Animal wonders & amazing animals

Blue Mormon (*Papilio polymnestor*)

In June 2015, Blue Mormon was declared as State Butterfly of Maharashtra. Maharashtra became the first state of Maharashtra to have state butterfly. Blue Mormon is a large, swallowtail butterfly found primarily in Sri Lanka and India, mainly restricted to the Western Ghats of Maharashtra, South India and coastal belts. It is reportedly the second largest butterfly found in India, just smaller than the southern birdwing. Now also seen in Bangladesh. It is commonly seen in monsoon and soon after that. The wingspan is 120 to 150 mm. it has a rapid unidirectional flight and frequently changes flight course, hopping up & down in its flight path. It is difficult to catch. Blue Mormon has exquisite velvet-like black wings with bright blue spots. Forewing has a band of blue scales, while the hindwing is almost blue with black patches at the base and distal rows. Underside has grey scales in a reduced area. Antennae, head, thorax and abdomen are blackish brown. Females are similar to males but with paler inter-nervular streaks o forewing that extend into the cell. They are known for mud-puddling. Eggs are laid on upper surface of leaf on rutaceous plants which are atleast 10 feet above ground. Caterpillar is light green initially then becomes orange yellow. Initially it feeds on egg shell caterpillar is a voracious feeder. It resembles fresh bird dropping. Male is fond of sun and avoids shade. This butterfly is pollinator of cardamom.

Striped tiger butterfly

Striped Tiger or Danaus genutia is a beautiful butterfly from the Nymphalidae family with striking black linings on its colorful wings. *D. genutia* is distributed throughout India, Sri Lanka, Myanmar and extending to South-East Asia and Australia (except New Guinea). This

butterfly occurs in scrub jungles, fallow land, dry and moist deciduous forests, preferring areas of moderate to heavy rainfall.

While it is a strong flier, it never flies rapidly or high. The butterfly ranges forth in search of its host and nectar plants. It visits gardens where it nectars on the flowers of *Adelocaryum*, *Cosmos*, *Celosia*, *Lantana*, *Zinnia*, and similar flowers.

Members of this genus are leathery, tough to kill and fake death. Since they are unpleasant to smell and taste, they are soon released by the predators, recover and fly off soon thereafter. The butterfly gets toxins from plants of the family Asclepiadaceae. To advertise their unpalatability, the butterfly has prominent markings with a striking colour pattern. This butterfly lays its egg singly under the leaves of any of its host plants of family Asclepiadaceae. The caterpillar is black and marked with bluish-white and yellow spots and lines. It has three pairs of tentacles on its body. It first eats the eggshell and then proceeds to eat leaves and vegetative parts of the plant. The chrysalis (pupa) is green and marked with golden-yellow spots.

The caterpillar of the common tiger butterfly obtains a supply of poison by eating poisonous plants, which make the caterpillar and butterfly a distasteful morsel for predators.

They have tannish orange wings framed with broad black bands and rows of white dots. The presence of a pouch on the males' secondary wings and the specific black-and-white spot beneath are also seen. Their flight, powerful yet graceful but close to the ground. The wingspan is 70 to 95 millimetres.

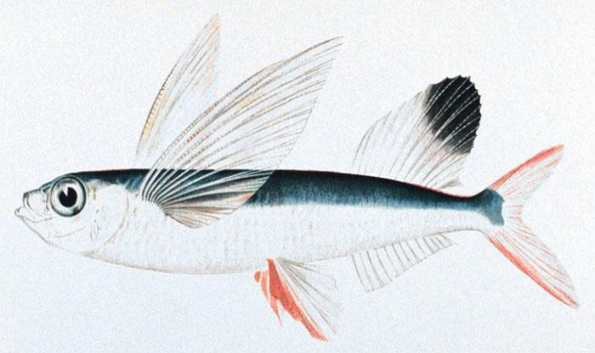
Flying fish-

The Exocoetidae are a family of marine ray-finned fish in the order Beloniformes, known commonly as flying fish or flying cod. Flying fish lives in warm waters all over the world.

The winglike pectoral fins are primarily for gliding—the fish hold the fins flat at their sides when swimming. Their streamlined bodies reduce drag when the fish are “flying.” Another interesting characteristic of the flying fish is its unevenly forked tail, with the lower lobe longer than the upper lobe. They are all small, with a maximum length of about 45 cm (18 inches). There are more than 50 known species of flying fish.

They do not fly actively: their fins do not flap. What they do is speed towards the surface and keep on going. When they leave the water they glide, sometimes for a surprising distance. It is generally thought to be an adaptation which helps them escape predators.

The glides are usually up to 30–50 metres (100–160 ft) in length. The fish can also make a series of glides, each time dipping the tail into the water to produce forward thrust. The longest recorded series of glides, with the fish only periodically dipping its tail in the water, was for 45 seconds.



Flying frog-

Wallace's flying frog (*Rhacophorus nigropalmatus*), also known as the gliding frog found in

China, India, Japan, and throughout Southeast Asia. It is found in primary evergreen forest, old shifting cultivation, and in vegetation near forest pools. These frogs lay their eggs in aerial foam nests. Upon hatching, tadpoles drop to the water under the nest and complete their development.

Body length is about 80-100 mm (males are smaller than females), it is one of the largest species of *Rhacophorus*. Its eardrums are large, as well as its eyes have horizontal pupils. They live almost exclusively in the trees Its limbs are very long, and its fingers and toes are webbed right to the tips, enabling the animals to strategically jump from tree to tree when threatened, or in search of a prey, using their webbing to gracefully “fall”, controlling their descent into a gliding motion, sometimes 50 feet or more, to a neighboring tree branch or even all the way to the ground. This is a form of arboreal locomotion known as *parachuting*. They also have oversized toe pads to help them land softly and stick to tree trunks. They survive mainly on insects, but also consume toads and small birds. Its back is bright shiny green and the underside is white to pale yellow. The upper sides of the inside toes, as well as the outer parts of the toe and finger webbing, are brilliant yellow. The base of the webs and one flank spot per side are jet black. The

female creates a bubble nest by lashing fluids she produces, on a branch or on foliage above water. She lays her eggs in the nest and the male fertilises them. When they hatch, the tadpoles develop in the nest until it breaks up and they fall into the water below. Here they continue their development, and undergo metamorphosis into juvenile frogs.

Fan Throated Lizard *(Sarada superba)*

Fan-throated lizards are found only on the Indian subcontinent, where they evolved under the influence of a changing climate that modified habitats.

They are small, colourful reptiles found in the dry shrublands and coastal areas of South Asia. Males have a loose patch of skin drooping from their throats – which becomes prominent when the lizards' dating game begins. That's when males scamper up a rock, strike a cobra pose and unfurl the loose skin into a beautiful fan. This fan, called a 'dewlap', gives the lizards their name and comes in hues of metallic black, orange, blue and cream – or all in one.

Since their discovery from India in 1829,15 different species are found in India. These belong to two genera – Sitana and Sarada.

Gharials *(Gavialidae)*

Gharial has extremely narrow jaws; adult males have a distinctive knob over the nostrils. They are found in India, Nepal, and Pakistan, Bangladesh and Bhutan. Gharials are found in deep, fast-flowing rivers, and prefer to occupy junctions and bends in these rivers where pools are deep and current is reduced. Sand banks are used as nesting sites. Gharials have the longest snout of all crocodilians. Males average 13–15 ft. Females average 11.5–13 ft. Adults are dark or brownish olive; hatchlings are grayish brown with five irregular transverse bands on the body and nine on the tail. They are white or yellowish white on the underside. The body form is sleek, the scales smooth, and the head is well differentiated from the body. Among crocodilians, only gavialis displays visible sexual dimorphism: mature males develop a cartilaginous knob, on the tip of the snout, females do not. This knob creates a buzzing sound during exhalation, a social signal during courtship. It has no other known function. Gavialis do not migrate long distance. Adults are unable to lift their bodies off the ground. Gharials feed almost entirely on a diet of fish. In the juvenile stage, the species may also consume tadpoles, shrimp, and water insects. Prey is sought by either the "sit and wait" technique, or by actively foraging, and fish are captured with lightening fast lateral swipes of the jaw. Fish are impaled on the sharp teeth and the gharial throws them to the back of the throat by jerking the head upward. The extremely narrow snout of Gavialis reduces friction in the water as compared to broad-snouted crocodilians, another factor contributing to its efficiency as a fish catcher.

Kingfisher

It is found in dense forests in the Himalayan foothills of Northeast India, the Eastern and the Western Ghats. Kingfishers are either tree, water or river kingfishers based on their habitat and hunting behaviour. Kingfishers have electric blues, deep indigo, chestnut reds, vivid fuchsia, ruddy pinks, monochrome black-and-white colour Tree kingfishers focus their keen predation on the ground, while the water and river kingfishers prefer a more aquatic diet and habitat. Water kingfishers are specialist fish-eaters who dive into water,for fishing. Kingfishers, ranging in length from 10 to 42 cm, have a large head, a long and massive bill, and a compact body. Their feet are small, and the tail is short or medium-length. Most species are crested. They are known for their dramatic hunting techniques. The bird sits still, watching for movement from a favourite perch. Having sighted its prey, it plunges into the water and catches the fish usually no deeper than 25 cm below the surface in its dagger-shaped bill. With a swift downstroke of the wings, it bobs to

the surface. It then takes the prey back to the perch and stuns the fish by beating it against the perch before swallowing it. Many species also eat crustaceans, amphibians, and reptiles.

Drongo

Drongos are mostly black or dark grey, short-legged birds and sit very upright whilst perched. They have long forked tails and some have elaborate tail decorations. They feed on insects and small birds, which they catch in flight or on the ground. They are known to utter fake alarm calls that scare other animals off food, which the drongo then claims. They flycatch or take prey from the ground. Some drongos have ability to mimic other birds and even mammals.

Two to four eggs are laid in a nest high in a tree. Several species of animals and birds respond to drongos' alarm calls, which often warn of the presence of a predator. Fork-tailed drongos in the Kalahari desert use alarm calls in the absence of a predator to cause animals to flee and abandon food, which they eat, getting up to 23% of their food this way. They not only use their own alarm calls, but also imitate those of many species, either their victim's or that of another

species to which the victim responds. If the call of one species is not effective, perhaps because of habituation, the drongo may try another; 51 different calls are known to be imitated. In one test on pied babblers, the babbler ignored an alarm call repeated three times when no danger was present, but continued to respond to different calls. Researchers have considered the possibility that these drongos possess theory of mind, not fully shown in any animal other than humans.

Malabar giant squirrel *(Ratufa indica)*

This is the state animal of Maharashtra. Mostly arboreal and canopy dwellers, they build their less than 3 kgs, they can easily leap up to 6 meters between trees. Their underparts are creamish and the upper body comprises maroon and black coloration. A dark bushy long tail helps balance their agile body. It is a large multi-coloured tree squirrel species endemic to forests and woodlands in India. It is a diurnal, arboreal, and mainly herbivorous squirrel.This species is endemic to India, found in the Western Ghats, Eastern Ghats and Satpura Range as far north as Madhya Pradesh found in tropical deciduous, semi-deciduous, and moist evergreen forests and woodlands. The Indian giant squirrel nests in taller trees with a mean height of 11 m in order to avoid predators.

The Indian giant squirrel is one of the largest squirrels, with average size for both sexes is about 36 cm in head–and–body length, 45 cm in tail length and 1.7–1.8 kg in weight. Body colour is whitish, creamy-beige, buff, tan, rust, reddish-maroon, brown, dark seal brown, or black. The underparts and the front legs are usually cream coloured, and the head can be brown or beige, and there is a distinctive white spot between the ears. They can be seen solitary or in pairs and are active during the morning and late evenings. Males stay with the female throughout the breeding season. The gestation period lasts hardly a month, and 2 to 3 young ones are born. They feed on fruits, nuts, jackfruit, tree bark, and even bird eggs. They disperse seeds from their fecal matter, When alarmed, they have a tendency to freeze themselves or flatten themselves to the bark of a tree resembling a part of the tree itself. An excellent camouflage mechanism.

Being the largest Squirrel in India, Indian Giant squirrels male and female vary in size from each other. Males are around 75 cm in length from head to tail (Head to body – 34 cm and Tail – 41cm approx) whereas females are larger being 78 cm in length from head to tail (Head to body -36 cm and Tail length – 42 cm approx). A pair builds 3 to 4 nests to confuse the predators.

SPIDERS

Spiders are found on all continents except Antarctica. Spiders range in body length from 0.5 to about 90 mm (0.02–3.5 inches). All spiders are predators mainly on insects. Spider body is made up of the cephalothorax (prosoma) and the abdomen (opisthosoma). The legs are attached to the cephalothorax. Spiders have six pairs of appendages. The first pair, called the chelicerae, constitute the jaws. Each chelicera ends in a fang containing the opening of a poison gland. The second pair of appendages, the pedipalps, are modified in the males of all adult spiders to carry sperm (*see below* Reproduction and life cycle). In females and immature males, the leglike pedipalps are used to handle food and also function as sense organs. The pedipalpal segment (coxa) attached to the cephalothorax usually is modified to form a structure (endite) that is used in feeding. The pedipalps are followed by four pairs of walking legs. Spiders can amputate their own legs (autotomy); new but shorter legs may appear at the next molt. Silk-producing spinnerets are usually located under the tip of a spider's abdomen, which enables them to spin a long strand of silk behind them. All spiders have simple eyes, fangs, palps, and legs in cephalothorax. The spinnerets reside on the posterior region, called the abdomen. The unsegmented abdomen attaches to the cephalothorax by means of a narrow pedicel, giving the spider the appearance of having a waist. Most Are Venomous**.** Spiders hunt and capture prey. The majority feed on insects and other invertebrates. Spider pours enzymes on prey to digest & convert it into liquid they it sucks the liquid food. Spiders produce & use silk to capture prey, protect their offspring, reproduce, and assist themselves as they move, as well as for shelter. Spiders reproduce sexually, but males use an unusual method to transfer their sperm to a mate. The male first prepares a silk bed or web, onto which he deposits sperm. He then draws the sperm into his pedipalps, a pair of appendages near his mouth, and stores the semen in a sperm duct. Once he finds a mate, he inserts his pedipalp into the female spider's genital opening and releases his sperm. Females are typically larger than their male counterparts. A hungry female may consume male. Female spiders deposit their eggs on a bed of silk, which they prepare just after mating. Once a female produces eggs, she covers them with more silk. Spiders rely on a combination of muscle and hemolymph (blood) pressure to move their legs.

OCTOPUS

Octopus has size from less than an inch to 30 feet & has weight ranging from **less than a gram to** 600 pounds. The 8 limbs of octopus help them move, hunt, and hide.

They can squeeze into holes bigger than their beak and eyeballs. **It lets them hide from predators**. **Octopus blood is blue because of presence of copper-based pigment** called hemocyanin. Three hearts pump this blue blood: two for the gills and one for the rest of the body. **Octopus arms are**

super sensors. These can detect chemicals, essentially tasting and smelling whatever they touch. Lost limbs can regrow, but it takes several months. Respiration in octopus is by gills or skin, Skin absorbs 41% of its oxygen requirements while resting and 33% while swimming.

When an octopus is not in a hurry, it crawls to conserve energy. It can go faster by swimming with tentacles. **For maximum speed,** it expels a jet of water out of a siphon, propelling it in the opposite direction in a movement known as backward swimming. Its photosensitive skin can see the colors around it and mimic these in the blink of an eye. It also **changes texture to match the environment.** The surface of the skin has ridges called papillae that morph at will. They can **manipulate their bodies to look like dangerous creatures.** They can also discourage attacks by appearing like bad-tasting prey.**The octopus can squirt dangerous dark ink.** The mixture of melanin and mucus can impair sight, smell, and taste. It can also suffocate gills. Even the octopus can suffer upon exposure, so it quickly bolts away. The **octopus is a carnivore** & feeds on crabs, shrimps, mollusks, worms, and lobsters. It typically drops from above and swarms prey with its arms. It can also drill holes in shells to inject toxins and use saliva to induce paralysis. All species of octopus are venomous. They may use this toxin against powerful predators. The octopus is a lazy eater. It avoids large prey with tough shells like moon snails. It does not waste energy on scallops, limpets, abalone, and other creatures stuck on rocks. Cannibalism is seen in octopuses. They feed on dead or smaller octopuses. They live alone except during the mating season. Males are smaller than females. Sometimes the female feeds on the male. Female lays 10,000 to 80,000 eggs & protect them from predators. Lifespan is 6 months to 5 years. Most only mate once. Their digestive glands shut down once their reproductive organs mature.

PEBBLE TOAD

Oreophrynella nigra, or **pebble toad**, is a species of toad in the family Bufonidae. It is endemic to the Guiana Highlands in Bolívar State, Venezuela.. Males measure 16.5–23.5 mm and females 20.4–30 mm in snout–vent length.

When threatened, the toad folds its limbs under its body, tucks its head in and tenses in a ball shape. If on an incline (this is how it gets its name), this causes it to roll down the slope, escaping

the attention of its predator, and looking like a dislodged pebble. Its cryptic black and dark grey coloring that may appear as dark navy blue to some blends with its sandstone habitat.

Its natural habitats are rocks and peat bogs in montane tepui environments at elevations of 2,300–2,700 m (7,500–8,900 ft) asl. It is classified as vulnerable because of its apparently restricted range. They eat all kinds of different insects and are either dark brown or black in colour The pebble toad (Oreophrynella niger) is a small amphibian, measuring just a few centimetres long. It is an unusual find at the top of a mountain. These toads live on the top of a type of mountain known as a tepui, which occur across the Guiana Highlands in South America.

STRAWBERRY POISON FROG-

The strawberry poison dart frog, or strawberry poison frog, is a species of poison dart frog found in Central America. These frogs live in rainforests, as well as humid lowlands and premontane forests. It is known for its beautiful and attractive coloration, as well as for its toxic skin. The venom from these frogs can cause symptoms like nausea, swelling, paralysis, and can even kill an adult human. As a result of their diet, the skin of these frogs secretes a deadly poison. This deters predators from attacking them as their venom hampers cardiac activity, leading to convulsions, paralysis, and eventually death in small animals. They use their long and flexible tongues to catch their prey in a technique called “wide foraging”.

They have Size: Length: 0.69–0.87 in (17.5–22 mm) **Weight:** 1 oz (28.35 g). These frogs have compact bodies, leaner than most other closely related species. The patterns on their skin show bilateral symmetry, and they have four digits on each of their limbs. These frogs show the most diversity when it comes to color. The coloration ranges from strawberry red, blue, black, green, orange, white, and yellow.

The primary prey of the strawberry poison dart frog are ants, from whom they get the alkaline toxins excreted from their skin. Other insects consumed by them include beetles, flies, millipedes,

and mites. They live upto 17 years. They are diurnal and are particularly active during the morning.cIndividuals are mainly solitary, coming together only to breed or compete for territory.

Males aggressively establish territories by calling loudly, and if an intruder responds, a wrestling match takes place. These matches last around 20 minutes, ending after one frog is pinned down. The loser then leaves the area. These territorial disputes occur during the morning when these frogs have the most energy. As per the IUCN, the strawberry dart poison frog is listed as “Least Concern” or “LC”.

KOMODO DRAGON-

Komodo dragons are the largest living lizards in the world. They are identified by their massive size, flat heads, bowed legs and long, thick tails. The name comes from rumors that a dragon-like creature lived on the Indonesian island of Komodo. Komodo dragons have long, forked tongues that they use to help smell and taste. The average size of a male Komodo dragon is 8 to 10 feet and about 200 lbsin length. Females grow to 6 feet (1.8 m). Komodos come in a variety of colors, including blue, orange, green and gray. Their skin is rough and durable, reinforced with bony plates called osteoderms. They have long claws and a large, muscular tail. Komodos have good vision; they can see objects as far away as 985 feet (300 m). They are also speedy. They can run briefly up to 13 mph (20 kph) but prefer to hunt by stealth — waiting for hours until prey cross their path. Their sense of smell is their primary food detector, Komodo dragons, like snakes, use their forked tongues to sample the air, and then touch the tongue to the roof of their mouth, where special organs analyze the airborne molecules. If the left tongue tip has more concentrated "smell," the dragon knows that their prey is approaching from the left. They live in a tropical dry forest to a savanna to a deciduous monsoon forest. They like extreme heat. It is usually around 95 degrees Fahrenheit (35 degrees Celsius) with 70-percent humidity. Komodos live in burrows. Komodo dragons are carnivores. They are such fierce hunters they can eat very large prey, such as large water buffalo, deer, carrion, pigs and even humans.

They use their sharp, serrated teeth to shred their prey to death. If the prey escapes, it will die within 24 hours of blood poisoning because the Komodo's saliva contains 50 strains of bacteria. Komodo dragons can reproduce through both sexual and asexual reproduction. Komodo dragons

are a species of monitor lizard, which are large reptiles found in Africa and across Asia. According to IUCN, the Komodo dragon is vulnerable.

SPATULA-TAILED HUMMING BIRD-

The **marvelous spatuletail** (***Loddigesia mirabilis***) is an endangered species of hummingbird in subfamily Lesbiinae, endemic to northern Peru. The male marvelous spatuletail is 15 to 17 cm long including its 11 to 13 cm tail. Females are 9 to 10 cm long with a 5 to 7 cm tail. The male's signature feature is its two outer tail feathers with bare shafts that cross each other and end in large purplish black racquets or "spatules". The remaining tail feathers are very short and are supported by two long undertail coverts. The female's outer tail feathers are also long, but shorter than the male's, and do not have the racquets. Both sexes have a slightly decurved black bill and a white spot behind the eye. Males have mostly green upperparts with a blue crest and a brownish hindneck. Their crest is glossy blue-green and the rest of the underparts are white with a black line down the center. Females are also green above but do not have a crest. Their underparts are white without the male's black central line. It feeds on nectar, most often on red-flowered lily (*Bomarea formosissima*) but has been observed feeding in at least five other species of flowering plants. Its breeding season (between December and February), males perform an aerial display. The male gives "a repeated high-pitched buzzy metallic note...'tzzz...tzzz...'" during its aerial display.

CHEETAH-

The cheetah is the world's fastest land animal and Africa's most endangered big cat. Cheetah is capable of reaching speeds greater than 110 kilometers per hour. It has a thin frame with a narrow waist, deep chest. flexible spine, semi-retractable claws, long legs and tail. Cheetahs' foot pads are hard. They have short blunt & semi-retractable claws. They have large nostrils that allow for increased oxygen intake. The cheetah's undercoat is light tan to a deep gold and is marked by solid black spots. Distinctive black tear stripes run from the eyes to the mouth. The stripes are thought to protect the eyes from the sun's glare. It helps cheetah to focus on their prey at long distance range by minimizing the glare of the sun. Cheetah tail ends with a bushy tuft encircled by five or six dark rings. These markings provide them with excellent camouflage while hunting. The tail is also thought to be a signalling device, helping young cubs follow their mothers in tall grass. The tip of the tail varies in color from white to black among individuals. The pregnancy period for the cheetah is 93 days, and 2 or 3 up to 6 cubs are born. Average life span is 10 – 12 years. Adult cheetahs' weight averages between 75 and 125 pounds with total body length up to 7.5 feet. Male cheetahs are slightly bigger than females and they have larger heads. Sexually matured female siblings separate from the group & lead independent life. Male siblings remain together for the rest of their lives, forming a group known as a coalition. Coalitions increase hunting success and act as a defence against predators. The male group travels long distance to find suitable place to settle & defend the territory. All males of a coalition will mate. Cheetahs are visual hunters & are diurnal. They kill prey by means of a suffocation bite to the throat. Cheetahs does not roar but growl when facing danger, and they bark when communicating with each other.