Beginner’s Guide to Bird Photography

A simple, modern and non-technical approach to using your Canon EOS camera to take great images of birds

Nina Bailey
This book, part of my Beginner series, is ideal if you are new to using an interchangeable lens camera, like the Canon EOS models, and you are looking to learn photography by getting out there, shooting subjects and learning as you go. It’s a more enjoyable way to learn and, by taking images, you learn very quickly what does and doesn’t work.

It’s also useful if you’re struggling to get consistent results of birds with your camera and want to concentrate on the final results, rather than being in full control of your camera.

So many books for beginners concentrate on the basics of photography which, although they are incredibly important, can be uninteresting and complex to learn. Your Canon EOS camera offers features which allow you to shoot a range of subjects automatically, leaving the camera in control of many of the basic settings. The advantage of this is that you get used to seeing, framing and capturing your subject.

As this book is written specifically for Canon EOS cameras, this means you can learn how and where features are set on your camera. I’ve been teaching Canon EOS photographers exclusively for over 20 years, so I understand how your camera works, what each of the settings does and, more importantly, how to use them to get the results you want.

With this book I explain the settings to get you started so you can get out and shoot. To reinforce what you’re learning at each stage, there are practical assignments.

Your EOS camera is only part of the mix. With this guide you will also find out about the lenses that are needed to get the images you want. Although it is possible to spend many thousands of pounds on equipment, in this book you will discover some ideal options which are affordable when getting started. In addition, the benefits of other equipment is also explained – gear that you might want to put on your wish list as your skills improve.

Although bird photography is one of the more challenging areas to choose to shoot, it is possible to get great images with basic equipment and simple shooting techniques. Later in the book I will explain some of the more commonly used settings for this type of photography and why they will start to be your favoured settings as you become more familiar with your camera and photography.

This is not designed to be an all-encompassing book on photographing birds, but to set you on your photographic journey of these very rewarding subjects and allow you to see what your camera is capable of as you start to take control.

Happy shooting,

Nina

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About the author

Nina started her career in the retail sector of the photographic industry and then moved to Canon UK where she had a successful nine years looking after training, exhibitions and marketing both in the UK and also within Europe. This gave Nina an unrivalled knowledge of not only the Canon EOS system but also how to develop and enhance the skills of photographers of all ability levels.

Nina started her own business in 1999, concentrating on training for amateur photographers. She is also at the forefront in developing the EOS Training Academy both online and within its practical day courses. In 2014 Nina started producing her own range of ebooks to bring photography training to an ever wider audience. In 2015 Nina became Technical Editor for EOS magazine and produces articles and images for each issue. In 2017 Nina launched the every growing range of Pocketbooks, which are small A6 pocket sized guides designed as aide-memoires to go with you when out shooting.

Nina started taking images when she was very young and is still a very keen photographer, both professionally and personally. Nina loves travel, landscape and wildlife photography and still shoots occasionally commercially though most of the images she shoots these days are for her own extensive range of books.
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About photographing birds

Birds can make fascinating photographic subjects, but it is fair to say that they do present the photographer with a lot of difficulties when it comes to getting good images of them.

The most important thing that we need to realise is that the majority of them are very small, especially a lot of the species that we are used to seeing in the UK. So if we want to fill the frame with our subject we either need to be very close to our subject or use a telephoto lens to magnify the subjects so that it fills the frame.

When I say very close, to fill the frame with a subject such as the robin in the image to the right, we need to be no more than 1 to 1.5 metres away assuming that we are using a lens with a zoom setting that goes up to 300mm. I will talk about lenses in the next chapter and what the settings mean, but for this type of photography the lens with the largest magnification which is affordable will be a lens with a range such as 75-300mm or similar.

Of course if the bird is larger, with the same lens we could be further away. So the first thing to be realistic with when starting off this type of shooting is that you need to be sensible in what birds you want to get the images of, at least to start with.

Robins are one of the easier song birds to get close to. Other birds that are very approachable will include water birds such as ducks, geese and swans, all of which can be fed in parks and on rivers to bring them close enough to get good images.

There are also a number of bird reserves around the country, some of the best for photography are run by the WWT – Wildfowl and Wetlands Trust. These have the advantage of having resident birds, which are used to having people around and are very approachable. They are housed in enclosures with natural looking surroundings and so you can get some great images without needing a very long lens.

Many of the images in this book were taken at another location called Pensthorpe Natural Park, located near to Fakenham in Norfolk. This has a collection of water birds which are resident and a fantastic walk through aviary which has a collection of waders that are rare to see, yet alone photograph in the wild.

Of course if you have a garden, then setting up a feeding station, near to the house, will attract the birds in to you and make it easier to get close to some of the smaller species.

If you travel then there are some fantastic destinations that give some splendid opportunities to photograph birds.
About photographing birds

I have been lucky enough to have travelled to some great locations. What I would say is that if you want to photograph birds you need to choose your destinations carefully.

Some locations allow you to get very close to the birds such as in the Galápagos where the shots to the right are all taken. For these shots I was only a couple of meters at the most away from the bird that I was taking the picture of.

A comment that I will make is that there is a big difference between what the bird photographer needs compared to what the birdwatcher is happy with. A small brown bird in the bushes (often referred to as a LBJ - little brown job) can get bird watchers very excited when they are looking through their powerful binoculars or even more powerful spotting scopes. However to the photographer it can be almost impossible to get the camera to focus on it and it is so small that it can hardly be seen in the image you are likely to capture. The more common, larger and more showy birds will invariably make the best images, especially as you can often get much closer to them.

One of the key things to getting successful images is choosing to shoot in the right locations. There are a lot of wild bird reserves, which might seem an ideal place to visit. However, a bit of research is needed as some are great for keen birdwatchers who are viewing through spotting scopes or binoculars. However, for the photographer, the birds are mostly too far away to get a satisfactory image unless you are very lucky or have invested in powerful lenses.

Top tip

If you have a trip planned to a more exotic location, put some time aside to go out and practise shooting some more common birds before you go. This allows you to get your ‘eye in’ on subjects that do not matter as much. It also allows you to check that the settings that you plan to use work for the types of images you hope to achieve, with the lens(es) that you are likely to be using.
Choose your times carefully

The best times to see birds will vary. However, most experts agree that the majority of birds are at their most active from daybreak until late morning.

There is then often another time later afternoon when they are also quite active. However, if food is readily available they will often feed in the morning and then do very little, often hidden away in the middle part of the day.

I always find that for many birds there is more chance of seeing them when they have young as they have to find food far more frequently and throughout the day at that time. That said, the image to the right was taken in a small country park that had a tiny hide and plenty of bird feeders that were constantly busy with lots of smaller birds.

Avoid wet days; for a small bird, raindrops are big things and they try to stay dry and in shelter, becoming more active the moment the rain leaves off.

If visiting bird reserves, try and pick times when they are quiet. Whilst writing this book, I visited the RSPB Lodge at Sandy, hoping to get some woodpecker shots. Unfortunately it was still half term in the area and the place was very busy and more significantly noisy which resulted in the birds all keeping well out of sight for most of the day. In the hides, small feet that kept appearing and running around noisily, kept all but the most tame species well away from the hides.

The two images to the right were the best images I got from the day – not great! Remember the smaller the bird the closer you need to be to get a good image.
Filling the frame

It is important with this type of photography to get the subject as large in the frame as possible, as although we can crop images on the computer, the smaller the area we crop down to, the lower the image quality will be.

Of course the cameras today do have a very large amount of pixels – 18-24 million is standard – though there are cameras that go up as high as 50 million pixels available at the higher end of the range.

Having this many pixels will allow you to crop down to about 25% of the original image area and still get an acceptable picture quality as in the image above. The image of just the head of the bird (left) is about 6% of the total image area, and this is now showing a lack of sharpness due to being cropped too much. The original image is at the top and the boxes show the area cropped relative to the original size.
Start off with the larger birds

When starting off in this type of photography, begin by photographing the birds that are fairly easy to find and reasonably large in size.

The swan image to the right was taken just a few hundred years from where I live, on the river Great Ouse. There are a lot of swans on that stretch of river and this was defending his stretch of the river from another swan. This image was taken on a EOS 7D Mark II with a EF-S 55-250mm lens fitted, though any EOS model in the range would have coped.

The images below were taken with a 70-300mm lens, including the image of the goose, who actually came so close that it was too close to focus on some of the time. So none of the images on this page needed particular high specification equipment to produce them.

Waterbirds can often be attracted close by food in many of our parks, gardens and wetland areas around the country. They are also large enough to make getting them to fill the frame realistic with fairly modest equipment.
Fieldcraft for wildlife photography

Fieldcraft is all about learning not to scare your subject away so you can get close enough to get good images of it.

For those who are already bird watchers, this should be second nature already. However for those new to both bird watching and photography there are some general rules that should be observed.

Firstly, remember that birds can see and hear us. So wear something that can blend in, professional photographers often wear camouflage but I find that the darker shades, especially greens and blacks seem to work reasonably well. Avoid the very bright reds, pink, blues and yellows that much of today’s outdoor gear seems to come in as the birds will see you coming a mile off.

Keep quiet when looking for the birds and trying to get closer. I recently observed a couple walking along in red jackets, talking loud enough that I could hear the conservation clearly 30 meters away, complaining that there were no birds to see at the reserve!

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It is also important to move slowly and gradually, rather than rush towards your subject or it will be long gone before you get there. If on a raised area try and avoid your outline breaking the sky. When raising the camera to the eye, do it slowly rather than as quickly as possible as these sudden movements will result in the bird flying off much of the time.

If there are hides then this helps, if not, if you have a vehicle then it can be used as a mobile hide. If not try and use bushes and trees to shield the view of you as much as possible.

I personally find that the most successful shoots are when I am on my own or shooting with another photographer. Non-photographers fidget, and get bored very quickly.

It’s also pointless trying to shoot birds whilst out walking the dog, I love dogs and have had several over the years but they scare everything off for a long way around even when on leads.

Also it goes without saying that taking young family members along can also be a disaster, unless you have trained them to be very still and quiet.

I recently had to give up shooting from a hide when a young child was brought in and sat and kicked the side of the hide constantly as they were annoyed there were no birds around. The reason there were no birds around was because they made so much noise entering the hide.

This was taken in Iceland in the same location as the front cover image. I was simply laying on the top of the cliff peering down and got some great shots, this image has not been cropped.
Assignment - Research locations

The very first assignment is not actually a practical one. It’s about thinking where to go and shoot the images. Where you live in the country is actually make a big difference to what is available locally to you.

If you live near the coast, find out if there are any big bird colonies locally. Many rivers, lakes and parks will have lots of birds in them. I live very near a river in the centre of the town and there are always lots of birds in the riverside park. Quite a few of them star in this book. Local nature reserves often have bird feeding stations which can be great for songbirds.

There are also the reserves that you can visit. Some are free but most do have charges to enter. Do a bit of research about the best times of year to visit as it will change according to what birds can be seen there. Some of the places to look are below. Spend some time browsing the following websites for ideas.

Also look at the picture galleries that most of them have as it gives you and idea of how easy it is to get images. If they all are small dots in the frame then it is really better for bird watching than photography. If there are lots of stunning shots by lots of different people then it’s generally a good option.

RSPB
The largest of the bird organisations in the UK with a wide range of reserves. Some locations offer better options for the photographer than others. Image taken at The Lodge, Sandy. Website [www.rspb.org.uk](http://www.rspb.org.uk)

Wildfowl and Wetlands trust (WWT)
A smaller organisation than the RSPB but with some great locations around the country including one at Barnes in London where this image was taken. Most locations also have resident birds ensuring there is always something to photograph. [www.wwt.org.uk](http://www.wwt.org.uk)

Wildlife Trusts
A collection of different wildlife trusts that have over 2300 nature reserves between them. They have sites for all different types of nature photography including some for bird watching. They have some interesting downloadable guides as to the best places to go to see various things. [www.wildlifetrusts.org](http://www.wildlifetrusts.org)

Pensthorpe Natural Park
A great location where many of the images in this book have been taken. One of the star attractions is a walk-in aviary where you can see avocets, ruffs, bearded tits and many other water birds. Pensthorpe is good at anytime of year but in winter they also get a lot of migratory birds. [www.pensthorpe.com](http://www.pensthorpe.com)

Norfolk Wildlife Trust
Norfolk is one of the best locations for bird watching and bird photograph with its extensive coastal and wetlands areas. The Norfolk wildlife trust manages many areas around the county. The image was taken on one of the broads that they manage. [www.norfolkwildlifetrust.org.uk](http://www.norfolkwildlifetrust.org.uk)

These are literally just of few of the many places you can go to photograph birds, it is surprising just how many you can find online.

At home
Don’t forget, if you have a garden, then setting up a feeding station will bring the birds to you. RSPB has lots of information on what to feed and the type of feeders to use for different types of birds.

I always try and position the feeding station near to a tree or natural-looking dead branch, as images of the birds sitting on these look much more natural than a bird sitting on a feeder. It takes a while for the birds to get used to the fact there is food there for them, but over time more will come, providing you keep the feeders topped up.
Equipment requirements
Camera choice

This really does depend on what you want to photograph. Any of the range will cope with static birds. Though it has to be said that going up the range a little bit will give you a camera that is capable of focusing a bit faster.

The models that are more tricky to use for this type of photography are the mirrorless EOS M-series. Although very small and light, and able to take the full range of EF and EF-S lenses via an adapter, with a large lens fitted as shown above it can make the camera very hard to handle. The EOS R-series, also mirrorless, are easier to handle than the M-series, but for moving subjects such as birds in flight these models require some very specific settings to make your viewing options work for the subject.

If you want to photograph birds in flight as well, you will need a higher specification camera. The EOS 700D – used to take the top right image – shoots at a maximum of just 5 frames per second. The image at the bottom of the gull in flight was taken on the EOS 7D Mark II which can shoot at 10 frames per second and as a result has a faster focusing system. The lens used for both shots was the same.

All of the EOS allow enough configuration of the camera to allow and image like the one of the Blue Tit above to be taken. The lens shown is the EF-S 55-250mm f4.5-5.6 STM lens which is really going to be the minimum that is needed for this type of photography. It’s an affordable lens selling for about £230 at the time this book was written.

The EOS 7D Mark II is the ideal camera for this type of photography. However, it does lack many of the automatic modes that are very useful to the novice. A good in-between choice would be a model like the EOS 70D, which still has an more advanced focusing system, shoots at 7 frames per second but still features the more automated ways of using it.
Explanation of sensor size

Within the EOS range there are currently two sizes of imaging sensor. The sensor is effectively doing the same job as film used to do – capturing the image.

The full frame or 1.0x sensor is roughly the same size as a frame of film – 24mm x 36mm. The models that have these are mostly at the more expensive end of the range and are generally preferred by professional photographers.

When digital cameras first appeared they initially used a smaller sensor, referred to either as APS-C or 1.6x crop sensor. This is approximately 22mm x 15mm in size. The 1.6x is often referred to as a magnification factor, which is incorrect, rather the image is cropped by a factor of 1.6x when compared to the image given by the full frame sensor.

The image to the right shows the difference that is made by simply changing the camera body on the same lens on the area that is being captured. The area captured is smaller, effectively ‘cropping’ the size of the frame captured by the camera.

The easiest way to tell which model you have is to look at the camera’s lens mount. If there is a white square and a red dot marked for alignment of the lenses it is a APS-C or 1.6x crop model. If there is only an red dot, then it is a full frame or 1x model.

The mirrorless M-series feature an APS-C sensor, with the lens mount illustrated with a white dot. The EOS R-series are full frame cameras – the lens alignment mark is a red dash.

The most frequently seen are the APS-C or 1.6x crop sensors – these are found on most consumer models.
Which is the best sensor size for wildlife photography?

The APS-C or 1.6x crop sensor models offer a number of advantages for bird photography. They fill the frame much more easily and so you do not need such long lenses, which keeps the cost of the outfit you need down.

Another benefit of the APS-C or 1.6x crop sensor models is that they are smaller and lighter and designed to take the more compact range of EF-S lenses. Though to be fair there are not that many lenses in the EF-S range that go up to the settings needed for wildlife photography.

They do give the crop factor all through the lens range and so you will need lenses much wider than we used to use in the days of film to cope with landscape and travel images. However, this is not the drawback that it used to be thanks to the ever growing range of Canon EF-S lenses.

You may well be wondering why people buy 1.0x or full frame cameras. I actually have both and choose the one that works best for the type of photography I am doing at the time. The APS-C or 1.6x sensors models are great for people to get going with, being easy to use and set up and smaller and lighter to carry, especially when used with the EF-S series of lenses which are designed exclusively for them.

People who have done photography for many years, tend to prefer the full frame or 1.0x models as the lenses give the same image area as they were used to with film. The full frame models having a larger sensor also have a better low light capability. However when you start to look at the subjects tackled by these photographers you often find that they are the areas that suit the full frame models better such as landscape, travel, portrait and interior photography. You generally find that if they do wildlife photography they also have one of the smaller sensor bodies within their outfit.

For a lot of amateur photographers the APS-C or 1.6x sensor models will give them the most flexible choice of body and certainly for bird photography anything that helps you get the bird to fill the frame a little bit easier is generally a good thing.

It can be important, especially if working to a tight budget to choose the body carefully as there is a one way compatibility of the lenses. The general EF range of lenses can fit any of the EOS D-SLR bodies but not the mirrorless M series bodies without an adapter.

The EF-S range of lenses are exclusive to the APS-C or 1.6x sensor models, so if you buy a range of these and decide to change to a full frame models you will need to change all your lenses as well.
Cameras to aspire to...

The EOS xxD range are designed to be good all-round cameras, but can be configured very easily for action photography with plenty of autofocus points. This means they cope well with the demands of birds in flight in addition to being out to take good pictures of static birds.

This is a good progression from some of the more basic models in the range such as the EOS 500D, 550D, 600D, 650D and 700D models. This camera series retains all the more easy-to-use features, allowing you to grow into using the camera within your own time. Although some of the control position, the menu system in general be very familiar to most photographers.

These cameras have the ability to shoot around seven frames per second and therefore the focusing ability is much higher than models further down range. These cameras feature an APS-C or 1.6x crop sensor which allows either the EF-S or the EF lenses to be used.

The EOS 7D Mark II is a stunning camera, with the ability to shoot at up to 10 frames per second and with 65 autofocus points and so is ideal for action photography. The camera also performs extremely well for more general types of photography. This model has the ability to autofocus down to f8 allowing the use of Extenders on some lenses.

However, for the novice this is not the easiest of cameras to get to grips with. If you have been used to some of the more basic models in the range, you’re going to find that pretty much everything will be in a different place or will have changed the way that it works. Even if you have previously used a mid-range model such as the EOS 70D, it is still a big step-up and will take a lot of getting used to.

That said if you’re interested in photographing birds in flight, then it has to be about the ultimate model for this purpose. The EOS 7D Mark II has the APS-C or 1.6x crop sensor which allows either the EF-S or the EF lenses to be used on this model.

The EOS 5D Mark III and more recent 5D Mark IV both offer great performance with 61 autofocus points and can shoot up to 6 frames per second. This camera features the 1.0x or full frame sensor and so is only compatible with EF lenses.

These cameras have the same layout and menu system found on the 7D Mark II and so therefore for the newcomer, can be very difficult to adapt to.

Although the full frame sensor is beneficial in many areas of photography, bird photography is not one of them and on this camera longer lenses are going to be needed to satisfactorily fill the frame.

This camera also has the ability to focus down to an f8 aperture and so allows the use of Extenders – Canon’s name for teleconverters – on some lenses.

Although this camera is often the choice of wildlife professionals, it does make the outfit heavier bulkier and more expensive for the amateur photographer.
I am trying to avoid as much jargon as possible in this book, however, lenses are described in a very specific way and so I am going to look at what all the description on the lens actually means in simple terms.

The most important thing that describes a lens is its focal length. This is a number that is shown on the lens and it has mm after it. If there are two numbers, then the lens is a zoom lens and in the example shown on the right has a range starting at 18mm and going up to 55mm.

Zoom lenses are the most commonly seen in use today as they are very convenient to use and prevent having to change lens too frequently.

If there is only one number shown then it is a fixed focal length or prime lens, which does not zoom, as in the example below. In this case the lens is a 50mm lens. There are advantages to the fixed focal length lenses.

They generally let in more light, are often lighter than the equivalent zoom lens and offer higher quality. However, the downside is you need more of them, which makes your outfit larger and heavier to carry around.

For most amateur photographers starting out in bird photography, the lenses of choice will be a zoom lens for the greater convenience of use and also to allow you to change the framing of the shot. I actually have both and when just shooting birds I will normally use the prime or fixed focal length lens as with a zoom you will end up using it at its maximum magnification most of the time.

The type of lens I would be using is the type illustrated below – it’s an EF 300mm f2.8L IS USM lens. However, you do not need to go to these extremes to get some great images.
Lens jargon and terminology

The focal length of the lens tells us the type of lens that it is and the effect that it will have on the image. Lenses can be broken down into three basic groups.

**Wide angle:** These get more into the picture than we naturally see with the eye but they also make things look further away and smaller and so we do not use these for bird photography. Focal lengths from 35mm down to 10mm would be considered to be a wide angle focal length.

**Standard:** These are lenses that give the same width and appearance as we see naturally with the human eye. However, as they do not make the subject look closer they are not generally used for bird photography. Lenses from 36mm up to 55mm are generally considered to be a standard focal length.

**Telephoto:** These are the lenses that are used for bird photography. They capture a narrower area than we naturally see with the eye and make the subject appear to be a lot closer to us. Telephoto lenses technically start at 56mm but it is not until 200mm and longer that they start to be realistic to use for bird photography. **Telephoto lenses** can be split into two groups. The normal telephoto lenses have focal lengths from 56mm and go up to 300mm. The focal length of 300mm is ideal for those that are starting to shoot images of birds.

You then have the **Ultra telephoto lenses**, these range from 400mm up to 800mm in the current range. The word ultra also seems to mean expensive as there are none of these lenses that will be found under a thousand pounds and many will be much more than that.

The images above are taken from the same spot but with the focal length adjusted between each shot. As the focal length gets longer, you can see a smaller part being captured. The 50mm image shows the scene as it looked to the eye.
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