



Challenge Image: Bird

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In this lesson, we're going to work on a challenge image that was sent in by a Masters Academy member. The image features a hummingbird and we're going to replace the background while still maintaining the transparency in the wings. We're also going to apply some color correction and tackle some issues related to shooting with a high ISO setting.



The original image, with no adjustments.

We're going to open the image by dragging the file to Photoshop's icon. Because this image is a raw file, it's going to open in Adobe Camera Raw. Know that you can use Lightroom's Develop Module in place of Camera Raw because they're essentially the same thing.

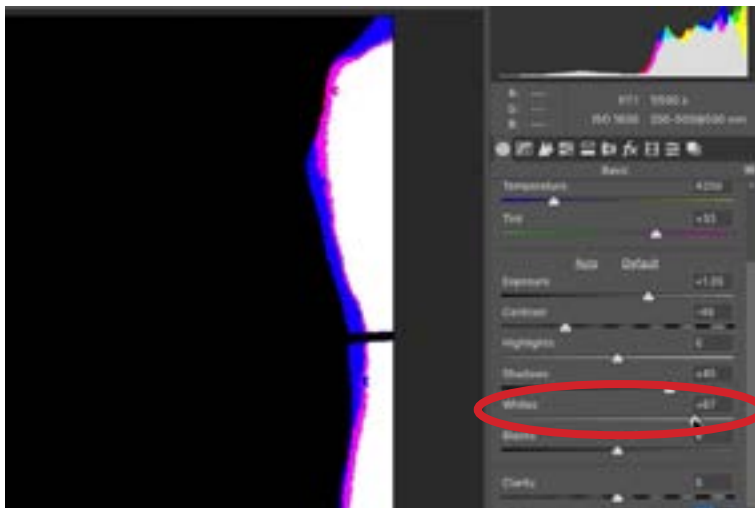
Camera Raw Adjustments

Tonal adjustments The image is quite dark, so the first thing we're going to do is lighten it up. Any time you look at an image's histogram and see a gap on the right side, it means that there are no whites in the image and that's the case here. We're going to drag the Exposure slider to the right until the bars of the histogram reach the right side. In this example, we can actually push the histogram bars quite far to the right because the area that we're forcing to white is the background and this is the part of the image that we're going to replace.

The subject is still pretty dark, so we're going to drag the Shadows slider to the right until we like the brightness of the bird.

We're going to now work on the contrast of the image by using a little trick. There are two sliders that you can move in opposite directions in order to manipulate the contrast with more control. If you want to emphasize content that's in the shadows like we do here, first lower the Contrast slider a bit. This is actually going to make the image look a little dull. To compensate for that, we're going to drag the Dehaze slider to the right. When doing this, we need to look at the histogram and make sure that we're not dragging the slider so far that a spike appears on the left side of the histogram chart. This would mean that we're starting to get a larger area of black and are losing detail.

Ensure there's a white point and black point Next, we want to make sure that we know where the brightest and darkest parts of the picture are, and that they contain areas of solid black and solid white. We can do this with the Whites and Blacks sliders. If we hold down the Option key (Alt on Win) while dragging these sliders, we'll get a special view of the image that shows us what areas are solid white (for the Whites slider) and what areas are solid black (for the Blacks slider). We'll hold the Option key while dragging the whites slider to the right. As we drag the slider, the image window goes from being completely black and then



We're holding down the Option key (Alt on Win) while dragging the Whites slider. This view shows what parts of the image are being forced to white.

gradually introduces white blotches. These white areas are the places that are being forced to white. Normally, we would stop moving the slider once a small spot of white appears, but because it's the background area that's becoming white, we will drag the slider a little farther than usual. This is because the background is going to be replaced, so it doesn't matter that we're losing detail there.

We'll now do a similar thing with the Blacks slider, holding down the Option key (Alt on Win) while dragging the slider to the left. This will change the view of the image window, showing us what areas are being forced to black. We'll drag the slider until just a few specks of solid black appear, indicating that there is a hint of black in the image.

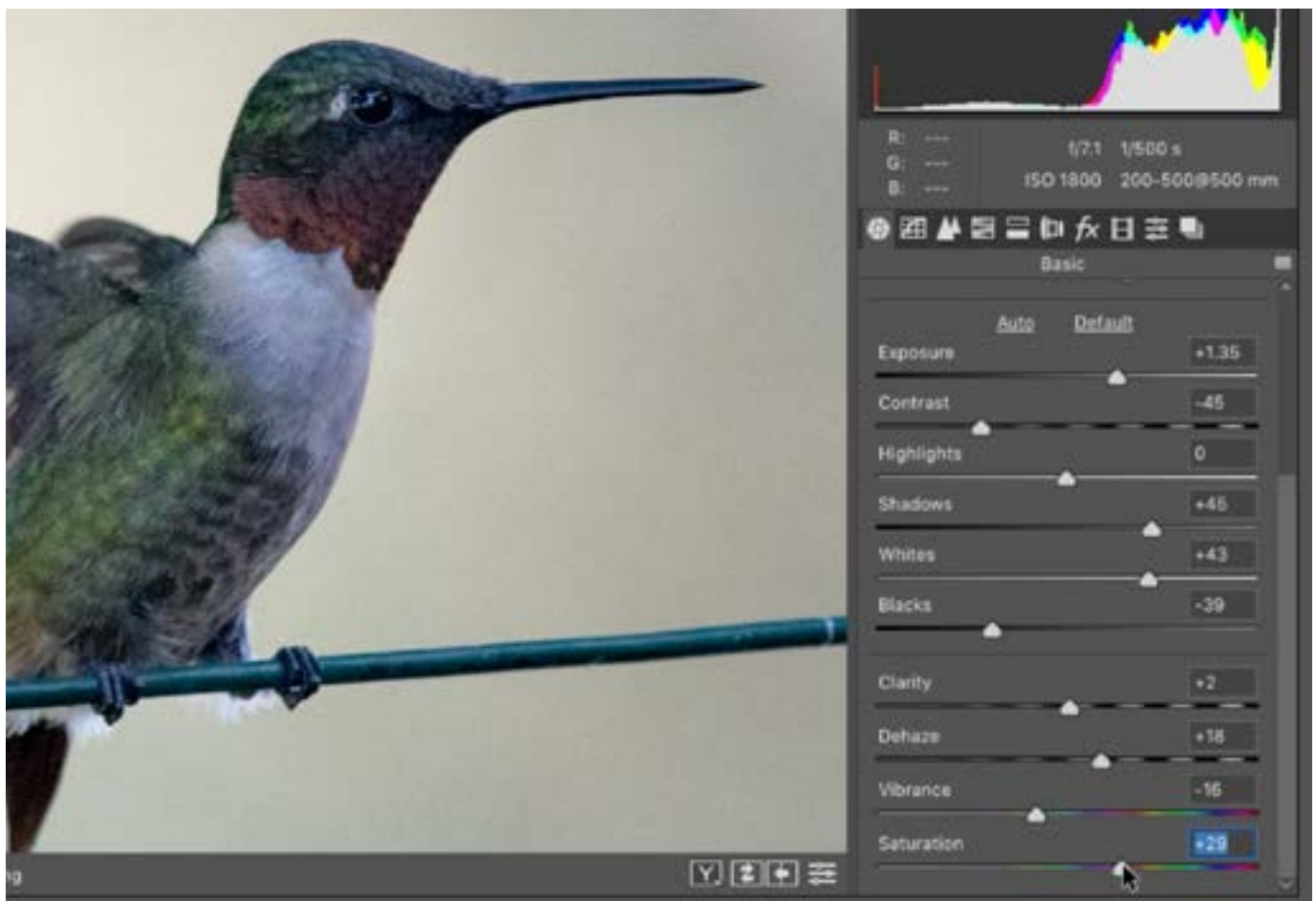
Now we know that the image has good contrast, containing areas of both solid white and solid black. We can see a before-and-after view of the changes we've made by toggling the little icon that looks like a set of sliders below the bottom right corner of the image window.



ABOVE: We're holding down the Option key (Alt on Win) while dragging the Blacks slider just far enough that we start to see a few black spots appear in this view.

LEFT: Here, you can see the results of all the tonal adjustments.

Color adjustments The next thing we're going to focus on is the color in the image and we'll start with the Vibrance slider and Saturation sliders. Any time I have anything really vivid in the image, I'll work with the Vibrance slider because it focuses on the more mellow colors. The Saturation slider works on the image as a whole. Often times, as in this case, I'll end up moving these sliders in opposite directions, adjusting the mellow colors with the Vibrance slider and the image as a whole with the Saturation slider.



The Vibrance and Saturation sliders are both being used to adjust the color. The Vibrance slider is being used to fine-tune the mellow colors and then the Saturation slider is used to adjust the image as a whole.

Finally, we'll adjust the white balance of the image. The Temperature and Tint sliders collectively control the white balance, but it's often times easier to use the White Balance Eyedropper for color correction. The White Balance Eyedropper can be found in the Toolbar above the image window in Camera Raw. In Lightroom, it can be found at the top of the Basic panel inside the Develop Module. We'll use the eyedropper to click on an area that should be neutral (an area that should have no color). In this example, it's the bird's white neck. When we click, the colors of the image will shift to ensure that the area we clicked has no color. We can fine tune the results, if necessary, using the Temp and Tint sliders.



The White Balance Eyedropper is being used to click on part of the image that should be neutral in color.

Working with the Saturation sliders, we're moving the blue slider to the left, which is taking all the blues in the image and making them less colorful.



The HSL sliders are also designed to adjust the colors in our images and they can be found by clicking on the tab that looks like three gradient bars in Camera Raw. HSL stands for Hue, Saturation and Luminance and there is a set of sliders for each of these elements. If you ever move the Vibrance slider up by a good amount, the adjustment will exaggerate the blues in the image. To compensate for this, you can take the Blue Saturation slider and drag it down a bit.

Lens Corrections In Camera Raw, the Lens Corrections settings can be found by clicking on the tab that looks like a deconstructed lens. In Lightroom, you'll find the Lens Corrections panel on the right side of the Develop Module. Here, we'll turn on the "Remove Chromatic Aberration" check box, which will make sure that there is no colored "glowy" artifact around high contrast edges. We'll also turn on the "Enable Profile Corrections" check box, which will eliminate any distortion caused by the lens. These are settings that I turn on for 95% of my images.

Noise Reduction Zooming in on the bird, we can see that the image contains a lot of noise. Any time you brighten a dark area, you're going to reveal any noise that was hiding there and that's what happened here. We'll click on the Detail tab, which looks like two overlapping triangles in Camera Raw. In Lightroom, it's listed on the right side of the Develop Module. This is where we'll find the sharpening and noise



Zooming in on the image, we can see that it contains a lot of noise.

reduction settings. We'll work on the sharpening settings first. By default, there will be some sharpening applied to the image. The sharpening is being applied to everything, which means that it's also sharpening the noise. We want to make sure that it's not sharpening the noise and we can do that with the Masking slider. If we hold down the Option key (Alt on Win) while dragging this slider, we'll get a black and white view of the image that shows what is being sharpened. With the slider all the way on the left, the screen will be entirely white, which means that everything is being sharpened. As we move the slider to the right, more and more of the image will start to turn black. The black areas will not be sharpened. We're going to drag the slider to the right until the background turns black. There was no detail in the background and, therefore, it does not need to be sharpened.



While dragging the Masking slider, we're holding down the Option key (Alt on Win) in order to get this view of the image that shows us what's being sharpened. Here, we're dragging it until the background turns black, indicating that it will not be sharpened.

Now we'll move on to the Noise Reduction settings. There are two types of noise that can appear in our image: luminance noise, which presents itself as variations in brightness, and color noise, which looks like grains of color. This image contains only luminance noise so we're going to drag up the Luminance slider until the noise is no longer distracting. (Note that you should be zoomed in on your image when doing this.) We had to drag the Luminance slider pretty far, and this resulted in a slight loss of detail in the bird. To compensate for this, we'll drag the Luminance Detail slider all the way to the right and then slowly start dialing it down. We're looking for the highest setting that still gives us effective noise reduction.

There is also a slider called Luminance Contrast and it's only when the Luminance and Luminance Detail sliders are at very high settings will this slider do anything. We'll experiment with this slider, moving it back and forth to see if there is any contrast boost. In our case, we do start to see more detail appear in the feathers. It is always a compromise between reducing the noise and maintaining a high amount of detail.

This image contains tiny little details of color, so it's might be a good idea to experiment with the color noise reduction sliders. There is automatically some color noise reduction applied, and if we drag the Color slider all the way to the left, we can see why. Almost all images need some color noise reduction to eliminate those tiny specks of color that contaminate the image. It might not need to be set at 25, however, so we'll play with the slider, trying to find the lowest possible setting that is still effective in removing the color noise. For this image, it's a setting of around 10. With the Color Detail slider, we again want to find the highest possible setting that gives us more detail while still eliminating the color noise. The Color Smoothness slider will try to eliminate any colored blotchiness that was delivered by the camera. If we drag this slider all the way down, we can see those blotches appear in the background of the image. We'll drag this slider up just until the blotchiness goes away and the colors are smooth.

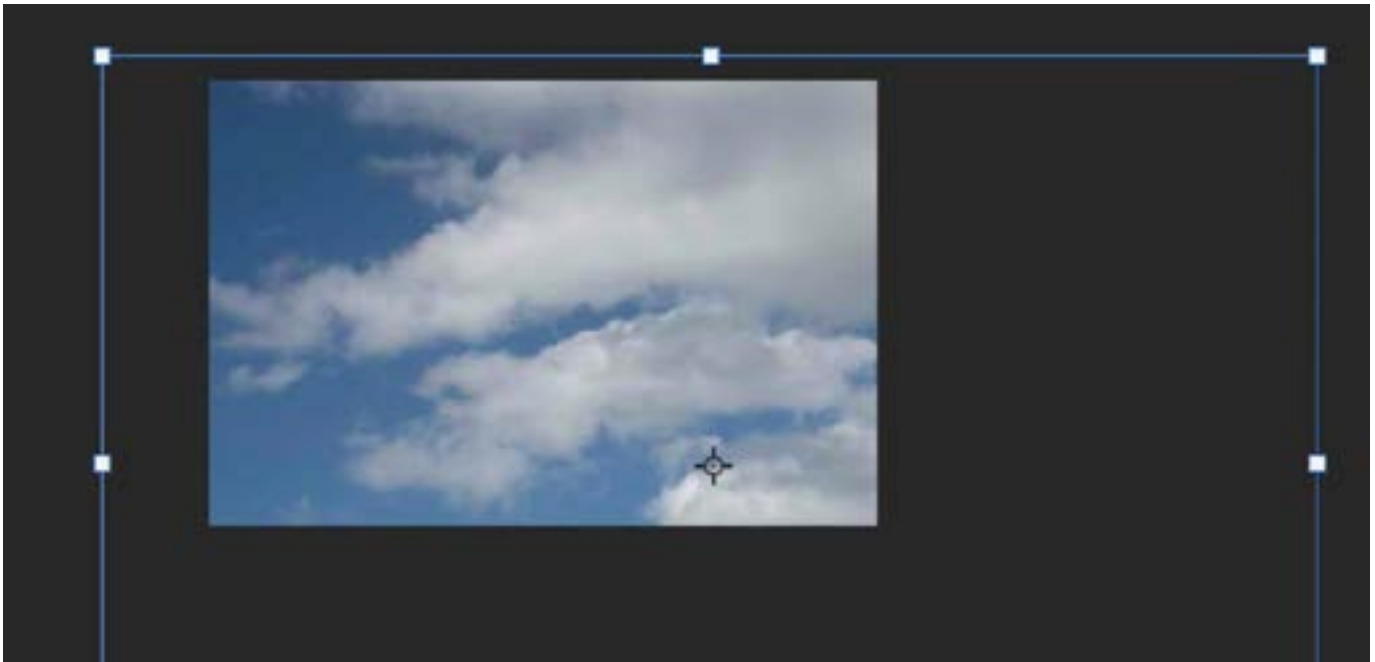
Now that we've worked through the noise reduction settings, we'll return once more to the sharpening sliders. Any time you have a lot of noise, it's going to be very easy to sharpen that noise, making it more noticeable. Under the sharpening settings, we'll move the Radius slider to a very high setting. Then, we'll start to tweak the Amount slider, bringing it to the highest setting that doesn't over-sharpen the image.



At left, you can see the results of the sharpening and noise reduction.

Photoshop Edits

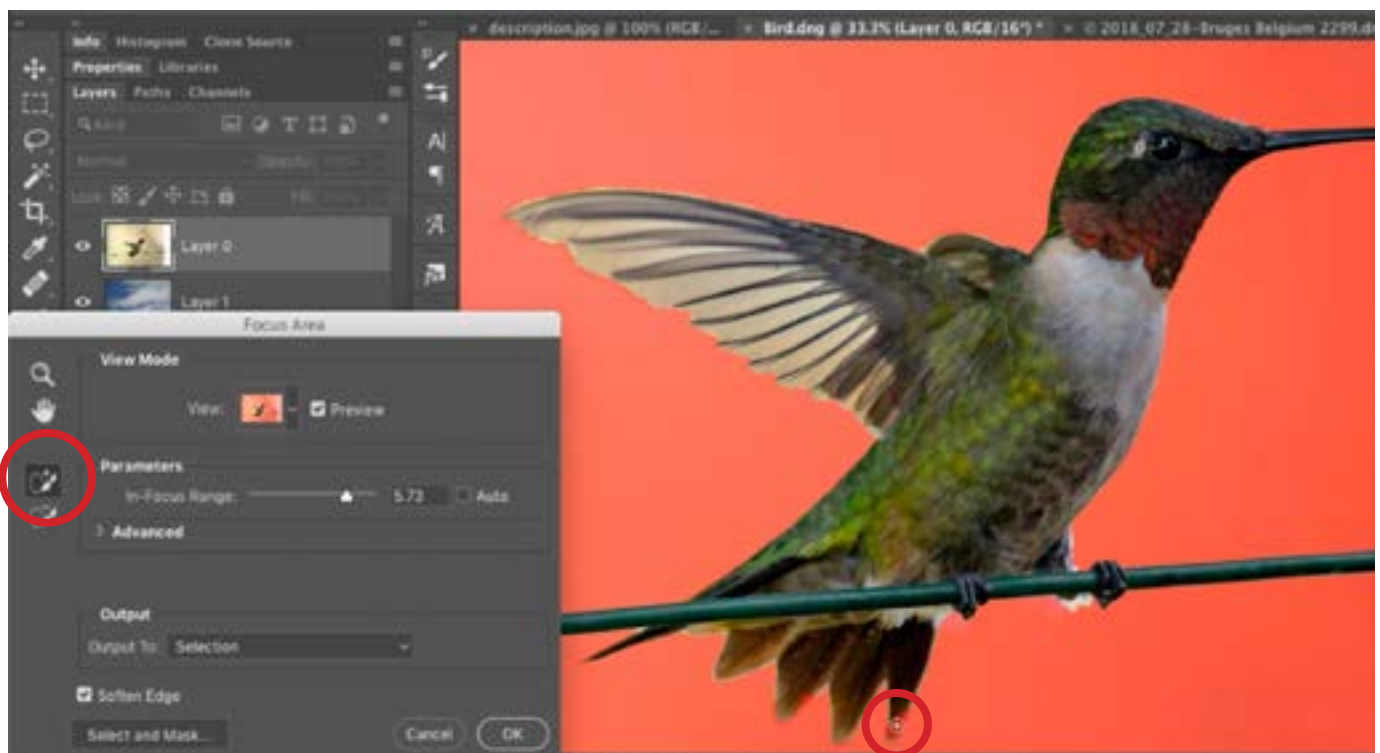
It's time to open the image into Photoshop. We'll click on the Open Image button at the bottom of the Camera Raw interface. We're eventually going to remove the background on this bird, so we want to find a new background to place it on. We'll open a sky image and drag it into this Photoshop document as a separate layer. In our example, the sky image is too small, so we'll use the Free Transform command to make the image fill the document window. It's ok that we're scaling this up so much because we're going to blur it significantly layer. We need to place the sky layer beneath the bird layer, but in order to do this, we need to make it so the bird layer is no longer the Background layer. (The Background layer is always locked.) We'll unlock the Background layer by double-clicking on it and then we'll drag the sky layer below it. Now we have the bird layer on top of the sky layer. We'll make sure the bird layer is active.



ABOVE: We're placing the sky image into the same Photoshop document as the bird image and scaling it up. **LEFT:** We placed the bird layer on top of the sky layer.

Select the subject

To remove the background from the bird, we first need to start by making a selection. This image has a completely out-of-focus background, which makes it an ideal image for using the Focus Area selection feature. We'll click on the Select menu at the top of the screen and choose Focus Area. This feature will select things based on whether they are in focus or out of focus. The Focus Area dialog will appear and it will try to isolate the sharp subject from the blurry background. It may or may not do a good job right off the bat. It will depend on the image. We'll adjust the In-Focus Range slider to specify how much of the image is in focus and should therefore be selected. We want to adjust it so that we get as much of the bird selected as possible without starting to bring the background in. We can use the View menu to determine how the preview should look. In this example, we'll choose the red overlay option, which will place the overlay over all parts of the image that are not selected.



The Focus Area feature is being used to make a selection of the bird based on what parts of the image are in focus. Here, we're using the "add to selection" tool (circled) to paint over additional areas that should be selected.

We were not able to get the bird perfectly selected using only the In-Focus Range slider, so we'll need to use some additional tools that can be found on the left side of the dialog. There is a tool with a plus sign, which would add to the selection, and there is a tool with a minus sign, which would remove part of the selection. Because there are parts of the feathers that contain the red overlay and are therefore not selected, we'll activate the tool with the plus sign. We'll use this brush tool to paint over the parts of the feathers that should be selected. Note that you can change the size of this brush by using the left and right bracket keys on the keyboard. When we release the mouse button, the tool will recalculate what should be selected. We also want to make sure that the "Soften Edges" check box is turned on because this will make the edges of the selection look a little more refined.

Now we have a good initial selection, but we want to fine-tune it. At the bottom of the Focus Area dialog is a "Select & Mask" button and we'll click this to bring up the Select & Mask settings. Here, we will use the Radius slider to get a more refined selection around the shape of the bird. As we bring this slider up, we are giving Photoshop more and more control over the selection edges. If we set the Radius slider to one pixel, we are giving Photoshop one pixel's width of control all the way around the subject. We'll bring up the Radius slider until the edges of the red overlay best match the edges of the bird and, in this case, that's a radius of 3.

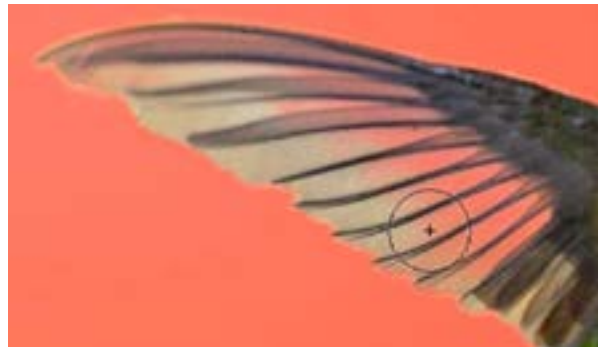


The Select & Mask feature is being used to refine the selection of the bird. Here, we're adjusting the Radius slider, which determines how much Photoshop has control over the edges of the selection.

Note that if you're using this feature with a subject that has both crisp edges and soft, fuzzy areas, then turning on the "Smart Radius" check box can help the setting work better.

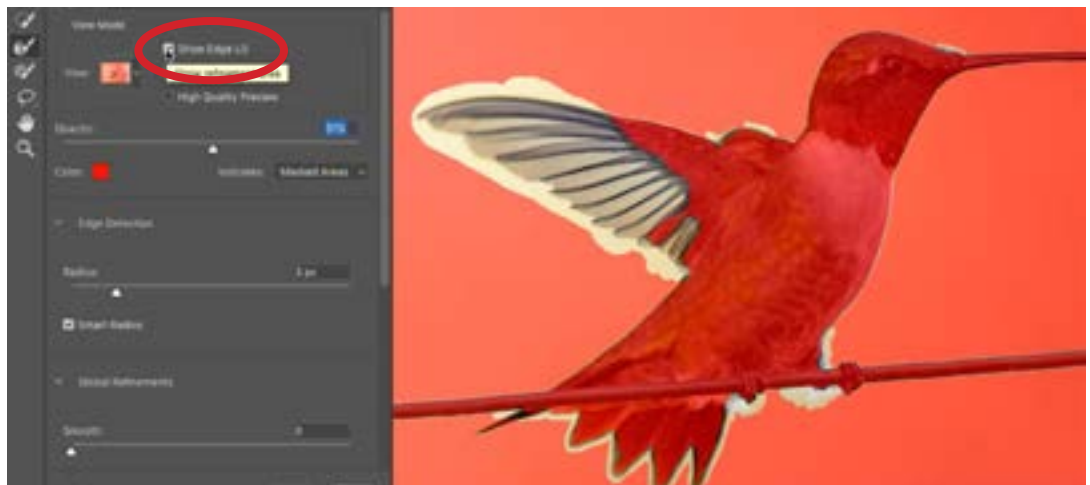
Next, we're going to turn to the tools the left side of the interface. We'll activate the second tool from the top. This brush will allow us to paint over the areas where we want to give Photoshop control and refine what's going on. We'll use this brush to paint over any areas that look like they need refinement. When we release the mouse button, Photoshop will assess the area and automatically refine the selection so that it looks better. This tool is great for subjects that are furry, fuzzy, hairy or partially transparent.

The bird's wing should be partially transparent, so we're going to make the brush larger and then paint over the parts of the wing that should be transparent. If we need to adjust our view of the red overlay, we can use the Opacity slider, which controls how much we can see through the overlay. We can also turn on the "Show Edge" check box, which gives us a different view where we can see what parts of the selection Photoshop has control of. We can further refine the edges while in this view.

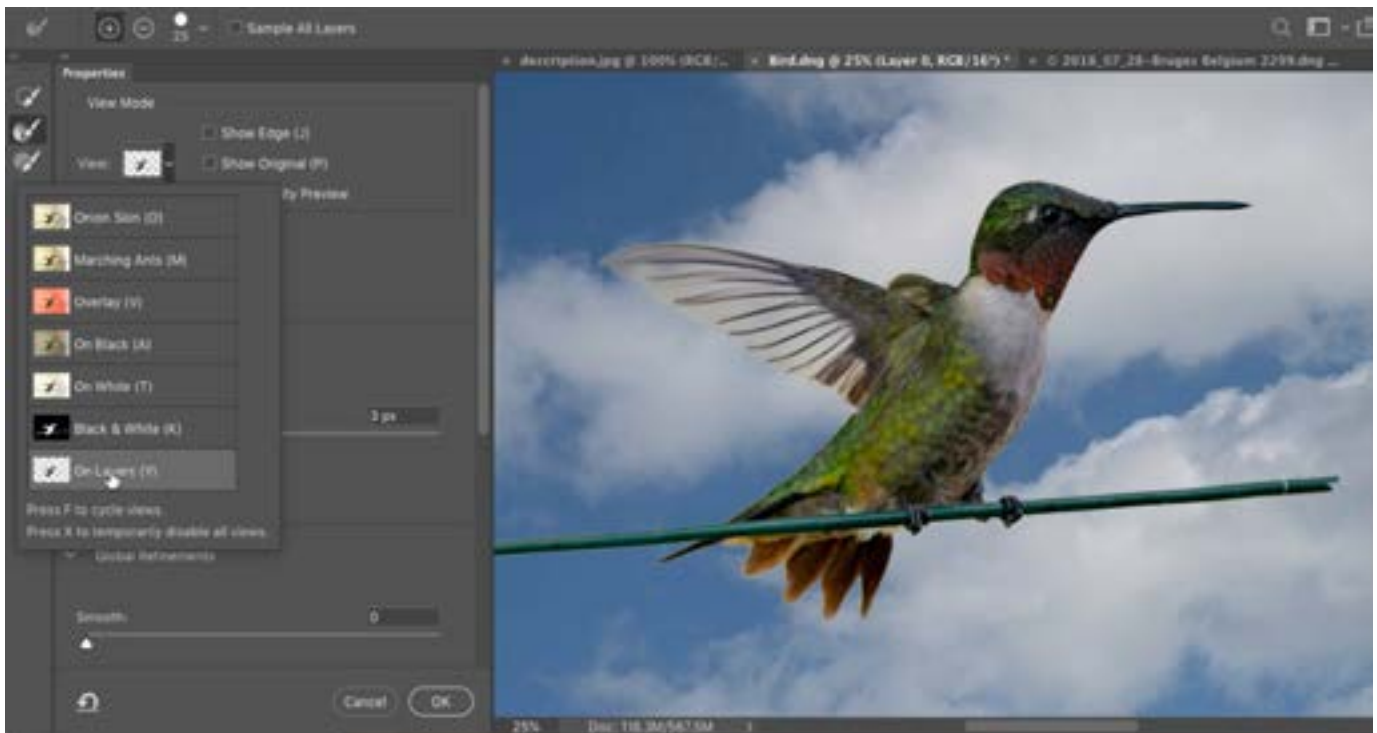


Using the Select & Mask settings, we're painting over part of the wing that should be transparent, giving Photoshop control of the selection in this area.

The Show Edge check box is turned on, which gives us a view of the mask where we can see what areas Photoshop has control of.



After we think we've refined the edges of the selection, we'll change the View menu so that we can see the bird against the underlying layer, which is the sky layer. To do this, we'll click on the View menu and choose the On Layers option. This view can give us a good idea of whether there are any areas that we've missed. If there are, we can further refine those areas before exiting the Select & Mask feature.

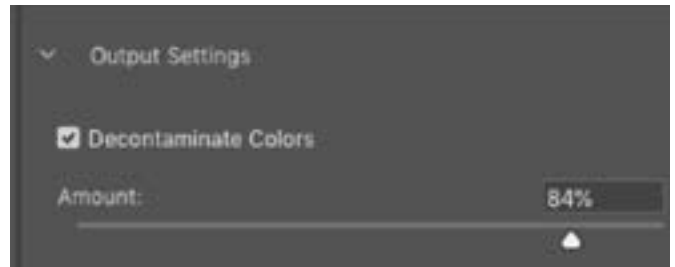


The View menu within the Select & Mask feature is being set to “On Layers,” which gives us a preview that shows the subject against the underlying sky layer.

This view can also give us an idea of whether there is any color contamination, or colors that are left over from the original background. In this case, the bird's wing has a brown cast to it, and that was from the background that we are removing. To fix this, we'll turn on the “Decontaminate Colors” check box, which is located under the Output Settings category. We can also adjust the Amount slider, which controls how much of a color adjustment will be made. We're going to keep this setting pretty high.



ABOVE LEFT: There is some color from the original background left over in the bird's wing. **ABOVE RIGHT:** After turning on the "Decontaminate Colors" check box, that color cast disappeared. **DIRECTLY RIGHT:** The "Decontaminate Colors" check box is located within the Output Settings.



Finally, we're going to set the Output menu to "New Layer with Layer Mask." This will create a copy of the original layer with a layer mask attached to it. When we click OK, we will end up with the original layer (which will have its visibility turned off) AND a copy of that layer with a layer mask that has the selection applied to it.

Blur the background

We now have the bird isolated and placed on the new background, but we want this sky background to be blurry. With the sky layer active, we'll click on the Filter menu and choose Convert for Smart Filters. Therefore, any filters that we apply here will not be permanent. They'll be applied as settings that we can change later.

We'll click on the Filter menu and choose Blur > Gaussian Blur. The Gaussian Blur dialog will appear and we will set the Radius slider very high because we want the background to be very blurry, mimicking the look of an image that was shot with a really low aperture. In this case we set the Radius to 138 and then clicked OK.



The Gaussian Blur filter is being applied to the sky layer, making it look as if the image were photographed using a really low aperture.

The effect looks adequately blurry, but it doesn't quite look realistic. In order to make this background look more realistic, we're going to add a little noise. This is something that would be present had we actually photographed the bird on this background. We'll click on the Filter menu and choose Camera Raw Filter. This will open the image in Camera Raw and we'll click on the FX tab in order



The Grain settings within the Camera Raw filter are being used to incorporate a bit of noise into the sky layer to make it look natural.

to access the Grain settings. Looking at a zoomed-in view, we'll move this Grain Amount slider up just so that we have a little hint of noise. We can also use the size slider to determine how big the individual grains are and we can use the Roughness slider to determine how rough the grains are. Usually, if we have a higher roughness, we'd have the amount setting pretty low. We'll click OK to exit the Camera Raw filter.

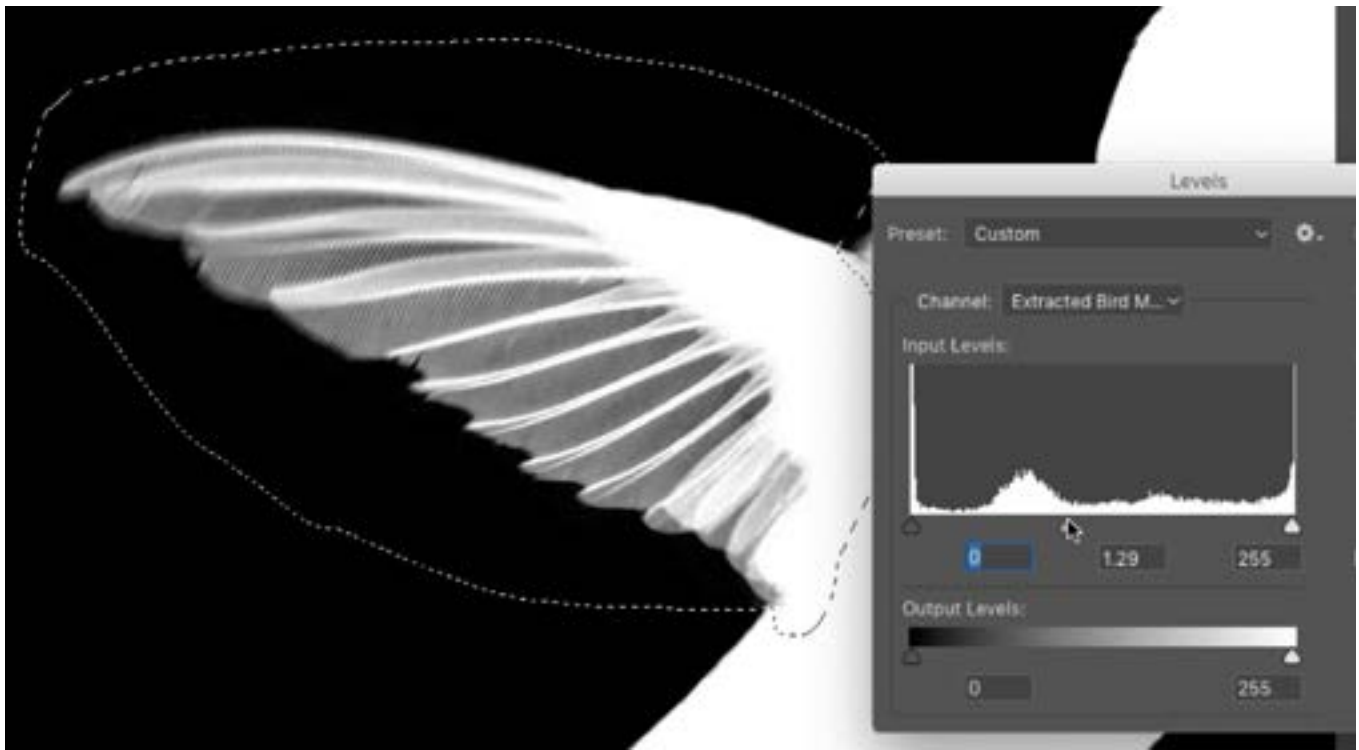
Fine tuning the wing transparency

Now that we have the bird on its new background, we're going to fine-tune the results, focusing on the wing and how transparent it should look. We'll activate the layer that contains the bird with the layer mask. We'll look at the layer mask directly by holding down the Option key (Alt on Win) and clicking on the layer mask thumbnail in the Layers panel. This view will give us an idea of whether there are any areas in the mask that need to be manually touched up. We can see a few small areas where the mask is a little transparent near the bird's feet, so we'll use the Brush Tool and carefully paint with white to fill in that part of the mask.



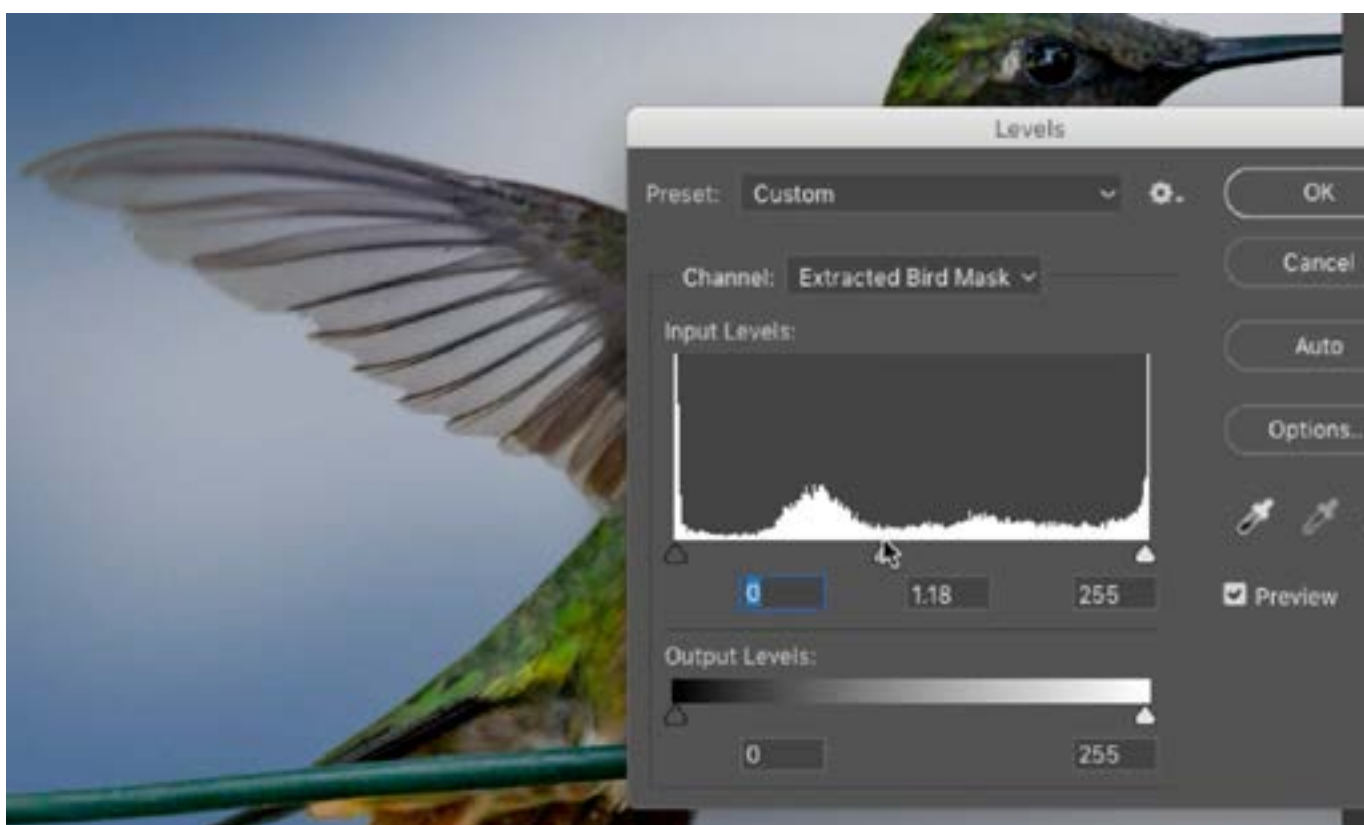
The Grain settings within the Camera Raw filter are being used to incorporate a bit of noise into the sky layer to make it look natural.

Looking at the wing, we want to see how it would look if it were more or less transparent. We'll use the Lasso Tool to make a selection of just the wing. Then we'll click on the Image menu and choose Adjustments > Levels. The Levels dialog will appear and there will be three sliders beneath the Levels chart. The middle slider controls the mid-tones. When we move it, the white areas will stay white and the black areas will stay black. It's the gray area that will become lighter or darker and it's this area that controls the transparent areas of the wing.



Here, we're viewing the layer mask within the main image window. A selection was made around the wing and the Levels adjustment is being applied. We're dragging the center slider back and forth and this is the slider that controls the gray tones. In the layer mask, the gray tones are the areas that determine how transparent the layer is.

Doing this while looking at the black and white view of the mask might help us to see what's going on, but in order to really control what the final result will look like, we want to apply this levels adjustment while viewing the image directly. We'll Option+click on the mask thumbnail again so that we are viewing the image instead of the mask. (We still want to make sure the mask is active, though.) Then, we'll open that Levels adjustment again and move the middle slider back and forth. When we do this, we can visually tell that the wing is becoming more and less transparent. When we have the wing at a transparency level that we like, we'll click OK and de-select the selection.

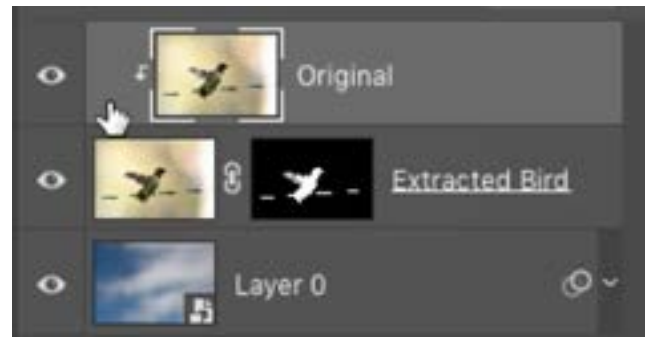


With the layer mask active, we are applying a Levels adjustment and moving the center slider back and forth to control the gray area of the mask. The gray part of the mask is mainly in the wing area, so as we drag the slider, we can see the wing becoming more and less transparent.

Fine-tuning the colors

Now we'll work on fine-tuning the colors. When you use the Decontaminate Colors check box, it's going to shift the colors of anything that was transparent in the picture. If it happens to shift those colors in a way that we don't like, there's a way of bringing some of the original color back.

When we used the Select & Mask feature, it left us with an extra copy of the original layer and this layer has its visibility turned off. We'll take that layer and drag it to the top of the layer stack, ensuring that it's directly above the copy of the layer that has the layer mask attached. Now, there is a way to make this layer only show up where the layer below is visible. With that top layer visible, we'll click on the Layer menu and choose to Create Clipping Mask. That top, original, layer will become indented and there will be a downward-pointing arrow to the left of its thumbnail. This means that it is clipped to the layer beneath it, so it is only visible where there is visible content in the underlying layer.



The top, original, layer is clipped to the underlying layer, which means that it will only be visible in the areas where there is visible content in the underlying layer.

Looking at the bird, it looks the same way that it looked before we turned on the Decontaminate Colors setting. We can now toggle the visibility of this layer to see if there are any areas where we like it better with the original colors. I like the wings with the results of the Decontaminate Colors setting, but I like the feathers near the bottom of the bird better with the original colors. We need to make it so the original layer only shows up in those areas where we want it to. We'll add a layer mask to this layer, but we want to start with a completely black mask so we'll hold down the Option key (Alt on Win) while clicking on the Layer Mask icon at the bottom of the Layers panel. Now, we can paint with white on the mask in order to bring that original color back in the small areas where we preferred it.



A black mask was added to the original layer, hiding the entire thing. Here, we're painting on the mask with white in the areas where we want to bring that original color back.