Devizes Camera Club

How to Manage Your Photographs

With modern digital cameras and minimal cost associated with taking each photograph, it is easy to take thousands, if not tens of thousands of images. The problem then is to catalogue your pictures in such a way that you can find the photos you are looking for, prune them so that only the better ones remain, as well as ensure they are properly saved and backed-up in case disaster strikes. This write up expands on the presentation/ demonstration given on 20th September 2016, showing how to use Adobe Lightroom to manage your photographs.

1. Adobe Lightroom (LR) - some basics

LR is both powerful and user friendly as an image management software tool, but can initially cause some confusion to those unused to database management techniques.

LR is based around the 'Lightroom Catalogue', which is simply an index of pictures, complete with low-resolution thumbnail of each picture to help you find the one you want. Managing your pictures takes place in the 'Library' module of LR, which is a very apt name. If you went to a book library to find a book, perhaps armed with the title of the book and/or its author, you would first of all go to the library's index, to find which room, which block of shelves etc contained your book. In exactly the same way, to find the photograph you are looking for, you go to the Library module of LR. When you select the thumbnail of the photograph you want, LR will find the full photograph file on your computer, and display it on screen ready to be reviewed, edited, copied to a different format etc.

So the LR Catalogue is the index, and not the Library itself. This means it does not take up a significant amount of space on your computer. The example I know of is my own LR Catalogue, which is a file of 300Mb (Megabytes), managing a collection of 38,000 pictures which take up 1Tb (Terabyte, or a million megabytes) of disk space.

2. Importing - Adding Photographs to the LR Catalogue

The starting point will be the photographs which were created on the memory card in your camera when you pressed the shutter. These need to be copied onto your Computer's hard-drive and added to the index which is the LR Catalogue. In Adobe jargon, this is termed 'Import'

The simplest (one step) way to do this is from LR, as follows:

1. Connect your camera directly to your computer with a USB cable, or put the memory card in your computer's card slot
2. Go to the LR Library module, and click the large **Import** button at the bottom left of the screen. Your camera or memory card should appear in the left hand panel, headed 'Source', which is where you specify where you want the photographs to be imported

from. Click the camera/memory card, and thumbnails of the photographs will appear in the large central portion of the screen.

3. By default, LR will import all of the photographs shown as thumbnails, but you can de-select individual ones if you don't want them copied and indexed (eg if there are pictures on the card left over from an earlier date which you have already catalogued).

4. Across the top are options to 'Copy' or 'Copy as DNG'. [Other options to Add or Move are greyed out - see 10 below.] Copy will copy the files in the same format as they were shot (eg Canon RAW, Nikon RAW, JPEG etc) and add them to the index. Copy as DNG gives the option to convert RAW files from the camera manufacturer's proprietary RAW format into Adobe's RAW format. See footnote 1 for reasons why you might would to do this.

5. On the right hand panel, you can specify where you want the photographs copied to on your computer. There are many possibilities here depending on your way of working.
   a. You could simply copy everything into one large file and leave the LR Catalogue to help you find the pictures you want. If you did this, you would be heavily reliant on 'Keywords' and 'Collections' to gather similar pictures together (see 3.5 and 3.6 below).
   b. You could tell LR to sort everything by date, so that all photographs taken on the same day will be put into the same folder
   c. You can create a named folder structure to help you group and find your photos, eg all your landscapes, all your wildlife, all your friends and family photos etc. You can also create sub-folders, so the landscape folder has sub-folders for each country you have visited, the 'English Landscapes' folder might have further sub-folders by county etc.

6. The mechanics of specifying where LR should copy your photographs to are in the right hand panel section headed 'Destination'. At the top, you can specify a new sub-folder if it doesn't already exist, and also tell LR whether to put all the photos 'Into one folder' (ie all into the chosen folder) or whether to split it 'By Date' within the chosen folder. Below this is a listing of the various folders and sub-folders on your computer, for you to select the one you want your photos copied into (or the parent folder for your new sub-folder).

7. Then click the Import button on the bottom right of the screen to start the process.

8. Note that at any time after Import, you can move your pictures into different folders, as described in Section 3. Indeed, one way of working would be to always import your photos into a folder called 'Temporary', and then move them into folders named by subject as you review and process them.

If the files are already on your computer, (eg they were already there before you installed LR), the Import process is very similar but all that happens is that LR will add them to its Catalogue, with a further option to Move them into a different folder at the same time.

9. In this case, in the left hand 'Source' panel, you select the folder which contains your photographs. Thumbnails will appear in the central portion of the screen.

10. This time, the options across the top will have 'Copy' and 'Copy as DNG' greyed out, and your choice is between 'Add' and 'Move'. 'Add' simply adds the photo to the LR Catalogue, but leaves it in its existing folder, whereas Move gives the option to specify a folder in the right hand 'Destinations' panel to move the photos into.

3. Managing Your Catalogue and Workflow

Your photos in the LR Catalogue do not have to stay where you imported them. The Library Module in LR gives you the opportunity to create new folders and sub-folders, to move photos from one folder to another, to delete the ones that didn't work so well, and to rename the ones you want to keep. These are steps you may want to take after you import your latest set of photos from your camera, which implies a workflow (ie sequence of doing things) though there are many ways of working and differing workflows which are all equally valid.

This section covers these basic 'file handling' options, though which is right for you depends on how you want to use the LR Catalogue.

3.1 Creating a New Folder or Sub-Folder

If your general method is to create folders by subject, then you will frequently need to create a new folder or sub-folder before moving your photos into it.

To do this, go into the LR Library module, and on the list of files in the left hand panel, select the folder which will be the parent of your new sub-folder. This might be 'My Pictures', or it could be one of your existing named folders within 'My Pictures'.

Then right click to bring up the short cut menu, the first option of which is 'Create Folder Inside xxxxxx'. Select this option, and a dialogue box appears enabling you to give the new Sub-Folder a name. Alternatively, use Library>New Folder, and then click the 'New Folder' button in the dialogue box. Give the new Sub-Folder a name in the next dialogue box.

3.2 Moving Photos from one folder to another

Having created your new folder, you will probably then want to move selected photos into it. Alternatively, you may want to move photos from your temporary folder of new work into a folder which already exists.

Within the Library module, select the folder where the photos to be moved are currently sited. All the photos in that folder will be displayed in the film strip across the bottom, and if you select Grid View, they will also be displayed in the Central panel.

Make sure that the folder you want to move the photos to is visible in the left hand 'Navigator' panel.

Now select the photos you want to move. To move a single photo, click on the photo to be moved. To move several sequential photos, click the first in the sequence, and then, while holding down Shift, click the last in the sequence. To move several photos which are not sequential, click the first in the sequence and then, while holding down Alt (PC) or Cmd (Mac), click each other photo you want to move.

Then simply drag and drop the photo or photos from the central panel or bottom film strip to the new folder. Note that you have to click in the picture and not the border to move the photos.

3.3 Choosing Your Keepers

Since taking pictures with your camera is at minimal cost, it is common to take many shots which are quite similar, with the intention of keeping just the best and deleting the rest. This is especially true of nature photography, and also candid shots of people, the family etc.

LR offers various ways to rank your photos and so work out which are your favourites and which you are going to delete:

a. alongside each photo, you can set a flag to show it as 'Flagged' ie Picked, or 'Marked for Delete'. An Unflagged picture is one you haven't yet decided on. A Flagged photo shows a white flag in the border of its thumbnail, while a Marked for Delete has a black flag with a cross.
b. you can award each photo a number of stars, from 1 to 5. This is probably too broad a scale for simply picking your keepers (for which you want a simple Yes/No/Maybe), and better suited to marking out your best photos across your Catalogue. When you award stars to your photo, the number of stars is displayed in the border of your thumbnail
c. you can set colour labels which can mean whatever you decide. The available colours are Red, Yellow, Green and Blue. You could for instance use a traffic light system where Red = delete, Green = keep and Yellow = maybe. If you set a colour label, its thumbnail border will be displayed in that colour.

Each of these can be found in Photo>Set Flag, Photo>Set Rating and Photo>Set Colour Label. Each of the settings has a short-cut key (shown when you use the Photo pull-down menu method), and you will probably be using these often enough to remember them.

Whichever you choose, you will need to work through your group of similar pictures, setting flags, stars or colours according to their merit. You probably want to do some minimum editing to make sure you are able to assess each photo's full potential (eg balance the tones using Highlights & Shadows, crop to modify the composition, sharpen to check focus accuracy etc).

At the end of the exercise, you will have a group marked for keeping and another group marked for deleting. You could delete each photo in the latter group individually, either from Photo>Remove Photo or more simply by the Delete Key on your keyboard. This brings up a dialogue box asking if you want to Delete From Disk or Remove. Delete From Disk will remove the LR Catalogue entry and delete the file from your computer, whereas Remove will remove the LR Catalogue entry but leave the file on your computer. If you are using LR to manage all your photos, use the option 'Delete From Disk', because otherwise you will have photos on your computer which are invisible but still taking up disk space.

If you have many photos to delete, it is quicker to do them in one operation. Go to the Library module and display the thumbnails in Grid view. Then select the ones to be deleted and either use the delete key on your keyboard or us Photo>Remove Photo. The same dialogue box appears, giving you the options to Delete From Disk or Remove. If you have used the Flag system of selecting your keepers and rejects, there is an option to delete them without doing a separate selection. To use this, go to Photo>Delete Rejected Photos in either Library or Develop modules.

3.4 Renaming Your Photos

Your photos come out of the camera with a filename which is typically just an unmemorable string of numbers. In LR, it is easy to rename them to something which describes the subject, or is at least more memorable.

To do this, go into the Library module, select the photo you want to rename, and press F2 or use Library>Rename Photo.   In the 'File Naming' box, select one of the Custom Name variants, and then enter your new name in the 'Custom Text' box. If just renaming a single photo, you will probably select the basic Custom Name option. However, if you want to rename a whole group of photos, giving them all the same name followed by a number eg My Dog 1; My Dog 2; My Dog 3..........., then select all photos in the group, and pick the 'Custom Name - Sequence' option. LR will then rename all the photos in one operation.

3.5 Keywords

Instead of using subject names for your folders and subject-based names for each photo, you might choose to keep track of your photos using Keywords. For instance, you might have a photo of your children playing in a rock pool in Cornwall. You might want to assign the following as Keywords - Family; Cornwall; Seaside; Holiday.

To assign Keywords to a photo, go the Library module right hand panel, which has a section titled 'Keywording'. You can also add Keywords in your Keyword List, or rely on LR to add them automatically if you use a Keyword not already in your list. Note that you can also add Keywords as you Import your photos into LR, as a way of adding the same Keywords to multiple photos in a single operation (assuming that the Keywords are applicable to all the photos being imported).

Performing a similar function to Keywords are Titles and Captions. These can be added to a Photo in the Metadata Section immediately below the Keyword Sections.

You can then perform searches across your entire Catalogue based on these Keywords, Titles and Captions (as well as Filenames). In the Library module, go to Library>Find. A new tool bar opens up above the central panel giving the option to search by Keyword, Filename, Title, Caption. A second pull down menu allows you to specify whether the search must be for exact matches, or just contains your text phrase, starts or finishes with your text phrase etc.

3.6 Collections

Splitting your photographic library across different folders might make it easier to organise your photos by subject or by date, but there is often the need to group together photos that ordinarily reside in different folders. You might want to:
- put together a group of your best photos of the year, to show the family at Xmas;
- put together a grouping for a presentation;
- put together a selection of possible competition entries so you can see them side by side

To do this, the LR Library module has a feature called 'Collections', which is effectively an alternative index which sits alongside the main LR Catalogue. Note that LR does not create multiple copies of your photo file for the Collection, just an additional index pointing to where the real photo file is on your computer.

To create a Collection, go to the Library module left hand panel. Below the listing of your folders and sub-folders is a Section headed 'Collections'. Either click the '+' symbol in the Collections section title bar, or use Library>New Collection, and in the next box give your new Collection a name. You can then go to the individual photos you want to include in the Collection, and drag and drop it into your Collection. Collections can also be nested together into 'Collection Sets', as an alternative to using a subject-based folder structure.

3.7 A Word Of Warning

In this section, we have seen how to use LR to create new folders & sub-folders, how to move photo files from one folder to another, how to rename photo files and how to delete them. This is all part of using LR as an Index for your photo library.

However, your computer has another Index which can do all of these things as well. Windows Explorer (PC) and Finder (Mac) are the standard file management tools which your computer is supplied with.

It is important that any file handling operation you do (folder creation/photo move/photo rename/photo delete) must be done in LR and not in Windows Explorer or Finder. The reason is that the LR Catalogue is not automatically updated with anything you do in Explorer/Finder. Hence if you moved or renamed a photo file in Explorer/Finder, LR would not be able to find it. Likewise if you deleted a file in Explorer/Finder, it would remain as an entry on the LR Catalogue. However, Explorer/Finder are automatically updated with anything you do in LR.

Hence to reiterate - use the LR Catalogue and only the LR Catalogue to manage your original photos.

Note there might be instances where you create a copy of a photo which is not on the LR Catalogue, eg creating jpeg copies of selected photos for a presentation or a competition. These are not on LR, so you do need to use Windows Explorer or Finder to file manage these.

4 Non-Destructive Editing

A fundamental principle of LR editing is that it is 'Non-Destructive'. This means that the original photograph as captured by the camera is never touched, and editing (ie changing the appearance of the photograph) is achieved by placing 'filters' in front of the original whenever the photo is displayed.

The advantage of non-destructive editing is that it preserves the quality of the original, whereas successive pixel-level editing as used in Photoshop and Photoshop Elements can quite quickly degrade the image and produce unwanted artifacts (eg banding in areas of smooth tone, halos around contrasty edges).

The list of these filters is extensive, and is described in some detail in the tutorial file on the DCC website titled 'Software Basics.pdf'. These enable the vast majority of editing to be done 'non-destructively', although there are some operations which require pixel-level editing such as focus stacking. Other operations such as cloning, healing, sharpening and noise reduction are also handled better in Photoshop than LR.

Non-destructive editing has a number of important implications for file management:

a. **Saving your work**. A common source of confusion is that there does not appear to be a way in LR to save the edits you have made to your photos. Most computer software has a File>Save or File>Save As which saves whatever work you have done. This is absent from LR because since the original photo file is never touched, there is nothing to save. What your edits have done is amend the list of instructions in your LR Catalogue which specify how to display the image - ie the list of filters through which the original image is to be seen. For these, LR performs an autosave in real time, so every time you change something, it is immediately and automatically saved by LR.

b. **Backing-up the LR Catalogue**. It should be apparent from what has been described so far that the LR Catalogue is an extremely important file on your computer. Effectively everything you ever did to your photos, possibility spanning years of work, is contained within the Catalogue. It is therefore essential that it is backed-up appropriately.

   The first part of backing-up is to take frequent copies of the Catalogue to guard against software corruption on your computer. If you suddenly had a problem with the Catalogue today, you could then restore the Catalogue to how it was the last time it was backed-up (eg yesterday), and only lose your most recent work.

   You can set the frequency of making a backup copy of the Catalogue by going to Lightroom>Catalog Settings. In the General tab, it is recommended you select either 'Once a day, when exiting Lightroom' or 'Every time Lightroom exits'. These will ensure you only lose at maximum a single day's working.

   The second part of backing-up is standard 'disaster' back-up, in which you hold multiple copies of the Catalogue + all your image files on different disk drives and in different physical locations. Holding a second copy on a different disk drive means that if there is

a hardware malfunction on your primary drive such that all the data is lost (eg a head crash), your files are still safely held on your secondary drive. There are various software utilities available (eg Time Machine for Macs) which automatically update the second copy from the primary copy every few minutes, so you always have a mirror copy of everything on your main drive. This ensures that you have a second copy of the LR Catalogue as well as all your image files.

The second copy is normally co-located with your main computer, and hence would not provide backup in the event of flood, fire or theft. The solution to this is to hold a third copy at a different physical location, which could be a 'Cloud Backup space' ie you pay for storage space on a third party server, or another physical disk drive which you update frequently and store in a separate building such as a friend's house.

c. **Virtual Copies**. Since the original file is never touched by LR editing, it is possible to create multiple versions of the same photograph without having to produce multiple copies of the image file. All that is needed is a different stack of filters which LR uses to display the base photograph. You could for example have a colour version and a monochrome version of the same photograph, or apply different crops to produce a landscape and portrait version etc.

The LR term for this is 'Virtual Copy'. In Library or Develop Modules, select the image you want to copy, then right click and select 'Create Virtual Copy' or use Photo>Create Virtual Copy. A second copy is created complete with whatever filters had been applied to the main copy. You may then edit the copy as if it were the main copy to apply different effects. Should you at any time decide you don't want the second version, simply click Delete or use Photo>Remove Photo, and then select Remove in the dialogue box which follows. Be careful to remove the Virtual Copy and not the actual image file - the dialogue box to Remove is clearly headed 'Remove Virtual Copy' and there is no option to 'Delete From Disk'

d. **Exporting**. Non-Destructive editing poses the problem of how to share your photograph or view it outside of LR. Clearly just copying the base file will produce a copy without the LR edits applied. The LR solution is termed 'Export', and is equivalent to 'Save As' on most other software applications. Exporting a photograph produces a copy with all the filter effects 'baked in' so your copy has the same appearance as the version you see in LR with the filters laid on top of the original file.

To Export a photograph, go to the Library module, select the file or files you want copies of, and click the large **Export** button in the bottom left corner. This brings up a large dialogue box where you specify to following details:
- Export Location - which folder do you want the saved version to be placed in. There is also the option to create a new sub-folder if the one you want doesn't already exist.
- Rename - you could just keep the LR filename, or you can rename it to something else completely. If you are Exporting several files, you might want to give them all the same name followed by a sequence number - eg My Dog 1, My Dog 2 etc

- File Format - you can choose whether your copy will be jpeg, tiff, psd, dng or keep its original format. Each format has secondary options such as colour space, quality etc depending on the format chosen
- Image Size - you could keep the copy the same size as the original, or resize it based on maximum dimensions or resolution.

Once you have specified the details of the Export, click the Export button on the dialogue box to initiate the process.

5   Using LR Export to prepare image files for Devizes Camera Club Projected Image competitions

If you have prepared your competition entry in LR, or have processed it in Photoshop but have the finished version on your LR Catalogue, you can use the LR Export function to produce a copy suitable for entry into DCC Projected Image competitions.

DCC Projected Image competitions are controlled by DiCentra software, which is used by many camera clubs, and which is also very sensitive to the folder and file names you use to submit your entry. This section explains in precise detail how to Export your image files to comply with DiCentra's requirements.

a. Outside of LR, you will need to create folders to receive the image files. To keep track on your competition entries, you will probably need a folder named '2016-17 Competitions' or similar, and inside this, sub-folders for each PI Competition you enter eg 'Open Competition 1'.
b. Then go to your first competition picture and click the Export button. In the Export Location section, use the 'Choose' button to find your 'Open Competition 1' sub-folder (or whatever you have called your competition specific folder).
c. Tick the 'Put In Subfolder' Box and create a new sub-folder named: *'Your Name Section'* Each competition section is abbreviated to Beg (Beginner), Int (Intermediate) or Adv (Advanced). Thus my folder would be called: Dave Gray Adv
d. Now rename the File using a Custom Name, in the format 01 File Name (or 02 File Name for your second image etc). The File Name you use must not be more than 25 characters long including spaces, and should not include any punctuation characters
e. In the File Settings section, set the Image Format to JPEG, the Colour Space to sRGB, and the Quality to 100%
f. In Image Resizing, tick the 'Resize To Fit' box and select 'Width and Height' from the pull down menu alongside. Then set W (Width) to 1920, H (Height) to 1080 and select Pixels in the pull down menu to the right.
g. Then click the Export button to create the jpeg copy.
h. Repeat this for your other images.
i. At the end of this process, you have a folder named 'Your Name Section' containing your competition entry images. You now need to email this folder to the competition secretary who will load it into the DiCentra Software. Folders cannot normally be emailed directly, but can be if you zip the folder. The method for doing this is different depending whether you use a PC or a Mac.

- for a PC, go into Windows Explorer, right click the folder, select 'Send To' in the menu and 'Compressed (Zipped) folder' in the next menu. This will create a zipped folder (with an icon depicting a zip) of the same name as your original folder, which you can attach to an email as if it is a single file.
- for a Mac, go into Finder, right click the folder and select 'Compress "Folder Name"'. Again this will create a zipped version of the file which can be sent as an email attachment.

Footnote 1 - Adobe RAW or Proprietary RAW (referenced in para 2, process step 4)
Each camera manufacturer has chosen to produce their own version of RAW, which like all proprietary standards means that there is a danger that it might be declared obsolete at some point in time. Adobe offers an alternative which is to convert the manufacturer's version of RAW into its own RAW format. Clearly, the same charge could be levelled at the Adobe version, though since Adobe lives and dies by the quality of its software, it is perhaps less likely to do so.
Apart from this, both formats provide a lossless way of recording the image to maximise the information available for editing. Crucially as well, the Adobe version yields a file size typically 20% smaller than the Manufacturer's version, which adds up to a significant saving in disk space in a collection of several thousand images.