

Newsletter

BirdLife Southern Queensland Photography

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Welcome to the first newsletter of 2016 - the fourth year that Di Oliver and I have been working together on it. We are in full agreement that it's been a delight throughout. We've learned a lot, received some interesting contributions and caught up with some members of the group. We're grateful to all of those who have contributed. A special word of thanks is also due to Julie Sarna, who has kindly proof read each issue. Also to Rob Parker who has, from time to time, allowed us to use items from the national bird photography newsletter.

We begin this issue with a fascinating article from the latter by Georgina Steytler that, for us at least, depicts photo competitions in a new light. Not everyone is drawn to take part in them. So the article may provide grounds to review long held views and possibly even lead to a change of mind on this topic. Next there's a vital up-date on ethical birding guidelines - an important topic for all of us. Birds are already under severe pressure from many directions so it's vital that photographers follow the policy and not add to these pressures. The full guideline document can accessed, by all, on the website at birdlifephotography.org.au under the About Us tab, and then click Our Policies from the dropdown menu.

When a Square-tailed Kite pair nested on Mt. Coot-tha again this year many local bird photographers were drawn to the site, myself included. Using long lenses it was easy enough to capture images of the birds on the nest and when feeding the juvenile. But, due to the terrain and surrounding forest, it was much more difficult to gain images of these impressive birds in flight. During the short time I was there I had one shot at it but the resulting image was underexposed and partial. This item shows how I attempted to fix the problem. If you have other examples of retrieving such images do, please, get in touch with Di with a short paragraph explaining what happened and what you did to optimise or correct the image. Purists may or may not approve but, personally, I enjoy challenges like this.

Finally we have a more technical article by Ian Wilson about raw converters. This is obviously not for everyone, some of our more technically minded readers, however, may be surprised at the results of the tests he carried out. Finally Di and I would like to remind you to please get in touch if you have ideas for future articles. We are always interested to hear from you, to view outstanding images and to receive short items that emerge from your experiences and bird craft.

Richard Slaughter.

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BirdLife Photography - Special Interest Group.

Photo Competitions

Previous Competition: “My Best Bird Photo Ever”

I don't know about you guys, but I loved seeing the variety of species and photo styles that came out of the “My Best Bird Photo Ever” competition. Congratulations to all those with winning and/or commended images.

Voting for a favourite was harder than ever with a diversity of great bird photos that ranged from:

- **seldom seen species**, such as the Great-billed Heron (Andrew Browne: Image ID 18675), Chin-strap Penguins (David Newell: Image ID 18625), Major Mitchell's Cockatoo (Tim Van Leeuwen: Image ID 18333), Australasian Bittern (Kevin Williams: Image ID 18788) and Noisy Pitta (Philip Bender: Image ID 18807); to
- **amazing behaviours** such as the fighting White-necked Herons (by Curtis Hayne: Image ID 18638), Australian Darter landing a huge fish (Bill Harris: Image ID 18763) and the big burly Pallid Cuckoo chick being fed by a poor little Singing Honeyeater (Manfred Henning: Image ID 18391); and
- the **'to-die-for' cuties** such as families of Tawny Frogmouths (Mark Lethlean: Image ID 18526 and Trevor Bullock: Image ID 18362), hugging Budgerigars (Margaret Thursby: Image ID 18711), snuggling Macaroni Penguins (Kaye Varlow: Image ID 18813) and irascible Dusky Woodswallows (Kent Treloar: Image ID 18827).

Our President made a splash with his first entries into our Photo competition, taking out line honours in the Advanced level with a stunning portrait of a Crimson Chat taken on the Oodnadatta Track. Set against the red of the outback, it is a great example of using the background to enhance the impact of an image. So often we focus on the bird and not what is around or behind it. Con Duyvestyn won the Intermediate level with a mesmerising portrait of an Australian Hobby taken with his Pentax K-3 and Sigma lens. Karen Emery also seems to have taken up my challenge to 'non-Canon' users and with her trusty Nikon she almost made a clean sweep of the Entry level. I wouldn't be surprised to see Karen and Con move up a level with their next competition entries.

It is really useful to see the details of where and how a photo was taken. Some members give comprehensive details of how they made their images. If you have not already done so, I strongly recommend you take the time to read the 'Equipment' field of some of the best images as it is an excellent learning resource.

Another useful piece of information is the location at which a photograph was taken. As a Western Australian, I am learning a lot about where is the best place to find certain bird species on the East Coast. In

particular, I have noticed that an extraordinary number and variety of birds seem to inhabit the Werribee Treatment Plant (WTP). It seems that when in Melbourne, everyone who is anyone (bird or human) goes to the WTP. It just is not fair for those of us who live in less prosperous 'birding' areas. Myself, I would be lucky to get even a Pacific Black Duck honking in my general direction from the salty dregs of the drying Avon River! Perhaps in order to have an even playing field, we should ban any photos of birds taken at the WTP. Hands up who is with me on this one? And in fact, whilst we're at it, let's ban any photos taken in Queensland too. I mean those guys practically have Logrunners, prawn-laden Kingfishers and adorable Owlet-nightjars sitting on their doorsteps. It's just not cricket!!!

It was great to see that once again entries in each of the three levels increased (a total of 234 entries, up from 171 for the previous competition), as did the number of photographers. I am looking forward to seeing this number swell even further, so members grab your cameras and find yourselves some Cockatoos, for the next competition, after voting for Juveniles and/or Immatures finishes.

Members' Voting Results

The results of members' votes for this competition are presented below. The **Winner** is the image which received the most votes; and we also show the next four highest placed images, rating them as **Highly Commended** if they received at least 90% of the votes for the winning image, and **Commended** for scores less than that.

Advanced Level – “My Best Bird Photo Ever”

This category attracted 54 entries (up from 37), from 17 photographers. 33 members voted, with the following result: **Winner: Graham Cam** ([Image ID 18726](#))



*Location: Oodnadatta Track, SA. Nikon D300 + Nikkor 600mm @ 1/160 sec, f5.6; ISO 200; tripod.
Rendered in NX-D; post-processed in Adobe Lightroom CC (2015) and Photoshop CC (2015)*

Commended: Ian Wilson ([Image ID 18797](#))



*Location: Western Treatment Plant, Werribee, VIC. Canon 5DIII + 600 mm f/4 II + 1.4x III extender,
hand-held. Manual, spot metering, 9-pt zone AF, AI Servo, f/7.1, 1/4000 sec, ISO 2500.
Processed with DPP4 and PSE14*

Commended: Geoff Gates ([Image ID 18632](#))



Location: Inverleigh, VIC. Canon 7D, 300mm f2.8 lens with 2.0 TC, tripod. Aperture priority, ISO 800, f7.1, 1/250s, -0.33 EC. Centre-weighted metering.

Commended: Warren Wilson ([Image ID 18682](#))



Location: Private garden, Woollamia, NSW. Nikon D300, Nikkor 70-200mm f2.8 VR lens, tripod with Wimberley gimbal head; 1/1000s, f6.3, ISO400

Commended: Geoff Gates ([Image ID 18743](#))



Location: Torquay, VIC. Canon 1D IV, 600mm f2.8 plus 1.4 TC, tripod. Manual exposure, ISO 640, f9.0, 1/1250s

Intermediate Level – “My Best Bird Photo Ever”

This category attracted 104 (up 23) entries from 26 photographers. 29 members voted, with the following result:

Winner: Con Duyvestyn ([Image ID 18581](#))



Location: Point Wilson Rd, Werribee, VIC. Pentax K-3, Sigma 150-500mm lens @ 500mm, 1/1600s, f6.3, ISO1600, +1ev, hand held, no flash.

Highly Commended: Bruce Mcnaughton ([Image ID 18262](#))



*Location: Sharpes Beach near Ballina, NSW.
Canon EOS 450D, Tamron 150-600 @ 600, tripod. f8, 1/400s ISO200.*

Commended: Philip Bender ([Image ID 18808](#))



Location: Mary Cairncross Scenic Reserve, QLD. Olympus EM-1, f4, 1/8s, ISO3200, FL300mm.

Commended: Glenn Pure ([Image ID 18380](#))



Location: Kambah, Canberra, ACT. Canon 700D with 100-400mm at 400mm handheld, 1/320 sec, f8, ISO 1600. Initially processed in DPP to sharpen and reduce noise in overall image as well as fix colour balance, exposure and lighting. Finished in PSE where bird only sharpened and background noise reduced.

Commended: Paul Jensen ([Image ID 18496](#))



Location: Killarney, QLD. Nikon D7100, Sigma 150-500mm Lens. 1/640sec, f6.3, ISO-110.

Entry Level – “My Best Bird Photo Ever”

This category attracted 76 entries (up 22), from 26 (up 7) photographers. 35 members voted (up 10), with the following result:

Equal Winner: Karen Emery ([Image ID 18714](#))



Location: Townsville, QLD. Nikon D750, Tamron 150 - 600, ISO 720, 500MM, f8, 1/1600 sec.

Equal Winner: Karen Emery ([Image ID 18713](#))



Location: Townsville, QLD. Nikon D750, Tamron 150 - 600, FL 500mm, ISO 400, f6.3, 1/250 sec.

Highly Commended: Anne Burgess ([Image ID 18550](#))



Location: Gympie, QLD. Canon Powershot SX40 HS; 1/250s, f5.8, ISO 125, FL 150.5mm.

Commended: Carole O'Neill ([Image ID 18717](#))



Location: Banyowla Regional Park, WA.

Nikon Coolpix P900 with Nikkor 83x Wide Optical Zoom ED VR 4.3-357mm-6.5.

Commended: Karen Emery ([Image ID 18715](#))



Location: Townsville, QLD. Nikon D750, Tamron 150 - 600, ISO 160, 500MM, f6.3, 1/1000 sec.

Congratulations to all these photographers for their quality bird images.

The Mystery Reviewer's - choice of images from both categories are given in a separate section of the newsletter.

Awards

And last but not least, don't forget that the Committee is offering a series of awards for various levels of member engagement in 2016, including in competitions. Those awards include:

- **Best Competition Photographer of the Year** for each competition level (Entry, Intermediate, Advanced);
- **Best Photograph of the Year** captured by a **DSLR** camera;
- **Best Photograph of the Year** captured by a **non-DSLR** camera;
- **Most Improved Photographer of the Year** (Entry to Intermediate transition and/or Intermediate to Advanced transition); and
- **BirdLife Photography Annual Award** (requiring, among other things, at least 50% participation in our competitions).

News and Photographic events

BirdLife Photography Policy for 'Nesting Bird' Photography and the use of Call Playback to Observe and/or Photograph Native Birds

On behalf of the BirdLife Photography Committee - Graham Cam PhD President BirdLife Photography

At our 2015 AGM at the Shortlands Wetlands Centre, NSW, the BirdLife Photography Committee was asked by the membership to review our policy on 'nesting bird' photography. This was timely as the Committee had already commenced a review of our ethical policies relating to bird photography. In addition to 'nesting birds' there has been an undertaking by various authorities to implement new policies on bird call playback. As a consequence, the impacts of call playback on bird welfare has been reviewed and incorporated into the attached policy document.

In compiling this policy document, which has been undertaken over the last 10 months, the Committee has reviewed – the appropriate legislation, the policies of national and international organisations relating to similar activities and relevant published studies/documentation. In addition, we have applied the Committee's expertise in the areas of law/environmental law, scientific research, animal ethics policies and procedures, as well as extensive expertise in the field of bird photography.

Members will also note that the document contains an Appendix A – (AUSTRALIAN LEGISLATIVE FRAMEWORK FOR THE PROTECTION OF THE ENVIRONMENT), which is designed to assist members by summarizing the legislation relating to the environment and to the legislative requirements for undertaking various activities, including photography, in national parks and reserves in each of the Australian States and Territories. I particularly thank Georgina Steytler for her expertise and diligence in compiling the greater part of this document.

Whilst the contents of this document will be self-evident to many members, the document is designed to clearly articulate our updated policies and the reasons for adopting such policies to both our experienced



members as well as those new to birding and bird photography. We have provided the document in PDF format for those who wish to print a hard copy for future reference.

This new policy will come into force for all BirdLife Photography members with the launch of our new website. We also encourage members to disseminate this updated policy to the wider Australian birding community.

The Committee trusts you will find this document informative and useful as you go about photographing our unique birdlife and promoting their conservation.

Repairing a Square-tailed Kite – Richard Slaughter



During late October a pair of Square-tailed Kites returned to Mt Coot-tha in Brisbane and successfully reared one chick. The nest was visible from a nearby track but some distance away. So a ‘long’ lens was necessary. I used a 400mm zoom lens at full extension on a Nikon D7100. Given the distance I also raised the ISO to 1000 to compensate for camera (lens) shake. I was fortunate in obtaining a couple of good shots of an adult bird on the nest with the juvenile (above).

The nest was in bushland with a mere strip of bright sky behind the viewpoint area. So when one of the adults glided over I had no time to make the necessary adjustments. Figure 1 shows the result of a rapid reflex shot – part of the bird was missing and it was also under exposed. The following is a short account of how I attempted to correct the image.



Figure 1



Figure 1a

First I ran the image through the very useful and easy-to-use Photoshop RAW processor. Figure 1a shows the settings I used to increase exposure, reduce contrast, bring up shadows etc. The next step was to rotate and crop the image (Image-> Image Rotation-> 90 degrees CCW in this instance). I also altered the size of the frame (Image-> Image Size). Next I copied part of the right wing, rotated it (using Select-> Edit->Transform and -> flip horizontal). I used the Move tool at the top right of the tools palette and moved the wing into the best position I could manage. I then sampled the sky with the eye dropper, selected the area to the left of the bird and pasted in (Edit-> Paste). The result is shown in Figure 2. There were also a couple of dust spots from the camera sensor that needed to be removed.



Figure 2

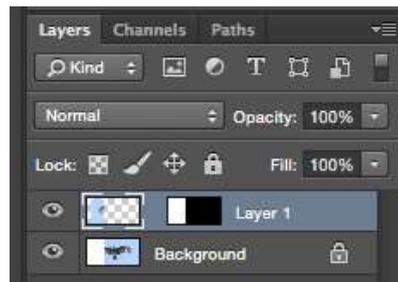


Figure 2a

Since the wing didn't 'fit' neatly I collapsed the layers, enlarged the area significantly and used the clone tool to re-model the feathers and also to differentiate the wingtips. The image certainly looked better, but 'anaemic' (Figure 3). So I added three layers as shown in Figure 3a using brightness/contrast to adjust the bird and the sky in turn. I then added a hue/saturation layer to improve the colours .



Figure 3

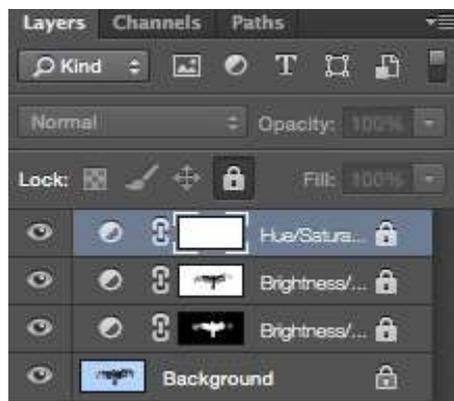


Figure 3a

The image was almost finished. I collapsed the layers again and saved (as I do after each step) before adding one final touch. I went to (Filter-> Sharpen -> Smart Sharpen) and chose a small amount of sharpening. This could not be pushed very far due to the high ISO I'd been using.

But I tried to get the balance right in the final image (Figure 4). It could have been better if I'd been ready for the darkish bird set against a bright sky. But I was moderately pleased at having 'rescued' the image to this point. The last step was to back up the entire set and save a reduced jpg version for future use.



Figure 4

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RAW Converters Are Not All Equal: A Case Study – Ian Wilson PhD(optics)

Most photographers are aware that there are a number of RAW conversion and adjustment platforms from which to choose. In fact, a quick search will turn up more than a dozen. The big names are Adobe Camera Raw (ACR), Lightroom (LR), DxO Optics Pro, Phase One's Capture One Pro and you might be aware of free-ware like RAW Therepee or camera brand-specific products such as Canon DPP4 and Nikon NX-D. How does one choose the RAW conversion utility best suited to a particular requirement or workflow? To answer this question, one needs to know the features and benefits offered by each product. How many photographers take the trouble to find out this information? Not many; most fall for the slick marketing of one of the big boys and the comfort of joining the herd.

I have an interest in the technical performance of RAW converters; I take so few pictures that I can put up with a clunky user interface or cumbersome workflow if the software produces images that are clean and sharp. It may surprise you to learn that in this regard, not all converters are equal, and sometimes the differences are stark. There are many technical requirements that must be met and some people argue that it is only the brand-specific converters that come near to satisfying these requirements. However, it is difficult to know as there are so many variables involved in rendering an image that it is often not easy to identify which technical features were responsible for what outcome. For example, a high quality output should have low noise and therefore a good signal to noise ratio (SNR), a low noise floor also ensures a high dynamic range, and the output should have high colour sensitivity to small changes in tone with accurate rendering of colours.

The conversion should also faithfully reproduce the textures, boundaries, linear features and singularities that were captured in the original RAW image. It is a tall order to simultaneously meet all these requirements and unsurprisingly, the development of RAW conversion algorithms is an ongoing field of scientific research at the big camera companies and in academia.

One of the key technical requirements of an effective RAW converter is good noise management. Some RAW conversion algorithms are better suited to converting noisy images than others. This can be investigated by measuring the SNR of test images captured at different ISO values. The exact details of how this is done are not particularly interesting so I will skip this and invite BLP members wishing to know the details to contact me by email.

This investigation came about because some members wanted to know how I achieved clean and sharp images in my work. There was also discussion on the Forum about the merits of using one RAW converter compared with another; it was stated that Nikon NEF files converted using ACR appeared to be noisier than conversions using some other software. Similar discussions have taken place on other bird photography websites, notably, the contribution of Arash Hazeghi on BirdPhotographers.Net. Hazeghi has long claimed that RAW conversions made using Canon DPP result in a finer-grain noise and a better SNR than conversions using ACR and LR. This is the background to how this case study came about.

I call it a case study because it is specific to three Canon cameras, DPP4 and ACR/LR. It would be wrong to draw firm conclusions based on this study about any other camera brand, indeed about any other cameras than those tested, the Canon 5Ds, 7DII and 700D. In this report I only show the results for the Canon 7DII but note that the same findings apply to the 5Ds and 700D and probably to other current Canon DSLR cameras. The results are shown graphically with SNR in decibels (dB) on the vertical axis and ISO on the horizontal axis with a logarithmic scale. The SNR was measured using a 50% grey test target with brightness values $R = G = B = 128$ DN recorded in-camera. In other words, the measured SNR is the mid-tone SNR. Higher values of SNR indicate lower noise and also notice that a change of 6 dB corresponds to a change by a factor of two in the SNR. For example, 30 dB has twice the noise of a 36 dB noise image. The SNR results are shown for the three colour channels which you may be surprised to see are different with green the least and red the noisiest channel. Green is better because there are twice as many green pixels in the sensor colour filter array as red or blue pixels. Red is noisiest because the red channel has lower quantum efficiency and therefore requires more amplification.

The first graph (Fig. 1) shows results for the 7DII with all DPP4 default settings turned off. It is generally agreed that the SNR needs to be better than about 30 dB for good mid-tone image quality and the camera delivers on this criterion up to about ISO 2000. Data measured by DxO Labs in Paris is also shown for comparison. The DxO results are luminosity SNR values obtained by changing the RGB measurements to luminosity $L = 0.30R + 0.59G + 0.11B$. If we converted our RGB results to luminosity, the SNR values would be similar to the blue channel results indicating good agreement with the DxO measurements.



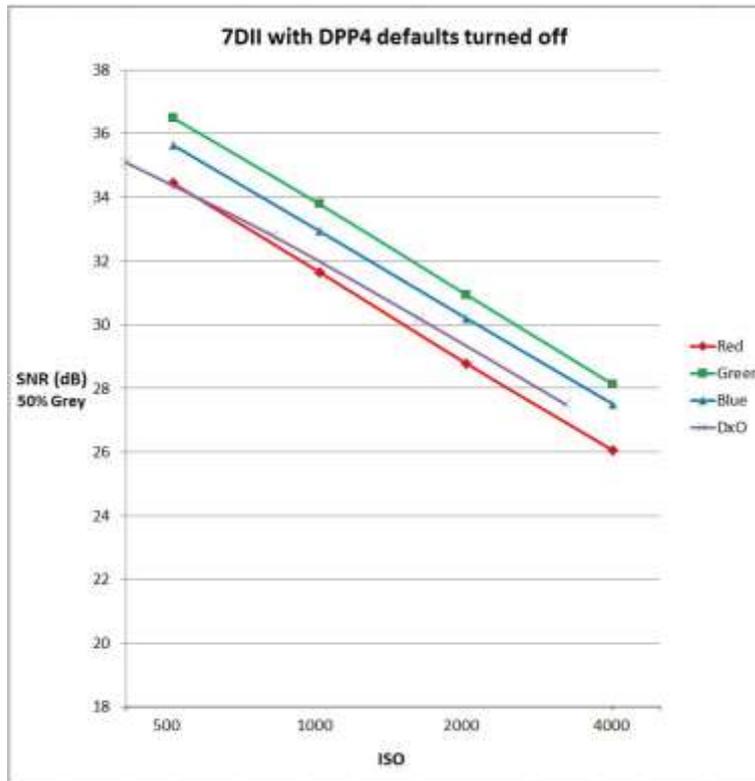


Fig. 1. SNR vs ISO: Canon 7DII, with DPP4 defaults turned off

The next graph (Fig. 2) shows the SNR of the 7DII using DPP4 and all defaults turned on (except the Digital Lens Optimizer and Distortion). Distortion correction will cause the image to be resampled and introduces a mild blur and possibly some noise reduction (NR). Any kind of resampling, including image rotation (except for 90°) and downsizing, will result in some mild blur and some NR. We wish to avoid the additional complication of resampling in these tests. With the DPP4 defaults turned on and standard Picture Style with sharpness = 3, the SNR of the red and blue channels has improved at lower ISOs and lost a bit of ground at the high ISO end. This suggests that when processing high ISO images it may be advantageous to reduce the sharpness to 2 and increase the luminance NR by 0.5 units.

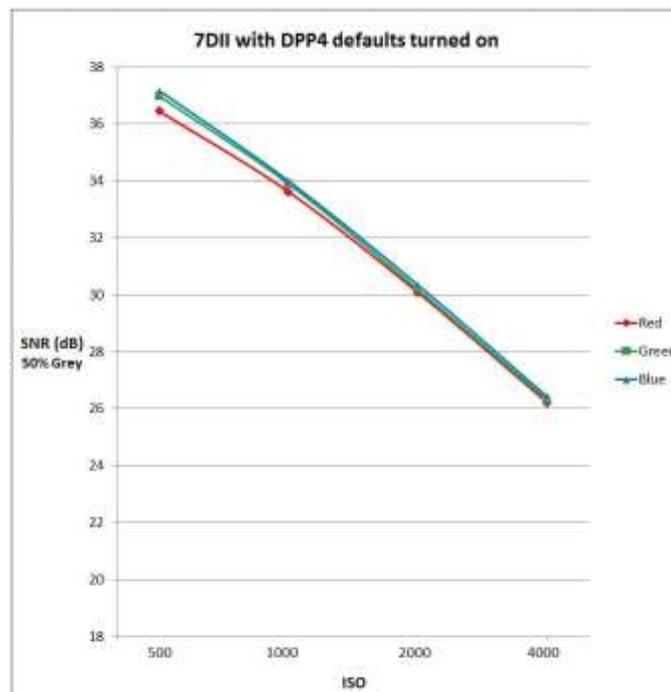


Fig. 2. SNR vs ISO: Canon 7DII, with DPP4 defaults turned on

The third graph (Fig. 3) shows the SNR of the 7DII obtained using ACR with defaults turned off, and should be compared with Fig. 1. Note that ACR has the same conversion engine as LR and the two platforms produce the same outcome when using the same conversion parameters. The most striking difference between the DPP4 and ACR results is that DPP4 has up to 7 dB less noise. In practice, this means DPP4 conversions can have less than half the noise of ACR/LR conversions, consistent with the observations of Hazeghi and others.

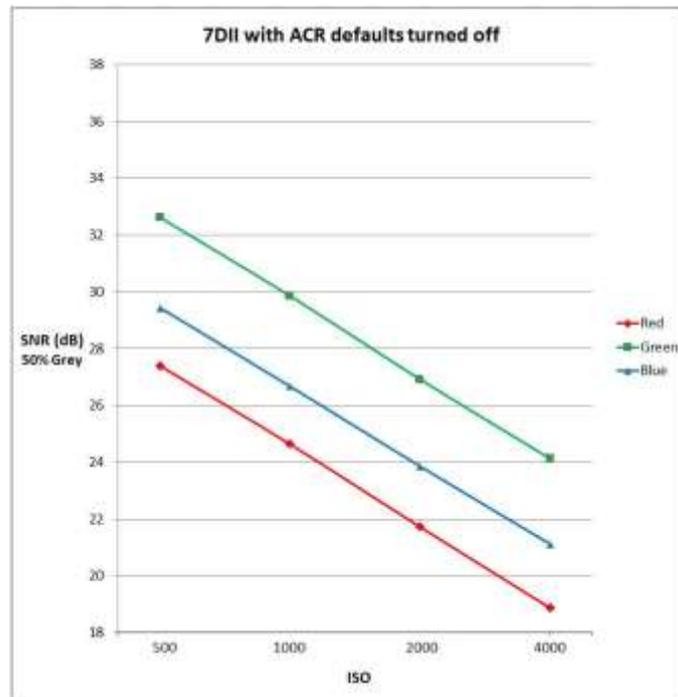


Fig. 3. SNR vs ISO: Canon 7DII, with ACR defaults turned off

Fig. 4 shows the SNR for the 7DII when using ACR with defaults turned on, and should be compared with Fig. 2. In this case, unlike DPP4 that has camera and ISO specific defaults for NR, ACR has only one default setting for NR used with all ISO settings. For the range of ISO values used in this study, the ACR default noise reduction is luminance NR = 0; chrominance NR = 25 and colour detail = 50. The graph shows that the SNR of the red and blue channels improved by up to 2 dB and the green channel decreased by about 2 dB. Overall, the DPP4 conversions have 5–6 dB less noise than the ACR/LR conversions. This is a larger difference than expected and would be noticeable in practice.

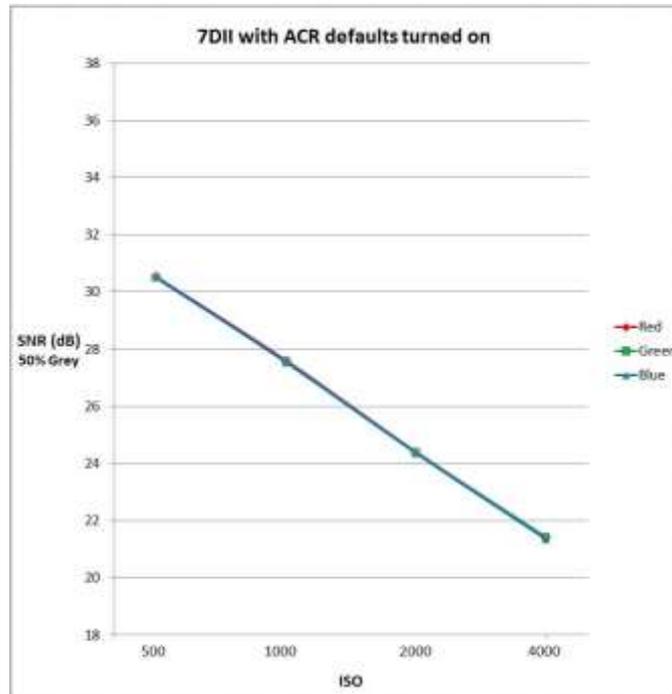


Fig. 4. SNR vs ISO: Canon 7DII, with ACR defaults turned on

Similar results were obtained for the Canon 5Ds and 700D cameras. I am grateful to Glenn Pure who used the test method to compare the SNR of conversions using DPP4 and ACR on noise images captured with his 700D camera. As mentioned earlier, this is a case study and not a general survey of all major camera brands and products. It is possible that ACR/LR performs better on images from some other cameras. It should also be remembered that the SNR is only one important factor used to assess image quality and we are unable to say whether ACR/LR is, overall, better or worse than DPP4 when all the image quality criteria are taken into consideration.

I am also grateful for the help of John Stirling who kindly duplicated some of the test conversions using LR to confirm there was no material difference between the noise levels of ACR and LR conversions.

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