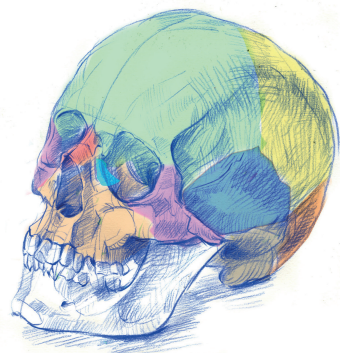


BEAUTY IS SKIN DEEP

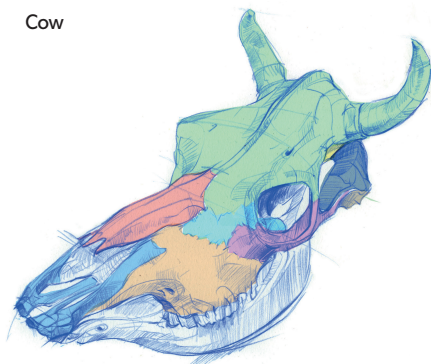
These skulls are colour-coded to show how the same underlying bones have developed in different species. Try drawing each one in turn, and try to work out what you can about their lifestyle from the shape of their skulls and the arrangement of bones as you do so.

Use tubes A good technique when sketching eyes on the sides of the skull is to join up the eyes with a tube shape. This helps to ensure that they are in line with each other.

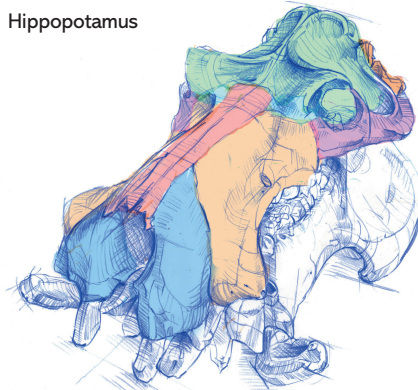
Human



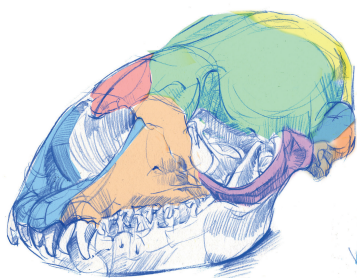
Cow



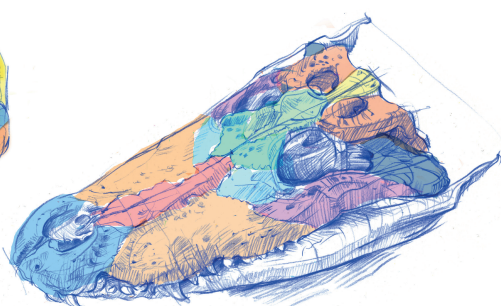
Hippopotamus



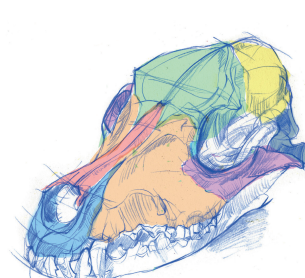
Seal



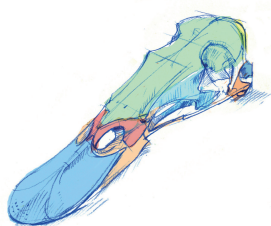
Alligator



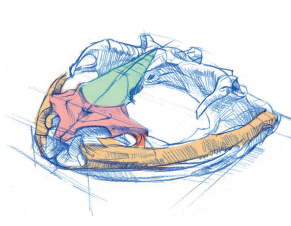
Dog



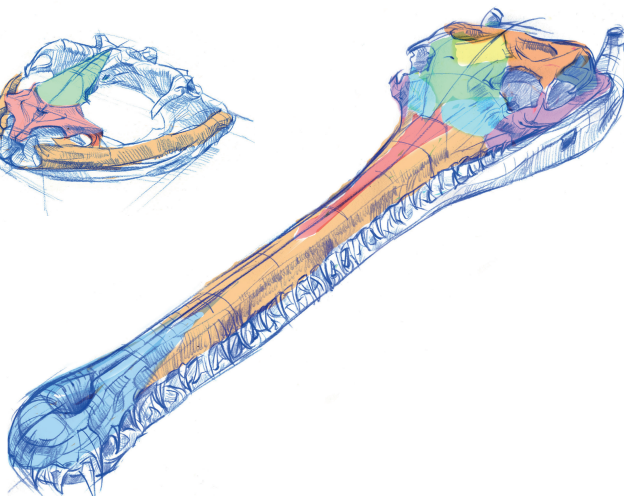
Duck













Frog



Gharial



-  Incisive bone
-  Nasal bone
-  Maxilla
-  Lacrimal bone
-  Frontal bone
-  Zygomatic bone
-  Parietal bone
-  Temporal bone
-  Occipital bone
-  Petrous and tympanic part of the temporal bone

Unusual predators

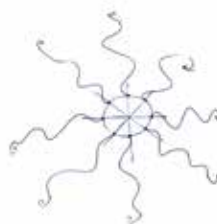
There are, of course, exceptions to the rule of predators having forward-facing eyes: orcas (killer whales) are apex predators with eyes on the sides of their head.

Octopuses

Some meek and mild, others bold and brassy, all octopuses are highly individual. Around three hundred species of these molluscs are grouped within the class *Cephalopoda*, along with squid, cuttlefish and nautilus. Octopuses are full of rich behavioural characteristics and really interesting forms and shapes to draw, from their bulb-like oval body form to their slender, searching arms. Despite their apparent size, their soft body enables them to squeeze through incredibly small spaces – restricted only by their beak, the lone hard part of their body.

OCTOPUS SCHOOL: SKETCHING TIPS

To distribute the eight arms evenly, divide a circle in half, then into quarters. Using the circle divided into eight as reference, you can place the shape in perspective.



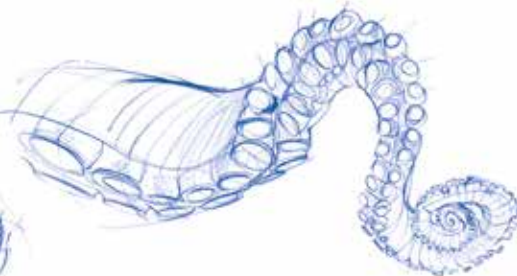
Start with a series of ellipses to help guide you when drawing the tentacles. Being very flexible and having a gelatinous body these ellipses can also be rotated vertically.



Use downward-facing ellipses if the octopus is propelling itself upwards.



The suckers twist like a roller coaster!



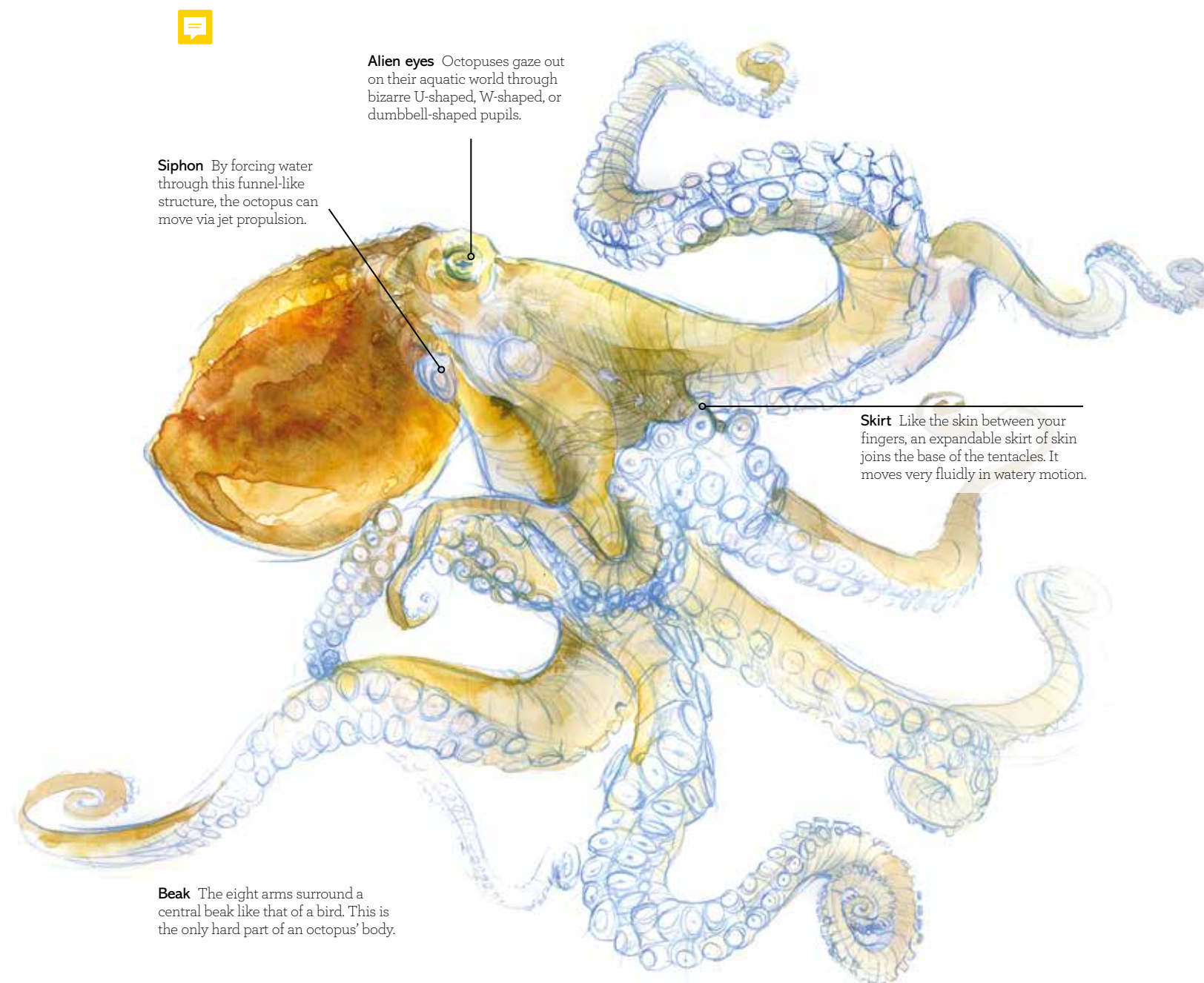
Sketch a funnel or cone-like shape to represent the beak. This can be attached to the eye and brain tube to form the eating mechanism of arms and beak.



Mantle

Octopus eye widget Octopus' eyes can be conceived as two balls on a tube. The brain is in the centre of this tube.

The two front tentacles lie on either side of the bilateral line of symmetry.



Alien eyes Octopuses gaze out on their aquatic world through bizarre U-shaped, W-shaped, or dumbbell-shaped pupils.

Siphon By forcing water through this funnel-like structure, the octopus can move via jet propulsion.

Skirt Like the skin between your fingers, an expandable skirt of skin joins the base of the tentacles. It moves very fluidly in watery motion.

Beak The eight arms surround a central beak like that of a bird. This is the only hard part of an octopus' body.

ABOUT THE OCTOPUS

Solitary creatures that live in dens amidst the rocky nooks of coral reefs and the sea bed, octopuses are both predator and prey. From the safety of its den, an octopus will wait with the patience of an ambush predator. Its dynamic arms are armed with paired rows of suckers that can dart out incredibly quickly and catch prey – a formidable catching mechanism.

In turn, however, octopuses share the seas with animals such as seals and sharks, which all eat these soft-bodied invertebrates. Fortunately, octopuses are masters of camouflage, able to blend into their environment by changing not only their colour and pattern of their skin, but also its texture, allowing them to match rocks, corals and other items nearby. This incredible chameleon-like ability is a fantastic defence to keep them off the dinner plate. The common octopus supplements this ability by gathering shells to create their own reef-like disguise.

If the octopus can't hide, then it can release a blast of ink to mask its escape. Fishermen sometimes call them inkfish for this reason; it is an ability octopuses shares with squid. Incredible as it might seem, there is even footage of octopuses killing small sharks: when attacked by them, the octopus puts its arms in their gills, starving them of oxygen and forcing them to let them go.



Red river hogs

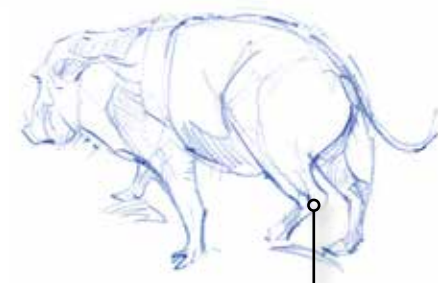
CAPTURING THE QUICK

One of the most attractive wild pigs to sketch is the West African red river hog. Their rust-red coloured coat makes them instantly recognisable. This wild pig occupies western and central Africa. Snuffling their snouts in the mud, grunting and squealing, red river hogs display all the normal behaviour we associate with pigs.

Red river hogs move around so quickly. The best approach to take is to create a study sheet. A stocky body, long leaf-shaped tufted ears are some of the elements that go to create the character of the red river hog. There is a distinctive tufted white stripe that runs the length of the spine. As you sketch notice how the hair on the flanks is longer than the rest of the body. The head is highly distinctive with its cone-shaped skull, white rings circle the piggy eyes and long white whiskers descend from the snout. The long ears are incredibly powerful and can hear the quietest paw of an approaching leopard.

RED RIVER HOG STUDY SHEET

Colours The ruddy yellow colour used here is a mixture of raw sienna and yellow ochre.



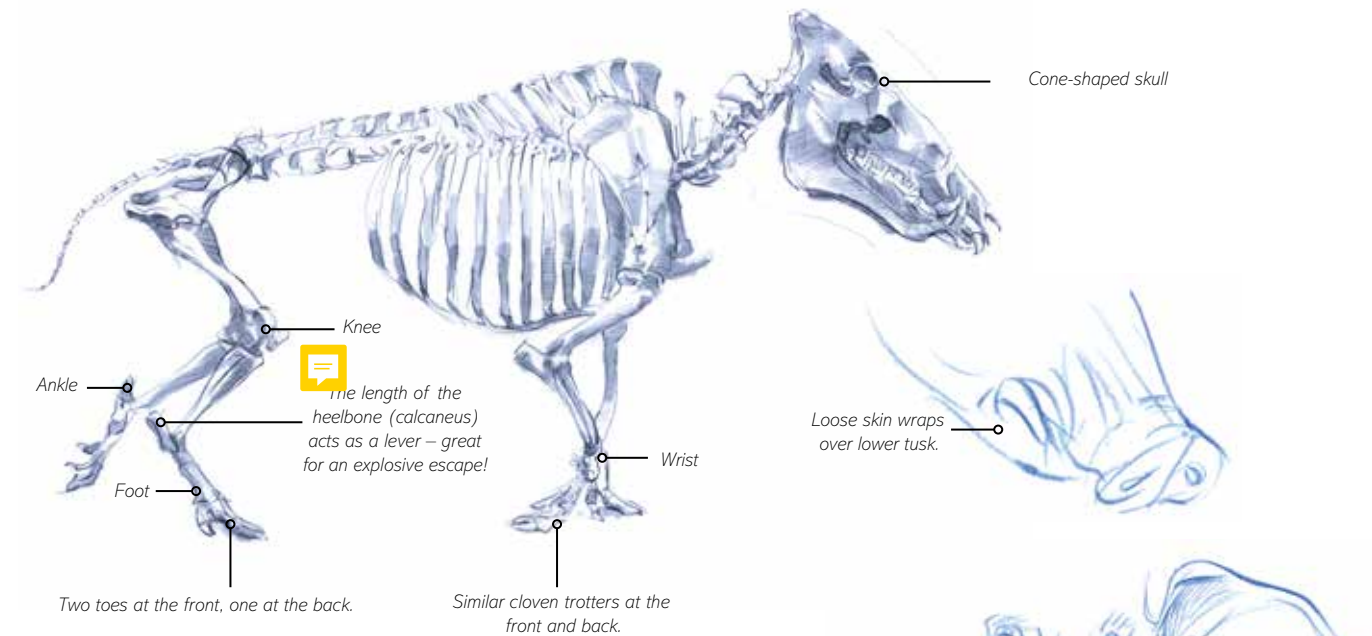
Stocky Red river hogs have a compact body shape.

Gastrocnemius



Compact Like other pigs, red river hogs have short, sturdy legs.

Standing on toes.

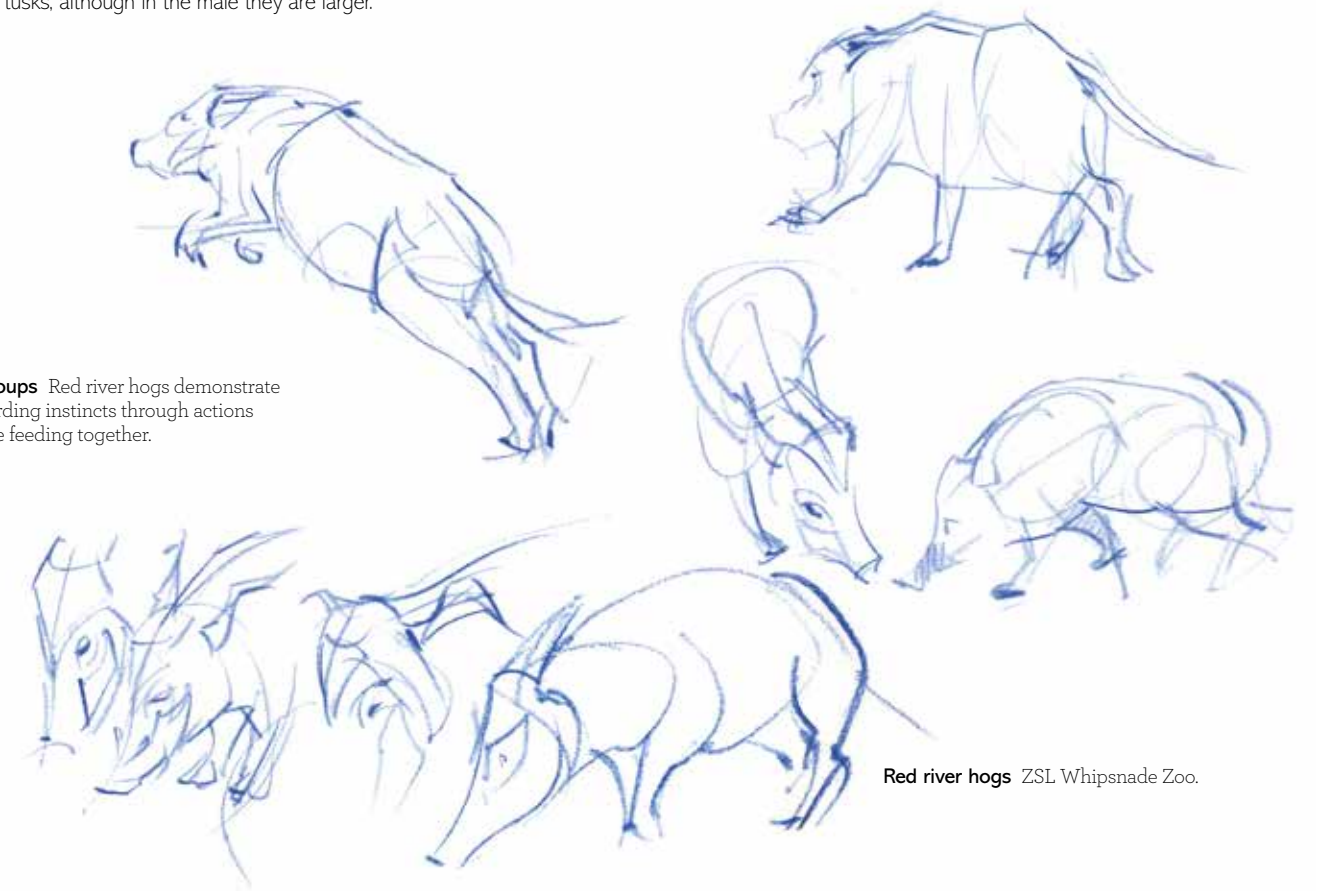


ABOUT THE RED RIVER HOG

Rarely seen away from rainforests, the red river hog prefers to live in areas near rivers or swamps, in small troops of up to twenty animals. These comprise a male called a boar, his adult females or sows, and their piglets. As you sketch you will notice the whole troop move in unison.

Red river hogs are omnivores and root around for tubers, roots and insect's grubs. Their elongated snouts have an incredible sense of smell. With them they rut around, and they can turn over an area of ground in a very short period of time. Both the male and female have small tusks, although in the male they are larger.

Groups Red river hogs demonstrate herding instincts through actions like feeding together.



Red river hogs ZSL Whipsnade Zoo.

Giraffes

THE WORLD'S TALLEST GENTLE GIANT

Giraffes, the tallest living mammals in the world, are animals that we all have to look up to. Yet their height is not the only reason we should all admire the majestic giraffe. They are one of the most beautiful animals in the world. They are one of the most wonderful animals to sketch because of their beautiful shapes and character. Giraffes move gently and with grace, and so are great animals to sketch from life.

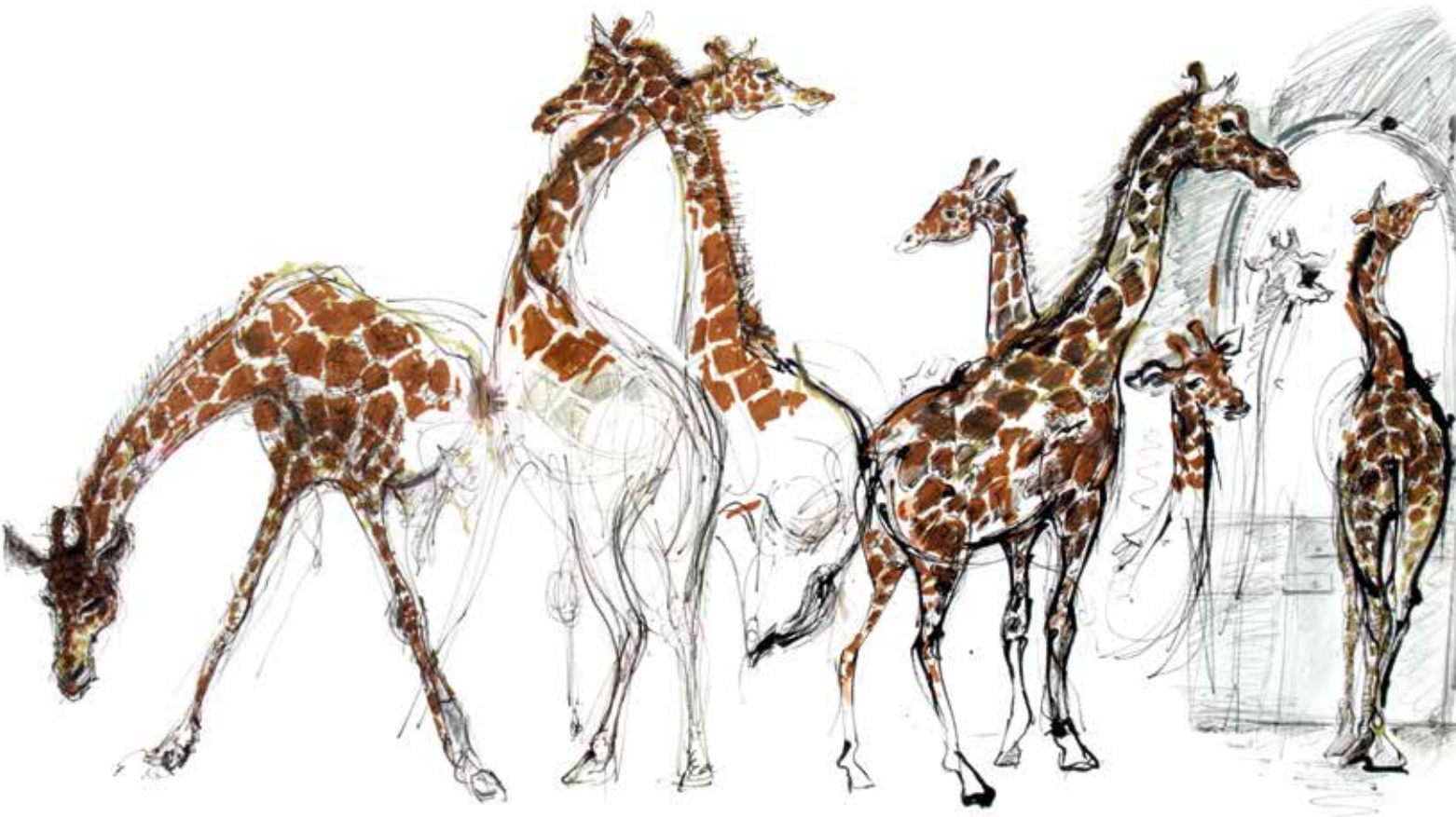
They have very feminine eyelashes and a black line around their eye gives them the appearance of having been outlined with eyeliner. The arabesque shape of their head and their long necks give them a unique and iconic look. Their long leg bones, besides being beautiful to draw, are also a fearsome weapon that can kick out at lions and other predators and knock them out dead.

ABOUT THE GIRAFFE

Seeing the world from the highest point of view of any animal on earth, and weighing up to 2 tons (4,410lb), giraffes may appear a strangely put-together animal, but they are remarkably well-adapted to their life on the plains of Africa, since they are able to reach food sources beyond those of other animals.

The ossicones are two residual horns that form conical protuberances between the ears. When a giraffe is born these ossicones lie flat against their head and start out as cartilage, so as to avoid hurting the mother. As the giraffe matures, the cartilage ossifies into bone, hence 'ossicones'.

GIRAFFE STUDY SHEET



Ossicones Much larger in males than females, ossicones can be used to identify individuals. The female has tufts of hair on the top of the ossicones; whereas males tend to be bald on top from sparring matches.



Neck Despite its length, a giraffe has only seven vertebrae in its neck, the same as almost all other mammals (sloths and manatees are odd exceptions) – the bones are simply longer.

Arch The arch of the back is created by long vertebrae on the spine.

Underpaint the shadows before painting the markings.

Median lump This lump, which is more prominent in males, is created by calcium deposits and gets larger as the skull ages.

Tongue If you observe giraffes grazing, you will notice their giant, black, sunproof tongues.

Camouflage When illustrating animals with disruptive coloration such as giraffes, I find it best to underpaint the shading first. This helps to avoid blurring the markings when shading is applied at a later point.

Markings

There are four species of giraffe, divided into nine different groups. Each of these groups has variations in the shape of the spots and colour, which bind them intricately with the distinct character of the landscape they dwell in. Each of the individuals in a herd has a slight variation in pattern, as unique as a fingerprint.



Angolan



Kordofan



Masi



Nubian



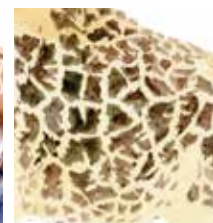
Reticulated



Rothschild



South African



Thornicroft



West African

Scientific name *Camelopardalis* translates as 'camel leopard'.

Lemurs

Named after the *lemures* of Roman mythology, meaning ‘ghosts’ or ‘spirits’, lemurs characteristically have a highly agile body and long limbs capable of athletic movement in the trees. Somewhere between 35–55 million years ago, a handful of lemur ancestors made their way to the island of Madagascar, perhaps on a log or floating vegetation. Those that arrived on the shore moved inland, their descendants diversifying as they adapted to their new habitats. These castaways have now evolved into more than 100 different species.

When an animal diversifies into many new species to fill different ecological niches in a new habitat, the process is known as ‘adaptive radiation’. The finches studied by Darwin on the Galápagos Islands are another example of a species diversifying through adaptive radiation.

Lemurs and lorises are also found in Africa, in the form of galagos (sometimes called bushbabies) and pottos and the lorises of Asia. All species outside Madagascar are nocturnal; meaning that **lemurs and lorises** do not compete directly with their simian rivals. As a result, they have distinctive large disc-shaped eyes.

ABOUT THE RING-TAILED LEMUR

Ring-tailed lemurs are fast-moving and a challenging species to sketch. It is best to begin by drawing them basking in the sun, or curled up asleep when they use their tail as a warm fluffy scarf (see right). Ring-tailed lemurs sunbathe, a behaviour not common amongst other lemur species. Sunbathing lemurs look almost like they are meditating.



Face Lemurs have a long muzzle and it is important to try and get a sense of the nose projecting forward.

Ring-tailed lemur in charcoal

After a day getting to know the characteristics and behaviours of the ring-tailed lemurs at your local zoo, try sketching up a full studio portrait from your reference. Not all of your study needs to be highly detailed: here I have focussed the attention on the face, but sketched the rest of the body in more loosely.



Dry brushing A painting technique using a paint brush that is relatively dry. Splay the bristles of the brush out between finger and thumb. The resulting brushstrokes have a characteristic hairlike appearance.

Lemur troops Ring-tailed lemurs live in intimate groups called troops, of between six and thirty individuals. On sleepy sunlit mornings, they almost appear joined together. Both sexes live in troops, but a dominant female presides over all.



Using markers Markers are a good fast medium for capturing the smoky greys of a ring-tailed lemur’s pelt. Ink and a brush can be used with calligraphic marks to capture the stripy tail.



Tonal gradation Charcoal is applied using the side of the stick and then brushed with lighter fluid to create a soft fur texture. By pressing harder, you can create a graduation in tone.

ABOUT THE BLACK-AND-WHITE RUFFED LEMUR

This enigmatic species inhabits the eastern rainforests of Madagascar, spending most of their time high up in the treetops of the canopy. The term for animals that have evolved to live in trees is ‘arboreal’. These lemurs have a complex social structure and can be heard before being seen with their unique, raucous chorus of calls.

Black-and-white ruffed lemurs are also known as the world’s largest pollinators, as they have the unique ability to open the flowers of the traveller’s palm tree. Lemurs enjoy the nectar within the flowers while the tree’s pollen gets transported to other trees on the lemurs’ faces. It is a mutually beneficial relationship.

These delightful creatures are striking in appearance, which makes them an attractive subject for illustration. Whilst sketching them from life you will notice a lot of activity, including dexterous leaping and suspensory behaviour, which involves hanging the body below the branches to feed.

The black-and-white ruffed lemur has three subspecies and unfortunately all of them are critically endangered. They have a small population that is spread out across Madagascar, with a consequence that reproduction is limited. Protection of their habitat is vital for the continued survival of this unique species.

Storm, black-and-white ruffed lemur ZSL London Zoo.



Eyes Add a thin circular highlight around the base of the eye to suggest the skin overlapping the pupil. Use white gouache to create highlights so that the eyes look alive.

Ears Tufted large sensitive ears listen for the slightest sound of predators. Keep the rendering of the edges soft. White gouache can be used with a dry brush technique.

Nose Scent is particularly important to lemurs and they pick up on scents left by other lemurs. The shape of the nostrils are very dog-like. To suggest the moist nose, leave or add little white dots.

Scent brushes Besides using their tails for balance, rival lemurs will rub scent on their tails and wave them in the air in a duel know as a ‘stink war.’

Noisy Black and white ruffed lemurs have an array of vocalizations. When alarmed, they can produce a deep, barking call to a wailing howl when defending their territory or being attacked.

Diurnal Black-and-white ruffed lemurs are active during daylight hours, spending most of their time foraging for fruit, which makes up nine-tenths of their overall diet; the rest being a combination of nectar, flowers, fungi, leaves and seeds.

Hands Lemur hands appear very like our own, with opposable thumbs. Males have scent glands on their wrist which they use to mark their territories and smear on their bodies and tails.