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Repairing Damaged Photographs: An Intermediate GIMP Course



Repairing Damaged Photographs: An Intermediate GIMP Course

Having established in the course “Intro to GIMP” a basic familiarity with using GIMP’s tools, canvas, and layers, this course will be focused on expanding on some of the more advanced tools within the context of one of the software’s many great practical applications, repairing damaged photographs.

During this course we will look at:

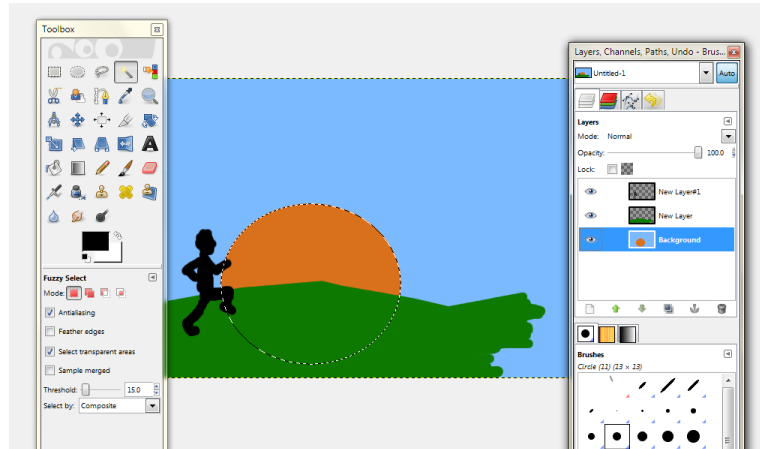
- Reviewing the Basics
- Opening the Image
- Targeting the problems
- Putting the Pieces Together
- Combining Layers
- Discoloration
- Missing Sections
- Blurring
- Creating New Areas
- Fixing Cracks
- Conclusion



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Reviewing the Basics



In the last course, we got familiar mostly with the layout of the program, including creating a canvas, adding and manipulating layers, and

going over the basic uses of the tools. Let's start off by exercising these skills for a few minutes. Launch GIMP, create a new canvas of whatever size you like, create two or more layers, draw on each, and play around with whichever tools you feel comfortable.

Opening the Image

Now, let's open the damaged image we're going to be repairing. The image is on your desktop, titled "oldphoto.jpg". You can open it by either double-clicking its icon on the desktop, or from within GIMP by selecting "File" from the upper menu, and then "Open", and then navigating to it.



Targeting the Problems

Obviously, every damaged photograph is going to have its own unique challenges, and there will never be a one-size-fits-all solution to how to repair it in GIMP. However, the photo we'll be working with has multiple common problems that will often be encountered in one way or the other. Regardless, it's important to start by identifying the problems that need to be repaired.



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This photo is torn, has several bends and cracks, discoloration from acid damage, and missing sections.

Once we've identified the individual problems, we can go about figuring out the tools we might be able to use to fix each one.

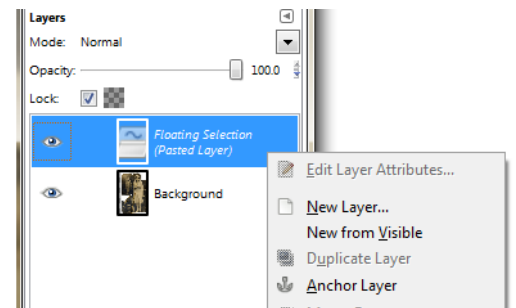
Putting the Pieces Together

We'll start with getting the three detached sections together. To do this, we'll need to separate each piece into its own layer, so that we can move them independently. Start by selecting one of the pieces. Since they are all in fairly tight proximity, the best tool for this is probably the Free Select Tool, as it allows for clicking defining an outline by clicking on points, keeping tight to the photo.



Once you have the selection, cut it by selecting "Edit" from the file menu, then "Cut", or by holding down the "Ctrl" key and pressing "x". Then, paste the cut content by selecting "Edit" from the file menu, then "Paste", or by holding down the "Ctrl" key and pressing "v".

This will create a "Floating Selection" layer, which will need to be defined as a real layer by right-clicking the layer, and selecting "New Layer".



If you try to move the new layer to line up perfectly with one of the other pieces, you'll see that it's surrounded with a white border that makes it impossible to make them line up. We'll need to remove this by using the fuzzy select tool. With the Fuzzy Select Tool, click on the white border of the layer. If it seems properly selected, hit the "Delete" key to make it disappear. Now what



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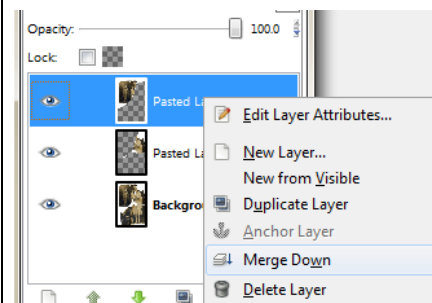
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was white becomes transparent, and the layer may be pushed tightly against another.

Next, we'll need to rotate the layer to get it properly aligned with the other piece. Like many aspects of GIMP, this will require trial and error. Use the Rotate Tool to tilt the layer to the same angle as the other piece, then move it to see if the angles match. If not, simply undo the rotation by selecting "Edit" from the file menu, then "Undo", or by holding down the "Ctrl" key and pressing "z".

Repeat this entire process until all pieces seem properly aligned with one another.

Combining Layers



Once they are, lock their position together by merging the separate layers. You can do this one at a time by right-clicking the top layer and selecting "Merge Down", which will combine that layer with the one below it. And then do the same to the newly merged layer to merge it to the one below. Or, to merge all layers at

once, right click any layer, and select "Merge Visible Layers..." or "Flatten Image".

Discoloration

On this picture, it appears an attempt was made to tape the torn pieces together, and that the acid of the tape yellowed the areas it touched. To repair this, we'll need to begin by precisely selecting a discolored area using the Free Select Tool. Then choose "Colors" from the file menu, then "Brightness-Contrast".





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Adjust the brightness and contrast sliders until the selected region appears to match the rest of the picture.

Missing Sections

Several chunks of this picture are missing altogether. In such cases, it is necessary to be creative. In the center of the photo, where the lower portion of the veil is missing, we can see that the missing section is simply a continuation



of the parts above and below it. So let's copy a section of the veil's edge above, and copy and paste it into the missing section. Some rotation may be necessary.

Once a continuous line has been created, the gap can be filled using the Clone Stamp Tool.

The Clone Stamp Tool takes a sample of one section of an image, which can then be drawn on another portion of the image with a brush. To do this, select the Clone Stamp Tool, and position the mouse pointer to the section you wish to sample. Hold down the "Ctrl" key, and click the mouse.

Now, drawing on any part of the image will copy the section selected. It will probably be necessary to select different areas in order to fill the whole space.

Blurring

If, after filling in the area, there are any sections which look spotty, the Blur Tool can often mute the differences. Simply select the tool, and drag it over any inconsistent areas with the mouse button pressed.





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Creating New Areas



The missing section of the woman's head would seem to pose a greater challenge. In this case, we can see that to an extent, the missing section is mirrored by the other half of the head. So we'll copy and paste the complete half, and then paste it (be sure to make the "Floating Selection" a "New Layer"!).

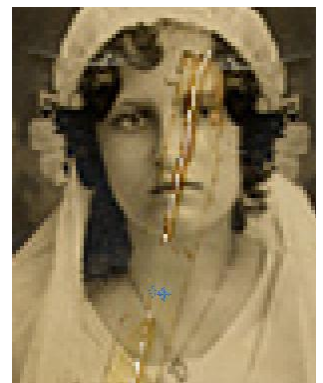
Then flip the new layer by clicking the "Select Tool" and then clicking on the new layer. Then, change the new layer's opacity, by moving the slider to the left until we can see both the new layer and the layers underneath it. We can now move the layer into a proper position, and see if it smoothly connects to both parts.

Then, to make sure we preserve as much of the original image as possible, carefully erase any part of the new layer that overlaps the rest of the image. Then increase the new layer's opacity to 100.

Fixing Cracks

To deal with cracks or folds, we'll return to using the Clone Stamp Tool. Select a section as close to the crack as possible. Then, trace down the line, copying the section immediately beside to mask the crack as best as possible.

As with many things, the greatest success will come not from knowledge of any special secrets, but taking the care and time to do as careful a job as possible!





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Conclusion

Ultimately, repairing damaged photographs with GIMP is not done by following a checklist. It often requires creativity, and always requires patience! To conclude the session, let's look at some of the remaining problems as a group, discuss potential ways they can be fixed, and try them out. There's never only one option!