Chapter 1

Getting Creative When You Have No Idea What You're Doing

When you are given the choice between gooshing your fingers in Play-doh for a few hours or helping to design the integration controls for an automated forklift…quick, which one would you choose?

There isn't a right or wrong answer here, but we were kinda hoping that you're the "gooshing" type. Why? Because this is a book on art and not forklifts. But more importantly, you can actually learn a lot from topographically rearranging child's modeling clay. Some things you just pick up by experimenting. And if you're new to Photoshop, the program may seem as complicated as the innards of a forklift, but we are going to make this complex image editing program (Photoshop) fun—yes, *fun* for you to goof around with. In this chapter, we have a handsome, goofy picture on several layers just waiting for you to alter, and you will assuredly learn some Photoshop truths through your (guided) tour.

So come along, it's only the beginning of the book, and you can honestly tell your boss you're researching the program while you're having a ball!

Meet Bouton's Idea of a Picnic

If you open picnic.psd from the Examples/Chap01 folder of the Companion CD, you will see a sight, *fer shur*. We have an alien sporting a shameless plug for a software company on its T-shirt, a duck swimming in a watch, a rock pile with a face looking on, some fruit, a gnome with a mushroom (at least he's bringing something to the picnic), and naturally, a pest—in the form of a hovering insect. Every picnic *has* to have insects.

The first thing we ought to do, therefore, is not to *kill* the insect, but instead to stash its component parts away in a layer aet.

What's a layer set? Read on!

Introducing Layers and Layer Sets

To understand layer sets, you first need to understand Photoshop layers. Photoshop layers can store non-transparent design or photographic elements. Those elements are held in place by transparency all around, which means that you can see the non-transparent contents of a layer underneath. For example, if you open picnic.psd from the Examples/Chap01 folder on the Companion CD (you're going to have to eventually), and then press F7 to display the Layers palette, you will see that there are about a quatrillion layers in the image. Why, oh why did author Bouton do this? Simple: So you can experiment with one item in the image without disturbing the others.

Now, the process does become a little confusing when you have odd ends and pieces of objects all on separate layers, so the most prudent thing to do when working on any multi-layered image is to keep components of one element in one place. A layer set helps you solve that problem by keeping all the crumbs on one cookie.

In the steps that follow, you will put the bumblebee, along with its left and right wing, in a layer set you create…

Creating and Using a Layer Set

1. With the picnic.psd file open in Photoshop, scroll up the Layers list until you can see Right wing, Bumble, and Left wing titles.
2. On the Layers palette, click the flyout menu button (circled in Figure 1.1) and then choose New Layer Set from the menu. A dialog box appears—type **Bumble** for the name and then click OK.

Figure 1.1 Create a new layer set for keeping elements together on the Layers palette.

3. A tiny folder icon appears on the Layers palette list with the title Bumble. Drag the titles for Bumble, Left wing, and Right wing from the palette to the folder icon. Although the bumblebee is still visible in the image window, you can now delete it, move it up or down in layer order, or make all three layers invisible with a single click. (Depending on the order in which you placed the three layers in the layer set, the wings may now appear behind the bee. But don't worry about that.) Pretty powerful stuff. Keep Photoshop and this image open; we've yet to begin messing it up.

Admittedly, organizing insect parts is not an auspicious opening to a playful chapter. We'll correct this in the following section where you get a true feel for the power of layers.

Changing Layers and Moving Objects

Before continuing, choose the Move tool (on the upper right of the toolbox; shaped like an arrow with a street intersection symbol) and make certain that the Auto Select Layer checkbox on the Options bar (upper left of your screen) is unchecked. You can check it later, after you've read about preferences in Chapter 2, "Optimizing and Customizing Photoshop Preferences." Now, as you can see, there are a lot of things wrong with this picture: the fruit has no color, the gnome looks happy even though he's a gnome—and *the tree has a faucet tap on it*! The gnome might benefit from some professional help, but you can move the tap to its rightful place on the keg (we aren't sure what's in the keg; we assume it's apple cider) in about two editing moves.

Here's how:

Tapping a Keg

1. Right-click (Macintosh: hold Ctrl and click) over the tap on the tree. The context menu pops up and tells you that there are three layers directly under your cursor. Choose the tap choice, and the Layers palette will highlight the tap title on the list to indicate that this is the layer you are editing (see Figure 1.2).

Note

For those of you who feel a tad rebellious and want to maneuver to different layers *without* selecting the Move tool and turning on the Auto Select Layer option as we suggested, try this: Ctrl(⌘)+click on the tap layer to jump instantly to that layer. Additionally, a Ctrl(⌘)+click (with the Move tool active) temporarily toggles the Auto Select feature on.

2. With one deft move of the cursor, drag the tap layer to the keg layer. One problem here: the duck is going to get its watch wet now that the tap is positioned correctly. This is no problem if you understand how to link layers and move them together. And besides, who invited the duck, anyhow?
3. Click on the QT shadow layer, and then click in the column to the left of the QuackTime layer title, as shown in Figure 1.3. You've connected the layers now; not in the same way that you collected the insect parts, but linking is good for moving things in tandem.

Figure 1.2 Right-clicking (Macintosh: hold Ctrl and click) over a point on a multi-layer image (when Auto Select Layer is turned off) takes your cursor to the layer that you choose on the context menu.

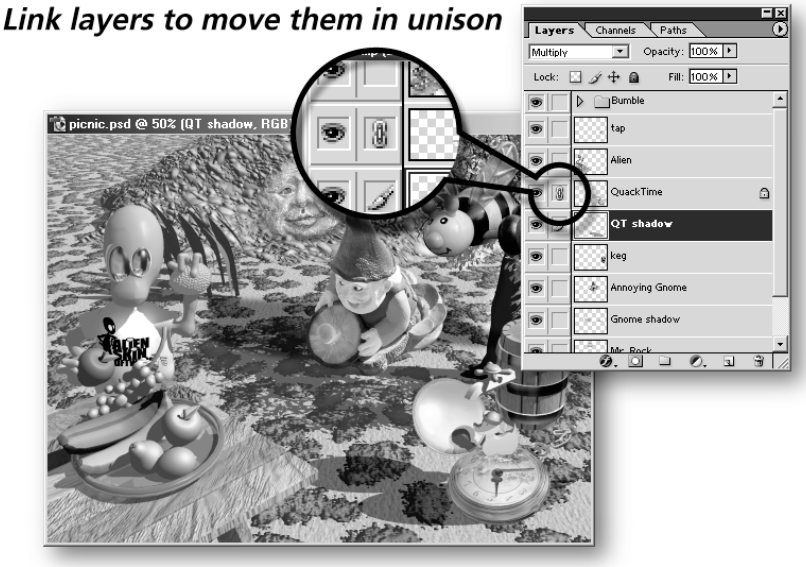

Figure 1.3 Linking layers is easy. Choose a "base" layer and then click the link icon on layers above or below the base layer.

4. Drag the duck-in-the-watch and its shadow to the left, out of wetness' way and into safety. Keep Photoshop open and save this image to your hard disk to speed up the action.

The next weird item on our "let's muck it up" list is the face in the stone pile. Why isn't he smiling? Wanna make him smile?

Using the Liquify Command

If you skipped past version 6 to arrive directly at Photoshop 7, or if you're new to the program, the Liquify command (which has moved from the Image menu to the Filter menu) is very much like KPT Goo (part of Corel KPT6) and the VALIS Group's Flo', except for two things.

First, Liquify produces more refined results than the other two products—with a lot of practice, you can actually make Aunt Tilly look slimmer or do a proboscis reduction on your friend, thus saving your relatives and friends thousands of dollars in plastic surgery. Liquify turns the target image into soft, pliable pixels—this author's favorite. Of course, the most predictable use for the command is to do unflattering things to pictures of late-paying clients.

Second, and this is unfortunate, Liquify cannot produce a movie of distortions like Goo and Flo' do. But hey, we're talking Photoshop and not Adobe Premiere, which is the program in the movie game. In the following exercise, you'll do something almost that amazing by transforming a grumpy rock into a smiling one for the occasion of the picnic.

Using the Liquify Command

1. Right-click (Macintosh: hold Ctrl and click) over the rock face to display the context menu, and then choose the entry "Mr. Rock." (Warning: The author does all sorts of cloying, Mr. Rogersish naming conventions in this chapter.) The layer with the rock face is the current editing layer.
2. Choose Liquify from the Filter main menu. As you can see in Figure 1.4, only the rock is subject to editing in the Liquify box. This figure shows some important numbers we'll reference in the following steps, so mark this place so that you can return to it easily.
3. Click the Zoom tool in the left tools column of the interface. Zoom into the rock face until it's approximately the size shown in Figure 1.4. On the right side of the interface, choose a 30-pixel brush tip (circled in Figure 1.4), and change Reconstruction to Smooth. This choice is more processor-intensive than the others; but hey, we all have P4s and G4s these days so brute force comes easy in Photoshop, right?

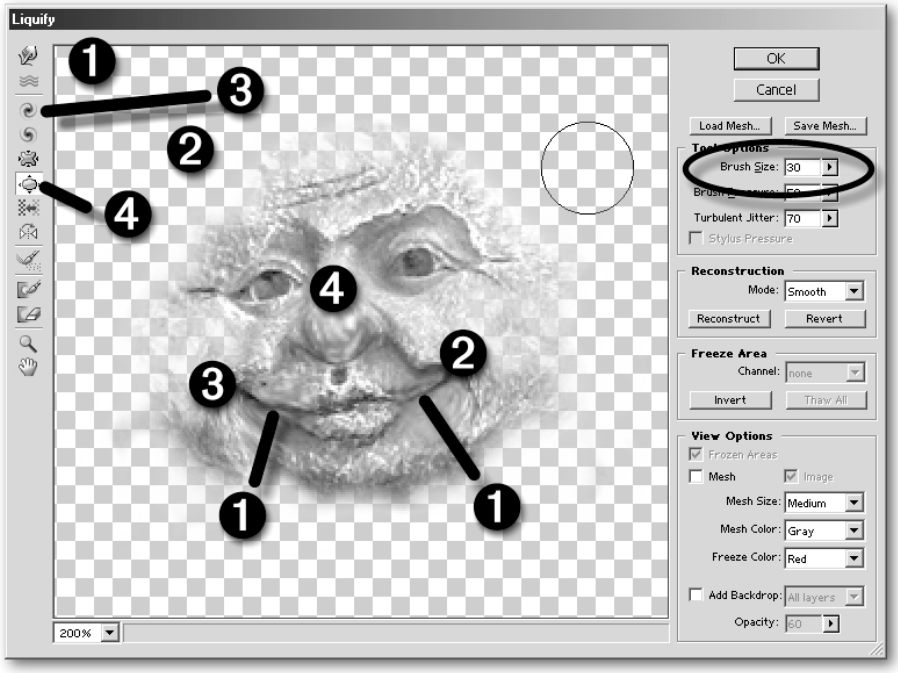

Figure 1.4 There are tons of editing controls in the Liquify dialog box. This section runs through the most striking and popular commands.

4. Click the top icon in the left column in the box. This is the Warp tool; and if you're new to the Liquify command, you might want to turn on tool tips from the Preferences menus after you close this dialog box so that you can work more and hunt less.
5. Pull on the rock's lips: first pull the left side farther to the left, and then pull the right side farther to the right (see item 1 in Figure 1.4).
6. Now, a smile, especially on a rock, should be a subtle thing—the corners of the lips turn up, like what Clint Eastwood does instead of actually smiling. Choose the Twirl counterclockwise tool (item 2), and then rub the tool over the right corner of Mr. Rock's lips. He smirks now—but you still need to even out the smile.
7. Click the Twirl clockwise tool and repeat Step 6, this time on the left edge of Mr. Rock's lips (item 3). Oh, boy, he's happy now!
8. Finally (optional): Click the Bloat tool (item 4) and click Mr. Rock's nose a few times. No, this doesn't directly contribute to the tutorial—it just looks funny. Click OK to apply the changes to Mr. Rock, close the Liquify command, and get back to the picnic.

Tip

If you want to see quickly how far you've come using the Liquify tool, you can press Ctrl+Z a few times to undo your changes.

9. Keep Photoshop open. We have to pretend now that the section coming up is a reference section.

In the world of Photoshop, there's something called *modes*. It will not make a lot of sense right now if you're just beginning, but Photoshop can eventually (and potentially) blend the visual information (the image area) on one layer with the underlying layer(s). The way in which the data (image area) is blended is called a *mode*. There are 22 layer modes (modes into which you subject an entire layer's contents) and 23 painting modes (all the layer modes plus the Behind mode, which enables you to (apparently) paint on the back of a layer, thus preserving the image data on the front of the layer.

The following section introduces you to the different modes so that you can make intelligent choices about which mode to use in your own work. You'll also understand, after reading the next section, why we ask you to choose certain modes for stuff in the picnic image.

Photoshop Modes: A Dry Definition of Each Blending Mode

Well, I'm lying—the explanations here will be terse but not dry. I don't write "dry." Learning about modes now is important because they control the way the painting and drawing tools in Photoshop affect the image you're working on. As you go through the exercises in the book, you'll be glad you had this primer up-front (really, you will). The following list gives you a quick introduction to the modes you'll use most often:

- **Normal mode.** Normal mode is the default mode for painting and compositing and is the standard mode for a layer. When a color or selected image area is composited into the background, Normal mode replaces the underlying pixels with the pixels you added to the image. It's a straightforward replacement of background pixels. You can change the opacity of the paint or selection before finalizing an edit by clicking and dragging the Opacity slider, which is found both on the Layers palette for compositing and merging layers and on the Options bar when you're painting.
- **Dissolve mode.** Dissolve mode corrupts a selection or paint stroke by randomly distributing foreground pixels throughout the selected area. Dissolve mode is useful for painting; it can create an instant "texture" to which you can apply other effects and create complex designs. Dissolve mode also can produce some

fairly unaesthetic blends of a selection into a background image. Blending layers together in Dissolve mode can be equally unphotogenic.

- **Behind and Clear modes.** These modes can be used only on layers, and these are painting modes, not layer modes; background images can't be painted clear or behind. Behind mode treats opaque pixels as masked, and only the transparent pixels on a layer can receive color. This creates a simulation of painting on the back side of a sheet of acetate, where a design has already been painted on the front. Clear mode changes opaque pixels to transparent and can be used with the Paint bucket tool, the Paintbrush tool, the Pencil tool, the Fill command, and the Stroke command. You must be in a layer with Lock Transparency deselected to use this mode. Additionally, you can use the Edit menu's Fill and Stroke commands to apply Clear to the edges or interior of a selection.

Tip

When you click and drag the Eraser tool through opaque pixels on a layer, it creates the same effect as Clear mode. You may find that erasing is a more straightforward way of removing a pixel's opacity than using Clear mode.

- **Multiply and Screen modes.** These are perhaps two of the most useful modes for painting and compositing that you, as a designer, could want. Multiply mode has the opposite function of Screen mode. When you paint in Multiply mode, the foreground color (indicated on the toolbox) combines with an image's colors to decrease brightness on the area you're painting. Painting in Multiply mode always produces a darker color, and the effect can look like soft charcoals or designer markers that have saturated the paper. When you use it as a mode for compositing floating selections, Multiply mode emphasizes the darker values of the selection as it's blended into the background image. Lighter colors in the selection disappear when you deselect (thus blend) the selection. Multiply is great for creating shadows, which you'll see in the examples shown in other chapters.

  Screening "bleaches" a lighter foreground color out of an image when you are painting, and Screen mode always produces a lighter color. Stay tuned for an example of using Screen mode in an exercise to follow.

- **Color Burn mode.** This mode looks at the color information in each channel and darkens colors on the bottom layer by increasing the contrast. If the Color Burn mode is used on a layer of white, there is no change in the appearance of the overall image.

- **Linear Burn mode.** This mode examines the channel colors in the target layer (the layer causing the change in Linear Burn mode) and darkens the color in the bottom layer to blend color by decreasing the apparent brightness. There is no change in the appearance of the overall image if the target layer is white.
- **Overlay mode.** This mode intensifies the highlight and shadow areas of the image you paint over; it also adds intense highlight and shadow areas to the background image when you assign Overlay mode to a floating selection. The *midtones* of an image—the areas that have neither highlights nor shadows—are tinted with the current foreground color when you use Overlay mode for painting, and floating selections assigned Overlay mode blends most of the color values into the background image. Overlay is a great mode for creating ghost-like objects in an image and for superimposing titles.
- **Soft and Hard Light modes.** These are combination effect modes; both Soft and Hard Light modes react to the base color (the color found in the background image you paint or composite a selection into). If a background area has a brightness of greater than 50%, Soft Light mode lightens the paint or composite selection, and Hard Light screens the paint or composite selection. If the underlying background has pixels that fall below a 50% brightness value, Soft Light darkens the area, and Hard Light multiplies the color values. This means that you can achieve a selective Screen and Multiply effect at once when you choose Hard Light as the painting or compositing mode. Use these modes with partial Opacity settings to achieve different effects.
- **Vivid Light.** This message burns in or dodges out the colors by changing the contrast, depending on the color(s) on the layer you're messing with. If the blend color is lighter than 50% black, the image is lightened by decreasing the contrast. If the blend color is darker than 50% black, the image is darkened by increasing the contrast. We'll be using this mode to help the alien in this picnic image color its fruit. Where's the Lucky Charms leprechaun when you need him?
- **Linear Light.** This mode works very much like the Vivid Light mode except that brightness is the governing force, not contrast. If the blend color(s) is lighter than 50% black, the image is lightened by increasing the brightness. If the blend color(s) is darker than 50% black, the overall image is darkened by decreasing the brightness.
- **Pin Light.** Similar to the two previous commands, Pin Light replaces colors with a break point at 50% black—no contrast or lightness is involved in the process. If the blend color(s) is lighter than 50% black, pixels darker than the layer upon which you are working are replaced, and pixels lighter than the blend color (the

color on the active layer) do not change. If the blend color is darker than 50% black, pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change. A warning, however: This author has played with this mode for over three months and has yet to figure out how to make a beautiful area in an image using it.

- **Darken and Lighten modes.** Darken mode affects only the pixels in the image that are lighter than the foreground color. Equal or darker pixels are not affected. Conversely, Lighten affects only the pixels in the image darker than the foreground color you selected. Darken and Lighten modes produce painting and compositing effects that are much more subtle than Screen and Multiply modes, but they are closely related. You may decide to use Lighten or Darken modes for painting when Screen or Multiply produces results that are too intense.
- **Difference mode.** This mode evaluates the color of both the image area you paint and the current foreground color. If the foreground color is brighter, the background color is changed to the color opposite its original value. Painting over an image with white produces the most dramatic results; therefore, few background images contain a value brighter than absolute white!
- **Exclusion.** This mode creates an effect lower in contrast than Difference mode. Painting with white on an Exclusion mode layer inverts the bottom layer color values. Painting with black produces bupkis, nada, nothing.
- **Hue mode.** Hue mode paints with the foreground shade only. The Luminosity and Saturation of the image area you paint is unaffected. This mode is terrific when you want to tint areas.
- **Saturation mode.** If your foreground color is black, Saturation mode converts color areas to grayscale. If your foreground color is a color value, this mode, along with each brush stroke, amplifies the underlying pixels' basic color value by reducing the gray component. The non-black foreground color you selected doesn't affect what happens. You have to play with Saturation mode to understand its possibilities in your own work.
- **Color mode.** This mode changes both the Hue and Saturation of a selected image without altering the background image's tonal composition—the quality that comprises visual detail in most photographic images.
- **Luminosity.** This increases the lightness qualities in the image. This powerful mode doesn't change color values. Use it sparingly when lightening, say, an oversaturated color area in an image. When using Luminosity mode with a brush, set the Opacity on the Brushes palette down to about 30%.

There. Whew! I think that's all of them!

Take a look at Figure 1.5, and here's a Quick Teaser quiz: If the alien's fruit is all grayscale, what painting mode would be the best to make it look really juicy—even if it's fake fruit?

Well, Color mode would help the fruit, but it wouldn't give it the intensity of the Vivid Light mixing mode.

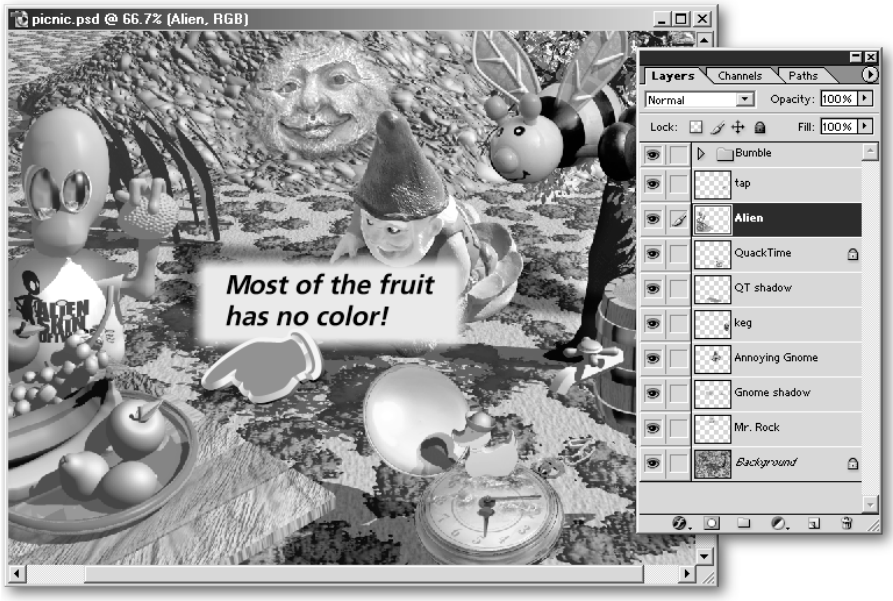

Figure 1.5 The guests really don't care which blending mode you use on the fruit—but you do. This section has given you a handy reference of all the blending modes to help you decide which one you need.

Painting Grayscale Fruit with a Photoshop Mode

Okay, I pre-empted myself in the last paragraph, but what you are about to do is both amazing and rote. You're painting, which means you have to stay within the lines. You choose a mode for the layer on top of the target layer when you perform modifications on new layers. You cannot change the layer you want to work on without changing the overall look.

By the way, that's a lime in the fruit bowl. The alien's got the lemon, and it's already colored, anyway…

Adding Color to Grayscale Fruit

1. On the Layers palette, click the Alien layer title. The alien shares this layer with the fruit. (Don't read anything into this.)
2. Click the Create a new layer icon (the turned page icon on the bottom of the Layers palette). Heads up—this is both a truism and a shortcut in Photoshop: New layers are always created one layer on top of the current layer, and the new layer becomes the current editing layer. That's why you needed to click the Alien layer. Now, double-click the layer title (currently titled Layer 1) and type **Fruit Color** in the text field. You gotta keep track of layers and the only way to do this is by using understandable names and layer sets. Before continuing, be sure to Lock Transparent Pixels on the Fruit Color layer by clicking the tool in the Lock bar on the Layers palette.
3. On the top of the Layers palette, choose Vivid Light from the modes drop-down box.
4. Click on what is called the Foreground Color Selection box. Adobe calls it this, and so shall we, to keep their documentation and ours in synch. In the color picker (the result of clicking on the color selection box), choose a red color (R:175, G:62, B:62) to define a juicy red apple. Click OK. Press B to switch to the Brush tool.
5. Choose the 19-pixel hard tip brush, as shown in Figure 1.6. You can right-click (Macintosh: hold Ctrl and click) when the Paintbrush tool is chosen to put the Brush Preset picker palette right at the point of your cursor. This makes selecting a brush easy. Press Enter (Return) to exit the palette once you've chosen your brush. Then start painting away on the apple. Cool, eh?
6. Change the foreground color for the lime, and again, you want a green (R:56, G:154, B:10), but a dull green for the pear (R:90, G:145, B:70). As a matter of fact, you might want to put a hit or two of brown (R:145, G:100, B:70) on the pear (try this with a soft round 21-pixel brush and lower the Flow on the Options bar to 20%). In Photoshop, you can apply paint using strokes, but the cursor can also remain stationary, and successive clicks simulate airbrush "hits" on the canvas, each hit making the applied color a little more pronounced.
7. Okay, the bananananananas. Get out a deep green from the color picker (R:60, G:120, B:30). Click the Airbrush option on the Options bar, and set the Flow of the Airbrush down to about 38%, as shown in Figure 1.7. Figure 1.7 is not shown in color, but if you just touch-up the tips of the bananas with the Airbrush-type tip, the bananas will look more realistic.
8. The bunch of grapes should be a walk in the park for an experienced fruit colorist by now. Make the foreground color selection box a ripe purple (R:70, G:17, B:116). You might want to choose a slightly smaller brush tip, take the Airbrush option off, and raise the Flow back to 100%. Then daub away until the bunch is purple. If you want to be super-finickey, you can (finally!) choose a pale brown and color the grape bunch stem. Me? I let this one ride. Gray is so close to the real color of grape bunch stems, I called it quits right here.

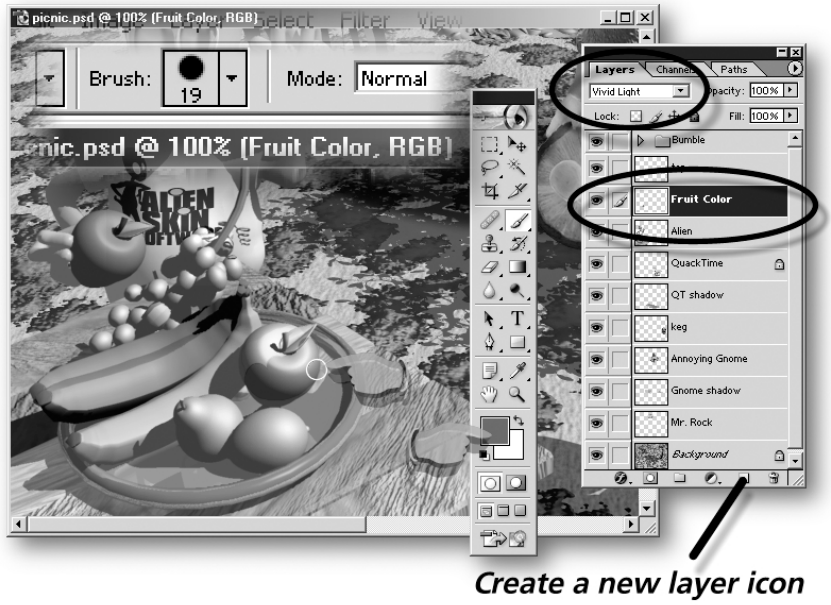

Figure 1.6 Choose a color, a mode, and a brush tip to bring this fruit to life.

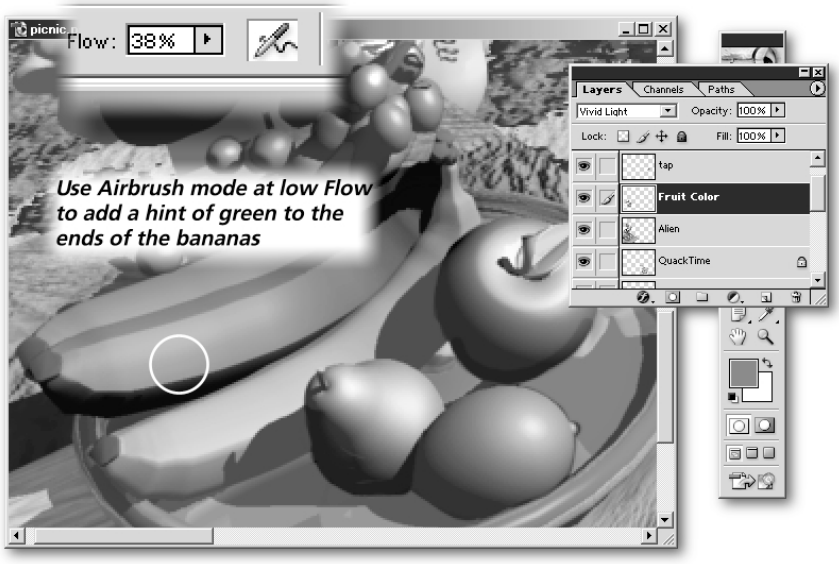

Figure 1.7 Make two-toned bananas by detailing the ends with green. They will also stay fresher this way.

9. Keep Photoshop open; there's more fun—oops, *research*, coming up.

Making Your Own Brush Tip and Quick Masking with It

This section opens up two more features of Photoshop for you to use—the Brush Tip Shape menu within the Brushes menu, and the Layer Mask mode. You are to grasp quickly how to use the custom brush tip, but a Layer Mask might sound as oblique as a "rotary simulatory activator."

The Layer Mask mode in Photoshop is, quite simply, a "gimme back" facility. You appear to be erasing when painting in Layer Mask mode, but here's the safety chute—no erasure or edit is permanent until you peel the Layer Mask off the image. Photoshop then asks you whether you want to apply the erasures, or discard the mask…which will return everything on that layer to a state before you did any editing. I wish I had this feature back in (physical) still-life drawing with a (physical) pencil at my (physical) university!

No sense in hangin' around now. Here's the plot: the duck on the pocket watch is lying pretty flat on the ground, and we think it should have a blade or three of grass growing up around the watch. By erasing part of the duck's watch on the bottom, it will appear that grass is growing around the watch. And to paint (erase) shapes that look like grass, you need to make a brush that looks like a blade of grass.

Here goes!

Growing Grass in the Picnic Image

1. Choose the Brush tool from the toolbox, and then click the menu icon (to view the Brushes palette options) on the top right of the Options bar. (You can browse ahead to Figure 1.8 if you want to see what the icon looks like.)
2. Click on the Brush Tip Shape title on the Brushes menu (at the top left), and then click on the 13-pixel hard round diameter tip. Now, you're going to distort this brush tip, but not to worry. No changes are permanent unless you specify it—the next time you call up brush tip 13, it will be round and happy again. And there's not time in the book to teach you about permanent changes…you'll learn that later.
3. With your cursor, squash the roundness of the tip by dragging the dots on the sides of the tip toward the center (see the point to which the finger is pointing in Figure 1.8). Then drag the arrow so that it is almost upright. As you can see in the preview window at the bottom of the menu, the stroke sort of looks like a blade of grass. This is good. (If your preview window doesn't update automatically, don't worry about it.) Click Enter (Return) to close the menu, and it's time to move on to the Layers palette.

You also can adjust the brush inside this menu dialog box by entering the numbers shown in Figure 1.8 for Angle, Roundness, Spacing, and so on.

4. Click the QuackTime layer to make it the active layer. Click the Add layer mask icon (pointed out in Figure 1.8) to create a layer mask on the selected layer title. Now, you are ready to do some sophisticated editing. The colors should default to black and white (with Black as the foreground color) when in Layer Mask mode.

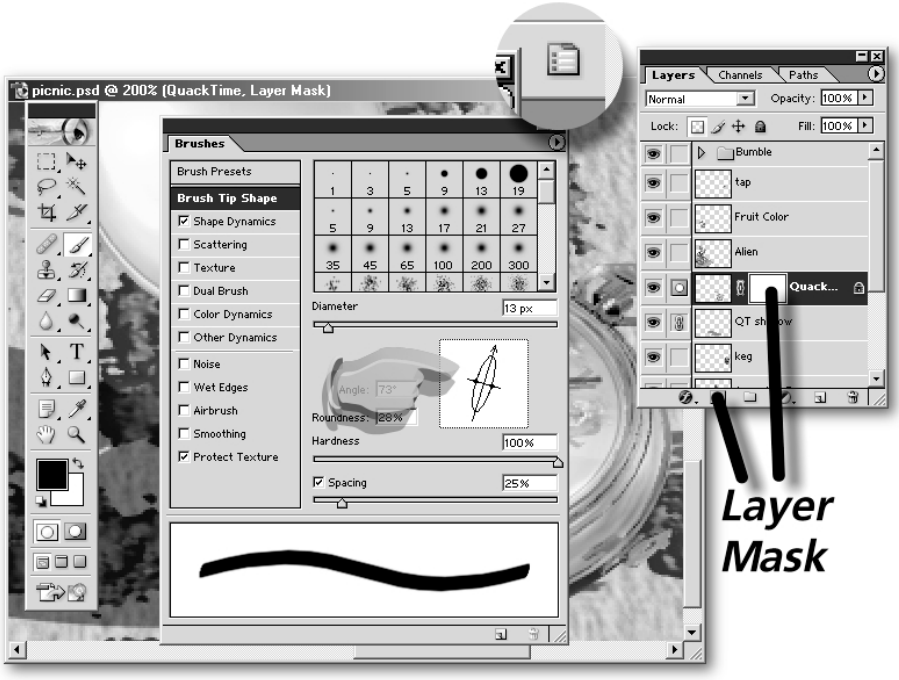

Figure 1.8 Create a unique brush tip for a special assignment, and then enter Layer Mask mode by adding a layer mask to the layer you intend to edit.

5. Zoom into the bottom of the pocket watch. Trick: Press Ctrl(⌘)+the plus key on the keypad until the image is at 200% viewing resolution—you don't always need to slow down your work to shift views by choosing the Zoom tool. Hold the spacebar (to toggle to the Hand tool) and drag within the image window until the pocket watch is in plain view.
6. Make some strokes with the custom tip, going upward from outside the bottom of the watch to inside the watch. As you can see in Figure 1.9, it really does look as though grass is infringing on the watch.
7. In Figure 1.10, I've decreased the opacity of the shadow layer underneath the duck so you can better see the grass illusion. Uh-oh. My boss doesn't think "QuackTime" is funny and wants a different duck in the image. I have to agree—I'd prefer a duck that brings its own food and drinks to the party. But

you need to see what happens when you delete a layer mask before we delete the duck. Click the thumbnail (the layer mask thumbnail) to the right of the image thumbnail on the layer title, and drag it into the trash icon on the bottom of the Layers palette. A question box similar to the one shown in Figure 1.10 pops up. Choose Apply to make your erasures permanent, and the pocket watch appears with permanent deep gouges on the bottom of it, masquerading as blades of grass.

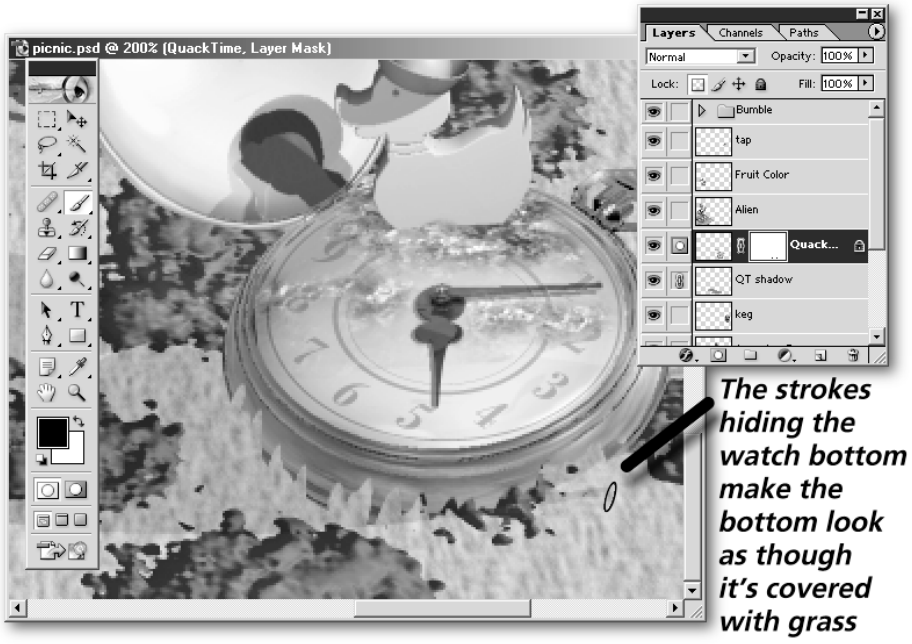

Figure 1.9 Remove parts of the bottom of the watch with your custom strokes, and you create a convincing illusion grass is growing over it. How long did this guy wait for the picnic to begin?

8. Now, drag the QT shadow layer into the trash icon, because you will be deleting the object of the shadow (the duck swimming in the watch) shortly (see Figure 1.11). Adobe gives you no warning that you deleted a layer—and never will. As we agreed (or at least as *I* agreed), the duck in the watch has gotta go. But before you drag its title into the trash on the Layers palette, why not move it to the left so the tap on the keg doesn't spill any precious liquid onto the watch face? Do this by pressing V to switch to the Move tool (or hold down the Ctrl(⌘) key to temporarily select the Move tool). Choose the QuackTime layer and scoot the little soon-to-be-doomed fellow over approximately 2 screen inches. You can now drag the QuackTime layer onto the trash icon.

Figure 1.10 Click Apply when you drag a layer mask thumbnail into the trash—and the areas you've erased are gone from the picture for good.

Figure 1.11 Delete layers by dragging their titles to the trash icon; and when the Move tool is chosen, you can either drag the contents of a layer or use the keyboard arrow keys to move a layer's contents.

Tip

When you choose the Move tool and tap the keyboard arrow keys to move the contents of the current editing layer, the layer contents move by one pixel per stroke. If you want to "super nudge" the contents to move them 10 pixels at a time, hold Shift while you press the arrow keys.

9. Now that the duck is gone, we can openly make rude remarks about him. We also need to create a shadow for the keg. The duck was hiding this area. Creating a shadow for the keg is easy. First, click the Annoying Gnome layer title, and then click the Create a new layer icon on the Layers palette. Now the target layer for the shadow is beneath the Keg layer (see Figure 1.12).

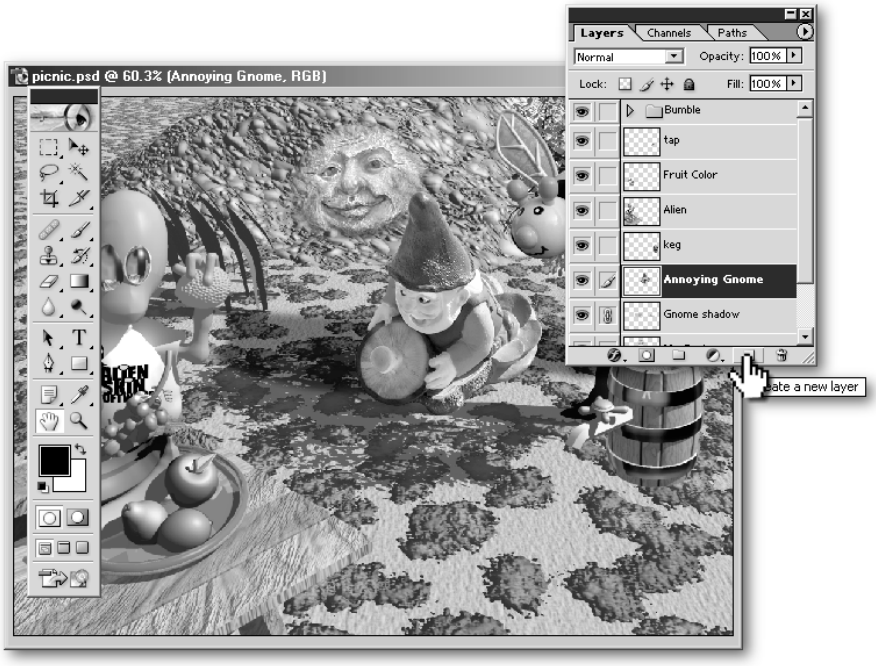

Figure 1.12 To enhance the reality of the scene (?), you need to put a shadow on its own layer directly above the Annoying Gnome layer.

10. Rustle up the Elliptical Marquee tool on the toolbox, and drag an ellipse at the bottom left of the key, touching its base (see Figure 1.13). Black should be the current foreground color. If it's not, click the Default Color icon in the toolbox. Now press Alt(Opt)+Delete (Backspace) to fill the marquee selection with black.

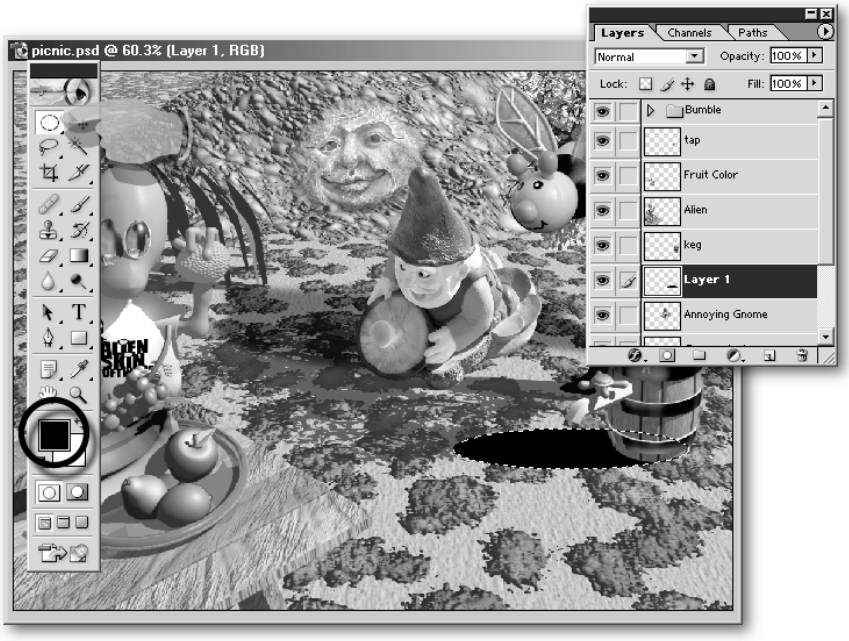

Figure 1.13 Fill the marquee selection with foreground color.

Tip

We haven't gotten into the nature and physics of marquee selection yet (gimme a break—it's only Chapter 1); but FYI, if your ellipse doesn't look situated as we have it in Figure 1.13, drag (from the inside of the selection) with the Elliptical Marquee tool *before* filling it, and you will have moved only the selection and not the contents of the selection marquee.

11. The shadow is too opaque and dense when compared to the other shadows in the image. Deselect the marquee selection (pressing Ctrl(⌘)+D is the pro's way of doing this), and then crank the Fill control down to about 50%, as shown in Figure 1.14. Now you've got your perfect keg shadow. Name the new layer by double-clicking on the layer title and typing something modest but tasteful, like **Keg Shadow**.
12. It's time to bring in the new duck, so save your changes to the picnic.psd file, and keep Photoshop open while we set up the next set of steps.

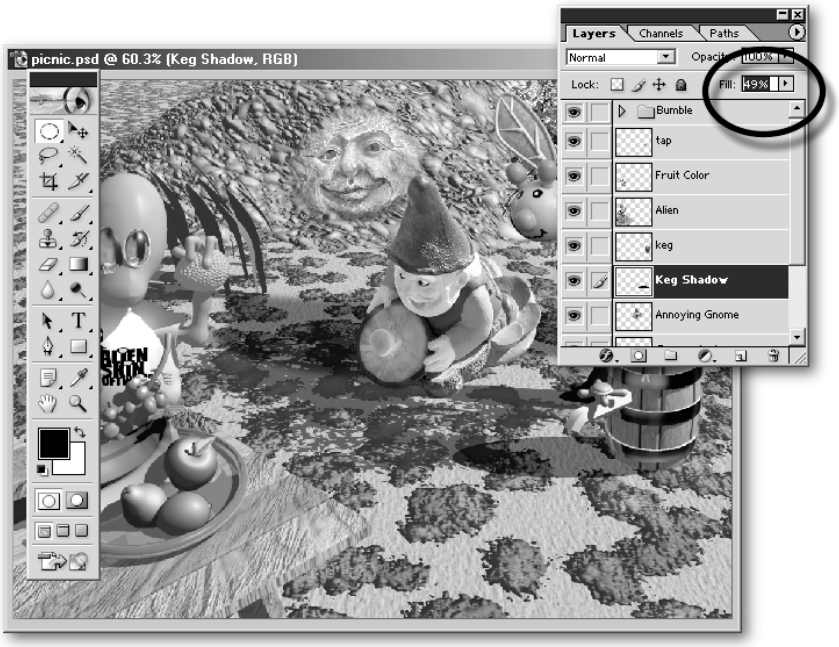

Figure 1.14 Reduce the Fill amount on the Keg Shadow layer, and the shadow looks more realistic.

Note

What's the diff' between Fill and Opacity? Opacity applies to both a layer's contents and any effects associated with that layer, such as embossing or a drop shadow. When you change a layer's opacity, you change the percentage to which it blocks the view of the next layer. A layer at 100% opacity totally obscures the lower layer. A layer at a lower capacity allows some of the lower layer to show through. Fill (which is really named Fill Opacity) affects only the painted or drawn shapes or pixels on a layer and doesn't change any layer effects that have been applied. This means that if you have applied a Drop Shadow effect to a layer and change the Opacity setting, the entire layer becomes increasingly transparent as you reduce the Opacity value. If you reduce the Fill Opacity value on that same layer, only the pixels on that layer—and not the Drop Shadow effect—are changed.

The following steps are pretty simple. By the way, if you've been following along on your own monitor, you are learning a lot of key concepts. We *told* you this would be fun—and educational!

Meet the New Duck

Now you need to add a new duck—with his own beverage—to the scene (no getting into the keg for this boy). To make it easy on you, the duck has been pre-sized and even has a shadow of the correct opacity attached to his tail feathers. This means that moving the duck into the picnic picture is the bulk of the task ahead.

Ready? Duck!

Copying and Moving a Picture Element into Position

1. Open the Duck with soda.psd file from the Examples/Chap01 folder on the Companion CD. Notice that the duck is surrounded by transparency, which means you can simply copy the whole layer to the picnic scene.
2. With a clear view of both the image window and the Layers palette, and with the Duck with soda image in the foreground, click the layer title on the Layers palette, and then drag the title into the picnic image, as shown in Figure 1.15. You might never go back to copying and pasting in Photoshop after learning to do it this way.

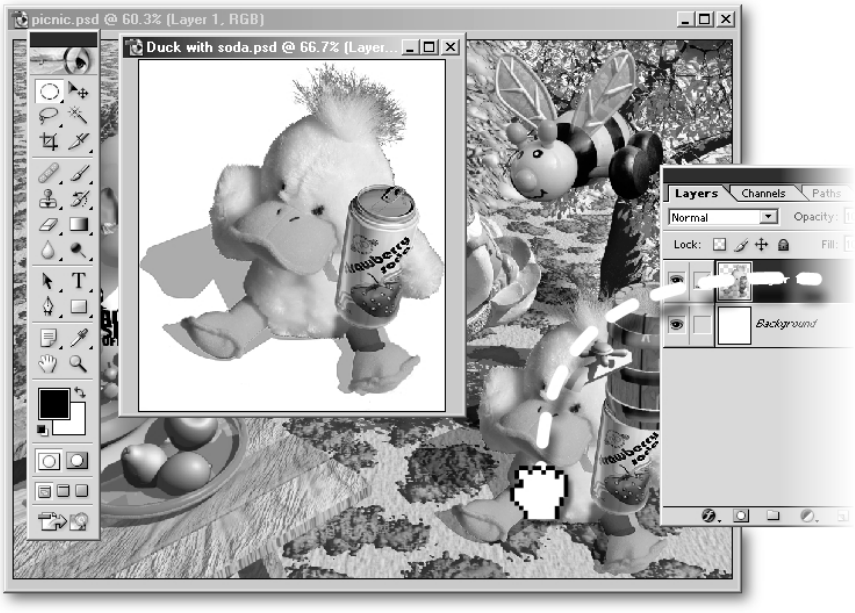

Figure 1.15 Dragging a Layers palette title into an image window is equivalent to copying and pasting the image.

3. Close the Duck with soda.psd file at any time. With only picnic.psd open, use the Move tool to drag the duck into a position similar to that shown in Figure 1.16, and rename the new layer on the Layers palette. Let's reposition a few layers. Drag the tap layer so that it's above the keg layer. The Duck with beverage layer should now be positioned on top of the tap layer. If necessary, drag the title upward or downward, and drop it on top of the tap layer title.

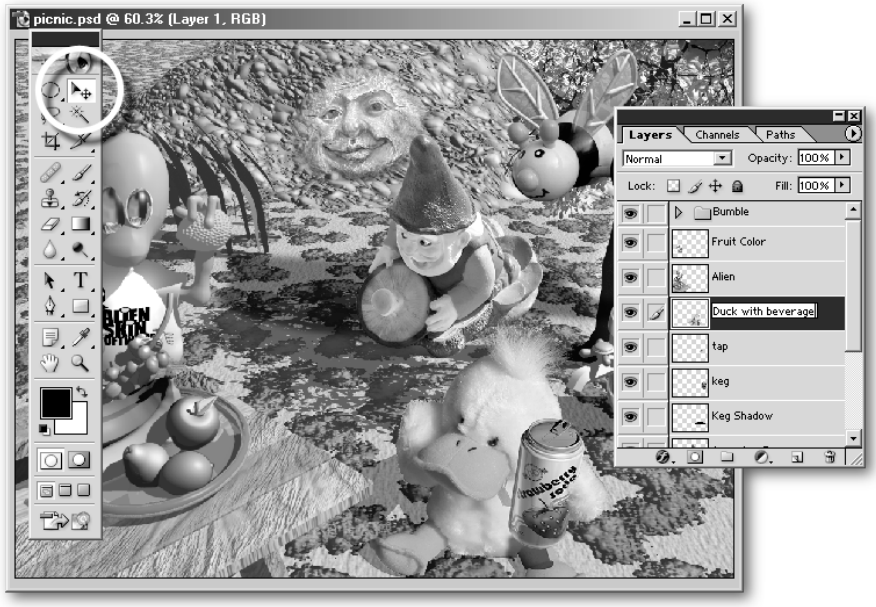

Figure 1.16 If this were a freezing spring day, would this be a cold duck on tap?

4. Save the image; keep Photoshop open and the screen door closed. Next we're going to edit the insect hanging out in the Layer Set folder.

Creating Your Own Special Effects Without a Clue as to What You're Doing

The bumblebee, for your amusement, is a photo of a child's toy we picked up at Pier 1 Imports. Most of the images in the picnic image, however, are rendered models (the keg is one such example). Bouton worked very hard to match angle and lighting effects for the photos versus the models. One thing we didn't particularly care for was that the bumbler came with wheels but no wings. Bouton modeled the wings in a powerful 3D program called trueSpace, complete with some alpha channel transparency, and the two wings and the bumblebee seem to work, artistically.

What doesn't work, however, is that if the picnic is supposed to be a photo (*in my dreams*), the wings would not be clearly defined as they flutter. And yet the bumblebee seems happily suspended in space without exerting energy.

We're going to change all that here and now.

Unpacking the Insect and Adding Wings

Yes, you read this section heading correctly. You are going to add wings of different opacity and angle to the bumblebee. This will create at least a cartoon representation, if not a somewhat real vision, of the bee fluttering its wings. And then perhaps we'll wipe that grin off its face.

Let's start with the introduction of another advanced Photoshop interface move and hide all the layers from view except the layer set.

Let It Bee

1. Drag the top edge of the palette to extend the Layers palette, if necessary, so the scroll bar disappears, and then in one lightning, expert stroke, drag your cursor down the visibility column, starting below the Bumble layer set. Isn't this wild? You can blank out the whole image except for the layer you want by simply stroking downward in the visibility column. I'm *impressed*.
2. Double-click the Zoom tool to zoom into 100% viewing resolution. You might need to pan with the Hand tool, open the window a little to get a good view of the bumblebee, and provide some space beneath it to create a new wing.
3. Click the right-facing triangle to the left of the Bumble layer set. The triangle then points down, and the contents of the layer set can now be addressed on the level of individual layers.
4. Ctrl(⌘)+click on the Right wing layer title. This action puts a marquee selection around the non-transparent areas of the layer. The wing is perfectly selected.
5. Hold Ctrl(⌘)+Alt(Opt) and then drag the wing to below the bee, as shown in Figure 1.17. This set of steps is sort of the "hard way" to add more wings to the bumbler, but know that this technique will come in handy in your own work for the future. The wing is now what we call a *floating selection* until you press Ctrl(⌘)+D to deselect it and let it fall on the same layer as the original Right wing (but don't press Ctrl(⌘)+D just yet).
6. Press Ctrl(⌘)+T. Introducing…the Free Transform feature. Did you know that you can rotate, distort, and otherwise mangle a selection area in an image to your heart's content, and then apply the transformations all at once, in one operation? This is terrific because the more you stretch and mutate areas in a bitmap image, the more the pixels can begin to lose their position. The result is poor image quality and focus. But Free Transform lets you play until either the cows come home or you press Enter (Return) to apply the changes to the image.

Figure 1.17 Copy the wing onto the same layer. Use the Move tool in combination with the Alt(Opt) key to duplicate the wing.

7. Drag the center circle of the Transform box to the lower-left corner of the box because you are going to make the right wing flap, and all the right wings (there will be three) need to have the same origin point. Otherwise, this bumbler will look stupid.

This center circle is called the *reference point*. By default, the reference point is in the center of an object. Certain adjustments, such as rotate, revolve around this reference point. This means that if the reference point is located in the center of an object, the object will rotate…um…around its center point. By moving the reference point to the lower-left corner, rotations will respond to this new location instead.

8. Right-click (Macintosh: hold Ctrl and click); and from the context menu, choose Rotate. Putting the Transform box in Rotate mode is not hard if you've been doing it for a while (you hover the cursor over a corner of the box), but let's make the steps foolproof for those of you who've never done this before. Put your cursor in the upper right of the Transform box, and pull clockwise. By how much? Check out Figure 1.18 for the answer. (Hint: See the Options bar for a clue.)

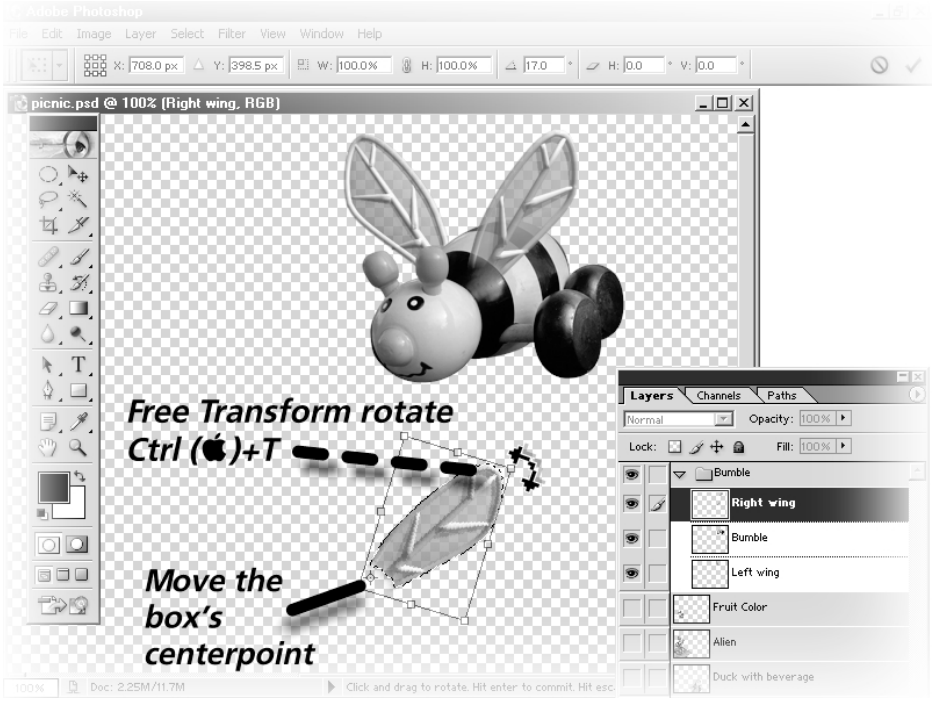

Figure 1.18 Pull the wing copy clockwise so that its beginning will hook up with the original wing's beginning.

9. Press Enter (Return) to finalize the rotation. Now, right-click (Macintosh: hold Ctrl and click). The wing should still be selected (if it's not, lasso select it). Press Ctrl(⌘)+Shift+J (a shortcut for the Layer via Cut operation).

The wing is now on a layer called Layer 1, but we're not going to rename these wings you are creating. There is a next-to-zero chance you will confuse the wings as we build this flying bee.

10. On the Layers palette, drag the Opacity down to 67% or so, choose the Move tool, and deselect the duplicate wing if needed (this is an automatic process when you choose Layer via Copy or Cut). Then move the wing up to where it should join the bee (see Figure 1.19). Do you see where this is going?
11. Make a copy of this layer by dragging Layer 1 to the Create a new layer icon at the bottom of the Layers palette. Press Ctrl(⌘)+T to put the wing in Free Transform, move the rotation center point, and then rotate the wing. Figure 1.20 shows you this.

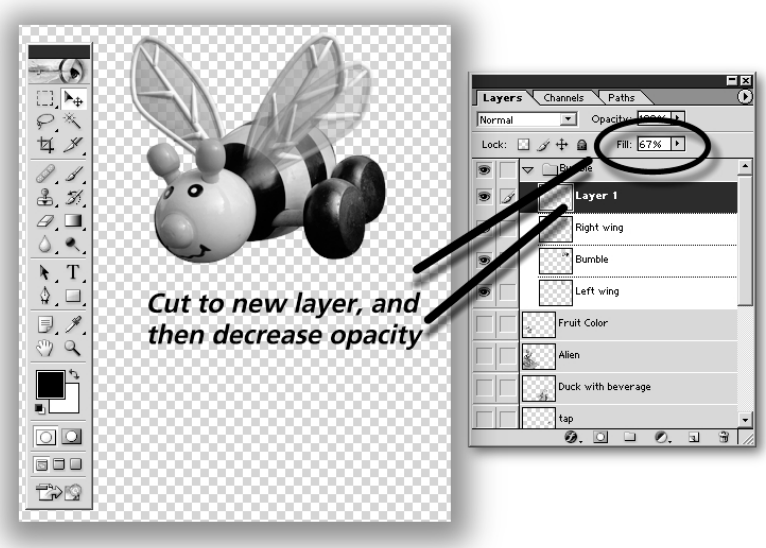

Figure 1.19 To suggest motion (especially motion like you see in those stroboscopic images), reduce the opacity of the duplicate wing and put it in its place.

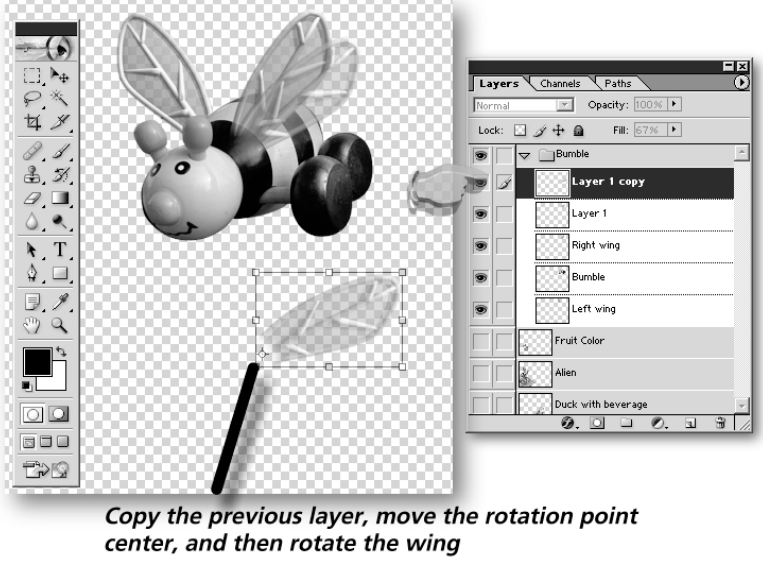

Figure 1.20 Make a third wing for the right side of the bumble bee. You can rotate this copy of a copy up or down—the important part is where you place it in the composition.

12. Repeat Steps 6–11 with the Left wing layer, making certain that as you create new layers for the left wing, the new layers are *behind* the bee body (in other words, below the Bumble layer on the Layers palette list).
13. Seal up the Bumble layer set folder by clicking the triangle to the left of the Bumble title. Now return the rest of the scene to visibility by dragging up the visibility column on the Layers palette, starting at the Background layer—this is the reverse of what you did to hide all the layers in one fell swoop (see Figure 1.21). The wings look good, but even with all that work on the bee, it's still smiling. Darn…

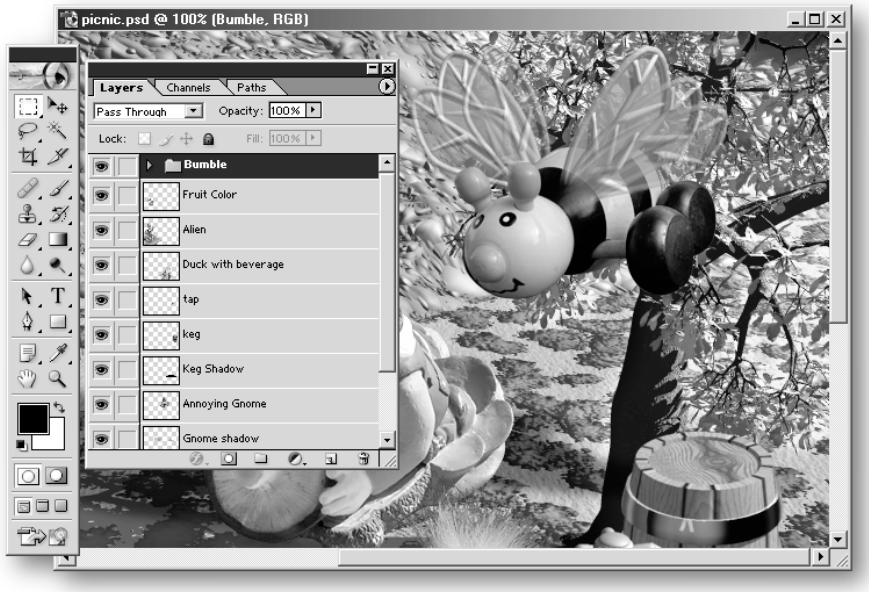

Figure 1.21 A group of wings at different opacities and angles definitely suggests motion.

14. Press Ctrl(⌘)+S; keep the file open.

For the sole reason that man has historically found it easier to destroy than to build, I'm proposing that after all your hard work on the insect, you hide it, and we put a sun in the picture. This will not be just any sun; it should to be a comical sun about 200% larger than we need it to be for the picture. Oh, what to do? (Clever segue, huh?)

Copying and Resizing the Sun (Handling "Big Data")

I remember it as though it were yesterday…an Adobe exec was telling me that Photoshop 4 now handles "big data." If my phone had had a camera attached, the Adobe

Systems person would have seen my dumb stare. Big data. Okay, what on Earth is big data?

Well, part of big data is Photoshop's capability to import an image to a layer that is *larger* than the image window. You can move the image around in the window *ad infinitum*, and as long as you do not crop the image or otherwise edit it.

Why is this important? Because shortly you are going to drag the sun title into the picnic scene, and even though it is larger than the image window, you will be able to use the Free Transform's Scale mode to shrink the sun and drag it to where it belongs in the composition.

This is neater than you might believe. You won't appreciate this feature until you need to use it—unless, of course, you remember Photoshop 3.

Copying and Scaling "Big Data"

1. On the Layers palette, click the eye icon to toggle the visibility off for the Bumble layer set. Open the Sun.psd image from the Examples/Chap01 folder on the Companion CD. Using the Ctrl(⌘)+the minus key method of zooming out, zoom out on both images in the workspace. At 50% viewing resolution, you can see that the sun ain't going to make it into the picnic picture. Or will it?

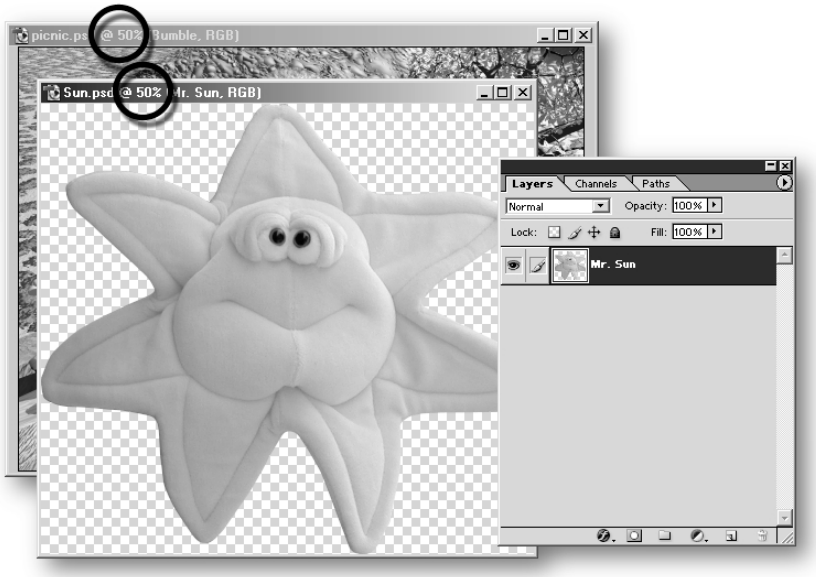

Figure 1.22 Hey, some sun is nice and everything, but this guy looks as though he's a replacement bulb for the *actual* sun when it burns out or breaks.

2. Click on the title bar of Sun.psd to keep it in the foreground, drag the Mr. Sun title from the Layers palette, and drop it on the picnic image. Drag Mr. Sun to the top layer, if it did not land there, as shown in blistering detail in Figure 1.23. You can close the Sun.psd file.

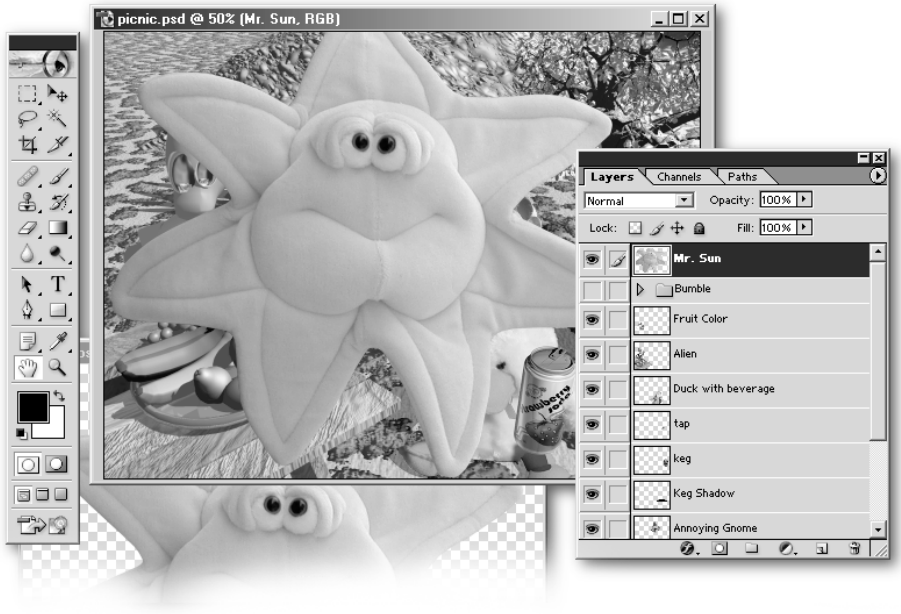

Figure 1.23 Yo, Bouton. We got a size problem here.

3. Drag the corner of the picnic window to maximize the picnic window size so that you can see some of the image window's neutral-colored background. Now press Ctrl(⌘)+T. Surprise! Free Transform works even outside the image window! Hold Shift to maintain the proportions of the selected sun and then drag inward (on a corner of the bounding box), toward the center of the sun. Take a break from the shrinking action to drag in the center of the transformation box to relocate the sun. If you do not do this, the sun will both shrink and try to reposition itself outside of the image window. See Figure 1.24 for the action in progress.
4. When the sun is about the size of the duck, press Enter (Return) or do it like the pros—double-click inside the Transform box to finalize your editing work.
5. Press Ctrl(⌘)+S; keep the file open.

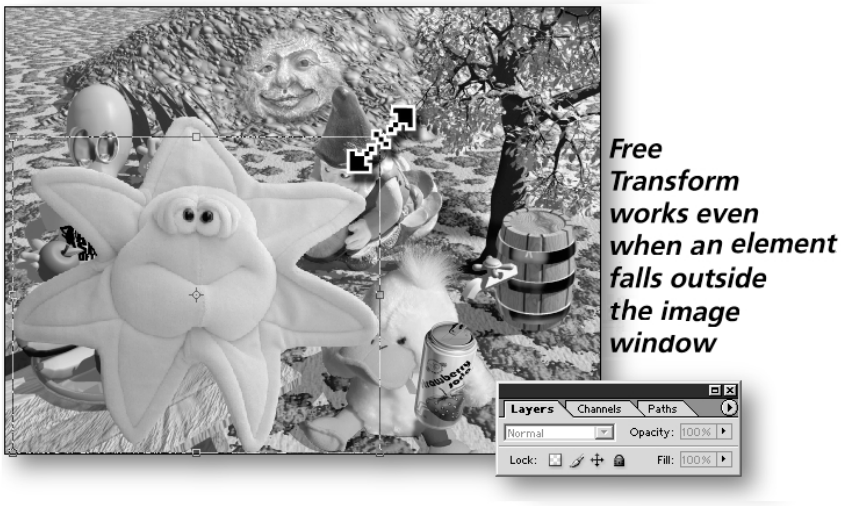

Figure 1.24 Even though the sun falls outside of the image window, the Free Transform feature works on the entire image.

Are you getting the sinking feeling that the author listed all those wild modes earlier in the chapter, and that's that—end of story? Far from it. In the upcoming section, you are introduced to the Paths palette and use a very special blending mode to make the sun *really* shine—none of this limbs-hanging-off-an-orb stuff, as we have at present.

Stroking a Path and Blending Modes

If you've picked up a trade magazine or seen just about anyone's web site these days, you know that Photoshop's capability to blur is being put to good use. Specifically, the Gaussian Blur filter has been making the rounds for around seven years, popular because it produces a bell-shaped distribution curve which, not surprisingly, imitates real-world phenomena, such as drop shadows and glows.

Well, one way to make the sun look as though it's hotter than it really is, is to stroke a path that is the outline of the sun, keep this stroked path on top of the sun, blur the layer, and then put the layer into a special blend mode.

Huh?

Don't worry. Follow the steps.

Introducing Paths and Creating a Sun Stroke

1. Now that the sun is in its proper place, Ctrl(⌘)+click on its layer title on the Layers palette. (Notice that named layers keep their names even when they are transported to different image windows.) Click on the title itself to make sure this is the target layer, and then Alt(Opt)+click on the Create a new layer icon. The Alt(Opt) twist here presents you with a dialog box in which you name the layer, which saves renaming it later. Type **Sunshine** in the Name field and then press Enter (Return).
2. Now, to select the sun's silhouette, which will be used as the path, Ctrl(⌘)+click the Mr. Sun layer title. See Figure 1.25 for a visual example of what's going on right now.

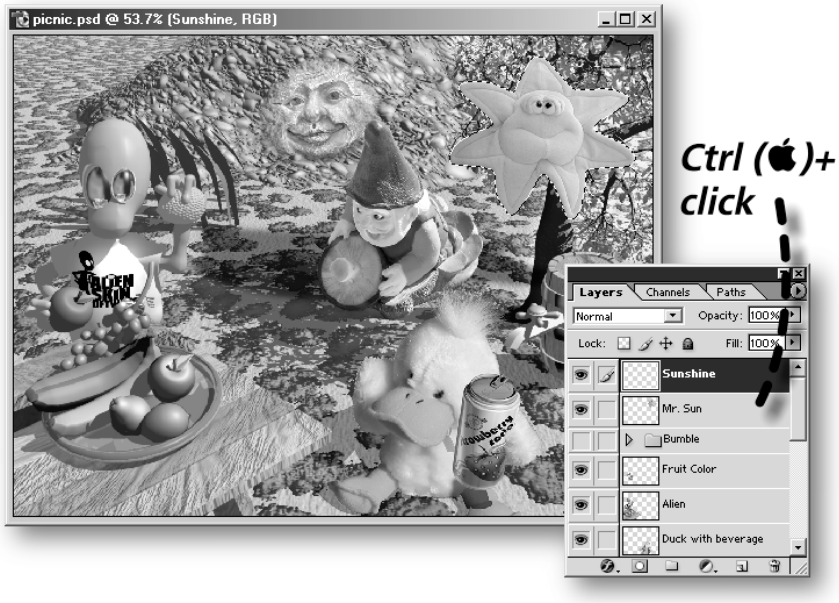

Figure 1.25 Load the sun's silhouette as a selection marquee. Shortly, you'll turn its shape into a path.

3. On the Layers palette, click the Paths tab to view the Paths palette. The Paths palette is ordinarily used in combination with the Pen tools, but for this assignment, all you need to do is convert the shape of the marquee to a path. Click the Make work path from selection icon, as shown in Figure 1.26, and Photoshop auto-traces the selection with a vector, non-printing path.

Figure 1.26 You can stroke a work path with as large, as small, or as weird a Paintbrush tip as you can find.

Note

Please do not freak out about paths at this point. If you've used a vector program, such as XARA, Adobe Illustrator, or CorelDRAW, you know that paths are simply vector directions on a page. They cannot mess up your work in Photoshop because, intrinsically, they have no physical form in this bitmap editing program until you fill or stroke the path.

You'll find a lot more information on paths and the Pen tools in Chapter 13, "Using Paths." Everything is sailing smoothly here, and remember—this is only the first chapter, but you're learning some advanced techniques.

4. Now that you have a work path (which you can leave as an unsaved path; you will not need it after you stroke the path), set up the tool with which you'll stroke the path. Set the foreground color to a golden color. (Actually, you can use the Eyedropper tool to sample a foreground color from the sun itself.)
5. Choose the Paintbrush tool. (This is very important. If you don't choose the brush before you stroke, the Paths palette defaults to the Pencil tool and the stroking looks crummy.) Choose the 100-pixel diameter, soft tip brush from the Brushes palette, and then click on the Stroke path with the brush icon, as shown in Figure 1.27. Wow! Intense, huh? Too intense, and that's why we have more steps to do. Right now, this figure makes the sun look like he's in the bottom of a laundry basket!

Figure 1.27 Have Photoshop stroke the path with a fairly large brush tip and you're well on the way to creating a very special effect.

6. Drag the work path on the Paths palette into the trash icon. Click the Layers tab to return to the Layers palette, choose the Hard Light mode from the modes drop-down list. You'll see the sun in all its glory onscreen, and of course we have the grayscale version, Figure 1.28, right here.

Note

The section, "Photoshop Modes: A Dry Definition of Each Blending Mode," earlier in this chapter, is what the author used to discern which mode to use. It's a handy reference and deserves one of those fluorescent sticky notes placed on that page!

7. Press Ctrl(⌘)+S; keep the file open.

It's only fair to end this chapter with a grand finale—besides, you've had almost enough of beginner's tricks, and I need to take a nap. In the following section, you use a secret trick in Photoshop to align perfectly an imported layer, and then get your hands on what is extensively used in the photography section of this book, the Levels command.

Figure 1.28 Hard Light appears to be the logical choice of blending modes for the stroked path. It creates a glow, but also allows the sun's face to poke through the stroke.

Working a Stein into the Picture

The author rendered a model of a glass stein, complete with partial transparency, using Caligari trueSpace. This modeling program happens to have two features (besides the rendering quality) that make it an assignment-saver for Photoshop work. First, trueSpace enables me to render the stein to any reasonable dimension, which means that I could render the somewhat diminutive stein practically swallowed by a large background—specifically for the same dimensions as the picnic picture.

The other feature? trueSpace renders *alpha channels*. You'll learn more about the virtues (and indispensable qualities) of alpha channels later in this book, but all you need to know about them for now is that an alpha channel can describe the shape and opacity of any object in the scene—and Photoshop can load channels as selections.

So let's go for it. Let's see how to add a stein to the table in the scene and then learn how to tonally balance the stein.

Using the Shift Modifier when Copying Layers

1. Open the stein.tif image from the Examples/Chap01 folder on the Companion CD.
2. Choose the Move tool. Click the Channels tab to view the Channels palette and then Ctrl(⌘)+click the Alpha channel on the Channels palette that describes the form of the stein. Switch back to the Layers palette, and sure enough, the outline of the stein has a selection marquee going around it (see Figure 1.29).

Figure 1.29 Load the selection of the stein in the Channels palette, and a selection marquee will appear around the object in the Layers palette view.

3. While holding Shift, drag the stein using the Move tool into the picnic.psd image. Surprise again! The stein landed perfectly on the table the alien is hogging. Why? Because the Shift key sends Photoshop a message to copy the stein to the relative center of the other image. In other words, I knew in advance where the stein should go, so I rendered it so both images were the same size. (I'm sure this is a better trick than it sounds!) If you understand this centering thing, you can copy and paste internally (from within Photoshop; from window to window) with perfect accuracy. In your Photoshop work, you might need to duplicate layers to different image windows, and the Move tool and the Shift key combination are your…well, your *key* (see Figure 1.30).
4. Press Ctrl(⌘)+S; keep the file open.

Figure 1.30 The stein is copied to its relative position in the picnic image. Holding Shift is the trick.

Got a minute to balance the tones in the stein? It looks washed out in the picture. And perhaps you want to give the stein a shadow that falls on the table.

The Levels Command and More Shadow Work

At this point, all you need to know is that the Levels command is sort of like the Brightness/Contrast control on your TV—only better. You can tune the highlights, the shadows, and the midtones, which is very useful for bringing out image detail. (Did you know most visual content in an image is in the midtones?). You're going to use the Levels command with confidence and gusto because we have steps for you to follow. Further, we think you can "wing" a shadow on the table from the stein. You've learned a headful in this chapter, and we need to cram in two more things, okay?

Finessing the Stein

1. With the Stein as the current editing layer on the Layers palette, press Ctrl(⌘)+L. This takes you to the Levels command…and it's a terrific keyboard shortcut for a much-used feature.

2. Drag the far left, black triangle under Input Levels to about 61. This makes the stein take on some blacks, where it used to be washed out. Now, we need some light areas.
3. Drag the white slider on the far right to the left until the Input field for this slider reads 216, as shown in Figure 1.31. As you can see, this is a visually interesting stein now—good contrast and motion of tones across its face.

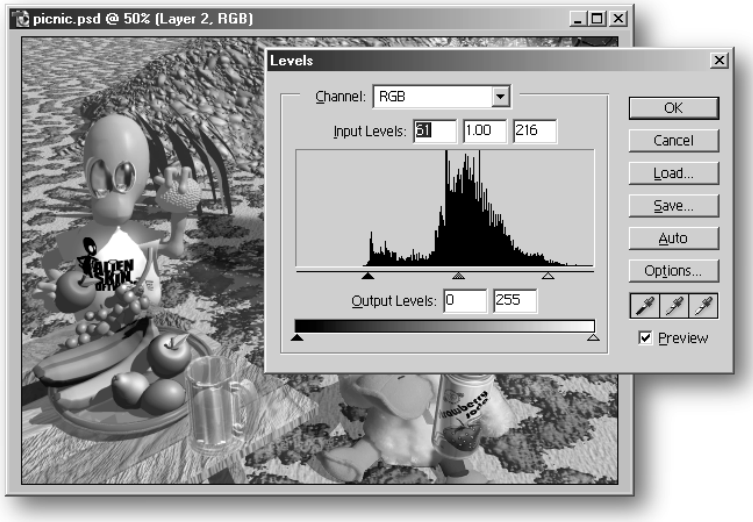

Figure 1.31 Use the Levels command to sort out tonal "blahs" in an image area.

4. Press Enter (Return) to make the Levels changes and return to the picnic.
5. Click the Sunshine layer title on the Layers palette, and then click the Create a new layer icon. The new layer is beneath the stein.
6. Zoom in on the stein, and with the Lasso tool, try really hard to draw the simple shape you see in Figure 1.32. This is an experimental chapter; give it another try if the shadow looks wrong on your first try.
7. Click the Eyedropper tool and click to sample a shadow color from one of the darker hues in the wooden table. This sets the foreground color in Photoshop.
8. Press Alt(Opt)+Delete (Backspace) to fill the selection. On the Layers palette, drag the Fill down to about 62%, and change the mode to Multiply. You can press Ctrl(⌘)+D at any time.
9. Press Ctrl(⌘)+S; keep the file open.

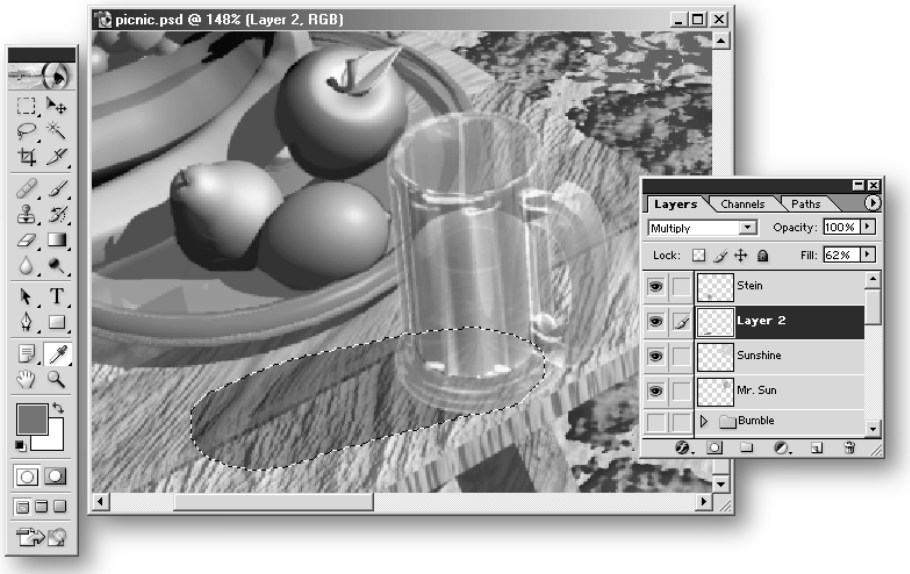

Figure 1.32 Create a shadow for the stein. You can do it with only a tug or two on the Lasso tool.

Note

Um…we almost made it out of this beginning chapter without discussing how Photoshop's sliders work. It might be in Adobe Systems documentation, but we don't want to take any chances.

Slider boxes are actually a two-in-one affair. For example, you can specify Opacity on the Layers palette two different ways: You can type a value in the Opacity field by typing the value and pressing Enter (Return), or you can reveal a hidden slider by clicking and holding the triangle to the right of the field.

I take responsibility for this oversight for which I will surely be punished.

There's one more command we can teach you that will conclude our "gooshing" of Photoshop and its features like so much clay. Check out Figure 1.33—you don't have to do anything but look at the bumbler. You now know how it was resized (using the Free Transform Scale mode command), but why is it now looking to the left?

By the way, the way the bumblebee is pointing now is wrong, because the light is striking its left side, instead of following the scene's emanation of light from the right. But, right or wrong, it was fun to do the following:

1. Click the Bumble layer set folder.
2. Press Ctrl(⌘)+T to put the folder in Free Transform.
3. Right-click (Macintosh: hold Ctrl and click) and then choose Flip Horizontal from the context menu.

Figure 1.33 You can put a layer set into Free Transform and come up with time-saving steps for editing.

Now you're not a beginner anymore, and it's going to be harder and harder to amaze you with the stuff to come!

We're up to the challenge, though.

Summary

This chapter was a light-hearted romp through some of Photoshop's really cool features, but ask yourself: how much did I learn and how can I apply it to an idea of my own? That's the *true* key to learning Photoshop—you can learn commands at your own speed, but you can't put a time value on the experience of discovering what the tools are good for and how creative you can be with them. As your experience grows, you form a sort of yin-yang relationship with Photoshop; that is, you bring a working knowledge of tools and a concept to Photoshop, and Photoshop helps you create it. Conversely, you can explore and discover what features can do, and this might influence the direction you take with a photo or a piece of art. And as far as exploring and uncovering, this chapter has barely exposed the surface to the standard for image editing. You saw some neat stuff, but turn the pages. Turn the pages! There's a *lot* of neat stuff about Photoshop in this book.

Next up: Preferences, options, and how to customize Photoshop so that sitting down with it each time is like sitting down to talk to an old friend. Master the controls, and you'll quickly master principles that bring your work to life.