



CHRIS BRAY THE BRAVE

Paddling past glaciers, spotlighting leopards in the dark - there's nothing this outdoor adventurer won't do to for a stunning image. He shares his secrets for working the light to get the perfect shot.

» IN DETAIL

I'm always humbled by the raw power and majesty of the Arctic, and never more so than when sailing among towering, impossibly sculpted icebergs like this one in Disko Bugt, on the west coast of Greenland. It was just my girlfriend Jess and I aboard our little 29-foot yacht and no one else around. I had to hop into our little blow-up dingy with my camera and row towards this one, while Jess bravely single-handedly sailed our yacht Teleport around the other side so I could get this magic photo. She had to make two passes, because during the first one, a large berg behind

me exploded and rolled over dramatically, sending out a large surge-wave that worried me a little, causing me to miss the first pass! **Getting into place:** As peaceful as it looks, it was quite a challenge to get this shot. Bobbing around in a little blow-up dingy in the Arctic in deathly-cold water, tangled in wet weather gear and lifejackets, I was trying to coordinate with Jess via VHF radio while simultaneously rowing the right distance back so that the yacht passing behind would neatly fill the arch. I had to get into position early enough to let any ripples subside as much as possible to enhance the reflection, and keep awkwardly shifting my sitting position because the dingy kept slowly spinning around. Lighting, as always, was

key. I shot from the sunny-side of the berg, otherwise it would have been in shadow, and even coordinated the angle Jess sailed at so the sails would have light on them, revealing their colour. **Settings:** It was quite bright so I had my exposure compensation set to + 2/3 stops (determined by trial and error with a few quick test shots and checking when the histogram just reached the white end). All I had in the dingy was my trusty EF 24-105mm f/4L IS USM lens. There was plenty of sunlight around, so I was able to roll the ISO down to a noise-free 200, and as I wanted a decent depth of field, I was in Aperture priority mode, with at f/18. I only had at best two or three seconds to get the shots with Teleport neatly in the middle.

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“The wildlife had never seen humans before and were as curious as us”

Wild at Heart
WI grew up sailing around the world with my family on our home-made yacht – five years of adventure with endless photographic opportunities. It wasn't until I was 20 and heading off on my first serious adventure – a 28-day untracked hike in Tassie's South West wilderness – that Australian Geographic gave me just enough money to buy my first real camera (still film) and that was what inspired me to get serious.

In 2005 my mate Clark Carter and I went on a world-first expedition across the largely unexplored Victoria Island in the Canadian Arctic. It was so stunning I couldn't help but come back with some great shots - the wildlife had never seen humans before and were as curious as we were. They came right up to me.

This led to various feature articles, and a conscious decision on my part, after just graduating in Electrical Engineering with 1st-class honours, to instead focus on my passion of photography and travel.

Canon agreed to sponsor me to finish what we started on Victoria Island, so I went back in 2008. More lucky shots ensued, and my ice experience secured me the role of official photographer on an Antarctic cruise and then an assignment for Australian Geographic, where in 2009 I became the first photographer they'd ever sent on assignment overseas. Around then Lowepro also made me one of their Aussie ambassadors.



On Safari

Wild workshops

Chris Bray runs one day courses in most capital cities but if you really want to get wild, sign up for a photographic safari in Kenya. See chrisbray.net

One thing led to another and Canon made me an Australian ambassador for digital photography, I also became their online tutorial host, presenting a huge series of free videos on their 'World of EOS' website. That fed back into my own start-up business of running very successful one day photography courses at zoos and other locations all around Australia. This business grew and grew, and I expanded into running photo safaris, taking small groups of people to Kenya, the Galapagos Islands,

Patagonia and Tasmania, teaching them how to get the best photos while they have an amazing holiday, surrounded and inspired by other like-minded photographers. In between all this, I've judged a number of Canon and other photographic competitions, and managed to spare three or four months off each year to sail my little wooden yacht through the arctic with my girlfriend. So far, so good!

Building a business

While bashing through the Southern Ocean as official photographer on a cruise ship down to Antarctica in 2008, I decided to fill-in time by throwing together a quick photography crash-course for those passengers that weren't seasick. To my surprise, they loved it, and asked when I'd be doing another course back in Australia. Thinking on my feet, I said I'd let them know, and took down a lengthy list of email addresses. Over the weeks that followed in Antarctica I was amazed at how many people had fancy DSLR cameras, which were almost all redundantly left on 'Auto' mode, and I decided this was my calling. When I got home, I was still in debt from my Arctic expedition, and actually borrowed money from my girlfriend to hire the Taronga Zoo function center in Sydney, spent three months creating the day's program, got Canon, Australian Geographic and Lowepro on side, emailed that original list of cruise ship guests, and the rest is history. I went from running them every couple of Sundays to now running up to four back to back in

each state, before flying to the next city and doing it all again, non-stop. I just love that I have a day job that visibly fills my 'customers' with such passion and enthusiasm. They leave smiling and feeling like I have done them a huge favour. It's tremendously rewarding.

In the classroom

Held in zoos and other inspiring venues all around Australia, I've spent three years carefully tweaking my one day photography courses to make the path to unlocking the huge creative potential of DSLRs as fast, simple and enjoyable as possible. Aimed at entry-level to keen-enthusiast photographers, my nine-hour day covers everything from composition, aperture, exposure compensation, lighting, lenses and everything else that once people are aware of, suddenly opens up a whole world of amazing and more creative photographs. I limit the day to a small group of just 14 attendees so there's plenty of one-on-one time with me and my partner, and the unique mix of theory and



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Colourful Crab

Summary: One day on my Galapagos Island safari tour I decided to try and stalk one of the beautiful 'sally-lightfoot crabs' scurrying around us on the sunlit rocks rimming the island of Santa Cruz.

Getting into place: Having repeatedly failed to sneak up on several crabs, I finally cornered one but the harsh sunlight resulted in a depressingly contrasty image. I was on the point of giving up when I saw another, bigger crab emerge glistening from the sea and hide in a shadowy crevice.

Settings: Being in the shade, I advanced slowly while scrolling ISO up to 800. I was in Aperture priority mode, with my Canon EF 100mm Macro f/2.8 L IS lens opened right up to f/2.8 to give me the fastest shot possible. Click. In the wonderful soft shade light, the colours of the wet crab looked just superb, and I got right in close, with a tight composition. The only let-down was that f/2.8 was giving me too shallow a depth of field to appreciate the detail on the claw and eye simultaneously. My shutter was 1/320 sec, so I cranked up to f/6.3 for a deeper depth of field, and this dropped my shutter speed to a dangerously low 1/80 sec. I held my breath, and thanks to built-in Image Stabilising, got close enough to even be reflected in his eye.



Understanding aperture



THE MOST IMPORTANT LESSON

If you want a larger depth of field (more stuff in focus), then just use a larger f stop. If you want a smaller depth of field (less stuff in focus, nice blurry backgrounds), then just use a smaller f stop.



“Low light is the thing that constantly challenges me to walk a fine line”

practical sessions (along with gourmet catering) I find allows people to get the hang of it all so much faster. I also throw in an exciting photography assignment at the end too - with a great Lowepro camera backpack prize - to encourage people to ummm... 'focus' during the day.

Lessons

Every student has different 'Eureka' moments during the day - but the most common is when I explain the very simple technique for remembering how to control depth of field in your photo using aperture / f-numbers, without doing any mental-gymnastic inversions and backward relationship nonsense. It's so easy if you just talk about f #'s instead of aperture size: If you want a larger depth of field (more stuff in focus), then just use a larger f#. If you want a smaller depth of field (less stuff in focus, nice blurry backgrounds), then just use a smaller f#. I just love the look of disbelief and dawning simplicity that spreads around the room.

Other important lessons include how the different types of light and directions that it's coming from can affect your photo so profoundly. How shade light is better than harsh sunlight that gives those high-contrast shadows, to the importance of using lens hoods and using your flash to fill in shadows by day.

Fighting in the Field

There are always challenges when you're working in the field. Sometimes it's keeping batteries charged in the freezing

cold in the middle of nowhere, other times it's spray or condensation getting on the lens, often it's the gnawing realisation that I really should be focusing more seriously on my own safety than trying to get a shot, but overall, I'd have to say low light is the thing that constantly challenges me to walk a fine line between using ludicrously high, noisy ISO values and deliberately underexposed but faster photos, or suffering the effects of camera shake and subject movement.

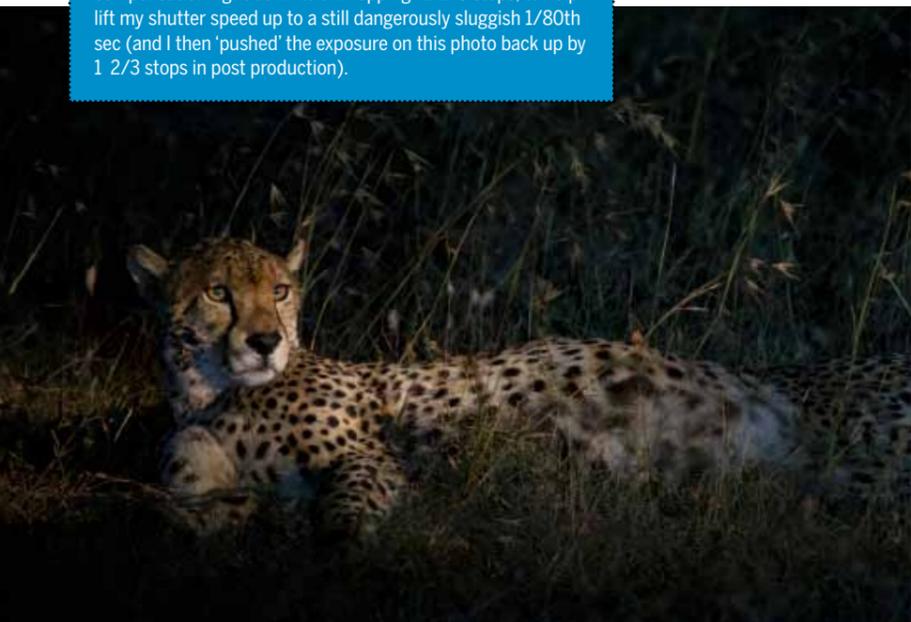
A lack of light plagued me constantly in Borneo recently, where I spent an amazing month photographing some of the rarest animals on the planet. Beneath the shady jungle canopy I was forever having to play that game - the instant it'd get a little brighter or the animal looked like it was going to hold still for a moment, I'd quickly slash my ISO back down to a less noisy value, hold my breath and fire away, staring transfixed at my dangerously sluggish shutter speeds. Whenever the subject moved behind some vegetation, I'd quickly review my photos, plunging the zoom into the pixel-level to see if the movement blur was acceptable. As the light faded again with the next thundercloud, I'd have to keep ramping my ISO up further and further, but ideally still only just enough to keep my shutter speeds tottering slightly ahead of significant movement blur. In desperate times (pretty much always in the jungle) I also underexposed the photo as

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SPOTTO - CHEETAH!

Summary: For the annual photo safaris I run to Kenya we're lucky enough to have wrangled special permission to do rare night-drives in one of the parks. Having first alerted all the wardens to suspend their usual 'shoot-to-kill' approach to poaching for that evening, with an armed guard in the car, we went out in search of cats. As I swept the spotlight around, huge reflective eyes shone back at us from all sides. Antelope, Bush-babies, zebras, but at last low down in the open grasslands, we saw a pale green/blue pair of eyes that looked a little different.

Settings: Not only is finding the animals hard, but operating your camera in the dark, dealing with the dangerously slow shutter speeds and the harsh shadows cast by a spotlight, while trying to hold the light and your camera, is tough. Once we'd located this cheetah I gave our local driver-guide the torch so the light would be coming slightly from the side, giving the scene more depth. At first we used my super powerful LED torch, but found it lit everything a little too well, and also cast a whitey-blue hue over the scene, compared to the weaker, yet more golden glow of the traditional spotlight, which we swapped to. I was using my favorite wildlife lens, a Canon 100-400mm f/4.5-5.6 L IS USM, zoomed in part way to 275mm, and set as-usual on the lowest f stop I could get, in this case f/5.6, for a blurry background and as fast a photo as possible. ISO was cranked up to 1600. I dialed my exposure compensation right down to a whopping -2 1/3 stops, to help lift my shutter speed up to a still dangerously sluggish 1/80th sec (and I then 'pushed' the exposure on this photo back up by 1 2/3 stops in post production).



5 top tips for shooting wildlife in low light

01 TURN YOUR ISO UP! This is your first line of defence. Don't be scared of turning your ISO up to alarmingly high values: take a test shot and zoom in on the result on the back of your camera and decide for yourself what's too grainy/noisy - you might be surprised what you can get away with.

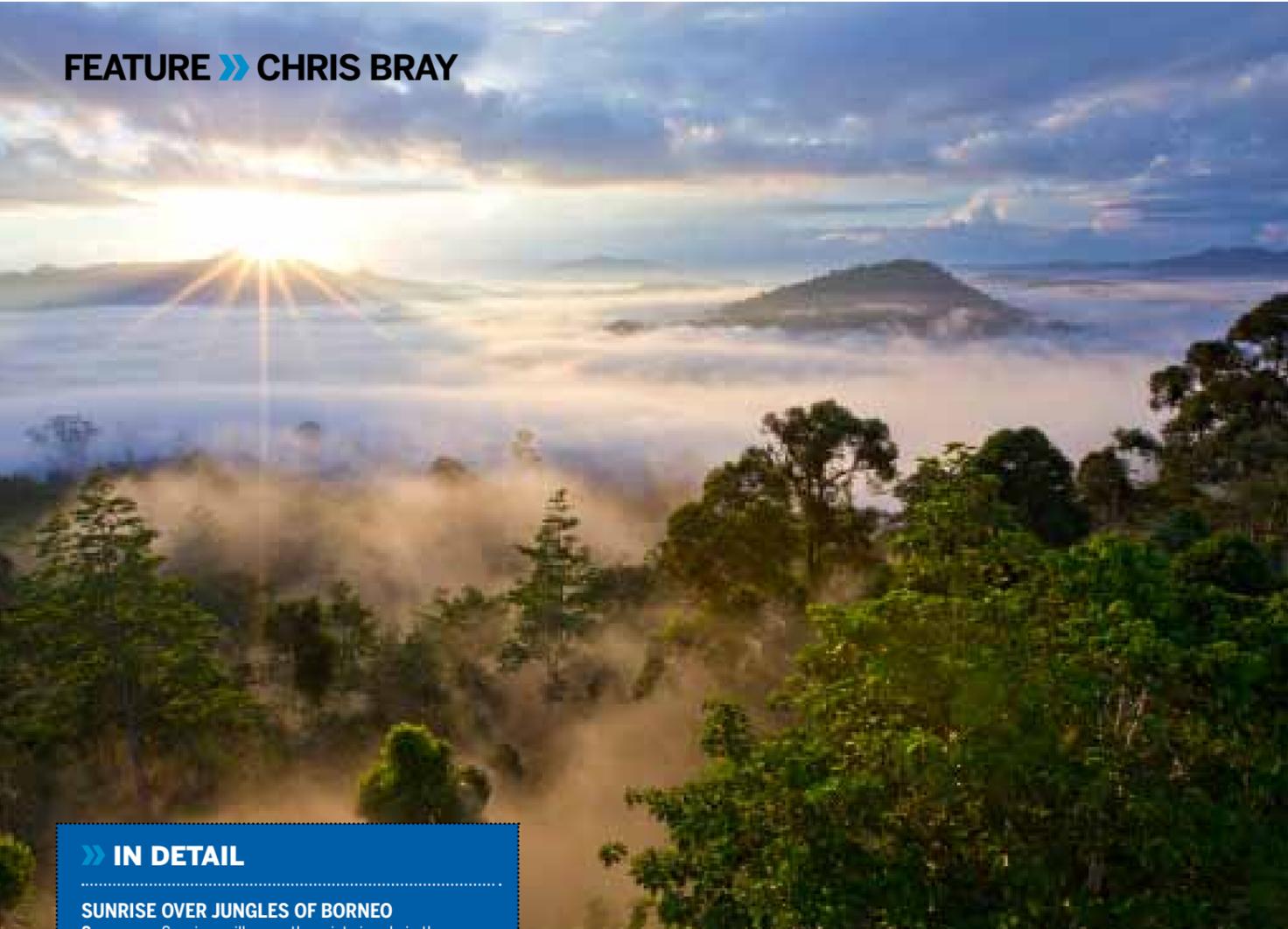
02 SCROLL DOWN TO YOUR SMALLEST F STOP IN APERTURE PRIORITY MODE This is the same as opening your lens up to the largest aperture hole, which lets light in faster. You'd likely be doing this anyway for a nice small depth of field, giving your subject good bokeh. Ideally you'd also be using a 'fast' lens. This is simply one that goes down to a nice small f stop, like f/4 or faster. This will let you get away with faster photos even in poor light.

03 USE A TRIPOD OR REST A tripod or bean bag can save a shot. When it's impractical to carry them, at least try to find a good object to rest the camera on. This only helps prevent camera shake, not subject movement. Even trees sway in the wind.

04 SLIGHTLY UNDEREXPOSE YOUR PHOTO Making your photo one-stop darker means you can use twice the shutter speed, and especially if you shoot in RAW, you'll likely be able to brighten it back up again later with a little care and skill.

05 TRY A PANNING SHOT If all else fails, embrace the slow shutter speeds forced upon you, and try for a panning shot. Smoothly following your subject's head and body as it walks past can give a wonderfully fluid feeling of movement to a photo. Deliberately scroll your shutter speeds down to around 20th sec and adjust faster/slower from there - fast enough that you don't have to track the subject for an impossibly long duration resulting in too much wobble, yet slow enough that the animal has had enough time to move forward so that you can get the background to streak past.





» IN DETAIL

SUNRISE OVER JUNGLES OF BORNEO

Summary: Sunrise spills over the misty jungle in the mega-biodiversity corridor of Danum Valley in Sabah, Borneo.

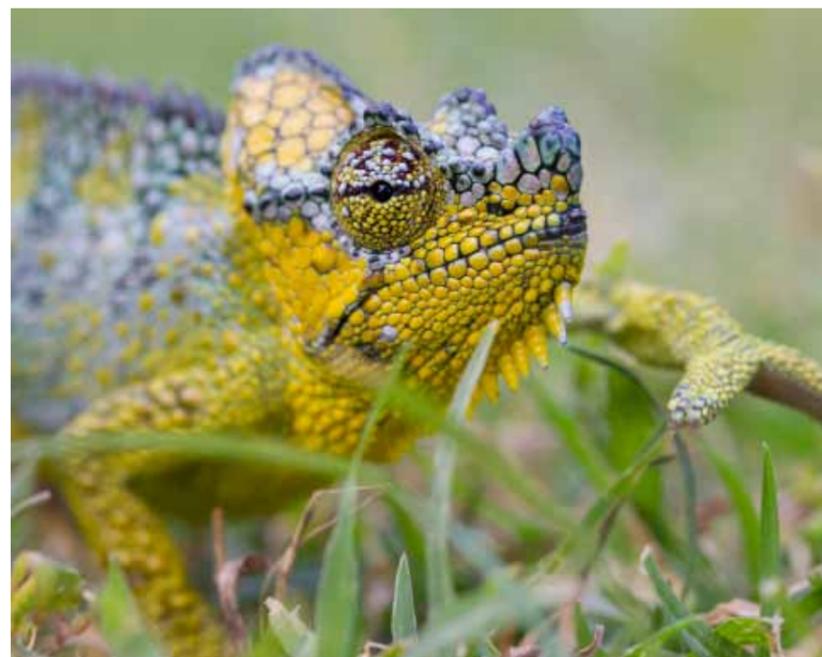
Getting into place: Despite having been out all night trying to photograph gliding frogs, I woke at 4:30am and my friends at the Borneo Conservation Trust and I groggily made our way to the 4WD and bumped along the traumatically eroded track out to the giant radio tower that dominates the horizon. We unlocked and climbed the endless ladder up into the dark, finally reaching the observation level just as banks of fog drifted around us, engulfing our view entirely.

Setting up: I was using my favorite wide angle lens for this landscape shot – the Canon EF 16-35mm f/2.8 L II USM. In the low light, I had it on my tripod and turned on the two-second timer to prevent shake as I pressed the shutter. At first we were just in a bank of fog, and it looked like it would be a failed mission. I contented myself taking photos of misty hills as they faded in and out of view, and as the sky grew gradually brighter I was able to turn my ISO down from 1600 to 400, then 200. I wanted to try and reach a high enough f stop not only to give a decent depth of field, but also to generate a nice star-burst effect as dawn broke. It didn't look like it was going to happen, but thankfully the bank of fog blew clear just as the sun burst over the horizon, spilling gorgeous light and colour across the jungle. The lighting changes impossibly quickly at this moment, and I raced to try and crank my f stop up as high as I dared without giving too slow a shutter speed (the whole tower was swaying in the wind too!). I managed to get it to f/16 for this shot, resulting in 1/60th sec shutter speed at ISO 200. I also underexposed the shot slightly by -1/3 stops as it made the colours richer and prevented the sun burning out too much of the sky. As for composition, I kept the rule-of-thirds in mind with the sun in the top-left third intersection, and zoomed my lens out wide enough to include an aesthetic amount of foreground and a bit of a leading line pulling in from the lower left corner.

Q&A

What gear goes with you on safari?

Along with my cameras and lenses, I take a Manfrotto MK394 ball-head and Gitzo GT353OLS carbon fibre tripods, Canon 580 EX II speedlite, ring-flash, bean bag rest and Lowepro Flipside 500 AW.



“I'd much rather have a grainy shot than a blurry shot”

much as I dared, as that too means the camera needs less light and thus allows slightly faster photos, but you have to know your limits for how far you can 'push' the exposure back up again in post production. It was the same (actually worse) photographing bird nest harvesters operating at dizzying heights inside pitch-black caves – far too far away to flash.

The other ill effect of low light is the way it forces photographers to use such depressingly small depth of fields, especially with macro photography. Sometimes it'd be wonderful to be able to show an entire beetle in focus (ie using a huge f# like 16+) but this drags our shutter speeds so low that it's likely crawled right out of your blurry shot. To combat this I recently bought my first ring-flash, and it's fantastic. It's only a cheapie LED version but throws enough light on close-up subjects to get some really detailed photos with shadowless surround lighting. I love it, and will upgrade to a real one sometime soon.

Isolating ISO

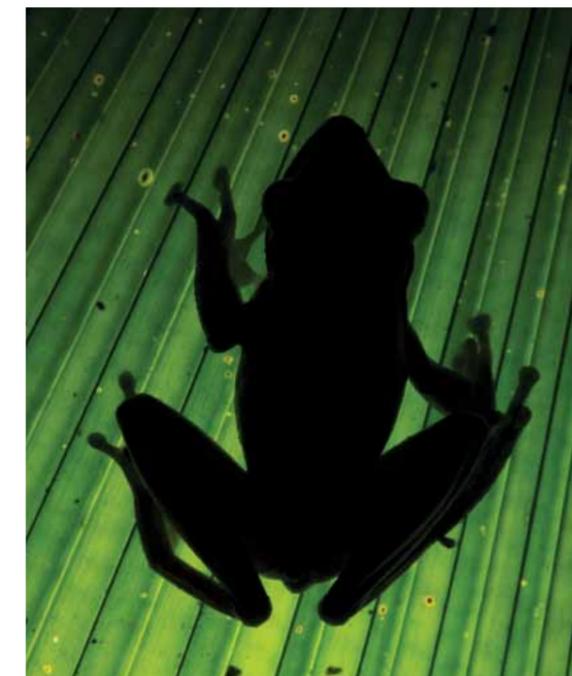
These days ISO technology is simply amazing, and it frustrates me how many people are still paranoid about lifting their ISO up to 800, 1600 and beyond. On modern cameras you basically can't even see noise at those levels – even if you zoom all the way in or print it out on a huge canvas. I think there's still a mental hangover from the film days (or very early digital camera days perhaps, when some of the textbooks

were re-written) where ISO 400 was still alarmingly grainy. It's just not like that anymore, and people need to get with the times. The ISO technology improves with every new model - my Canon EOS 1D MIV gets into the 100,000 ISOs and yes, it's quite grainy up there, but the creative options that open up are mind-boggling, and the lack of noise at once unheard-of ISOs is astounding.

I lift my ISO up as high as I need to get the shot. Sometimes it's the highest value – and that's just the way it is. I'd much rather have a grainy shot than a blurry shot.

Take a look inside even the most image-proud magazine and you'll be able to find some photos in there that (if you look closely) are quite grainy – so what? Of course I like to keep my ISO down as low as convenient, and whenever I can find a way to better light my subject or creatively embrace the slower shutter speed I will, but the moment I find that my shutter speed simply isn't quick enough (perhaps I'm unable to use a flash, and I'm not using a tripod and am getting camera shake, or perhaps the subject is simply moving too fast and is blurring slightly), then I'll crank my ISO up to whatever I need to, to get a sharp shot.

For more info on Chris Bray's courses, Safaris and work, see chrisbray.net



Chris's top tips for low light setup

Take a look at these tips for when you've got time to set up your shot:

- 01 TRUST THE TRIPOD** If it's not an action-packed wildlife situation, then really you have no excuse not to use a tripod. They're extremely useful. Just make sure when you buy one it's small and light enough that you could be bothered taking it with you, otherwise it's useless. Also ensure it's designed to take the weight of your camera and heaviest lens – they all have a max load limit you need to stick to.
- 02 CAMERA SHAKE** Turn on the 10-second or 2-second countdown self-timer on the camera's 'drive mode' so the act of pressing the button doesn't bump and wobble the camera, otherwise you'll end up with a blurred photo.
- 03 FOCUS FIRST** Pre-focus with Auto Focus (AF) and then switch over to Manual Focus (MF) to lock it in. Autofocus can struggle in low light, so I'll often carefully get the camera to auto-focus on something – anything – that's approximately the same distance away, or ideally light my subject up with a torch so the camera can accurately AF on it, and then switch your lens from AF to MF, turn off the torch and now, so long as you don't accidentally twist the focus-ring on your lens, you can happily go ahead and take a long low-light photo, smug in the knowledge that your lens is already perfectly pre-focused and won't hunt for focus on each subsequent photo.
- 04 GET A GOOD EXTERNAL FLASH/SPEEDLITE** These tools open up so many creative lighting opportunities: bounce-flash; stroboscopic flash; the ability to have the flash off-camera (wirelessly or on a cable) to get more 3D/side-lighting effects; etc. Turn low light into any light you want.
- 05 GET A MODERN CAMERA BODY** Fortunately/unfortunately cameras have come a long way even in just the last three years. If your camera doesn't go beyond ISO 1600 then I'm sorry, but you're going to struggle with a lot of low-light photography challenges that any newer camera would eat for breakfast, simply by being able to crank the ISO up higher.

