

no reflection

Mirrorless cameras

TEXT & PHOTOGRAPHS **MARTIN BENADIE**

OM-D EM-1 Mark II (OM-D II) mirrorless camera paired with the 40–150mm f/2.8 zoom and 300mm f/4 fixed lenses on a birding trip.

As the name suggests, a mirrorless camera does not have the mirror mechanism that a DSLR has, resulting in a smaller and lighter camera. It does, however, allow the user to change lenses, as in a DSLR. The disadvantages of the mirrorless system compared to DSLR have been shorter battery life, lacklustre viewfinders and slower autofocus. Due to its smaller image sensor, it has also struggled in terms of noise performance and image quality in low light conditions. The OM-D II (and the latest Panasonic offerings) has addressed many of these shortcomings and is now being used more and more by bird photographers around the world.

To be honest, mirrorless cameras had never been on my radar, but now given the chance, I was keen to find out how image quality, ergonomics and handling compared with my DSLR of choice. For a long time I have wanted to go smaller and lighter with camera gear on my birding travels, so the fact that I could pack

the OM-D II and two lenses, an extra camera body, my binoculars and a spotting scope all into a mid-size backpack was a good start.

For birds, which are mostly shy subjects that rarely allow a close approach, you can never get enough lens. Reach is where the Olympus shines, thanks to its adopted Micro 4/3 sensor format, which gives you double the focal length over the conventional 35mm (full-frame) format. The 300mm f/4 fixed lens thus becomes a 600mm f/4 – and if you use the built-in 1.4 electronic teleconverter, this becomes an astonishing 840mm f/5.6! So you get a great focal length with brighter and faster apertures. To put this in context, the OM-D II's sensor is half the size of an APS-C (crop body) and about a quarter the size of a full-frame DSLR sensor, though you wouldn't say so based on the images taken. The effective depth of field compared to full-frame is reduced by two times, so f/1.4 will deliver a depth of field equivalent to f/2.8 on full-frame.

A conventional 600mm f/4 prime lens is monstrous in both weight and price. The 2x crop factor of the OM-D II enables the lenses as well as the body to



be smaller, while the f/4 aperture helps the Micro 4/3 sensor to handle low light conditions better as it is sharp enough to shoot wide open. So overall, the OM-D II shows that a very pleasing image quality can be achieved with the mirrorless system. Photographers who shoot in RAW format will appreciate the favourable recovery of shadow detail, while the colours and camera metering are also accurate. Although the OM-D II performed quite well at higher ISOs too, cameras with a larger sensor would still be ahead. For close subjects, the 20-megapixel Olympus sensor produced excellent images, probably helped by the fact that the camera does not have a low-pass filter. Using the 300mm f/4 lens, I got many acceptable bird images.

The autofocus of the OM-D II is DSLR-like, fast and efficient and covering the entire frame. I found it to be easy to use with a high keeper rate, especially when photographing bird behaviour. The AF system uses 121 on-sensor phase detection AF points (all cross-type) arranged in a rectangular array that covers a much larger area of the frame than regular DSLR

systems do. To take action shots you need a fast continuous shooting mode and mirrorless cameras are making progress here too, partly because they have fewer moving parts and partly because they are pushing ahead into 4K video, which demands serious processing power that also helps with continuous shooting.

When focus tracking moving subjects, I found the 18 frames per second of the Olympus to be excellent for capturing more in-focus action shots. Using a system that does not require the mirror to move out of the way during each shot means that you can take more shots per second than with a DSLR. The continuous autofocus of the OM-D II can certainly keep up with most moving subjects.

Mirrorless cameras have electronic rather than optical viewfinders, displaying the image direct from the sensor readout and not via an optical mirror. It may take a little time for DSLR users to get used to electronic viewfinders, but they will find advantages. One benefit of an electronic viewfinder is the wealth of overlays and shooting aids that can be displayed; another is the view that directly >



above Pririt Batis (ISO 500; f/5.6; 1/500s).

top Pygmy Falcons (ISO 640; f/7.1; 1/1600s).



above The Olympus OMD EM-1 Mark II and the ED 40-150mm F2.8 Pro lens.

top Ruddy Turnstones (ISO 400; f/6.3; 1/1250s).



above *Namaqua Sandgrouse* (ISO 800; f/5.6; 1/1000s).

top *Rufous-eared Warbler* (ISO 400; f/7.1; 1/1000s).

represents the exposure and camera settings in real time. On the down side, having to power an electronic viewfinder means that the battery in a mirrorless camera has a shorter life than one in a DSLR. As battery technology improves,

however, this situation is improving with each new release. There are also settings that can extend the battery life.

I found the OM-D II less comfortable in the hand than my DSLR and photographers with larger hands may struggle a bit, but they will no doubt get used to it. You can customise the button functions and even assign back-button focus if you need to. The menu and control system is quite complex and may be a challenge for the beginner, but not too bad for those

who are more experienced. Luckily there are online set-up guides that will help. The rear touch screen is fully articulated and side-hinged so it can be flipped and twisted in any direction.

The Micro 4/3 mount ensures that users of the OM-D II have access to a wide array of lenses to choose from. At the time of writing, more than 75 lenses are available from Olympus and Panasonic, as well as from third parties such as Sigma, Tamron and others.

When it comes to video, mirrorless cameras now offer a wealth of features that most DSLRs can't match. For starters, 4K capture is a common feature, whereas DSLRs have been slow to offer it. In addition, the OM-D II has very good in-body stabilisation for video and stills when coupled with stabilised lenses like the 300mm f/4 prime lens. It also has built-in Wi-Fi for remote control, image transfer and geo-tagging via an iOS or Android smartphone. Images can be stored on two SD cards.

For me, one of the greatest advantages of the OM-D II is its portability. The Olympus Micro 4/3 sensor delivers a much more compact system all round, as longer lenses can be made much smaller. The Olympus fixed 300mm f/4 is light enough

to be carried wherever you go, even on foot – an exciting advance for the mobile birder. The smaller size also enables you to be more nimble, focusing on subjects much more quickly. At the same time, both body and lenses are sturdy and weather-sealed, attributes that are essential when photographing birds in African conditions. The quoted shutter life is 200 000 shots.

For bird photographers who want to move up from a bridge camera, the mirrorless system is definitely worth considering, especially if you still want to travel light. Those used to shooting fast, long primes (like a fixed 500 f/4 lens) with a professional

DSLR camera will notice a loss in quality on distant objects if they were to change, but this is balanced by the mirrorless camera's lightness and versatility.

Having now used a mirrorless system, I'm left weighing up the pros and cons of mirrorless versus DSLR. The Micro 4/3 sensor format used by Olympus and Panasonic is smaller than the APS-C sensor, but so are the cameras and lenses. Which is more important: size or ultimate image quality? I think the photos in this article show what can be achieved.

There's no doubt that as this technology matures, mirrorless cameras are

likely to become the cameras of the future and will take more market share from their DSLR counterparts. At a fraction of the weight of a high-speed sports DSLR with an autofocus system – and at a lower price – the OM-D II is narrowing the gap between mirrorless and DSLR technologies. At the time of going to print, the cost of the OM-D II retailed for about R28 995 (body only).

Both Nikon and Canon have recently released their new full-frame mirrorless offerings, the Nikon Z and Canon EOS R respectively, with totally new mounts, and they will certainly also be worth testing. ♦

REVIEW: Kowa Genesis 33 Prominar 10x33 binoculars

The May/June 2018 issue of *African Birdlife* featured a review of Kowa's mid-range BD42x10 Prominar binoculars. For this issue, I was able to test its top-of-the-range Genesis binoculars. These are available in the slightly unconventional 44mm objective models, with 8.5 and 10.5 times magnification, as well as the smaller 33mm objective models, with 8 and 10 times magnification.

The review model was the 10x33 option, which is conveniently similar to my preferred 10x32 binoculars. My first impressions were favourable. The binoculars are pleasant to hold and nicely compact, with a subtly understated design that is a step up from Kowa's previous binocular models. Weighing 590 grams without the neck strap, they are at the lighter end of the full-size binocular size spectrum.

Build quality appears excellent, with a rugged magnesium alloy chassis and well-designed rubber armour. The eyecups are even better than the BD series, with four well-defined height settings to accommodate all preferences. However, the rain guard is so snug that once fitted it takes some effort to remove, costing precious fractions of a second when birding in the rain. Indeed, the guard on the review model fitted so tightly that it sometimes pulled up one eye-cup when I tugged at it to uncover the eyepieces.

As you might expect, the Genesis offers even better specifications than the BD42x10 Prominar. A major plus is a

lockable dioptre adjustment mechanism. Whereas the BD series has two Prominar XD lenses, the Genesis range has four, giving an even brighter and arguably crisper image right across the field of view. One slight issue with the BD42x10 was the somewhat narrow field of view; this is not a problem with binoculars in the Genesis series, which have impressively wide fields of view, especially in the 33mm objective models.

I took the review pair on a trip to Marion Island and it performed well in the challenging conditions. At sea, it offered sufficient magnification to discern distant petrels, but on land it allowed me to read albatross rings from a few metres away; the manufacturer's specifications claim a minimum focus distance of 1.5 metres, but I found it to be closer to 1.8 metres. My one concern was that the focus wheel became a bit stiff in the frigid weather, but this is unlikely to be a common problem when birding in African conditions.

Kowa is proud of its C3 prism coating, which reflects more than 99 per cent of light across the full visible spectrum. Certainly the Genesis delivers the sort of sharp, true-to-life image you would expect from Kowa's premium range of binoculars. The colours are vivid and it's easy to observe through the binoculars for extended periods. However, like the BD42x10, I found that there was a hint of reduced magnification towards the



edge of the field of view, which was apparent when panning across the landscape.

The Genesis 33 comes with a luxurious, broad neoprene neck-strap that is reinforced with nylon webbing. In addition to the rather unfortunate rain guard for the eye-pieces, there are also rubberised objective covers that can be mounted on the objective barrels and a rugged carry case. This is a serious pair of binoculars, but it comes with a fairly hefty price tag of about R17 699, putting it in direct competition with the cheaper models from Leica, Swarovski and Zeiss. PETER RYAN