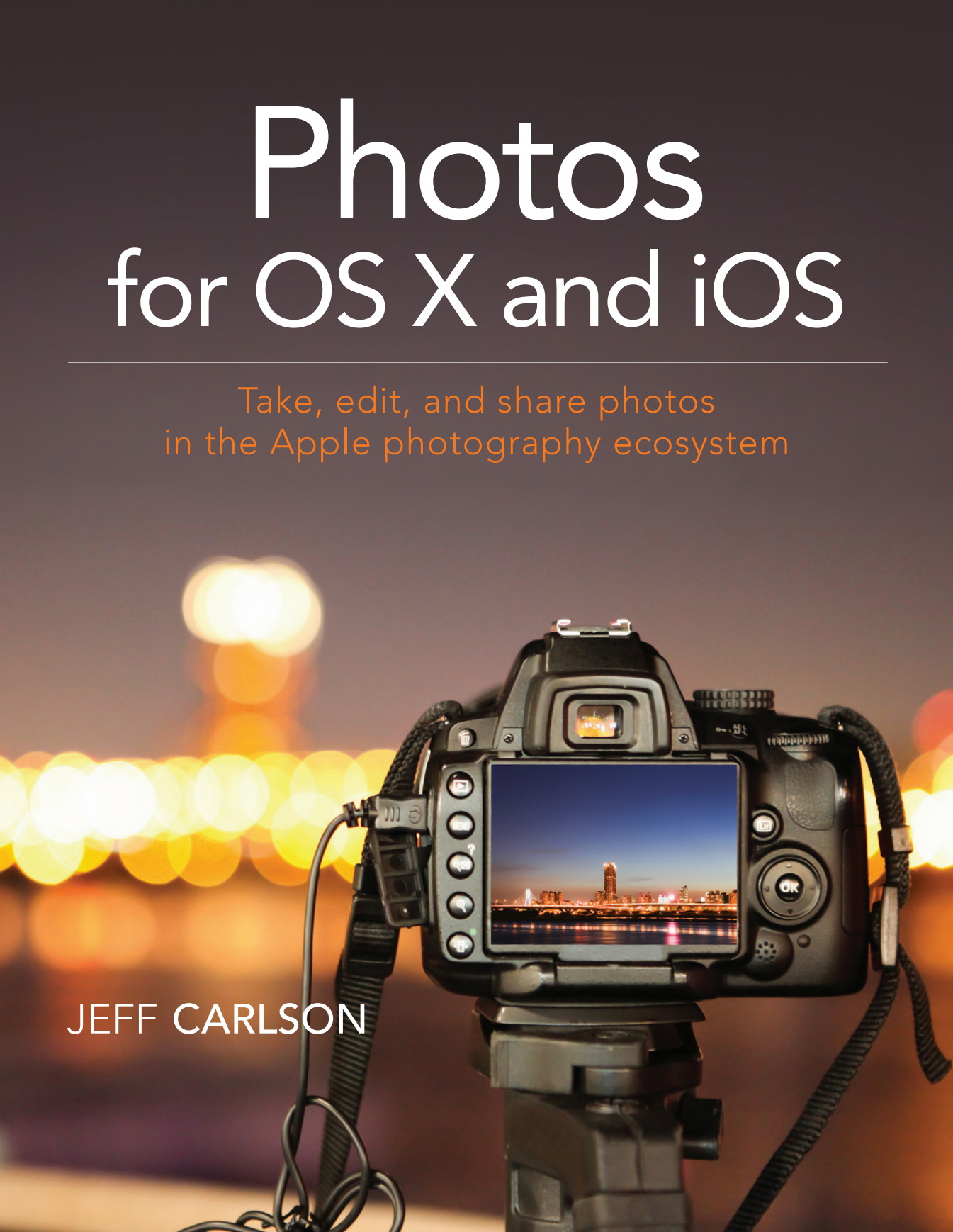
Photos for OS X and iOS

Take, edit, and share photos
in the Apple photography ecosystem



JEFF CARLSON

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Jeff Carlson

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Editors: Clifford Colby and Scout Festa
Production editor: David Van Ness
Copyeditor: Scout Festa
Compositors: Jeff Carlson
Indexer: Valerie Haynes Perry
Cover Design: Aren Straiger
Interior Design: Mimi Heft

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For Cliff, who has shepherded more of my words into print than perhaps anyone

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Introduction

The iPhone is the most popular camera in the world. Not the most popular mobile phone, but the most popular *camera*. It's taken the place of many point-and-shoot cameras for one reason: you can't argue with convenience. It's easy to capture a spontaneous moment using the camera phone in your pocket. Even when I'm out shooting with other cameras, I also snap photos using my iPhone.

But what happens then? Images can't stay on the iPhone forever. The answer is the twin anchors of Apple's photography ecosystem, Photos for OS X and Photos for iOS, tied together with iCloud Photo Library. Images captured on an iPhone, iPad, or iPod touch automatically sync to iCloud and are copied to all your devices. That also means you have access to your entire photo library wherever you are.

The Photos application isn't solely focused on mobile photography, mind you. Photos for OS X replaces Apple's earlier photo applications, iPhoto and Aperture, where you probably have years of images from several types of digital cameras stored.

This book takes you through the entire workflow of working with photographs on the Mac, from snapping and editing photos on iOS devices to managing them on other devices and the Mac. Use iCloud Photo Library to access all your photos no matter where you are, and iCloud Photo Stream to share photos with others instantly. Then take the photos further by making prints and cards, creating photo books and calendars, and building slideshows. I also walk you through the steps (and around potential pitfalls) of converting existing iPhoto and Aperture libraries to work with Photos for OS X.

Notes About This Book

I'm making a few assumptions about you, dear reader, to make sure we're both on the same page:

- You own a Mac, an iOS device, or both, which can run the included Photos apps. That means you're running a Mac with OS X Yosemite (version 10.10.3) or later, and iOS 8 on any iPhone, iPad, or iPod touch device.

- You know the basics of using Apple's products. I don't expect you to be an expert, but as long as you can get around easily, you're good.
- You own a camera (which may be your iPhone) and have photos you can work with. I don't provide sample files to download, but that's okay—I'd rather you invest your precious time on your own photos.

As you read, you'll run into examples where I've adopted general terms or phrases to avoid getting distracted by details. For example, I may refer to the "computer" or the "desktop" as shorthand for any traditional computer that isn't an iPad or iPhone.

The same general rule applies to iPad and iPhone models. For example, the iPad mini, despite its size, is still a fully functional iPad, so when I refer to "iPad" in general it applies to the iPad mini as well as to the larger, flagship model. Similarly, I don't always refer to specific models.

I also frequently refer to just the iPhone even though the information applies equally well to the iPod touch. I'm not being lazy, for two reasons: If I had to always type "iPhone, iPad, and iPod touch," I'd go quickly insane. Also, as I write this, the latest iPod touch Apple sells is the fifth-generation model, which was originally released in 2012. I suspect that unless Apple has something up its sleeve, the iPod touch as we know it will soon disappear.

When directing you to specific areas within iOS and OS X, I use a shorthand for locating them. For example, to access the preferences for the Camera app, I'll point you to **Settings > Photos & Camera**. That translates to "open the Settings app and tap the Photos & Camera button" (1).

On the Mac, settings are called *preference panes* and are found in System Preferences. So when I ask you to open the iCloud preference pane, it means "open System Preferences and click the iCloud icon" (2).

1 Photos & Camera settings on the iPad

2 Accessing the iCloud preference pane on OS X

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CHAPTER 4

iCloud Photo Library

Over the years, iPhoto got to be pretty creaky and slow, which by itself is reason enough to overhaul the whole thing. But Apple's work to replace iPhoto with the Photos for OS X app was, I believe, less about modernizing iPhoto's code and more about making cloud synchronization work.

Here's the problem: We have thousands of photos, and we also have mobile devices that can't possibly store them all. Even though we rarely, if ever, need entire libraries on our iPhones, we also don't like monkeying about with manual syncing.

iCloud Photo Library is Apple's grand attempt at making all your photos and videos available on any device, at any time. It's easy to set up, and has genuinely changed how I work with my library and also changed my expectations for how photos should work on mobile devices.

iCloud Photo Library Basics

Before I get into how to use iCloud Photo Library, let's cover just what it is, what's involved, and other important things to know before you decide to set it up.

iCloud Photo Library is not required

When Photos for OS X was first announced, Apple emphasized iCloud Photo Library to the extent that many people assumed (and still assume) it's required to use the new software. *The feature is entirely optional.* In fact, in some cases you may not be able to use it.

If you own a Mac and have no interest in viewing photos on mobile devices, you can ignore this feature. If you do own an iPhone or iPad and want the photos you capture with those to transfer easily to your Mac, you can enable My Photo Stream (see the next item).

Telling Apple's cloud photo services apart

Apple offers three separate, but sometimes linked, cloud photo services, which were introduced at separate times.

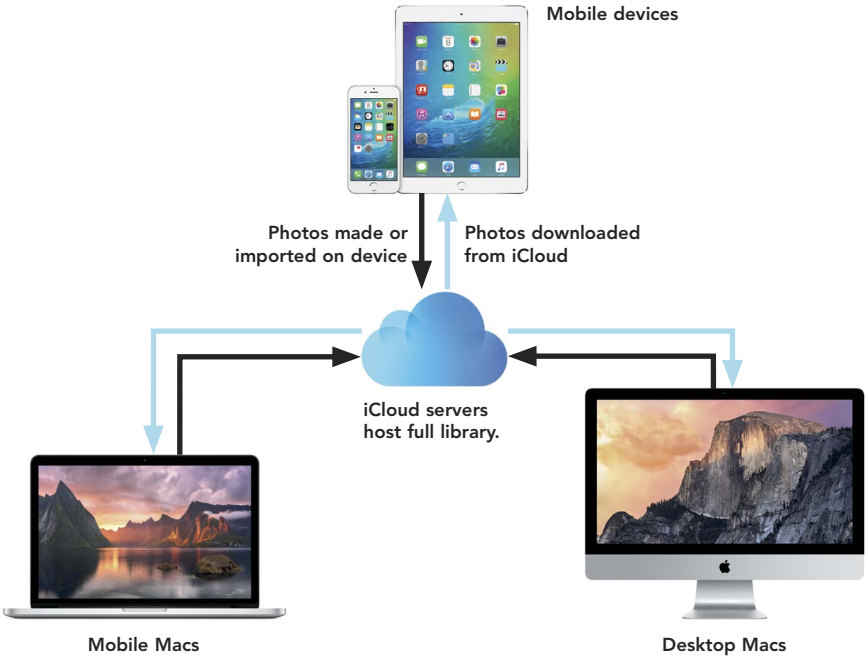
- **iCloud Photo Library:** The most recent service makes your entire photo library available via iCloud to iOS devices and the Web (when you log in with your Apple ID).
- **iCloud Photo Sharing:** This service lets you create shared albums to which other people subscribe. When new photos are added to an album, everyone receives the images. For example, I created a shared album of recent photos of my daughter so family members near and far get to stay current with what she's up to. Subscribers can comment and like the photos, and in some cases contribute their own photos for everyone else to see.
- **My Photo Stream:** Apple's first foray into cloud-based photo sharing, this service automatically transfers photos you capture using an iOS device to the cloud. Within a few seconds, the photos appear on other iOS devices and in Photos for OS X (if enabled). You can do the same thing with iCloud Photo Library, but there are restrictions you need to be aware of (see "My Photo Stream," later in this chapter).

How iCloud Photo Library works

The key component is iCloud—it's the central hub from which photos and videos are propagated to your devices (4.1).

The images in Photos for OS X and in Photos for iOS on your devices are uploaded to the iCloud servers and stored as your photo library. From there, images that appeared in one location but not the others, such as photos you capture using the iPhone's camera, are copied to the other destinations.

The result is the same library—including the same albums—on every device.



4.1 iCloud Photo Library is the hub for all photos created in or imported into the Photos apps on your devices.

Here we run into a conundrum: Not all devices have the same amount of storage. If your iPhone is a 16 GB model, but your photo library is larger than that, how does your entire library show up on the iPhone?

The Photos apps store compressed, low-resolution versions of your photos on the mobile devices—and optionally on the Macs—so you can access your entire library. When you want to view a photo, a higher-resolution version is downloaded as needed.

► **TIP** Depending on the amount of free space on your devices and Macs, you can opt to store originals instead of low-resolution versions. See "Set Up iCloud Photo Library," just ahead.

► **NOTE** What about raw images? Your raw originals (and Raw+JPEG pairs) are uploaded to iCloud and stored there. iCloud creates low-resolution JPEG versions for storage on devices. Opening one on the Mac loads the original for editing. Opening one on an iOS device loads a high-resolution JPEG for editing, since iOS does not support working with raw formats; any edits you make on iOS, however, apply to the raw version on the Mac when they're synchronized.

iCloud storage requirements

Depending on the size of your photo library, you'll need to pay Apple for iCloud storage. A free iCloud account includes 5 GB of storage, but that amount is used by all iCloud services, such as iCloud Drive and iOS device backups (if you back up to iCloud). If your photo library is larger than that, you need to pony up for a paid service tier:

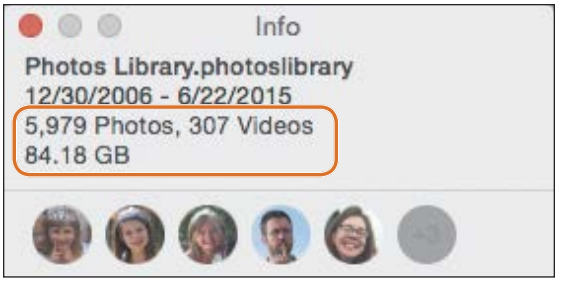
- 20 GB for $0.99 a month
- 200 GB for $3.99 a month
- 500 GB for $9.99 a month
- 1 TB for $19.99 a month

That 1 TB plan is the largest option available. If your library is larger than 1 TB, you can't use iCloud Photo Library.

Also, if you bump up against the limit of your current plan (say, you import a bunch of photos that push you past 20 GB), the Photos apps will stop updating until you either delete photos to make room or move up to another paid tier.

To see how large your library is, do this:

1. In Photos for OS X, go to the Photos tab and make sure no images are selected.
2. Choose Window > Info and look at the size listed at the top **(4.2)**.



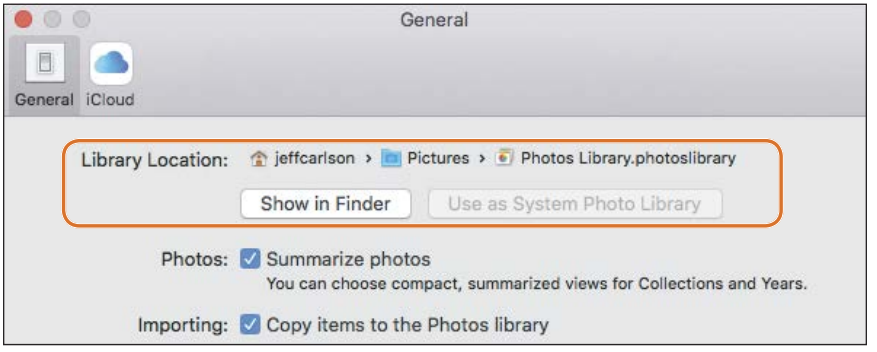
4.2 See how much storage your Photos library occupies.

- **NOTE** If you're not subscribed to a higher tier and your library exceeds 5 GB, the Photos app won't even let you turn on iCloud Photo Library in the first place.

- **NOTE** Yes, Apple's prices for cloud storage are higher than competing services like Dropbox, Google, or Flickr. I hope Apple reconsiders their pricing in light of these other services. For now, you can justify the price of using iCloud Photo Library as being part of Apple's ecosystem and the way the Photos apps work on all Apple products. To stay on topic, I'll be covering just Apple's service in this book, not the others.

Library must be the System Photo Library

If you have multiple Photos library files (such as if you converted old libraries or created separate ones; see Chapter 3), only one of them can be used as the iCloud Photo Library. To set this up, open the Photos preferences, click the General button, and then click Use as System Photo Library. If the option is grayed out, it means that library is already set as the System Photo Library (**4.3**).



4.3 Designate your System Photo Library.

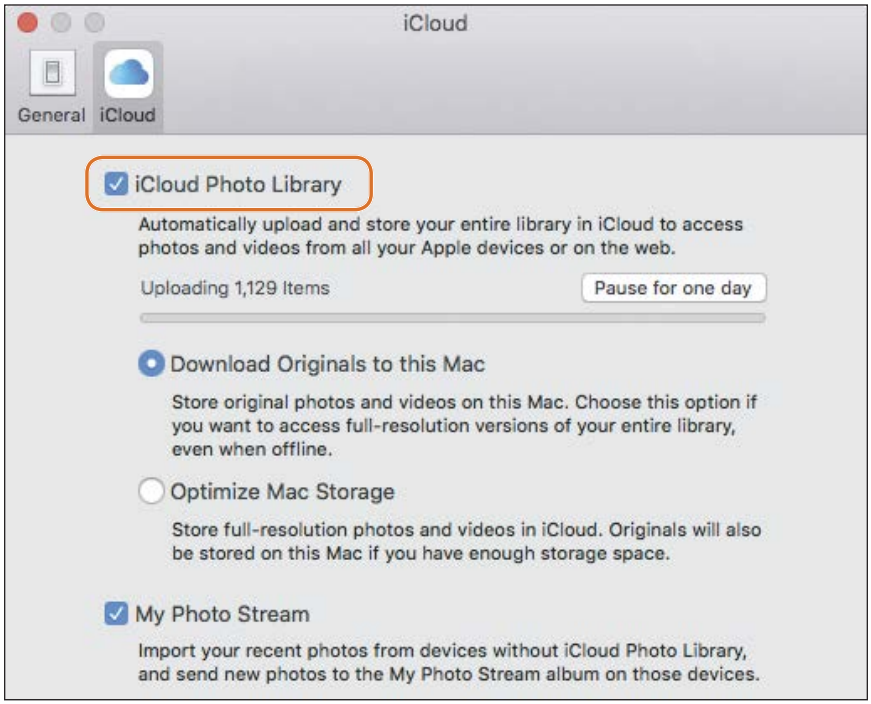
Set Up iCloud Photo Library

In true Apple fashion, turning on iCloud Photo Library is almost a one-click operation. Here's how to enable it in Photos for OS X and Photos for iOS, plus the settings you need to be aware of to make it work well.

Photos for OS X

To get iCloud Photo Library working on your Mac, do the following:

1. First, you need to be signed in to iCloud. If you're not already, open System Preferences, click the iCloud icon, and enter your Apple ID and password. You can also reach the same point from the preferences window in the Photos application, under iCloud.
2. In Photos, go to the iCloud preferences window and click the iCloud Photo Library checkbox (4.4). Once it's enabled, Photos begins uploading the contents of your library to iCloud.



4.4 Enable iCloud Photo Library.

3. Choose how to store the image files on the machine:
    - **Download Originals to this Mac:** The original files are stored locally as well as in the cloud.
    - **Optimize Mac Storage:** The original files are kept in the cloud, and if space permits, originals remain on the Mac. However, most photos stored on the computer are compressed, low-resolution versions.

▶ **TIP** Photos for OS X takes into account the overall unused storage space on your Mac and calculates more than the size of your actual library size for its use. If you're running thin on free space, the Download Originals to this Mac option is unavailable—even if all the originals are already stored there! See the sidebar "Working with Optimized Libraries" for more information.

Photos for iOS

The steps to enable iCloud Photo Library on an iOS device are nearly identical:

1. Open the Settings app.
2. Tap the iCloud setting and sign in using your Apple ID and password (the same ones you use on the Mac).
3. Tap the switch for iCloud Photo Library to turn it on **(4.5)**.
4. Choose whether originals or optimized versions of photos should be stored on the device (see step 3, above).

4.5 Enable iCloud Photo Library on an iPhone.

Working with Optimized Libraries

Storing optimized versions of photos makes sense on iOS devices, which offer far less storage than most Macs. So why would you choose that option in Photos for OS X? Two reasons: to free up space on your Mac or to take your library along on a laptop such as a MacBook Air, which offers less storage than an iMac or other desktop Mac—as of this writing, the least-expensive MacBook Pro and MacBook Air models include just 128 GB of storage, the same as the top-of-the-line iPad and iPhone.

My MacBook Pro has plenty of space to store my Photos library…well, it would if it weren't already full of gigabytes of other junk. So even though that machine is my main one, the Photos library is optimized.

Now, I'm not crazy enough to treat iCloud Photo Library as a backup for my originals. True, my originals are stored on Apple's servers, but that can't be the only location for those files. So instead, I have a Mac mini in my office that I use for storing media, which includes Photos set up to download originals. That gives me a local backup and an iCloud backup of those important versions, plus additional direct backups to that Mac that I do as part of my regular backup scheme.

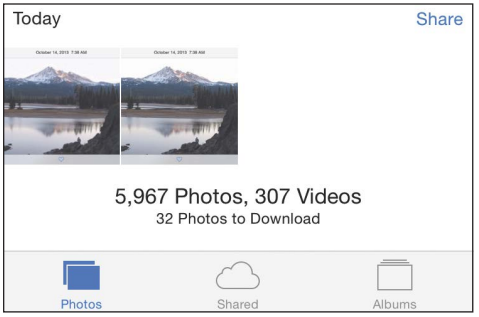
Consolidating a Library for iCloud

As I mentioned in Chapter 3, a way to work around a too-small hard disk is to store the photos' image files on an external disk as referenced files, instead of within the library's file.

Unfortunately, iCloud Photo Library won't accommodate that setup. If any photos are referenced, they need to be consolidated back into the main library file (or removed). The easiest way to do that is to create a smart album that finds all referenced files (set the condition to "Photo is referenced" in the pop-up menus), select the photos, and then choose File > Consolidate. Only then will you be able to use the library with iCloud Photo Library.

View Photos Everywhere

Once iCloud Photo Library is set up, photo synchronization happens automatically when you're connected to a Wi-Fi network; photos don't transfer over the cellular connection, so they don't consume your phone plan's data allotment. At any time, scroll to the bottom of the Photos window to view the status of uploads and downloads (**4.6**).



4.6 View the sync status (iPhone shown here).

Pause iCloud Photo Library syncing

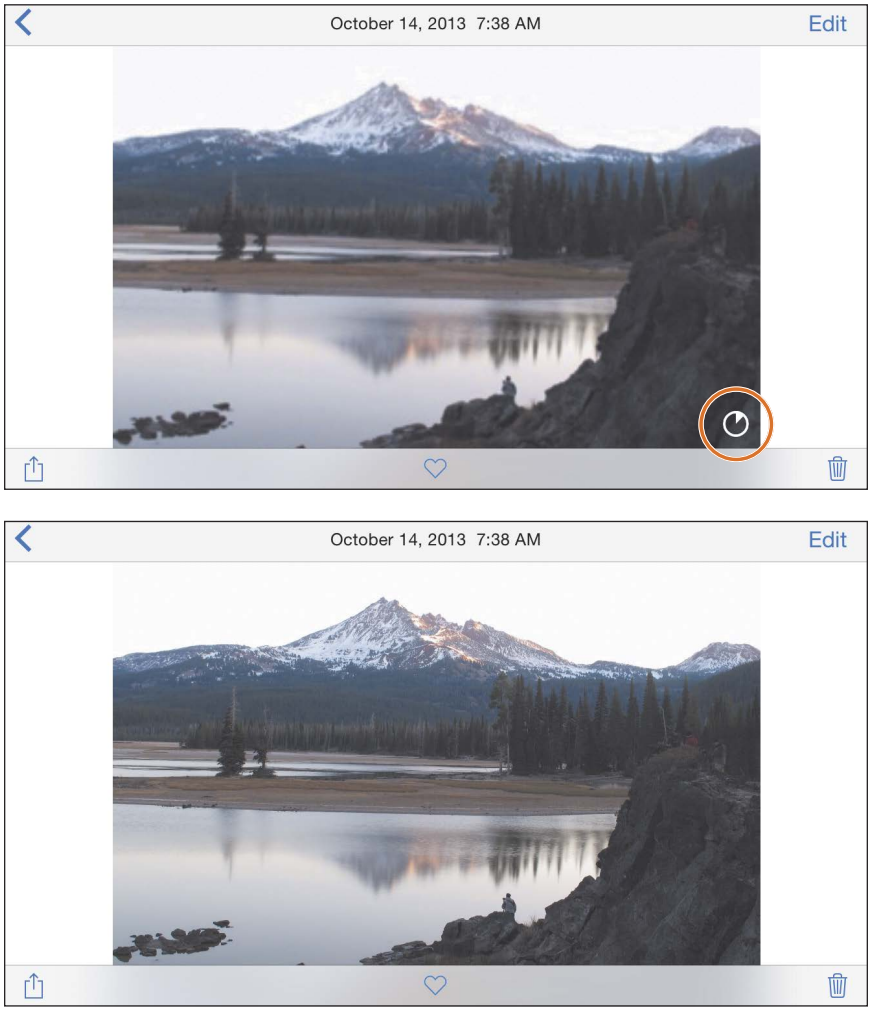
The best part of iCloud Photo Library is that you don't have to think about it. However, there might be times when you want to put it on pause—for example, if you're tethering a laptop to your iPhone's cellular network connection, or if you have just imported a lot of photos and don't want the uploading to compete with other activities on your network.

In that case, open the Photos for OS X preferences, click the iCloud button, and then click the Pause for One Day button. The application stops checking for new images and resumes after 24 hours. To start it up again before then, click the Resume button that appears in place of Pause for One Day.

▶ **NOTE** The 1.0 version of Photos for OS X has a bug such that the application can completely swamp your network bandwidth as it's downloading and uploading files to keep the library in sync. Even quitting the application doesn't prevent the problem, because what's actually handling the transfers is an invisible background task. The temporary solution is to click the Pause for One Day button in the Photos preferences to halt the activity. I'm hoping this gets resolved in an upcoming release.

View photos in optimized libraries

When you open a photo that has been optimized to save storage space, you'll experience a slight delay while the high-resolution version downloads (4.7). You don't need to perform any extra action—I just don't want you to be surprised (as I was) when a blurry version appears the first time.



4.7 When opening an optimized image, a low-resolution version appears (note that it's slightly fuzzy) with an indicator that the high-resolution version is downloading (top). After a few seconds, the high-quality one is loaded (bottom).

▶ **TIP** Behind-the-scenes nerdery here: All the screenshots of iOS devices in this book were made by taking advantage of iCloud Photo Library's synchronization. My iPhone, iPad, and MacBook Pro all share the same library, so when I created a screenshot on my iPhone or iPad (by pressing the Home button and Sleep/Wake button simultaneously), the image was immediately synced to iCloud and appeared in Photos for OS X on my Mac within a couple of minutes.

Merge Libraries via iCloud Photo Library

Although this is an unconventional approach, it's possible to use iCloud Photo Library to merge multiple Photos libraries. I still advocate merging iPhoto libraries before converting them to Photos (see Chapter 2), but imagine this: You create a new empty Photos library on your Mac for an event, like a wedding or a vacation. After it's over, you want to bring those images into your main Photos library that's set up with iCloud Photo Library. The trick is to designate the new library as your system library, allow the photos to upload to iCloud, then switch back to your main library, like so:

1. Launch Photos while holding the Option key, and choose the new library.
2. Open the Photos preferences, and click the Use as System Photo Library button.
3. Click the iCloud button, and enable iCloud Photo Library.

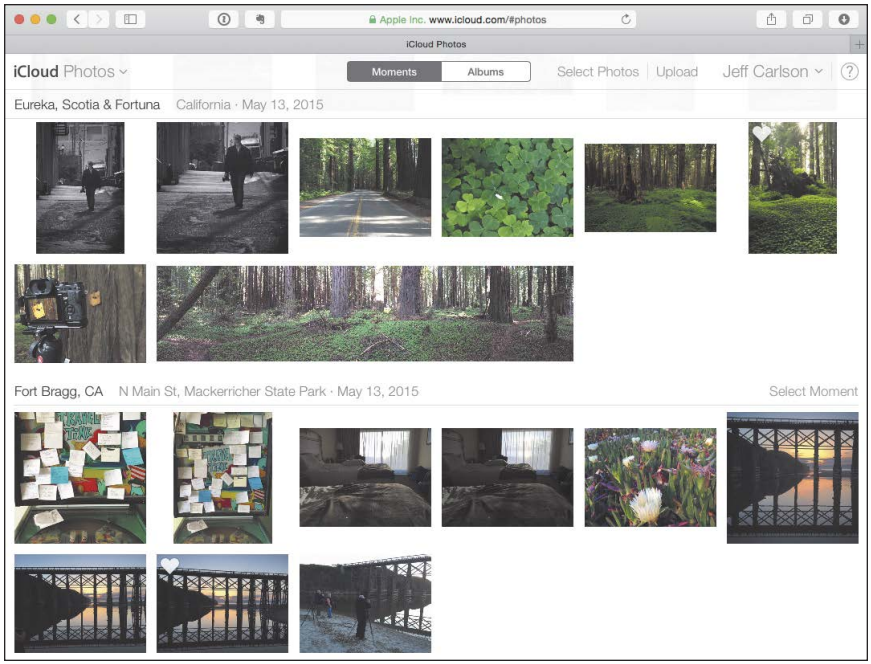
After a while, the new library's contents are mingled with the set at iCloud. When it's done, open your main library, set it as the System Photo Library and enable iCloud Photo Library again, and the photos from the other library download.

iCloud Photo Library on the Web

Having your photo library available no matter where you are isn't limited to just the devices you own. As long as you can access the Web, you can view your photo library.

1. In a Web browser, go to www.icloud.com.
2. Sign in using your Apple ID and password.
3. On the Home screen that appears, click the Photos button. You can do most everything in your library that you can in the Photos

application aside from editing the images, including sharing and marking favorites (4.8). Albums remain intact, but smart albums show up empty, since their contents aren't auto-generated via the Web interface.



4.8 Your photo library at iCloud.com

My Photo Stream

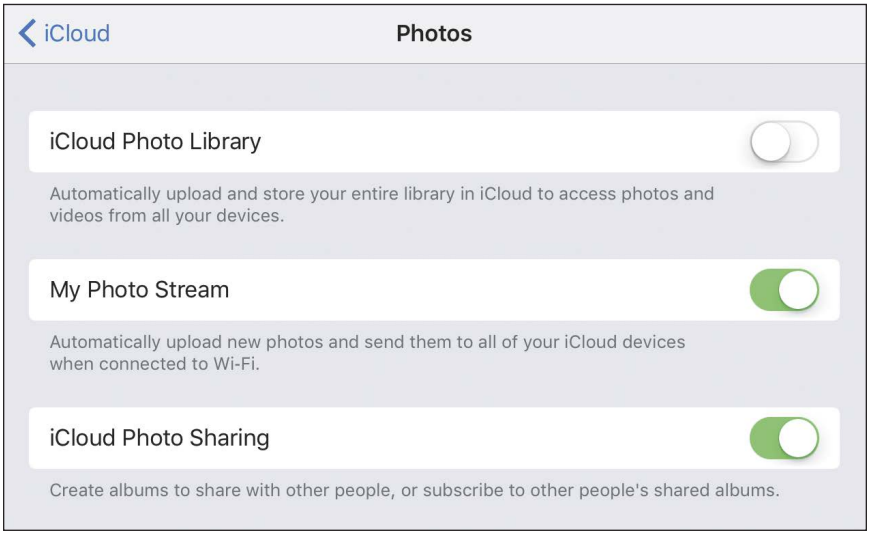
With the rollout of Photos for OS X and iCloud Photo Library, the My Photo Stream feature has gotten pushed out of the spotlight. If you've decided that iCloud Photo Library isn't a good fit for you—or it was decided for you, if your library is too large, your network connection too slow, or your library includes referenced photos—My Photo Stream is still helpful for automatically transferring photos between devices. It also works for syncing photos to devices that share the same iCloud account but don't have iCloud Photo Library turned on.

Set up My Photo Stream

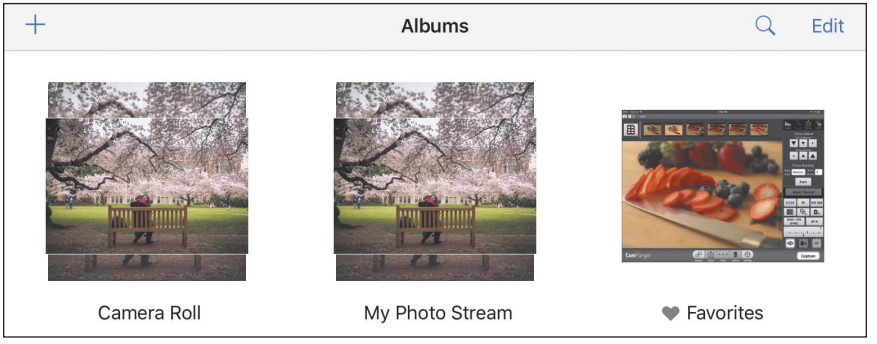
Here's the easy part. In Photos for OS X, open preferences, click the iCloud button, and then turn on My Photo Stream.

On an iOS device, go to Settings > iCloud > Photos and turn on My Photo Stream (4.9). After you do, a new My Photo Stream album shows up in the Albums view (4.10).

► **TIP** If iCloud Photo Library is enabled, you won't see a My Photo Stream album, because all synced photos and videos go to the All Photos album.



4.9 Enabling My Photo Stream



4.10 My Photo Stream appears as an album.

My Photo Stream limits

Unlike iCloud Photo Library, the My Photo Stream service does not count against your iCloud storage allotment—in fact, you can stick with the free 5 GB iCloud account and still use My Photo Stream. However, there are limitations to how much you can store. As its name suggests, it's a stream of data that rushes by, not a pool where all your photos are stored indefinitely. So here's the breakdown:

- Photos in My Photo Stream are stored at iCloud for 30 days. Older photos are removed from the stream after 30 days.
- On iOS devices, the last 1000 items are saved in the My Photo Stream album.
- If you'd like to keep a photo on an iOS device before it's deleted, move it to the Camera Roll by selecting the photo, tapping the Share button, and choosing Save Image.
- Only photos are supported in My Photo Stream, not videos.

► **NOTE** For more information about My Photo Stream, see Apple's support document at support.apple.com/en-us/HT201317.

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