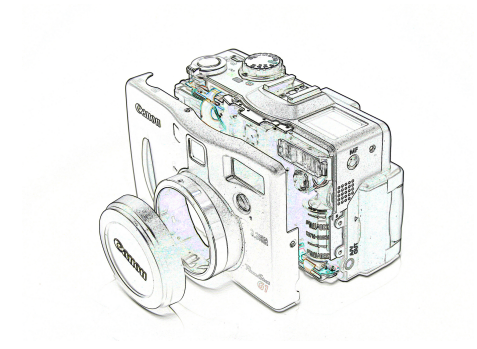# Inside Aperture

Derrick Story, O'Reilly Media & The Digital Story • www.thedigitalstory.com

SPEAKING NOTES • MACWORLD SF • JAN. 9-10, 2006

These notes are supplements to my Aperture training class and workbook presented at Macworld SF 2006. They may be shared only in their entirety. They may not be reproduced in any other format than this PDF. Please write me for permission or further information.

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Aperture vs iPhoto 5

MODULE TWO - APERTURE VS IPHOTO 5

What some Pros Say (in interviews by me):

Prefer's iPhoto's slideshow function to Aperture's.

Likes iPhoto's performance better on a PowerBook

Slideshows too basic in Aperture

Keywords search too slow in Aperture (fixed in 1.0.1 update)

Photoshop integration better in iPhoto

Website output more professional in Aperture

Better color management in Aperture

Better books and prints in Aperture

Print output is better in Aperture

Importing Images into Aperture

MODULE SIX - IMPORTING

Aperture enables you to import images from just about any source—digital camera, card reader, iPhoto Library, folders, and individual files. In this module we'll review these options.

Import from Digital Camera

If you've been using iPhoto as your digital shoebox, you'll need to tell your Mac that Aperture is now your import destination. You can set this in Aperture's Preferences.
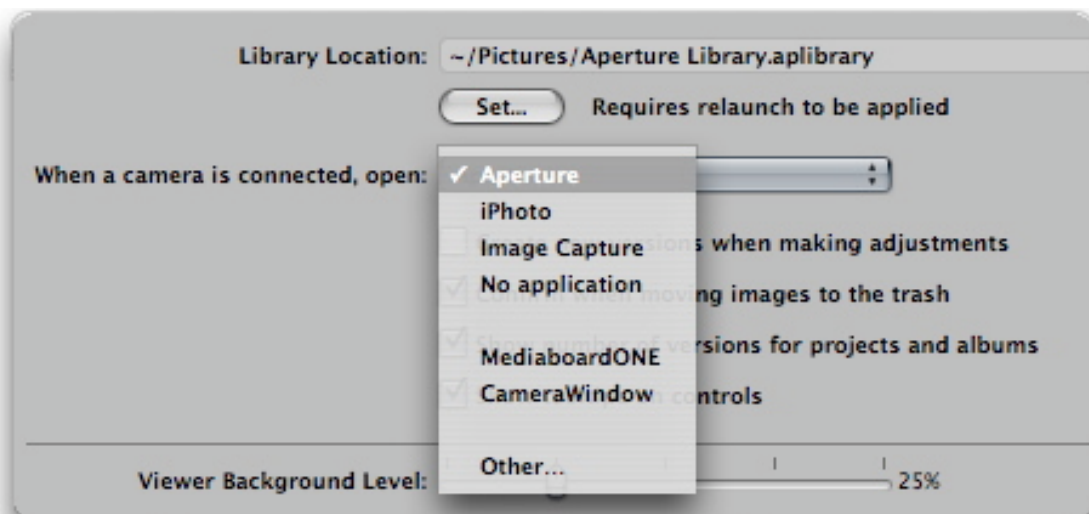
You choose the primary application for image import in Aperture's preferences.

Once you connect your digital camera, Aperture reads all of the images on the memory card and presents them to you as thumbnails. You can review the metadata for each picture, enlarge the thumbnails, even review as stacks—all before you actually add a single picture to your computer. If you want, you can select just one or two images to import. Or you can import them all with just a click of a button. During import, you can add metadata, adjust the timestamp, and even change

the filenames. These parameters are adjusted as the files are imported to your Mac. (See pages 59-61 of your Aperture manual for more information.)
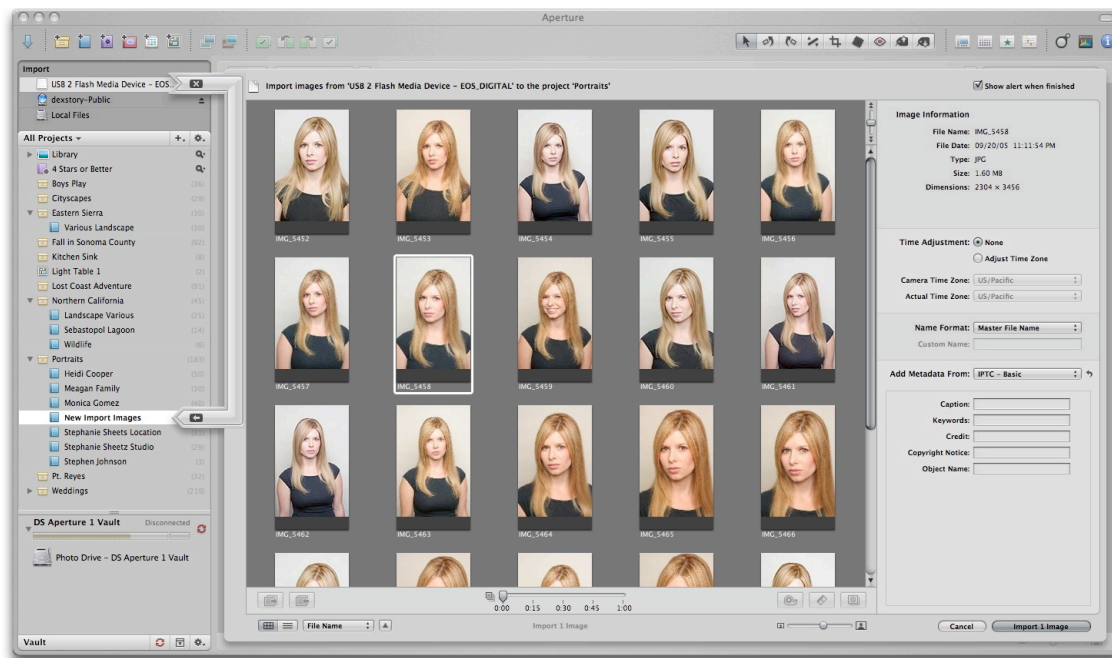
On the left of the thumbnails you indicate where the imported files will located within Aperture.
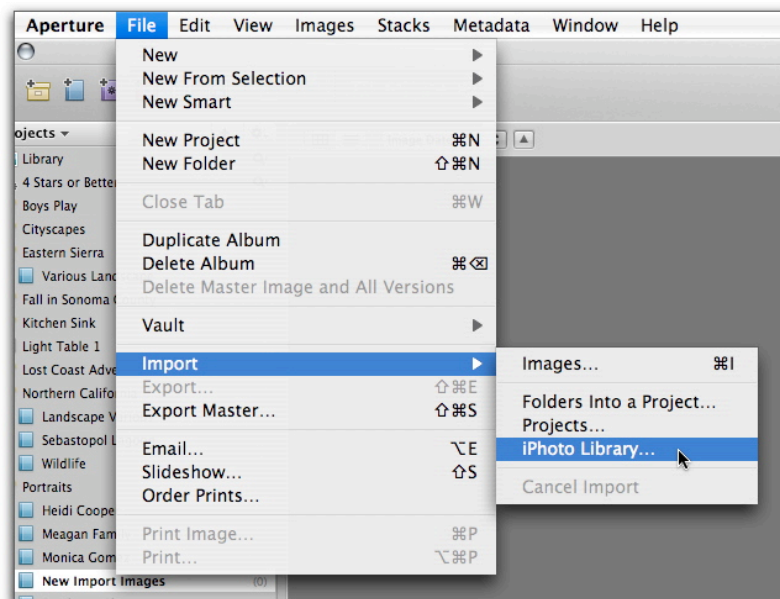*On the right side you can adjust the image metadata during the import process.*

Import Files From Other Sources

Aperture makes it easy to import files from your computer too. See pages 62-63 of your Aperture manual. You can import folders of images as projects (p.64) and even bring in your iPhoto Library (p.65).

Speaking Notes on File Import

Can't create new albums on the fly while importing. Only projects. So you have to create your album before you connect your camera to import.

You can Cancel the import, create the album, the pick the camera again from the Import menu in the upper left.

Custom Naming on Import

First, browse your options in the "Edit" menu for Name format. I like Custom Name with Index. See the new Adjusted File Name in red?

You can configure your custom naming parameters in the Edit menu that's available via the Name Format popup menu. This includes removing spaces between the different parts of the file name, and even adding underscores between the file name parts.

Image Information

File Name: IMG_6458
Adjusted File Name: Yates IMG_6458
File Date: 12/30/05 01:27:25 PM
Type: JPG
Size: 3.61 MB
Dimensions: 3456 × 2304

Time Adjustment: ⦿ None
◯ Adjust Time Zone

Camera Time Zone: US/Pacific
Actual Time Zone: US/Pacific

Name Format: Custom Name with Index
Custom Name: Yates

One gotcha was that I could not find a way for my copyright notice to persist in that field for import. It always blanks out when I start a fresh import.

I should discuss my strong recommendation for retaining Master File Name on all images, including those in Aperture.

When you have a sequence of images selected for import, you can read the metadata of any particular image by clicking on it. The other images will not be deselected as a result.

You can fix any naming mistakes you made from the original import by use the Batch Change command from the Metadata Smart Menu popup.
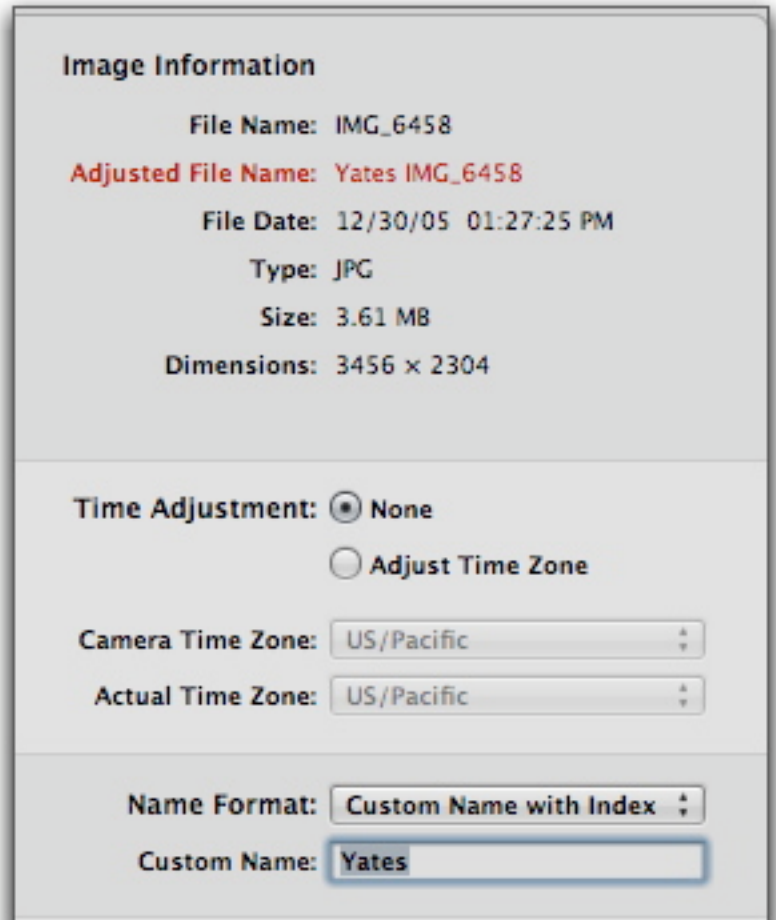
Importing iPhoto Libraries

My favorite way is to select File > Import > iPhoto Library

then navigate the the iPhoto Library on my hard drive that I want to bring into Aperture. Once I begin the import, Aperture brings in all my photos plus the custom Albums I've created in the iPhoto Library and the Rolls too. The iPhoto Library is denoted by a Blue Folder in Aperture's Projects pane.

One interesting note: Aperture adds the words "iPhoto Original" the the Keywords field of all images imported from iPhoto.

Importing Images from the iPod

 If you use an iPod with a Camera Connector for uploading images directly from your digital camera, then you can transport those images directly from the iPod to Aperture. Just connect the iPod, then select it from the available drives in the Import pane.

The iPod will combine all of your rolls together into one import. But aside *from that quirk, the process works well. Be sure to eject the iPod before disconnecting to avoid any data corruption.

Importing a Folder of Images from Your Hard Drive

If you choose File > Import > Folders Into a Project, Aperture will take the entire folder of pictures from your hard drive, create an Album by the same name in the designated Project. All of the images from that folder will be placed within the Aperture Album. But you don't get the same kind of control over changing metadata on Import as you do with other methods.
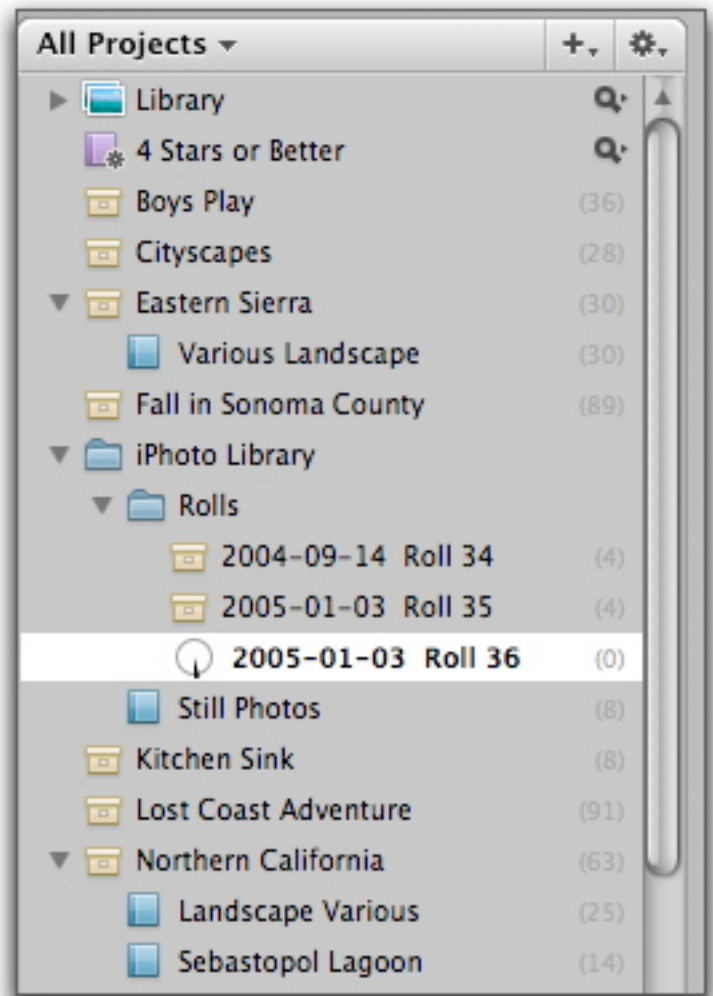
Compare and Rate Photos

MODULE SEVEN - COMPARING AND RATING

Aperture does many things well, but it shines for comparing and selecting images. You can begin by enabling Auto Stack (Stacks > Auto-Stack) to pull images into groups for easy culling. (See pages 101-102 in your Aperture manual for more information.)

Auto Stack mode lets you group shots recorded together for easy sorting.

Once your Stacks are created, you can collapse them by choosing Stack > Close Stack (Shift-K), or clicking on the Stack number in the upper left corner of the Stack.

You can choose a "Pick image," which represents the entire Stack by clicking on the image once to highlight it, then choose Stacks > Pick
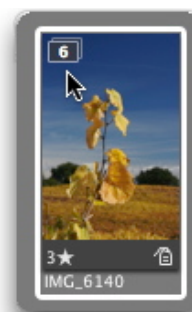
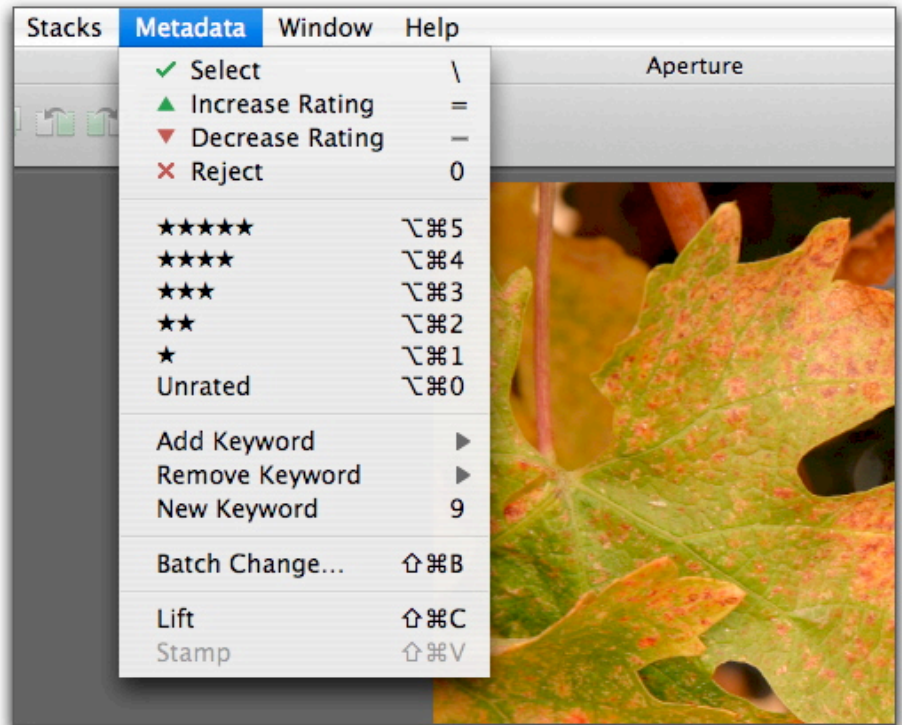(CMD \). That picture moves to the far left of the Stack and is on top if you collapse the stack. (See page 104 of your Aperture manual.)

To begin the comparison process for the images in the Stack, press the "V" key to enable the Viewer. You can set the Viewer mode by clicking on the icon to the far left of the Control Bar to display your options. Choose Stack to help you determine the best images in this particular group. Your Pick image will be displayed to the left, then the next image in the stack to the right of it. If the image on the right appears to be better, you can make it the Pick image by simply clicking on it and pressing the Return key. It now moves to the left and serves as the Pick image, and the others in the Stack will now be compared to it. You can make this exercise even more fun by going to Full Screen Mode by pressing the "F" key. After you

Aperture • Derrick Story • derrick@thedigitalstory.com
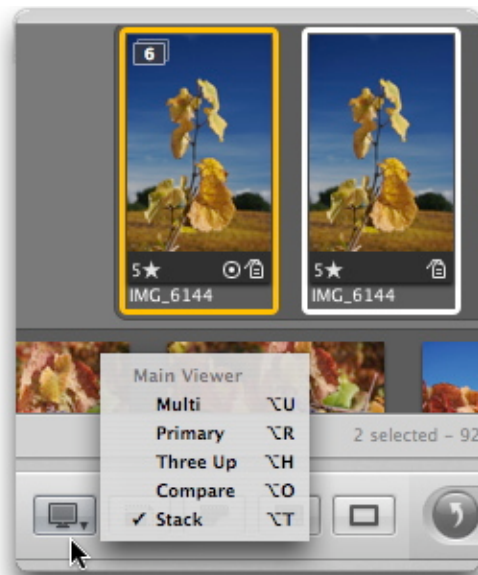
choose your Pick image, you may want to rate all of the pictures in the Stack before moving to the next group. There are many shortcuts to assigning ratings to an image. You can review them in the Metadata dropdown menu. Most people prefer to add rating stars by clicking once on the image to highlight it, then using the "=" to increase the rating or the "-" to decrease it. Others prefer to use the Option-CMD number to directly assign a star rating. Regardless of method, this is an effective way to determine your best pictures. Be sure to make the highest rated image in your Stack the Pick by using the "CMD \" keyboard shortcut. (See pages 110-114 of your Aperture manual.)

There are many methods in Aperture for culling your images. But grouping your shots in Stacks, setting a Pick, comparing the other pictures in the Stack to the Pick, then rating all the images is one of the most popular culling methods. (See pages 101-107 in your Aperture manual.)

Close Inspection with Zoom Mode and the Digital Loupe

Sometimes you need a closer look at your pictures to determine which ones are best, even when working in Full Screen mode. Aperture provides two great tools for this. First is the Zoom mode. While in the Viewer, press the "Z" key to enlarge the image to 100 percent size. You can move around in the image by holding down the spacebar and dragging. Or you can drag the red rectangle that appears in the image. (See page 84 in the Aperture manual.)

If you're doing a side-by-side zoomed comparison of two images, you can hold down the "Shift" key to drag them in unison. When you're finished inspected the images at full size, simply press the "Z" key again to return to normal viewing mode.

You may also want to use the Digital Loupe for this task. To enable it, press the "Accent Grave" key " ` " and the Loupe appears at its default magnification of 100 percent. If you want the Loupe bigger, just press the "CMD =" keys. The "CMD -" keys reduce its size. You can also increase its magnification by pressing the "CMD Shift =" keys, and decrease magnification using the "CMD Shift -" keys. (See page 83 of your Aperture manual.)
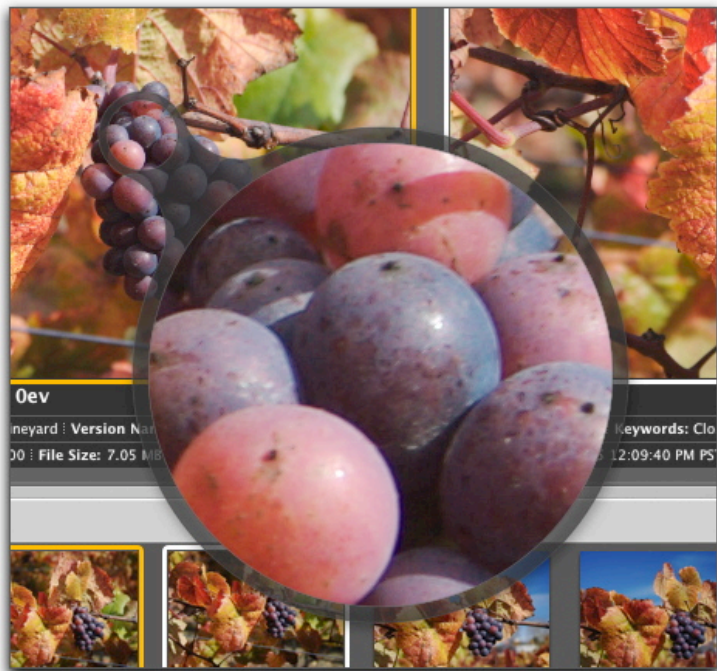
One of the cool things about the Loupe is that you can use it on thumbnails as well as images in the Viewer.
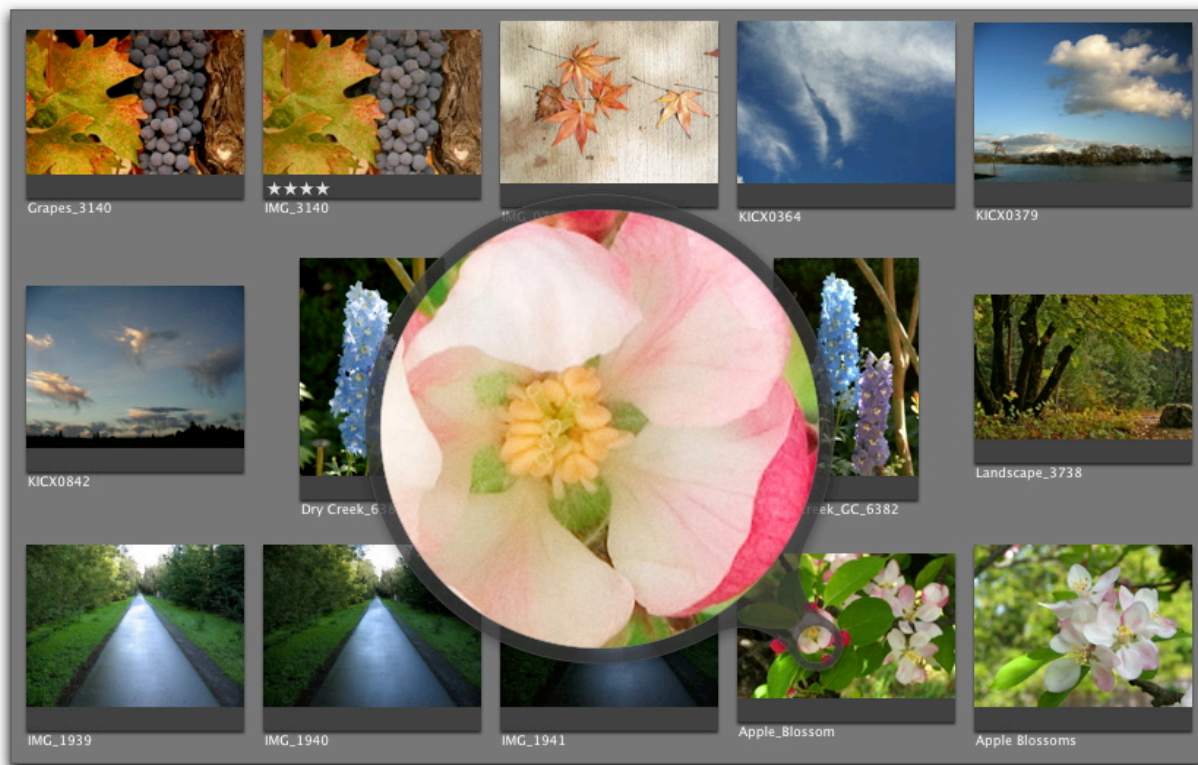
Speaking Notes for Comparing and Sorting

First, enable Auto Stack

Clean up your stacks by adding stray images or splitting stacks. (the stack splits to the left of your chosen image)

Choose what appears to be the best image and make it your "compare" image by pressing Return. You can Un-Compare it by pressing CMD-Return

You may want to rate the images as you compare them.

When you find the image that's your "Pick" image, click CMD-\ It will move to the top of the stack.

When you're comparing images, I like "Stack" mode because it keeps you in the stack while using the arrow keys to move back and forth. "Compare" mode is fine if you want to wander out of the stack, and "Multi" is good if you want to see more than 2 images at a time.

Working in Full View mode is great for comparing images.

Again, choosing "Stack" from Viewer mode is handy when working in Full view.

You can hide the Filmstrip in Full mode by using the CTRL + . keystrokes, and bring it back into view by using the CTRL + / keystrokes. Even when the Filmstrip is hidden, you can bring it back temporarily by waving the mouse pointer over the area it resides. These controls are also available under the Viewer Mode popup menu.

One other setting in the Viewer Mode popup menu that you may want to explore is the "Avoid" command. When enabled, this moves the Filmstrip around the screen so it doesn't overlap your pictures as you move from image to image.

Also, you have some control with the Toolbar that appears at the top of the screen. Normally it only appears when you wave the mouse over the area. But you can keep it there all the time by choosing "Always Show Toolbar" from the Toolbar.

Zoom Mode is a great tool to help you examine the details of your image at 100% magnification. You can enable Zoom mode by pressing the Z key. If you want to move around within the image,

hold down the space bar and drag the mouse pointer. If you're comparing images, hold down the Shift key too and you can drag around within both images in unison.

The Digital Loupe is also handy for examining image detail. You can enable it by pressing the ` key in the upper left corner of your keyboard. The Loupe starts out at 100% magnification. You can use these keyboard commands to increase the diameter and magnification of the Loupe:

You can also enlarge the Loupe and increase its magnification level to see more detail.
To reduce the size of the Loupe:
m Press Command-hyphen (-).
To enlarge the size of the Loupe:
m Press Command–equal sign (=).
To increase the Loupe magnification:
m Press Command–Shift–equal sign (=).
Press these keys repeatedly to increase magnification more.
To decrease the Loupe magnification:
m Press Command-Shift-hyphen (-).
Press these keys repeatedly to decrease magnification more.

You can even use the Loupe on thumbnails, which is very handy.

Image Processing

MODULE EIGHT - APERTURE'S EDITING TOOLS

Even though Aperture doesn't have the image editing muscle that Photoshop boasts, it does have the tools that photographers need for the bulk of their work. And one of the great things about Aperture's approach is that it never touches your master. From the moment of import, Aperture creates a "Version" of your master, and that's where you see your changes applied.

You can add tools to the Adjustments HUD via the Add pop-up menu.

Even better, this version is nothing more than XML data that points back to the master. So instead of duplicating massive megabyte files for adjustments, Aperture creates only Kilobytes of XML data. That's why you won't see a "Save As" command in Aperture. It isn't necessary. If you ever get insecure about your master file while working on a version of it, just type "M" to bring the Master forward in the Viewer. It's always there.

When you're ready to edit, just click once on your thumbnail to highlight it, then type "V" to activate the Viewer. Press "I" to display all of the Inspectors in Viewer mode. My favorite editing environment, however, is to go to Full Screen mode and use the Adjustments HUD (HUD is a term in Aperture for Heads Up Display). Press "H" to show the Adjustments HUD.

You have lots of controls that you can apply to your image (see page 152 for more info):

- Red eye correction

- Spot and patch

- Straighten

- Crop

- Levels

- Exposure

- Highlight and shadows (love this one)

- White balance

- Monochrome mixer (this one is cool too!)

- Sepia tone

- Noise reduction

- Sharpen

You can choose the controls that you want to appear in the Adjustments HUD by selecting them from the "+" dropdown menu in the upper right corner of the HUD. A histogram appears at the top of the HUD. The default view is Luminance. But you can change that view to RGB, or even

see the individual channels themselves by selecting from the options presented in the Action pop-up menu. It's the button in the upper right corner of the Adjustments HUD.

The primary adjustments that you'll want to load into the HUD are Exposure, Levels, White Balance, and Sharpen. These are the tools that you'll use most of the time. (See Figure on page 31 of this workbook.) To remove an adjustment from the HUD, click on its area once to highlight it, then select "Remove Selected" from the Actions menu.

When you use one of the adjustment settings, such as Exposure, the box next to the label will automatically display a check mark. You can toggle back and forth between the original view and the adjusted on by unchecking and checking the box.

You also have a few auto adjustments to choose from. One for Exposure and two for Levels. You can access them via the buttons directly below the Histogram. What's nice about the auto adjustments is that you can use them as a starting point, then fine tune the settings in the respective Exposure and Levels panels. At any time, if you want to undo those settings, just click on the curved arrow on the right side of each specific adjustment.

Speaking of Levels adjustments, you can work with "quarter tones" by clicking on the Quarter Tones button in the Levels panel (see pointer arrow in illustration). This essentially gives you curves-like control without having to leave Levels. Click the button again to turn off quarter tones.
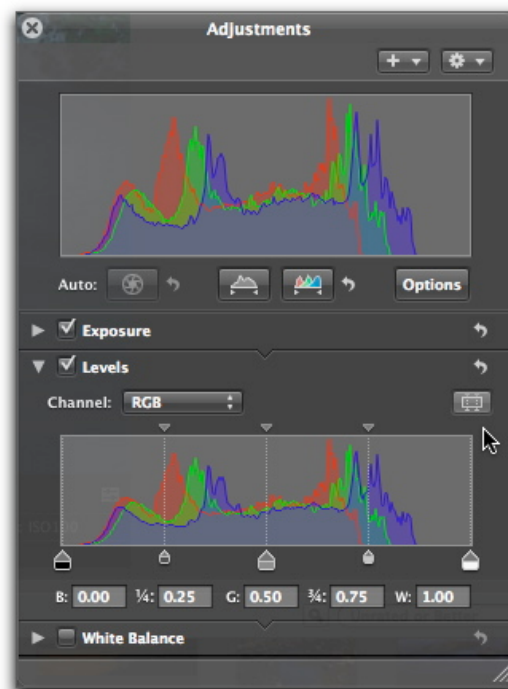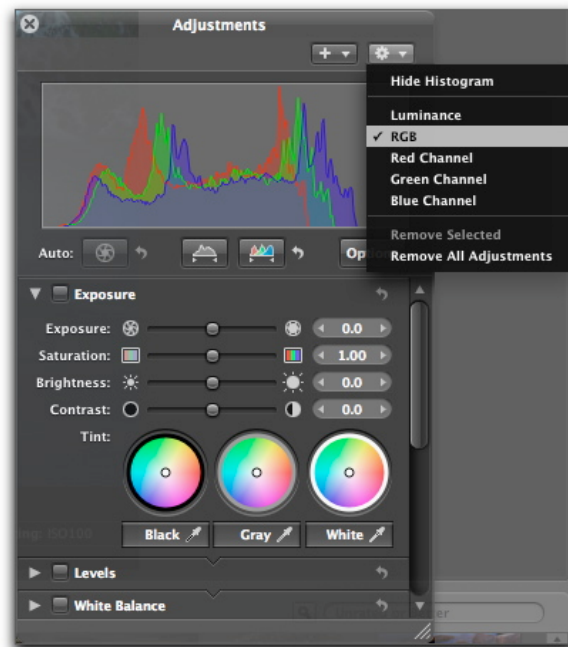
Another goodie hidden in Aperture is the Highlight Hot Areas display "Shift Option H" that displays parts of your image where the pixels are "blown out" because of overexposure. Aperture displays the hot areas in red. You can quickly check hot areas by using the keyboard command.

Aperture also handles cropping in an innovative way. You have the standard-looking crop tool "C" that lets you free-select or constrain as with other cropping tools you've used in the past. The difference with Aperture is that it doesn't throw away the pixels after the crop.

They're still there, you just can't see them–that is, unless you enable the cropping tool again. This gives you total freedom to change your mind without having to worry about losing pixel information.

Editing in Photoshop

You can edit your Aperture images in Photoshop. You can Ctrl-click on the picture and choose "Open with External Editor" from the pop-up menu. Aperture creates a duplicate file and opens it in Photoshop. When you complete your edits in Photoshop, and save, the edits are applied to

the duplicate image in Aperture. The layers are preserved, but you can't see them unless you re-open the picture in Photoshop. See page 157 of the Aperture manual for more information.

I was disappointed to discover, however, that I can't link directly to Camera Raw for editing my Raw files in Aperture. I can use Photoshop as an external editor, but only in the .PSD or .TIFF format. So if I open a .CR2 file (contained in Aperture) in an "external editor," (Photoshop CS2), then Aperture opens a .PSD version of the file in Photoshop. Once I make my adjustments, the changes are saved back to Aperture (again, leaving the master file untouched).

If I want to work in Camera Raw, I have to export the master .CR2 file out of Aperture, edit in Camera Raw, then import the Photoshop file back into Aperture.

Speaking Notes for Image Adjustment

In the Adjustments HUD, you can work with an RGB histogram or a Luminance view. Let's start with looking at the difference between Luminance and RGB.

Luminance

Perceived brightness, or grayscale level, of a color. Luminance and chromaticity together fully define a perceived color.
www.w3.org/TR/PNG-Glossary.html

The black and white, or brightness, part of a component video signal.
www.psps.com/pages_frames/tech_talk/film_and_video_terms.htm

 Lumnance is a measure only of light.
www.novalynx.com/glossary-l.html

Black and white portion of a video signal representing picture contrast and brightness.
www.digitalpostproduction.com/Htm/Features/DigitalVideoGlossary.htm

The physical intensity of light.
graphics.comsci.us/glossary/

RGB

Red, Green, Blue. The hues of the additive color system.
www.rainwater.com/glossary/r.html

RGB (red, green, and blue) are called additive colors because added together they may create all colors. Typically, RGB is used for slide presentations, computer software and games, and any-thing that is viewed on a video monitor.
www.graphicsquote.com/glossaryofterms.html

Red, green, blue. A method of processing color images according to their red, green, and blue color content.
www.absoft.com/Products/Compilers/C_C++/XLC/docs/glossary/czgr.htm

RGB is the mode that we've been using for our Levels adjustments in Photoshop. You can view the top histogram in the HUD in either mode. Generally speaking I like to work in RGB mode.

In either mode, you may want to enable "Highlight Hot Areas," Shift - Option - H. Helps you make highlight adjustments without completely blowing then out.

Show the Auto adjustments for Exposure, Luminance Levels, and RGB Levels.

At any time you can use the little "curvey arrow" to restore those particular settings to default. You can temporarily disable an adjustment by unchecking the box on the left of it. Rechecking the box reapplies the adjustment.

Auto White Balance adjustment -- you can do semi-auto white balance adjustment by using the eye dropper tool in the White Balance pane to select a white point. Aperture will attempt to set the proper white balance based on your white point selection.

Archiving Your Library

MODULE NINE - VAULTS AND BACKUP

Aperture knows how to protect your images. It's called the Vault. You can create a Vault on one or more external FireWire drives so you have complete backups in more than one location. Only picture information that's changed is written to the Vault when you enable the update command. So the backup process is as fast as it is easy. And if something goes wrong with your Aperture library, it's easy to restore it completely from any of the Vaults you've archived.

Aperture's Vault protects your images and metadata.

Setting up a Vault is as simple as connecting a FireWire drive then using the "Add Vault" command (File > Vault > Add Vault). You can display all of your Vaults in the Project pane by selecting Window > Show Vaults. From there, you can enable an update, add more Vaults, or delete a Vault if necessary.

Backup Strategy

I recommend that you create at least three Vaults for your library. The first Vault is located on a portable hard drive, such as a 60 GB iPod. This is the Vault that you use for daily backups while working with your Aperture images. The second Vault is a high capacity hard drive located at your office. This Vault is updated weekly. The third Vault is also updated weekly, but is located at

home. This strategy protects you against hard drive failure on your computer, and drive failure on an external backup drive too.

Vault Status

In the Vault inspector, Aperture shows you the status of your Vaults and if they're connected. If the status button is black, the Vault is up to date. Yellow indicates that all of the Master files have been backed up, but a change has occurred to at least one version file that hasn't been backed up. Red means that you have at least one master file that has not been backed up. To back up a Vault, just connect the FireWire drive and and click on the yellow or red update button. Aperture will compare the library in the Vault with that in Aperture, then update the Vault with the differences. The status color will then change to black.
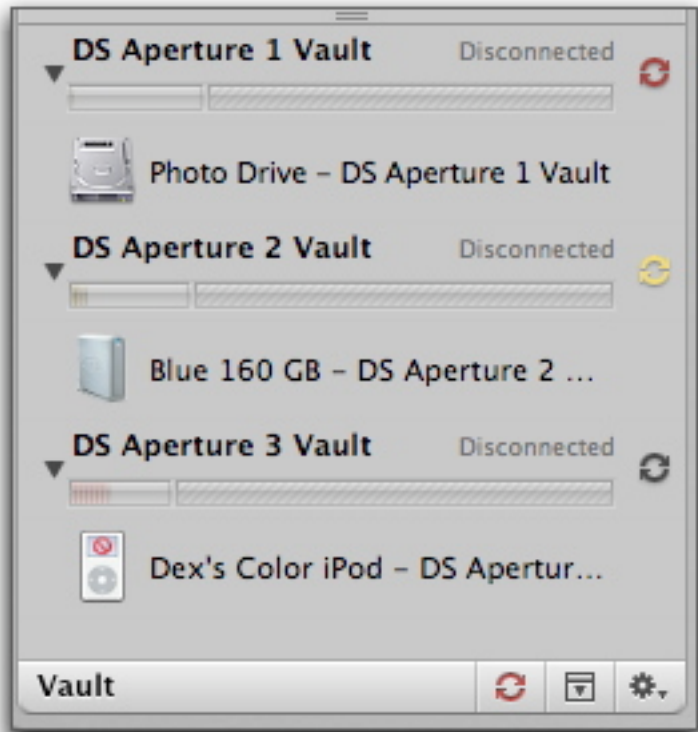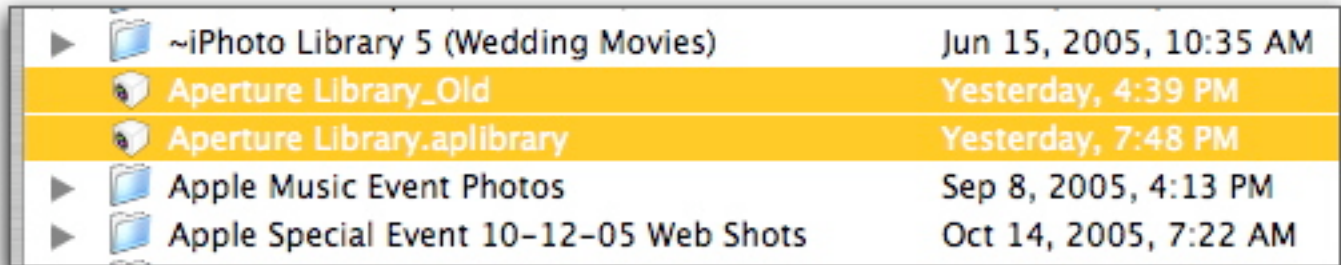
Project Backup

You can also backup an individual Project within Aperture. The project container holds all of the masters in that project, plus versions and metadata. You can drag a saved Project into Aperture on another computer, and everything will appear exactly the same within the Project as it does on your Mac.

To export a Project, just drag it to your Desktop, or CTRL-click on the Project and choose "Export Project" from the pop-up menu.

Restoring from a Vault

If your Aperture library becomes corrupted or if you lose it due to hard drive failure, you can restore it from a saved copy in a Vault. Go to File > Vault > Restore Library. Once you assure Aperture that you really want to do this, it will make your existing Library "old," then add the restored Library from your FireWire drive. Both of these libraries are stored in your Pictures folder, unless you've indicated otherwise.

First test the new Library to make sure everything is OK. On a PowerBook, I've noticed that Aperture has to rebuild all of the thumbnails the first time you reopen a Project. But after that, everything seems to behave normally. Once you're satisfied that things are alright, you can either backup your old Library and then discard it, or just trash it without backing up. Your call.

Aperture makes it easy to do what we all know we should be doing... backing up our photography often and in different locations.

Image Export

IMAGE EXPORT SPEAKING NOTES

Exporting Master

You have two basic options for exporting images out of Aperture: Export Master and Export Version. When you choose Export Master, Aperture takes the original image that you captured with your camera and makes an exact copy of it placing it in the location you indicate.
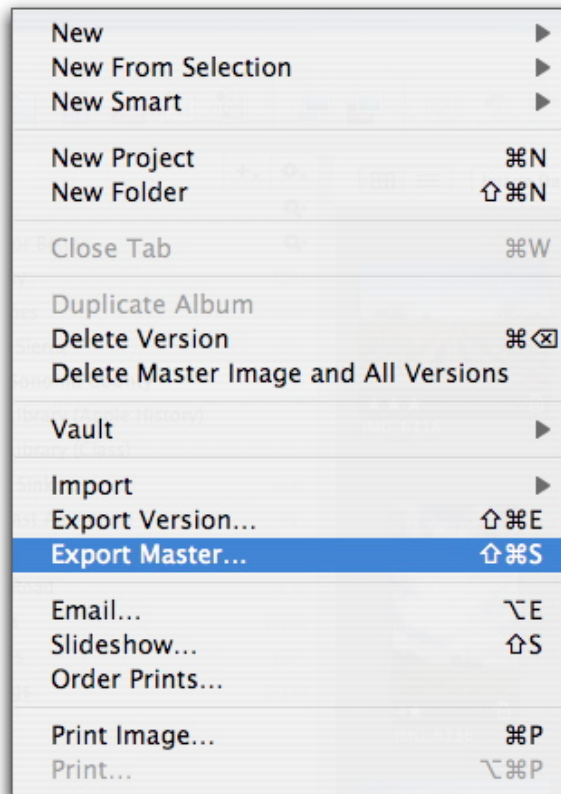

Choose Export Master when you want to move the original image your camera captured out of Aperture.

If you export a Raw file, for example, then that's what you'll see on your hard drive. If you drag that file to Photoshop, it will open Camera Raw allowing you to use the tools that you're accustomed to for image editing. You can then take that completed file and import it back into Aperture. You'll want to do so as a Photoshop or Tiff file to preserve your Camera Raw image edits.

Exporting Version

When you export a version of an Aperture file, such as a Raw, you have the ability to apply any instructions you want, plus IPTC data to the file on export. You can configure the export parameters and save them as presets.

Many people become confused by the export presets that Apple provides. You are not limited to these! They are only starting points. You can delete those presets or add to them with your own. To do so, choose "Edit" from the Export Preset popup window.
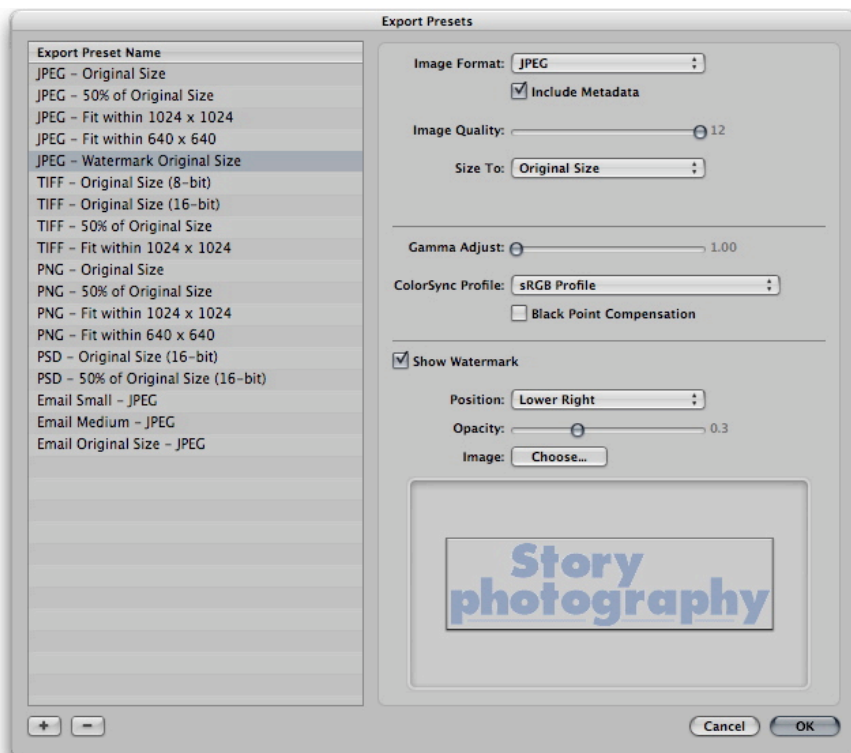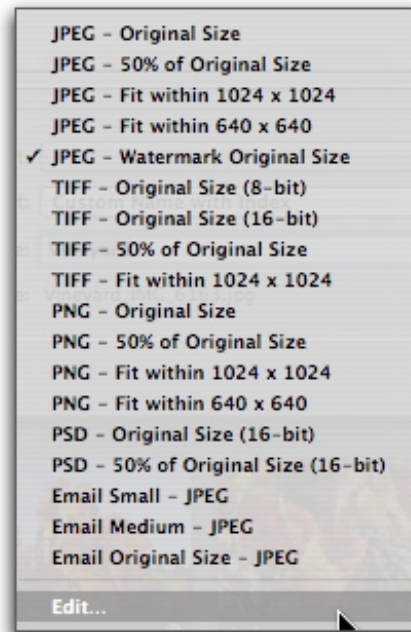
Now you can configure your own export preset and save it to the list.

There are a couple things in the Export Edit dialog box you should be aware of. The Include Metadata checkbox is your opportunity to add IPTC caption, keyword, and copyright information to the file metadata on export. You can also choose a specific ColorSync profile, including those for a specific printer. And you can add a watermark. If you want to save this info as a preset, just click the + button in the lower left corner of the dialog box.

You can export multiple versions by selecting them in Aperture and choosing Export Versions. Once you choose your preset, those instructions will be applied to all the images you selected and they will be exported to the location you indicated on your hard drive.

If you work with a printing lab that has specific settings for different types of prints, you can set up an Export Preset for those different settings and have your images perfectly calibrated for output.

As for your Master images in Aperture, they are left untouched. They are never touched, whether they are Jpegs or Raw files.

Printing

PRINTING SPEAKING NOTES

Aperture provides two basic types of printing: single image and contact sheet.
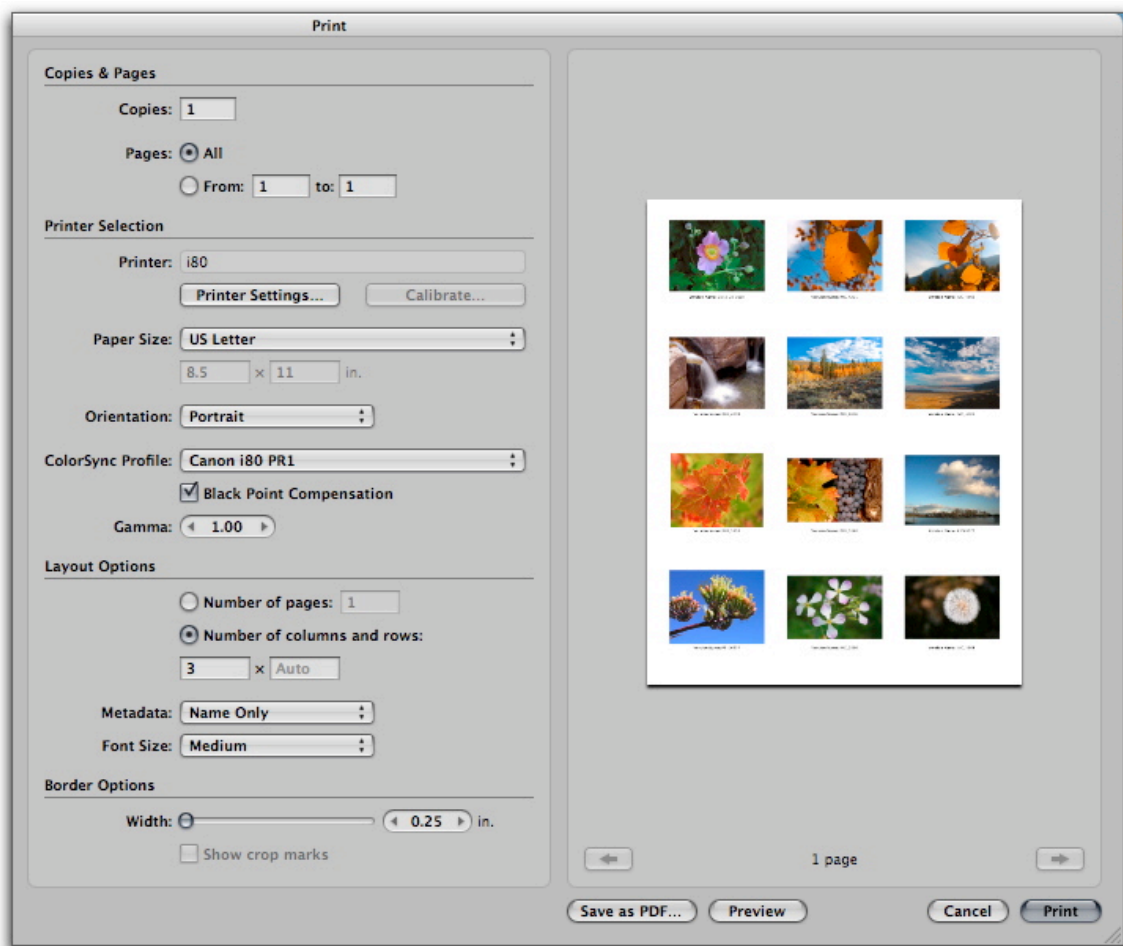
Contact sheet set up in Aperture's Print dialog box.

As with many other areas in Aperture, you can save your custom settings as presets that are simple to employ for future print jobs of the same nature.

Setting Up a Contact Sheet

First select the images in Aperture that you want to include on your contact sheet. You can use CMD-click or any other method of selection that you normally use. Then choose Print Images from the File dropdown menu.

Once the dialog box appears, click on the Printer Settings button and choose the printer you want to use for this preset and make any custom printer configurations such as its paper surface. Click Done returning you to the Aperture Print dialog box. Now set Paper Size and other basic settings, including the ColorSync Profile. If you don't have a specific one loaded for your printer, you can use System Managed.

In the Layout Options section, choose the number of columns you want on your contact sheet. Aperture will automatically calculate the rows for you. You can also select the metadata you want included, such as file name or caption.

Once you have everything set up to your liking, click the Save button at the bottom of the Preset Name column. Give your preset a descriptive name so you can return to it in the future.

If you want to preview your contact sheet, click the Preview button in the lower right corner. Aperture will open Preview for you and load your contact sheet. If you like what you see, you can print directly from Preview.

You can also save your contact sheet as a PDF by clicking on Save as PDF...

Making a JPEG Contact Sheet for Email Attachment

Here's a neat trick, if you want to save your contact sheet as a JPEG, first save it as a PDF in Aperture. The open the PDF in Preview, and choose Save As... Select JPEG from the format popup menu and click OK.

My PDF version of the contact sheet was 4MBs, but my JPEG version of it was only 270kb, a substantial savings that your recipients will thank you for.

Making Single Prints

Making single prints in Aperture is similar to contact sheets. First, select the image you want to print and choose Print Image... from the File dropdown menu. Set up the job as you did for the contact sheet, then save your settings as another preset with a descriptive name.
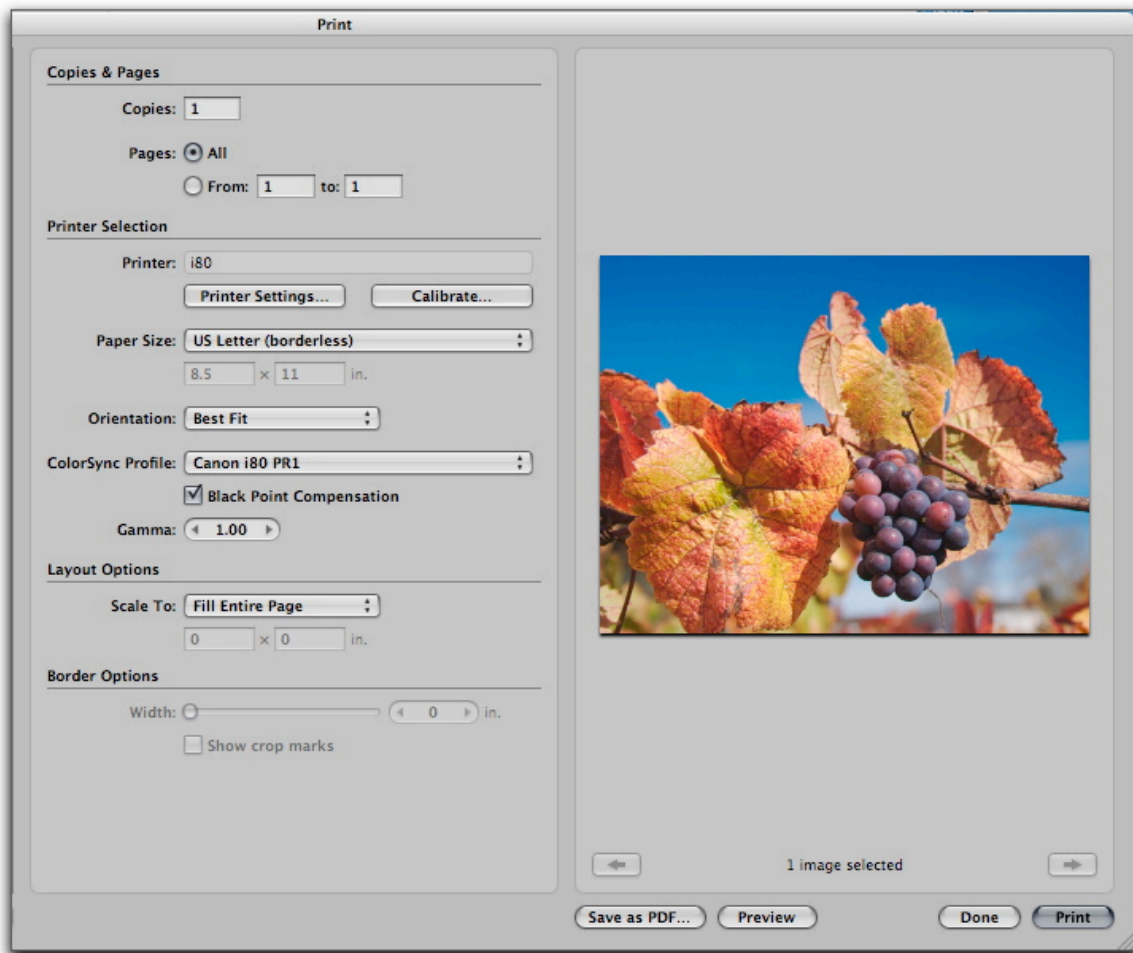
Calibrating Your Printer

It's worth the effort to click on the Calibrate button in the Print dialog box the first time you use a printer with Aperture. It will print out a guide sheet that you can use to make paper edge adjustments so your images are positioned properly on the paper.