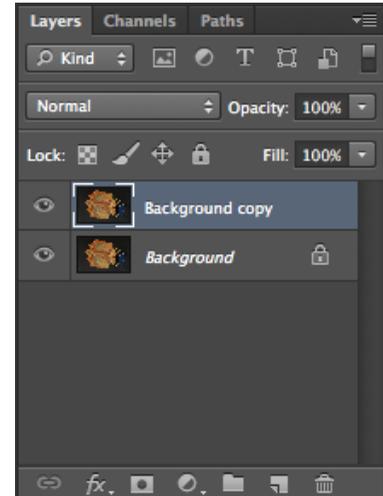
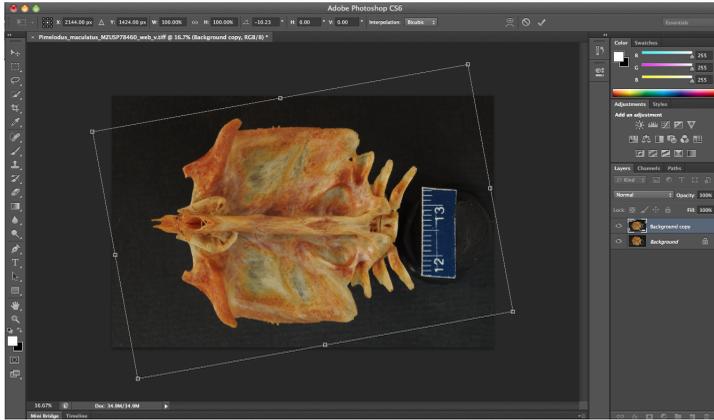


Editing Specimen Photos using Photoshop CS6

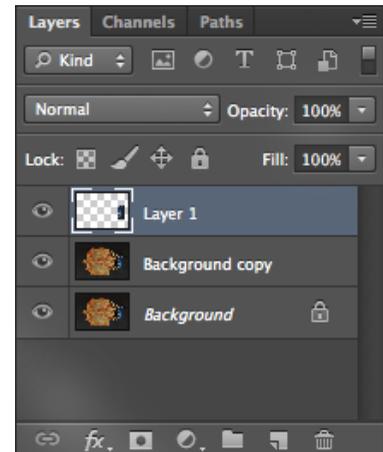
1. Duplicate the image on the new layer by dragging the layer down to the  symbol at the bottom the layers palette.

2. Rotate the new layer so that the specimen is in the correct position. (Free Transform - Command (⌘)-T or Ctrl-T)

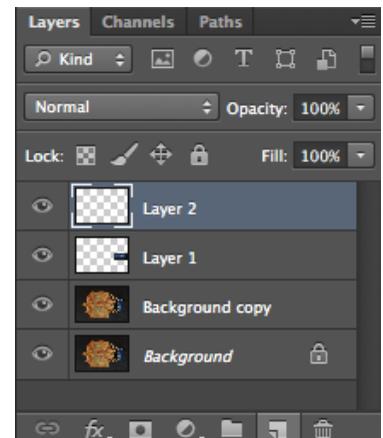
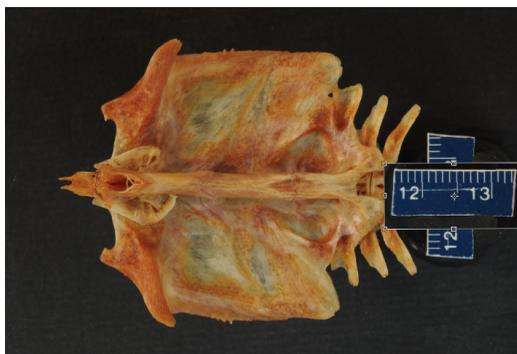


3. Flatten the layers. (Merge Down - ⌘ -E or Ctrl-E) Duplicate the image again to a new layer.

4. Use the Marquee Tool  to select the scale. Copy (⌘ -C or Ctrl-C) and paste (⌘ -V or Ctrl-V) to a new layer.



5. Rotate the scale so that it is level. (Free Transform - ⌘ -T or Ctrl-T)



6. Create a new layer, Click  at the bottom of the layers palette.

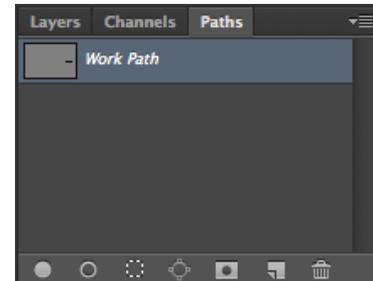
7. On the new layer use the pen tool  to create a line. Click once to the left of the left side of scale and then holding shift click again to the right of the right side of the scale. This should create a straight line.



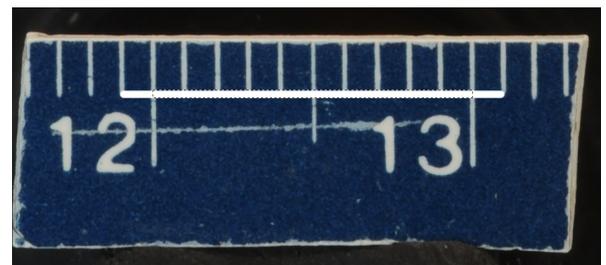
8. Select the Brush tool from the tools palette  and set the brush to 13 and make sure you are using a hard brush with 100% hardness. Next make sure that you have the desired color set as the foreground (white for a dark background, black for a light background).



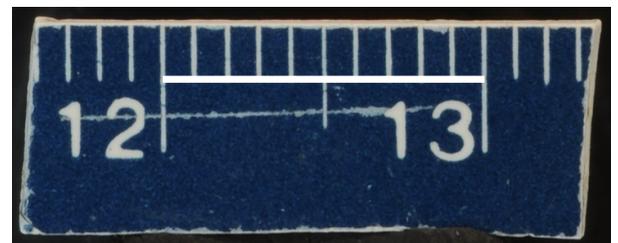
9. Click the Paths tab on the layers palette to pull up the paths palette. Then make sure the path is highlighted in the paths palette and stroke the path by clicking  at the bottom of palette.



10. Use the Marquee tool to clip the ends off the scale. See left. The left and right margins of the box should be in the middle of the lines of the scale bar.



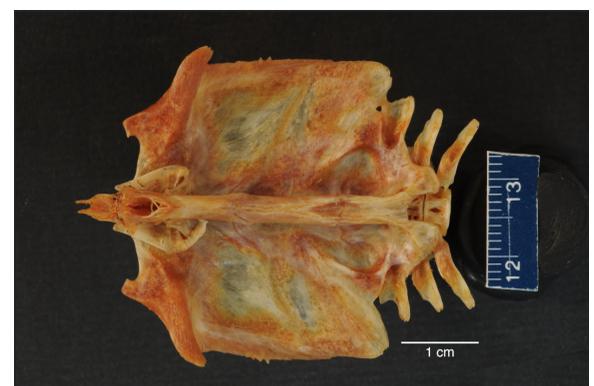
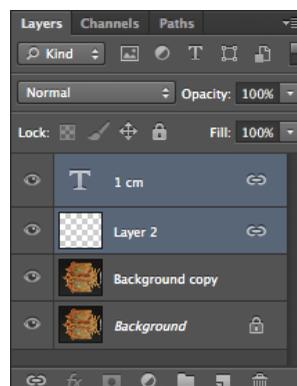
11. Press (⌘-Shift-I or Ctrl-Shift-I) to invert the selection and then press (⌘-X or Ctrl-X) to cut the excess off of the line. You now have a scale bar.



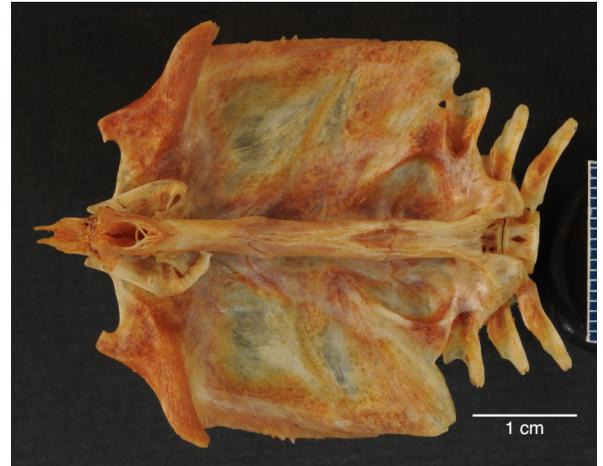
12. Delete the layer with the rotated scale. Then use the text tool to type 1cm under the scale (Helvetica or Arial font). Next move the text so that it is centered under the scale bar. As you move it, it should snap into place.



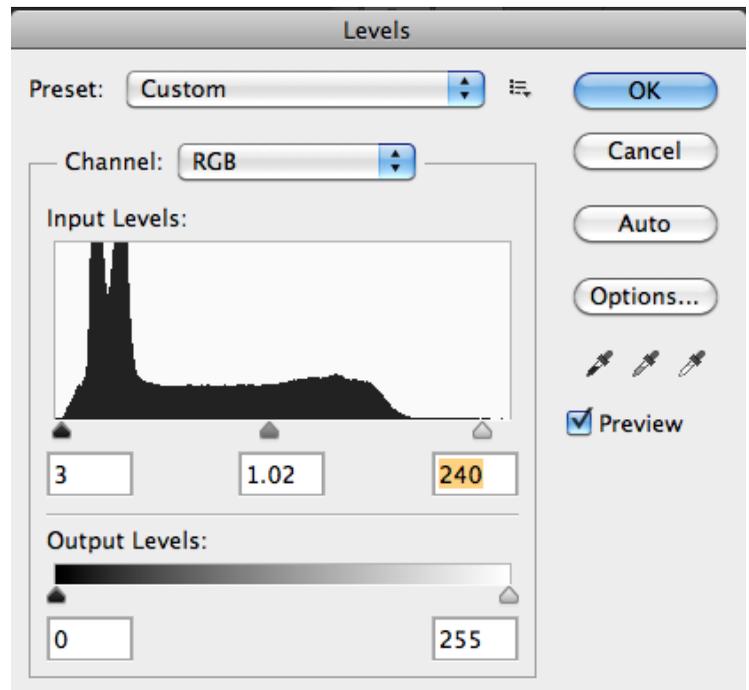
13. Hold Shift and click on the Type layer and Layer 2. Then click the  symbol at the bottom of the layers palette to link the two layers together. Now you will be able to move the two elements together. Then use the move tool  to place the scale and text under the lower right corner of the specimen (or wherever it fits).



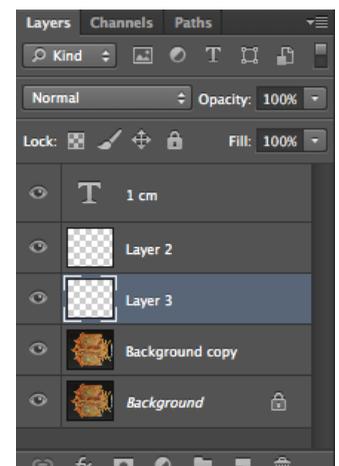
14. Crop the image using the crop tool . Leave some space between the specimen and the edge of the image. You should try to make the distance the same on all four side. Be careful not to leave too much space. This unesecarily in-creases the canvas and file size of your image.



15. Select the layer labeled Background copy. Then press (⌘ -L or Ctrl-L) to bring up the levels window. Adjust the levels so that you can see all of the details and so that the photo is an accurate representation of the specimen. Moving the left toggle (shadows) into where the histogram begins to rise on the left side, the right toggle (highlights) into where the histogram begins to rise on the right side and then adjusting the middle toggle (midtones) left or right is a good start. See right.

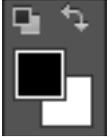


16. Next create a new layer  between the Background copy layer and Layer 2. This new layer will be Layer 3.

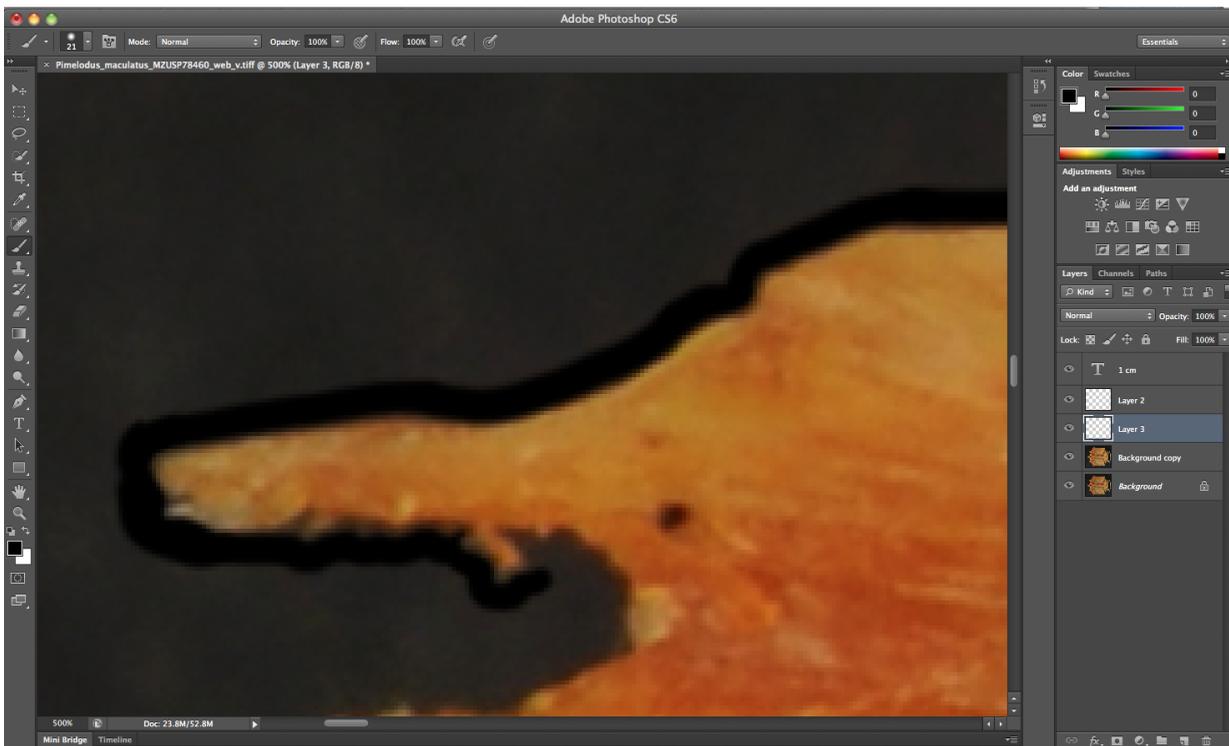
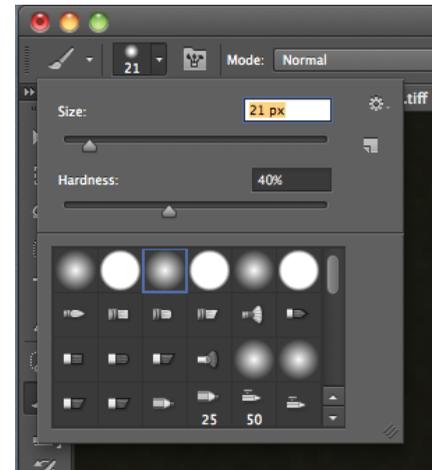


17. On the new layer, Layer 3, you will begin to draw in the new background. To start make sure that you have selected Layer 3. Then zoom in to 500%

somewhere on the left side of the specimen. Next select the brush tool and set the brush to a “soft round pressure size” (top row third from the left). Then set the size to 21 and the hardness to 40%. Last make sure that black is

the foreground color . If you think a sample from the background

would give you a better result you can use the eyedropper tool  to select a tone to use. You are now ready to use the Graphics tablet to start outlining the specimen. It should look something like the image below when you start.



18. Trace all the way around the specimen.

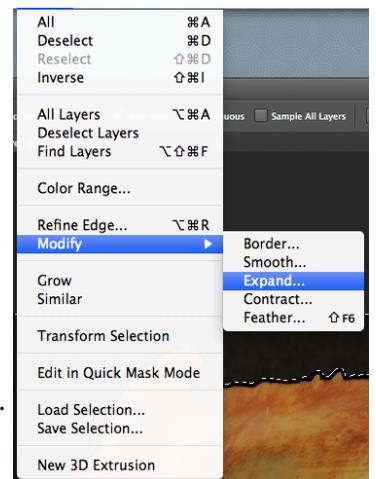
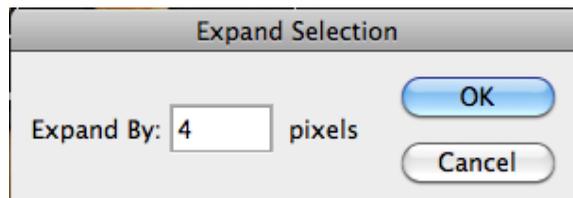


19. Use the magic wand  to select around outline you created.



20. Go to Select on the top menu and choose Modify and Expand.

Then expand by 4 pixels.

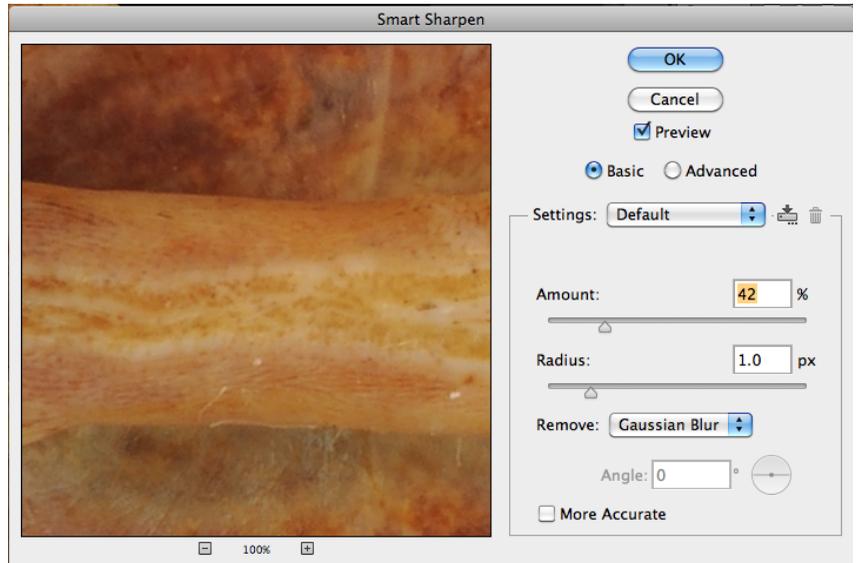


This will make sure that your selection overlaps the outline that you have just drawn.

21. Next press (Option (Alt))-Delete or Alt-Backspace). This will fill in the rest of the background. Your image should look like this.



22. Deselect the selection. Then the next step is to sharpen the image. Select the layer labeled Background Copy. At the top of page select Filter - Sharpen - Smart Sharpen. Set the Amount to 42 and click okay.



23. You may have to adjust the levels again if the new background is much darker than the old background.

You can also use the burn  and dodge  tools to darken and lighten any areas that don't look correct. If you use the burn or dodge tools set the exposure in the 3-5% range so that you can work gradually.

24. The last step is to name and save your file. Always use the "save as" option so that you don't save over your original file. Put any information in the file name that you think will be relevant for later searches, but try to keep the name as short as you can. Shorter file names cause less issues when you are uploading to a server. Another important thing to remember is to avoid spaces. Use underscores instead.

Here are some naming suggestions:

Genus_species_Museum_catalognumber_view.tif

Genus_species_Museum_catalognumber_structure_view.tif

Genus_species_Museum_catalognumber_view_x.tif (x for xray)

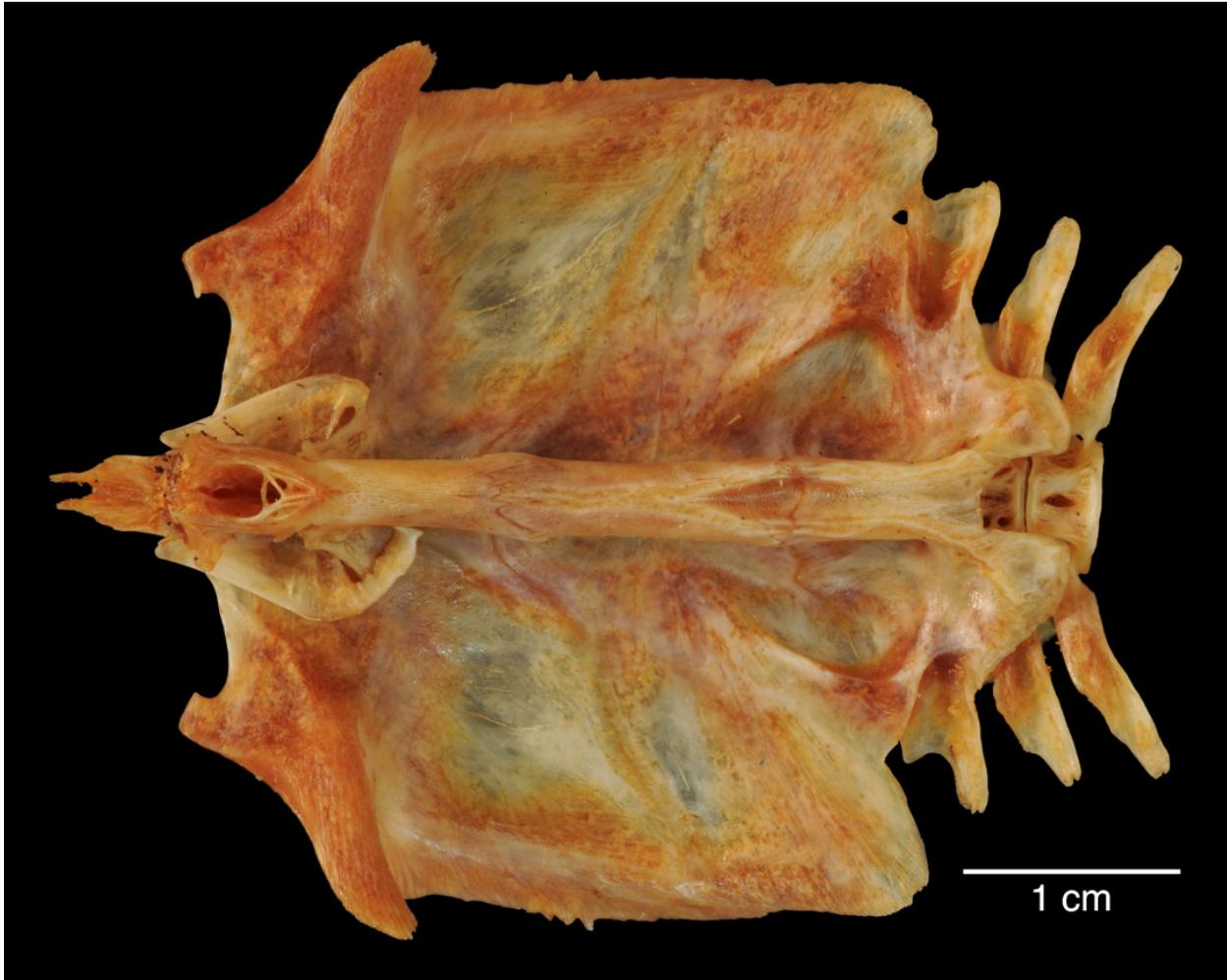
When saving files you have many options. This is typical format followed in Ichthyology at ANSP:

First save a layered 16 bit tif file with LZW compression and ZIP layer compression - add _16 before the .tif extension in the file name.

Then save a layered 8 bit tif file with LZW compression and ZIP layer compression - add _8 before the .tif extension in the file name.

Then flatten the layers and save as a jpg at the maximum quality

This way you have your original with no correction, a large tif file, a smaller tif file that can be sent via email, and a jpg that can be used on the web.



Keyboard Shortcuts (listed as used in tutorial)

Mac

Free Transform
 Merge Down
 Copy
 Paste
 Invert Selection
 Cut
 Levels
 Fill Background Color
 Fill Forground Color
 Hue/Saturation
 Undo
 Undo Multiple

Command T
 Command E
 Command C
 Command V
 Command Shift I
 Command X
 Command L
 Command Del
 Option (Alt) Del
 Command U
 Command Z
 Command Shift Z

PC

Free Transform
 Merge Down
 Copy
 Paste
 Invert Selection
 Cut
 Levels
 Fill Background Color
 Fill Forground Color
 Hue/Saturation
 Undo
 Undo Multiple

Ctrl T
 Ctrl E
 Ctrl C
 Ctrl V
 Ctrl Shift I
 Ctrl X
 Ctrl L
 Ctrl Backspace
 Alt Backspace
 Ctrl U
 Ctrl Z
 Ctrl Shift Z