Amazing animals Part II

MATILDA VIPER/ **Matilda's horned viper (*Atheris matildae)***

It is a species of arboreal forest viper endemic to Tanzania. It was discovered in the Southern Highlands of Tanzania during a 2010–2011 biological survey. The snake was described as a new species on December 6, 2011, in a study published in the journal, *Zootaxa*.

The species is a nocturnal ambush predator, waiting by streams to ambush frogs. They have two enlarged hornlike structures above their eyes. *A. matildae* measures 2.1-feet in total length. Matilda's horned viper occupies only a small area, further threatened by logging and charcoal production. *Atheris matildae* was named after Matilda, the daughter of Tim Davenport, the director of the Wildlife Conservation Society in Tanzania and a member of the three-person team to have discovered the snake. The scientists are already worried about its survival. The authors of the Zootaxa article are keeping the exact location of Matilda's Horned Viper (Atheris matildae) a secret, fearing that illegal pet collectors could descend on the area.

SNUB-NOSED MONKEY

Snub-nosed monkeys are a group of Old World monkeys and make up the entirely of the genus *Rhinopithecus*. Snub-nosed monkeys live in Asia, with a range covering southern China (especially Tibet, Sichuan, Yunnan, and Guizhou) extending into the northern parts of Myanmar and Vietnam. Snub-nosed monkeys inhabit mountain forests up to elevations of more than 4,000 m (13,000 ft). In the winter, they move into the deeply secluded regions. These monkeys are named for the short stump of a nose on their round faces, with nostrils arranged forward. They have relatively multicolored and long fur, particularly at the shoulders and backs. They grow to a length of 51–83 cm with a tail of 55–97 cm. Snub-nosed monkeys spend the majority of their life in the trees. They live together in very large groups of up to 600 members, splitting up into smaller groups in times of food-scarcity, such as in the winter. Groups consist of many more males than females. They have territorial instincts, defending their territory

mostly with shouts, calling sometimes solo while at other times together in choir-like fashion. The diet of these animals consists mainly of tree needles, bamboo buds, fruits and leaves. A multi-chambered stomach helps them with digesting their food. The impulse for mating starts with the female. She takes up eye contact with the male and runs away a short bit, then flashes her genitals. If the male shows interest (which does not always occur), he joins the female and they mate. The 200-day pregnancy period ends with a single birth in late spring or early summer. Young animals become fully mature in about six to seven years. They are critically endangered.

PURPLE JOKER CRAB- (*Insulamon palawanense)*

Insulamon palawanense, or the Palawan purple crab is a species of freshwater crab from Greater Palawan province of the Philippines described in 2012. They are 2.5–5.3 centimetres (1.0–2.1 in), wide and have striking purple colour. They are crabs with bright purple coloured body with red-tipped claws. The reddishness of tips of claws is more in adult male crab. Females are more purplish. German taxonomist Hendrik Freitag has carefully catalogued the characteristics of crabs.

Greater Palawan consists of a mainland region and several nearby islands, probably providing opportunities for geographic isolation that facilitated speciation. The particular violet coloration might just have evolved by chance, and must not necessarily have a very specific function or reason aside from being a general visual signal for recognition.

Insulamon palawanese

Crabs can discriminate colours. Freitag explained. It is believed that the colouration has a signal function for the social behaviour, e.g. mating. This could explain why large males of various *Insulamon* species are more reddish compared to the generally violet females and immature males."

They depend on freshwater at all stages of their development. Having been completely separated from their relatives, they have developed their own separate species and genera over tens of thousands of years.

The Insulamon palawanense, is confined to rivers and streams on a particular inland region of the 5,600-square-mile island.

Palawan's biodiversity has been threatened in recent years by destruction of habitats. Mining activities have threatened the region's fragile soil. Palawan animal and plant life depend on precise environmental conditions and even minor environmental changes can lead to extinctions

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AFRICAN DWARF SAWSHARK-

The African dwarf sawshark is a newly discovered species of sawshark found off the coast of Eastern Africa, in Mozambique & Tanzania. These deepwater sharks live near the bottom at depths of 285 to 570 m, where they feed mostly on small crustaceans. They are ovoviviparous like other sawsharks. They are currently listed as Data Deficient.

On average, they measure around 61.6 cm for males and 62.1 cm for females in length.

The rostrum is an elongated snout that is lined with sharp teeth-like structures on each side. Unlike other different sharks, the sawshark's rostrum is not used for predatory purposes but rather for sensory functions. It is covered in thousands of specialized pores called ampullae of Lorenzini, which allow the sawshark to detect electric fields produced by other animals. These electric fields help the sawshark locate and sense potential prey hidden in the sandy or muddy

seabed. By moving its rostrum back and forth, the sawshark can disturb the substrate, causing small creatures to reveal themselves. Once located, the sawshark uses its tooth-like projections to immobilize and capture its prey. The rostrum is up to *one-third* of the shark's total length. They live on sandy or muddy region of tropical and subtropical region. They are carnivorous and mainly feed on benthic animals like small crustaceans. They are opportunistic predators and feed on whatever suitable prey is available in their habitat. These sawsharks employ a sit and wait predation strategy. They typically lie motionless on the seafloor, camouflaging themselves among the sandy or muddy substrates. Their unique rostrum, or saw plays a vital role in capturing prey. There lifespan is 10 to 20 years.

THE PSYCHEDELIC GEKO- **psychedelic rock gecko** *(Cnemaspis psychedelica*)

It is an endangered species of gecko, only scientifically described in 2010, that is endemic to Hon Khoai Island in Vietnam. Male is about 7.5 cm long & female is 7.2cm long. It has bright-orange forelimbs, hands, feet and tail; bright-orange flanks bearing three or four yellow, transverse bars; a bright-yellow reticulum on the neck overlaying thick, black streaks; and a greenish head.

This diurnal gecko inhabits granite boulders in densely vegetated country, retreating into crevices or under the rocks if scared or for sleeping at night. Each female typically lays two white eggs that are attached 0.3–3.5 m (1–11.5 ft) above the ground to the underside of a rock ledge. and several females may use the same place, forming a communal nest with up to ten eggs. Newly hatched young are quite dull, but the adult colours are already evident when two months old. Only about 500 mature individuals left in the wild, these endangered lizards are threatened by habitat loss and predation. A major predator is the invasive long-tailed macaque. It's also a favourite of the pet trade. They are more comfortable sunbathing on the loose granite rocks scattered throughout the Vietnamese rainforest, or on trees or branches, rather than in the substrate of the forest floor.

MANTIS SHRIMP-FASTEST PUNCH

Mantis shrimp are carnivorous marine crustaceans of the order Stomatopoda. Mantis shrimp typically grow to around 10 cm in length, while a few can reach up to 30 cm. Mantis shrimps' eyes have at least 12 types of photoreceptors, which increases the speed at which they can identify colors. The shrimp's own hard-shelled body has bright red, green, orange and blue colours, and its forearms are covered in spots. There are two main types of hunting for mantis shrimp: spearing and smashing. Spearing mantis shrimp have sharp forelimbs they use to pierce predators and prey. Smashing mantis shrimp have calcified forelimbs that they use to administer a powerful strike to both predators and prey. It is highly aggressive, territorial creature and doesn't like strangers invading the nooks and crevices where they live. Like terrestrial praying mantises, they fold & tuck their limbs beneath their body – is a pair of lethal, club-like front legs, or "dactyls". If threatened, the smashing mantis shrimp can whip out these appendages at speeds of 23 m/sec (75 ft/sec). That's 50 times faster than the blink of an eye, or about the same as the trajectory of a .22 calibre bullet – and with a force some 100 times that of its weight, making it the strongest self-powered strike by an animal. Mantis shrimp are known in particular for striking their prey with a force and speed that is unmatched in nature. Forceful enough to shatter glass, and too fast to be registered by the human eye. This ability allows the mantis shrimp to hunt small prey such as crabs, other crustaceans, clams, and even fish twice its size.

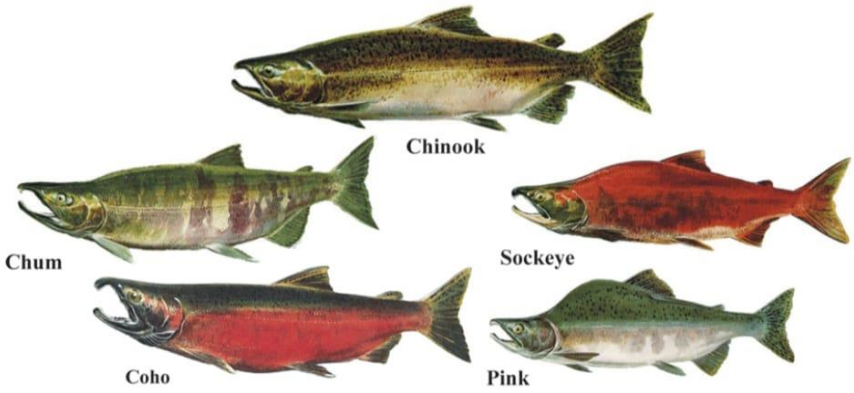
Mantis Shrimp

HOMING IN PACIFIC SALMON-

Salmons are famous for their homing migrations from oceanic feeding grounds to their natal river to spawn. During these migrations, salmon travel through diverse habitats (e.g. oceans, lakes, rivers), each offering distinct orientation clues and, perhaps, requiring distinct sensory capabilities for navigation. Typically, salmon spawn in streams or lakes and, after a variable period of freshwater residence (0–3 years, depending on the species and population), the offspring migrate to the ocean, presumably to take advantage of increased productivity and foraging opportunities. Salmon remains in the ocean until they begin to mature and then return to their natal site to spawn. For many species and populations, these migrations pose extraordinary bioenergetic and navigational challenges. Homing migrations often begin thousands of kilometers from the mouth of the home river and, for some populations, in-river migrations back to their natal site may be as long as the ocean migration. These diverse marine and freshwater habitats provide distinct sets of orientation clues and pose distinct challenges for orientation. Despite these challenges, homing is generally precise, and fidelity to the natal site has resulted in reproductive isolation of spawning populations and specialized adaptations of these populations for their natal habitat.

This incredible homing instinct (ability to return to their original location) is inherited by all salmon. Even a salmon's run timing (internal time mechanism that determines what time of the year they will return to the river) is inherited through their genetic makeup. Freshwater phase is governed by olfactory recognition of homestream water. Prior to their seaward migration,

juvenile salmon learn (imprint on) odors associated with their natal site and later, as adults, use these odor memories for homing. Homing to natal sites has led salmon to evolve population-specific adaptations to the physical and biotic characteristics of these sites.



Pacific Salmon Species

SPERM WHALE- (*Physeter macrocephalus*)-DEEP DIVING

Sperm whales are mostly dark grey, though some whales have white patches on the belly. They are the only living cetacean that has a single blowhole asymmetrically situated on the left side of the crown of the head. Their heads are extremely large, accounting for about one-third of their total body length. Sperm whales possess the most asymmetrical skull of any mammal. The sperm whale is the largest of the toothed whales and the largest toothed predator with weight of 41,000 kg (Male, Adult), 14,000 kg (Female, Adult) with average length of 16m. The sperm whale is a large, dark-colored, toothed whale with a massive, square-shaped head that can make up more than a third of its body length. It has a single blowhole that is set on the forehead and to the left. They feed on deep-water squid also occasionally on octopi, sharks, and other fish species. Lifespan is 60 yrs.

The habitat of the sperm whale is the open sea. More specifically, Sperm whales can be found in almost all marine waters deeper than 1,000 m that are not covered by ice, except in the Black Sea and possibly the Red Sea. They tend to be more frequent around cold-water upwellings. Sperm whales hunt for food during deep dives that routinely reach depths of 2,000 feet and can last for 45 minutes. They are capable of diving to depths of over 10,000 feet for over 60 minutes. After long, deep dives, individuals come to the surface to breathe and recover for several minutes before initiating their next dive. Because sperm whales spend most of their time in deep waters, their diet consists of species such as squid, sharks, skates, and fish that also occupy deep ocean waters. Sperm whales can consume about 3 to 3.5 percent of their body weight per day. Sperm whales have been listed as vulnerable since 1996.


NOAA Fisheries