

# The Essential Guide To Capturing Birds In Flight

Written by Nina Bailey

Especially for Canon EOS cameras



PREVIEW  
EDITION

Written, designed and images by

Nina Bailey



## Foreword by the author

Over the years I have written many different guides, scripts, technical publications and more presentations than I really care to remember, but this is my seventh ebook.

One of my favourite areas of photography is photographing wildlife, I have travelled all over the world to get the images you see in this book and have been privileged to be able to shoot up close and personal to many of the subjects in places such as Antarctica and Galápagos. Within wildlife photography, shooting birds in flight has to be one of the most challenging yet rewarding areas.

It's an area of photography that can be equally enjoyed close to home and we have a great selection of birds that can be photographed with relative ease around the UK. We are also lucky enough to have some great bird of prey centres where the birds are flown and this allows us to shoot much closer than in the wild.

The equipment required can be fairly basic although to get some of the shots I am showing in this book you do need lenses of 300mm and longer. Often for shooting birds in flight the lenses may well be more basic than used for static birds. As we have to hold and control the lens, size and weight become very important things to consider when selecting lenses.

It's an area of photography that can be enjoyed all year round, and in winter some of our bird reserves can be spectacular with the winter visitors to our shores.

My aim is to give you a good understanding of what you need to grasp to get some great images of birds in flight and what settings are needed. I have also looked at the creative side of this type of photography looking at framing, lighting and seeing the best images to take in addition to the more factual approaches.

Hopefully the images and explanations will inspire you to go out and get the very best images of the subjects that are all around us.

Nina





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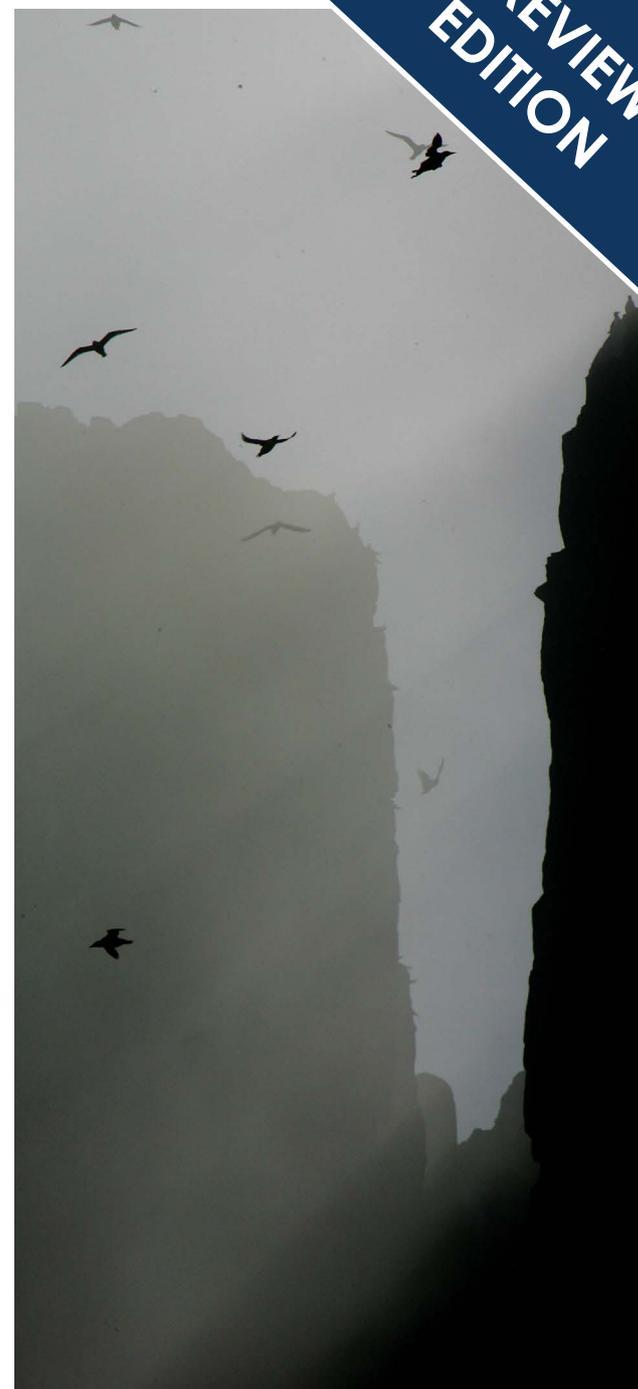
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Chapter 01

# Introduction



This was taken very early one morning on a trip to Spitsbergen from the lookout posts on the bridge of the ship I was on. At this time the birds flew very close to the ship making the photography much easier.

## Introduction

Over the years this is an area of photography that I have been asked about a lot. It is an area that requires a very good understanding of the basics of photography, as the settings we need to use can be very challenging to get under some of the light levels we shoot in.

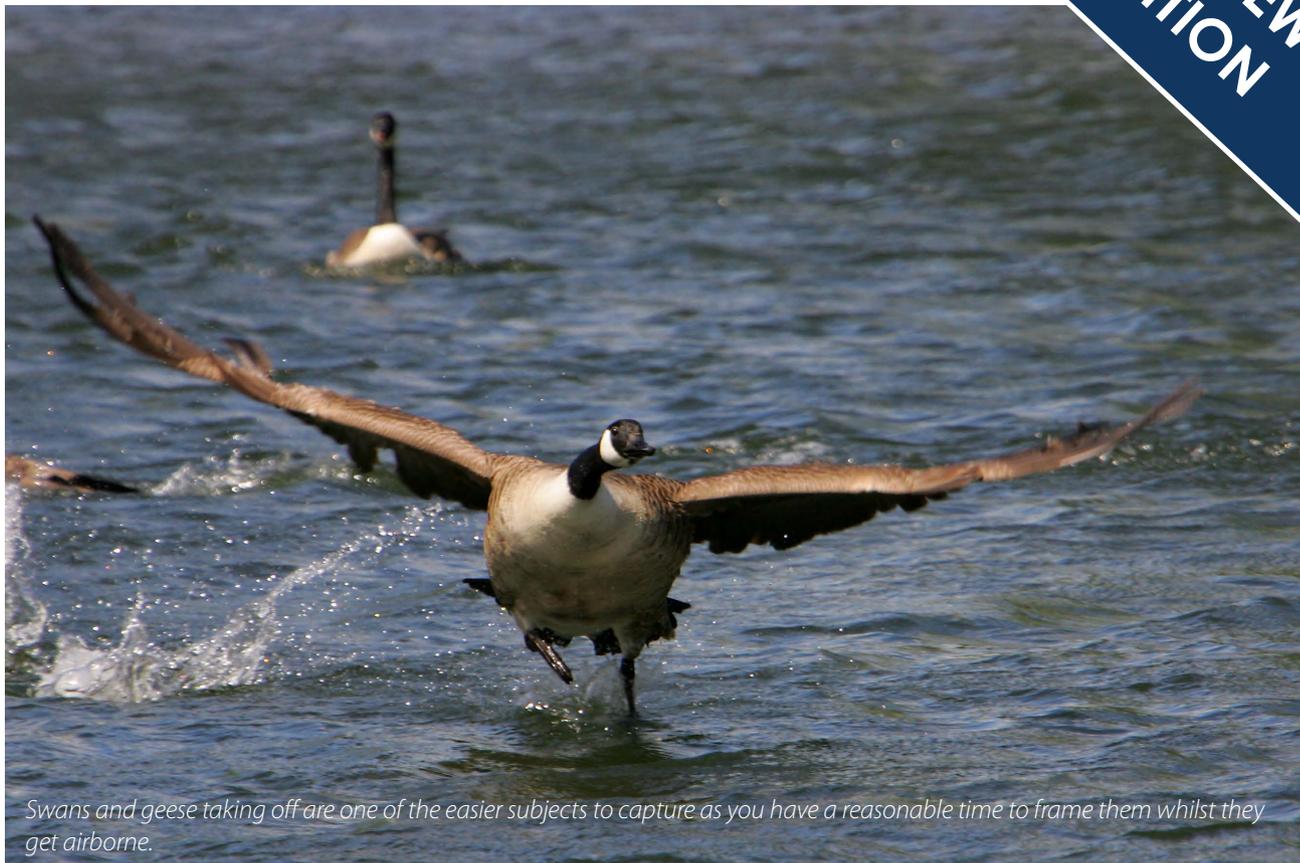
It is also an area that understanding the camera settings and knowing how to set the camera up for specific types of action, is very important as you have little time to respond and often do not get a second chance to take the image.

In most areas of photography, I would normally say that the camera you use will make little or no difference to the images that you take. Unfortunately in this area of photography the camera that you use will make a big difference to the success of the results that you get.

The higher level models will focus faster and have more configurable options and so therefore are more suitable for this type of photography.

Therefore I am going to take a more in depth look at the cameras and explain why some will work better than others and what to look for when selecting a camera for this type of photography.

The lens choice is also important, throughout this book I have assumed that the photography will be done handheld, the sort of tripod head needed to follow action and the tripod to put it on is beyond the reach of all but the most serious of professional photographers and I find handheld shooting allows you to respond much quicker.



*Swans and geese taking off are one of the easier subjects to capture as you have a reasonable time to frame them whilst they get airborne.*

The lenses you choose for this type of photography need to have quick focusing, yet still be small enough to handle and follow the bird with.

The subjects distance is going to vary considerably making zoom lenses a more practical all round choice than the fixed focal length lenses that are often used for more static bird images.

I am also going to look at the use of extenders and how they affect this type of photography.

Although appearing to be a practical way of extending the focal length of the lens, the compatibility issues often outweigh their benefit when shooting moving subjects.

This is a challenging area of photography and one that you have to shoot many images in order to get the few stunning ones - for every one of the images of mine you see in this book, there will be literally hundreds which got deleted along the way.

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## Chapter 02

# Camera choice



## Why is the camera choice so crucial?

In most areas of photography the camera choice is not really that crucial, the lenses often make far more difference to the quality of image you produce than the camera body choice.

Once we start photographing anything moving the camera choice starts to become increasingly important. The faster the subject moves the more important the camera selection becomes.

Going back a few years this made this type of photography difficult for the amateur photographer as the only bodies that were really suited to the task were the professional 1D series models.

Today with advances in the model range we now have a much wider range of models to choose from. The ideal models are cameras like the 1DX and 5D Mark III which feature 61 AF points and a very wide range of configuration options for how the focusing works in the servo modes.

The EOS 7D and 70D models, have 19 AF points and share many of the higher level models configurable features. As a result they also make excellent cameras for this type of photography.

However in more recent years we have also seen some of the more basic models start to feature 9 AF points which all have cross sensors. This makes the AF system more responsive and therefore it will cope with at least the larger and therefore slower birds in flight, making it possible to get great images even with the introductory models in the range.



## Why the drive speed is important

There are several things that are important to look at on the camera when selecting what is best for this type of photography.

The number one priority has to be the speed of focusing that the camera can achieve. However this is actually a very difficult thing to assess when looking at specification sheets as there is not really an easily quotable figure that allows you to compare one model against another.

However, a very good indicator of how fast the camera can focus is the drive speed or the frames per second that the model is designed to shoot at. The focusing has to be able to work fast enough to keep up with the speed that the camera can shoot, so generally a camera that shoots at 8 frames per second will focus twice as fast as one that only shoots at 4 frames per second.

So if we look at what the main current models at the time of writing this book shoot at we have:

EOS 1DX	12 FPS with AF
EOS 5D Mark III	6 FPS
EOS 7D	8 FPS
70D	7 FPS
700D	5 FPS
1200D	3 FPS
100D	4 FPS

We really need to look at cameras that shoot at 5 frames per second or higher to be able to cope with the majority of images of birds in flight.



*This sequence was taken on an EOS 7D which has a drive rate of 8 frames per second and it shows the variety of shots that are possible shooting at this speed.*

## Why the drive speed is important

The drive speed indicates how fast the camera can focus and therefore how well the focusing is going to be able to keep up with the subjects that we are taking. However it is also important for another reason, which is that birds in flight images only look right with the birds wings in certain positions.

If the wings are level or up, the image normally works well, but if the birds wings are down this often gives a very unnatural looking posture and makes the image look awkward.

There is also the reality that not all the images that you shoot will be good ones. I am more than happy if I come away from shooting birds in flight with at least one in ten of my images sharp and correctly framed. Much of the time when shooting wild birds, the keep percentage will be far lower than this. Especially if using the more basic lenses and camera bodies.

The reality in this type of photography is that you need to shoot a lot just to get a few good ones.

This is how professional photographers have always worked, but we mostly only get to see the good ones.

Digital has made it easier for the amateur to compete, as now there is no cost to going out and shooting several thousand images to get just a few good ones.

In the days of film it was difficult for the amateur to afford the volume of film shot by professional photographers.



*This sequence was taken on a 5D Mark III which has a drive speed of 6 frames per second and we see slightly more difference between each shot that was taken.*

## Why the number of focusing points is important

As we move up through the camera range the number of focusing points that the cameras offer increases.

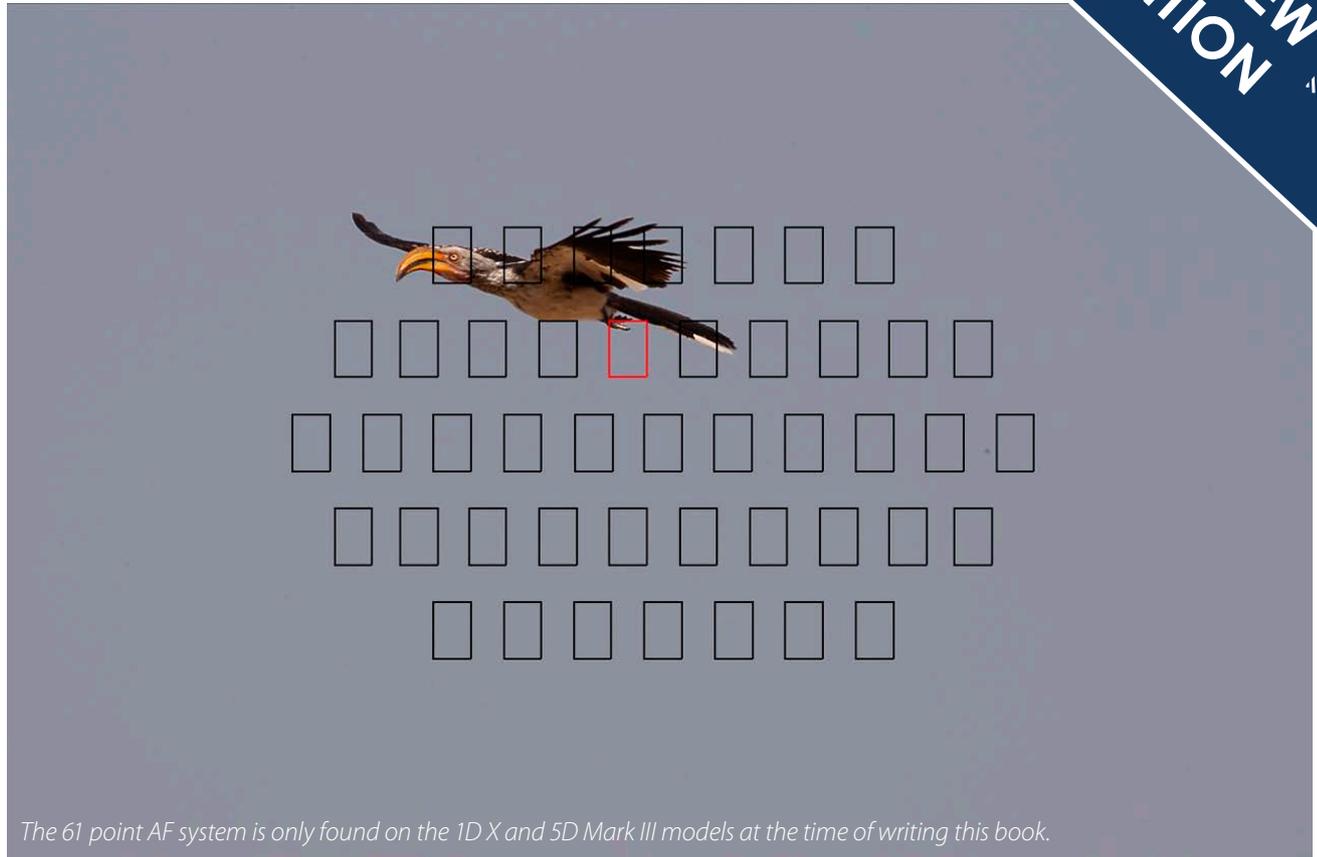
The most basic models now offer 9 AF points which is more than adequate for most normal subjects. However as we start to need to focus on something that is moving at high speed, the big gaps between where the focusing points are located can potentially give us a lot of problems. There is not always a lot of detail for the camera to see on the bird and often the camera has to focus on the edges and more focusing points will give more places for the camera to look to see something that it can focus upon.

We are also just starting to see 11 focusing points on some models, though this does not really give a significant advantage over 9 AF points.

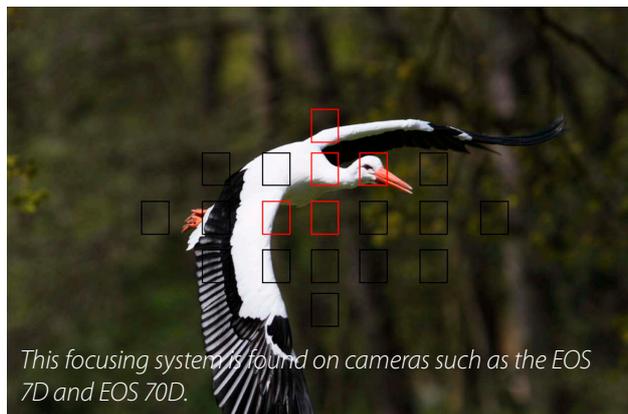
As we move up the range we increase the number of focusing points up to 19 AF points on the mid range models. These are all clustered in the central part of the cameras viewfinder and this allows the camera to focus in more places and therefore makes it easier for the camera to pick up and follow a bird in flight.

The cameras that feature 19 AF points are also faster on their shooting rate.

The higher level models now feature a 61 point AF system which allows for a more responsive focusing system which can focus over a wider area and with more focusing points they focus more responsively.



*The 61 point AF system is only found on the 1D X and 5D Mark III models at the time of writing this book.*

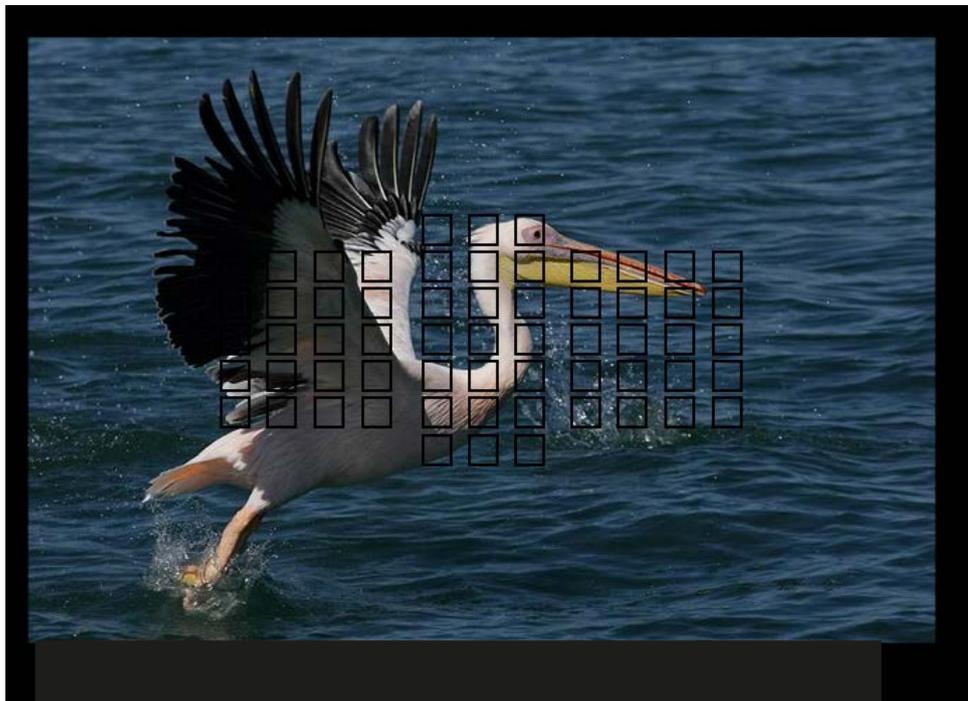


*This focusing system is found on cameras such as the EOS 7D and EOS 70D.*



*This is found on virtually all the basic models in the range.*

## Why the number of focusing points is important



The interesting thing with the 61 point AF system that is found on the 5D Mark III is that it is teamed up with a drive system that allows shooting at just 6 frames per second.

However, this is why it is important to look at all aspects of how the focusing system is working as even at 6 FPS the focusing will significantly out perform the focusing on the 19 point AF models such as the 7D and 70D that actually have a higher frames per second rate.

Part of this focusing speed advantage comes from how configurable the focusing system is on the higher level models. The other thing that helps the performance is having a separate

processor that is dedicated to running the AF system, whereas on the other models the processor has to perform more functions.

The more focusing points that there are within the central area, the more chance the camera has of seeing something within the subject that it can identify and focus upon. This makes focusing on fast moving subject easier and more reliable.

The ability on the higher level models to narrow the focusing points down to a smaller area, still gives a good number of focusing points but avoids the focusing system starting to look at things that are in the background of the shot

and therefore provides more reliable focusing and tracking on the subject.

We can see in the illustration above, how much more the 61 point AF system (left) can see when compared with the more standard 9 point (right) AF system.

Of course the bird that you are photographing can also make a big difference to how easy the focusing will be. Birds with good amounts of feathers or markings will be easier to focus upon than subjects that are a single plain dark shade, where it is difficult to see any details and there is only the outline of the bird for the camera to focus upon.

## Which sensor size is best?

One of the advantages for bird photographers is the crop factor that some digital cameras give. The majority of the digital cameras crop the image by a factor of 1.6x. The full frame cameras can be used, but longer lenses are needed.

This magnification is achieved because an imaging sensor smaller than 35mm film is used in the smaller cameras in the range. All of the other optical effects of the lens remain the same, allowing for some very effective photographs to be taken with the more modest telephoto lenses.

This also means that when shooting birds in flight a smaller more manageable lens such as a 300mm lens can be used. You will get the same frame filling effect on a 1.6x crop model as you would get if using a 480mm lens on a full frame model, which is considerably harder to hold and follow a bird with.

The minimum focusing distance, infinity point, and compatibility with the extenders are the same regardless of the camera that the lens is being used on.

This can be especially useful if travelling with the lenses, as a long telephoto lens can take up almost all of your cabin allowance. Generally the 1.6x crop sensor models are a little smaller as with cameras such as the 70D.

The full frame cameras can be used for shooting birds in flight but longer lenses are going to be needed making the outfit more costly and much more bulky as we can see with models such as the EOS 5D Mark III.



## Camera size and handling

Camera size can also be important in this area of photography. This is because most of the lenses that we are likely to be using are fairly large and heavy and therefore if fitted to the smaller size bodies, such as the EOS 100D and 1200D models, the lens can make the combination very front heavy.

Therefore the mid and higher range models which are larger and chunkier to handle, offer a distinct advantage when it comes to the balance and handling of the equipment that is being used.

An accessory that can help a lot with the camera's overall handling is the use of a battery grip. This makes the camera's overall size a little bigger, introduces a second release button for when shooting vertically and adds a little weight with the extra battery pack that will help to stabilise and balance the large lens that you are likely to be using.

Although not available for all models, most of the models that are suitable for the focusing requirements of this type of photography will have a compatible grip available for a relatively modest cost.

They also are excellent accessories for any area of photography where you shoot a lot of vertical framed images, as they give far better camera handling with the second shutter button when shooting in the vertical format.





*This image was taken on a 550D with a  
USM lens fitted. The settings were 800 ISO  
an aperture of f8.*

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*This image was taken on a 700D with a EF 75-300mm f4-5.6L IS USM lens fitted. The settings were 1600 ISO 1600th second with an aperture of f10.*

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*This image was taken on a 5D Mark III with a 100mm f/2.8L IS II USM lens fitted. The settings were 400 ISO, 1/1000s, and an aperture of f8.*



*This image was taken on a 7D with a EF 300mm f2.8L IS USM lens fitted. The settings were 1600 ISO 1600th second with an aperture of f5.6.*



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## Chapter 03

# Lens choice



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*Nina*

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