

BIRD PHOTOGRAPHY: MOST POPULAR LENSES

Quick Guide
Written by Tobie Schalkwyk



INTRODUCTION

So you've probably heard the saying, "It's not the camera that makes the image, it's the photographer." Well, if not, then you have now!

If you have ever taken that saying seriously, though, then be prepared for a rude awakening when you get to bird photography! Not so much because of the fallacy that you need a proper camera to get a decent shot (I mean, I have seen very decent bird images taken with an entry-level DSLR), but there's always one prerequisite: a 'proper' lens mounted on such a camera!

Before you start jumping up and down about my apparent degrading of the importance of the photographer behind his or her camera, yes, I know you have to know your camera and use the 'best' settings for getting decent bird shots, but (there's always that pesky BUT, isn't there?) what I'm saying is this: you can have the knowledge and ability to select the 'most suitable' settings blind-folded for each

individual circumstance, but if you do not have a suitable lens mounted on your camera, then you can kiss your chances of getting regular top-notch bird images goodbye!

So what do I mean by 'a proper lens'? I have done a little research on my own (not relying on Google this time, as you can do that all on your own) by asking the members of various bird photography groups and forums what lenses they're using and why.

In this guide I'm going to list these lenses and have a quick look at why they are so popular and what makes them render such nice bird images.

What are the properties that drive the sales of lenses used for bird photography? Some of these may be more important than others, and the importance of each may differ from person to person, but the main ones are as follows:

SHARPNESS

Any bird photographer wants his or her viewer(s) to look at a bird image and say, "Wow, look at the detail!" The first time I saw bird images in which the feather detail was simply superb, I said to myself, "Amazing! I also want to do this!" and I was hooked!

For a lot of photographers sharpness is the main factor in choosing a lens. The lenses that occupy the top spot in this category are certainly the brand name prime lenses, from 300mm to 600mm.

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SIZE AND WEIGHT

This is an important consideration when buying a 'bird lens.' The fact that they vary from 800g to 5kg (1.5lb to 11lb) in weight is a huge consideration, especially if you're planning on carrying (dragging?) it along on hikes and/or shooting without the help of a tripod!

A 5kg lens of superb quality is of no use when your hike includes long routes, ladders, and hills. You simply cannot take it with you or you'll regret that you did before you reach the half-way mark! On

the other hand, if you're on a safari where you're provided with a camera mount on a road vehicle or boat, or you can drive right up to a bird hide, then that heavy lens is certainly an option!

I know top bird photographers who own 500mm/600mm prime lenses (oh, how I hate those guys!) but they would rather use a much lighter 300mm/400mm prime lens 80% of the time, just because of weight.

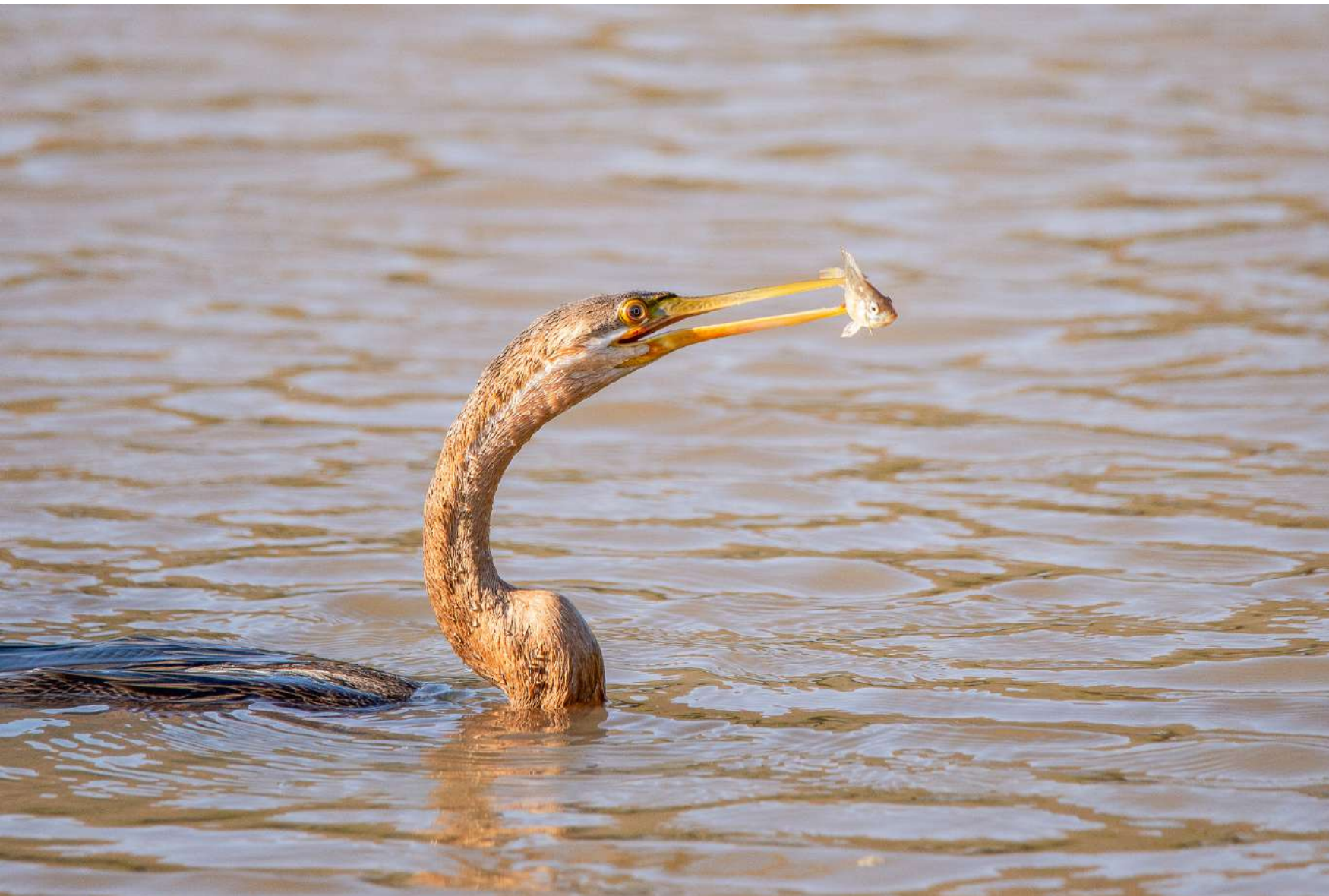
ZOOM

Have you ever looked at a beautiful bird through a prime lens, but it's too close to cover the whole bird in your frame? Let me tell you, you feel like grabbing the front of the lens and stretching it to all sides to enlarge your view! Then you clench your teeth as you fight the urge to rob the guy next to you of his cheaper zoom lens because you know this opportunity will never offer itself again!

So what do you do? Some prime lens photographers have a second body and lens on standby just in case of events like this. Carrying only a second (zoom)

lens with you is not an option because, firstly, your chances of gathering sensor dust 'out there' is a real danger whilst changing lenses. Secondly, a bird that is perched this close to you is certainly not going to wait for you to change lenses before it takes off again.

The solution would usually be to first purchase a high-quality zoom lens (and thus cover all scenarios) and a prime lens thereafter, for those 'special' shots where the prime lens is a suitable option.



Photograph by Tobie Schalkwyk


African Darter with breakfast, Nikon D600 + Tamron 150-600mm G2 @ 600mm, f/6.3 | 1/800s | 800 ISO | Beanbag

FOCUS SPEED AND TRACKING ABILITIES

This is a huge consideration when shooting birds in flight, unless you like looking at blurred bird-blobs afterwards! This is simply a function of what you can afford, as the price of lenses goes up in line with its ability to focus fast and track. Fortunately the non-Nikon companies have caught up well in this regard during the last couple of years (more about that later).

At this stage, however, reality dictates that the two main camera brands' prime lenses still reign, and they probably will for some time to come, as they are not waiting for the 'other' brands to catch up. They still keep on improving focus speeds and tracking abilities in their new releases – as unbelievable as that sounds – supported by enhanced features in their latest camera releases!

Obviously the camera plays at least as important a role here as the lens, but there is no doubt that the sharper lenses make these tasks a lot lighter for the cameras.

 **Key Lesson:** You need to decide what is important to you before buying a lens. If you want a good success rate when photographing birds in flight, it will make no sense to buy a slow-focusing lens or one with a reputation for bad tracking abilities. If you want to carry a lens

along with you on long hikes, then a lightweight lens will be of much better use to you than a 5kg beast.

I know of quite a few bird photographers who traded their top-notch 500mm/600mm lenses for much lighter 300mm/400mm (or even zoom) lenses. If they want longer reach they simply mount it on a crop sensor camera which serves as a 1.5x/1.6x TC without sacrificing maximum aperture width and focus speed.



Photograph by Tobie Schalkwyk

Striped Pipit, Nikon D600 + Tamron 150-600mm G2 @ 550mm, f/6.3 | 1/800s | 800 ISO | Beanbag

OTHER FACTORS IN YOUR CHOICE OF A 'BIRD LENS'

PRICE

So let us dream a bit. Let's imagine a camera bag containing a 300mm f/2.8 lens and/or a 400mm f/2.8 (bought for only a total of \$16,000!). Then, just for those special occasions, we have a second bag with a 500mm f/4 and/or a 600mm f/4 (bought for only a total of \$20,000!).

What's wrong with this picture? Well, if I look at my wallet, then it's not a dream; it's a nightmare! Not even the plastic money is going to save me here. I'll have to mortgage my house, which means I'll become an instant divorcee! Well, we may dream...

I have stopped counting how many guys told me that they've owned one of these magnificent lenses but they downgraded to something more affordable just because it did not make sense to carry along such an expensive lens (and

the insurance cost!) just for the pleasure of taking beautiful shots.

But hey, if you're one of the lucky ones owning one or more of these, congrats! Don't forget to count your blessings! The rest of us will just keep on envying you!

Important Note: If a desired lens is outside of your budget, it is worthwhile to save up for it, or to settle for a good second-hand lens at a much lower price. Be on the lookout when new versions of lenses become available. There are always togs around who want to sell their 'old' version at bargain prices in order to buy the newest release.

So what lenses are we talking about?

OK, enough talk. Let's start looking at what the guys are using out there!

Disclaimer:

- I'm not going to get into detail here. I'll give you just enough to get going with further research and decision-making on your own. Maybe **price** is your starting point. It usually is mine; there is no use spending three months researching a lens you can never afford anyway!

I first look at what I can afford and then look at what's out there within my budget!

- The prices I've quoted are correct at the time of writing this article (second half of 2018) and as listed by the big guns like Amazon, etc. And I might quote the price of one brand only.
- I'll be using the mnemonic '**TC**' for both 'teleconverter' (Nikon) and 'extender' (Canon) and for whatever they're known as by the other brands.
- I'm not going to discuss each version of each lens. Some lenses discussed might have previous and/or later versions available with different specs.
- The photo(s) used with each lens may or may not reflect the lens under discussion or photos taken with it. Check the accompanying EXIF data to confirm, if that's important to you.
- You may argue that I have not covered some of the top-notch lenses which would most probably do very well in bird photography (the Canon 200-400mm comes to mind). I have only listed 'popular' lenses (in other words, lenses seen often in bird photography). Thus, it does not mean that I believe it's incompetent; it just

means that I do not see it too often in the field for some reason.

- I have only covered the four main brands (Canon, Nikon, Tamron, and Sigma) because those are the ones I see in the field 99.9% of the time when on a bird shooting hike or safari. In other words, the other brands are not 'popular' amongst bird photographers, which is the reason for their exclusion.
- ***** Canon users:** Wherever I mention the fact that you can mount a lens on a crop sensor body, I assume that your camera has an EF-S mount (introduced by Canon in 2003) in the event of a full-frame (EF) Canon lens which I mostly refer to.

- I refer quite a bit to the use of crop sensor bodies in order to get the 35mm magnifying equivalent of 1.5x (Nikon) or 1.6x (Canon). Some togs swear by the fact that a full frame (zoomed in) will give you the same or better results than the perceived crop sensor magnification. Be that as it may, in my book I'd rather trust focusing on a magnified image in the viewfinder than on a smaller one.
- I've covered the two market leaders' lenses first and then the others.

Right, let's go!



Photograph by Tobie Schalkwyk

300MM F/2.8

Do not be deceived by the short focal length of this 'baby' amongst the big guns! It is super sharp (the sharpest of them all, in my humble opinion), it is light enough to carry around and its fast focusing is superb! This is the only lens where I've seen excellent shots in combo with a 2x TC – even birds in flight!

Having said that, I've spoken to a respectable photographer and owner of this lens (Canon brand) who assured me that the focusing speed and tracking ability of the lens is degraded somewhat when mounting a TC (even a 1.4 TC), especially when tracking a bird against a non-sky background; so much so that he prefers to shoot without it.

BUT he compensates for its short reach by mounting it on a crop sensor body (7D II), giving him the 35mm equivalent reach of 480mm.

NIKON AF-S NIKKOR 300MM F2.8G ED VR II

Weight: 2.9kg (6.4lb)

Length: 26.7cm (10.5")

Price: \$5,500 US

CANON EF 300MM F/2.8L IS II USM

Weight: 2.4kg (5.3lb)

Length: 24.8cm (9.7")

Price: \$6,100 US

NIKKOR AF-S 300MM F/4E PF ED VR

I have used the previous version of Nikon's 300mm f/4 lens (with a 1.4 TC) with great success for a couple of years. A few years ago Nikon released its 'PF' version with Fresnel lens technology. This offered improved quality at a super small size and weight.

I believe the best use of this lens is a 1.4 TC combo on a crop sensor body. The TC will change your widest aperture to f/5.6, but if you mount it on a body that handles high ISOs very well (the Nikon D500 comes to mind), then it's irrelevant at a 35mm equivalent reach of 630mm!

Weight: 755g (1.6lb) *** Super light!

Length: 14.8cm (5.83") *** Super compact!

Negatives: Sold without a collar (\$170 extra)
(Not the same amount of dust protection as other Nikon lenses)

Price: \$2,000 US

*** Canon also offers a 300mm f/4 version and, other than being a little heavier and bigger, it offers very similar features.



Key Lesson: A 300mm lens will not serve well as a birding lens on its own. You can extend its reach by mounting it on a crop sensor camera or by using an extender. Just keep in mind that if you mount it on an extender, you will sacrifice light in terms of aperture (1 f-stop for a 1.4x TC, 1.5 f-stops for a 1.7x TC, and 2 f-stops for a 2x TC). You will most likely also sacrifice image sharpness, focus speed, and tracking abilities.

The 300mm f/2.8 is known to render excellent results even with the use of all ranges of TCs (except for sacrificing maximum aperture width).



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Photograph by Tobie Schalkwyk

*Lilac-breasted Roller, Nikon D7100 + Nikon 300mm f/4 @ 35mm
equivalent of 630mm, f/7.1 | 1/800s | 200 ISO | Beanbag*

400MM F/2.8

This is one of the most loved and used prime lenses around, short on the heels of the 300mm f/2.8 in terms of sharpness and tracking ability. The only reason I do not rate them the same is that I have not seen anyone yet using it on a 2x TC. But if you're looking for that extra 100mm reach, then this is a fantastic asset to your kit!

Use it on a crop sensor body and you have a whopping 35mm equivalent reach of 640mm (Canon) or 600mm (Nikon) – I'd like to believe at a sharpness beyond that of the 300mm f/2.8 + 2x TC!

On the downside, though, you have one of the heaviest lenses around (in weight and price), so think carefully about your return on investment before forking out the big bucks!

NIKON 400MM F/2.8G ED VR II AF-S SWM

Weight: 4.4kg (9.7lb)

Length: 35.3cm (13.9")

Price: \$10,000 US

CANON EF 400MM F/2.8L IS II USM

Weight: 3.85kg (8.5lb)

Length: 34.3cm (13.5")

Price: \$10,000 US

500MM F/4

Sharp with excellent tracking abilities, this lens gets good feedback from guys using it in combo with 1.4 TCs. A possible downfall is weight and its price tag. It has a fantastic 35mm equivalent reach of 800mm (Canon) or 750mm (Nikon) on a crop sensor body.

NIKON AF-S NIKKOR 500MM F/4E FL ED VR

Weight: 3.1kg (6.8lb)

Length: 38.7cm (15.2")

Price: \$10,000 US

CANON EF 500MM F/4L IS II USM

Weight: 3.2kg (7.04lb)

Length: 40cm (15.32")

Price: \$9,000 US

Important Note: The 400mm and 500mm lenses are excellent for static use (certainly on a tripod), but make sure that you have a second lighter lens available if you're planning on doing bird shoots during long hikes, unless you are a masochist or you're built like the Hulk, of course!

NIKON AF-S NIKKOR 500MM F/5.6E PF ED VR

This is Nikon's latest answer to a lower-cost and lighter 500mm prime – "the poor man's 500mm" so to speak. Don't be mistaken, though; this is no lens to be scoffed at! Fresnel lens technology allows a much more compact body (just a little bigger than the 70-200mm f/2.8) with top sharpness.

A couple of years ago I would have raised my eyebrows at the sensibility of sacrificing a full f-stop of light (compared to the 500mm f/2.8), but what are

you getting back in return? A full savings of \$6,400 on the price tag of the f/2.8!

Now take this tip from me: take the money you're saving from buying the 500mm PF and buy yourself the Nikon D500 for \$1,900 (even cheaper if used). Then mount the lens on the best high ISO handling crop sensor camera ever built so far by looking at the evidence! The single f-stop sacrifice compared to the 500mm f/2.8 is thus irrelevant as you can push the ISO really hard on this body and not worry about it. And all that at a fantastic 35mm equivalent reach of 750mm!

Weight: 1.46kg (3.2lb)

Length: 23.7cm (9.5")

Price: \$3,600 US

Important Note: The Nikon 500mm PF lens opens up a new world to those who could not afford a 500mm prime lens before. One will only do justice to it by mounting it on a body which handles high ISOs well, though. It will probably render sharp images if mounted on a 1.4 TC, but the drop in maximum aperture (to f/8) is just not worth it.

On the next page, see how amazingly compact this Nikon 500mm PF (left) is compared to a Nikon 70-200mm f/2.8 (right)?



Photograph by Marc Moll



Photograph by Tobie Schalkwyk

A Nikon 200-500mm in action

NIKON AF-S 200-500MM F/5.6E ED VR

This is probably the most popular zoom lens for bird photography under the Nikon togs. It competes directly with the non-brand 150-600mm lenses in terms of features, weight, and size. Which is the best between the lot? It all depends on who you talk to; although I'd give the Sigma 150-600mm sport the benefit of the doubt in terms of fast focusing abilities.

A tog told me about getting good results in combo with a 1.7 TC. Personally I would not go that route because of the 1.5 f-stops of light you'd sacrifice (even a sacrifice of 1 f-stop with a 1.4 TC will take you to f/8, which is just too much in my book).



Photograph by Hennie Storm

*Cut-throat Finch, Nikon D500 + Nikon AF-S 200-500mm f/5.6E ED VR @
500mm (35mm eq: 750mm), f/8 | 1/1600s | 1250 ISO*

Slap it onto a crop sensor body with good high ISO handling abilities rather than a TC, though (Nikon D500?), and it's a totally different story! That will give you a 35mm equivalent reach of 300-750mm at f/5.6, which is just great!

Weight: 2.3kg (5.1lb)

Length: 26.7cm (10.5")

Price: \$1,414 US

Important Note: The Nikon 200-500mm is Nikon's budget' long reach zoom offering, but it has strong contenders from the Tamron and Sigma stables in terms of quality and price. If you're a loyal Nikon supporter, then buy it. Otherwise take it, together with the aforementioned two brands, for a test drive before you make your final decision.



Photograph by Hennie Storm

*Bearded Vulture coming in for a landing, Nikon D3s +
Nikon 600mm f/4, f/9 | 1/2500s | 800 ISO*

600MM F/4

This lens is sharp, with excellent tracking abilities. Just like the 500mm f/4, there is good feedback from guys using it in combo with 1.4 TCs. And just like its smaller brother, it has a heavy weight and price tag! It has a very handy 35mm equivalent reach of 960mm (Canon) or 900mm (Nikon) on a crop sensor body.

AF-S NIKKOR 600MM F4G ED VR

Weight: 5.06kg (11.6lb)

Length: 44.5cm (17.5")

Price: \$9,200 US

CANON EF 600MM F/4L IS III USM

Weight: 3.05kg (6.7lb)

Length: 44.8cm (17.6")

Price: \$13,000 US

Important Note: Just like Nikon and Canon's other long-range prime lenses, the 600mm will not disappoint in terms of quality. Its price and weight may be determining factors before buying it, though.



Photograph by Tobie Schalkwyk

A Canon EF 100-400mm f/4.5-5.6L IS II USM in action

CANON EF 100-400MM F/4.5-5.6L IS II USM

This is the lens I probably see the most amongst our Canon birding photographers, and that speaks for itself. I believe its weight and relatively small size is what makes it so popular. Its users report fast focus and sharp images.

Mount it on a crop sensor body and you have a 35mm equivalent reach of 160-640mm!

Weight: 1.64kg (3.6lb)

Length: 19.3cm (7.6")

Price: \$2,200 US



Photograph by Kate Morris

Rock Kestrel in flight, Canon 7D MkII + Canon EF 100-400mm f/4.5-5.6L IS II USM, f/6.3 | 1/3200s | 800 ISO

TAMRON AND SIGMA

If there were some significant improvements in the world of lenses recently then it is in the Tamron and Sigma worlds. I do not think they're competing with Nikon and Canon yet – and they probably will not for some time to come – but their latest released lenses carry huge improvements and are really good value for money!

So let's see what the bird photographers are using out there.

SIGMA 150-600MM 5-6.3 CONTEMPORARY DG OS HSM

This is Sigma's (much needed) upgrade on their aged 150-500mm lens and competes in features and price with the Tamron 150-600mm G2. Personally I'd give the G2 the first spot in terms of sharpness across its full zoom range.

In spite of its shortcomings, some guys are using it on a 1.4 TC. It's not something I'd recommend because, firstly, I did not have good experiences with non-brand TCs (they do make excellent paper weights, though!) and, secondly, you do not want to sacrifice another f-stop of light on your already-slow maximum aperture.

On a crop sensor body this lens will give you a nice 35mm equivalent reach of 240-960mm (Canon) or 225-900mm (Nikon). Mount it on a body where you can afford to play with high ISOs, though!

Weight: 1.95kg (4.3lb)

Length: 25.9cm (10.2")

Price: \$1,000 US



Photograph by Hennie Storm

*Wahlberg's Eagle, Nikon D3s + Sigma 150-600mm 5-6.3 Sport DG
OS HSM @ 600mm, f/6.3 | 1/1250s | 1600 ISO*

SIGMA 150-600MM 5-6.3 SPORT DG OS HSM

This is Sigma's answer to the Tamron 150-600mm G2, and from test results and reports it looks like they've produced a winner by a narrow margin – albeit at a \$500 higher price tag and almost 1kg extra in weight.

One owner of this lens mentioned to me that it's slow to lock onto its target but once it has found it, it tracks it well. Therefore it might be worth the effort to take it (together with the G2) for a test drive if you need to decide between these two lenses.

Unless you actually need it for sport events (and want to keep the wider focal length), mounting it on a crop sensor body will give you a very handy 35mm equivalent reach of 240-960mm (Canon) or 225-900mm (Nikon). If at all possible, mount it on a body where you can afford to play with high ISOs in order to cancel out its maximum aperture limitations.

Weight: 2.86kg (6.3lb)

Length: 28.96cm (11.4")

Price: \$1,800 US



Photograph by Christopher Caine

New Zealand Silvereye, Nikon D5300 + Tamron 100-400 mm @ 400mm (35mm equivalent: 600mm), f/6.3 | 1/160s | 640 ISO

TAMRON 100-400MM F/4.5-6.3 DI VC USD

I would not recommend using this lens on a full-frame body because of its limited reach, but on a crop sensor, which can handle high ISOs well (because of its aperture shortcomings), it offers good value for your hard-earned bucks. A 35mm equivalent reach of 160-640mm (Canon) or 150-600mm (Nikon) on a crop sensor body is not to be scoffed at.

Its users report a very respectable focus speed and sharpness, and its relatively light weight is certainly a big plus.

If you have a full frame in your bag and you can afford the \$500 difference in price, then I'd recommend passing on this lens and opting for its 150-600mm G2 sibling.

Weight: 1.35kg (2.5lb)

Length: 19.2cm (7.7")

Price: \$800 US



Photograph by Tobie Schalkwyk

The Tamron 150-600mm SP f5-6.3 Di VC USD G2

TAMRON 150-600MM SP F5-6.3 DI VC USD G2

When the first generation of this lens came onto the market I borrowed one from a friend for a few shots and I was just not 100% happy with the results. I could not always put my finger on the reason why, but it just lacked the 'wow' factor in terms of sharpness in its longer focal lengths.

However, when the second generation (G2) of the lens came onto the market, I was one of the first to pay attention. Fellow togs reported great results and I soon decided to trade my 300mm f/4 for one of these in order to have longer reach on my full-frame Nikon body.

I must say, other than a little slower auto-focus than the 300mm, I did not miss the old lens for one second! I get super-sharp shots even at the limits of its settings (f/6.3 @ 600mm), which I use for 99% of my shots.

The only improvement I'll consider the moment I can afford it is to also mount it on a crop sensor body with excellent

high ISO handling abilities (the Nikon D500 comes to mind). A 35mm equivalent reach of 240-960mm (Canon) or 225-900mm (Nikon) on a crop sensor body is to die for!

Weight: 2kg (4.43lb)

Length: 25cm (10.1")

Price: \$1,300 US

Important Note: Tamron and Sigma have recently closed the gap considerably in producing quality images with their latest releases of long-range zooms lenses. They will probably never catch up 100% with Nikon and

Canon, but they do offer excellent value for money considering the quality of the images that they now produce.

They certainly bring good-quality long-range zooms within reach of those who cannot afford the brand names' prime lenses!

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Photograph by Tobie Schalkwyk

Pied Kingfisher with a catch, Nikon D600 + Tamron 150-600mm G2 @ 600mm, f/6.3 | 1/1000s | 200 ISO

CONCLUSION

Bird photographers are spoilt for choice as far as lenses are concerned. In the end the choice is all a function of quality requirements, ease of use (weight and size) and, most importantly, budget.

A couple of years ago **only** the 'pro' (f/2.8 and f/4) brand name prime lenses were considered as 'really good enough' because in those days the cameras' difficulty in handling high ISOs was a real Achilles heel when mounting slower lenses. The problem was that the widest aperture of these lenses in general started at f/5 and narrower, so they were really useless as soon as unfavorable lighting conditions struck.

Then entered the latest range of cameras with stunning high ISO handling abilities: the Canon 5D IV; Nikon D850 and D5; and even a crop sensor beast, the Nikon D500, among others.

These cameras opened up a whole new world to the (prospective) owners of no-brand zoom lenses. Their relatively 'bad' aperture ranges could be overridden by pushing up the ISOs much higher than feasible before, without fearing negative results.

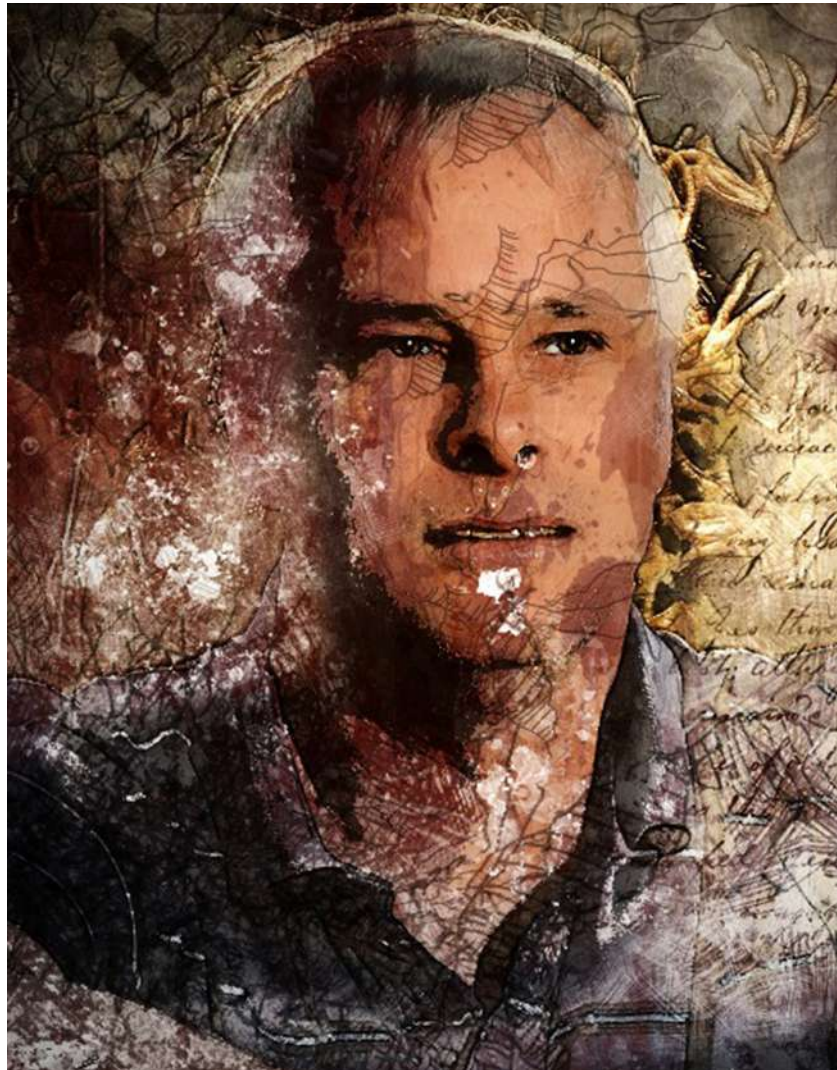
I believe that the ISO dragon will be conquered even more in the future. Who knows, maybe we will even see cameras in the years to come without ISO buttons or ISO settings because it simply will become irrelevant! We can only dream!

Word of thanks: Thanks to each and every person who allowed me to capture shots of their lenses – or to use their bird images – to make this guide more interesting and colorful. Without those images it would have been just a dull collection of words!



Photograph by Neil Crafford Lazarus

ABOUT THE AUTHOR



Tobie Schalkwyk is a retired Web Systems Developer hoping to soon make an income from photography alone. He has a passion for all genres of nature photography, especially bird photography, but he also gets involved in other genres of photography like weddings, events, and in-studio portraits.

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