Instructions for Preparing Images for AntWeb:

Before uploading images to AntWeb, you'll first want to edit them in Photoshop. This document will walk you through that process.

To start, copies of your original images should be in a master folder named by project or date. Within that master folder, create a "PS" subfolder to save the images you are going to edit in Photoshop.

Note: You should always maintain your original images in an archive folder. That way you will always have the original, unedited versions in case you need them later.

Once you've created a "PS" subfolder, you will want to open the images in your master project/date folder, working numerically down the list of dorsal, head, label, and profile images to reduce the chance of duplicating or skipping files. For each image that you open, you will want to do the following:
Go to "File → Save As…", add "_working" as a suffix to the filename, and save to your "PS" folder. As example, "CASENT0001234_H_working".

For **Labels images,** you only need apply the "Cropping," "Levels," and "Unsharp Mask" instructions.

1. Crop and Moving Scale Bar
If there is too much empty space around the specimen, you'll want to crop the image. This allows the specimen to fill the space evenly, as in the cropped image below.

First, make the image display larger by clicking the "Full Screen" option on the toolbar. This will allow plenty of room for the cropping tool and allow the user to move the image around using the "Hand" tool.
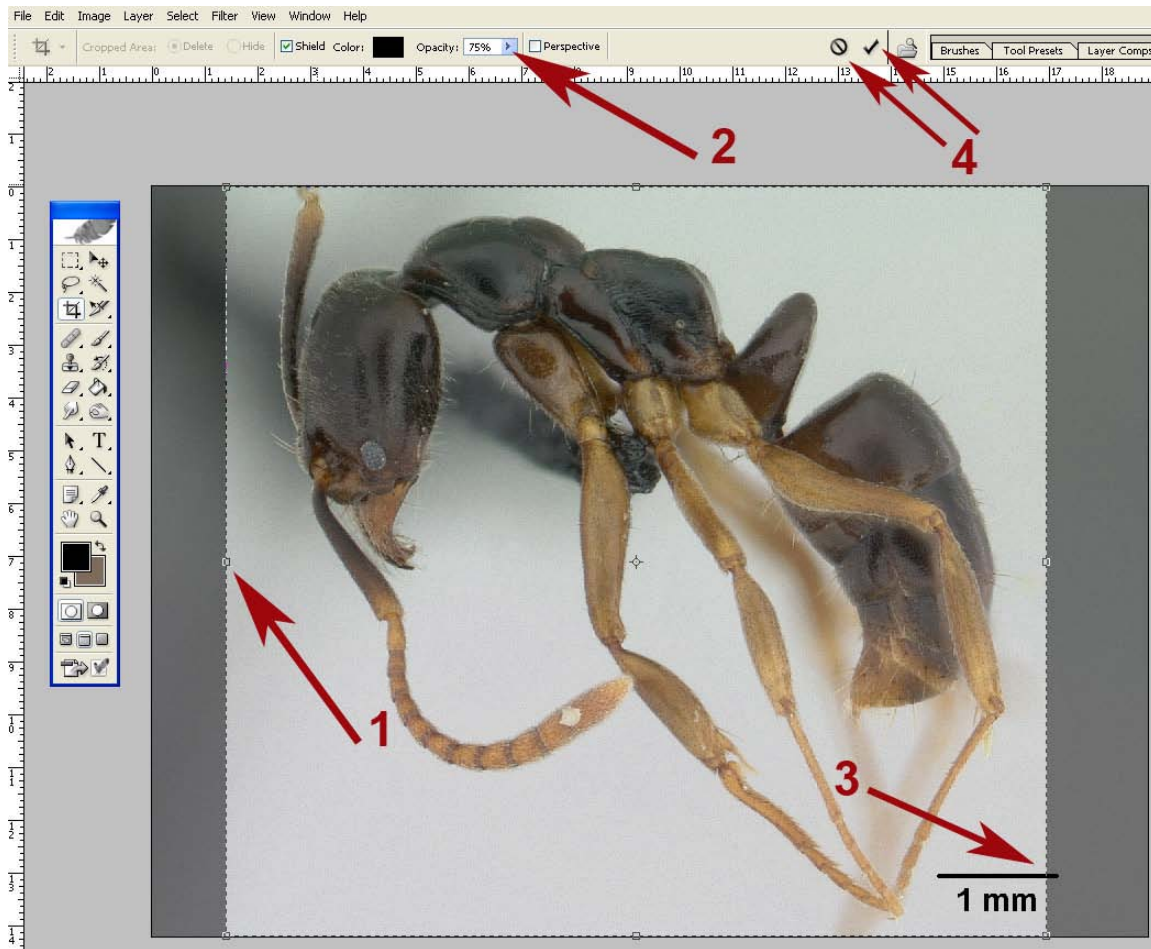
Select the "Crop" tool. Click and drag from top left outside of the image diagonally over to the bottom right of the image to create a marquee. You can adjust the cropping marquee by clicking on any handle (1) and dragging it to the desired point.
Increase the opacity (2) outside the cropping area to better visualize the image. Note that the scale bar will be cropped out of the image (3). A replacement scale bar must be added in this case. To apply the crop, click the check mark or cancel mark (4) OR double click inside the crop area to apply crop OR right click inside the crop area for the same options.

If the crop cuts out the scale bar as in the example above, either move or recreate the scale bar in Photoshop before cropping. Always put the scale bar in the bottom right corner of the image for consistency, using the typeface and point sizes specified in the directions below:

To Create the Scale Bar: Select the "Line" tool from the tool bar, with weight at .02cm, and a black foreground color. Use the Shift key while dragging to maintain a straight line. Create your line by following the length of the original scale bar line.
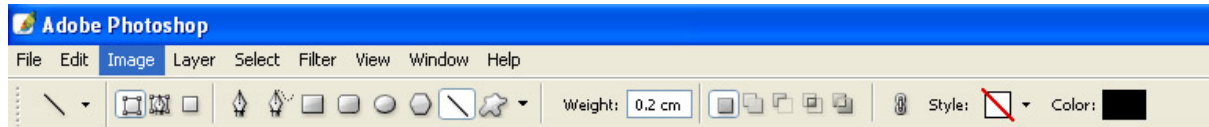
To Create the Scale Bar Measurement: Select the "Type" tool from the toolbar and select "Arial," "Bold," "44 pts," and "Sharp" as the typeface, on the Options bar.
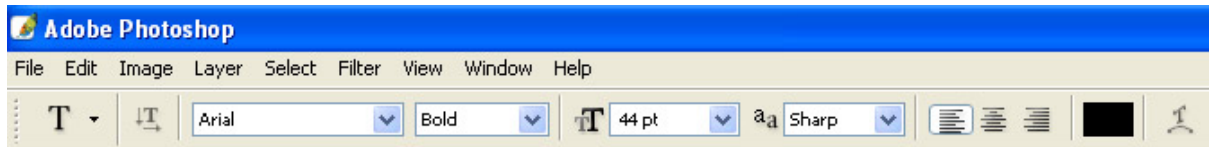
To Move the Scale Bar: Select, copy and paste the scale bar to move it, then remove the old scale bar by using the "Clone Stamp" tool.

Note: re-creating the scale bar is preferable. Moving the existing scale bar is only suggested if there is no interference around the scale bar, such as a change in background color or intersecting areas of the specimen. For example, image "A" has a scale bar with no interference or distractions around the scale bar. This scale bar can easily be moved. In image "B," the scale bar intersects with the antenna and will need additional photoshopping once copied. You would have to re-create the antenna and remove bits of the antenna from the scale bar copy, as seen in image "C".
Tip: Avoid having to move the sale bar by placing it in the proper area during the
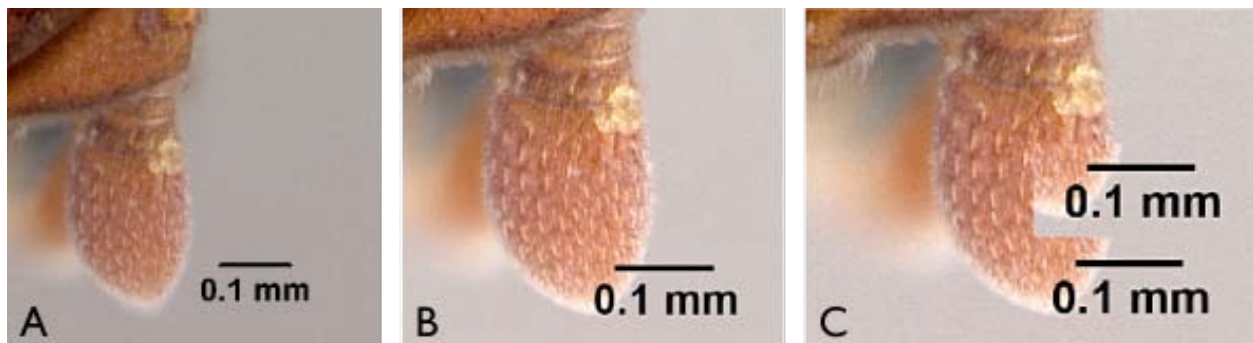
montage editing process.

Select the "Marquee" tool from the toolbar (1). Click and drag a marquee box (2) around the scale bar. Right click to obtain a drop down menu and select "Layer via Copy".
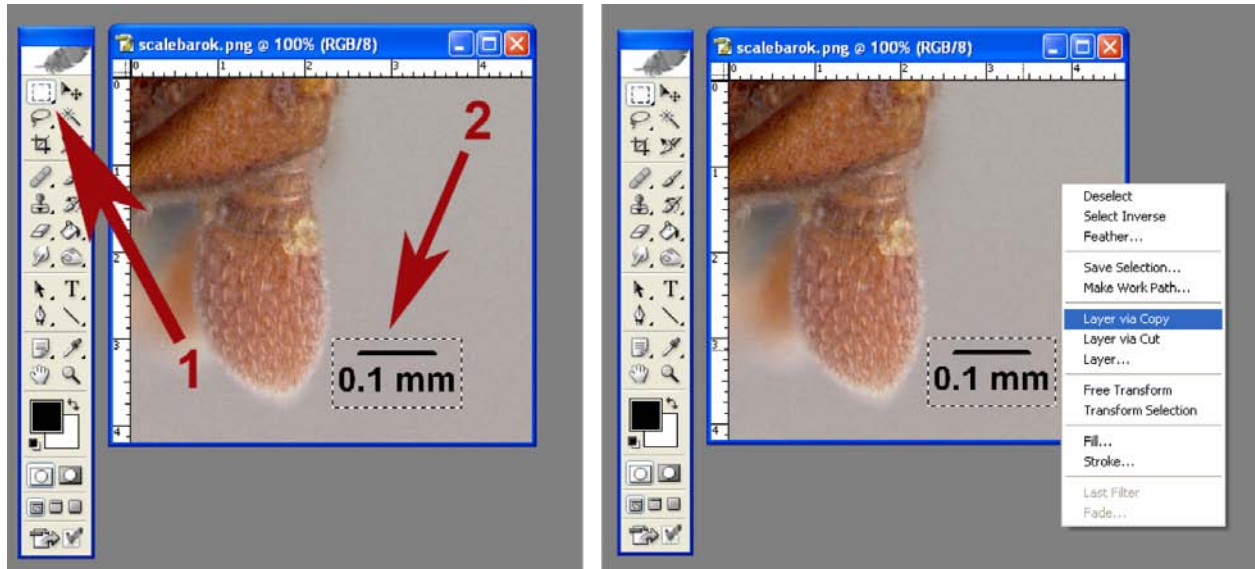
With the "Move" tool from the toolbar, move the new scale bar (1) out of the way. Remove the old scale bar (2) by using the "Clone Stamp" tool. With the clone stamp tool selected, click while pressing the "Alt" key to obtain a starting point for the cloning (3). Click and drag the clone stamp (4) over the old scale bar to remove it.
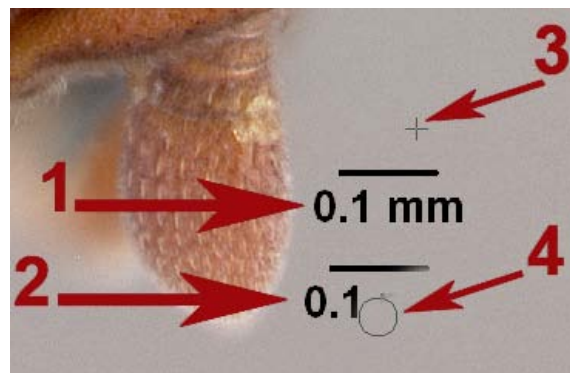

Once the new scale bar is in place in the right bottom corner, and the old scale bar has been removed, merge the background layer, the line shape layer, and the text layer via the "Layer → Merge Visible" menu or "Shft+Ctrl+E".

text, line shape
and background layers
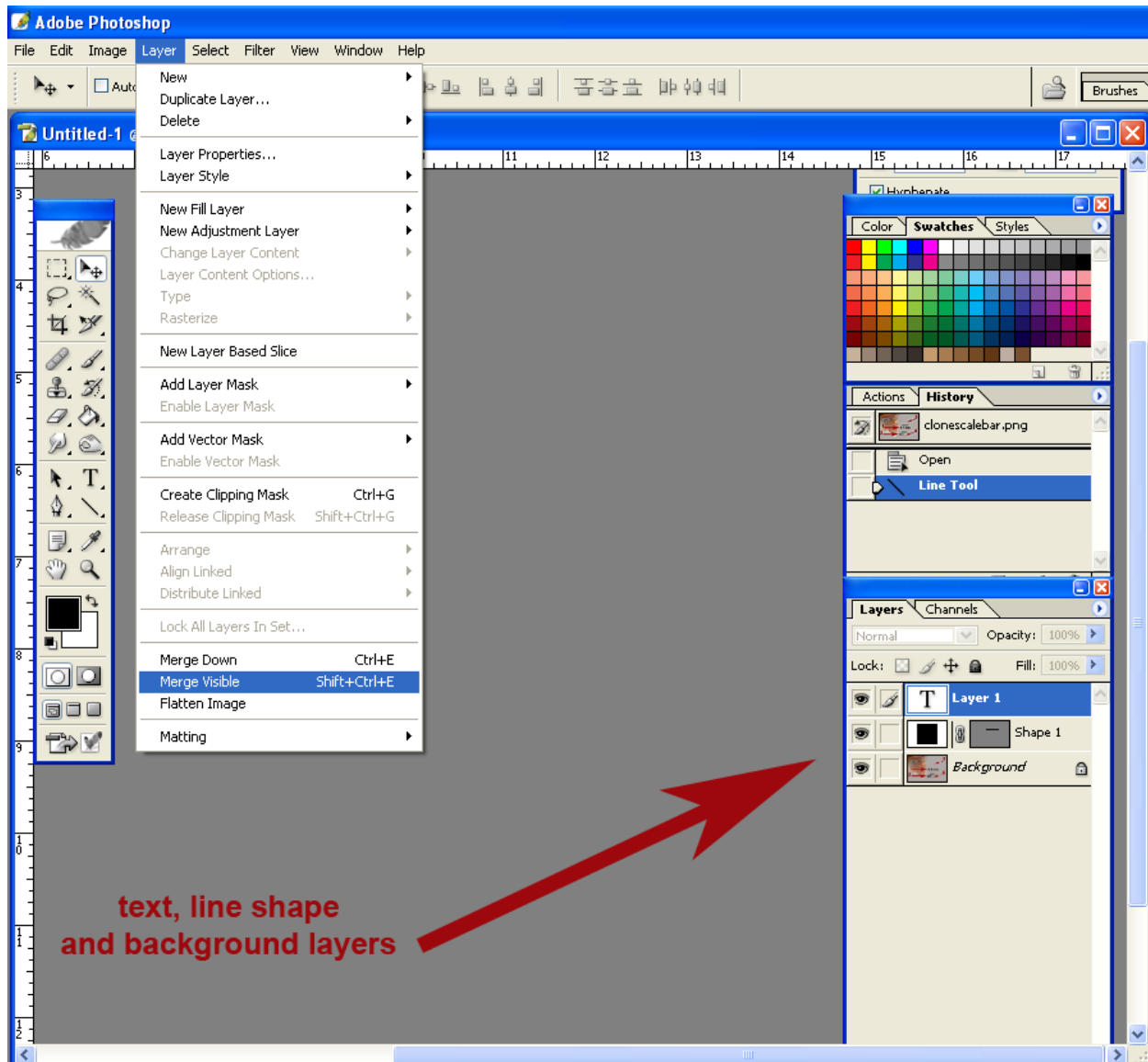
2. Levels

Adjust the levels if the image is too dark or too light by using the "Image → Adjustments → Levels…" menu. Bring the white fader in to the left to lighten the image and bring the black fader in to the right to darken image. The center fader is for lightening or darkening mid-tones.
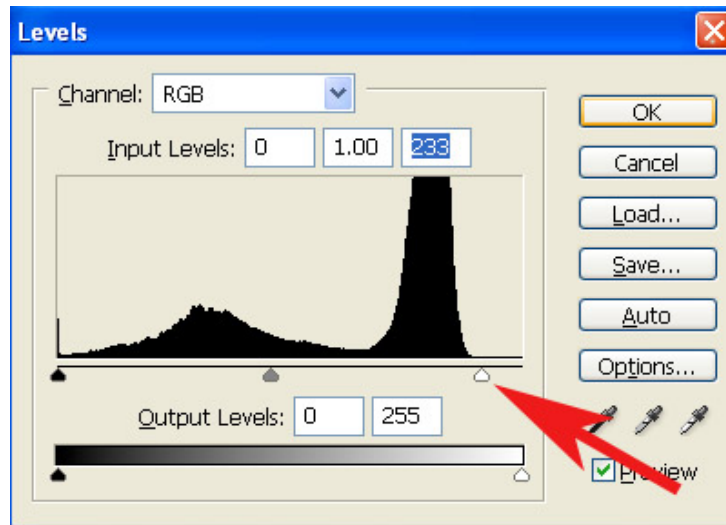
Tip: Do not pursue levels past the flat line of the histogram, as this will cause too much contrast within the lighter areas of the image. However, do play around with extremes to recognize the limits of each tool.

The above pictures demonstrate how an image can be lightened without causing contrast problems.

3. Clean up

Edit the image as needed using the "Clone Stamp," "Brush," and "Healing Brush" tools, as well as the "Blur" and "Noise" filters. Focus on and clean up dead spots, missing information, harsh pixilated areas, missing or blurred hairs, and in-between hairs, and blur out or remove any background distractions. Modulate tool settings such as harshness, opacity and flow to obtain a better blend or softer brush, and clone strokes and make realistic touch-ups.

Note: Look at the overall image. Zoom in and out and identify problem areas that can be easily fixed.

1. Indistinct hairs. 2. Blurred spine. 3. Background distraction. 4. Bit of color distraction.
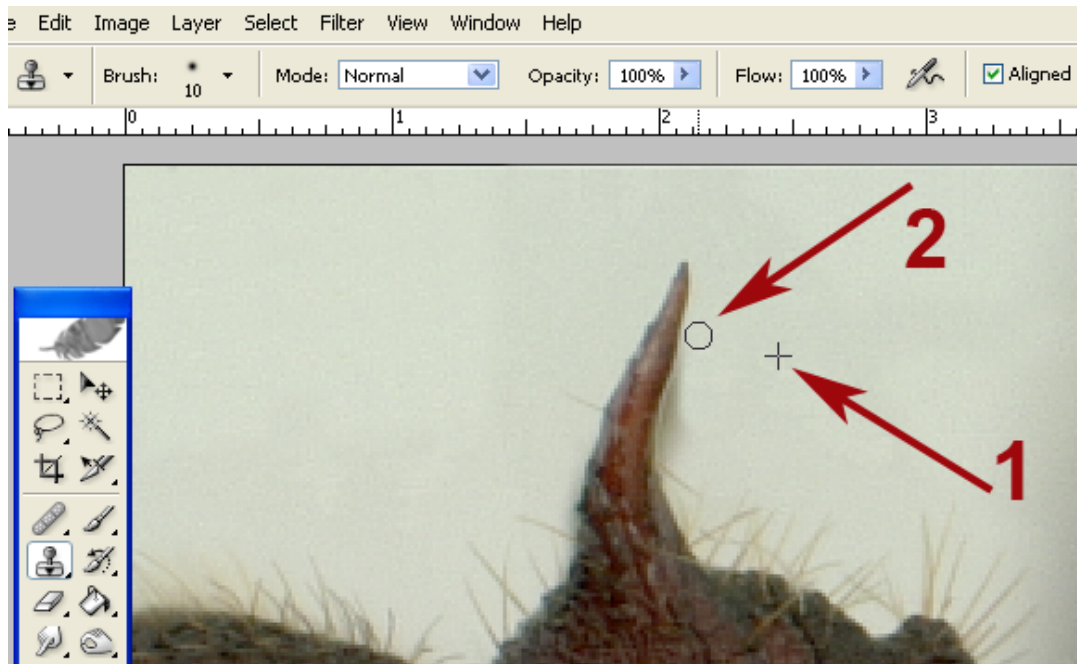
3a. Clone Stamp tool: Select the "Clone Stamp" tool. Click on an area that you would like to clone while pressing the "Alt" key at the same time then click and drag to clone over the area that you would like to alter. There will be a corresponding crosshair indicating the cloning point.
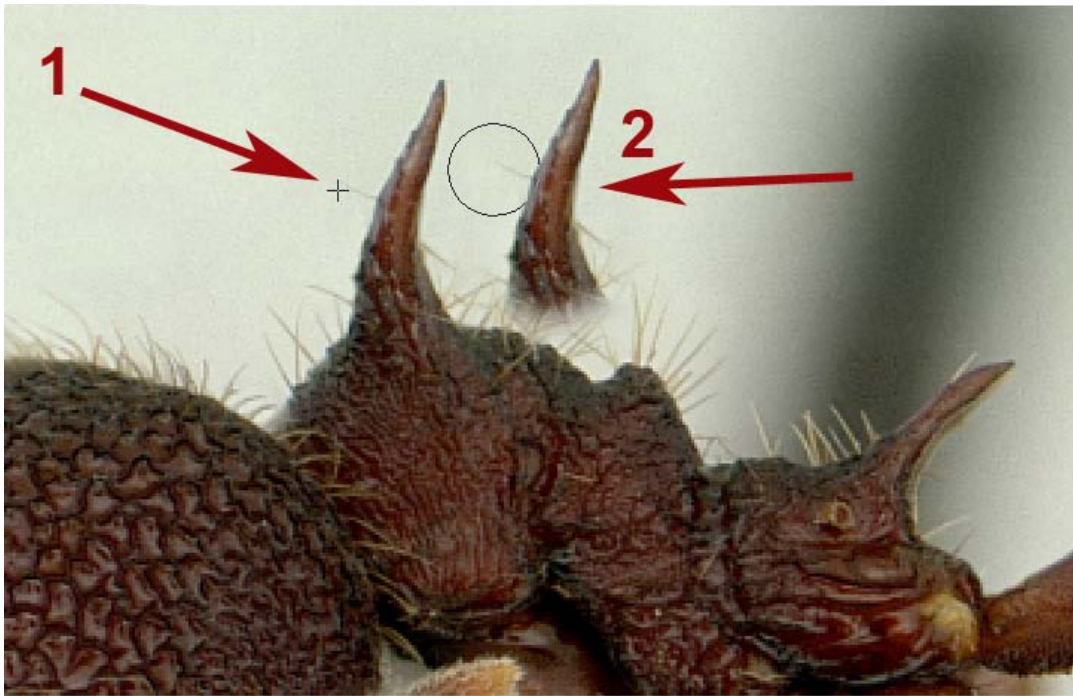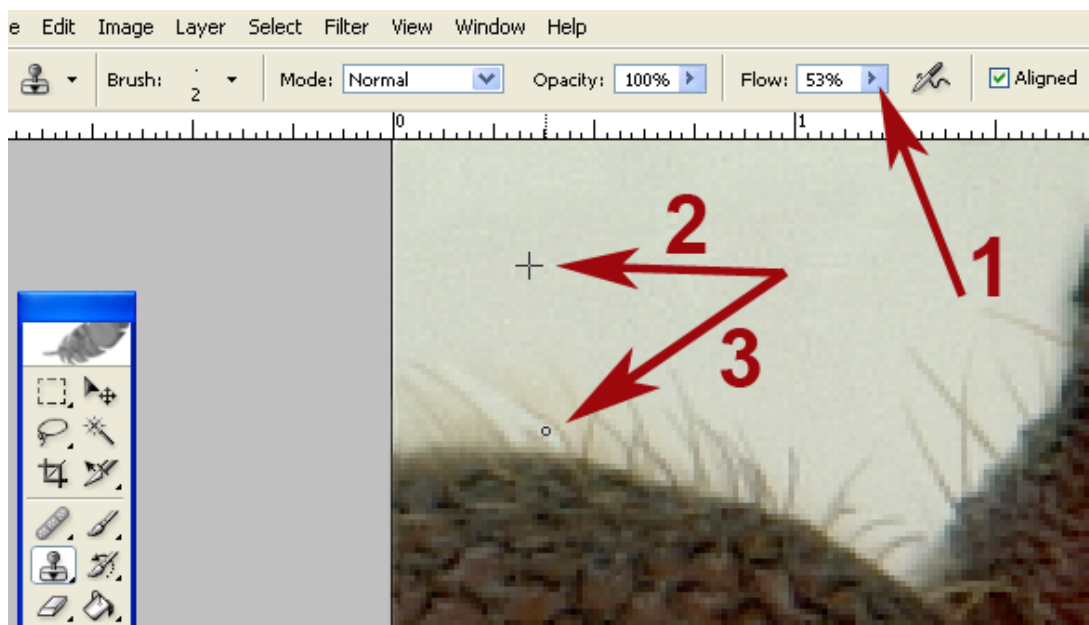

Clone Stamp tool Example 1:

Number 1 indicates the area being cloned. Number 2 shows the result of the clone stamp.
Note: This example is to demonstrate the "cloning" aspect only. Do not alter the specimen's characters.

Clone Stamp tool Example 2:

Number 1 indicates cloning point. Number two shows the result of the clone; the removal of the blurred spine. On the options bar note the size of the Brush set at 10 pixels, and that the Opacity and Flow are both set at 100%.

Clone Stamp tool Example 3:

For tight cloning areas, such as in-between hairs, reduce the flow and/or opacity (1) to clone with softer edges. Note that the brush size is smaller (3) and that the clone indicator (2) is cloning a smooth, similar background between the hairs.
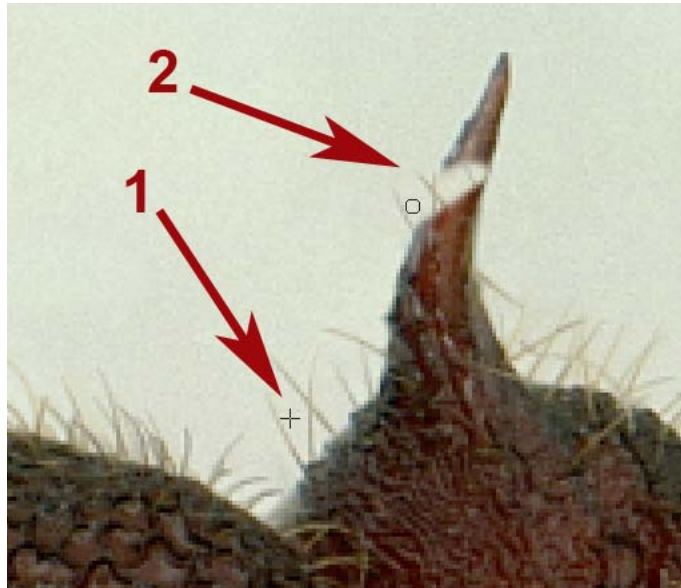
Clone Stamp tool Example 4:

Always be aware of the cross hair indicator (1); the source of the cloning point. Frequently select new indicator points to clone from reducing cloning errors (2). This action will eventually become a smooth, quick series of "Alt, click, drags".

before

after

Use the "Clone Stamp" tool to remove or alter distracting background areas.

3b. Brush tool: This tool is used to re-create blurred, broken, pixilated hairs and to accentuate hairs.

Choose a color to match the specimens' hair color.

Select the "Eyedropper" tool. With the eyedropper icon, click on a color pixel. For example, click on another hair to obtain a matching color. Zoom in if necessary to select the correct pixel color.
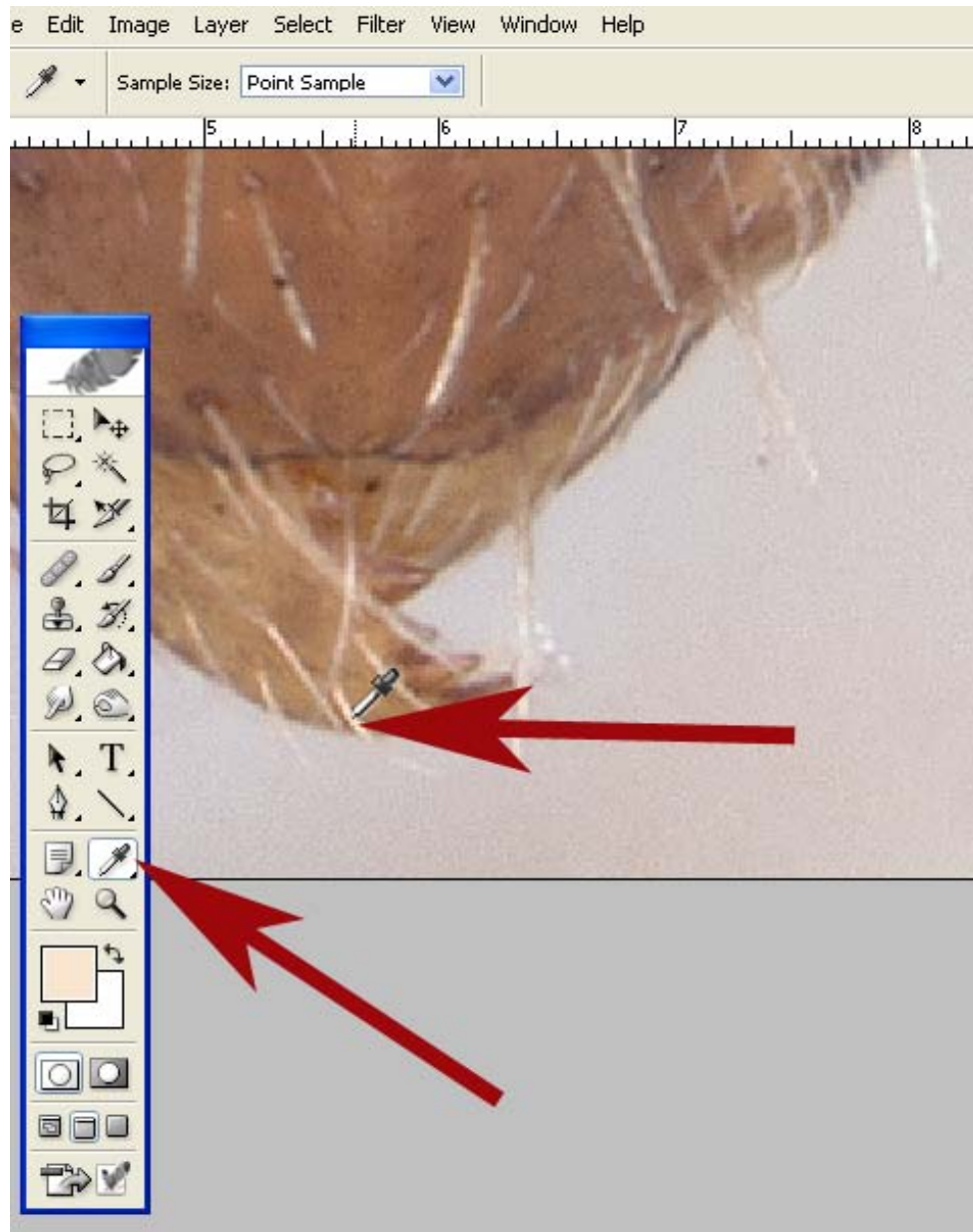

Once the color is selected, select the "Brush" tool. Select an appropriate brush size and manipulate the Opacity and Flow options to obtain a realistic result. Brush or draw over the existing hairs with quick, smooth motions. Double click on the foreground color to enable more color options.

Note: This may take a couple of tries. Hair color will vary depending upon the background. If the background is dark, a lighter hair color is needed; conversely, if the background is light, use a darker hair color.
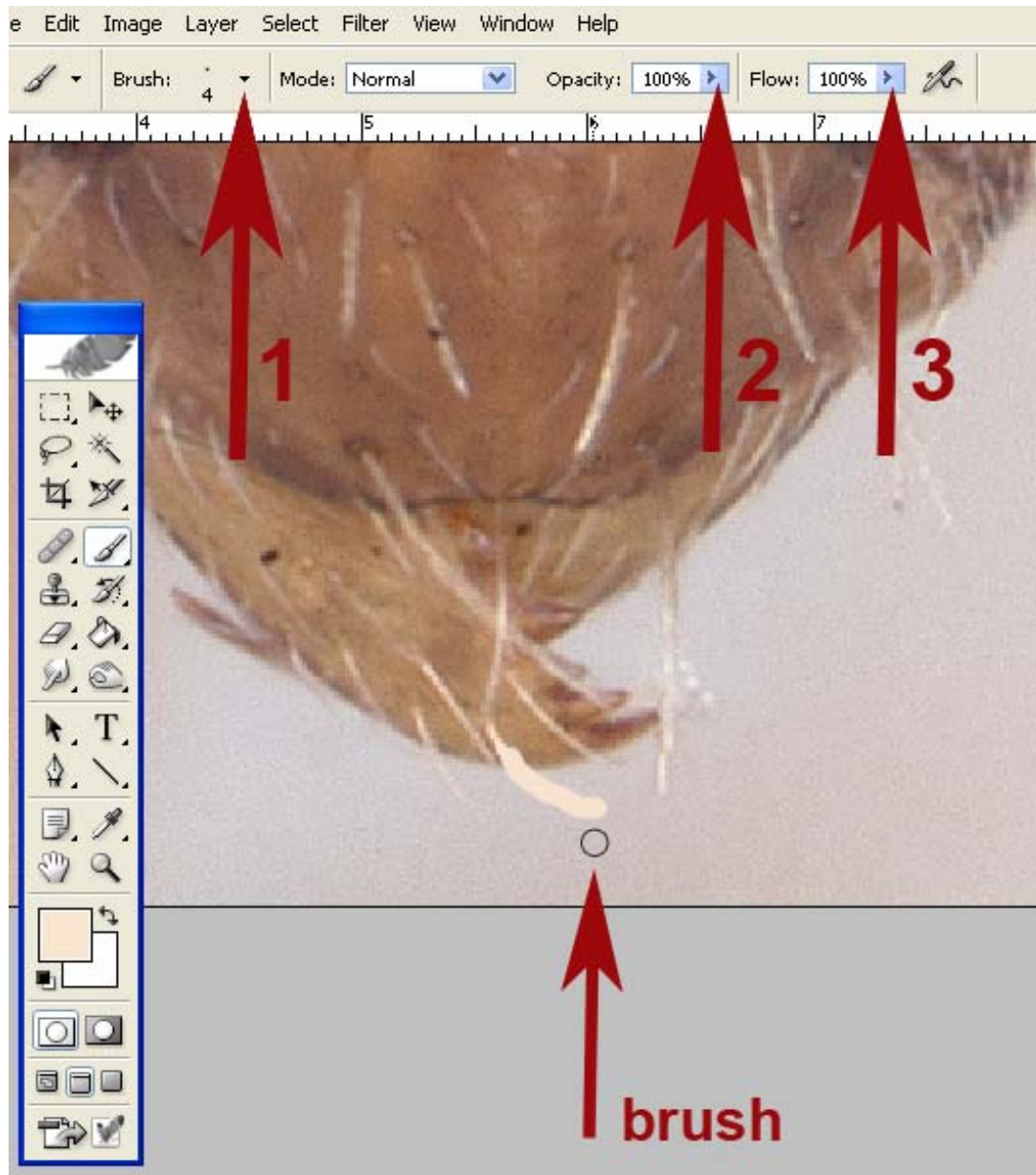

Brush tool Example 1:

In the above example, the brush size (1) is too large making the hair extremely thick. The Opacity (2) and Flow (3) options are at 100% making the brush color a solid color.
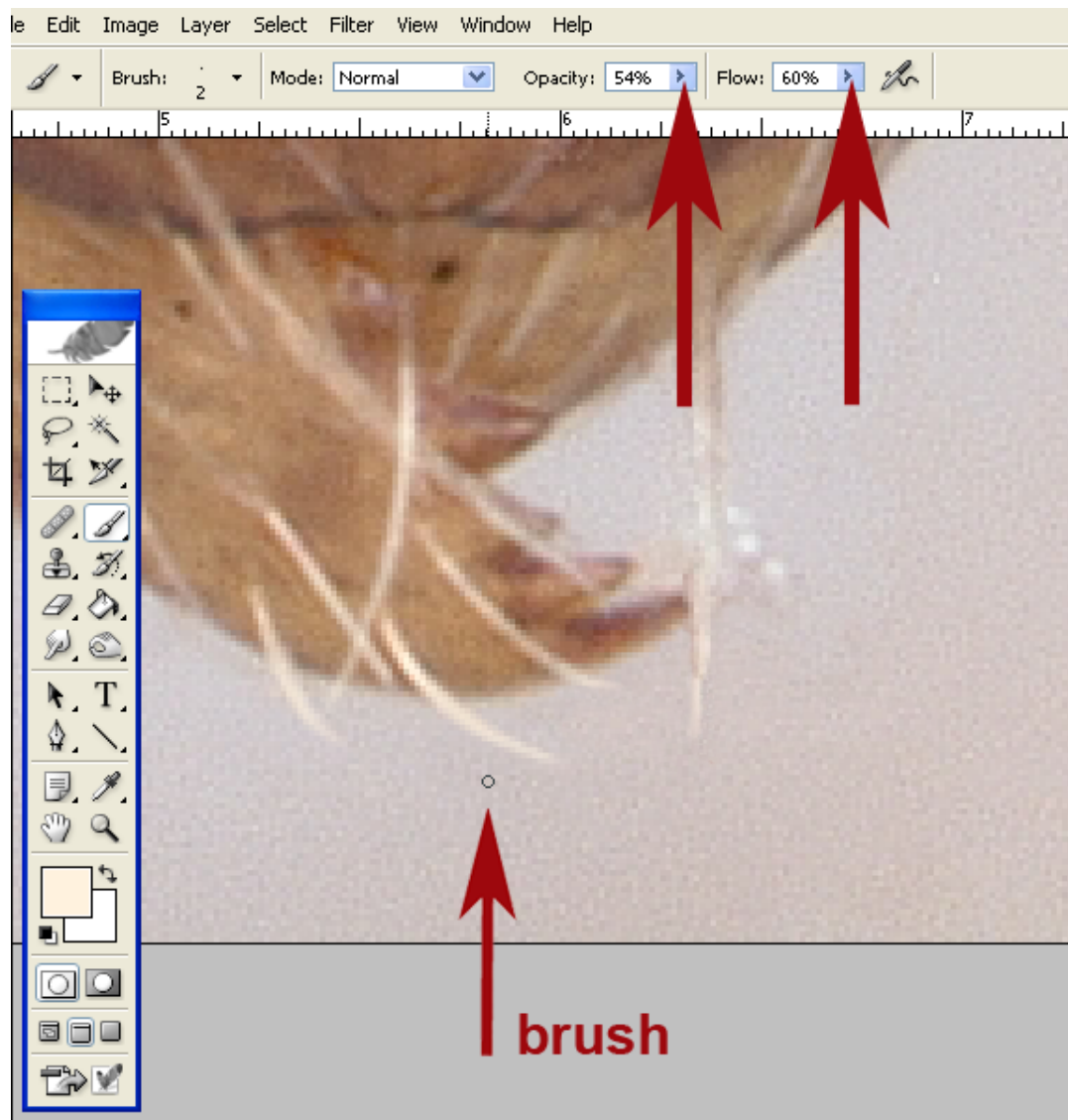
brush

Brush tool Example 2:

The above example demonstrates the correct brush size for the hair. The Opacity and Flow options vary making the color brush over with less harshness. The clone stamp was used to taper the end of the hair if the ends are too thick.

3c. Blur and Noise filters: Use the default "Lasso" tool to draw around any pixelated, uneven or distracting areas of the background to select it. Select the "Lasso" tool. Click and drag around the areas to select. This may range from smaller, separate areas of the image including legs, to large portions of the background that did not get properly blurred during the montage editing process.
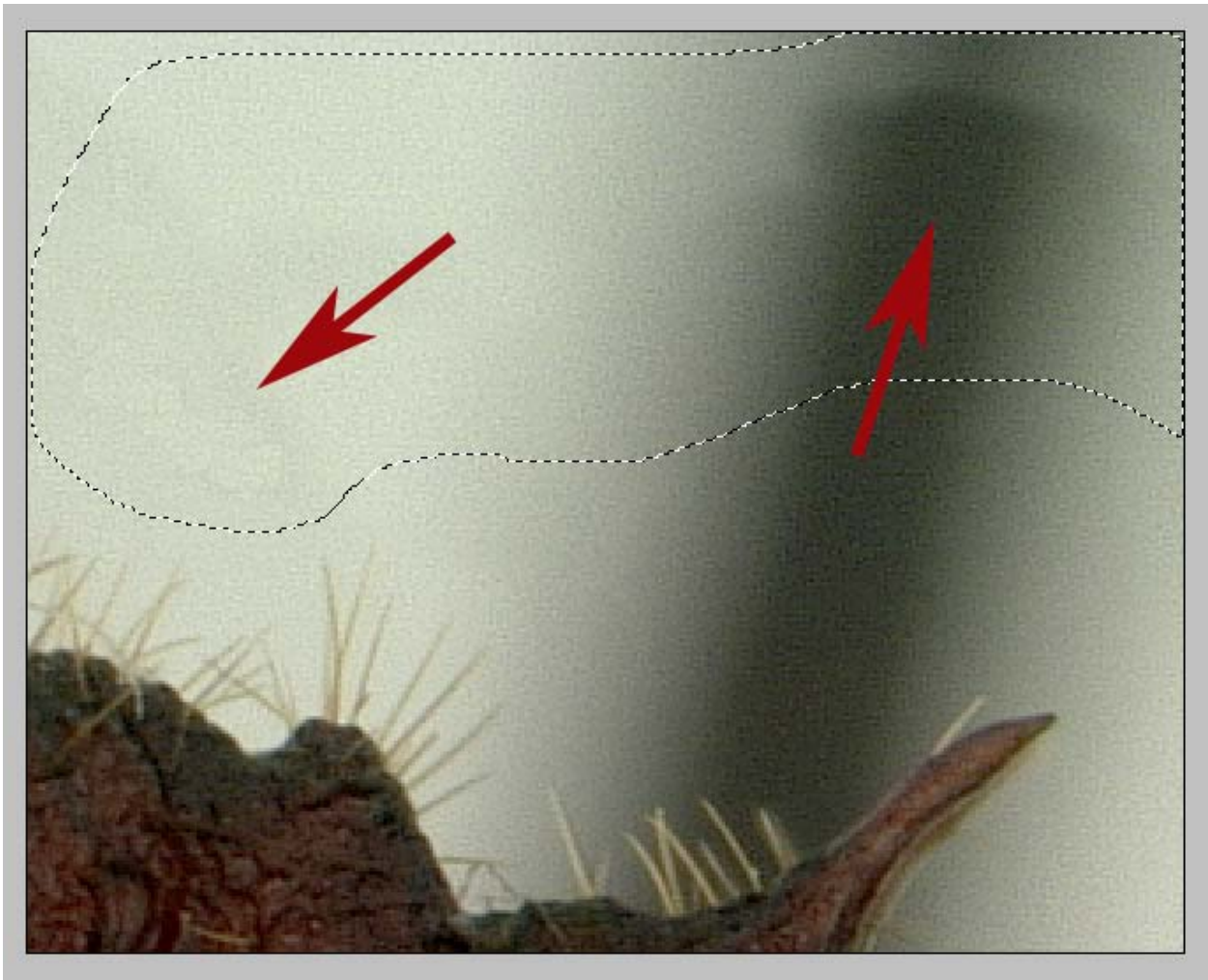
Sections of this image that contain pixilation and distracting visuals could have been blurred more easily during the montage editing process but can be rectified easily in Photoshop.
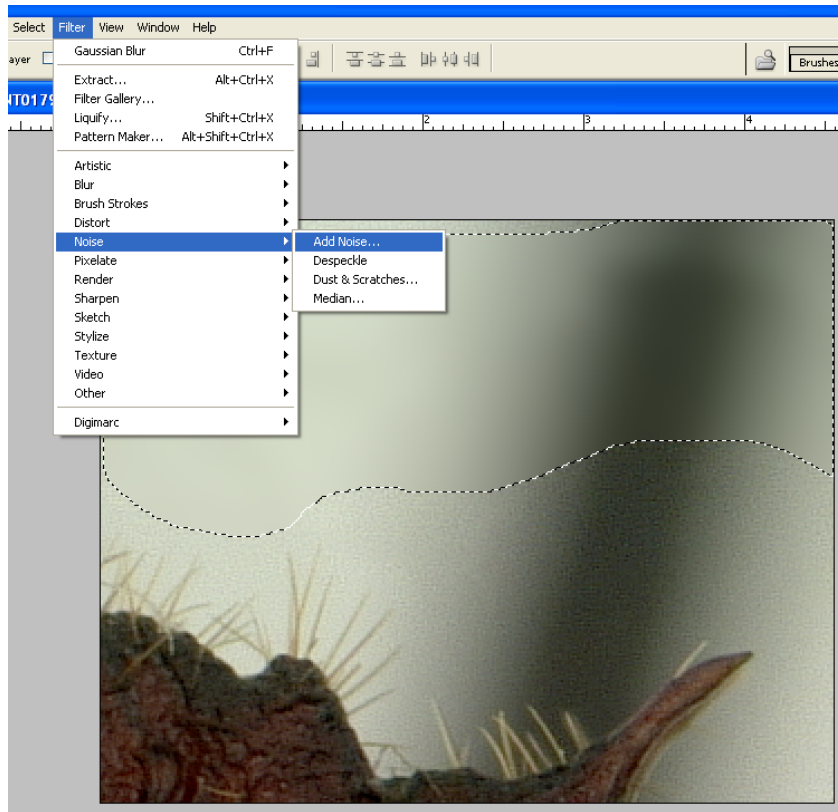
Select the "Gaussian Blur" option via the "Filter →Blur" menu.
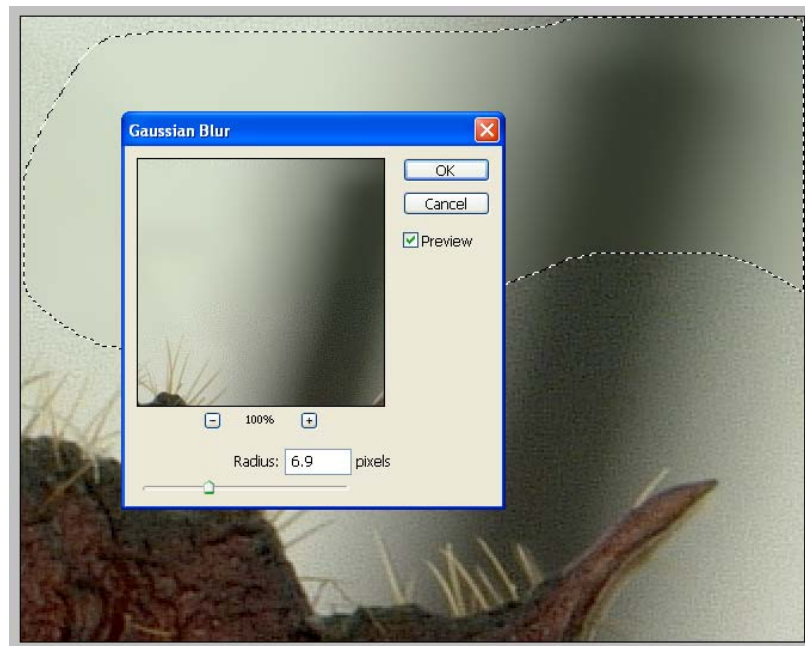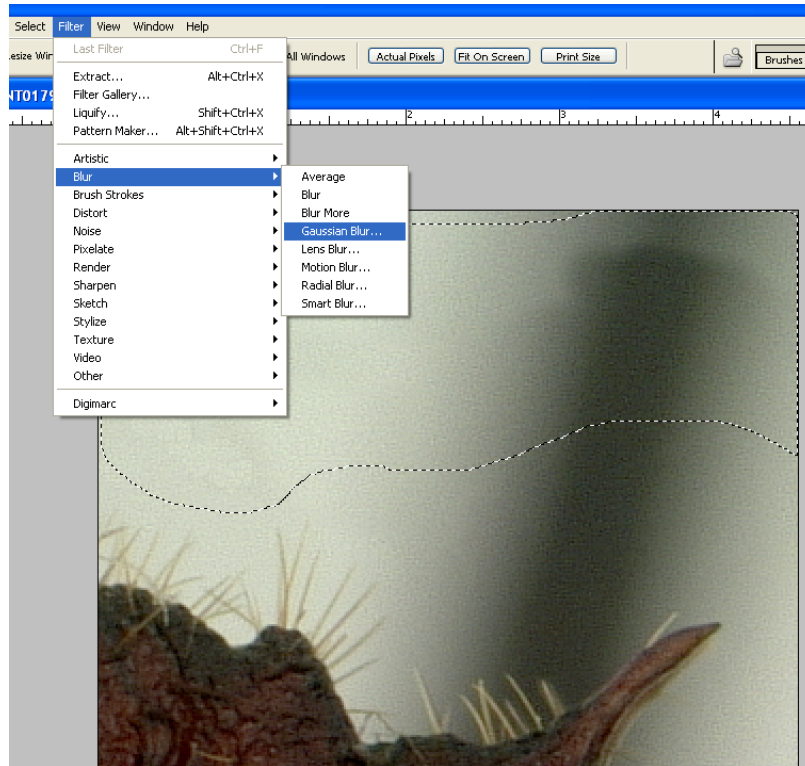
Move the "Radius" fader to blur the selected area of pixels to smoothly match the surrounding area. Too much blur will create a separation line between blurred and non-blurred areas.

With the selection still active, select the "Add Noise" option from the "Filter → Noise" menu.
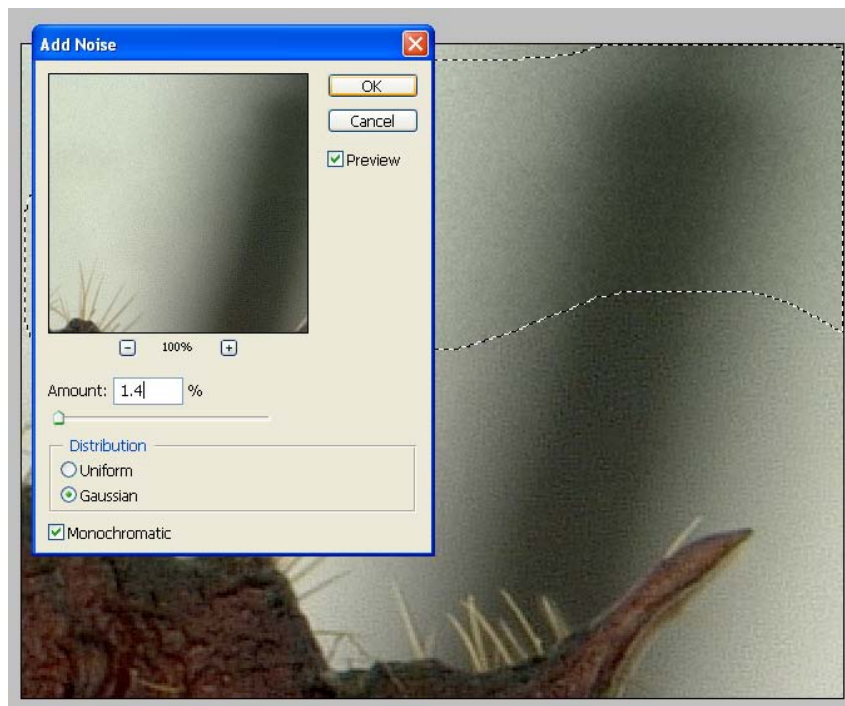
Move the "Amount" fader adding noise to match the background noise or pixilation as closely as possible. Note: this will be a very low number and, therefore, it will be easier to type in the percentage amount.

Click anywhere in the image to deselect. Use the heal brush to smooth out any additional areas.

3d. Healing Brush tool: The "Healing Brush" tool is used to smooth out smaller pixilated areas or minor discolorations.

Notice the yellow discoloration on the left and difference in shade separating the image.

Image clean up - 16
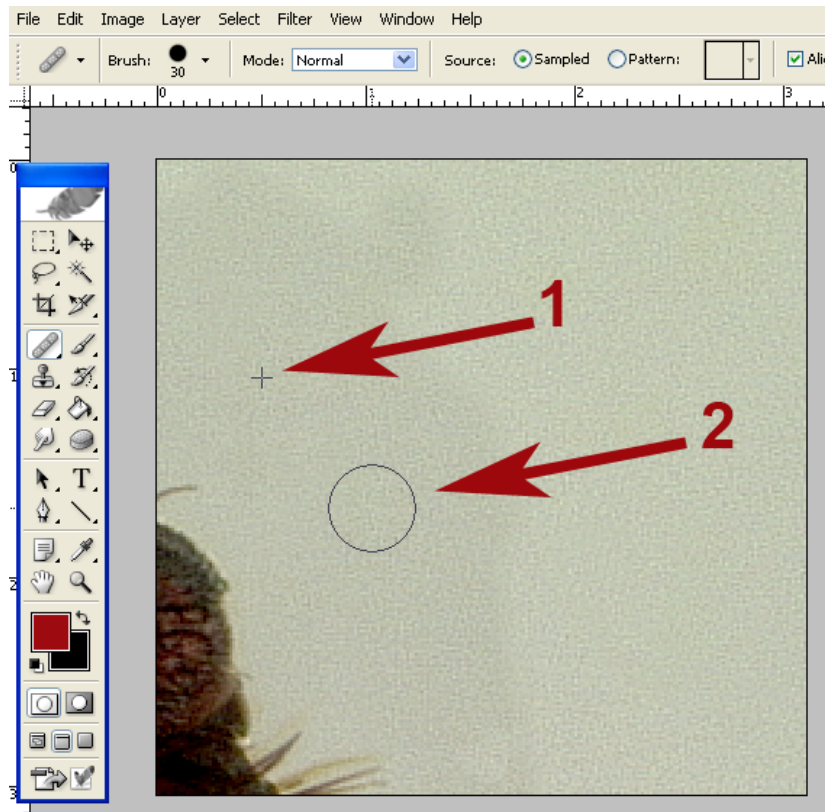
Select the "Healing Brush" tool. Like the "Clone Stamp" tool, click on an area that you would like to indicate as the healing point while pressing the "Alt" key at the same time. Click and drag to smooth over the area that you would like to heal. There will be a corresponding crosshair indicating the healing point.

before

after

Too much healing can cause pixilation. Decide whether or not the blur and noise filters would be a better option.

Image clean up - 17

4. Unsharp Mask

Once you've edited your image, use the "Unsharp Mask" filter under the "Filter →
Sharpen → Unsharp Mask…" menu to sharpen the image. Use the following settings:
Amount = 50%, Radius = 1.7 pixels, Threshold = 0
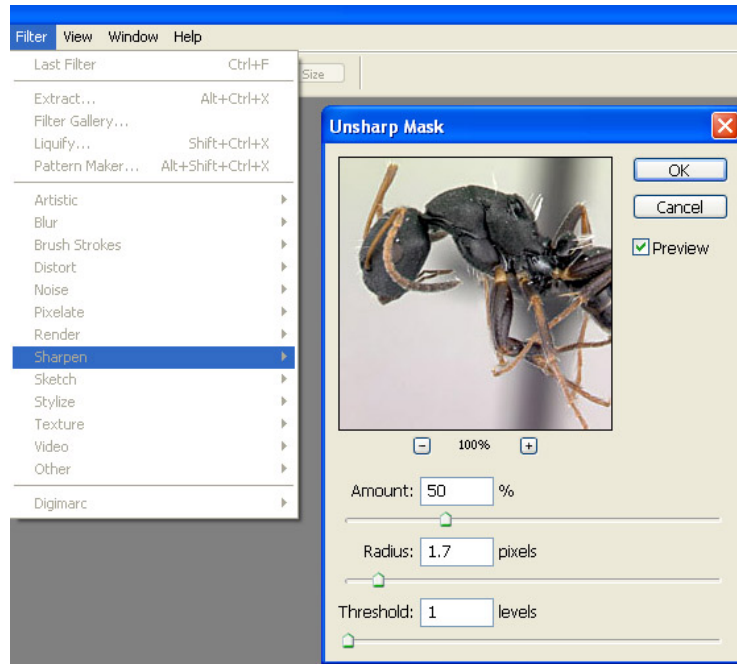
Saving the File:

Go to "File → Save As…", remove the "_working" suffix, select "TIFF" as the file format,
save it into the "PS" subfolder, and close the file.

Finally, delete the "_working" version of the recently Photoshopped image in the "PS"
subfolder.

And that's it. You should now have a project folder with all of the original images, and a
"PS" subfolder that has all of the TIFF files that you just edited ready for upload to
AntWeb.

Tips for Photoshop tools; CS version:

| crop tool (C) | foreground color (D) | line tool (U) | text tool (T) | clone stamp tool (S) | healing brush tool (J) | brush tool (B) | eyedropper tool (I) |
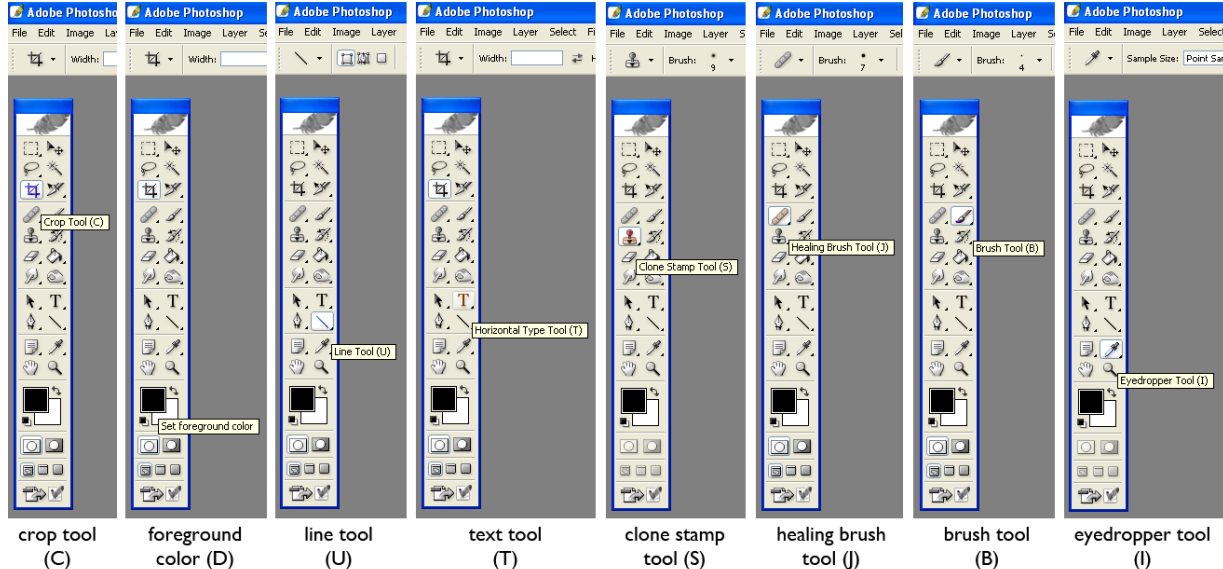
Click each tool icon to access the tool or select the shortcut key using the corresponding letter to navigate among tools.
Place the cursor over each tool to reveal the tool name if you are uncertain about what the tool icon represents.

Each tool will have additional options such as "Opacity" and "Flow" options for brushes and cloning tools.
Reset the tool to default settings if necessary.
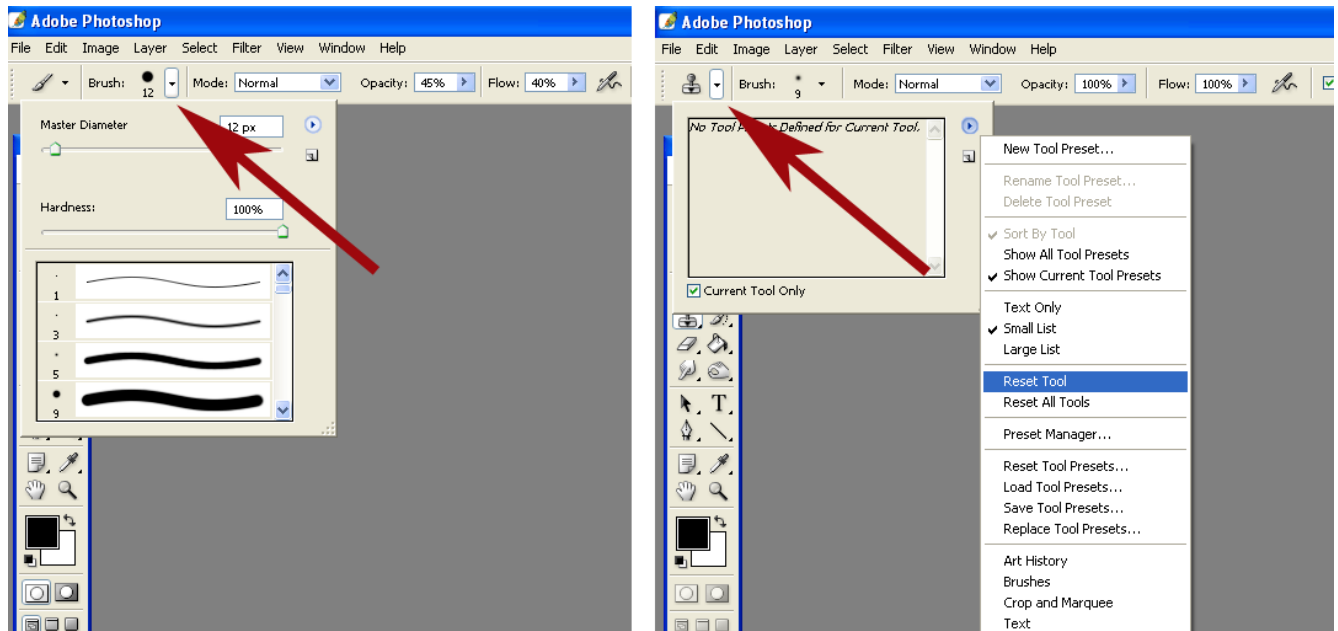
Use the "[" and "]" buttons on keyboard to increase or decrease size of brush, clone stamp, healing brush, etc.

Image clean up - 19

Use the "Ctrl and +" and "Ctrl and -" key to zoom in or out.
Use "Ctrl+z" to undo and "Ctrl + Alt + z" to continue to undo.
If the cursor suddenly switches to a crosshair or plus sign, check the "Caps Lock" key.

Shortcut tool keys:

Tool	Shortcut key	Symbol
Marquee	M	
Lasso	L	
Crop	C	
Heal brush	J	
Hand	H	
Move	V	
Magic wand	W	
Brush	B	
Text	T	note: with the mouse, click on any other

tool to switch from the text tool; shortcut keys do not work while in the text tool.

Line	U	
Zoom	Z	
Eyedropper	I	

| Default black /white foreground/background color | D |
| Toggle between foreground and background colors | X |

An additional set of tools can be accessed within the shortcut menu. Click the tiny black triangle in the corner of any tool on the menu to access these tools OR press "Shift" along with the desired shortcut key to toggle through them.
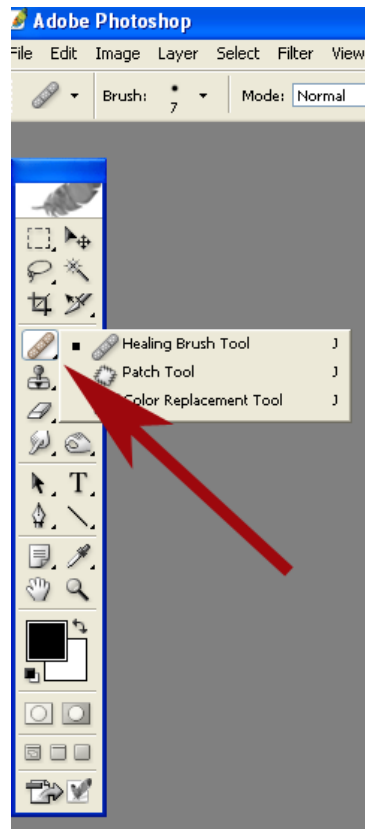
By playing around with variations of the above tools, you might discover other options that work better for you.