

# DIGITAL PHOTOGRAPHY

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LAST ISSUE WE DISCUSSED THE REQUIREMENTS TO CREATE SPLIT SHOTS IN CAMERA. HOWEVER, IF YOU USE A POINT AND SHOOT DIGITAL CAMERA YOU'LL FIND THAT TECHNICAL ISSUES PREVENT SUCCESSFUL SPLITS BEING CREATED. LETS LOOK AT HOW WE CAN WORK AROUND THOSE LIMITATIONS. THE EASIEST METHOD TO CREATE SPLIT SHOTS USING A POINT AND SHOOT CAMERA IS TO DO IT ALL IN THE DIGITAL DARKROOM; YOUR COMPUTER. WHAT YOU'LL BE DOING IS CONSTRUCTING ONE IMAGE OUT OF TWO IMAGES USING YOUR COMPUTER SOFTWARE AND A LITTLE KNOW-HOW. BEFORE WE START, THERE ARE TWO ISSUES THAT CAN BE ADDRESSED: ARTISTIC AND MORAL. SOUNDS HEAVY BUT IT'S SURPRISING HOW CREATING IMAGES CAN CAUSE ALL SORTS OF PROBLEMS.

From the artistic point of view, the main problem with constructions is that they often don't look real or 'right'. This may be because the person constructing the images has a low quality threshold (near enough is good enough) or they have no idea how a real world image works. Foreground, background, perspective, focus. All combine with no thought at all, like breathing, to create a normal photo. When bits and pieces are cut and pasted together in a montage often the perspective, focus, lighting and colour do not match. The result is an image that looks totally fake, like that old magazine ad for an airline with cut out fish stuck onto a coral reef shot.

At times a fake looking image is just what's needed. Visual hyperbole if you wish, tongue in cheek images like a celebrity being bitten on the backside by a white shark. Obviously and cheerfully fake. We'll look at how to blend and adjust your images to make them look as real as possible. If you want to create obvious fakes then you won't need any help beyond the basic techniques described below.

The moral issue is that some people get very upset if an image is found to be tampered with, which includes constructions. On one



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and if there's a new marine dive adventure to be experienced or invented, he's always the first to put up his hand. He's also dived the southeastern Australian continental shelf and photographed shark species nobody knew would be found out there. Kelvin is a BBC Wildlife Photographer of the Year marine category winner and his unique work is on [www.marinethemes.com](http://www.marinethemes.com)

hand this is quite understandable when the image is presented as being authentic. For example, *National Geographic* was very embarrassed to find that a cover shot of a kingfisher catching an insect off the surface of a stream turned out to be a construction. The problem was that the photographer said that the image was original and untouched and the magazine innocently presented it as such. Obviously there are moral issues at stake when a constructed image is presented as an original with the intent to deceive. On the other hand, many people think that constructions or 'adjusted' photos are a modern phenomenon spawned by the latest digital technology including cameras and computers. Not so. Photo constructions, retouching and the 'adjusting' of reality has been around and in use since the first photo was reproduced.

In the 1980s there were a lot of people making a very good living out of retouching product photos, portraits, etc to look better than reality. They were very skilled technicians and commercial artists.

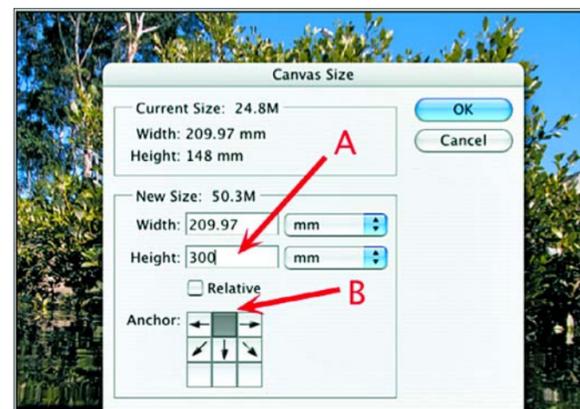


Figure 1: The Canvas Size dialogue box in Photoshop. The height (A) has been set to 300, just over double the original 148mm, and the canvas will extend below the image as it has been anchored or locked at the top (B).

When Photoshop and 'fast' computers become affordable in the early to mid 90s those businesses collapsed overnight. The process was still alive and well, it had just moved across to the digital realm. All digital image handling did was to make it much easier and cheaper to 'fiddle' with images. It also meant that on commercial shoots much time could be saved by digitally constructing or adjusting an image rather than spending all the time setting it up in a studio. I remember once spending a day and a half photographing a computer chip against a rainbow coloured background. Now I could do the same shot in about two hours including the computer work. It would not look any better or worse, it would just be easier and quicker to create.

I know some people totally flip out if there is any sniff of adjusting an image, even spotting out an annoying bit of backscatter has them frothing at the mouth. But if you make many of the same adjustments in a darkroom then that's OK with them. The reality is that every single photograph of a human used on the cover of a magazine has been digitally fiddled with in some way. And always has been. It may be as simple as changing the exposure or colour to suit the printing press or, more likely, a full body reconstruction; removing wrinkles, slimming thighs, changing eye colour, adding hair, removing hair, raising brows, fixing teeth, etc. Trying to match your appearance to these cover shots is impossible because the models themselves do not look that perfect.

Personally, I don't construct images as I can't be bothered spending all that time in front of a computer screen. I prefer to go out and capture the images that are out there that to me are far more interesting. I certainly use modern technology to then make those images look as good as possible but I leave the constructions to those who have the patience and enough bad weather to make it worth the effort. So without making moral judgements, lets look at how to construct a basic split image by using two separate photos.

To start with you need an above water and below water image. For our example, I want to construct an image of a mangrove tree with a crocodile. The best images to start with are taken from the surface interface or near the surface. If the top half of your image is taken from a cliff then the perspective will be all wrong. It won't look like it was taken from the surface of the water. The mangrove shot used in this example was taken with the camera in a housing at the water's surface. I could have used a nearby bridge, thereby avoiding the squishy mud between my toes and some nasty oyster cuts. But it wouldn't look right – the perspective and angle of view would be wrong. I find that if the top looks right, you can get away with murder with the underwater shot because most people have never seen an underwater scene so their 'belief' system is easier to

trick, while they probably have seen a tree growing in or near water so they know what to visually expect.

The first step is to open the images in your favourite image editing software. I'll use Photoshop as it, and it's much cheaper little brother, Elements, are the most popular image editing programs. If you don't have these Adobe products, any other image editing software that allows you to use layers will do. You can always download a copy of either of the above programs and use them for 30 days for free. See the sidebar for the web address. I'll use Photoshop 7 as it's an older version which does everything the

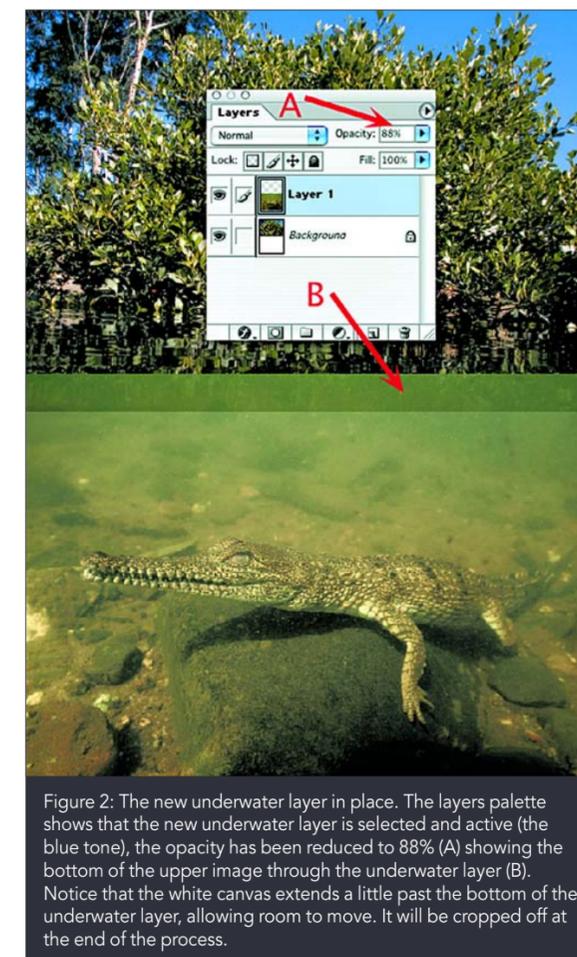


Figure 2: The new underwater layer in place. The layers palette shows that the new underwater layer is selected and active (the blue tone), the opacity has been reduced to 88% (A) showing the bottom of the upper image through the underwater layer (B). Notice that the white canvas extends a little past the bottom of the underwater layer, allowing room to move. It will be cropped off at the end of the process.

newer versions can do for our project and there are some quirks in the newer CS versions which I find annoying.

Both images need to be of the same bit depth and resolution. For our example we'll use both images in 8 bit at 300 dpi. To check this for each image, go to the main menu bar at the top of your screen and select Image>Mode>8bits/channel. If it is not in 8 bits, make it so for each image. Then check the image size: Image>Image Size. Uncheck the Resample Image checkbox and type in 300 in the Resolution field, making sure the drop down menu next to it says 'pixels/inch'. You'll now have two images in 8 bit depth at 300 dpi. If both shots were taken by the same digital camera or scanned off film at the same settings then you'll have two files with the same resolution and physical dimensions. If they're different you'll have some minor problems later fitting them together.

Now you need to make space to place your second shot. Let's assume that our topside shot is our main image to which we will add the second underwater shot. You could just create a new document and add the top and bottom to it but in my opinion that is just additional work with no clear advantage. First you need to

increase the canvas of the topside shot. We're not changing the resolution or 'size' of the image, just making extra blank space below onto which we'll add our underwater shot. While any colour for this space will do, to keep things clean hit the letter 'D' to reset your colour swatches or go to the tool bar and click the little icon to set the foreground and background colours to black and white respectively. Go to Image>Canvas Size and double the height of your image. You can round it up to be a little larger if you wish. In the Canvas Size dialogue box you can specify where the extra space is needed by clicking on a small diagram called the Anchor. Make it add the space below the image (Figure 1). You now have some blank canvas onto which you will drop your underwater image. Click on your underwater image to select it. Hit the 'V' key or go to the toolbar and select the Move tool. Drag the underwater image across onto the topside image. When you release the mouse, you'll have created a new layer on your topside image containing your underwater image. If your layers palette isn't visible, go to the

main menu bar and select Window>Layers. You'll now have a Background layer and 'Layer 1' which is your new underwater image, in this case our little crocodile. If you wish, you can click on the layer names and rename them 'topside' and 'underwater' if that helps you to keep track of things.

Use the Move tool to position the underwater image layer below the topside image but overlapping by a reasonable amount. We'll be blurring the two images together, so we need an overlap to avoid an abrupt end to the topside image. To help with this and the next step, it's good to drop the opacity of our new layer so we can see how much overlap we have (Figure 2). Click on the Opacity option and reduce it to about 80% or whatever looks good for you. Now you can see the top edge of the bottom image as well as the bottom edge of the top image and the area of overlap. With that done we can now blend the two images without too much guesswork.

In the tool bar select the Lasso tool (keyboard shortcut = L) making sure we have the basic Lasso selected, not the Polygonal or Magnetic lasso tools. At the top of the screen set the Feather option to 50 pixels and make sure the Anti-aliased box is active or ticked. Now draw a boundary around the top of the new layer image so that the bottom of the selection is above the edge of the Background image and well above the top of the underwater image (Figure 3). For this exercise try to keep the bottom of the selection reasonably horizontal and straight. Hit the delete key to clear the pixels out of the selection then deselect the area by going to Select>Deselect. Change the opacity of the underwater layer back to 100%.

You now have a soft upper edge on your underwater image. Use the move tool to adjust the position of the lower image so that the blurred upper edge just covers the lower sharp edge of the background image. Save the image in this state. While you can save it as a .tiff file with layers, I usually save layered images in Photoshop format (.psd) so that later I can easily see which file has layers and which is the finished flattened version. If you feel that either the top or bottom images need to be lightened or darkened to make the overall image look better, click on the appropriate layer in the

layers palette and make your adjustments. I thought that in this state my underwater image looked too bright at the top where it blended into the upper mangrove image, so I selected the Lasso tool again, changed the Feather to 100 pixels and selected the upper area of the underwater layer then used the curves dialogue box to darken that part of the image.

There are lots of little things you can do to improve on the above basic process. Instead of selecting and deleting the pixels at the top of the underwater layer you could use the Eraser tool in brush mode with the brush set to zero hardness. However I prefer the above method as it allows a wider range of pixels to be blended. You can also use a slight curve to the selection with a lower feather setting to simulate a bit of surface wave action. You can turn the upper image into another layer and double blend it into the lower image. You can use masks and more complex selections but the basic process above will cover most of your needs.

Once you're happy with how the image looks, save it again as a layered psd file then flatten it (Layer>Flatten Image). Crop off any of the excess canvas that is peeking out below the bottom of your pic and save as a tif file.

There's more than one way to skin a catfish so as your computer skills improve you'll find shortcuts or preferred ways of fiddling with your images. Constructions certainly are not better than original images but it's one way to save a situation or get a result when you don't have the necessary photographic hardware. It is also a fun way to extend what you do with your photos. When you have a day off and the dive sites are wiped out by a storm then you can use your creative muscle to get more out of the photos from your last dive trip.

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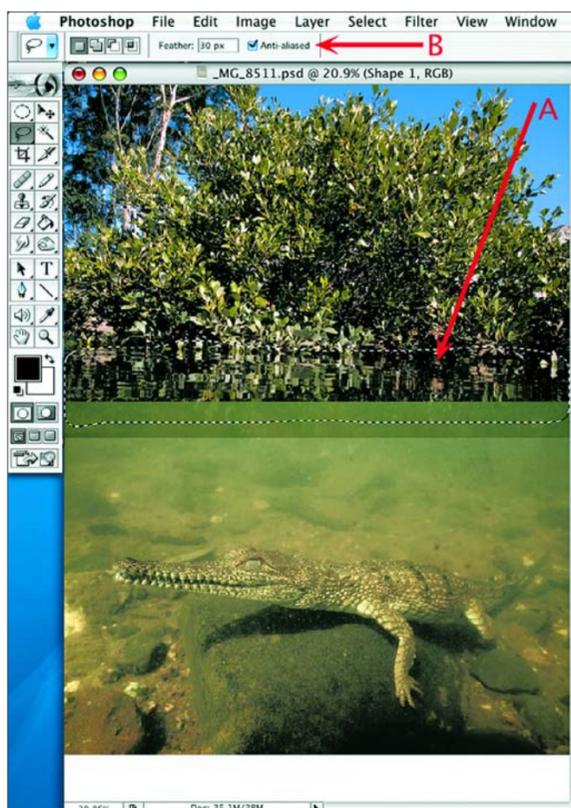
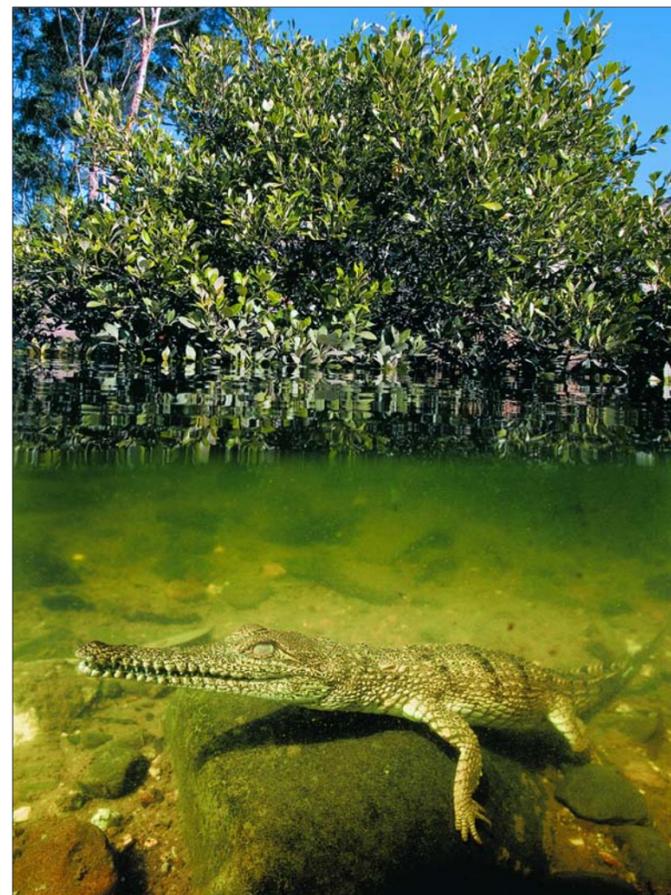


Figure 3: The selected area is shown by the dotted lines (A). It is reasonably straight at the bottom, the top of the selection is well above the overlap and the bottom is half way between the upper and lower area of overlap. The Feather is set to 30 pixels and the Anti-aliased option is on (B).



Final Blend: The finished product. A quick and easy process to join two images together. Besides the basic blend, the top of the underwater shot has been darkened and the brightness of the two halves have been tweaked to look more natural. This image works reasonably well because the lighting is similar and the water colour and subject matter is believable.