



Mastering Selections
with

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What is a Selection?

A selection in Photoshop represents the area of an image that is selected versus not selected. But when we make use of selections in Photoshop, sometimes things can be a little confusing. Perhaps you've heard about layer masks or alpha channels for example. These features can be intimidating because they seem so technical and abstract. But the concept behind selections and the various ways they are put to use in Photoshop is actually quite simple.

A selection is simply a stencil that is used to identify specific areas of a photo. When you create a selection in Photoshop it is generally displayed as an animated dashed line around the selected area of the image. This outline is often referred to as the "marching ants" display, because it resembles a line of ants heading to a picnic.

In the background Photoshop actually uses a basic image to track the selection. Areas that are selected appear white, areas that are not selected appear black, and areas that are partially selected appear as a shade of gray.



How Selections Get Used

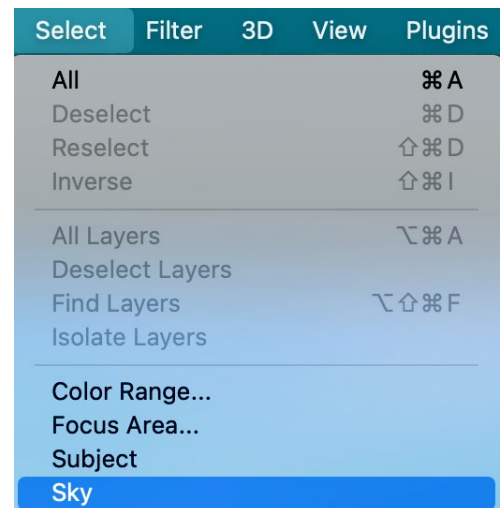
Selections are used as the starting point for targeted adjustments and composite images. For example, you can create a selection of an area of an image and then add an adjustment layer so that only the selected area is affected by the adjustment.

You can also use a selection as the starting point for a composite image that combines two or more images. You would start by creating a selection of the area of an image that you want to have visible, with the non-selected areas representing the area of the image you want to hide. When you then add a layer mask to that image layer, only the area of the image that was selected will remain visible.



Instant Sky Selection

One of the fastest ways to create a selection is with the automatic option for selecting a sky. With an image that features a sky open in Photoshop you can simply choose **Select > Sky** from the menu, and Photoshop will analyze the image and create a selection of the sky automatically. While the selection may not be completely perfect, in most cases it will represent an excellent starting point for a selection of the sky.



Select Subject

Another automated selection option is the Select Subject command. With many of the selection tools in Photoshop you'll find a Select Subject button on the Options bar. You can also access the Select Subject command by choosing Select > Subject from the menu.

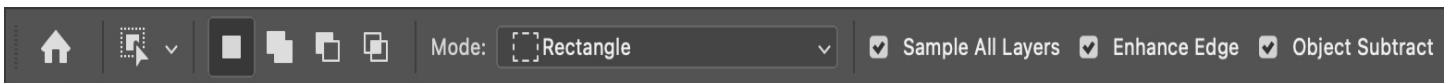
When you use the Select Subject command Photoshop will analyze the image and attempt to create a selection of what it determines to be the key subject of the photo. This is partially based on which areas of the image are in focus, and variations in tone and color between the subject and the background.



While this command won't work well for all images and may not produce a perfect selection of the key subject of a photo, it can provide an excellent starting point for a selection.

Object Selection

A variation on the Select Subject command is the Object Selection tool. With this tool you have the benefit of the image analysis from the Select Subject combined with the ability to specify which specific area of the image you want Photoshop to analyze. In effect, you create a simple selection around the object you want to select, and Photoshop determines where the object is within that area and creates a refined selection for you.



After selecting the Object Selection tool from the toolbar, you can configure the settings for the tool on the Options bar. First select the type of initial selection you want to create from the Mode popup. Choose Rectangle if you want to draw a simple rectangle around the object you want to select, or Lasso if you want to draw a freehand shape around the object.

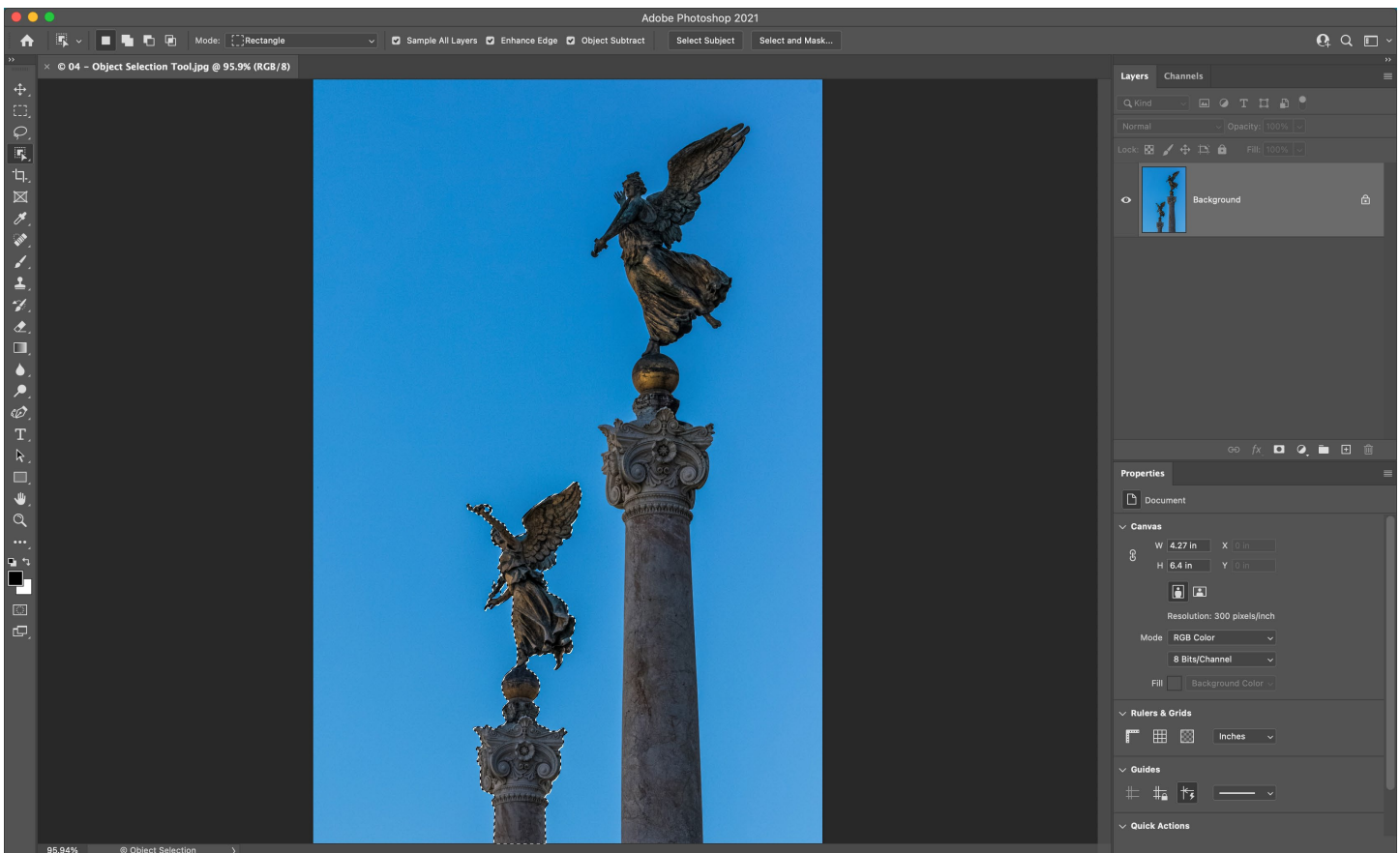
In most cases I recommend turning on the "Sample All Layers" checkbox so that you don't need to worry about which layer is currently active on the Layers panel, and your selection will be created based on the overall appearance of the image. If you need to create a selection based on just a single layer you can turn this checkbox off and select the desired layer on the Layers panel.

I also recommend turning on the Enhance Edge checkbox, which will cause Photoshop to further analyze the initial selection edge and attempt to improve the quality of the selection.

You can then drag from corner-to-corner to define a rectangular initial selection around the object you want to select, or click-and-drag to draw a freehand selection around that object, based on the setting you

selected for Mode. Photoshop will analyze the area you selected and create a refined selection of the object detected within that area.

If the selection includes areas that should not be selected, you can use the “Subtract from Selection” option to improve the selection. Turn on the “Object Subtract” checkbox on the Options bar to ensure the edge of the object will be detected. Then hold the Option key on Macintosh or the Alt key on Windows to access the “Subtract from Selection” option while drawing a selection around the problem area. That area will be further analyzed, and the selection will be refined to remove those portions of the selection that are determined to not include the object you are creating the selection for.

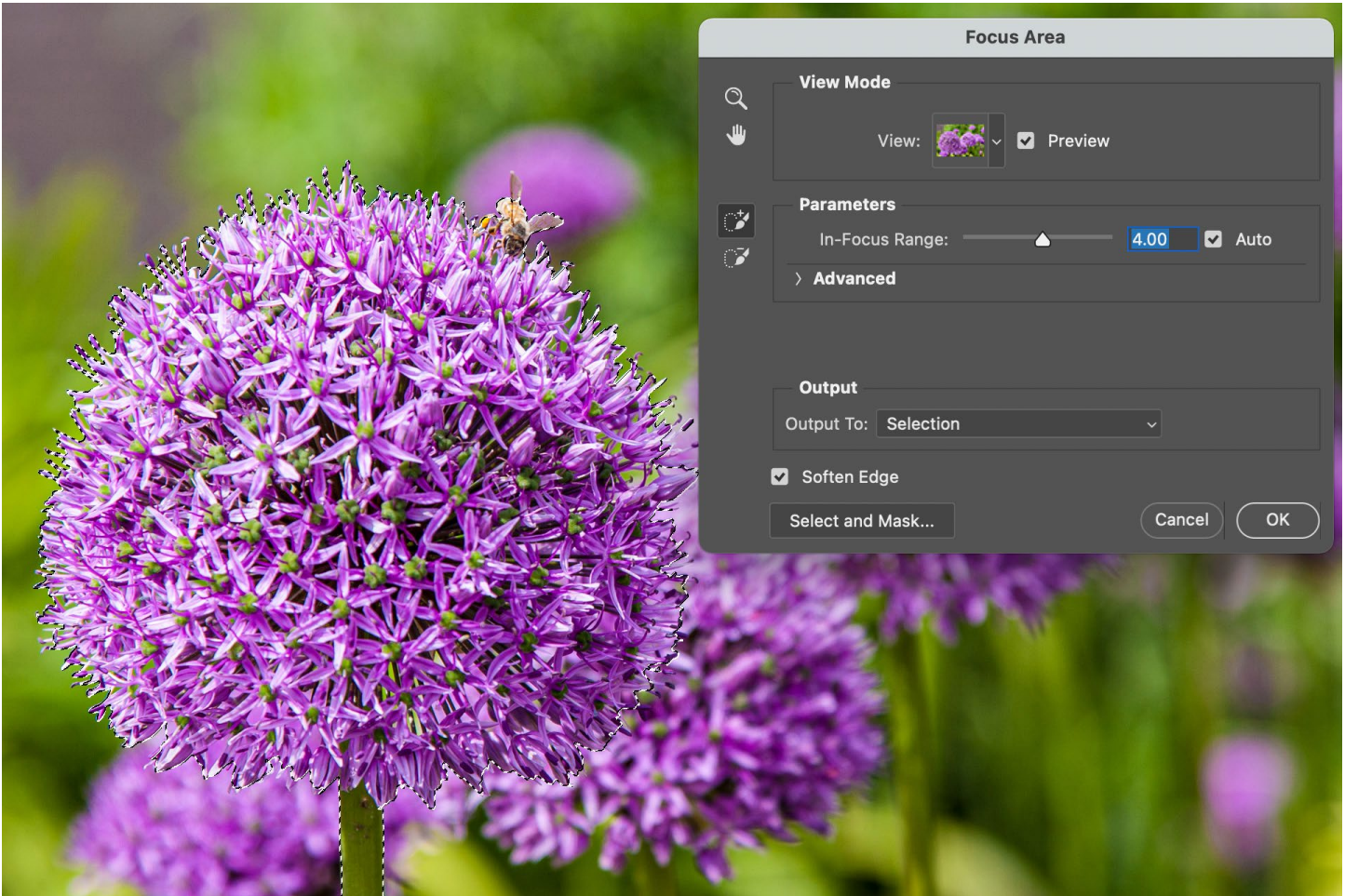


Selecting by Focus

If the subject you want to select is in focus against an out-of-focus background, you can use the Focus Area selection command. To get started, choose **Select > Focus Area** from the menu.

In the Focus Area dialog you can turn off the Auto checkbox and adjust the In-Focus Range slider setting to specify whether you want the selection to reflect a smaller area with a lower setting or a larger area with a higher setting. This effectively adjusts the tolerance for how much an area needs to be in focus to be included in the selection.

In most cases, however, I find that simply leaving the Auto checkbox turned on will provide the best selection based on areas of the image that are in focus. Make sure the “Output To” popup is set to Selection, and click the OK button to create the selection based on focus within the image.



Color Range Basics

When the area you want to select differs from the rest of the image based on color values, you can likely use the Color Range command to create an excellent selection. To get started choose **Select > Color Range** from the menu.

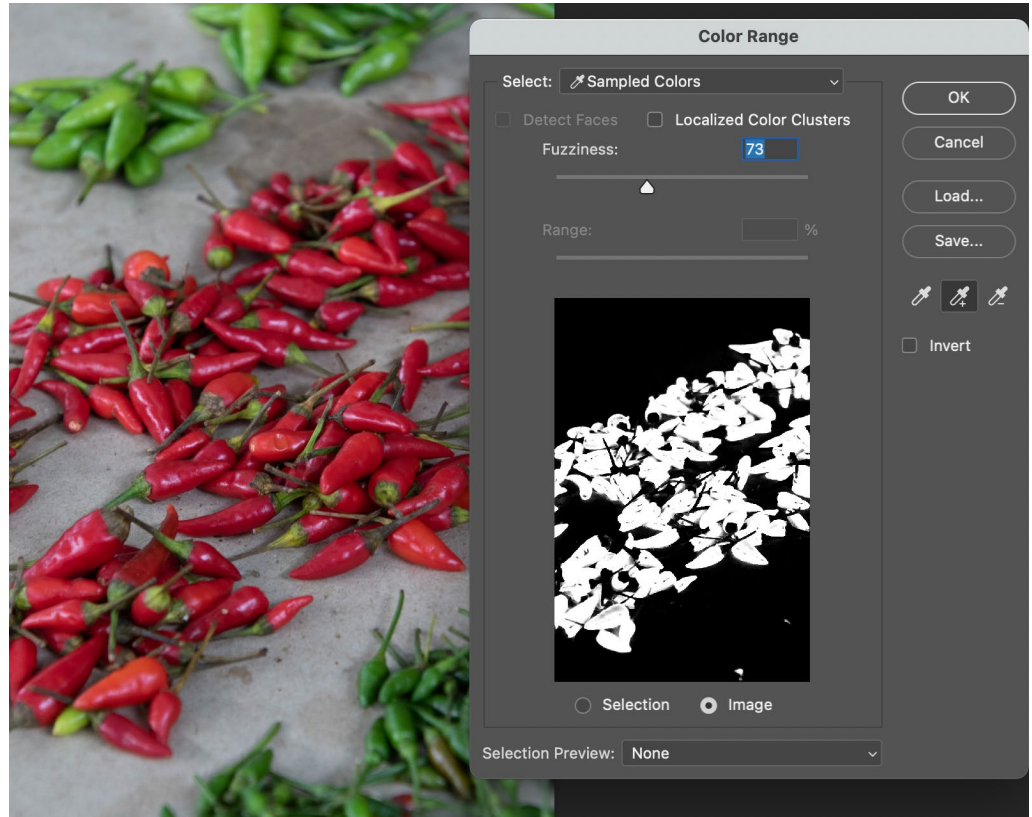
Make sure “Sampled Colors” is selected from the Select popup at the top of the Color Range dialog. I also recommend turning off the Localized Color Clusters checkbox at least initially, though this option will be addressed in more detail in the next section. It is also helpful to set the Selection Preview popup at the bottom of the Color Range dialog to “None” initially so you can see the actual color values in the full image.

I also recommend setting the Fuzziness slider to a relatively low value of around 25 to get started. You can refine this setting as needed after creating the initial selection, as I’ll explain shortly.

Select the standard eyedropper (not the one with the plus or minus symbol) below the set of buttons toward the top-right of the Color Range dialog. Then click within the image in an area that represents the color you want to create a selection based on. The preview within the Color Range dialog will update to reflect the initial selection, with white representing areas that are selected and black representing areas that are not selected.

You can then select the “Add” eyedropper (the one with the plus symbol) and click or drag within the image to sample additional color values to include in the range of colors you want to select. Use the “Subtract” eyedropper (the one with the minus symbol) if you need to remove colors from the range to be selected.

As you get closer to establishing a good selection based on the small preview within the Color Range dialog it can be helpful to use one of the preview options to evaluate the selection within the image itself. The Grayscale option provides you with a full-size preview that matches the preview shown within the Color Range dialog, and can be helpful for determining whether you have all intended areas included in the selection. The Black Matte and White Matte options show a black or white overlay on non-selected areas, and the Quick Mask option displays a translucent color overlay on non-selected areas.



To further refine the overall selection you can adjust the value for Fuzziness. When you increase the value for Fuzziness two changes will be applied to the selection. First, there will be an increase in the size of the transition between selected versus non-selected areas of the photo. Second, the selection will be expanded into a larger range of color values, but with an emphasis on the colors that are closest in value to those included in the color range you're selecting.

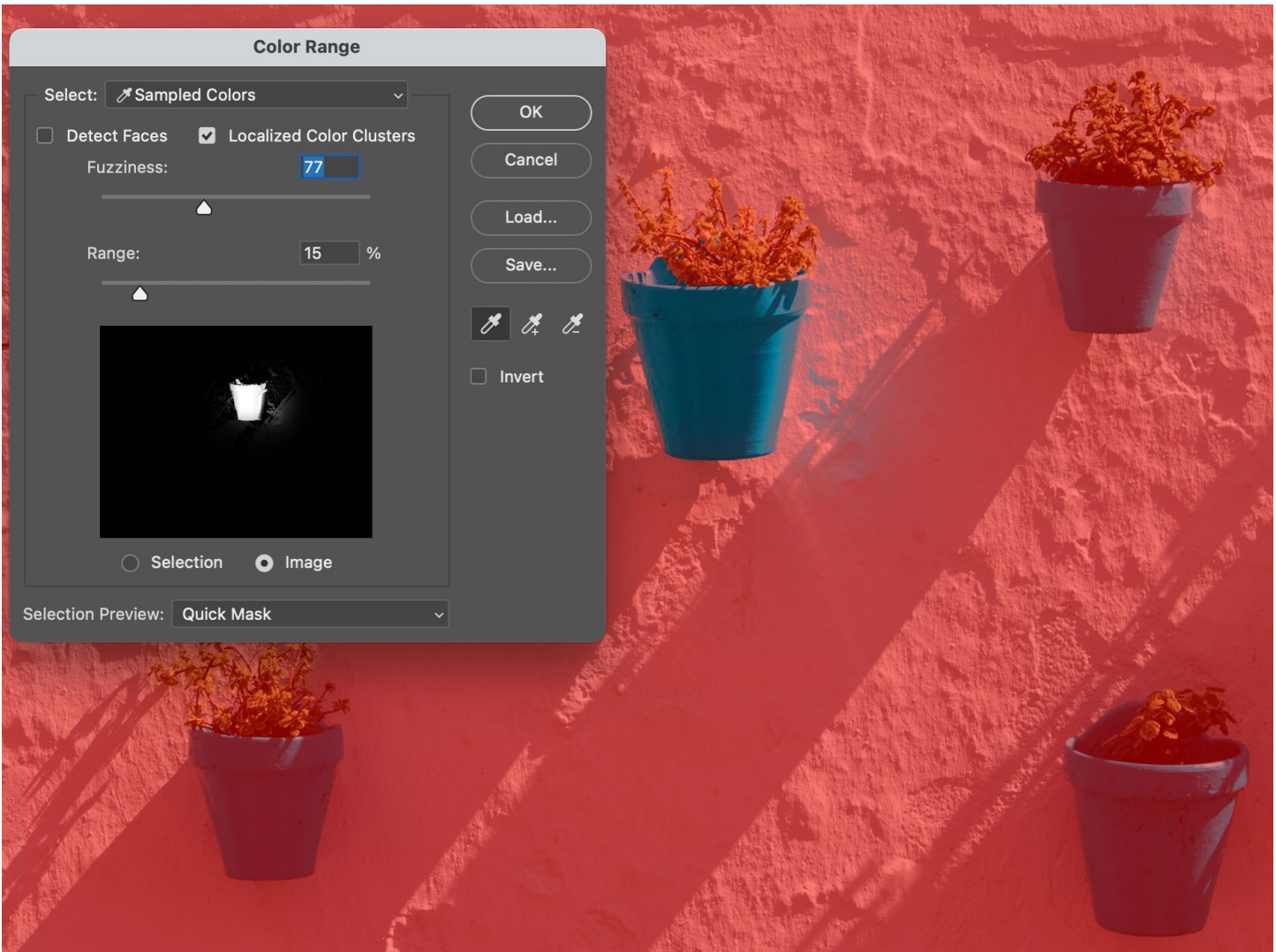
Once you are happy with the overall selection preview you can click the OK button to create the actual selection in your photo.

Focusing the Color Range

In some cases you may want to focus a color range selection to only include a specific area of an image, in addition to being based on specific color values. For example, if you had several objects of the same color in a photo, you may want to focus the selection on just one of those objects.

To get started create an initial selection as outlined above, but be sure to only sample colors within the area of the image that you actually want selected. For example, if you only want to select the middle of three objects that are the same color, be sure to sample colors only from that middle object.

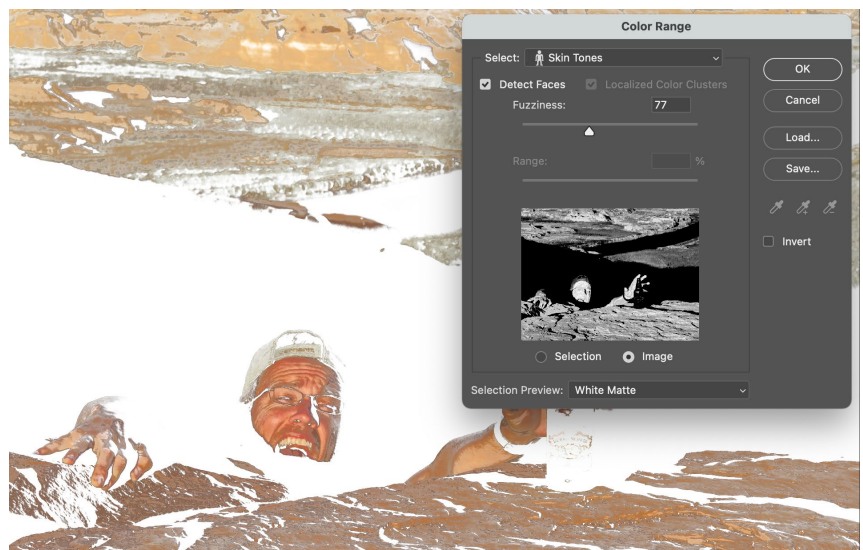
After otherwise refining the settings for your selection, turn on the "Localized Color Clusters" checkbox. Then use the Range slider to focus your selection on the object where you sampled the color values. A lower value will provide a smaller selection area, and a larger value will provide a larger selection area.



Selecting Skin Tones

Another option for the Color Range command is to create a selection based on skin tones. This option only really works when the skin tones in question stand out well from the rest of the image.

To create a selection based on skin tones, choose "Skin Tones" from the Select popup at the top of the Color Range dialog. You can also turn on the "Detect Faces" checkbox to refine the selection based on faces that appear within the photo. Adjust the Fuzziness slider to refine the selection, and click OK to create the selection.



Selecting by Tonal Values

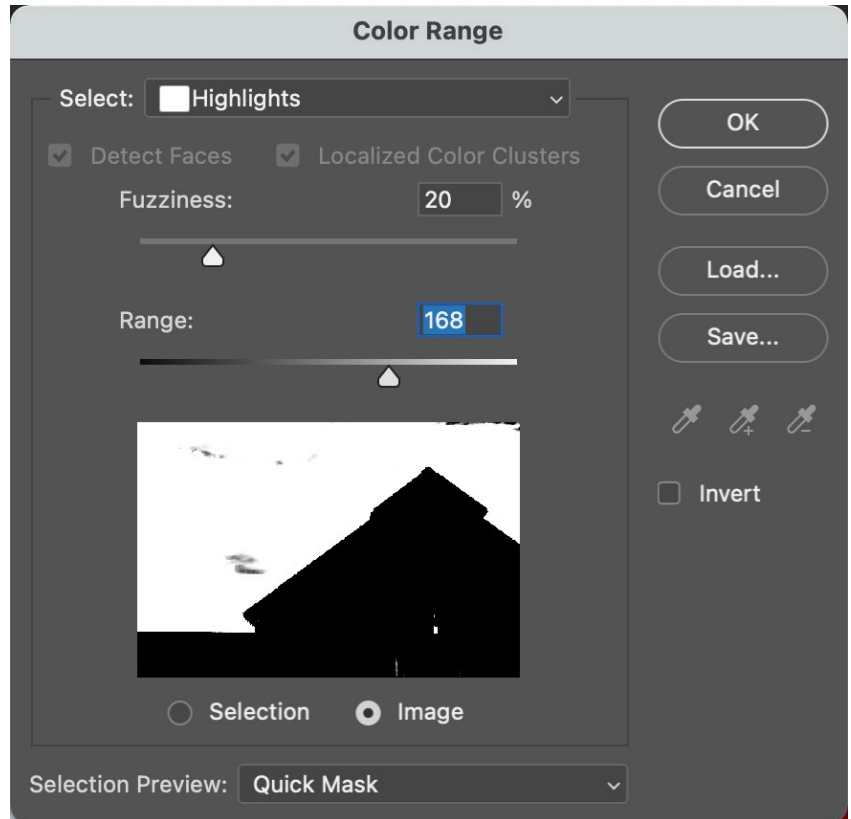
While the Color Range command is obviously focused on creating selections based on color values in an image, it can also be used to create selections based on tonal values.

The first step is to choose Highlights, Midtones, or Shadows from the Select popup in the Color Range dialog. You can then use the Range control to specify the tonal range you want to include in your selection.

With the Highlights or Shadows option the Range slider is used to determine the tonal value that will divide the image between selected versus not selected areas. For the Highlights option only tonal values brighter than the setting established with the Range slider will be included in the selection, and for the Shadows option only tonal values darker than the Range value will be selected.

When you use the Midtones option the Range slider will have two handles. Only tonal values that fall between the values for those two slider handles will be included in the selection.

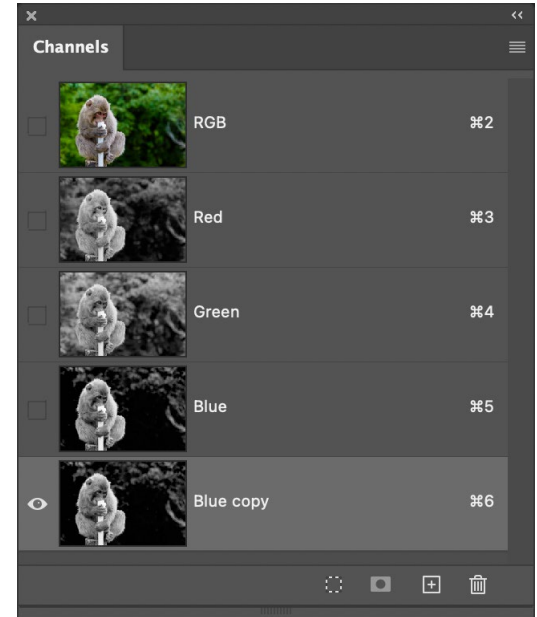
As with other selection options with Color Range, you can use the Fuzziness slider to further refine your selection, then click the OK button to create the actual selection.



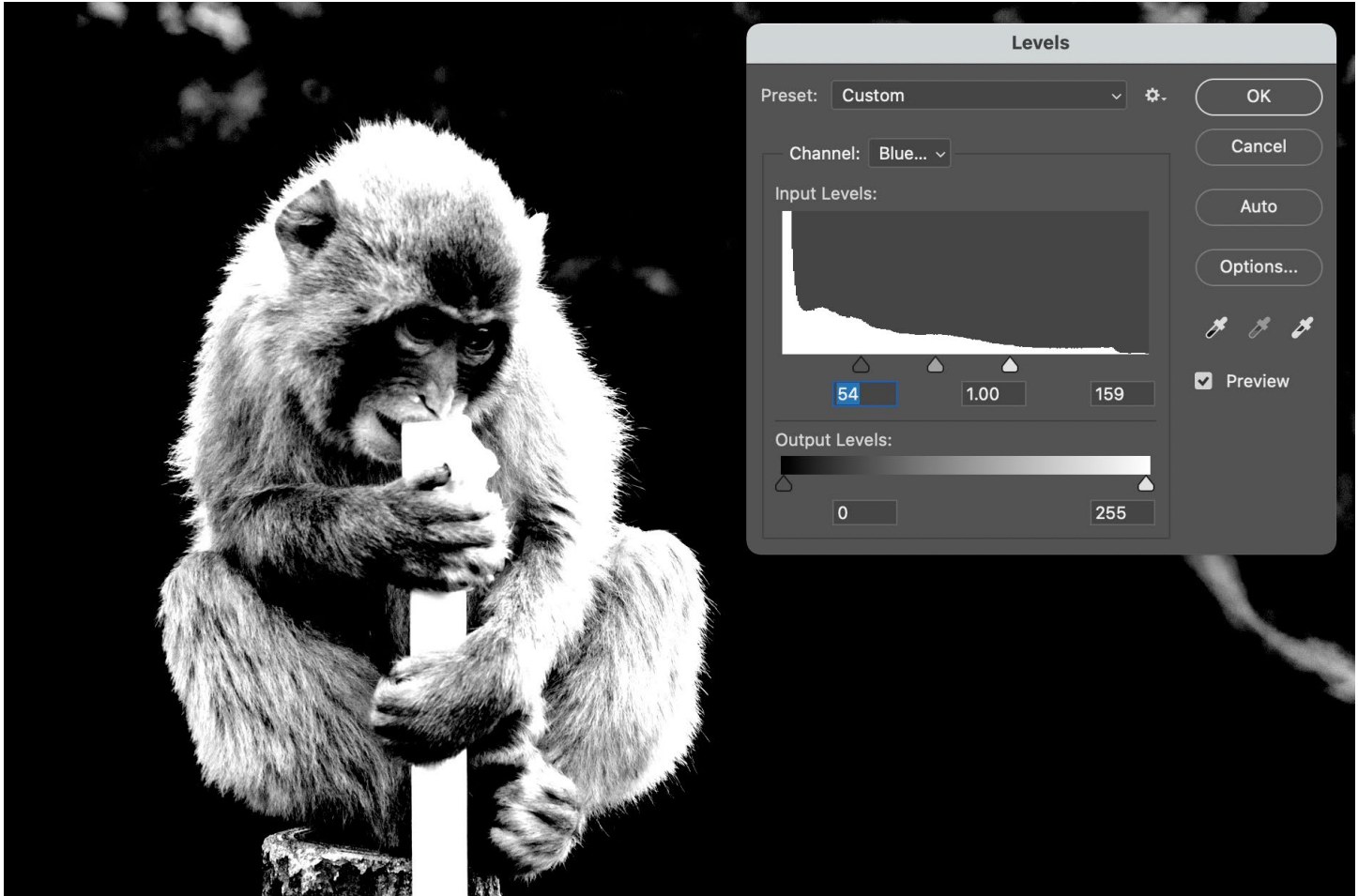
Channel-Based Selections

When there is some degree of color separation between the areas you want to select versus not select, and especially when there otherwise isn't good contrast that defines the area you want to select, it can be helpful to create a selection based on one of the color channels for the image.

If the Channels panel isn't currently displayed you can choose Window > Channels from the menu to bring it up. Then click on the thumbnail for each of the color channels (generally Red, Green, and Blue) in turn to preview the channels. Choose which of the channels represents the best starting point for a selection of the intended area of the image. Then duplicate that channel by dragging the thumbnail for the channel to the "Create New Channel" button (the square with a plus symbol) at the bottom of the Channels panel.



Next, enhance contrast for the channel to improve the initial basis of the selection. You can use the Levels adjustment, for example, to enhance contrast. To do so, choose Image > Adjustments > Levels from the menu. Then drag the black point and white point sliders directly below the histogram inward to enhance contrast and create better separation for the area you want to select.



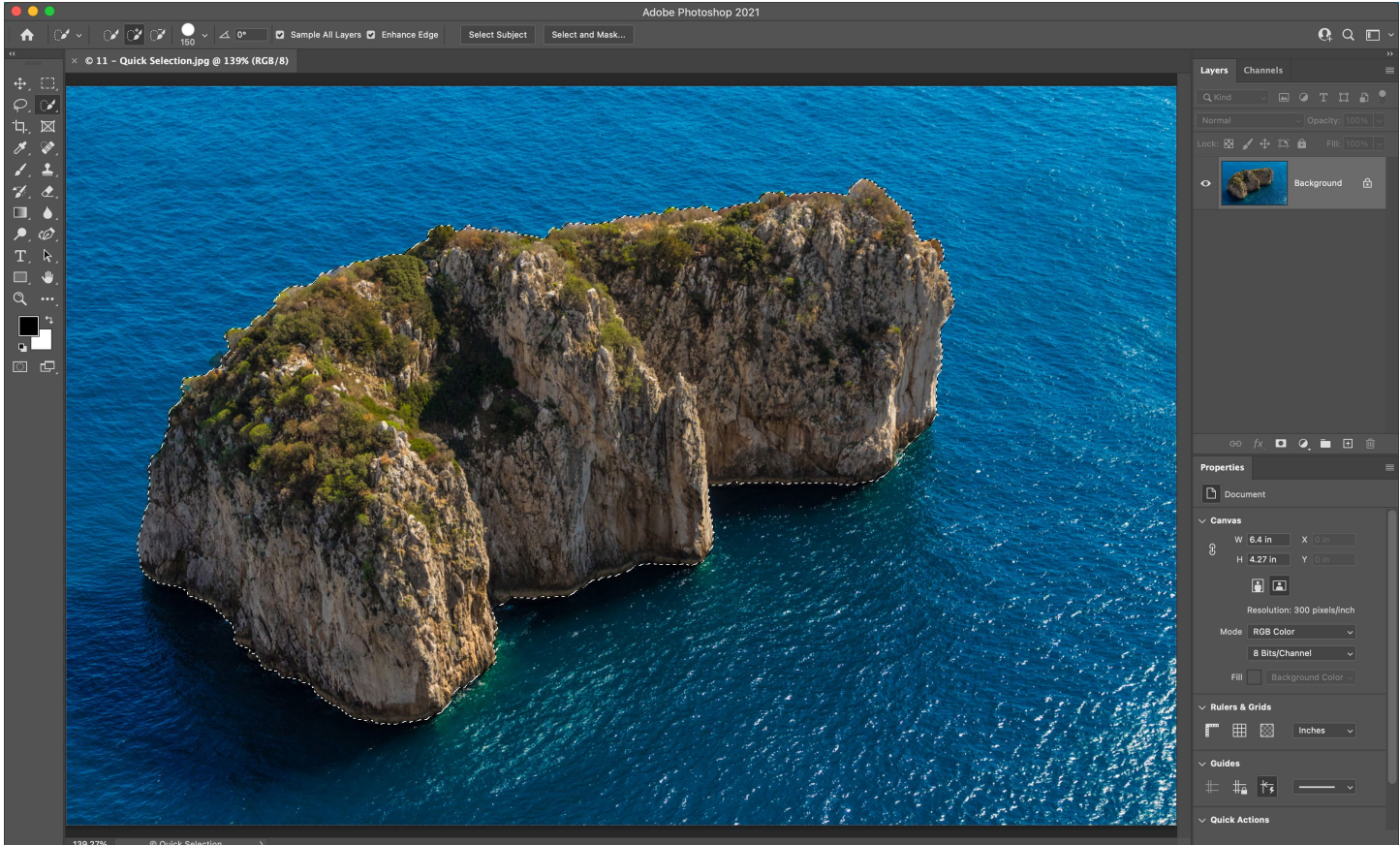
You can then use a dodging and burning technique to further improve the selection. Choose the Brush tool from the toolbar, and set the Mode popup on the Options bar to Overlay. Press “D” on the keyboard to set the colors to the default values of black and white. As needed, you can press “X” to exchange the foreground and background colors.

Then paint with black in areas of the image that exhibit white when they should be black, and paint with white in areas that include black but should be white. You may need to paint over areas more than once to completely shift the area to black or white.

You can also use a selection to speed up the process of improving the selection as you’re defining it from a duplicate channel. For example, you could choose the Lasso tool from the toolbar, and then trace around all of the areas you need to fill with black (not selected) or white (selected). After creating this selection, choose Edit > Fill from the menu to bring up the Fill dialog. Select either White or Black from the Contents popup as needed, and click OK to fill the selected area.

When you have cleaned up the duplicate channel so that all areas you want selected are white and all areas you don’t want selected are black, you’re ready to load an actual selection based on this duplicate channel. To do so, simply click the “Load Selection from Channel” button, which is the dashed circle icon at the bottom of the Channels panel.

You can then click the RGB thumbnail on the Channels panel to return to your full color image.



The Quick Selection Tool

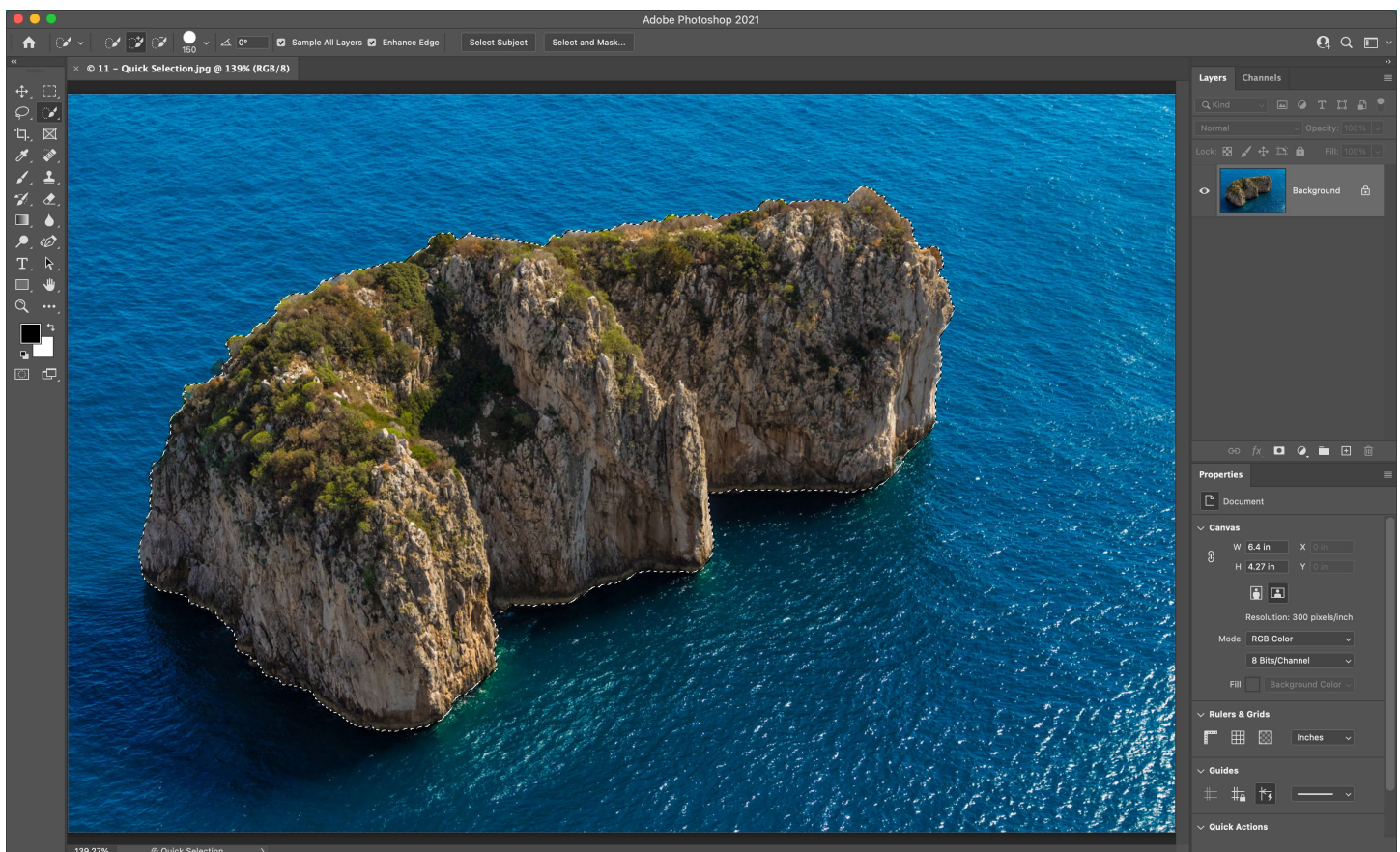
The selection techniques covered so far feature some degree of automation in terms of creating the selection. In many cases those techniques will be all you need to create great initial selections. Sometimes, however, you'll need to take a more "manual" approach. In those situations, the Quick Selection tool is my first choice among the various selection tools found on the toolbar.

The Quick Selection tool is a sampling tool, which means you'll sample areas of the image that you want to select and Photoshop will attempt to create a selection based on that sampling.

After choosing the Quick Selection tool from the toolbar make sure the "Sample All Layers" and "Enhance Edge" checkboxes are turned on, as explained above regarding the Object Selection tool. Then move your mouse over the image and adjust the size of the brush using the left and right square bracket keys ("[" and "]"). The left square bracket will reduce the size of the brush and the right square bracket will increase the size of the brush. You want a brush size that is small enough to fit within the area you want to select but big enough that you will be able to sample the area to be selected without too much effort.

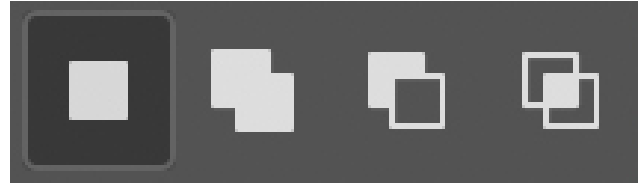
Then simply paint over the area you want to select. As you paint you'll notice that the selection edge "jumps" outward from the area you're painting as Photoshop attempts to determine which areas of the image you want to have selected versus not selected, based on where you paint within the image.

The Quick Selection tool automatically switches to the "Add to Selection" option, so you can simply continue painting as needed in additional areas of the photo to expand the selection.



Add, Subtract, and Intersect

Whenever you're creating or modifying a selection using the various tools and techniques outlined above, you're more than likely going to need to modify the initial selection to make it more accurate. That is where the add, subtract, and multiply options come into play.



For most of the selection tools the default option is to create a new selection, so that if you have an active selection but then click or drag with the tool on the image you'll be creating a new selection that replaces the existing selection.

However, on the Options bar for the selection tools you'll find a set of four buttons (only three for the Quick Selection tool). The first button is the "Create New Selection" option noted above.

The second button is the "Add to Selection" button. You can choose this option or hold the Shift key on the keyboard so that you can click or drag (depending on the selection tool you're using) to define additional areas you want to add to the existing selection.

The third button is the "Subtract from Selection" button. Choose this option or hold the Alt key on Windows or the Option key on Macintosh so you can subtract areas from the selection.

The fourth button, which is not available for the Quick Selection tool, is the "Intersect with Selection" button. You can click the button to activate this setting or hold both the Shift key and the Alt key on Windows or the Option key on Macintosh. The intersect option can seem a little tricky at first, but I suggest thinking of it as an option to deselect all areas of the existing selection except the areas within the selection you draw with the intersect option active.

The add, subtract, and intersect options are most helpful when you need to modify an existing selection. In most cases I find it best to work with the Lasso tool for this type of selection modification. With the Lasso tool you simply trace within the image along the edge of the area you want to select, add to an existing selection, subtract from an existing selection, or intersect with an existing selection.

Inverting a Selection

In many cases you may find that it is much easier to create a selection of the area you don't actually want to select rather than the area you do want to select. For example, the Select > Sky command on the menu makes quick work of selecting a sky. But what if you wanted to select the foreground rather than the sky? You can simply invert the selection.

After creating a selection you can choose Select > Inverse from the menu, and the active selection will be inverted to represent the opposite area of the image.

Transforming a Selection

You may be familiar with the various transform commands that enable you to resize or warp an image. The same basic capability is available for selections as well. For example, you may need to select an area that is nearly round, but slightly distorted. For this type of situation, the Elliptical Marquee tool can be very helpful,

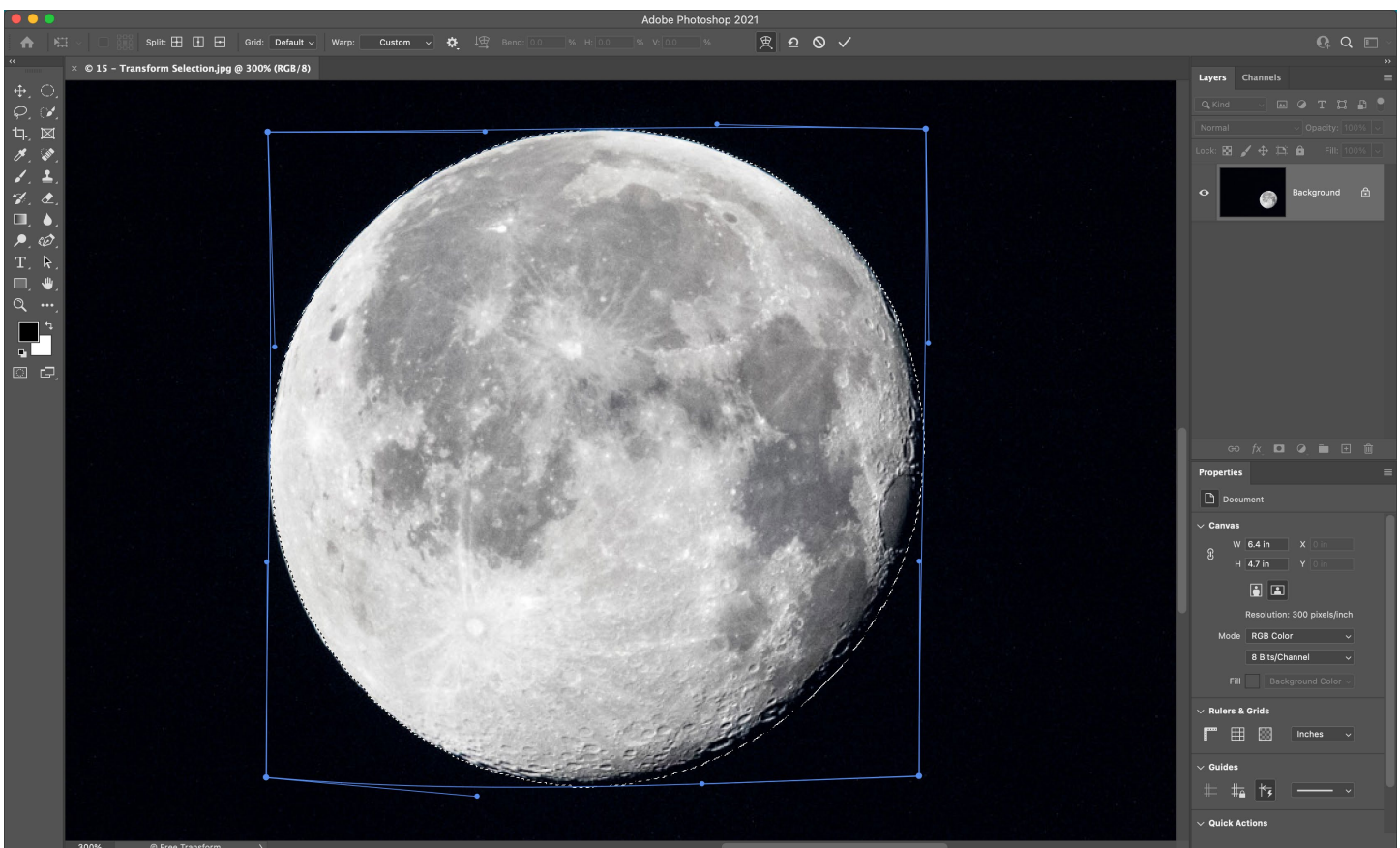
but won't provide a perfect selection. The Transform Selection command provides a solution.

Start with a selection that is as close to matching the intended area of the image as possible. Then choose **Select > Transform Selection** from the menu, and a bounding box with handles will appear around the selection. You can drag any of the edges or handles of this bounding box to resize the selection, holding the **Shift** key on the keyboard if you don't want to maintain the aspect ratio of the selection.

Even better, you can enable the Warp option to really fine-tune the overall shape of the selection. The Warp button on the Options bar has an icon of a square divided into four sections, warped so that the horizontal lines are curved. Click that button to enable the Warp feature.

When you enable the Warp feature additional handles will appear on the bounding box for your selection, but I don't recommend using those to adjust the selection shape. Instead, point your mouse directly at the selection edge in a position where it doesn't align with the area you want selected. Then click and drag your mouse pointer to the edge of the area you want selected. While you're dragging the selection edge won't appear to move, but when you release the mouse the update will be reflected.

With this approach you can refine the overall shape of the selection so that it perfectly aligns with the intended area of the image. When you're finished transforming the selection press **Enter/Return** on the keyboard or click the checkmark icon on the Options bar to apply the change.



A First Step

Selections are the first step in making use of some of the most powerful capabilities of Photoshop. With a selection you can apply a targeted adjustment by adding an adjustment layer, or create a composite image by adding a layer mask to an image layer with a selection active. It can therefore be very helpful to understand selections and how to create and modify them so you can exercise greater control over your images in Photoshop.