



The Best Nature Photographer's Camera...

by E.J. Peiker

"The best camera is the one you have with you" - an old but true cliché... So which camera should you take with you? That is the subject of this article. My readers fall broadly into two primary categories - landscape photographers and wildlife photographers; many also enjoy travel photography. For this article on the best cameras from each manufacturer, I'll include travel photography under landscape and bird photography as a major subset of wildlife photography.

Canon Wildlife - my personal preference for wildlife cameras are APS-C models due to their crop factor which effectively puts more pixels on the subject than full frame cameras. Unfortunately Canon's crop sensor flagship, the EOS 7D Mk II is now quite out of date with regard to the sensor. Canon is still using their 2007 process technology based 20 megapixel sensor that does not have on-chip analog to digital converters, nor does it use backside-illumination technology. In combination, this results in about 2 stops less dynamic range and much worse shadow noise than the competition. The EOS 80D, while a consumer camera has a somewhat better and newer sensor than the 7D Mk II and is a more modern camera all around but it does not have the high end AF system that is desirable for some forms of wildlife photography. These deficiencies eliminates both Canon crop-sensor models from consideration as a best wildlife camera. When we look at full frame models there is the incredible EOS 1Dx Mk II with its 14 frames per second, killer AF system but at just 20.2 megapixels on a full frame body, by the time you crop to the same frame as a Canon APS-C body, you are left with just 8 megapixels which is good for 2004 but completely inadequate for most in 2017. That leaves the EOS 5D Mk IV, a much maligned camera due mostly to its seemingly incomprehensible design choices on the video side. As a still camera it is very good, not quite up to the sensor capabilities of a Sony sensor camera but good for Canon. It incorporates an outstanding AF system and when you crop it to Canon APS C dimensions you are left with 12 megapixels which at least get you to 2008 levels but still well behind the now relatively old EOS 7D Mk II which puts 20 megapixels in the same APS-C area. If Canon were to put the 80D sensor and the 5D Mk IV AF in the EOS 7D line, an EOS 7F Mk III, you could delete this entire section and anoint it the king of Canon wildlife cameras... So which to choose given that an EOS 7D Mk III doesn't exist? If you aren't doing birds in flight and don't shoot in the rain, then the 80D is probably the

best camera as it incorporates Canon's latest sensor technology with 24 megapixels, the most of any Canon camera either in APS-C or cropped full frame to APS-C dimensions. If you do need great AF and are OK with not having much cropping capability then the EOS 1Dx Mk II is unbeatable. If you can't decide then the EOS 5D Mark IV is your best bet - it is the ultimate jack of all trades and master of none camera.



Canon Landscape - the big problem with Canon cameras in general for landscape photographers has been and continues to be a lower dynamic range than any other manufacturer of comparable cameras. The EOS 5DX(R) is the resolution monster of the lineup at 50 megapixels. It is a great camera, although with marginal dynamic range. As long as you keep the ISO very close to its base ISO of 100 since it falls off quickly due to noise and poor dynamic range as early as ISO 400. The EOS 5D Mk IV is a better camera from a noise and dynamic range standpoint albeit at a significantly lower 30 megapixel resolution. Personally, as a landscape photographer, I would choose the EOS 5DSR and take a separate exposure for higher dynamic range scenes and combine the two images in post to get better shadow detail and noise. But the 5D Mark IV, as noted above, is a better compromise camera for all types of shooting. On the travel front, Canon makes it much easier to choose... The new EOS M5 is a very good mirrorless camera - it's basically a mirrorless EOS 80D and that makes it a very good camera. The Canon lens line-up still leaves a lot to be desired for the EOS-M mount but it is slowly improving although everything seems to be oriented more towards low end consumer grade lenses. You can use full sized EOS lenses with an adapter. My vote for Canon camera of the year is actually the EOS M5, not because it is a ground breaking camera but because it is a very good camera and it finally shows the world that Canon is serious about making a good mirrorless camera; now let's see if they are serious about lenses or if they just see this as a way to usher you into a DSLR if you need something better than lower end consumer glass...

Fujifilm Wildlife and Landscape - The best camera for both genres and I'll throw in travel too is the Fujifilm X-T2. I have raved before about this camera and its predecessor, the X-T1, for being the most photographer oriented camera on the market with discrete controls for everything without having to go to the menus for anything once you set the camera up to your liking. It also incorporates Fuji's best sensor, the Sony sourced 24 megapixel APS-C sensor. It has a very credible AF system, especially for a mirrorless cameras and has an exceptional line of lenses. It won't rival a DSLR with their huge f/4 super-tele and lightning quick predictive AF systems but it comes as close as any mirrorless camera has and does have lenses out to 400mm which is similar to 600mm on



a full frame camera. The Fujifilm X-T2 gets my camera of the year award for 2016, not just for Fuji, but among all manufacturers. Now if only they introduced a model with a Bayer color array rather than an X-Trans one I would be a likely customer. Sometime in the first half of 2017, the X-T2 will be dethroned as the best Fuji landscape camera when they launch the 50 megapixel cropped medium format sensor GFX camera. It will have a sensor that has 70% more area than a full frame sensor and 378% more area than Fuji's current Sony sourced APS-C sensor. On the travel camera front, any of the Fujifilm X-trans cameras will be very good but if you need something smaller than the X-T2 or the rangefinder style X-Pro2, then my nod would go to the new X-A10 which retains the APS-C sensor but at 16 megapixels and takes all of the Fuji X lenses in a very small package. Alternately the forthcoming X100F, if you are OK with just a single focal length, would be a great travel companion.

Hasselblad Landscape - There are no real solutions for wildlife photography in the Hasselblad ecosystem. Any of the cameras can be used for animal-scapes but most intimate wildlife photography from a distance is not supported. On the landscape front, the cream of the crop is the near full 645 format H6D coupled with Sony's 100 megapixel sensor. It has only one rival for landscape photography in the world and that is the similarly sensored Phase One XF-IQ3100. This is a huge investment but will give you the best image quality available. An alternative, and Hasselblad's best travel camera is the new X1D which is a cropped sensor medium format mirrorless option using the Sony 50 megapixel cropped medium format sensor. This is a beautifully designed modern camera with the best human user interface I have seen so far - virtually anybody that can use a smart phone can learn to use this camera in minutes. There aren't many lenses yet, no zooms, and the widest you can currently get is the 30mm lens which is approximately equal to 24mm on a 135 format full frame camera - wide enough for many applications but a bit limiting for the serious landscaper. AF performance and general speed of operation are the camera's weakest points in its current form but image quality will surpass anything in the 35mm world.



Leica Wildlife and Landscape - lets first put aside any notion of using Leica cameras for wildlife photography. Yes animal-scapes in the wild are no problem for Leica cameras but any serious photography where the animal dominates the photographic frame in a truly wild setting is very unlikely to happen. Leica has neither the lenses nor the camera body performance from either an AF or frame rate standpoint for that type of photography. They simply aren't built for that. For landscape photography, on the other hand, Leica cameras can excel albeit at lower resolution than most other manufacturers. There are three main systems that can be considered; the quasi-medium format Leica S2, the classic Leica M, and the newish Leica SL

system. All three are very capable and while I would prefer the larger format 37 megapixel sensed S2 system, the reliability of it, coupled with very poor service in North America from Leica has been questionable to date, makes it an iffy choice for the serious photographer or professional. The Leica SL on the other hand is a rugged, well made and very capable full frame 24 megapixel system with what is easily the world's best EVF. Currently, the widest lens available is a 24mm which isn't really wide enough for many landscapers but Leica has announced a 16-35mm lens to be available in late 2017. The SL gets my nod as the best Leica for landscape photography currently. For travel, the classic Leica M series still gets my nod.



Nikon Wildlife - at the beginning of 2016 I expected the much anticipated D5 to be the best wildlife camera from Nikon in 2016 but two things happened: 1) Nikon surprised us with a D500 APS-C camera that uses the same "world's best" AF system as the D5, and 2) the D5 sensor underperformed on the dynamic range front actually taking a step backward from the D4 at all but very high ISOs. The D500 had some initial teething pains with firmware bugs and strange battery behavior but a lot of that has been resolved. The D500, as stated, sports an incredible AF system that covers the entire frame in a rugged weather sealed body that has a 20 megapixel sensor with better dynamic range characteristics at lower ISO than the D5. The D500 is easily Nikon's camera of the year despite getting off to a rocky start.

Nikon Landscape - Picking the best Nikon landscape camera is an easy choice. The D810, even after almost 3 years, is still one of the best full frame 35mm landscape camera on the market. It uses the fantastic Sony 36 megapixel sensor with enormous dynamic range and incorporates an electronic shutter that eliminates in camera movement at the time of the



exposure. The AF system is now a generation behind but in a landscape camera that isn't important. The D810 is rumored for replacement in 2017 but at this writing there is no better camera in the Nikon line-up for the landscaper but it is no longer the absolute best 35mm landscape photography camera on the market - that honor is split between Pentax and Sony however there are many more lenses available for Nikon than the other two. On the travel front, look elsewhere! With the delay in the Nikon DL cameras this just isn't the brand for a super high quality but highly

portable solution.

Olympus Wildlife - I am not a fan of the micro 4/3 sensor for still photographers. I have described my reasons in previous articles and newsletters but it is primarily due to 20 megapixels being severely diffraction limited on this sensor size even at relatively fast apertures. But, I



do understand that not everybody needs more than 20 megapixels and that there are some significant size and weight advantages to the m43 system. For wildlife shooters, the answer is pretty easy, the OM-D E-M1 Mk II is the best m43 camera ever created - by far. It's AF is excellent for a mirrorless camera and it has virtually everything one could want in a true professional grade fast shooting body. It is capable of a staggering 60 frames per second. Couple this camera with the 300mm f/4 which gives you the reach of a 600mm lens on a full frame body and Olympus' 1.4x teleconverter to go all the way out to an 840mm equivalence in a very small and light package compared to most anything else and you have a very capable wildlife system. Do realize that f/4 will have the depth of field of f/8 on an equivalently framed full frame camera photo so it will be harder to get a buttery smooth background blur.

Olympus Landscape - The biggest challenge, beside the relatively low megapixel count of m43, is the dynamic range that these sensors are capable of delivering. Compared to a full-frame D810 or Sony a7R, the newest sensor available in the Olympus line of cameras has about 3 stops lower dynamic range! This makes them not as well suited for landscape photography and one can do much better with a similar form factor using cameras from other companies, most notably the Sony a7 and a6xxx series or the Fujifilm X-T2. If I had to choose a landscape kit from Olympus, it would be either the same OM-D E-M1 Mk II or the Pen F. Both use the same sensor so it comes down to your camera style preference. For me I would choose the lighter weight Pen F but with the OM-D E-M1 Mk II one can shoot landscapes and wildlife with the same body. The Pen F would be my choice for an Olympus travel camera.

Panasonic Wildlife and Landscape - I would not choose a Panasonic camera for either landscape or wildlife photography due to some of the same limitations I've previously described for all micro 4/3 sensor cameras. While Panasonic makes excellent m43 cameras, for the most part they are more well suited for videography and are primarily marketed into that space. For wildlife, if I had to choose I would wait for the new GH5 to appear on the market as the only current action oriented body, the GH4, has only 16 megapixels. The GH5 will up that to 20 megapixels. On the landscape side, of currently available cameras, the GX8 is the clear choice but the GH5 may take the title when available. The GX8 would also make a very good travel camera.

Pentax Wildlife - Hands down the best Pentax camera for wildlife is the K3 II. It uses the exceptional Sony 24 megapixel sensor in a full featured 8 frame per second body.

Pentax's biggest drawback for this type of shooting is it's autofocus system so it will take some practice and good anticipation to get the most fleeting of subjects. Pentax simply does not have an AF module that approaches anything close to what Canon, Nikon, and Sony offer in their DSLR/DSLT lines. But in the Pentax line, this is the best body. Lens selection is also very limited with the longest

lens being the 150-450 f/4.5-5.6 lens, a capable performer that gets you full frame equivalency of about 225-675mm - a bit short for some bird work but adequate for most other wildlife.



Pentax Landscape - The Pentax K-1 was one of 2016's most welcome surprises. It is an exceptional body for landscape photography using the same 36 megapixel sensor that made the Nikon D810 famous in a full featured professional body with all the bells and whistles except a world class AF system which is not needed for landscapes. It even incorporates a pixel shift capability that dramatically increases resolution as long as the subject has no movement or relatively little movement. In this mode it moves the sensor so that all colors can be recorded at all pixel locations but this takes time so the subject should be still. Pentax has built some trickery into the body that tries to handle movement but for best results, it needs to be minimal. Alternately, if you are ready for the weight and the investment of a medium format system, Pentax continues to offer its 645Z 50 megapixel cropped sensor medium format camera which utilizes the same sensor as the Hasselblad XD1 and Fuji GFX as well as the low end offerings in the Hasselblad H6D and Phase One XF lines. The 645Z will give you the best image quality possible in the Pentax world at a very aggressive price. On the travel front, there aren't many offerings but Pentax's parent company, Ricoh, makes the highly regarded GR II which is a

compact APS-C 18 megapixel camera with a fixed 28mm equivalent lens.



Phase One Landscape - Similar to Hasselblad, for intimate wildlife shooting of distant subjects, the Phase One system really isn't a good wildlife solution although you can use some humongous old Mamiya lenses on it but at a slow frame rate and with an AF system that is not designed for that kind of photography. That said, some of the very best animal-scape photographs where animals are a part of the larger landscape that I have seen are taken with Phase One gear. On the Landscape front, there is no higher

quality system on Earth at present than the Phase One XF body coupled with the IQ3100 digital back in combination with the Schneider Kreuznach lenses which can go as wide as 28mm (18mm full frame equivalent) and as long as 240mm (160mm full frame equivalent). There are various different resolution digital backs available but the cream of the crop is the 100megapixel Sony sourced sensor digital back. The XF has a number of key options that make it a true landscape photography delight. This includes such things as: 1) an auto-focus-stacking mode that automates the photography process of taking multiple shots at different focus points to enhance depth of field, 2) incorporation of being able to fine tune and memorize the hyperfocal setting of any lens, 3) the easiest to use time-lapse mode I have ever seen in any camera. On the travel camera front, there is no real choice from Phase One.

Sony Wildlife - While most of the attention on Sony in the last few years has been on their exceptional mirrorless offerings, Sony surprised many, including myself, by introducing an A-mount (original Minolta auto focus mount) high speed full frame camera with what is the most accurate fast AF system ever put into a camera. It uses both a traditional off-sensor fast phase detect AF array similar to what Canon and Nikon use and a much more accurate on sensor phase detect array simultaneously to offer both very fast AF speed and super high accuracy that does not need focus fine tuning for every lens. They coupled this with a back-side illuminated 42 megapixel sensor that can shoot at 12 frames per second with in-body sensor based image stabilization (IBIS). Lens choices aren't as vast as Canon or Nikon but there are excellent 500mm f/4, 70-400, and 300mm f/2.8 lenses along with third party options from Sigma and Tamron. It may be the best wildlife/landscape combination camera on the planet - EOS 1X Mk II or Nikon D5 like performance in a 42 megapixel camera that weighs a lot less...



Sony Landscape - In the Sony world you have your choice of a 42 megapixel SLR type body in the same a99 Mk II covered above or what has become one of the most popular landscape cameras in the world, the a7R Mk II. My nod goes to the a7R Mk II for a several reasons: 1) it is smaller and weighs less, 2) there is no light robbing translucent mirror which gives it about a 2/3 stop better noise performance, 3) there are now more and better lenses, especially primes, available for full frame E-mount than A-mount due to exceptional offerings from Zeiss, Voigtlander, Tokina, and the new Sony G-master line of lenses. While the a7 series also make excellent travel cameras, especially the Mk II models that incorporate in-body image stabilization (IBIS), my selection here would be the smaller and lighter a6300 or even better the new a6500 which is basically an a6300 with IBIS.

Manufacturer	Best Landscape	Best Travel	Best Wildlife
Canon	EOS 5DSR	EOS M5*	EOS 1Dx Mk II
Fujifilm	X-T2* (GFX when avail)	X-A10	X-T2*
Hasselblad	H6D-100	X1D*	N/A
Leica	SL*	M	N/A
Nikon	D810	N/A	D500*
Olympus	Pen F	Pen F	OM-D E-M2*
Panasonic	GX8*	GX8*	GH5 when available
Pentax (Ricoh)	K1* or 645Z	GR II	K3 II
Phase One	XF-IQ3100	N/A	N/A
Sony	Alpha 7R Mk II	Alpha 6500	Alpha 99 Mk II*

* Best new camera of 2016 for each manufacturer

In summary, most of today's camera manufacturers make cameras that are exceptionally well suited for landscape, wildlife photography, or both. Some have better choices than others but in today's digital imaging world, it is easy to find something that excels at your type of photography. This is only limited by our budget, our imagination, and how much time we have to dedicate to the wonderful world of photography. My personal choices are the Sony a7R Mk II for landscape photography in weight sensitive applications (such as travel on some airlines or significant hiking), Phase One XF with 100 megapixel digital back for no-compromise image quality landscape photography, the Nikon D500 for wildlife photography, and a Sony a6300/a6500 for travel photography. I would have no problem choosing any of the gear in the table above except, personally, I would not choose the Panasonic gear for what I do or Olympus for landscape photography. Your needs, of course, may be different from mine and you can make choices based on your personal circumstances. I've tried to lay out what I think are the currently available best options.

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