

# Endangered Species Associated with Mangroves

The IUCN Red List of Endangered Species lists most flora and fauna into seven categories ranging from “Least Concern” to “Extinct”. These categories are based on the current population of the species, the population trend (whether it is increasing or decreasing and how rapidly) and the threats faced by those species.

Hunting, habitat loss/degradation and climate change are the three biggest threats to the natural world and these problems are increasing the number of endangered species rapidly.

Below is a list of some of the species associated with Mangroves ranging from “Vulnerable” to “Critically Endangered”. The list covers fauna that rely on mangroves for either all or part of their lives as well as flora that are part of the Mangroves themselves. Many of these species are closely associated with each other and interlinking ecosystems, meaning the loss of one species can have devastating effects on another.

The loss of flora and fauna species and biodiversity is yet another reason why protecting mangrove habitat is so important.

For more information please contact Mangrove Action Project at [info@mangroveactionproject.org](mailto:info@mangroveactionproject.org)

## Fauna

### Mammals



#### **Dugong, *Dugong dugon***

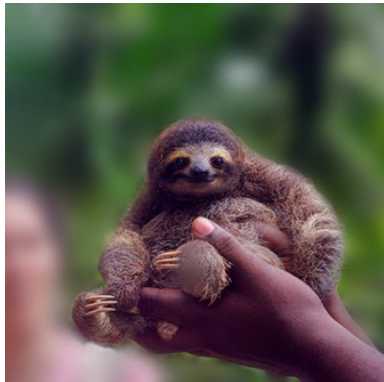
Status: Vulnerable

Range: Coastal and island waters between East Africa and Vanuatu (Islands west of Australia)

This large mammal is more closely related to the elephant than other sea mammals. It is the only fully marine mammal and is long lived and shy of humans. They are mostly herbivorous; sea grass being the main part of their diet, but have been known to eat jellyfish and squid.

The major threats to this animal come from habitat loss/degradation due to pollution and trawling, hunting for their meat and bones and fishing activities which either kill intentionally or sometimes accidentally.

<http://www.iucnredlist.org/details/6909/0>



#### **Pygmy Three-toed Sloth, *Bradypus pygmaeus***

Status: Critically endangered

Range: Only known on Isla Escudo de Veraguas, off the coast of Panama.

This is the smallest sloth in the world and it is only found in the red mangrove forests surrounding the tiny island it lives on. It is believed to only feed on mangrove leaves and it's total population is estimated to be less than 500 individuals.

It's main threat comes from loss of habitat because of indigenous peoples cutting the forest, but also from opportunistic hunters that visit the island.

<http://www.iucnredlist.org/details/61925/0>



#### **Bengal Tiger, *Panthera tigris tigris***

Status: Endangered

Range: India, Bangladesh, Nepal and Butan

This iconic species is found in tropical forests including Mangrove forests such as the Sunderbans. It's population across its entire range is estimated at less than 2500. It's diet mostly consists of large prey such as wild deer and pigs, but it will also prey on animals such as fish, elephants and primates.

The major threat to this species is poaching for its skin and of its body parts for “medicines”. It is also suffering heavily from habitat loss which is leading to a decline in prey for the animal.

<http://www.iucnredlist.org/details/15955/0>



#### **Water mouse, *Xeromys myoides***

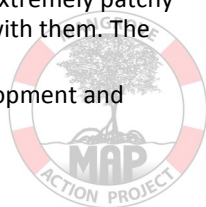
Status: Vulnerable

Range: Papua New Guinea and coastal areas of Northern Territory and Queensland, Australia

There is little known about this small, nocturnal rodent. It is carnivorous and feeds mainly on molluscs and crabs found at low tide amongst mangrove roots. Its distribution is extremely patchy along its range and it is only found in mangroves and coastal wetland associated with them. The population of this species is unknown but it is declining.

The biggest threat for this animal is loss of mangrove habitat due to coastal development and aquaculture. Development inland of mangrove ecosystems is also a major threat.

<http://www.iucnredlist.org/details/23141/0>





### **Proboscis Monkey, *Nasalis larvatus***

Status: Endangered

Range: Endemic to Borneo, found in Brunei, Indonesia and Malaysia

This unique primate has a declining population of only a few thousand. It is found in coastal and riverine forest such as mangroves and is limited to these specific habitats, avoiding cleared land. It is easily identified by its huge nose, pot-belly and reddish fur. Its diet consists mainly of leaves and fruit but it will also eat flowers and seeds.

Because of its association with coastal habitat, the main threat to this animal is habitat destruction. Logging, forest fires and development are encroaching rapidly on the area this monkey occupies. Hunting for Chinese “medicines” and as bush meat are also problems as it is easily caught by hunters.

<http://www.iucnredlist.org/details/14352/0>

### **Smooth-coated Otter, *Lutrogale perspicillata***

Status: Vulnerable

Range: Wide-spread across South and Southeast Asia

This animal is secretive and diurnal (active in the morning and evening) and is rarely seen in the wild. It can grow up to 65cm and is found in large rivers, lakes and mangrove estuaries. It builds dens along river banks and prefers habitat with cover available for hiding from predators. This mammal is an opportunistic hunter and mostly eats fish, but will also eat crustaceans, insects, amphibians, birds and small rodents.

This aquatic mammal faces many threats from humans: destruction of habitat for aquaculture and hydroelectric dams, pollution of waterways by pesticides, reduction in prey and indiscriminate killing because of competition with humans and finally trapping for the fur trade.

<http://www.iucnredlist.org/details/12427/0>

### **Red Colobus, *Procolobus badius***

Status: Endangered

Range: Senegal to Ghana, Western Africa

This primate has declining, fragmented populations along west Africa’s coast one of its 3 subspecies being listed as critically endangered. It uses a variety of forest habitats, including mangroves and is vegetarian. It is preyed on regularly by Chimpanzees.

This animal is rapidly losing its habitat due to logging and clearing land for plantations. It is also suffering from hunting as it is desired for “bush meat” in the country. The logging roads through its forests are giving more access to the interior of the forest where it was once safe.

<http://www.iucnredlist.org/details/18240/0>

### **Fishing Cat, *Prionailurus viverrinus***

Status: Endangered

Range: Patchy distribution across Asia and India

This cat is about twice the size of a domestic cat and is found in wetland habitat such as swamps, marshland and mangroves. They are good swimmers and—as their name suggests—primarily prey on fish, although they are known to eat birds, insects and rodents as well.

The main threat to this feline is wetland destruction and degradation, due to its dependence on this type of habitat. Over-fishing these areas is another significant threat and persecution by fishermen is also seen. Though considered not as valuable as other wild cats, its fur is still sold through illegal trade.

<http://www.iucnredlist.org/details/18150/0>

### **Sambar Deer, *Rusa Unicolor***

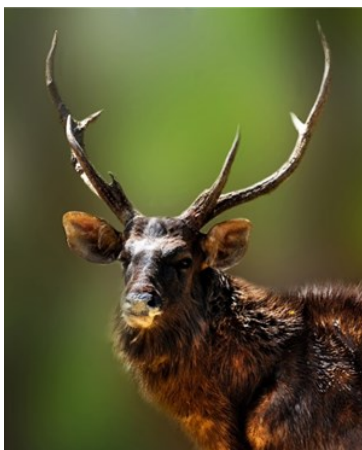
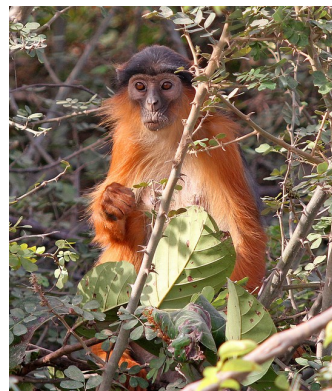
Status: Vulnerable, some populations classed as endangered

Range: Fragmented populations across South Asia, Southeast Asia and China

This large deer can reach up to 350 kg in weight, is highly adaptable and is the dominant species of deer in Tropical Asia. It’s habitat varies widely from savannah to mangroves and it is indiscriminate with its herbivorous diet, eating many types of course vegetation.

Despite it’s adaptability, populations outside protected areas are at a very high risk with some having faced up to 50% declines over the last 3 generations. Hunting is the most serious threat to the animal: its antlers are used as “medicine” and it is killed for its meat. The demand for bush meat is a rapidly growing industry and for this deer the market is based in South-East Asia and China. Hunting has head to localised extinction in Vietnam, India, Thailand and Laos (amongst others), seen by a lack of this species in otherwise suitable habitat.

<http://www.iucnredlist.org/details/41790/0>





## Birds



### **Philippine Cockatoo, *Cacatua haematuropygia***

Status: Critically Endangered

Range: Endemic to the Philippines

This once common bird has declined in number over 50 years to there being around 1000 left in the wild, with its population still declining. It lives in lowland forests, including mangroves.

Trapping for the caged bird trade is the biggest threat to this bird. It is valued at around \$400 per bird. Habitat loss, hunting, changing weather and introduced predators are also adding to the decline of this species.

<http://www.iucnredlist.org/details/106001403/0>



### **Mangrove Finch, *Camarhynchus heliobates***

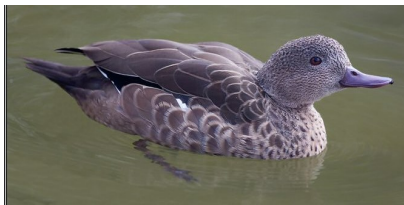
Status: Critically Endangered

Range: Restricted to the Galapagos Islands

This bird is thought to only have a maximum of 200 mature individuals left in the wild, restricted to the North-West coast of Isabela Island. It inhabits dense mangrove swamps and has a diet of insects, larvae, spiders and some vegetable matter.

The biggest threat to this bird is predation and disease from invasive species such as the common rat (*Rattus rattus*).

<http://www.iucnredlist.org/details/106009612/0>



### **Madagascar Teal, *Anas bernieri***

Status: Endangered

Range: Endemic to western coast of Madagascar

This bird has a total population of 1500-2500 individuals but this is decreasing. The species prefers coastal mangroves usually, but only breeds in seasonally flooded, non-tidal areas dominated by Black Mangrove *Avicennia marina*. It feeds mainly on aquatic and terrestrial insects and vegetation.

Habitat loss and disturbance by agriculture and development are threatening this species and isolating its populations. Hunting and trapping are also a problem as it is considered a delicacy.

<http://www.iucnredlist.org/details/100600449/0>



### **Mangrove Hummingbird, *Amazilia boucardi***

Status: Endangered

Range: Endemic to the Pacific coast of Costa Rica

A maximum of 7000 mature individuals are found spaced along the stretch of coast but numbers are decreasing. It has very a specific habitat and feeds mostly on the flowers of the mangrove species *Pelliciera rhizophorae*.

The biggest threat is habitat loss due to construction of shrimp ponds and salt farms, but pollution and road construction (destroying hydrology) are also threats.

<http://www.iucnredlist.org/details/106001941/0>

## Insects



### **Illidge's Ant Blue Butterfly, *Acrodipsas illidgei***

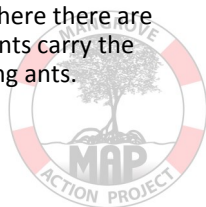
Status: Vulnerable

Range: Endemic to Australia

This rare insect is a classic example of the interlinking web mangrove ecosystems maintain. The female butterfly lays her eggs in the stubs of Grey Mangrove (*Avicennia marina*) where there are colonies of *Crematogaster* ants. It has a symbiotic relationship with the ants: the ants carry the larvae into their nests and feed on the excrement and the larvae feed on developing ants.

Loss of habitat is the biggest threat to this insect as it is only found in mangroves.

<http://www.iucnredlist.org/details/313/0>





### **Mangrove Skimmer, *Orthetrum poecilops***

Status: Vulnerable

Range: Very localised in China, Hong Kong and Japan

This species is a marine dragon fly, restricted to coastal habitats and can only be found either in mangrove forests or on the mud flats near them. The males are territorial and the females will visit in mornings and evenings.

Coastal development and aquaculture are the biggest threats to this insect, resulting in habitat loss and degradation.

<http://www.iucnredlist.org/details/60302/0>

## **Reptiles**



### **Hawksbill Turtle, *Eretmochelys imbricate***

Status: Critically Endangered

Range: Tropical and subtropical waters of the Atlantic, Indian and Pacific oceans

This animal is migratory and occupies many different habitats during its lifetime. Mangroves are an essential habitat for older juveniles and adults, offering protection and food. One sub-population in Central America nests and lives in mangrove estuaries all year round. Hawksbills are long-lived animals which can take between 20-40 years to reach maturity. There has been an 80% decrease in the number of turtles over the last 3 generations and the population is still decreasing.

The major threats to this species are the Tortoiseshell trade, egg collection, destruction of nesting and foraging habitat, hunting for meat and entanglement in fishing equipment.

<http://www.iucnredlist.org/details/8005/0>



### **King Cobra, *Ophiophagus Hannah***

Status: Vulnerable

Range: Southeast Asia and parts of India

Although this species is widespread, it is not common in any of the areas it occurs. It is venomous and can reach almost 6m in length. It can be found in mangrove forests but has a range of habitats. It's diet consists mostly of other snakes but it will also eat birds, rodents and lizards.

Deforestation and agriculture development are leading to habitat loss which is the biggest threat. However this reptile is also hunted for its skin and body parts for traditional Chinese medicine.

<http://www.iucnredlist.org/details/177540/0>



### **American Crocodile, *Crocodylus acutus***

Status: Vulnerable

Range: Atlantic coast of South and Central America up to Florida and Pacific Coast of Mexico to Peru

This reptile is the most widespread of the New World Crocodiles. They are mostly found in coastal habitats such as lagoons and mangroves but also inhabit freshwater. Their main prey is fish but adults have been known to hunt animals as large as cattle. A male adult can grow to nearly 4.5m long. Over the last 75 years the population has declined by 30%.

Coastal development is leading to a loss of nesting ground and loss of mangrove habitat for this species. Despite a ban, illegal hunting for this crocodile's skin is an on-going threat. This species is also hybridising with other *Crocodylus spp.* but it is unclear yet whether this will have a long-term detrimental affect on the population.

<http://www.iucnredlist.org/details/5659/0>



### **Four-Toed Terrapin, *Batagur baska***

Status: Critically Endangered

Range: 5 countries in Southeast Asia

Found in tidal areas of estuaries, this turtle lays its eggs in riverbanks and sandbars. This animal is listed under CITED appendix I which is meant to be the highest level of protection from trade, yet it's population is declining rapidly and has become extinct in 4 countries over the last 15 years.

The biggest threat comes from illegal trade of the animal, especially in China.

<http://www.iucnredlist.org/details/2614/0>





# Fish



## **Sharptooth Lemon Shark, *Negaprion acutidens***

Status: Vulnerable

Range: Indian ocean and western, Central Pacific

Found in tropical waters including coral reefs and mangrove estuaries, this fish dwells on the bottom of the ocean and has a limited movement range. It feeds on bony fish and can grow up to 3m as an adult but its threat to humans is relatively low.

The major threat to this fish is habitat loss through coral reef destruction by pollution and dynamite fishing, along with deforestation of mangroves throughout Southeast Asia. It is very susceptible to heavy localised fishing and has become extinct in local areas in Thailand and India because of this.

<http://www.iucnredlist.org/details/41836/0>



## **Roughnose Stingray, *Pastinachus solocirostris***

Status: Endangered

Range: Western-central Pacific: Malaysia, Brunei, Singapore and Indonesia.

Little is really known about this stingray and its population size is unknown. It mainly occupies mangrove estuaries and coastal areas in very shallow waters. It has a very restricted range and habitat and dwells on the sea bed.

The rapid destruction of mangroves for aquaculture is a serious threat for this animal. It is also exploited by for its shallow water habitat and over-fishing are the main threats to this animal.

<http://www.iucnredlist.org/details/161465/0>

Picture of *Pastinachus* spp.

## **Tiger Tail Seahorse, *Hippocampus comes***

Status: Vulnerable

Range: Primarily Philippines

These fish are found in coral reefs, seagrass beds and mangroves. They are nocturnal and are ambush predators, eating anything small enough to swallow from tiny invertebrates to fish fry. It uses its tail to grasp onto coral, sponge and sea grass and its habitat is very localised. These seahorse mate for life and it is the male that gives birth rather than the female.

They are under threat for use in traditional “medicines” and the aquarium trade. It is also affected through by-catch and habitat degradation from fishing techniques and development. The unique behaviour of fidelity towards a partner means the sea horse may never reproduce if one partner is lost.

<http://www.iucnredlist.org/details/41008/0>

## **Mangrove Whipray, *Himantura granulate***

Status: Near Threatened but close to vulnerable

Range: Eastern Indian and Western Pacific Oceans, coastal.

This is a large (141cm across) stingray that prefers shallow, coastal waters including mangroves. Its population across its range is unknown but it is much less common than other *Himantura* spp.

Threats mostly come from industrial fishing across its range, but habitat loss and pollution are also affecting numbers.

<http://www.iucnredlist.org/details/161431/0>

## **Fin-joined Goby, *Gobulus birdsong***

Status: Critically Endangered

Range: Only in 2 mangrove streams leading to the Panama Canal, Gulf of Panama

This little fish—up to 7.2cm—is endemic to this part of Panama and is incredibly rare. It depends on the mangrove forests it lives in and is only found in their shallow, fresh waters. It is carnivorous and feeds on invertebrates found on the bottom of the sea, such as molluscs, crabs and worms.

The biggest threat to this fish is habitat loss due to coastal development in Panama.

<http://www.iucnredlist.org/details/183832/0>



# Flora



## **Pelliciera rhizophorae**

Status: Vulnerable

Range: Caribbean coast of Central and South America

This rare mangrove species has 5 small and separate populations along its range. It is restricted in its distribution and these populations are declining. It is a relatively small tree that has specific salinity needs and is the main habitat for the endangered Mangrove hummingbird.

The main threat to this mangrove is deforestation. Due to its localised populations, it is also at risk from unpredictable storms. Rise in sea level is also a threat.

<http://www.iucnredlist.org/details/178833/0>



## **Bruquiera hainesii**

Status: Critically Endangered

Range: Singapore, Malaysia and Papa New Guinea

This is an extremely rare species and only has around 200 known individual trees left. It has low propagation and germination rates, but can grow 30m tall with the right conditions.

The main threats are coastal development and deforestation. Because of the slow growth and production of this species it does not have time for recovery in the same way others that are faster would.

<http://www.iucnredlist.org/details/178834/0>



## **Sonneratia griffithii**

Status: Critically Endangered

Range: North-East coast of Bay of Bengal, Andaman Coast and coasts of Andaman Islands

There are less than 500 mature individuals left spread out in a patchy distribution and this population is decreasing with an overall decline of 80% since 1950.

Coastal development for shrimp farms and agriculture continue to be a threat to this species, despite it being fast-growing and colonising.

<http://www.iucnredlist.org/details/178799/0>



## **Avicennia bicolor**

Status: Vulnerable

Range: Eastern Tropical Pacific from Mexico to Columbia

This species population has declined by around 30% over the last 30 years. It is a canopy tree reaching up to 15m and can withstand relatively high salinity levels compared to other mangrove species.

The major threat to this species is cattle grazing: either the land is cleared or the cattle graze under the mangroves and damage/destroy the undergrowth and any potential regeneration. It is also under threat from aquaculture and urban development.

<http://www.iucnredlist.org/details/178847/0>



## **Camptostemon philippinense**

Status: Endangered

Range: Indonesia and the Philippines

There are estimate to be less than 1200 mature species across its range in a restricted and patchy distribution with this number decreasing. It is found on the edge of mangrove forests along tidal creeks.

Fish and shrimp aquaculture is a severe threat to this species, especially in the Philippines. It is targeted locally as a source of wood for various uses and pollution is also a problem.

<http://www.iucnredlist.org/details/178808/0>



## **Heritiera fomes**

Status: Endangered

Range: From the Sundarbans in India spreading down the coast to Northern Malaysia

This species can be common in local populations but has a limited overall distribution. The population in India and Bangladesh is rapidly declining. It prefers fresh water and can grow rapidly in such conditions, up to 25m tall.

This species is quickly disappearing in many parts of its range due to coastal development (urban, agricultural and industrial), disease, typhoons, aquaculture and selective cutting for charcoal.

<http://www.iucnredlist.org/details/178815/0>







### ***Heritiera globosa***

Status: Endangered

Range: Endemic to Borneo

There is little information about this extremely rare species. It is only found in freshwater-dominated riverine areas and can grow to more than 25m but this is a slow process.

Logging to create timber and palm oil plantations are destroying the habitat for this mangrove species.

<http://www.iucnredlist.org/details/178807/0>

*Heritiera* spp.

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