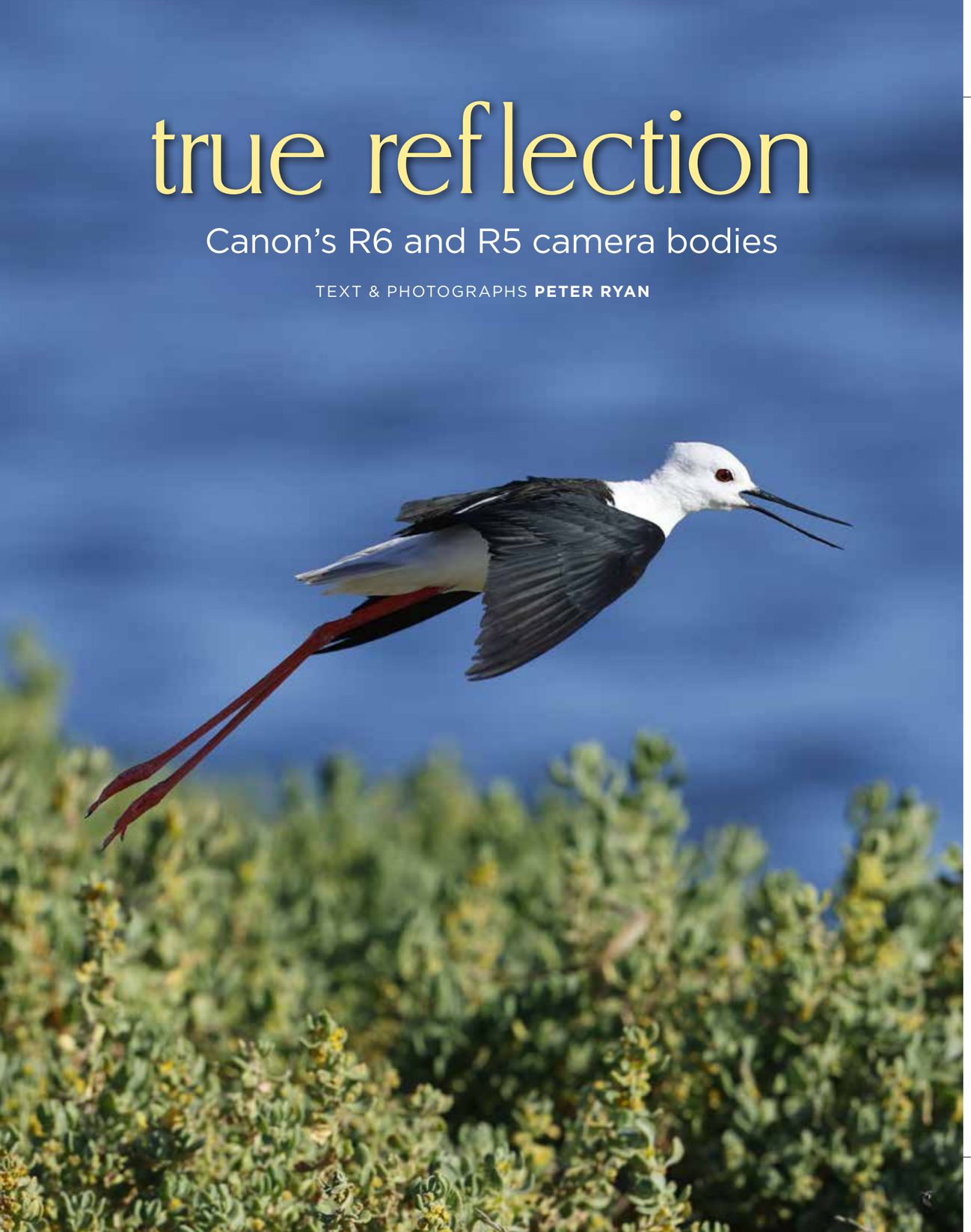
# true reflection

## Canon's R6 and R5 camera bodies

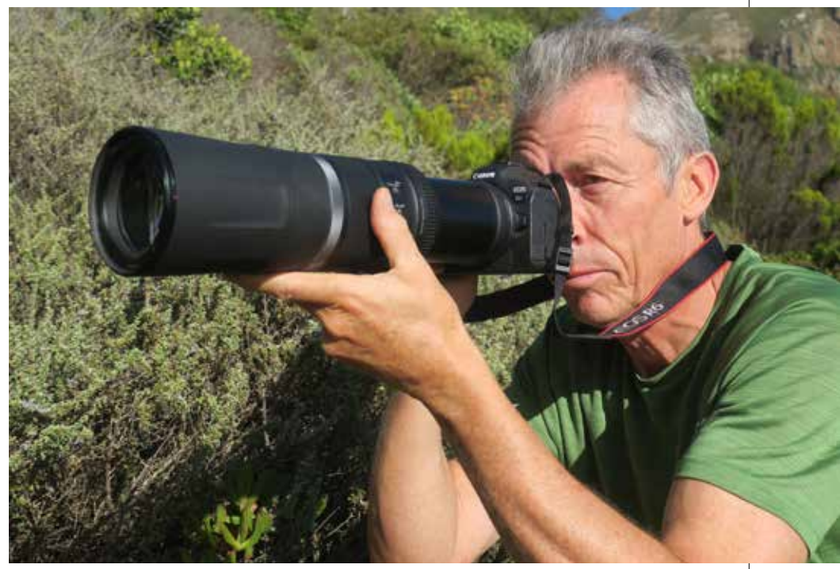
TEXT & PHOTOGRAPHS **PETER RYAN**



I still vividly remember the excitement of getting my first digital single lens reflex camera (DSLR). The freedom to take hundreds of images revolutionised my birding as well as my photography. Over the past 16 years, photography has become an indispensable part of my ornithological toolkit, giving novel insights into birds' moult, diet and other behaviours, as well as improving my ID skills. Like many bird photographers, I have spent a small fortune investing in the steady increase in image resolution and frame rate in the quest for the perfect camera. After a week with the Canon R6, I feel as excited as when I got my first Canon D10.

In the early 2000s, the debate was whether digital would replace slide film. I have some useless slides from a stunning day on Tristan peak in 2004 because publishers at the time still favoured transparencies. How quickly things changed! The past few years have seen a similar revolution brewing – the switch from DSLRs to mirrorless cameras. Mirrorless is nothing new – every point-and-shoot camera is mirrorless. The disadvantage for bird photography has always been the lag between the sensor and the viewfinder. Until recently, you couldn't hope to track a bird in flight with an electronic viewfinder (EVF). The mirror system in an SLR camera allowed you to literally see the image going to the sensor.

There is one big drawback to the SLR system: when the shutter is triggered, the mirror flips up, cutting off the viewfinder. This is barely noticeable for most bird images, when exposures last a thousandth of a second, but during that time the camera's focusing system is also blind. This is particularly annoying if you want to shoot videos, because the mirror remains up throughout, forcing you to resort to manual focusing. Mirrorless cameras circumvent this problem because they use the information from the sensor to focus. And because the viewfinder is digital, that focus can be much more intelligent. Any smartphone worth its salt has face recognition to help you focus on the subject of your image, irrespective of its position in the image.



Sony started the push towards professional mirrorless cameras, quickly cornering the video market and gaining a small but dedicated following in the stills photography market. Other brands followed, but Nikon and Canon were slower to react to the demand for better mirrorless cameras. Their initial offerings were expensive without challenging the top-end DSLRs. But this changed in mid-2020 when Canon released its R5 and R6 models. Soon the internet was abuzz with reviews about these cameras' intelligent focus-tracking capabilities and blistering 20 frames per second electronic shutter speed. I had to get my hands on one to see for myself!

When I received a review model of the R6 it came with the bonus of Canon's F11 800mm lens, designed specifically for use with the R-series bodies. More on the lens later – first, the R6 camera. Strangely, one of the common complaints about mirrorless bodies is that they are too small! Removing the mirror and prism that takes the image to the optical viewfinder makes the body appreciably smaller and lighter than a DSLR, but smaller can mean fiddlier if you have to work with lots of controls. Canon has cleverly kept the R5 and R6 more or less the same size as its standard DSLRs, with much the same arrangement of control buttons and wheels, so it's easy to make the switch between the two marques. However, the R6 weighs about one quarter less than a 7D Mark II does, which is a bonus if you're carrying your camera for long periods.

The lighter body does mean it's not as well balanced when a massive telephoto lens is attached, but I didn't find this to >

above *Another advantage of the R-series bodies is the super-lightweight f11 800mm lens, seen here on a Canon R6.*

opposite *The main advantage of Canon's new mirrorless R6 camera is its more than 1000 autofocus points, which cover the entire sensor. Flying birds remain in focus against the busiest background, even if the bird gets close to the edge of the image. I took 130 images of this Black-winged Stilt and every one was sharp. The R6 is not always this reliable, but a much higher proportion of its images are in focus compared to a DSLR camera's.*

above *The electronic shutter offers a blistering 20 frames per second, ideal for capturing birds such as this Grey-headed Gull in flight. However, the out-of-focus beach huts in the background appear to be leaning over as the camera pans with the bird because of the rolling shutter effect, caused by sequential scanning of the sensor by the electronic shutter release. Using the mechanical shutter avoids this problem, but drops the frame rate from 20 to 12 images per second.*

opposite, above *Once locked onto your subject, the animal eye focus allows you to concentrate on image composition rather than keeping the subject – in this case a White-fronted Plover fledgling – in focus.*

opposite, below *The animal eye focus mode managed to track this Levaillant's Cisticola in dense vegetation, even when the plants were blowing back and forth, occasionally completely obscuring the bird's head.*

be a significant issue. The loss of the mirror also allows the lens to be much closer to the sensor, which helps the design of wide-angle lenses, but it does mean that you need an adaptor – basically an extension tube – to use any EF lens on an R-series body. You can buy either a simple adaptor for about R2100 or a control ring adaptor, which allows you to adjust your ISO and exposure compensation, for R4100. One slight negative on the R6 was the lack of a lock on the programme-mode wheel, which has been moved to the right of the viewfinder. I accidentally changed settings a couple of times. The R5 has a top LCD display, so avoids this issue.

Enough technical talk. How does the R6 perform in the field? After half an hour's homework to decide on basic menu settings, I took it to sea for half a day, to Strandfontein for a few hours one windy morning, as well as on my regular mountain bird count and on a couple of shorebird counts. At Strandfontein, I compared it directly with my trusty 5D Mark IV as well as a 7D Mark II. Upfront, I should admit that I prefer the 5D to the 7D for image quality, so it's my go-to camera for dedicated photographic sessions, but the extra reach given by the 7D's crop factor and its marginally faster frame rate mean I tend to use that body for grabbing 'work' shots. The standard comparison for bird portraits was with a Canon 500mm f4 lens, both with and without a 1.4x converter, but I also tried the R6 with a Canon 100–400mm Mark II lens, a Canon 24–105mm f4 lens and the new R-series 800mm f11 lens.

I found that the EVF on the R6 took a bit of getting used to when tracking fast-moving birds. The images appeared staccato at times, irrespective of whether I used the energy-saving viewing mode or the more energy-draining 'smooth' viewing mode. This wasn't a problem for following larger birds in flight, but swallows proved tricky (aren't they always?). However, there are advantages to an EVF. In addition to the image, you can view other information such as exposure histograms or zebra striping to highlight overexposed parts of the image. This can prove distracting but is extremely useful if you are working under tricky exposure conditions. You can also review images through the viewfinder, which is better than using the back display in bright light.

However, the main advantage of going mirrorless is the improved focusing system. As the table on page 60 shows, both the R5 and R6 boast more than 1000 autofocus points, five times more than Canon's flagship DSLR, the 1DX Mark III. More is not always better and I have to admit I haven't had the privilege of using the 1DX, but the difference compared to the 5D and 7D is staggering. Once the R6 locked onto a bird it stuck with it against even the most cluttered backgrounds. The focus points cover the entire sensor area, so the bird remained in focus even if it moved to the edge of the frame. At sea it picked up dark birds against the water, a task that DSLRs find particularly challenging.

The autofocus also includes an entirely new 'animal eye' mode, which hunts out and locks onto eyes. One of the first lessons in wildlife photography is that, in general, the eyes should be in focus and this feature makes it easy. It is not always perfect – sometimes it selected the white tips to the primaries of Kelp Gulls in flight and if there were multiple birds in the field of view it might choose one that you didn't want to be the subject. However, it's fairly easy to switch focus modes or to move the frame until only the bird you want is in view. Once it locks on, the animal eye mode is amazingly tenacious. You can trust the focus to stay with your subject while you concentrate on composing the image. Even if the bird turns its head or is briefly obscured by vegetation, the focus stays true.

Another big drawcard, especially for action shots, is the 20 frames per second image rate. This relies on an electronic shutter mode, which is completely silent. At first I wasn't sure whether the camera was taking multiple images and it was only when I reviewed the images that I knew for sure the frames had been rattled off. This lightning-fast frame rate is not without its issues, however. Unlike a mechanical shutter, which exposes the entire sensor at once, the electronic shutter scans the sensor line by line, leading to so-called 'rolling shutter' distortion if what you are shooting is moving. In practice this is seldom a problem for photographing birds in flight – it is only if the background has strong vertical elements that the effect is highlighted.

For perched birds, however, you are likely to prefer the mechanical shutter option, if only because of the more modest number of images to process. It doesn't take long to accumulate a lot of images when shooting at 20 frames per second and if you only shoot raw, it's going to take ages to review them all. Even for a lazy jpeg shooter like me, there are a lot of very similar images to sort. With the R5 you have the option to save jpegs to the SD card and raw to the CFAS card, so you can quickly select the images you want to keep from the jpegs and then spend your evenings tweaking the raw files. The mechanical shutter delivers a respectable 12 frames per second on a fully charged battery, but this drops to nine frames per second once the battery charge drops below 60 per cent capacity.

Which brings us to one of the two main drawbacks highlighted in most reviews of Canon's new mirrorless bodies: the shorter battery life than DSLRs because of the digital viewfinder. Both the R5 and R6 take the same battery as many Canon DSLRs, so I charged up a few spares. However, I didn't need them. The supplied battery was still half charged after taking nearly 8000 images on the Strandfontein visit and it was able to manage the day at sea and mountain >

*Coupled with Canon's R6 camera, the RF 800mm f11 lens is great for photographing flying birds. The animal eye focus mode helps to keep the head rather than the closest wing tip in focus.*

hike on a single charge. Maybe over time the battery performance will wane, but I don't foresee this being a major concern for most photographic sorties.

The second drawback is the lag in the start-up of the viewfinder. Again, I didn't find that to be as serious as some reviews suggest. The EVF starts automatically when you put your eye to the viewfinder, with a lag of perhaps 0.2 seconds – long enough to be problematic if you are trying to pick up a bird in flight. However, I soon learned to half press the shutter release as I lifted the camera so that the EVF was on as soon as it reached my eye.

What about image quality? In good light, there was little to choose between the R6, 5D and 7D, but above ISO 400 the 7D quickly fell out of the running. When I compared the R6 side by side with the 5D on my local White-fronted Plovers, the R6 stacked up favourably, despite its lower resolution. This is where the R5 wins out, offering the highest resolution sensor yet made by Canon at 45 megapixels. But this comes at a cost and not only in terms of price point.

I was able to borrow an R5 and tested it with my EF 500mm and the RF 800mm lens. There's no doubt the R5 takes stunning images, but it was appreciably slower to focus and significantly less persistent in holding focus than the R6, especially with the RF 800mm lens. I also found the start-up time longer and battery life shorter, presumably due to the greater processing demands of its larger file sizes and higher resolution viewfinder. The much larger file sizes also reduce the number of images that the R5 can buffer and the more densely packed sensor results in slightly poorer low-light performance. The R5 is a great all-round camera and is exceptional in offering 8K video, but it is very expensive relative to the R6. For bird photography I'd buy an R6.

How Canon's R6 and R5 compare to other popular Canon DSLR bodies for bird photography

| | 1DX III | 5D IV | 7D II | R6 | R5 |
|---|---|---|---|---|---|
| Mass (g) | 1250 | 890 | 910 | 680 | 738 |
| Image resolution (megapixels) | 20.1 | 30.4 | 20.1 | 20.1 | 45.0 |
| Crop factor (1 = full frame) | 1 | 1 | 1.6 | 1 | 1 |
| Frames per second (mechanical) | 16 | 7 | 10 | 12 | 12 |
| Frames per second (electronic) | 20* | | | 20 | 20 |
| Focus points | 191 | 61 | 65 | 1053 | 1053 |
| Shutter rating (thousands) | 500 | 150 | 200 | 300 | 500 |
| Approximate price (R1000s) | 115 | 39 | 22 | 44 | 82 |

**in live-view mode, but this is not practical for tracking birds in flight*

# the ultimate point-and-shoot

## Canon's R6 and RF 800mm f11 IS STM lens

The switch to full-frame sensors in most digital cameras has improved image quality, especially at lower light levels, but has left many bird photographers wishing for a bit more 'reach'. Even a 500mm or 600mm super-telephoto lens begins to feel a bit short for taking opportunistic bird photographs with a full-frame body. But until now there were very few options for a longer lens. Canon's EF 800mm f5.6 lens is a monster that weighs 4.5 kilograms and costs more than R235 000! By comparison, Canon's new RF 800mm f11 lens weighs only 1.26 kilograms and costs R17 500, about the same as Canon's budget EF 400mm f5.6 lens.

Clearly some compromises have been made and the main one is in terms of aperture size. The fixed f11 aperture lets in a lot less light than lenses with larger apertures that enable faster shutter speeds and a shallower depth of field to isolate the subject from the background. Also, the f11 lens is made of polycarbonate plastic, not magnesium alloy, and is not weather proof. The lens has to be extended to use, which makes it more compact to transport but raises the spectre of sucking in dust. Clearly it would need to be used with more caution than an EF lens.

Another slight drawback is the minimum focus distance, which at six metres is perhaps a bit farther than you would like for bird photography. However, it's the same as Canon's EF 800mm lens. The focus range can be set to 'full' or from 20 metres to infinity. The focus was a lot faster when set to the reduced focus range, especially for birds in flight, but of course only if the birds were more than 20 metres away. Like all R-series lenses, it has a control ring that can adjust the ISO or exposure compensation while shooting.

There is a built-in tripod mount, but this doesn't rotate, so you can only use a tripod easily in landscape orientation. However, I see this mainly as a convenient 'point-and-shoot' lens that is compact and light enough to hand hold. The lens has image stabilisation equivalent to four stops, which allows hand-held images down to fairly slow shutter speeds. It doesn't come with a lens hood; Canon offers a large plastic one for another R1000 or so, but I found the lens worked fine without a hood (which adds extra shake in windy conditions).

Despite its limitations, having an 800mm lens plus a camera that weigh less than two kilograms is amazing. It is appreciably lighter than a Canon 7D with a 100–400mm zoom lens (2.6 kilograms) and positively feather-light compared to most fixed focal length EF super-telephoto lenses. The proportion of sharp images was perhaps not quite as high as when shooting with my 500mm f4, but it was generally pretty good. This is a great everyday lens to capture something that you can't anticipate, be it unusual behaviour or a mega-rarity. ◆

*The 800mm lens also was great for reading ring numbers. This juvenile Sandwich Tern (white 5NH) was ringed as a chick in the Netherlands in June 2020.*