ISSUE FIVE September 2020

FINAL 20 PHOTOGRAPHY TIPS

Groan Animals humour and more Animal Magic



In this issue



When Nicholas asked his wife of 30 years, Will you still love me when I'm old, fat, and balding?' she answered, 'I do'.

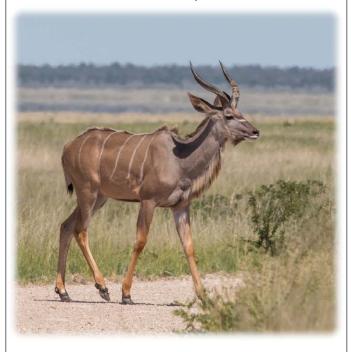


Maribou stork (*Leptoptilos crumenifer*) Queen Elizabeth National Park, Uganda, October 2016 Canon EOS 70D, 200mm, 1/1600 sec, F8, ISO 800

Front cover

Groan Animals

Clark was reluctant to get out of the way of the safari vehicle. Dad always said that the buck stops here.



He was confused, as the tourists always stopped for a zebra crossing. Perhaps zebras had herd immunity?



top

Greater kudu (*Tragelaphus strepsiceros*) young male Etosha National Park, Namibia, March 2018 Canon EOS 80D, 400mm, 1/500 sec, F11, ISO 200

Burchell's zebra (*Equus quagga burchellii*) mother with juvenile Lake Manyara National Park, Tanzania, December 2004 Canon EOS 300D, 300mm, 1/400 sec, F7.1, ISO 100

A Sharp Eye on WILDLIFE PHOTOGRAPHY

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All photographs by Charles J Sharp except where indicated. These are all wild animals. They were not photographed in safari parks, rescue centres, zoos, butterfly houses, in captivity, or in a studio.

Most full resolution images are on Wikipedia and on Flickr.

Previous issues on the website

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Golden-eyed tree frog (*Agalychnis annae*) Heredia, Costa Rica, May 2019 Canon EOS 80D, 371mm, 1/250 sec, F11, ISO 200 with flash

A Smile

Smiling is infectious,
you catch it like the flu,
When someone smiled at me today
I started smiling too.

I passed around the corner and someone saw my grin. When he smiled I realised I'd passed it on to him.

I thought about my smile and then
I realised its worth.
A single smile like mine could travel
right around the earth.

If you feel a smile begin don't leave it undetected. Let's start an epidemic quick and get the world infected.

Jez Alborough in *Shake Before Opening*, 1991

The future...

arry and Meghan's whine-and-tell *Finding Freedom* opens with a famous quote from Ralph Waldo Emerson: 'Do not go where the path may lead, go instead where there is no path and leave a trail.' There are two problems with this. Firstly, if we wish to protect wildlife and its delicate habitat, we should avoid leaving a trail. Please stick to the path. Secondly, Emerson never said this. It is a false attribution. Similarly, you will often see the poem opposite wrongly attributed to Spike Milligan.

This issue has my final twenty tips for wildlife photographers. The tips have come out in a random order, but all one hundred will be collated and sorted and published as one book. Sometime...

I will produce another issue when we have been able to travel again. Perhaps we will make it to Central America in December, but more likely we will have to wait till 2021. In the meantime, I hope that the wild animals are enjoying time off from our interference in their lifestyle.

We do need to make every effort to travel again. Wildlife lodges, game reserves, guides and everyone employed in the industry need us to come back and spend our money. Conservation programmers cannot be put on hold for long. Security for endangered species costs money. Habitat loss will accelerate if we stay away.

When we have come back from our travels, we must share our experiences so that the unconvinced will take the plunge. Wildlife trips avoid centres of population and surely must be less risky than an all-inclusive week surrounded by hundreds of people?

Charles Sharp

... stay safe

Tip #81 Get a first

very now and then you get lucky. I was leaning out of the car window trying to get two bee-eaters looking in the same direction on the same branch. They were flying off to grab dragonflies on the wing, then returning to the same place. This is typical behaviour for all bee-eater species.

Finally I snapped two together. Then I stayed focused on the two birds and a third one joined them. I had no

idea at the time that each was holding the same species of dragonfly in its beak.

I have seen amazing photos of bee-eaters with insects, often male and female sharing a meal. I've seen a photo of four birds, each holding an insect. It may have been captured before — most things have — but I have not been able to find an image anywhere that has three birds perching like this.



European bee-eaters (*Merops apiaster*) with darter dragonflies (*Sympetrum sp.*), near Kondor Tanya, Kecskemét, Hungary, August 2018 Canon EOS 80D, 560mm, 1/640 sec, F8, ISO 200

Tip #82 Take birds in flight

ome photographers don't bother with birds unless they are flying. It is challenging. The bird is always a long way away, above you and against a bright background. Stand on high ground and you have a better chance. I took the picture of the heron a week after buying my first 100-400mm lens while

standing on one of the Capability Brown mounds that surround Blenheim Palace's lake. Birds flying low over water are an easier target. The skimmer has developed low-level flying skills worthy of Guy Gibson's 617 Squadron. It skims, beak open, to catch fish near the surface.



Grey heron (*Ardea cinerea*), over Queen Pool lake, Blenheim Palace, Oxfordshire, March 2014 Canon EOS 70D, 400mm, 1/4000 sec, F6.3, ISO 800



Black skimmer (*Rynchops niger*), Barranco Alto, Mato Grosso do Sul, Brazil, September 2015 Canon EOS 70D, 400mm, 1/2000 sec, F5.6, ISO 500

Tip #83

Construct your trophy room

⊀ he UK government is considering banning the import and export of hunting trophies. I hope they do. We photographers can still fill our trophy rooms with impressive horns. These photos are all examples of male antelopes in Africa –from Botswana, Ethiopia, Namibia, Senegal, South Africa, Tanzania and Uganda. Biggest to smallest left to right and top to bottom. Collect as many antelope horns as you can for an identification guide and be one step ahead of your friends, family and your long-suffering guide...



(Kobus ellipsiprymnus)



Red lechwe (Kobus leche leche)



Giant eland (Taurotragus derbianus)



Mountain nyala (Tragelaphus buxtoni)



Sing-sing waterbuck (Kobus ellipsiprymnus unctuosus)



Impala (Aepyceros melampus)



Greater kudu (*Tragelaphus strepsiceros*)



Red hartebeest (Alcelaphus buselaphus caama)



Common tsessebe (Damaliscus lunatus)



Black-faced impala (Aepyceros melampus petersi)



Roan antelope (*Hippotragus equinus*)



Blue wildebeest (Connochaetes taurinus)



Sable antelope (Hippotragus niger)



Swayne's hartebeest (Alcelaphus buselaphus swaynei)



Topi (Damaliscus lunatus topi)



Ugandan defassa waterbuck (Kobus ellipsiprymnus defassa)



Gemsbok (*Oryx gazella*)



East African oryx (Oryx beisa)



Ugandan kob (Kobus kob thomasi)



Abyssinian bohor reedbuck (Redunca redunca bohor)



Springbok (Antidorcas marsupialis)



Steenbok (Raphicerus campestris)

Common blue butterflies sequester flavonoids from their host plants and the pigments are absorbed into their wings. Females do this best and the pigments attract males.



Common blue butterflies (*Polyommatus icarus*) mating.

The male is on the left.

Yoesden Bank, Buckinghamshire, August 2016
Canon EOS 70D, 100mm, 1/1000 sec, F9, ISO 400

The black witch moth is one of the largest South American moths. Females can be as large as 17cm. It is known in Mexico as *Micpapalotl*, the Butterfly of Death (*Mariposa de la Muerte*). If you are ill in Mexico, it's best to close the windows. Myth has it that if the moth comes into the house, you will die. Don't worry too much if one flies over your head. You will only lose your hair.



Black witch moth (*Ascalapha odorata*) female Horto Florestal, Sao Paulo, Brazil Canon EOS 70D, 104mm, 1/250 sec, F8, ISO 1000

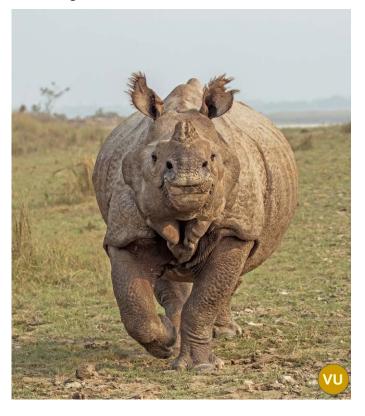
Tip #84

Play one-on-one

ne of the easiest mammals to photograph in Brazil is the capybara. It is the largest rodent in the world and looks like a cross between a giant mole rat and the guinea pig which is its closest relative. A perching bird makes the photo more interesting, just as it does with Africa's large mammals.

Tip #85 Take head on for menace

here are quite a few animals that you don't want to face down. They would be happy to kill you. More likely to attack than to run away. They look more menacing when you look at them head on and you have to balance the need to take the shot with the need to get away. Your flight distance. Our guide parked his Landrover about 100m away from a grazing one-horned rhino. A minute later it started trotting towards us, coming right up to the (covered) vehicle. Focal length = 100mm. After a few anxious moments, it decided that we were not that interesting after all.





Yellow-headed caracara (*Milvago chimachima*) on male capybara (*Hydrochoeris hydrochaeris*)

Barranco Alto, Mato Grosso do Sul, Brazil, September 2015

Canon EOS 70D, 400mm, 1/500 sec, F8, ISO 800



Indian rhinoceros (*Rhinoceros unicornis*) near Narayani River, Chitwan Community Forest buffer zone, Nepal Canon EOS 80D, 100mm (left)/120mm (above), 1/1000 sec, F5.6, ISO 400

Groan Animals

Knowing that the early bird gets the worm, Santiago was so glad he was the late bird



Edward had an eyrie feeling that it was time to return home



Common kingfisher (*Alcedo atthis ispida*) female Kondor Tanya, near Kecskemét, Hungary, August 2019 Canon EOS 80D, 400mm, 1/250 sec, F5.6, ISO 640

Western banded snake eagle (*Circaetus cinerascens*) Matetsi Safari Area, Zimbabwe, March 2018 Canon EOS 80D, 560mm, 1/500 sec, F8, ISO 200

Tip #86

Find an unusual perspective

e know that taking a photograph from eye-level will usually give the best result, whether your subject is your grandchild or some other small animal. It is not easy to get down to crab-eye-level. There is no shortage of Sally Lightfoot crabs in the Galápagos. They scurry around over the bare volcanic rock and gave me an opportunity for a new perspective.

Tip #87

Create an action sequence

f you know what's going to happen it is easier to capture the action. The kingfisher breaks the spine of the fish on the branch, then repositions it in its beak so it can swallow it head first. image layout 123







Galápagos Sally Lightfoot crab (*Grapsus grapsus*), Isabela Island, Galápagos Islands, Ecuador, March 2012 Canon EOS 300D, 300mm, 1/250 sec, F5.6, ISO 100

White-throated kingfisher (*Halcyon smyrnensis fusca*), Salai, Uttar Pradesh, India, November 2017 Canon EOS 80D, 420mm, 1/1250, F10, ISO 640 (6 of 12 images taken)



Proboscis monkey (*Nasalis larvatus*) young male Composite image from three photographs Labuk Bay, Sabah, Borneo, Malaysia Canon EOS 70D, 200mm, 1/1600 sec, F10, ISO 640



Armadillo means 'little armoured one' in Spanish. It is a fast mover, faster than the British Army's Challenger 2 Main Battle Tank over rough terrain, approaching 30mph. The armour is keratin, the protein that gives strength to the rhino horn and is the main protein in human hair, nails, and the surface layer of the skin.



Six-banded armadillo (*Euphractus sexcinctus*)
Barranco Alto, Mato Grosso do Sul, Brazil, September 2015
Canon EOS 70D, 135mm, 1/1250 sec, F11, ISO 800

All elephants are good at child care, but the desert-adapted elephants of Namibia have to work hard. They are continually on the move, searching for food and water. There is little cover for a baby to rest during the day. This mother has guided her baby under the bushiest tree she can find. Once her baby had lain down, she tore off a large branch and used it to cover the youngster. There was no shade for the mother so she covered herself with sand to protect her back.



Desert elephant (*Loxodonta africana*) female with calf Damaraland, Namibia, March 2018 Canon EOS 80D, 105mm, 1/640 sec, F10, ISO 400

Tip #88

Forage in the meadows

hen you are on safari or a wildlife tour, most of your day is planned. Game drives, boat trips, forest walks, stake-outs... On a normal holiday, with normal people, you cannot expect to have it all worked out. But can you steal some quality camera time? If we are doing culture or staying with friends, like we were in Sweden, I still like to forage in the meadows. When the sun is out in spring and early summer, you always find something interesting, even on a windy day.



Large skipper (Ochlodes sylvanus) with false blister beetle (Oedemera sp.)
Valöns naturreservat, Västra Götaland, Sweden, June 2018
Canon EOS 80D, 100mm, 1/2000 sec, F6.3, ISO 400
Focus stacked from 3 images



Bee beetle (*Trichius fasciatus*) and flower crab spider (*Thomisidae sp.*) Valöns naturreservat, Västra Götaland, Sweden, June 2018 Canon EOS 80D, 100mm, 1/1600 sec, F6.3, ISO 400

Tip #89

Go house-hunting

he rufous hornero is the national bird of both Argentina and Uruguay. Ovenbirds build large covered clay nests which look like ovens. They have long-term pair bonds and the couple share the building work. They do re-use nests, but this one is a new build.

How selection could be applied to organisms living in a state of nature remained for some time a mystery to me.

Charles Darwin (1809 – 1882) Autobiography

The southern masked weaver has a different way of life. The male has a succession of female partners and builds a new nest for each one. His skill in weaving increases his chances of a female accepting him. If she likes his handywork she will move in and be in change of interior design. She furnishes the nest with soft grass and feathers.

Rufous hornero (*Furnarius rufus*) and nest Transpantaneira Highway, near Poconé, Mato Grosso, Brazil September 2015. Canon EOS 70D 400mm, 1/640 sec, F9, ISO 800

Southern masked weaver (*Ploceus velatus*)
male building nest, Walter Sisulu Botanical
Gardens, Roodepoort, South Africa
December 2018. Canon EOS 80D
400mm, 1/800 sec, F5.6, ISO800





Galápagos marine iguanas do not have white heads. They swallow a lot of salt as they graze underwater. They sneeze it out of their nostrils and the salt ends up on their head and back.



Galápagos marine iguana (Amblyrhynchus cristatus albemarlensis) Isabela Island, Galápagos Islands, Ecuador, March 2012 Canon EOS 300D, 210mm, 1/125 sec, F5, ISO 400

Seabirds drink salt water so they have the same problem. How to get rid of the salt? They have salt glands above their eyes. The salty nasal excretion runs down grooves in the bill and drops off the end.



Great frigatebird (*Fregata minor ridgwayi*) Genovesa Island, Galápagos Islands, Ecuador, March 2012 Canon EOS 300D, 210mm, 1/125 sec, F5, ISO 400

Tip #90

Avoid tongue-in-cheek photos

I f you've got time, keep trying to photograph an animal with its tongue sticking out. This is really important for reptile shots. An advancing Komodo dragon is scary enough, but the forked tongue makes it more intimidating. Monitor lizards are close relations, but are smaller (1.75m vs 3m in length) and relatively harmless.

The savanna, or southern, vine snake is a venomous snake, hence the 400mm lens. When threatened, it swells up its head to look doubly dangerous.



Common Indian monitor (*Varanus bengalensis*) Kumarakom, Kerala, India, November 2017 Canon EOS 80D, 100mm, 1/1000 sec, F5, ISO 800



Southern vine snake (*Thelotornis capensis capensis*)
Phinda Private Game Reserve, South Africa, October 2014
Canon EOS 70D, 400mm, 1/640 sec, F9, ISO1600



Komodo dragon (*Varanus komodoensis*) male, Komodo National Park, Indonesia, May 2015 Canon EOS 70D, 400mm, 1/1000 sec, F10, ISO 800

Tip #91 Respect the wildlife

It is important to avoid influencing animal behaviour, especially in the breeding season. Typically, spring is the danger season, but animals can court, mate and have babies all year round. Lizards have complex courtship rituals which can be observed without disturbing their interaction.

Here, the male with his impressive blue throat is courting a female in April.



European green lizards (*Lacerta viridis*) pair, near Aggstein Castle, Melk District, Austria Photograph Wikipedia User:Uoaei1, April 2014 Nikon D7100, 105mm, 1/180 sec, F11, ISO 800

Tip #92 Discover new behaviour

any bird species, particularly those in captivity and those eating human food, put food in water, often to soften it. Adult birds have also been observed dunking insects in water to moisten them when feeding their young.

In this series of eight photos shot over 30 seconds, an immature bronze-winged jacana has grabbed a grasshopper along with some grass. It walks a couple of metres to the water's edge and drops the still-live insect in the water. The bird is unlikely to be trying to drown the grasshopper. It doesn't hold it under water. The grasshopper is still alive as it has moved between images 5 and 6 (at the bottom of this page). It then picks up the clean insect (no grass now) and eats it.



One possible explanation for this particular behaviour (which may be new to science) is that the immature bird is mimicking its parent's behaviour, although jacanas are precocial i.e. they can feed themselves very soon after hatching.

Another possible explanation comes from the knowledge that this bird lives on the banks of the Chambal River and has to feed on land at this time of year. Jacanas usually feed in standing water and move around on lily pads (hence the nickname of Jesus birds as they appear to walk on water). They catch insects which are much more likely to be clean and wet.

Let's hope someone can explain.

image layout 1 2 3 4 5 6 7 8 Bronze-winged jacana (*Metopidius indicus*) immature Chambal River, Uttar Pradesh, India, November 2019 Canon EOS 80D, 420mm, 1/1250 sec, F7.1, ISO 400



The caterpillars of *Lepidoptera* (butterflies and moths) have a similar morphology. The three pairs of 'true' legs at the front are called thorasic legs. They come out of the thorax. The four pairs (usually four) of thicker legs in the middle are false legs (prolegs) and are attached to the abdomen. They have strong hooks to help the caterpillar cling on. The well-developed pair of false legs at the back end (on the right of the image) are called anal prolegs.



Old World swallowtail (*Papilio machaon*) caterpillar on a wild carrot (*Daucus carota*) leaf, Niitvälja Bog, Estonia Photograph Ivar Leidus (Wikipedia User:Iifar) June 2019 Nikon D5200, 105mm, 1/1000 sec, F10, ISO 800

Some moth caterpillars (below) can have a postabdominal spine that looks like a tail or horn. The pink 'mouths' on the abdomen are spiracles or stigma, openings which allow air to enter the trachea. The butterfly caterpillar (above) has them too, but they are less easy to see in the black pattern.



Poplar hawk-moth (*Laothoe populi*) late instar larva Parc du Marquenterre, Baie de Somme, France, July 2020 Canon EOS 80D, 100mm, 1/500 sec, F14, ISO 500

Tip #93

Take the spectrum challenge

here are hundreds of colourful birds, but it is quite tricky to cover the spectrum during one week in one country, especially if you want the bird to be predominantly the chosen colour. These birds were all photographed in Brazil's Pantanal from 6-13 September 2015. I wanted to have all the birds from one family, the *Passeriformes* or songbirds, but I couldn't find a green songbird. There aren't many.

For bonus points (during the same week), I photographed the red and green macaw, a bird that covers the spectrum on its own.

Walk on a rainbow trail;
walk on a trail of song
and all about you will be beauty.
There is a way out of every dark mist,
over a rainbow trail.

Traditional Navajo song

red

Vermilion flycatcher (*Pyrocephalus rubinus*) male Canon EOS 70D, 371mm, 1/250 sec, F5.6, ISO 800

orange

Orange-backed troupial (*Icterus croconotus*) Canon EOS 70D, 400mm, 1/160 sec, F5.6, ISO 800

yellow

Saffron finch (*Sicalis flaveola*) male Canon EOS 70D, 278mm, 1/500 sec, F7.1, ISO 800

green

Rufous-tailed jacamar (*Galbula ruficauda*) male Canon EOS 70D, 400mm, 1/2000 sec, F7.1, ISO 800

blu

White-winged swallow (*Tachycineta albiventer*) Canon EOS 70D, 400mm, 1/800 sec, F10, ISO 800

indigo/violet

Shiny cowbird (*Molothrus bonariensis*) male Canon EOS 70D, 271mm, 1/250 sec, F5.6, ISO 400



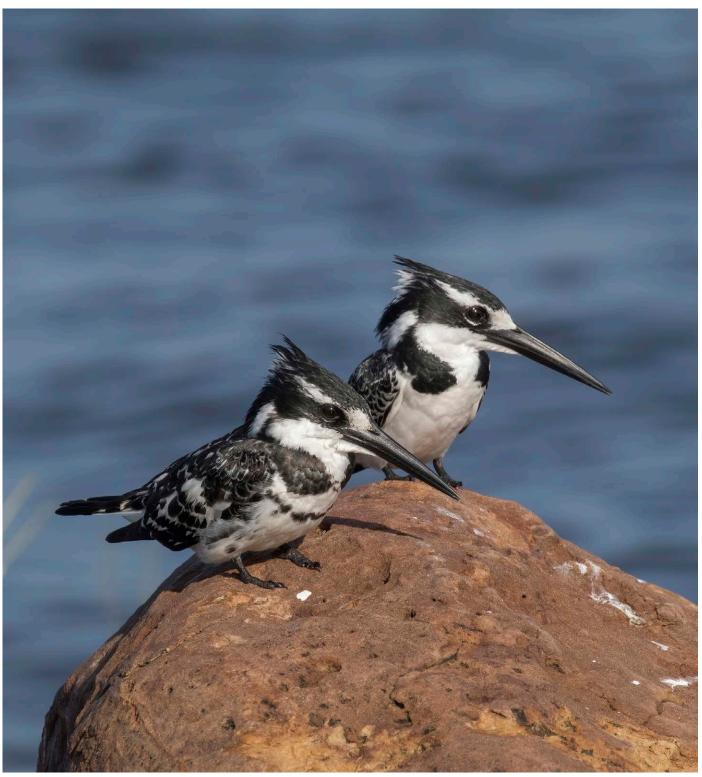


Red-and-green macaw (*Ara chloropterus*) juvenile, Barranco Alto, Mato Grosso do Sul, Brazil, September 2015 Canon EOS 70D, 400mm, 1/1000 sec, F11, ISO 800

Tip #94

Bag a left and a right from a matched pair

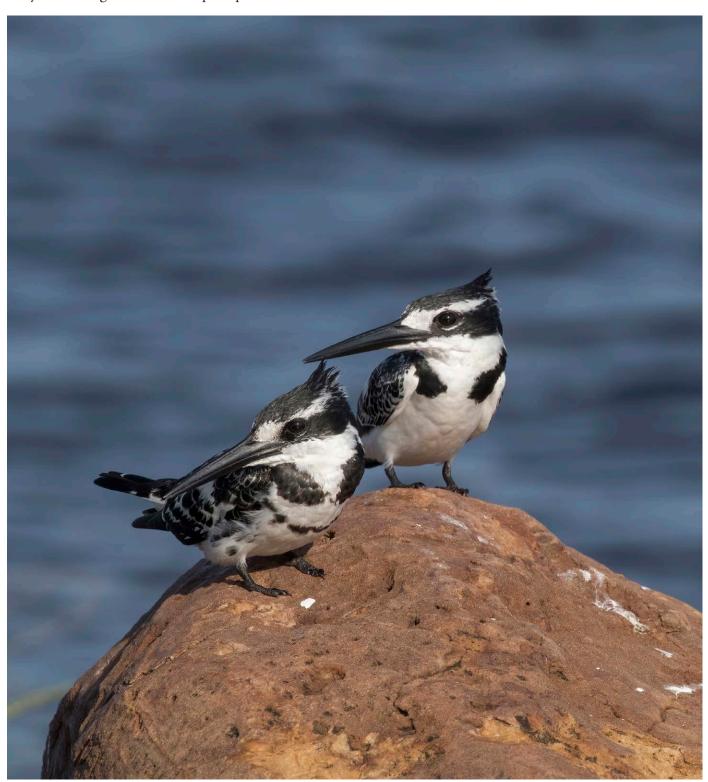
In game shooting, 'a left and a right' was when you shot a bird with each barrel of your 12-bore in quick succession. And a 'matched pair' referred to papa's hand-crafted side-by-side Purdey shotguns.



Pied kingfishers (*Ceryle rudis rudis*) male (L) female (R), Chobe National Park, Botswana Canon EOS 80D, 560mm, 1/800 sec, F11, ISO 400

These photos are my re-interpretation. The male pied kingfisher (nearest the camera) has two black bands across his chest. The female has one broken band. They are monogamous and the pair spend much time

together. I imagine that is why they instinctively turn together. Unless they have been watching the crowds on Centre Court at Wimbledon.



Groan Animals

Margaret was known as a social butterfly, but sometimes she just needed time on her own



Robin liked hanging out with Mr Wayne



crimson rose butterfly (*Pachliopta hector*) Kumarakom, Kerala, India, November 2017 Canon EOS 80D, 400mm, 1/500 sec, F5.6, ISO 1000

Indian flying foxes (*Pteropus giganteus giganteus*) (types of bat) Jamtra, Madhya Pradesh, India, November 2017 Canon EOS 80D, 560mm, 1/500 sec, F11, ISO 800

Tip #95

Take the 'Ronseal' shot

he Ronseal slogan *It does exactly what it says* on the tin was first used in 1994. There are dozens of species of most bird families, so most common names describe their appearance or where they live. Lapwings are large plovers and there are over thirty different species. A few have names that describe identifying features like wattles.

The spur-winged lapwing has carpal spurs on the front edges of its wings that it uses in battle. The spurs cannot be seen when the bird is on the ground, so it has to be flying and making a banked turn for you to get the Ronseal shot. The skimmer skimming on page 7 is another bird that you have to get in flight.

Birds can have names that describe their diet. There are over 60 types of eagle. The black-chested snake eagle eats small mammals and reptiles and its favourite food is venomous snakes. Having spotted its prey, it slowly parachutes to the ground to grab it. This one then popped onto a nearby post to show off its catch of the day.



Black-chested snake eagle (*Circaetus pectoralis*) with a snake Awash National Park, Ethiopia, December 2017 Canon EOS 80D, 400mm, 1/1000 sec, F11, ISO 400



Spur-winged lapwing (*Vanellus spinosus*), near Serrekunda, The Gambia, December 2016 Canon EOS 70D, 400mm, 1/1600 sec, F5, ISO 200

Tip #96

Go on a gorilla trek

do not apologise for making a very specific recommendation. There is nothing quite like an encounter with a gorilla family. It is a totally managed experience with habituated groups, but somehow that doesn't seem to matter.

We spent an hour with one group in Uganda then did another trek in Rwanda. Both encounters were different, but equally memorable. And the most amazing thing? When our guides told us that our time was up, the gorillas understood. On both days, they all got up and walked off.

The gorillas never looked at us; it was as if they had been coached to act naturally. The baby suckled, the older children played, lunch was taken and for some, it was siesta time.

It is an expensive hour, but worth every dollar. The pictures you take are not going to be out-of-theordinary, but the experience is.

Mountain gorilla (Gorilla beringei beringei)

top of this page male
bottom of this page
female with 10-month-old baby
Titus Group, Volcanoes National Park,
Rwanda, October 2016
Canon EOS 70D
70mm, 1/800 sec, F4, ISO 1600 (top)
53mm, 1/500 sec, F5, ISO 1600 (bottom)

top of facing page female
bottom of facing page three two-year-olds
Mubare Group, Buhoma sector,
Bwindi Impenetrable Forest
Uganda, October 2016
Canon EOS 70D
255mm, 1/800 sec, F5, ISO 1600 (top)
53mm, 1/800 sec, F4, ISO 1600 (bottom)









Leafcutter ants are said to form the most complex animal societies on earth (not counting humans). Their underground nests can be 30m across. They cultivate fungus on leaves to feed the ant larvae. The ants are divided in castes, each with a specific role. The oldest (most dispensable) ants are put in charge of waste management. Mmmm. Not just ants then.



Leaf-cutter ant (*Atta caphalotes*)
Asa Wright Nature Centre, Trinidad, December 2014
Canon EOS 450D, 100mm, 1/1000 sec, F2.8, ISO 1000

The kori bustard is the largest flying bird in Africa. Males are twice as heavy as females.



Kori bustard (*Ardeotis kori kori*) male Etosha National Park, Namibia, March 2018 Canon EOS 80D, 330mm, 1/640 sec, F10, ISO 200

Tip #97

Stake out the target

Since they hover, they are one of the few birds you can shoot close-up with normal camera equipment. The real specialists set up multiple flash units with an out-of-focus photographic print as a backdrop, a wireless transmitter to trigger the flashes and a flower clamped in position loaded with sugar water. That's not for me. I do not relish spending all day on the veranda waiting for technology to do my job for me.

I will stake out a flower. I choose one with nothing too disturbing in the background and choose my settings. The scintillant hummingbird is a regional endemic, living only in Panama and Costa Rica. It is the smallest hummingbird in Central America, just a little bit bigger than the world's smallest bird, the bee hummingbird of Cuba.

I had noticed a number of slaty flowerpiercers at work in the same bushes. Flowerpiercers have a unique bill that allows then to pierce the base of flowers to get at the nectar. The scintillant hummingbird is known to use the holes created by flowerpiercers and bananaquits, but that's not what is happening here. There were no branches where a flowerpiercer could land. Perhaps the hummingbirds learnt the secret by watching and copying.

A good photograph is knowing where to stand

Ansel Adams Landscape photographer (1902-1984)

Adams put a huge amount of effort in his darkroom working on his negatives. He worked hard to 'take care of mistakes God made in establishing tonal relationships'.

He would have embraced the post-processing capabilities we now have at our fingertips.



Scintillant hummingbird (*Selasphorus scintilla*) female feeding, Mount Totumas cloud forest, Panama, May 2019 Canon EOS 80D, 400mm, 1/500 sec, F5.6, ISO 250



Tent-making bats make tents from large leaves to make a safe space away from wind and rain. They bite and chew the leaves binding them together. They then snuggle down in a huddle.



Common tent-making bats (*Uroderma bilobatum*) Arenal, Costa Rica, February 2013 Canon EOS 450D, 80mm, 1/60 sec, F4, ISO 400

There are four-eyed fishes that have eyes on the top of the head so that they can see above and below and the water at the same time.



Four-eyed fishes (*Anableps anableps*)
Dégrad des Cannes, French Guiana, March 2013
Photograph Claude Meisch (Wikipedia User:Cayambe)
Nikon D800, 300mm, 1/320 sec, F10, ISO 100

Tip #98

Go on a quest

veryone loves butterflies and common species are easy to find. You will have many opportunities to get a result you are happy with. In England, the black and brown hairstreaks are elusive butterflies, even if you make a trip to where they live. They feed on honeydew high up in the trees and seldom deign to come down to be photographed. The females lay their eggs on blackthorn bushes and it is a good time to see them even though you have to be very careful not to disturb their egg-laying.



Black hairstreak (*Satyrium pruni*) female laying egg Whitecross Green Wood, Buckinghamshire, June 2015 Canon EOS 70D, 100mm, 1/200 sec, F5.6, ISO 800



Brown hairstreak butterfly (*Thecla betulae*) female laying egg Otmoor RSPB Reserve, Oxfordshire. August 2014 Canon EOS 450D, 100mm, 1/640 sec, F6.3, ISO 400

In England butterfly enthusiasts travel miles hunting for one elusive butterfly, the purple emperor. It is addressed by its subjects as 'His Majesty'. It is an impressive butterfly with questionable tastes, coming down from the treetops for animal droppings or foul-smelling man-made concoctions produced to lure it down to the ground. The lesser emperor is not found in the UK. It is slightly smaller, but arguably more beautiful. It has similar tastes and never feeds on flowers.



Lesser purple emperor (*Apatura ilia f. clytie*) Bükk National Park, Hungary, August 2019 Canon EOS 80D, 400mm, 1/640 sec, F7.1, ISO 800

The two-tailed pasha is a beautiful sight and is the only butterfly in Europe from the *Charaxes* genus. It likes the heat and we found it in Greece, hanging serenely from a twig.



Two-tailed pasha (*Charaxes jasius jasius*) Dragoudeliou - Karra, Sithonia, Greece, August 2017 Canon EOS 70D, 400mm, 1/400 sec, F11, ISO 400

For butterfly hunters in Europe, the search for the Holy Grail is a search for a grayling. The Macedonian grayling is one of very few insects classified as Critically Endangered and is the most threatened European butterfly. You have to go to one tiny village in North Macedonia to find it. It lives above 1000m on steep and rocky marble and limestone hillsides above Pletvar. It flies for a few weeks in high summer, so you are faced with an arduous hike to find it. Its habitat has shrunk due to quarrying.



Macedonian grayling (*Pseudochazara cingovskii*) Pletvar, Republic of North Macedonia, August 2017 Canon EOS 70D, 400mm, 1/500 sec, F18, ISO 800

A prettier butterfly, the very rare Eastern greenish black-tip, lives at the top of the same hill as the grayling. It was just about worth the hike. It was 40 degrees in the shade. But there was no shade.



Eastern greenish black-tip (*Euchloe penia*) Pletvar, Republic of North Macedonia, August 2017 Canon EOS 70D, 400mm, 1/800 sec, F22, ISO 800

Groan Animals

Harold was a bit fed up with always being called a cold-blooded killer. He was, after all, a reptile



Bruce was determined to promote Kung Fu Flying as the next martial art



top

Yacare caiman (Caiman yacare)

Barranco Alto, Mato Grosso do Sul, Brazil, September 2015 Canon EOS 70D, 220mm, 1/1000 sec, F9, ISO 800

oottom

Large-billed tern (Phaetusa simplex)

Barranco Alto, Mato Grosso do Sul, Brazil, September 2015 Canon EOS 70D, 400mm, 1/2000 sec, F5.6, ISO 200

Tip #99

Encourage people to use your photos

t's nice when people ask to use your images. I've had people use mine for paintings, an album cover, wallpaper design, research papers, publications and news reports. Field guides are the best, because then the publisher sends you a copy of the field guide.

The Indian Post Office used my photograph of a hyacinth macaw for their 2016 series of Exotic Birds. They did not have the courtesy to tell me. They didn't even acknowledge that it was my photo.



Drawn with coloured pencils by Jeniffer Gómez-Camargo Biologist, Universidad Pedagógica y Tecnológica de Colombia



Rufous-collared sparrow (*Zonotrichia capensis costaricensis*) Mount Totumas cloud forest, Panama, May 2019 Canon EOS 80D, 400mm, 1/500 sec, F5.6, ISO 500



Hyacinth macaw (*Anodorhynchus hyacinthinus*) outside Pousada Araras Eco Lodge, Transpantaneira Highway, Brazil, September 2015 Canon ESO 70D, 100mm, 1/1000 sec, F5, ISO 1600

Tip #100 Keep learning

he martial eagle is a large and powerful booted eagle. We came across a bizarre friendship on the border between Zimbabwe and Botswana. The eagle was flying in close formation with an African harrier-hawk. It was a beautiful air display. So why would an eagle make friends with a harrier-hawk?

Martial eagles are normally solitary and are not known to tolerate others of their own species except during the breeding season. The African harrier-hawk specialises in raiding other bird's nestlings and is known to be disliked by other birds. The harrier-hawk sometimes lays eggs in a martial eagle's nest. So was the harrier-hawk raised by eagle foster-parents?

There is so much more to learn...



Martial eagle (*Polemaetus bellicosus*) (the nearest bird) with African harrier-hawk (*Polyboroides typus*), Matetsi Safari Area, Zimbabwe, March 2018 Canon EOS 80D, 280mm, 1/500 sec, F7.1, ISO 200



Front cover

White-fronted bee-eater (Merops bullockoides)

Canon EOS 80D, 560mm, 1/640 sec, F8, ISO 400

Back cover

Little bee-eater (Merops pusillus argutus)

Canon EOS 80D, 560mm, 1/1000 sec, F9, ISO 400

