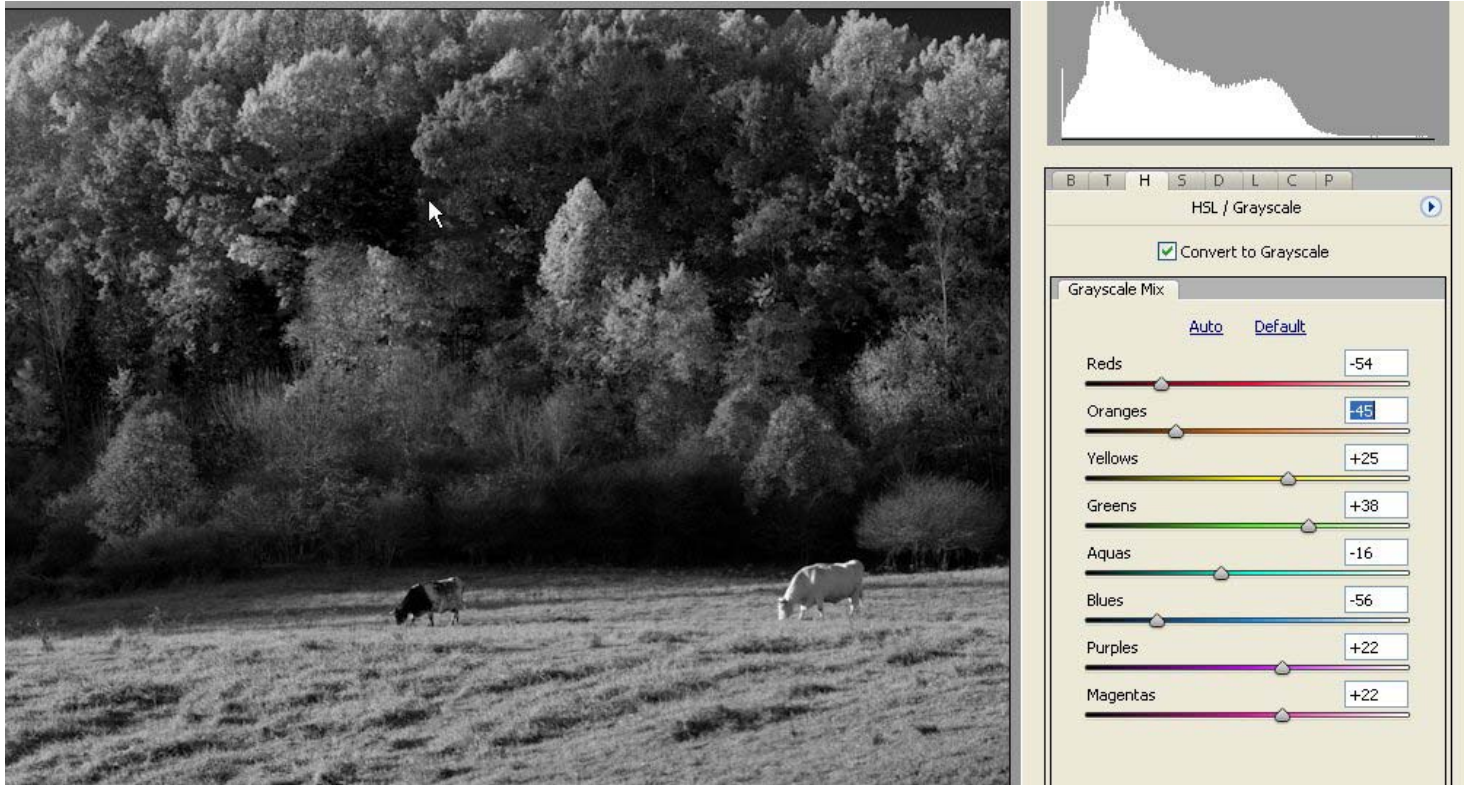




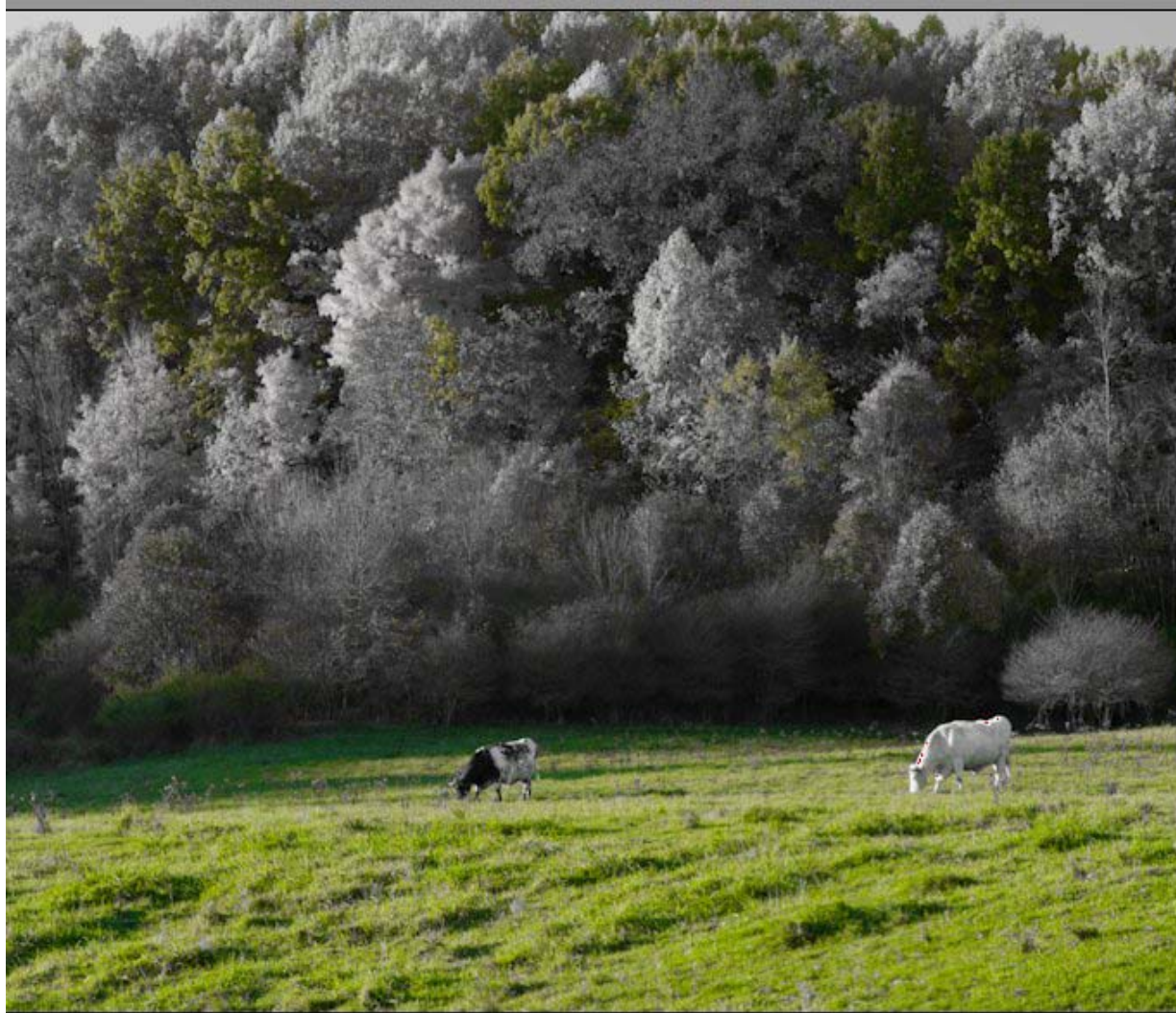
- You can also select a part of the image with your mouse and click and scrub across the image to just adjust that color tone.
- You can also color tint an image from this dialogue box.
- Any settings can also be saved as a preset to use on other images.

CS3 RAW Converter

- Open RAW file in RAW converter.
- Under the H tab (HSL\Grayscale) check the Convert to Grayscale box. Adjust the various color sliders to taste.



- If you want to hand color the image, go to the H tab and click on the Saturation sub-tab. Move some of the color sliders to -100 saturation while leaving others with color.



The screenshot shows a software interface for color adjustment. At the top, there is a histogram with a multi-colored peak. Below it, a tabbed interface is open to the 'HSL / Grayscale' section. The 'Convert to Grayscale' checkbox is unchecked. The 'Saturation' sub-tab is selected, showing a list of color sliders. The sliders are set to the following values:

Color	Saturation Value
Reds	-100
Oranges	-99
Yellows	-100
Greens	+79
Aquas	-100
Blues	-100
Purples	-100
Magentas	-96