

BBC

Wildlife

with Mark Carwardine

PHOTOGRAPHY MASTERCLASS

#10 Birds in flight



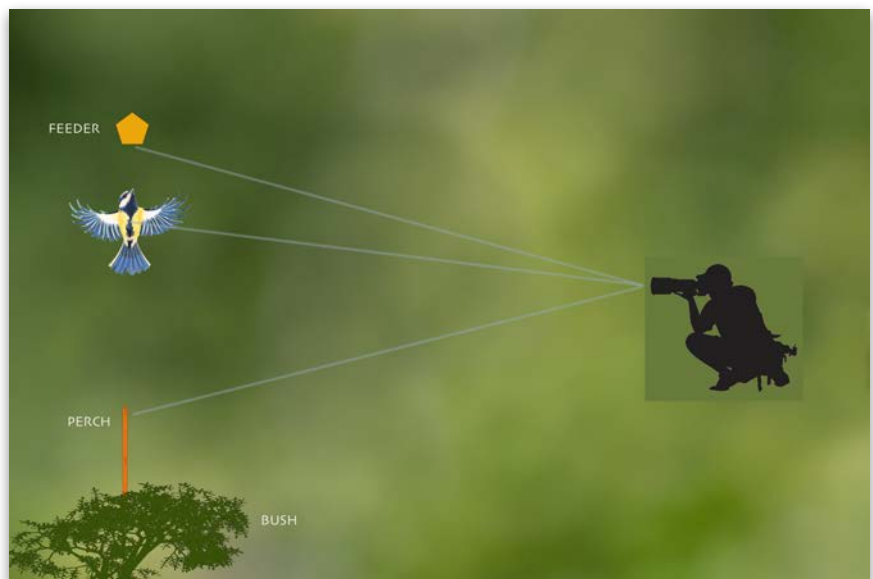
The ultimate garden bird photograph is perhaps a striking image of a bird in flight. But if you were to stand in the garden, camera at the ready, trying to photograph any of the small birds flying by, your chances of success would be pretty small. They are so fast that, by the time you've pressed the shutter button, they'll have gone. You need a better technique. One technique is to use a trigger system. You set up an infrared beam and, when the bird breaks the beam, it triggers the camera and effectively takes its own photograph. Trigger systems are getting easier and easier to use and, in the right hands, work incredibly well. But the best – the ones fast enough for birds in flight – are expensive.

A much simpler technique – which can achieve equally good results – is to use regular camera equipment to shoot the birds as they approach a feeder. The main essential ingredient is a bright day (it's almost impossible to shoot small birds in flight without sufficient light) and then, with a little patience and perseverance, it should be possible to get some stunning and powerful pictures. For this shoot, you'll be using manual focus (autofocus can't track small birds in flight) and you won't even be looking through the viewfinder. But first, here's how to prepare the basic 'stage':

- Set up a feeder in a well-lit location about 6-8 feet from a bush or hedge (somewhere your garden birds will feel safe hiding inside). Think about when you might be shooting and the angle of light – so that there aren't going to be unsightly shadows made by the feeder or the birds' own wings, for example.
- Make sure the background is uncluttered and has no distracting shadows. And, ideally, pick a bush or hedge with no obvious and easy natural perches along the edge.
- At the same time, set up a 'staging' perch to stick out

of the bush or hedge by roughly 12-18 inches. This doesn't need to be attractive – just strong enough for the birds to perch on comfortably. If there are other potential perches the birds might use, make sure that yours stick out further (or remove the 'competitors'). The aim is to persuade the birds to pause on this specific perch, while they check the surroundings, and then fly across to the feeder.

- Make sure the perch and the feeder are in exactly the same plane of focus. Then, in theory at least, the birds will remain in perfect focus while flying between the two.
- Leave it all set up for a few days or a week, to let the birds get used to it and encourage them to visit regularly. If you are going to use a hide, set that up at the same time.
- When you are ready to take pictures, temporarily tape over all the feeder holes except for one. Leave the hole directly facing the perch open for feeding (you may need to fix the feeder in some way, to stop it twisting round mid-shoot). Now, hopefully, the birds will land on the perch and then fly in a straight line to that particular hole – so you can pretty much predict the exact plane they are going to be flying in.
- It's a good idea to remove all other sources of food, temporarily, otherwise the birds might bypass your special set and go somewhere else. This is fine for an hour or two, and the impact on the birds will be minimal, but don't forget to put all the food back and remove the tape from the set feeder when you have finished your photography session.
- You can also adjust the height of the feeder, of course: put it lower than the perch to encourage the birds to glide down to it, or higher to encourage them to fly up to it.



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Camera equipment and settings

Now that you have the set ready and waiting, with birds flying from the perch to the feeder, it's time to think about camera equipment and settings:

- You need to shoot from a spot that is perpendicular to the flight path, to give the greatest chance of everything being in focus. In other words, you need to be facing the exact line from the perch to the feeder so that the back of your camera is in the same plane. It's worth actually measuring the distance from the camera (not the lens – because that is likely to move) to the perch and the feeder to make sure they are equidistant.
- Choose a lens that's not too long – or you'll be composing overly tight. It'll be impossible to predict exactly where in the frame the bird might pass and you'll need plenty of space for flapping wings and extended legs. You can increase your hit rate by keeping the bird smaller in the frame and leaving plenty of room for manoeuvre. Then you simply crop back a bit in the computer.
- Different species will use different flight patterns for this short hop from the perch to the feeder. Some will fly direct, others will swoop down and then up or they will swoop up and then down (unfortunately, some will inevitably curve slightly to one side – making it that much harder to get them in focus). Of course, once you've worked out which species does what, you can compose with one particular species in mind.
- Set your camera on a tripod (it needs to be locked in position for the whole shoot).
- Put it into manual focus and focus on a point about 30cm to the side of the feeder (towards the perch); you might need

to use a stick or something similar to focus in exactly the right spot.

- Compose the picture so that the feeder is just outside the side of the frame. This way you'll get the birds landing (many of the nicest wing positions occur just as the birds are braking to land) and, if you're lucky, some might hover right in front of the open port.
- You'll need a very fast shutter speed to freeze the wing movement of small birds in flight. If you want every last wingtip to be sharp, select 1/3200 sec or, preferably, faster. I frequently shoot at 1/4000 or even 1/5000 second, if it's bright enough. If you don't mind (or prefer) a little movement in the wingtips, you could drop down to 1/2000 sec.
- Then pick a suitable aperture. I tend to shoot at f5.6, which gives some depth of field while still allowing a fast shutter speed. But it depends on the amount of light, your lens, your shooting distance, etc, so do experiment. The ISO will need to be high enough to achieve the correct combination of shutter speed and aperture. One way of achieving all of this is to set your camera on manual, select the ideal shutter speed and aperture, and then set the ISO to auto.
- Set the maximum number of frames per second your camera allows – the more the merrier. It's amazing how many images of a bird in flight you must take in order to capture one in which the wing positions are perfect.
- It is possible to take pictures by pressing the shutter button on the camera, in the usual way, but it's a lot easier to fire the shutter using a cable release or remote trigger.
- As soon as a bird takes off start firing a quick burst of photos (actually, you have to anticipate when it's about to take off, which means shooting as soon as it even twitches). You may notice a few tell-tale signs: a little poo, a stretch of the wings, maybe a quick shake. Just don't wait until you think the bird is in frame, or you're guaranteed to miss the shot.
- The trick is simple: don't look through the viewfinder. Otherwise, your reaction will be far too slow. It's much, much easier to see what is happening – and, more importantly, what is about to happen – by having a wider field of view than through the lens.



The shutter speed needs to be as fast as possible – this one is much too slow at 1/160 sec

MANUAL FOCUS

MANUAL EXPOSURE

SHUTTER SPEED: minimum 1/3200 sec
 APERTURE: f5.6 (but experiment)
 ISO: Auto

MAXIMUM NUMBER OF
 FRAMES PER SECOND

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Doing a Superman impression (1/5000 sec, f4, ISO 800)



The wings and angle of flight feel comfortable (1/3200 sec, f4, ISO 800)



This angle of flight feels wrong (1/4000 sec, f5.6, ISO 800)



Try shooting straight into the sun for backlit shots (1/5000 sec, f6.3, ISO 1600)

Once you have mastered this technique, try moving position to get a different background and a different angle. You could even have a go at shooting straight into the sun, for backlit shots.

Great flight photography is all about wing position. You'll need to take hundreds of images – if not thousands – to achieve the most attractive results (typically, catching the wings in a perfect downbeat or a perfect upbeat). You will inevitably get an awful lot of duffs, with wings in 'uncomfortable' positions (from a human perspective) as well as birds out of the plane of focus, wings or tails chopped off at the edges of the frame, shadows over their faces, or wings completely closed (it's amazing how much time small birds spend flying like Superman – which looks very odd).

Keep reviewing the images on the back of the camera and, if necessary, adjust your composition and focus accordingly. It's largely a matter of trial and error but, once you have the set-up working properly, there is no limit to the number of flight pictures you'll be able to capture.

A more advanced technique

Try shooting directly into the flightpath, to get head-on shots of the birds coming in to land and braking. This is a more tricky technique, because it's not as simple as just shooting from behind the feeder – especially if the birds are launching from a nearby bush (the background will be far too close). You'll need a bit more space or a way of shooting against a more distant background.

It's safe to say that a bird will spread its wings – giving you the split-second chance to capture the full wingspan - in the same location most of the time. But you need to work out exactly where that location is. Take the time to study the birds as they fly in to the feeder, to judge where they spread. This will increase your keeper rate dramatically. You may have to pick a particular species to increase the odds of getting sharp shots, because they all have different approach techniques. Then manually focus on that precise point in front of the feeder in preparation. As soon as the bird takes off start firing. The more frames per second the better your chances of capturing it in exactly the right spot. And the further away the background, the smaller the aperture you can use to maximise the odds of everything being in focus (which still blowing the background out of focus).

Shooting head-on is a numbers game. You'll probably have to take an awful lot of shots – or get really lucky – before you get a keeper. Keep reviewing the images (you may have to tweak the point of focus or the line of sight) until you start getting some direct hits.



Shooting directly into the flight path (1/4000 sec, f5, ISO 800)

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