

COWABUNGA!: A THEMATIC GUIDE TO GLOBAL TURTLE AND TORTOISE STAMPS

By Dr Steven Allain

We join Dr Steven Allain for a 'slow-paced' thematic look at some of the many turtle and tortoise species to see how these incredible creatures have been celebrated on stamps from around the world.

If I were to ask you to guess how many turtle and tortoise species are currently recognised by science globally, what would your answer be? 50? 100? 200? At the time of writing, there are currently more than 360 species that can be found across the world, and it is likely that there are many more awaiting discovery.

There is somewhat of a paradox in my mind when it comes to turtles though, as they are a ubiquitous addition to our oceans yet there are only seven species of sea turtles. This means that there are over 350 other species in the group known to scientists as the Testudines, which encompasses all turtles, terrapins, and tortoises. We're going to take a quick look at some of these species that have been immortalised on the stamps of different countries and learn a little bit about each of them on our journey.

The stamps

The first of these sees us starting relatively close to home with the European pond turtle (*Emys orbicularis*), which is a freshwater turtle species native to Europe and parts of Asia. It inhabits various aquatic habitats such as ponds, lakes, marshes, and slow-moving rivers. It can be recognised by its distinctive domed shell and webbed feet, with yellow-green speckles on their shell and skin. This species is primarily carnivorous, feeding on a diet of small invertebrates, fish, and amphibians. The European pond turtle has featured on a number of stamps over the years, but the one that stands out most to me is one of the earliest, which was produced by Albania in 1966 (Fig 1).

Next on our tour is one of the famed sea turtles I mentioned earlier, the green turtle (*Chelonia mydas*), which is a large marine turtle found in tropical and subtropical oceans around the world. They are known for their olive-green carapace (or shell), this species is primarily herbivorous, feeding on seagrasses and algae.



Fig 1 Albania's 1966 stamp illustrates the European pond turtle. Known for its domed shell and yellow-green speckles, it inhabits various freshwater environments and is native to Europe and parts of Asia

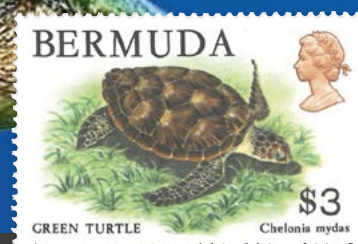


Fig 2 The essence of the endangered green turtle, known for its olive-green shell and long migrations between feeding and nesting grounds, is captured on this 1978 stamp from Bermuda



Fig 3 The Blanding's turtle, with its distinctive high-domed shell and bright yellow chin, is showcased on this 2019 stamp from Canada. It was issued to raise awareness about habitat loss and fragmentation of the threatened species



Fig 4 The hawksbill turtle, pictured here on a 2014 Indonesia stamp, is a critically endangered sea turtle species which lives in tropical coral reef habitats

Green turtles are famous for their long migrations between feeding and nesting grounds, with females returning to the same beaches each year to lay their eggs. Again, the green turtle is one of those charismatic species that has been featured by multiple nations on their stamps through time, the one produced by Bermuda in 1978, however, captures the character of this species most (Fig 2). Nonetheless, green turtles are currently listed as endangered and threatened with extinction regardless of their charming appeal.

Staying in the Americas, let's visit the Blanding's turtle (*Emydoidea blandingii*) which is a semi-aquatic species native to North America, particularly found in wetlands, marshes, and shallow waters. This makes it very similar to the European pond turtle, with the two being quite closely related.

They are characterised by their high-domed, helmet-like shell and bright yellow chin and throat. Blanding's turtles are considered a threatened species due to habitat loss and fragmentation, with them also being listed as endangered. Fear not! Canada

celebrated this species in 2019 with a fantastic stamp that even follows the profile of the shell and head of a Blanding's turtle, making this example stand out from the crowd (Fig 3).

Back to the ocean now with the hawksbill turtle (*Eretmochelys imbricata*), a critically endangered sea turtle species distributed in tropical coral reef habitats worldwide. Known for its strikingly patterned shell and pointed beak, hawksbill turtles primarily feed on sponges. They are threatened by habitat loss, pollution, and illegal trade of their attractive shells.

The stamp shown in Figure 4 from Indonesia, dating to 2014, is one of a few of different denominations depicting this beautiful species at home under the waves.

National natural monument

The black-breasted leaf turtle (*Geoemyda japonica*) is a small species of turtle native to Japan, found only on the Ryukyu Islands. It is for this reason that the species was designated a national natural monument of Japan. Named for its dark-coloured plastron (the underbelly), this species is known for its shy and secretive behaviour, often hiding under leaf litter or in dense vegetation - which is how the species gets its name! They're also quite small, growing to only 15cm in length.

Like many of the species we're visiting together, the black-breasted leaf turtle is threatened with extinction. As you can imagine with a species that is such a source of national pride, this small but colourful species was featured on a Japanese stamp in 1976 (Fig 5).

The Chinese pond turtle (*Mauremys reevesii*), also known as the Reeves' turtle, is a freshwater turtle native to East Asia, particularly China and Korea. It inhabits ponds, streams and rice paddies, feeding on a varied diet of aquatic plants, insects, and small vertebrates.

They have an interesting history, as it is believed that the high demand for turtle plastrons for Shang divination rites may have seen this species farmed in antiquity. This is reinforced by archaeological findings of large caches of turtle shells dating to the period. Despite this potential link to pyromancy, this species too is endangered. You would have thought given the species' name that China would have championed this species, but the stamp I want to draw your attention to is from Korea, issued in 1996 (Fig 6).

South Asia is one of the areas with the most diversity in turtles, as we have already seen. Our next species continues this theme, being found throughout



Fig 5 The small and secretive black-breasted leaf turtle, native to the Ryukyu Islands of Japan, is featured on this 1976 Japanese issue



Fig 6 It is thought that in the Shang dynasty the Chinese pond turtle was bred in large numbers because its shell was used in divination rituals. It is shown here on a 1996 stamp from Korea

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Fig 7 Laos issued this stamp, which features the Southeast Asian box turtle, in collaboration with the WWF in 2004



Fig 8 You could be lucky enough to spot the Hermann's tortoise on holiday as it is native to Southern Europe, particularly the Mediterranean region. The stamp shown here from a set of four was issued in 1991 by Monaco

the Indo-Chinese subcontinent. The Southeast Asian box turtle (*Cuora amboinensis*) is found in various habitats including forests, swamps, and grasslands.

Recognised by its hinged plastron, which allows it to completely close its shell, this species is omnivorous, feeding on a range of plant matter and invertebrates. The species has been observed to contribute to seed dispersal for fig trees and other tropical plants. Our first stamp released in collaboration with the World Wildlife Fund (WWF) is from Laos, released in 2004, which features this rare and interesting species, as part of a set of four stamps (Fig 7).

European tortoise

Back to Europe now, and who would have guessed that the continent was home to tortoises? If you're lucky, you may have seen our next species on holiday. Hermann's tortoise (*Testudo hermanni*) is a medium-sized tortoise species native to Southern Europe, particularly the Mediterranean region. This species is characterised by its domed shell and distinctive yellow and black markings on its carapace. Hermann's tortoises are herbivores, grazing on a variety of grasses, weeds, and flowers.

The species is listed on Appendix II of the Convention on International Trade in Endangered Species (CITES), as demand for pet tortoises has extirpated them from some of their former range. The stamp I've chosen to demonstrate the splendour of this species is from a country most people will associate with Formula One more than tortoises. Monaco released a set of four stamps in 1991 with the WWF, with the one shown in Figure 8 being my favourite.

If you thought that the Galapagos was the only place with large tortoises, then think again! While they may not reach the size of their Ecuadorian cousins, the ploughshare tortoise (*Astrochelys yniphora*), also known as the angonoka, is a critically endangered tortoise species endemic to Madagascar.

There may be fewer than 400 of these tortoises left in the wild, being highly sought after in the illegal pet trade, making it one of the rarest and most threatened tortoises in the world. Despite this, there have been a number of captive breeding projects aimed at securing the future of this species, including one operated by the Durrell Wildlife Conservation Trust. In 1987, Madagascar released a stamp demonstrating the defining characteristics of this species, a highly domed and light brown carapace (Fig 9).

Agile climber

Staying in Africa, we have another species that helps to demonstrate the versatility and variety of tortoises. The pancake tortoise (*Malacochersus tornieri*) is a small species, growing to around 17cm, native to East Africa, primarily found in Kenya and Tanzania.

They are critically endangered and characterised by their flattened, flexible shell, and despite looks the pancake tortoise is an agile climber, often seen scaling rocky outcrops in its arid habitat. It primarily feeds on grasses and succulent plants, living in isolated colonies with males fighting for access to females.

The species is primarily threatened by habitat loss and collection for the illegal pet trade, themes that are starting to echo throughout our adventure. A stamp was released in 1977 by Kenya, again in partnership with the WWF to help raise awareness to the plight of this highly specialised species (Fig 10).

True giant

Returning to the ocean, we encounter a true giant. The leatherback (*Dermochelys coriacea*) is the largest of all sea turtle species and is known for its unique leathery shell, distinguishing it from other turtles. Found in all major oceans, leatherbacks are highly migratory, travelling vast distances in search of their primary prey, jellyfish.

They are classified as vulnerable due to threats such as entanglement in fishing gear and habitat degradation. You may be surprised to learn that they are frequent visitors to British waters, due to their size they don't mind the cold and our waters are full of their favourite meal.

There are countless countries that have featured leatherbacks on stamps, due to their near global distribution. However, the stamp produced by Tokelau (a dependent



Fig 9 Fewer than 400 of the large ploughshare tortoise are left in the wild. It is illustrated here on a stamp issued by Madagascar in 1987



Fig 10 Kenya released this stamp featuring the pancake tortoise in 1977. Despite its looks, it is an agile climber over rocky outcrops found in its natural environment



Fig 11 The largest of all sea turtle species, the leatherback, is found in all major oceans and travels vast distances. Tokelau produced a set of stamps in 1995 which included the one shown here



Fig 12 Native to sub-Saharan Africa, but also found in the Seychelles, is the carnivorous black terrapin which appeared on this 1983 stamp

You may be surprised to learn that they are frequent visitors to British waters, due to their size they don't mind the cold and our waters are full of their favourite meal



Fig 13 Despite its name, the eastern snake-necked turtle is harmless and is a unique species native to Australia. It appeared on this stamp released by Australia illustrating the country's reptile and amphibian diversity



Fig 14 The fourth largest species of tortoise in the world features on this Botswana stamp. As it's name suggests, the leopard tortoise has a distinctive leopard-like pattern on its shell and they are very well adapted to an arid habitat found in its native African savannas

territory of New Zealand) in 1995 as part of a set paying tribute to sea turtles, manages to demonstrate the true essence of this species (Fig 11).

The black terrapin (*Pelusios castaneus*) is a freshwater turtle species native to sub-Saharan Africa, commonly found in rivers, streams, and marshes. They have a dark-coloured shell and are relatively small in size, this species is primarily carnivorous, feeding on aquatic invertebrates, fish, and carrion.

Black terrapins can also be found in the Seychelles, where in 1983 they were featured on a stamp commemorating the wildlife of the country (Fig 12).

The eastern snake-necked turtle (*Chelodina longicollis*) is a unique species of turtle native to Australia. Unlike most of the wildlife that call this continent home, and despite its name, this species is harmless. It is characterised by its long, slender neck that it extends sideways to capture prey, resembling a snake. Found in various aquatic habitats, this species feeds on a diet of fish, insects and aquatic invertebrates.

As you would imagine for a nation such as Australia that is renowned for its unique faunal assemblage, the eastern snake-necked turtle is just one of the species featured in a special release acknowledging the country's diversity in reptiles and amphibians (Fig 13).

The leopard tortoise (*Stigmochelys pardalis*) is a large species of tortoise native to the savannas of Africa, being the fourth largest species of tortoise in the world. As their name suggests, you can distinguish leopard tortoises from other species by the distinctive leopard-like markings on its shell. This species is primarily herbivorous, feeding on grasses, leaves, and succulent plants, although they have been known to supplement their diet by gnawing on bones to provide calcium for their eggshells.

As you would imagine, leopard tortoises are well adapted to their arid habitat and can go for long periods without water. In 1980, Botswana released a series of stamps featuring some of the more notable reptiles found in the country, with the portrait of the leopard tortoise being among these (Fig 14).

Who knew that turtles did punk? The spiny turtle (*Heosemys spinosa*) is a captivating freshwater turtle species native to Southeast Asia. Renowned for its unique appearance, this turtle features distinctive spikes adorning its carapace, providing both protection and a striking visual characteristic.

Inhabiting freshwater environments such as streams, rivers, and marshes, the spiny turtle primarily feeds on aquatic plants, fruits, and occasionally small invertebrates. However, despite its intriguing features, the spiny turtle faces threats from habitat loss due to deforestation and illegal collection for the pet trade. Conservation efforts are crucial for safeguarding this species and its habitat. Thankfully, Cambodia helped to raise awareness of this species with a stamp issued in 2000 (Fig 15).

South America

We've neglected South America until now, not due to a lack of suitable species, but due to a deficiency in sufficient stamps. However, I managed to find an interesting example to share with you all.

The twist-necked turtle (*Platemys platycephala*) is a fascinating freshwater turtle species found in South America, particularly in the Amazon Basin and Orinoco River regions. This turtle species is aptly named for its unique ability to twist its neck sideways, enabling it to reach prey and navigate through dense aquatic vegetation with ease.

Twist-necked turtles primarily feed on small fish, insects and aquatic vegetation. Along with seven other species, the twist-necked turtle was the subject of a stamp released by Suriname in 1982 (Fig 16).



Fig 15 Renowned for its unique appearance, the spiny turtle has distinctive spikes adorning its carapace. Cambodia issued this stamp in 2000 which helped raise awareness of this threatened species



Fig 16 In 1982 Suriname released a stamp set depicting several turtle species, including the twist-necked turtle. This species can be found in the Amazon Basin and the Orinoco River regions of South America



Fig 17 The Sonoran Desert tortoise plays a vital role in the North American desert ecosystem it inhabits. As a burrow-digger, it provides habitat for other native species. This tortoise was featured on this stamp issued by the USA in 1999 as part of a set

Overexploitation for consumption, traditional medicine, and the pet trade, along with the illegal wildlife trade, continue to drive declines in turtle populations. Invasive species, and a lack of effective conservation policies and enforcement further compound these threats

The final species on our tour of testudines is the Sonoran Desert tortoise (*Gopherus morafkai*), which, as its name suggests, is a resilient species inhabiting the arid landscapes of the Sonoran Desert in North America.

Known for its iconic appearance and slow-paced lifestyle, this tortoise plays a vital role in desert ecosystems as both a herbivore and a burrow-digger, providing habitat for numerous other species. Given the importance of this species, it is no surprise that it was featured as part of a set dedicated to the wildlife of the Sonoran Desert, released by the United States in 1999 among other recognisable species (Fig 17).

Threats

The conservation threats to turtles globally are multifaceted and include habitat loss and degradation due to urbanisation, agriculture, and coastal development, which can be exacerbated by climate change-induced impacts such as rising temperatures and sea level rise. Turtles are in an extremely precarious position as most species rely on temperature-dependent sex determination, whereby the temperature at which their eggs are incubated determines the sex of the developing embryos. As the world warms, the sex ratio of each population becomes more and more skewed towards females. With males declining, some populations may collapse within our lifetimes. There is the additional threat of pollution, particularly from plastic debris which turtles may mistake for food, and the incidental capture in fishing gear, known as bycatch.

Overexploitation for consumption, traditional medicine, and the pet trade, along with the illegal wildlife trade, continue to drive declines in turtle populations. Invasive species, and a lack of effective conservation policies and enforcement further compound these threats. Addressing these challenges requires collaborative efforts focused on habitat protection, sustainable resource management, pollution reduction, and enforcement of wildlife protection laws, alongside public awareness and education initiatives. The stamps I have shared with you act not only as a prepayment to post mail, but also as ambassadors to the testudines and their conservation needs.