

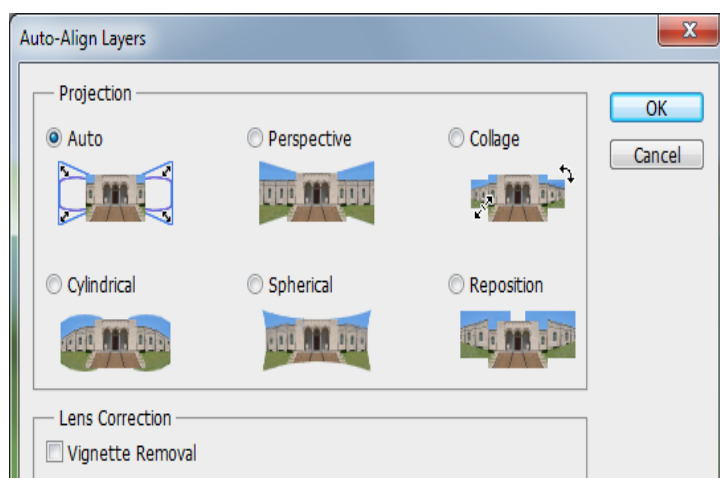
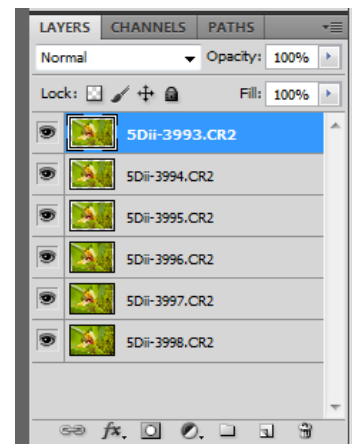
Photoshop Image Stacking Technique

Image stacking is a useful tool to combine images to increase apparent depth of field. It can be used for landscapes as well as close up subjects. Several images are made of the same scene with the focus set at different points in the subject. The separate captures are assembled in Photoshop by loading them all as layers of a single image.

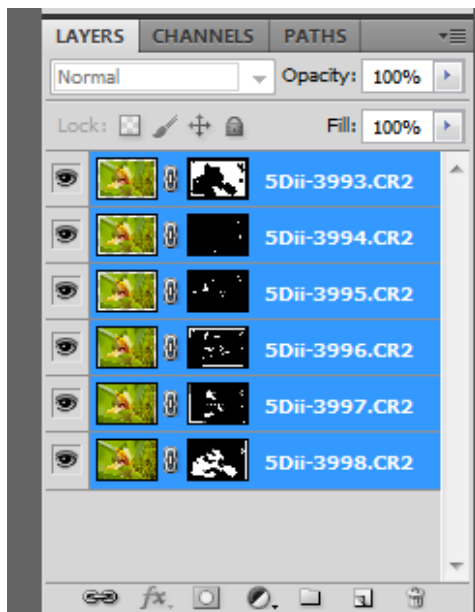
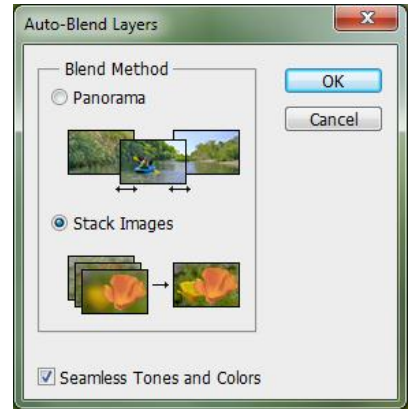
From Lightroom. Edit one of the images in Lightroom as normal with the exception of cropping, and copy and paste the adjustments to all the images that will be combined. It is easier to clean the images of dust spots and blemishes before stacking. Image defects such as small out-of-focus insects will be in different places in each image and all of them will appear in the stacked image. Selecting all the images to be combined, right click and “Open as Layers in Photoshop” from the “Edit In” option.

From Photoshop. Open Bridge and find the images to be stacked. Select all the images then from the pull down menus select Tools/Photoshop/Load files into Photoshop Layers... The images will be loaded sequentially as shown in the image at the right.

All the captures are now loaded into one image as layers. Since the images in the stack have slightly different fields of view due to the change in magnification as a result of changing the focus point, we need to align the elements of the image. Photoshop has a tool for that. Select all the layers (Ctrl-click on each layer) ensuring that they are all highlighted blue, and from the Edit pull down menu, select Auto-Align Layers. A window appears (below) with the alignment options. Since we want each image to be stretched and moved so that all the parts of the image are aligned, select Auto and click OK.



The result after being stretched is that some image layers are larger than others and depending on the composition may require cropping of the stacked image. No point in cropping yet, as it really depends on what the blended image looks like around the edges. With all the layers selected, from the Edit pull down menu, select Auto-Blend Layers. A selection window appears, and for this application select Stack Images and click OK. Photoshop will compare each layer and select the sharpest pixel groups and mask out the others. The resulting image may exhibit some anomalies around the edges of the image which can be corrected by cloning or eliminated by cropping.



As can be observed from the resulting masks, it may be possible to eliminate some of the layers from the stacking as they do not contribute any sharp pixel groups as in the second layer down in the stack below. By turning on each layer in turn, it is possible to view which parts of the final image are contributed by each stacked image. In this case, the second layer down has only soft background areas of the image contributing to the final image. Deleting this image from the stacking process in a subsequent attempt provided no improvement to the final image.

At this point I flatten the layers to reduce the file size (a 20 layer stack could be 2 GB in size) and save the PSD file with a suitable name. The composite image is now ready for normal editing and enhancement processes.