

THE POCKET PROFESSOR

A VERY SHORT INTRODUCTION TO THE ENDEMIC & EXTINCT LAND MAMMALS OF SRI LANKA

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""Everything is relative' said the cosmic onion." 'Well, you're no relative of mine', said Dougal, huffily."

> Dougal The Magic Roundabout 1965-1977

There is something unexpectedly gorgeous about science, seen from a Sri Lankan perspective. It is an pursuit every bit as irresistible as cool coconut Kiribath, or warm Cornish scones served with unmeasured scoops of fresh clotted cream. It is everything that it ought not to be.

No shrinking violet, science, after all, has never been one to hold back with its definitions. It delights in precision and truth, alluring virtues in our post Trumpian world.

Most of all, it exalts in lists, classifications, reclassifications, tables, empirical results, and designations that venerate exactitude, close observation, and experimental findings as matters beyond debate.

And yet, of course, the only certainty in science is uncertainty. And nowhere is this more true than in attempting to nail down the number of extinct and endemic mammals that call – or called – the island of Sri Lanka their home.

Counting them is like painting the famous Forth Bridge: just when you get to the end you have to start all over again.

The conundrum is a joyful commission, taking you deep into lost worlds; old discoveries - themselves long lost; new ones hatched in thrilling jungle encounters; intense arguments as pointless as chocolate fireguards; and animals that, once overlooked, are born again by new observation, lively as any evangelist convert.

Somewhere, with deft hands and glowing fervour, there is always to be found a scientist who has craftily and credibly reclassified the endemic civet into three distinct sub species; or added in a shrew recently discovered to have one toe longer than the rest, or a bat readmitted to the hallowed list after a much disputed and injurious eviction. Or, like Lucifer, abruptly expelled from their Edenic Eden for wickedly passing themselves off as what they are not.

You would be forgiven for thinking that the word "endemic," defined as "an animal native and restricted to a certain place," means exactly that. But of course it doesn't. Before you even get to clarifying its geographical location or distribution, you must first define what makes the animal the animal that it is. Or more precisely, what makes an animal belong to or vary from a particular species or sub species. And, in point of fact, just how sub should a species be, before it is a sub species?

There is no United Nations of Taxonomy, no Governing Body of Immortal Definers to turn to for a final appeal – a judgment both wise and conclusive; just untold numbers of magisterial scientists busy, post Linnaeus, defining what they see and arguing industriously with one another.

And in these struggle session are born the socalled definitive lists of endemic animals that best – works in progress, focused on a destination never to be reached.

Here in Sri Lanka, any number of endemic mammals from 19 to 30 is likely to be correct or wrong, depending on what the latest research papers have to say. And on how you chose to define what makes a species a species. There are well over twenty accepted scientific definitions for a species, each one different from the next, each duplication as keenly believed in as any other.

So it is hardly surprising that when it comes to defining a sub species against a species, the range of alternative definitions becomes a torrent. In truth, neither science not lexicography is of much use in pinning matters down. And in a lethal way, the debate simply misses the real point.

For what counts is not passing some magic threshold marked on an Aryan scale of Endemic purity, but the mere existence of the difference itself, however big or small: disparity, variance, diversity, a riotous band of partygoers never still for long enough to be counted.

Even as the Western Black Rhino or Spix's Macaw vanishes or the huge, woeful, and overfished Chinese paddlefish, goes extinct, every possible scrap of dissimilarity matters. And as species extinctions accelerates, Sri Lanka is facing a rising number of probable annihilations.

And so, in the light of this, the beasts included here are deliberately more a vox pop than a photograph. This list errs optimistically on the side of arithmetic generosity which explains why its lists twenty-eight creatures as endemic; or endemic about to be extinct; and another seventeen that are now extinct and were probably endemic too.

Forty-five endemic or extinct-endemic land mammal species is quite some tally for so small an nation. And for this, the country can give thanks to plate tectonics, climate change, storms, and sea levels. For Sri Lanka is, of course, an island – and islands, as Darwin discovered are laboratories of endemic evolution. More potent than any fortress, the three seas that surround Sri Lanka are a salty Cordon Sanitaire keeping separate a sixty-five thousand square kilometres land mass. But to the island's north the ocean story is very different.

Here lie the Palk Straits, and the Gulf of Mannar, with the shoals and islets of Adam's Bridge separating India from Sri Lanka like the vertebrae on an crocodile's back.

The bridge, a here-yesterday, gone-tomorrow geological formation of casual and confident utility, was prehistory's great gift to Sri Lanka, a land corridor that was later drowned in a fifty-kilometre stretch of water brought on by rising sea levels and storms that overwhelmed the land bridge.

At first everything that could, walked across; or was blown; or came in the small rivers that this narrow strip of land once supported. But once sunk, it meant that what remained or later splashed up on Sri Lanka's shores stayed there. It did not merely wash away like footprints in sand. It was left in place to go native.

And native it went. Sri Lanka and its mammals were left develop on their own terms, a prodigious stew in a slow cooker, brimming with rare ingredients, allowed, enabled, and encouraged to go AWOL.

There is no agreement amongst scientists on exactly how many species inhabit the island – the arguments over the correct number begin upwards of 10,000 – but when the country became an island, all were given that rarest of opportunities – to evolve, climate permitting, with little other outside influences.

From bats to mice, squirrels to shrews; elephants to monkeys; from tree nymphs to magpies, bears to frogs, vipers to geckos, worms slugs, crabs, molluscs, tarantulas; pines to palms, moss to lichen, primroses to grasses, Sri Lanka marked out, and remains to this day, one of the world's richest biospheres.

It has a degree of endemic-ness that is unparalleled across Asia. A staggering 16% of the fauna and 23% of its plants are home grown.

Collectively, its endemic mammals may lack the innate glamour of a white tiger, the brooding menace of a yak or the familial delight of a Highland Gorilla; but they exude instead a profound and pleasing subtly, their apparent modest position in the Food Chain being as powerful an argument as any to cherish what is unique.

And in this way they are like the very country they inhabit. There is little that is obvious, or even forcefully glamorous about Sri Lanka. It is no India or China, Japan, or the Maldives. Like its endemic mammals, it is incorrigibly subtle; to get what makes it unique takes both stillness and application.

Unique – and threatened, for many, if not all, of the country's endemic mammals are threatened by a rising tide of habitat loss, pollution, and climate change. And this is where these mammals' lack of obvious pizazz cuts against them. Who cares if a shrew vanishes, or a bat ceases to fly? Not enough people – yet.

Even so, for a country so gladly patriotic, these creatures, flashy or not, are ones to celebrate.

Be happy, for example, for the mice of Sri Lanka. Almost half of the country's mouse species are endemic. Three of its shy civets, rare and endangered as they are, come only from the island; and have just been joined by a fourth - said finally to have made the cut as unquestionably endemic. Of its many rat species, two can only be found within these shores. And only two of its seven squirrel species are endemic.

Endemicity, akin to be ennobled as a duke or marquis, is enjoyed by just one of just one of the thirty bat species that fly Sri Lanka's skies the Sri Lankan Woolly Bat. This honour is very recent, bestowed as recently as 2019.

Shrews – that most modest and retiring of tiny mammals – accounts for over a fifth of the country's endemic mammals. In the refined world of loris classification, it was long thought that only one of these dazzling, secretive beasts – the Sri Lankan Red Slender Loris - could claim to be endemic. But now four distinctly different sub species have been identified. So watch this space; actual living breathing loris numbers maybe shrinking but loris types are on the up.

Two of its three monkeys are incontestably endemic - the Purple-Faced Langur and the Toque Macaque – whilst a third, Hanuman's Langur - also known as the Tufted Frey Langur - is embroiled in raucous academic debate about whether the Sri Lankan sub species is so sufficiently different to the Indian one as to be called an endemic species in its own right.

Ever on the side of unilateral declarations of independence, this book will of course take its endeminioness as a given.

Deer nazis have marked out the lovely Ceylon Spotted Axis Deer as a creature barely worthy of being included in any lists of endemic island mammals as it is so similar to the Indian Spotted Axis Deer. But some scientists disagree; and the species has become a Weimer Republic of class discord. Whilst the differences might defy all but the most determined forensic pathologist, the beast will be included as endemic here in keeping with the inclusiveness of this review. No arguments however rage over the Sri Lankan Spotted Chevrotain and Yellow-Striped Chevrotain, both unambiguously endemic.

What is distressing about all this however, is that, looked at from the perspective of the distant past, these spectacular endemic mammals are now as fragile as elephant bird eggs – and almost as endangered, their long-term future as ephemeral as the ghosts of those seventeen animals that have already become extinct on the island.

For long-term now is an ever-shrinking measure.
Increasing numbers of scientists are putting
forward the prospect of the earth facing its sixth
greatest extinction, a party to which no-one
desires an invitation.

The first of these extinctions, the Late Devonian (383-359 million years ago) killed off about seventy five percent of all living species. One hundred million years later came the plant's worst extinction – the Permian-Triassic extinction, or Great Dying. This despatched

ninety six percent of all marine animals; and three out of every four land animals that had managed to recover from the previous extinction.

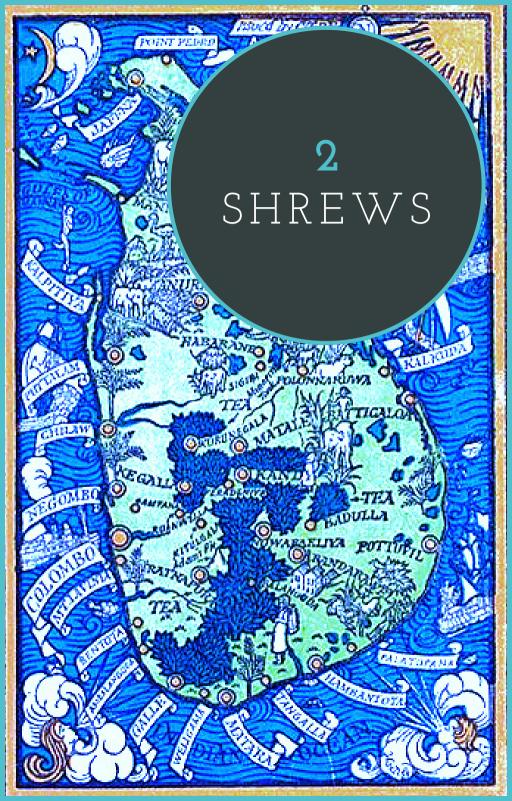
Then, after fifty-one million years of exhaustive recovery, the Triassic-Jurassic extinction swept down, exterminating eighty percent of all living species. The last, and most famous mass extinction, the Cretaceous-Paleogene extinction, sixty-six million years ago, was the one that claimed the life of the dinosaurs – and with them seventy six percent of all earth's species.

The next one, argue many, will be the first due to human activities. Already one million species of plants and animals are classified as being in danger of extinction, a process that has, of course, already started, not least in Sri Lanka, where records, including rare fossils, illustrate the ghostly presence of many mammals that once roamed the island.

Much of what little we know about these spectral beasts dates to the remarkable work carried out between 1930 and 1963 by P. E. P. Deraniyagala, Director of National Museums.

Uncommonly hands-on for so senior a civil servant, his life work was spent examining the alluvial strata better known for concealing gems around Rathnapura. Within its sandy layers he uncovered fossils, fragments, teeth, and bones daring right back to the Pleistocene, when Sri Lanka was still – just about – joined physically

physically to the Indian landmass and when the melting ice sheets caused the creation of these alluvial beds. Iconic as these extinct creatures were, they stand now like hosts at the door of an abominable party, waiting to welcome in more guests, unless we somehow change the tune.



"He's bigger than me!"

Dougal The Magic Roundabout 1965-1977 Infinitesimally tiny, and diminutively petite, shews, the Forrest Gump of Sri Lanka's endemic mammals, are the ideal species to open this book with. From the start they confound expectation. With almost four hundred known species worldwide, they are the fourth-most species-diverse mammal family about – and yet only ten of these have found their way to Sri Lanka. Sad enough as this was, worse was to follow.

Until quite recently it was thought that eight of these shrews were endemic – but that was before the Superintendent of Shrew Species Accreditation & Approval got to work. Two of the species, Kelaart's Long-Clawed Shrew (Feroculus Feroculus) and the Sri Lanka Highland Shrew (Suncus Montanus) were found living in totally identical form in India. Naturally, they were rapidly cast off the endemic list.

Even so, the remaining five shrews amount to a hefty number. With their rat like appearance, invisible nocturnal habit, and modest behaviour, they rarely hit any headline and are easily outshone by the more opulent endemic island mammals such as the Toque Macaque or Golden Palm Civet.

Being a shrew is a challenge. Despite good hearing and smell, they have small eyes and dreadful vision, but what really makes their little lives difficult is their unusually high metabolic rate. It means that they must eat ceaselessly,

pausing barely long enough to sleep, requiring as they do twice their body weight daily in the form of seeds, insects, nuts, worms, fruit, grass.

The Ceylon Jungle Shrew (Suncus Zeylanicus) is one of the island's most famous endemic shrews.

Barely twenty centimetres long, nose to nail, with grey fur it prefers subtropical or tropical forests, and night as its time to get busy. It is highly endangered. So too is the Sri Lankan White-Toothed or Long Tailed Shrew (Crocidura Miya). A mere twelve centimetres nose to tail, it is so deeply threatened by habitat loss and logging that it has recently only been recorded in five highly fragmented areas in the Central and Sabaragamuwa provinces.

Even smaller is the Ceylon Pigmy Shrew (Suncus Etruscus Fellowes-Gordoni). Although minuscule, it is a more handsome shrew than its relatives, with fur that is chocolate brown to dark grey. As benefits so small a beast, it has a commendably long Latin moniker, much of it deriving from being named for Marjory née Fellowes-Gordon, the wife of the amateur Dutch naturalist who first recorded it. Highly endangered, it has been recorded as living in the low mountain rainforests of the Sabaragamuwa and Central Provinces, with a possible third sighting in the Western Province.

By comparison, Pearson's Long-Clawed Shrew (Solisorex Pearson), at almost twenty centimetres nose to tail, is something of a

Goliath. His discovery dates to New Year's day in 1924 when Joseph Pearson, a young biologist who had come to Sri Lanka from Liverpool to assume the position of Director of the Colombo Museum, woke up and went hunting.

As the rest of Colombo's beau monde were nursing hangovers and trying to rid their heads of the tune of Auld Lang Syne, Pearson discovered what would come to be called Pearson's Long-Clawed Shrew. At the time, it would have been a much more common sight than it is today, commonly found in forests and grasslands – habitats that are now so embattled as to render the creature highly endangered.

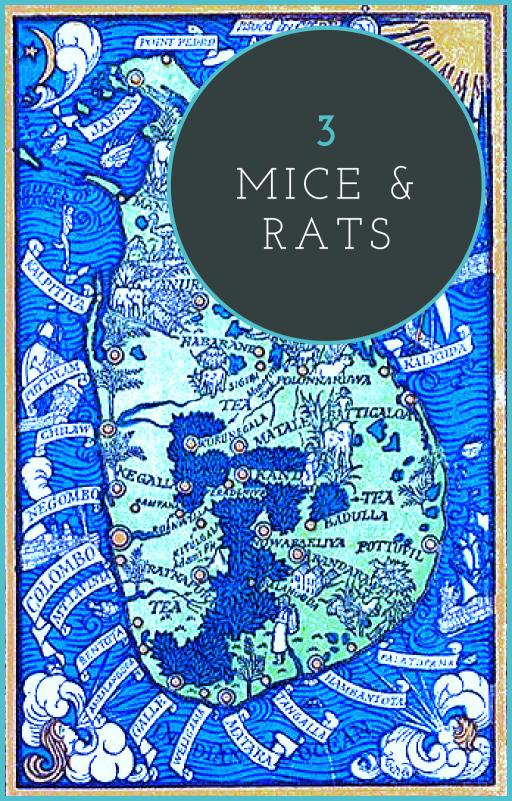
The tale of the island's fifth shrew, the Sinharaja White-Toothed Shrew, shows that even in the midst of mass ecological disaster, jubilation is also an option.

In 2007 the rarefied world of shrew scientists were taken aback when an entirely new endemic species of Sri Lankan shrew was agreed upon:
the Sinharaja White-Toothed Shrew.

The result of extensive research by five biologists and environmentalists, they proved that what had been masquerading in Sinharaja as the Ceylon Long-Tailed Shrew (Crocidura Miya) was a quite different species, and one that had, till then, not been properly recognised or identified

A closer study of its bone

structure, taken with the simple observation that it had a shorter tail, resulted in the formal recognition of this new endemic species. Sadly however, it is so restricted in distribution as to be almost entirely invisible – and has been found in only two areas of the edge of the Sinharaja Forest.



"I've come over all unnecessary."

> Ermintrude The Magic Roundabout 1965-1977

A little larger on the scale are the island's mice. Of the thirty-eight mice species found on the planet, four are endemic to Sri Lanka. The smallest is Mayor's Mouse which measures barely ten to fifteen centimetres. It has trifling, commonplace ears and reddish grey fur.

What marks it out however, albeit negatively, is it capacity to carry quite so many other creatures on its fur – including mites, ticks, sucking louses and small scorpions- more so than any other mouse.

Two endemic versions live on the island - Mus Mayori Mayori, which inhabit the hill country; and Mus Mayori Pococki which prefers the low wetlands. Telling them apart is almost impossible.

At around eighteen centimetres in length nose to tail the endemic Ceylon Spiny Mouse (Mus Fernandoni) is a bit bigger. It is a mouse to fall in love with. Its reddish grey back and sides morph into white underparts, with huge gorgeous smooth scooped out ears that stand like parasols over large dark eyes. It is now so endangered that it can be seen in a few locations, rarer than nightclubs on Neptune.

The giant of the endemic mouse pack is the Ceylon Highland Long Tailed Tree Mouse (Vendeleuria Oleracea Nolthenii). At around twenty-one centimetres nose to tail, it has reddish brown fur, that occasionally grows darker but

disappointingly small ears. Highly endangered, it is found in Sri Lanka's hill country where it lives in trees, venturing out only by night.

Rats, despite being occasionally kept as pets, are beyond the skills of the best influencers or publicists to reposition as adorable, or even mouse-lovely. All too often, wherever there are outbreaks of bubonic plague, or Lassa fever, rats are to be found, the world's most efficient disease super spreaders, lively inhabitants of every continent except Antarctica. Intelligent, invasive, fecund, noticeably social, willing to eat practically anything and highly adaptable it is surprising that of the fifty-six rat species worldwide at last a third of them are, like the San Quintin Kangaroo Rat, Emma's Giant Rat, or Nelson's Woodrat, crucially endangered. Sri Lanka sports fifteen of the world's available species - but only two are endemic.

Thirty centimetres in length, nose to tail, with steel grey fur and white undersides, the endemic Ohiya Rat (Srilankamys Ohiensis) is named after a small village of seven hundred souls near Badulla where it was first discovered back in 1929, the year of the Great Depression.

Despite being later recorded in Sinharaja and The Knuckles, sightings of it elsewhere on the island are wholly absent. Indeed, scientific observations and investigations into its life and biology are almost rare. Modest in looks and behaviour, it lives quietly in forests and has gradually become ever scarer in counts done by depressed biologists who now class it as Vulnerable.

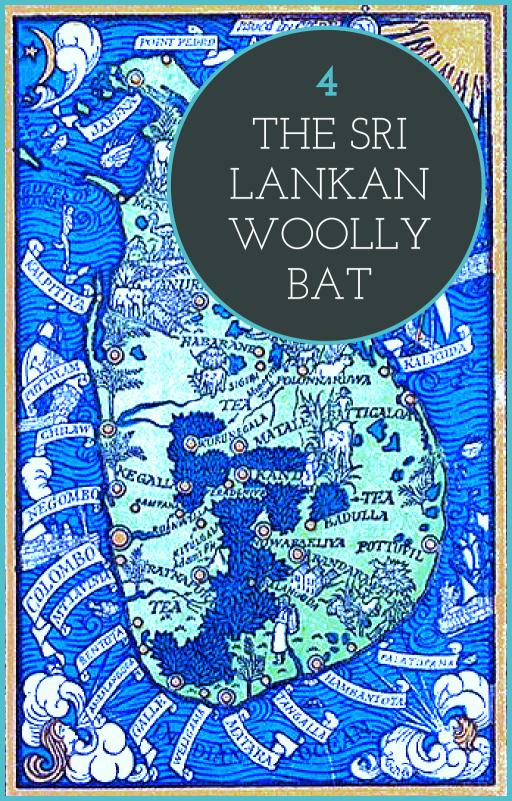
Like its endemic cousin, the Ohiya Rat, the Nillu Rat (Rattus Montanus) is also rare. Indeed it is much rarer – now so endangered that sightings of it are, like democracy in Afghanistan, so infrequent as to barely register.

A little larger, a little redder with marginally longer whiskers than the Ohiya Rat, it is even more poorly studied by scientists and biologists. What little is known about it is likely to be as much as will ever be known if it becomes extinct — which looks highly probable.

Little more than thirty-nine centimetres length nose to tail, itwas last recorded in a few highland locations such as the Knuckles, Horton Plains, Nuwara Eliya, and Ohiya. Its name, "Nillu," which means cease/settle/stay/stand/stop, is a sad harbinger of what awaits it.

A final rat, named Tatera Sinhaleya, is today known only from fossil records. It bade farewell to the island many thousands of years ago. From the scant remains it left behind it was a rat species distinguished from it modern counterparts by longer and broader teeth. Practically nothing else is known about it, the record it has left on the planet after what must have been a long and busy

innings as a species being proof if ever it was needed of the warnings given by the prophet in Ecclesiastes 1:14: "I have seen all the works which have been done under the sun, and behold, all is vanity, a futile grasping and chasing after the wind."



"I'm here, let joy be unconfined."

> Dougal The Magic Roundabout 1965-1977

Sri Lanka is bat country, its incredible range of environments supporting 30 of the world's 1400 bat species. They are the only mammals able to truly fly.

Using ultrasonic sound and the full capacity of their renowned hearing, they navigate the world, dining off insects, pollen, fruit small beasts and occasionally one another.

But observe them from a distance for they are enthusiastic harbingers of diseases, especially those best at leaping from animal to human.

Most live in large colonies and are given to hibernation, a habit that accounts for their exceptionally long lifespan – with one bat recorded to have lived 41 years.

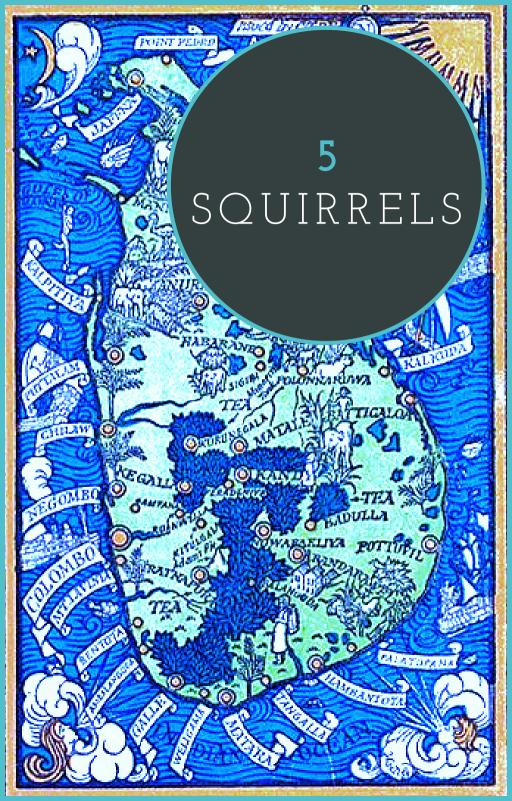
They have much in common with humans too, giving birth to live offspring who they feed with milk and take with them when they go in search of food.

The Sri Lankan Woolly Bat (Kerivoula Malpasi) is the country's only endemic bat. This tiny creature, barely fifty milometers from head to body, was first described by a tea planter, W.W.A. Phillips, in 1932.

It is said to enjoy sleeping in curled up banana fronds on hills between five hundred to a thousand metres, though its sightings are so rare that it has not been properly assessed for a on the IUCN list of endangered animals. It has, nevertheless, been through the wringers of taxonomy, and it was only in 2019 that the influential Journal of Bat Research and Conservation finally admitted that "Kerivoula malpasi is sometimes treated as a synonym of Kerivoula hardwickii.

However, an analysis of the K. hardwickii species complex argued on biogeographic backgrounds that both Kerivoula crypta (in southern India) and K. malpasi (in Sri Lanka) should be recognized as distinct species." Thus it was that the Sri Lankan Woolly Bat finally joined the nation's elite list of endemic mammals.

Unlike its doppelganger, the Woolly Bat has no hair on the tip of its ear. Its lobes are rounded not pointed. Its chin, throat and dorsal hair is dark brown, not bright orange. Its wing membrane is a transparent brown, not a transparent orange.



"Hello, handsome"

Ermintrude The Magic Roundabout 1965-1977 Squirrels sit at the cuter end of the rodent world; and although their scientific family rather eccentrically includes marmots, and prairie dogs, most people, in considering the beast, think of tree squirrels – all one hundred and twenty-two of them scampering anywhere in the world where there is vegetation. They live in nests constructed within the tree branches they spend nearly all their time within.

Elegant, slender beasts, muscular and furry, they have four digits and a thumb on each forefoot and ankle joints that rotate so beautifully as to allow them to race safety down trees, headfirst. Their tails are usually as long as their bodies and their claws sharp little simitars. Power jaws and razor teeth are perfectly aligned to unlock nuts and seeds.

Of the seven squirrel species that live in Sri Lanka, two are endemic.

Layard's Palm Squirrel (Funambulus Layardi) is named for Edgar Layard, one of those legendary Victorian all-rounders, who took on a diplomatic career, the better to document the natural world, a passion he put down to lacking any siblings when growing up.

He spent ten years on the island, leaving behind a variety of animals named after him, including a parrot and this, the popular and endemic island squirrel, sometimes known as the Flame Striped Jungle Squirrel for the beautiful markings that run along its back. It

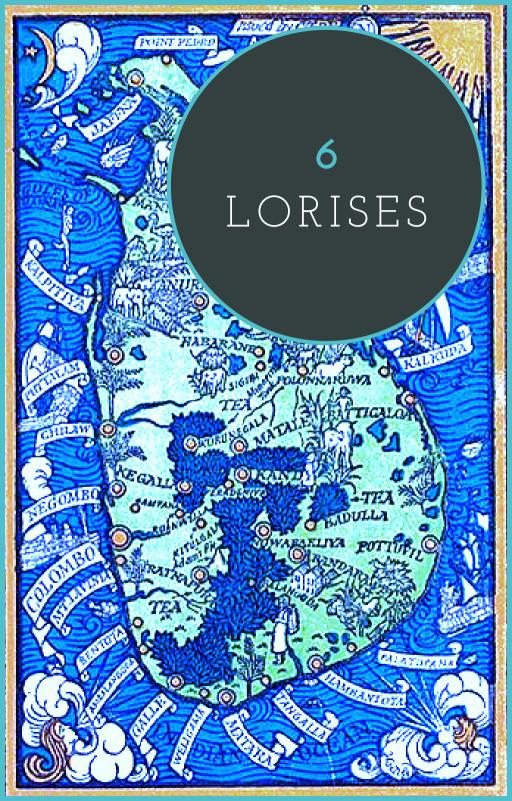
is about thirty centimetres nose to tail, with black fur that fades to reddish brown on its stomach. It can be seen all around the central highlands. By day it forages for fruit and nuts; by night it chatter from tree to tree, living, like swans, in pairs that bond for life.

With its natural forest habitat eroded steadily, it is categorised by the Red List as Vulnerable

The Dusky-Striped Squirrel (Funambulus Sublineatus Obscurus) is the smallest of Sri Lanka's endemic squirrels. It was first documented in 1935 by the tea planter by W.W.A. Phillips in his celebrated book, The Manual of the Mammals of Ceylon - and has since gone through a taxological assault course in terms of classification and reclassification before being stamped and approved as a distinct sub species in its own right.

It takes it comforts cold and lives most happily in such high elevations as Horton Palins and Nuwara Eliya where frosts occur. It is also something of a lyrical chatter box, with a strange bird like sound that modulates depending on its message.

It is classified as Vulnerable by the Red List.



"Our very talented and beautiful friend"

Mr Rusty The Magic Roundabout 1965-1977 Beauty at its most subtle and mesmerising, the loris encapsulates Sri Lanka like no other mammal. And it is fast becoming the Heinz 57 of the island's endemic mammalian world. Once, when life was straightforward and all ketchups were Heinz, there was but a single endemic loris, the Red Slender Loris (Loris Tardigradus).

But just as Heinz has evolved into baked beans and mayonnaise, salad cream, baby food and sauces, so too has that part of the loris population that is formally recognised as endemic. Restricted to the wet zones and mountainous areas of the country, closer scientific inspection of the Red Slender Loris revealed such a wealth of diversity as to increase the endemic count to four. For the once blameless Red Slender Loris – the Loris Tardigradus as was – was discovered in fact to be made up of two quite separate sup species; and two further sub-sub species.

The first of these is now called the Western Red Slender Loris - Loris Tardigradus Tardigradus; and is to be found hiding in the jungles of the lowland wet zone. The second, now known as the Horton Plains Slender Loris - Loris Tardigradus Nycticeboides – keeps itself to the mountains of south-central Sri Lanka.

So far, so good. But in a further evolutionary twist as baroque as the best, the Western Red Slender (Loris Tardigradus Tardigradus) was itself found to have produced two further and quite separate sub species. One was named in 1993 as the Northern Ceylon Slender Loris - Loris Lydekkerianus Nordicus Hill - and was found to restrict itself to the country's dry zone forests. The second was named the Highland Slender Loris - Loris Lydekkerianus Grandis. For this beast, the lower mountains, and higher hills of Kandy and Matale were its home

Painstaking work by very dedicated scientists on body dimensions and proportions, variables in the shape of the skull and fur; different patterns of vocalizations - all has helped validate the subtle but still evident differences between these different lorises.

To the casual observer – and in conditions rarely suited to acute observation – at night, with the naked eye – they are all but impossible to tell part. And yet nature has created from a single animal four quite separate ones.

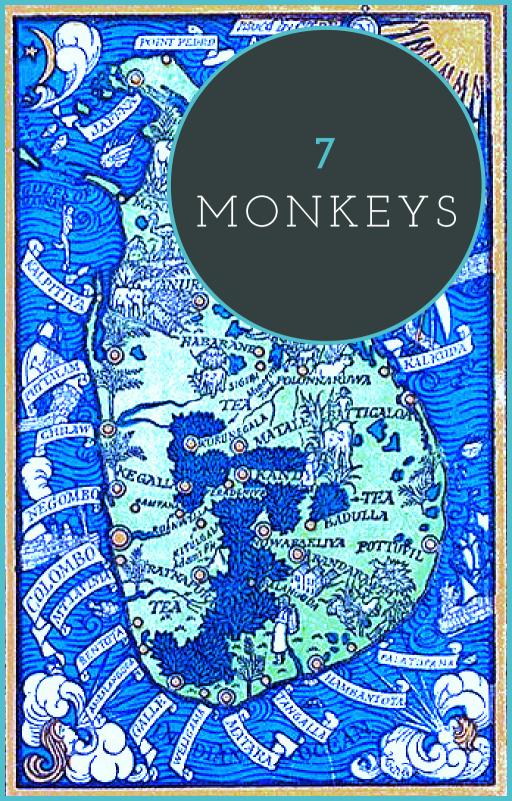
By day they sleep in leaf covered tree holes, a habit that must help account for their relatively long-life span (fifteen to eighteen years). They coat their offspring in allergenic saliva, a toxin that repels most predators. Their bodies weigh little more than a hundred and seventy grams, and their lean legs and hands have evolved to ease their passage through treetops to gather fruits, berries, leaves.

In island folklore the loris

has a cry that can call devils to a house, so it is often regarded with a certain amount of dread.

To wake up and find one staring at you is considered to be one of the worst possible omens; should it then reach out and touch you, your body will respond by becoming skin and bones.

The country's only other loris species – the grey slender loris – must look on all this with deep envy. This loris, lovely though it is, is also found in India and so fails to meet the criteria of what is endemic.



"Try "Sir"," said Dougal.

Dougal The Magic Roundabout 1965-1977 Of all the mammals, monkeys, so close to us by evolution, need no introduction, though this rare moment of animal certitude is undermined by the fact that there are said to be three hundred and thirty-four monkey species on the planet. That is way more than you could ever hope to meet or get to know at a drinks party. But with so many to choose from it is also surprising that only three of them call Sri Lanka their home.

Of the three only two were ever considered endemic - the Purple Faced Langur and the Toque Macaque. That however was in the bad old days before academic squabbles about the third species - Hanuman's Langur – reached such a pitch as to leave the species tottering on the very edge of an Endemic UDI (Unilateral Declaration of Independence).

But if that was not sufficient to force a pause or species reset, other academic debates surrounding the Purple Faced Langur were to cause yet more species proliferation.

The Purple Faced Langur is one of eight lemur species that live in quarrelling groups from the Himalayas to Sri Lanka. It was first thought to have just one distinct endemic species in Sri Lanka - Trachypithecus Vetulus.

Like the other Langur species, the Sri Lankan version measures up to one hundred-and twenty-centimetres nose to tail, or a little less for females. Its fur blends from

black to grey, their faces a purple shade of black with white sideboards of the sort once favoured by Victorian entrepreneurs. Dedicated scientist have however since judged that the species is not one but five sub species, all so sufficiently different as to be worthy of separate recognition.

The Southern Lowland Wet Zone Purple-Faced Langur - Semnopithecus Vetulus Vetulus – displays great colour variation from all-white to ones with black upper torsos, brown scalps, silver rumps and legs, white tails, and white whiskers so huge and striking as to leave Hercule Poirot weeping.

The Western Purple-Faced Langur, sometime known as the North Lowland Wet Zone Purple-Faced Langur (as if one confusing name were not sufficient) or Semnopithecus Vetulus Nestor is by far the smallest of the island's endemic purple faced langurs.

It is also, by a long shot, the most endangered with sighting of it ever more infrequent. Greybrown hair covers most of its torso, and rump, which becomes darker grey and brown on its legs.

The Dryzone Purple-Faced Langur Semnopithecus Vetulus Philbricki – is the largest
of the purple faced langurs in Sri Lanka. Whilst
its torso is typically grey-brown, its cheeks are
white with prominent tufts, and its tail long and
oddly slimy.

The Montane Purple-Faced Langur or Bear Monkey - Semnopithecus Vetulus Monticola – is something of a butch style star, its cheeks white and tufty, the rest of its fur a contrasting dark grey-brown; and nicely shaggy to give it better insulation in its mountain hang outs.

The fifth sub species has yet to be given a common name but is known in Latin as Semnopithecus Vetulus Harti. This animal is so rare that it almost no reliable accounts of it being seen live exist. It has been identified instead by golden yellow skins found on the Jaffna peninsula and north of the Vavuniya, a little visited border town that divides the Tamil and Sinhalese population.

And just as the counting came to an end with the Purple Faced Langur, it began all over again with a related species, the Hanuman, or Tufted Gray Langur.

The Hanuman langur is one of three
Semnopithecus Priam variants, the other two
being found in India. The Sri Lankan variant –
Semnopithecus Priam Thersites – is named,
rather eccentrically, for an anti-hero in Homer's
Iliad, a character later pigeon-holed by Plato as
a man best fit for the afterlife.

It is a doubtful honour to bestow on this, one of Sri Lanka's more recent endemic aristocrats.

Some scientists have taken exception to its endemic inclusion – but others have stated with equal

vehemence that the species is sufficiently distinct as to be now recognised as separate. The direction of travel for this langur is plain to see. Like so many other mammals that came from India tens of thousands of years ago, it has morphed subtly but surely into something ever so different to the mainstream. It is easily the most

arresting monkey on the island, its appearance little short of sensational.

Up to sixty inches long head to tail, with a weight that can hit fifteen kilos, Thersites has a black face framed in a wispy white beard that runs from forehead to chin. It is light grey in colour, and lives as readily in dry zone forests as urban areas – showing a strong preference for antique cultural sites if their dwellings in such places as Polonnaruwa, Dambulla, Anuradhapura, and Sigiriya are anything to go by.

Once settled, they tend to stay put, having little of the gypsy tendency within them. Eagerly vegetarian, they live in troops of up to 50 members, the larger ones being curiously non-sexist with leadership shared between a male female pair.

Similarly intimate studies and heart felt academic discussion have surrounded the island's third money – the Toque Macaque. At first, all agreed there was but one – the Toque Macaque. Occurring nowhere outside of Sri Laka, it was a simple enough task to place it amongst the recognised endemic mammals of the island. But then more observations were conducted. Bones were measured, colouration studied - and it soon emerged that the Toque Macaque had evolved so specifically in different parts of Sri Lanka as to merit the recognition of at three sub species.

The Pale-Fronted or Dusky Toque Macaques (Macaca Sinica Aurifrons) stick to the wet zones in the southwest. The Common Toque Macaques (Macaca Sinica Sinica) favours the dry zone areas of the north and east.

The Highland Toque Macaque (Macaca Sinica Opisthomelas) favours the hilly centre of the island. Telling them apart however is a pastime best left to scientists with lots of patience and sturdy magnifying glasses.

All three bear a striking resemble to President Trump – through they are smaller in size than the former star of The Apprentice, weighing up to twelve pounds with a head to tail length of almost a metre.

Whilst they have been known to live for thirty-five years, most die within five, victims to infant mortality or fights within troops for dominance. They sport white undersides, golden brown fur on their backs and a car crash of an almost orange coiffure, as if they have got stuck in a cheap tanning salon. Pink faces peer out below recherché hairstyles, giving substance to their name - "toque," the brimless cap that

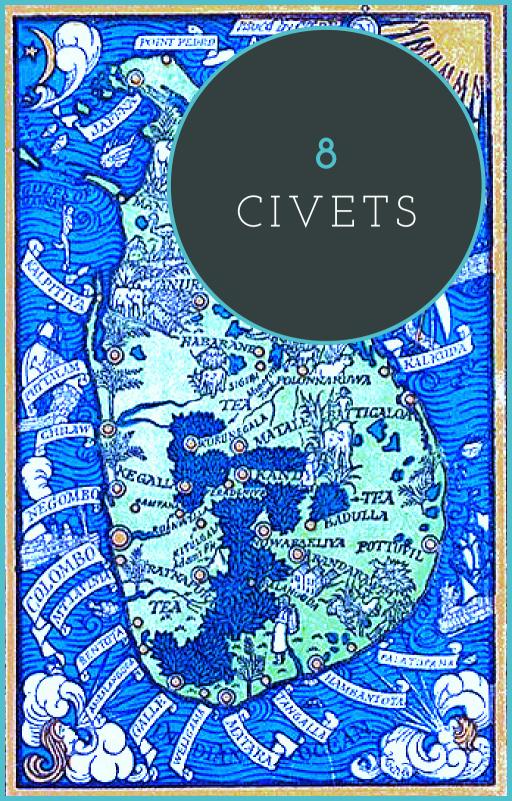
is their bob. They are accomplished scavengers, their vegetarian fancies best saited on fruit. Their capacious cheek pouches are specially adapted to allow them to store food for consuming later, a technical refinement that helps them steal, store, and run with their pilfered bounty.

As dexterous leaping through trees as capering across the ground, or even swimming, they move in self-protective groups and sleep huddled together, every night in a different place like chastened celebrities or terrorists. They are easy to spot for they are active during daylight hours, appearing in groups of 20 members led by an alpha male, with half the group comprised of infants or juveniles. Young adult males wisely leave the group on attaining maturity, for fear or otherwise being chased out.

But they also have a reputation for being very matey with other species – the family dog, for example. And they talk to one another.

Naturalists have recorded over thirty different sounds, each conveying a very specific meaning.

And sadly all three species are on the Endangered Red List.



"You're so difficult sometimes,"

Florence The Magic Roundabout 1965-1977 When life was simple, long ago, and beige, like black or white, came in just one colour choice, it was thought that the island was home to just one endemic civet. But scientists, zookeepers, and wildlife photographs like Dhammika Malsinghe, Doctors Dittus and Weerakoon, and Channa Rajapaksha have in the past 15 years worked hard to evaluate this assumption. By careful observation, the checking of paw prints, the measurement of bodies and assessment of markings, they have instead concluded that the country actually plays host to 4 endemic civets.

But although each civet is zone specific and different enough to be so classified, it would take much effort on behalf of armchair naturalists to ever tell them apart.

All four are golden beasts and from nose to bottom measure forty to seventy centimetres – like large cats. They weigh from three to ten pounds, and are mild, secretive, forest loving creatures, living their life on trees and in high hollows, solitary and nocturnal, munching their way through fruits and small animals.

The Golden Wet-Zone Golden Palm Civet
(Paradoxurus Aureus) has a golden red-brown
hue to its coast and is found in wet zone forests.
The Montane Golden Palm Civet (Paradoxurus
Montanus) is, by contract, browner in hue with a
tail that is at least a third white.

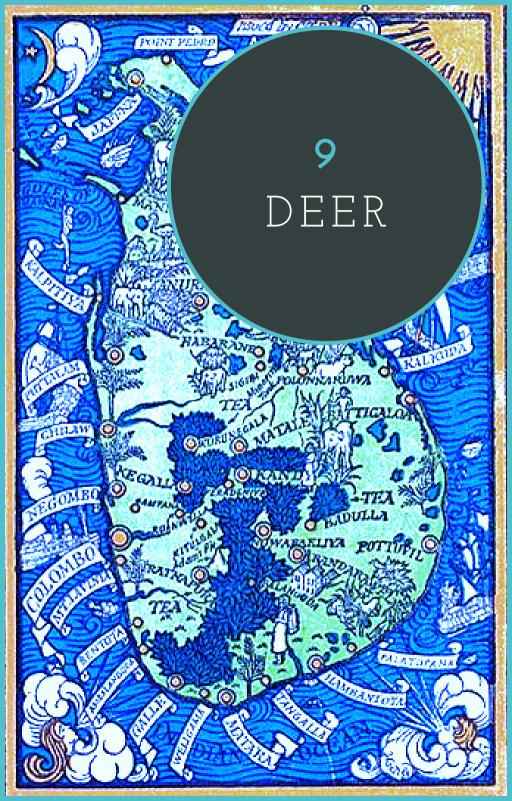
The deep forest of high and rolling

hills are its preferred habitat. The Golden Dry-Zone Palm Civet (Paradoxurus Stenocephalus) has dark brown stipes running down from its neck and keeps to dry zone forest,. A fourth civet, the Sri Lankan Mountain Palm Civet (Paradoxurus Supp) is now on the verge of being added to the endemic list.

Found only in Dickoya, a tiny settlement near Hatton and the water airport on Castlereagh Reservoir, it does its few supporters no favours by being all but invisible.

Such reserved behaviour is typical but not set in stone. Occasionally they can be a more sociable. For four long months one lived very comfortably in the space between my bedroom ceiling and the roof, a home from home where it raised its many excitable and noisy offspring.

Most curiously – and unexpectedly – their farts are widely known on the island to be so pleasant as to smell of the flower of the joy perfume tree – the Magnolia champaca, a scent immortalized in Jean Patou's famous perfume, 'Joy'. The perfume outsold all others, excepting Chanel No. 5.



"... Flowereating monster."

Dougal The Magic Roundabout 1965-1977 Placid seem the waters of the world of deer in Sri Lanka, where, apparently, four species live the Sambar, Axis, Hog, and Barking Deer. But as ever with autecology on this island, within moments you are deep into full blown zoological wrangles.

The Ceylon Spotted Axis Deer (Axis Axis Ceylonensis) is a perfect case in point. Standing up to a hundred centimetres high, their delicately white spotted fawn coats present them as everything a perfect deer ought to be.

But the paucity of detailed studies stymied the debate about whether the species is so sufficiently separate to their Indian cousin the chital (Axis Axis) as to be endemic. This book will, of course, err on the side of individuality and treat them as a proper sub species.

In one rare and celebrated academic study, the Department of Zoology, at Sri Lanka's Eastern University, concluded, reassuringly, that "their main activities were feeding and play."

Scientists are much divided on the subject of animal play, and tortured monographs have been written. attempting to pin down the very concept.

To some it is merely an evolutionary by product; others claim it ensures animals teach one another about fairness and consequences. That the Sri Lankan Axis Deer should be minded to

play at all is encouraging for it an increasing vulnerable species, its preferred habitats - lowland forests, and shrub lands – shrinking, and with it the grasses, leaves, and fruit it lives on. Their numbers are now counted in just several thousands.

They live in herds of up to one hundred, and are seen by leopards, bears, crocodile, jackals, and hungry villagers, as living supermarkets of fresh meat.

But if the Axix Axis arguments are still current, those around the Chevrotain were finally settled in 2005 when decisions were reached confirming the separate existence of three distinct species, one in India and two in Sri Lanka.

The endemic Yellow-Striped Chevrotain (Moschiola Kathygre) is the smallest of the three species – a tiny fellow, barely half a metre long head to body but little is known about it. It is easily recognised for its distinctive yellowish coloration, yellow stripes and light-yellow spots but being nocturnal is rarely seen.

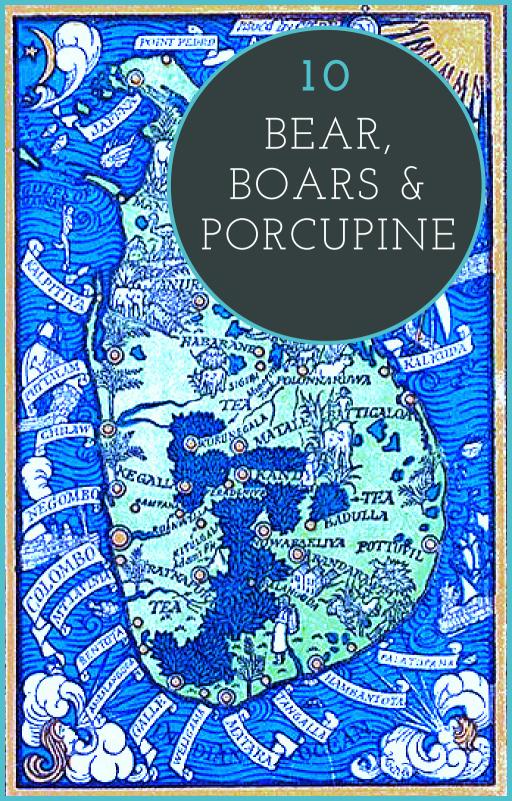
Some have reported Olympic feats of swimming, including underwater. Its endemic cousin the Sri Lankan Spotted Chevrotain or Mouse Deer, (Tragulus Meminna) is not much bigger – barely a foot high and up to sixty centimetres long. It lives scattered in the dry zone forests, leaving those of the wet zone to the Yellow-Striped Chevrotain. If popular superstition is to be

believed, it is something of a monster. The saying goes that a man who gets scratched by the hind foot of a mouse deer will develop leprosy. This has yet to be fully verified by scientists.

To these three must be added at least two types of prehistoric and extinct deer, their endemic status as puzzling a question as why doctors are always late for appointments.

One was a small deer called Muntiacus Muntjak, identified from a single antler base found at the Ratnapura Museum.

The second was called Muva Sinhaleya, this one more reliably identified from fossil records from three separate locations.



"I'm not made of stone, you know, I'm sensitive."

> Dougal The Magic Roundabout 1965-1977

"The bear puffed out its chest. "I'm a very rare sort of bear," he replied importantly. "There aren't many of us left where I come from.""Given just how rare Paddington Bear was, he could easily have come from Sri Lanka rather than Peru, for bears are so rare here that, of those accounted for, one is but a rumour and the other, the Sloth Bear, has gone so native as to be an endemic sub species in all but name.

The Indian Sloth Bear, widespread in the forested low hills of India, is known here as the Sri Lankan Sloth Bear - Melursus Ursinus Inornatus.

It is distinctly different, smaller overall, its skull and body – even its fur is shorter. All the same, it is no midget, typically measuring six feet in length and weighing in at up to three hundred pounds for a male or two hundred pounds for a female.

Once found in plentiful numbers across the dry zone forests of the island, they are now in serious and significant retreat, with an estimated five hundred to a thousand bears in the wild today.

The destruction of their habitats has been instrumental in their decline, but the fear they engender amongst village populations has also played it part.

They are often hunted and killed, with a

reputation for damaging property and killing or maiming domestic animals humans running like a wave of terror before them.

The "sloth" part of their name is rather misleading for the bears are quite capable of reaching speeds of thirty miles an hour – faster than the fastest human yet recorded. Although willing to eat almost anything, their preferred diet are termites for which their highly mobile snouts are especially well designed. With nostrils closed, the snouts become vacuums, sucking out the termites from their nest. Long curved claws enable them to dig the nest ever deeper till the last juicy termite has been consumed. The claws are also handy for rapidly scaling up trees to suck out honey from bee

Evolution has cast the sloth bear towards the Grumpy Old Man side of the mammalian spectrum. Its poor sight and hearing leaves it dependent on its sense of smell, so it can all too often be surprised by what seems like the abrupt appearance of something threating – like a human – which it will attack with warrior like ferocity before asking any questions.

It is very solitary, living alone in the forest except for those rare moments when it seeks a mate. Reproduction is not its strongest skill, and most females produce a single cub that stays with them for two to three years, the first months of which are endearing

spent living or travelling on its mothers back.
D.J.G Hennessy, a policeman who had a couple of bears on his land in Horowapotana in 1939, noted the emotive articulateness of their paw suckling:

"The significance of the notes on which the bear sucks his paw is interesting; a high whine and rapid sucking denotes impatience and anger, a deep note like the humming of a hive full of bees on a summer's day indicates that he is contented and pleased with life, a barely audible note shows great happiness while a silent suck in which he usually indulges in just before going to sleep on a full stomach denotes the acme of bliss".

The island's other bear, the Red Bear or 'Rahu Walaha' is a species of hearsay, folklore, and ambiguity, its nebulous trail left only in the scribblings of early adventurers to the island; and a pelt and skull discovered in Trincomalee in the nineteenth century that has since vanished

Not a bone, not a scrap of fur, no photo, illustration, still less a selfie on Instagram remains to tell that it did once really exist.

Many argue that it never was.

But faith, like beauty, is given to the select few and this book selects to acknowledge it as a species, possibly endemic, and most certainly real – at least once upon a time. Hugh Neville a British civil servant based on the island, recorded its existence in 1855 writing of a brown or reddish bear found in the southeast of the island. He noted that it was especially savage and only half the size of the sloth bear.

Some years later in 1887, Henry Parker, another British agent, told a similar story, recounting how an especially savage red bear lived into the north central province.

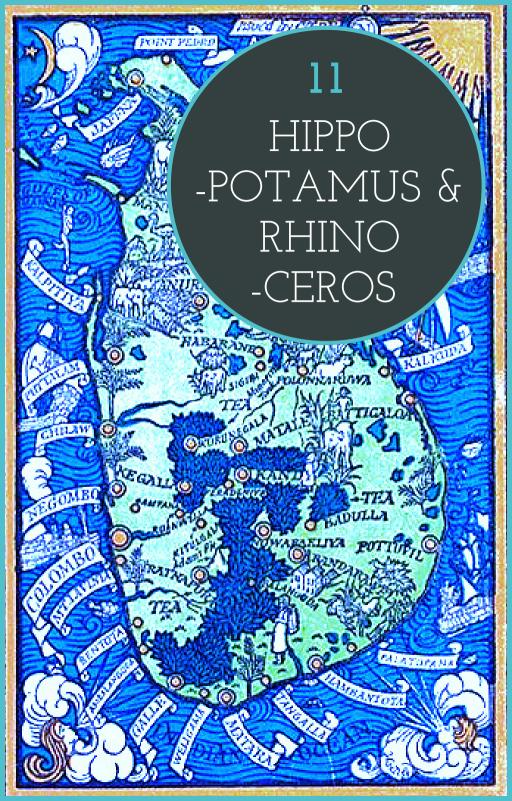
Even as late as 1957 this account was validated by the observation of Philip Crow, the American Ambassador who went to that area and heard from locals how it was the hunting ground of the red bear.

Happily widespread, and at home in most habitats, the Indian Crested Porcupine (Hystrix Indica) is found right across Sri Lanka and India.

Common as muck, it is not even whispered to be a future Endemic mammal. But fossilised records from thousands of years ago show that the present porcupine once had an ancestor similar though smaller to its form today, the Hystrix Sivalensis Sinhaleyus; and this may well have been endemic.

A similar tale can be told of the Indian Boar or Pig (Sus Scrofa Cristatus). This impressive animal is widespread across Sri Lanka and the Indian sub-continent. It is most magnificently differentiated from its European cousin by a crested mane that runs from head to back, sharp features, and a gratifyingly athletic build. It is highly social too, travelling in night bands, and much given to wrestling one another.

However, fossil records – in reality little more than a few broken teeth - from thousands of years ago show they were preceded by an endemic species that was a third smaller than the one that lives today - Sus Sinhaleyus.



"I wonder if this ever happened to Eisenstein."

Dougal The Magic Roundabout 1965-1977 Despite their extinction being lost in the extreme obscurity of deep antiquity, the tale of the island's hippo and rhino populations is as cautionary a tale as any Hilaire Belloc might have written. Like Henry King, there was no cure for the fate that awaited them: "Physicians of the Utmost Fame, /Were called at once; but when they came, / They answered, as they took their Fees, / "There is no Cure for this Disease."

Both animals were probably killed off by climate change, albeit a naturally induced one rather than the human sponsored version in progress today.

That we even know about their existence on the island is a wonder in itself, with a handful of chipped and broken fossilized remains being uncovered decades ago by Dr. P.E.P.

Deraniyagala and then laboriously studied to reveal a land like no other.

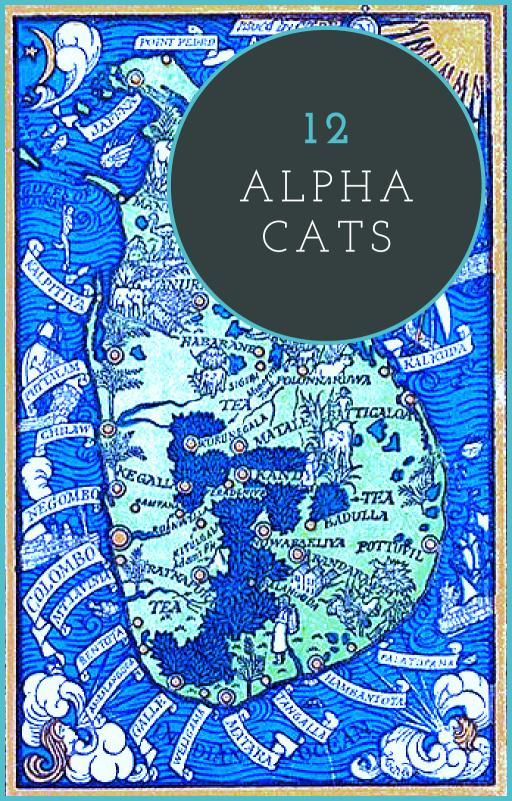
In the case of the hippopotamus, the Sri Lankan fossils discovered date back to almost a million years ago. They amount to no more than a bit of a jawbone. It indicated that its owner had several more teeth than the modern hippopotamuses living in Africa today. Dubbed Hexaprotodon Sinhaleyus, it presented to the world the existence of a new, distinct, and possibly endemic sub species. Once a lively and plentiful presence on Sri Lanka's rivers, as the climate changed and rainfall lessened, their habitat shrank until

eventually Sri Lanka offered them a home no more.

Unearthing the Sri Lankan Rhinoceros was down to jewels. Gem minters digging deep shafts in Kuruwita's forests, above Ratnapura, discovered instead some fossilised teeth. From these tiny fragments two entirely new rhinoceros species were identified – both extinct' and both probably endemic: Rhinoceros Sinhaleyus and Rhinoceros Kagavena.

Both animals had a single horn, but the former possessed teeth that were squarer and positioned lower in the jaw,. Teenagers by comparison to the hippopotamus, the fossils date just eighty thousand years.

The beasts are thought to have died when climate change brought about such increased rainfall that the island's grasslands because instead forests, depriving them of their basic food. Other experts, at the drama queen end of science, have argued that it was a sudden meteoric shower that sealed their fate.



"Come in, number three, your time is up."

> Brian The Magic Roundabout 1965-1977

All but one of the island's alpha casts have become extinct. The first to fade away was the famous Sri Lankan Lion, in 37,000 BCE – about the same time as the famous Stone Age Balangoda Man walked his last steps. Panthera Leo Sinhaleyus, as the sub species is known, only came to light in 1936 when P.E.P. Deraniyagala, uncovered two fossilized teeth near Ratnapura.

With the passion of a forensic detection, the archaeologist studied his modest clutch of teeth.

One was so damaged as to be of little use in identifying the animal, but the other, a left molar, presented so distinctive a structure as to not just twin it with lions, but set it apart from all known species too. From this single tooth, a lost sub species was uncovered, its size indicating that the beast was a lion much larger than the present Indian lion.

Back in 37,000 BCE, Sri Lanka was a very different place to what it would became, an island of open grasslands – a habitat perfect for lions. But over time, as the increased rainforest fuelled the proliferation of trees, its habitat become ever more restricted and at some point the creature just died out.

The National Flag aside, the lion lives on still in many a temple and ancient fortress, in statues and the names of practically anything from tuk tuks to graphic designers.

Fossilized remains for the Sri Lankan Tiger (Panthera Tigris) are more recent – dating back just sixteen and a half thousand years. Nine fossils or bits of fossil were unearthed, five dating clearly to a period fourteen thousand to twenty thousand year ago. They include a left lower tooth found near Ratnapura in 1962 and a sub-fossil of a paw bone found near Kuruwita.

Tigers arrived in India some twelve thousand years ago and spread from there to Bangladesh, Nepal, and Bhutan.

But it seems that the Sri Lankan Tiger came from an altogether different species one was native to central Asia, China, Japan, Siberia, Sumatra, and Java. Little else is known of this now long departed mammal whose spectral remains sadly disproves the old German proverb "There is no off switch on a tiger."

More recent still is the extinction of the Ceylon Asiatic Cheetah (Acionyx Jubatus Venaticus).

A distinctly different version of the African Cheetah, the Asiatic Cheetah once roamed the world from Arabia and the Caspian to South Asia - and Sri Lanka, until around ten thousand years ago.

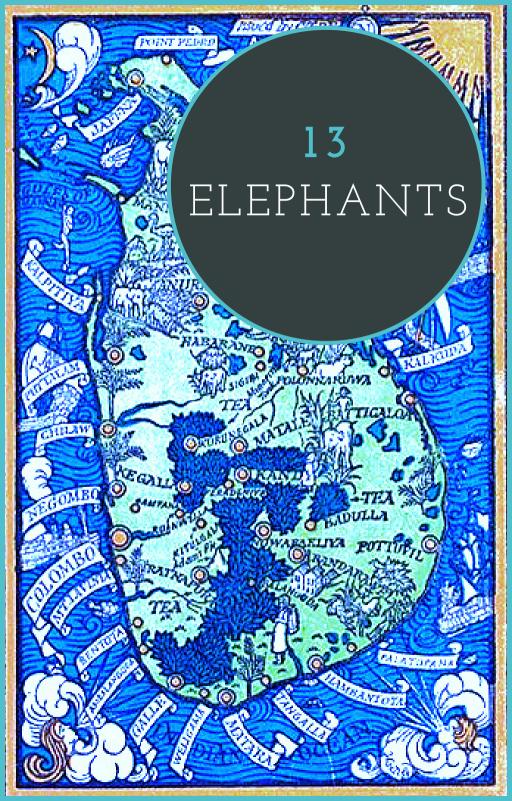
Today barely a dozen are left in the wild, living in the desert area of eastern-central Iran, and all but the most myopically optimistic enthusiasts, anticipate that it will soon cease to live in the wild at all.

Of the island's great cats, only the Sri Lankan Leopard (Panthera Pardus Kotiya) survives in the wild today. It was first described as endemic in 1956. As the apex predator, untroubled by competition from other large wild cat species, it has grown into its space and is notably larger than its Indian cousin.

Males can reach almost 220 pounds. Its coat is tawny or rusty yellow with dark spots and rosettes, which are smaller than those on Indian leopards. Listed as Endangered on the IUCN Red List, the island's wild population has plummeted to just 700–950.

Its protection and nurturing, a top priority for the wildlife department, remains as allusive as a love-in with Kim Jong Un.

An errant gene in the leopard population provides for a leopard still rarer - the Black Leopard, of whom there have been only a few firm sightings. One in every three hundred leopards born has the propensity to be black.



"Keep your
voice from
weeping and
your eyes from
tears,"

Dougal The Magic Roundabout 1965-1977 There is much more variety to elephants than most people first believe when they first encounter the African verses Asian Elephant debate. Three distinctly different Asian elephants still exist today, and one of them, the Sri Lankan Elephant (Elephas Maximus Maximus) is only found in Sri Lanka. Once widespread, they are now more limited to the dry parts of the north, east and southeast – especially in such parks as Yala, Wilpattu and Minneriya.

Sri Lanka has the highest density of elephants in Asia - but as roads, villages, farms, plantations, and towns grow, they come into ever closer contact with humans – always to their extreme disadvantage.

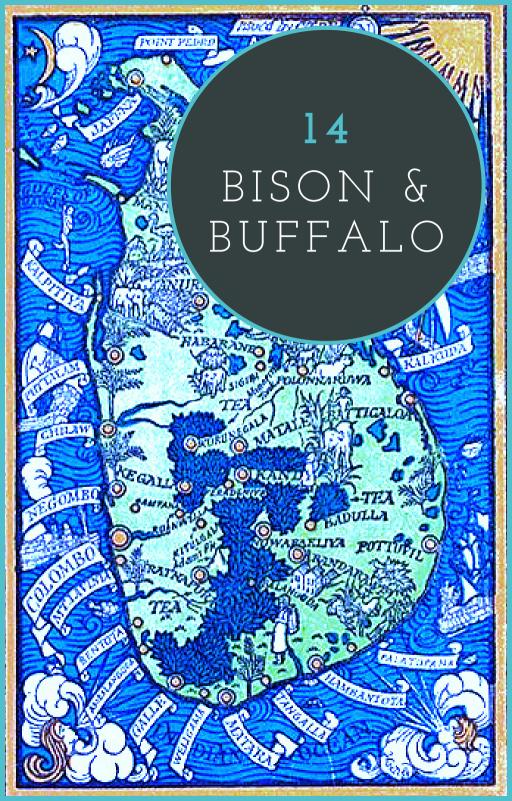
Unsurprisingly, numbers of Sri Lankan elephants are nose diving. In 2023, four hundred and seventy elephants were killed. The WWF put their total at between two and a half to four thousand, and although killing one carries the death penalty, the threat they face is existential. The enforcement of laws protecting elephants is frontier territory, and the creatures are commodities, to be petted, prodded, tamed, photographed, and then forgotten.

A noted sub species of Elephas Maximus
Maximus is the Ceylon Marsh Elephant, a rarer
beast, barely seen outside the flood plains of
the Mahaweli Basin. It is a vast animal, its size
and habitat preference marking it out more than
anything else from its cousin.

Rarer still – indeed almost as rare as the dodo, is the Sri Lankan Pygmy Elephant. It was first recorded in 2012 in the Udawalawe National Park. Standing barely two metres tall, it was the first confirmed case of disproportionate dwarfism in a fully-grown wild Asian elephant. When filmed he was busy attacking (and winning) a duel with a rival twice his size.

The beautifully named Elephas Maximus
Maximus is thought to be a subspecies of
Elephas Maximus Sinhaleyus, an elephant now
extinct in Sri Lanka. Its treasured fossils
indicates that it last lived a hundred thousand
years ago. Its similarity to the present-day
elephant is likely to have made it all but
impossible to tell them apart, the difference
lying in such things as smaller molars and a
wider spout.

A scant dusting of other fossils reveal the existence of two further elephant sub species that may have called Sri Lanka home before becoming extinct: Hypselephus Hysundricus Sinhaleyus and Palaeoloxodon Namadicus Sinhaleyus.



"Oh, I feel like a sausage roll."

Dougal The Magic Roundabout 1965-1977 The extinction of the Gaur, or Indian Bison, is a rare example of the annihilation of a species that is reaching its bleak denouement right now.

Once common throughout South and Southeast Asia, there are now just twenty-one thousand gaurs left, spread out in groups so small across shrinking habitats in Nepal, India, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, and China that reproduction has become difficult.

Related to yaks and water buffalo, gaurs are the largest of all wild cattle, out ranked in size only by elephants, rhinoceros, and hippopotamus.

They can reach up to seven feet in height and weight up to a thousand kilos.

The Ceylon Gaur (Bibos Sinhaleyus
Deraniyagala) was thought from the fossil
record to be a distinct and physically smaller
sub species that the one that until recently lived
in Sri Lanka, especially in the central highlands.

It was noted by Rober Knox in his book "An Historical Relation Of The Island Ceylon In The East Indies" published in 1681 as being included in the menagerie of King Rajasinghe II of Kandy.

Its existence was later recorded in the early 1800s by Sir John D'Oyly, "a Member of His Majesty's Council in

Ceylon and Resident and First Commissioner of Government in the Kandyan Provinces"; and later by Sir James Tennant, the Colonial Secretary of Ceylon, in 1845.

A well-intentioned initiative by the Sri Lankan government in 2022 to import a bull, and three to five cows to start a gaur breeding and reintroduction programme was overtaken by the collapse of the government and has been shelved.

Buffalos, a common sight across the island, have very recently yielded up the secret that the species found in the wild is a unique endemic species not found outside Sir Lanka.

It has been given the name Bubalis Arnee
Migona and is thought to be a descendant of
the now extinct endemic wild buffalo that was
found in ancient fossil records, (Bubalus bubalis
migona).



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