PHOTOSHOP TUTORIAL 5 FOCUS STACKING

©Hein Waschefort

Focus stacking involves taking several photos, all in manual at f8 or f11 ideally 9the optimal quality settings for most lenses) each with a slightly different point of focus. The first image is focused towards the front of the subject, the next a little further back. More images of different focus fields are needed towards the front (nearest point), the front being closer and thus having more acute limited depth-of-field.

The next step is to use dedicated software to create a photo with all the focused areas of the different photos compacted to create a sharp photo from front to back.

Adobe Photoshop has an auto-blending function for focus stacking.

CombineZM is a free Windos program that does the same,

A different part of the flower is in focus in each of the photos.

to download go to- http://hadleyweb.pwp.blueyonder.co.uk/CZM/News.htm.

Another stacking program is **Helicon focus** available for Mac and PC, go to- www.heliconsoft.com for approximately R200.00 a 30 day trial version is also available.

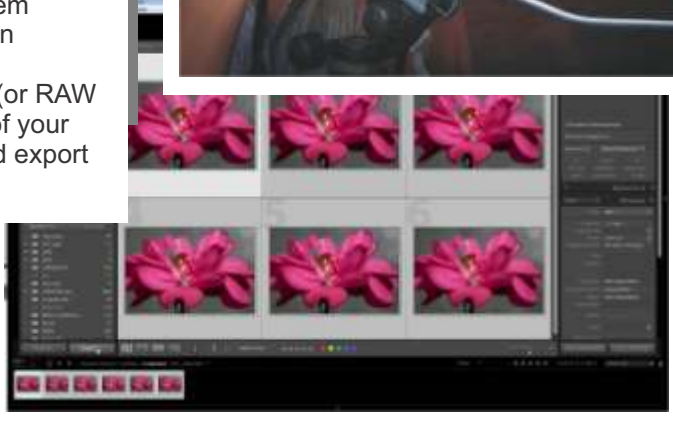
"We tested Adobe Photoshop CS4 and Helicon Focus. Both programs worked flawlessly - Helicon Focus was much quicker and easier to use, but cropped tighter into the image than Photoshop CS4." EOS Magazine Oct-Dec 2010

Focus Stacking on left blends them all together to create a new image, compared to the small depth-of-field of a single shot from the series.
Camera: Nikon 300D, AFS Micro Nikkor 105 2.8 ED + 2 X SBR 200 strobes. 1/50th sec. at f8.
Photos: Hein Waschefort

step 1

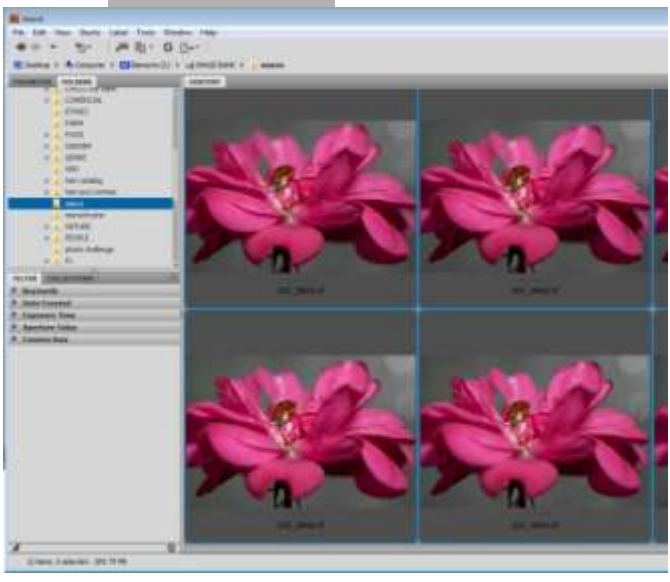
A bracket atatched to the lens helps to keep the subject in exactly the same position from the lens and eliminates the use of a tripod.

Take photos in RAW, process them identically in Photoshop Lightroom (or RAW converter of your choice) and export as TIFF's.



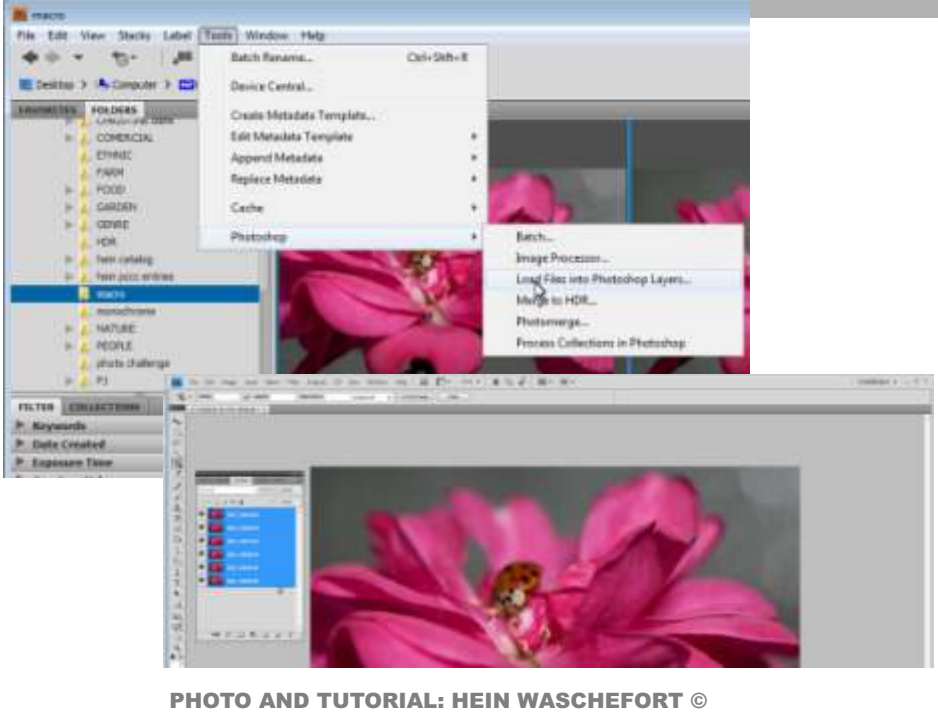
step ②

Open Adobe Bridge, navigate to the new folder and select all the images **Edit - Select all**



step ③

Go to **Tools - Photoshop - Load files into Photoshop layers**. This loads the selected photos into Photoshop and combines them into a single file with each photo in its own layer.



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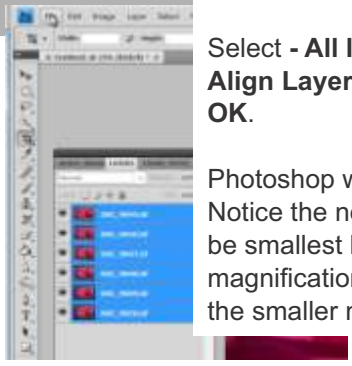
step 4

To align photos. Photos differ in size. Remember the nearest focus had the lens extended furthest therefor the image will be bigger (the lens was closer).

Select **- All layers - Edit - Auto-Align Layers...** Select **Auto** and **OK**.

Photoshop will align the layers. Notice the nearest focus image will be smallest because the bigger magnification need to shrink into the smaller magnifications.

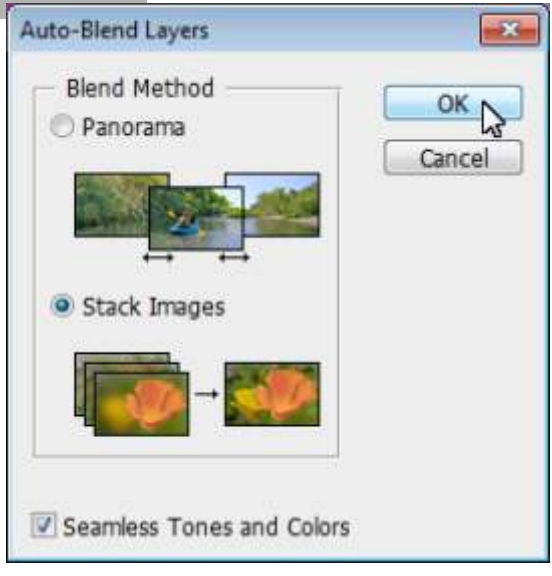


step 5

I normally crop image at this stage with cropping tool, this will crop all layers and reduce time in the following Auto-blend process

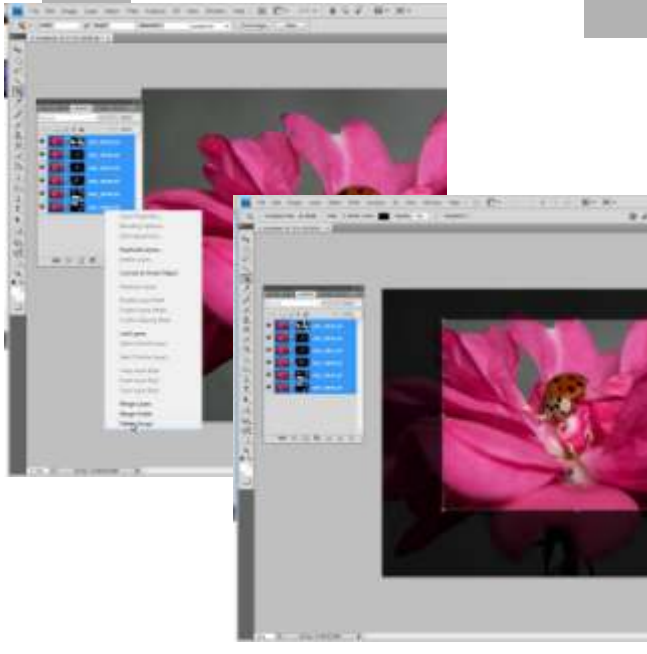
step 6

To blend the sharp parts of the layers: **Edit - Auto-Blend Layers**, Select **Stack Images** and **Seamless Tones and Colours** press **OK**. It will take a few minutes.



step 7

When **Auto-blend** is done, go to **Layer - Flatten Image** to flatten the layers and then do post processing or save photo for later processing.



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focus stacking

PHOTOSHOP

BITS AND PIECES ON FOCUS STACKING

- Use a tripod and cable release.
- Use mirror lock-up when shutter speeds are slow
- Use 100-200 ISO f
- Shoot RAW.
- Use same manual setting for all exposures, auto might change exposures on different images, the size change with each focus field and might change the exposure.
- A moving insect will spoil the effort
- Focus stacking is not the solution to all depth-of-field problems in macro photography.
- Focus stacking is not always the desired option, in some cases a shallow depth of field has a greater aesthetic value.

Focus stacking is probably exclusive to digital photography. Unlike many other digital techniques, it does not appear to be an implementation of a film technique.

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