



## Cochin Forest Cane Turtle

*Vijayachelys silvatica* (HENDERSON, 1912)

**Characteristics:** Carapace oval, flat with three keels. Vertebrae broader than long (sometimes Vertebral I as broad as long), I wider than broad or as wide as broad, II almost as broad as long (may be variable), III and IV longer than wide, V wider than long. Upper jaw truncated with median hook. Plastron almost as long as carapace, axillary and inguinal scute small (sometimes inguinal absent). Digits webbed, toes without webbing (or with faint webbing).

Carapace brown to reddish-brown. Face reddish-yellow or olive grey, iris red sometimes with a white ring within.

**Recognised Subspecies:** None.

**Global Distribution:** India.

**Habitat and Ecology:** A terrestrial species, associated with forests. Omnivorous.

**Breeding:** Clutch size 1–4, incubation period 91–96 days.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for food and pet trade.

**Size:** 13.9 cm.



Photo: S. Harikrishnan

*Vijayachelone sinuatica*



Map showing global distribution of *Vijayachelys silvatica*



Ventral view of *Vijayachelys silvatica*

Photo: Peter Praschag



A variation in head colour of *Vijayachelys silvatica*

Photo: Deepak, V.



GEOEMYDIDAE

## Indian Eyed Turtle

*Morenia petersi* (ANDERSON, 1879)

**Characteristics:** Carapace convex with vertebral keel. Nuchal scute broader than long. I vertebral longer than broad, II–V broader than long. Plastron as long as carapace, truncated anteriorly. Axillary and inguinal scutes large. Head small, snout pointed. Upper jaw strongly notched at middle. Circular plate behind mouth angle. Digits fully webbed.

Carapace olive or black. Yellow margins present between two plates. Plastron yellow or orange.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Bhutan, India, Nepal.

**Habitat and Ecology:** An aquatic species, mainly associated with standing water bodies and sometimes rivers. Omnivorous.

**Breeding:** Clutch size 3–7, incubation period 76–149 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Not Listed.

**Threats:** Habitat loss and hunted for food.

**Size:** 22 cm.

Photo: Shailendra Singh



*Morenia petersi*

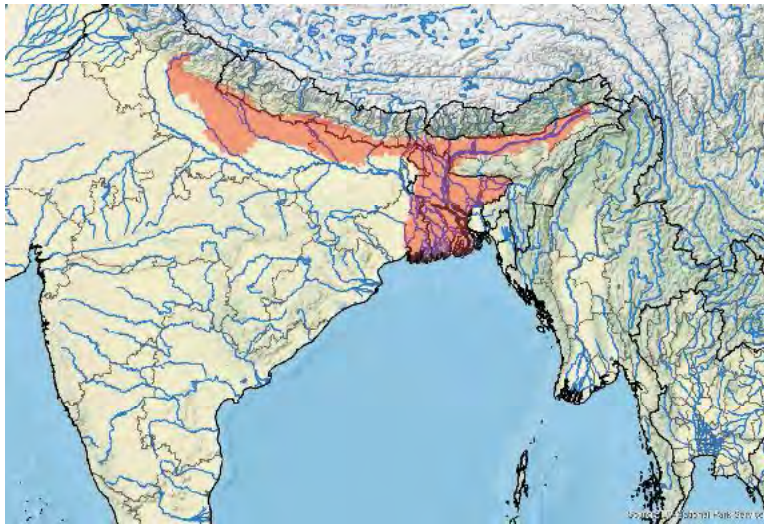


GEOEMYDIDAE

Photo: Shailendra Singh



Ventral view of *Morenia petersi*



Map showing global distribution of *Morenia petersi*



## Three-keeled Turtle

*Melanochelys tricarinata* (BLYTH, 1856)

**Characteristics:** Carapace elongated with three narrow keels with vertebral keel being prominent. Pleurals broader than vertebrals. Plastron as long as carapace, feebly angulated with perpendicular lines. Axillary scutes generally present, inguinal generally absent. Large shields on posterior of head, jaws feebly notched. Fingers half webbed, toes feebly webbed.

Carapace light brown to black. Keels yellow or light brown. Plastron brownish, cream or orange.

**Recognised subspecies:** None.

**Global Distribution:** Bangladesh, Bhutan, India, Nepal.

**Habitat and Ecology:** A terrestrial species, mainly associated with Sal forests and grasslands. Omnivorous.

**Breeding:** Clutch size 1–6, incubation period 60–72 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix I.

**Threats:** Hunted for flesh and habitat loss from forest fire.

**Size:** 17 cm.

Photo: Jayaditya Purkayastha



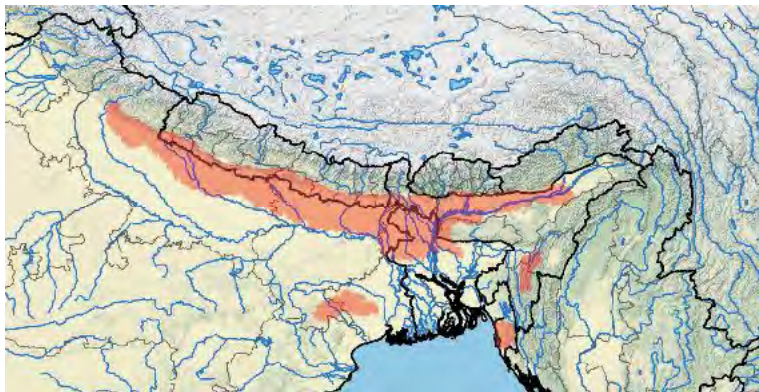
*Melanochelys tricarinata*



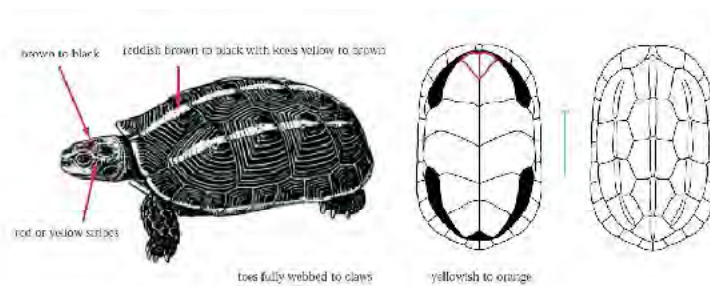


Photo: Jayadiya Purkayastha

Ventral view of *Melanochelys tricarinata*



Map showing global distribution of *Melanochelys tricarinata*



Line diagram of *Melanochelys tricarinata*



## Indian Black Turtle

*Melanochelys trijuga* (SCHWEIGGER, 1812)

**Characteristics:** Carapace elongated, moderately depressed and tricarinate. Vertebrae I to IV as long as broad (occasionally longer than broad), V broader than long. Nuchal scute small, triangular. Plastron as long as carapace. A typical octagonal 2<sup>nd</sup> neural. Upper jaw mesially notched. Digits fully webbed. Plastron truncated anteriorly.

Carapace brown or blackish. Plastron white with yellow margins. Head grey with yellow spots.

**Recognised Subspecies:** *M. t. thermalis* (South-Eastern India and Southern Sri Lanka) is the smallest form with maximum carapace length of 23 cm, head grey with reddish pink spots. *M. t. trijuga* (Peninsular India, excluding the west coast) has a maximum carapace length of 25 cm, head with pale yellow reticulation. *M. t. coronata* (Western coast of India) has a maximum carapace length of 26 cm, head with dark diamond shaped mark, *M. t. edeniana* (Myanmar and Western Thailand) has a maximum carapace length of 28 cm, head brown or grey, *M. t. indopeninsularis* (North-East India, Nepal, Bangladesh) has a maximum carapace length of 34 cm, head olive brown with a spear-shaped mark and *M. t. parkeri* (Northern Sri Lanka) has a maximum carapace length of 38 cm, head olive brown sometimes with orange spots.

**Global Distribution:** Bangladesh, Bhutan, India, Nepal.

**Habitat and Ecology:** An aquatic species, mainly associated with standing water bodies, sometimes rivers. Omnivorous.

**Breeding:** Clutch size 3–7, incubation period 76–149 days.

**IUCN Redlist Status:** Near Threatened.



Photo: Anirban Chaudhuri

*Melanochelys trijuga*





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**CITES:** Not Listed.

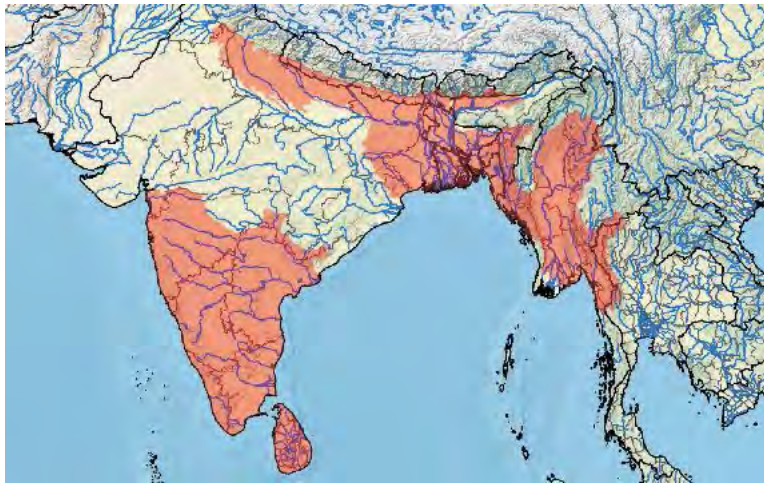
**Threats:** Hunted for food and habitat loss.

**Size :** 38 cm.

Photo: Anirban Chaudhuri

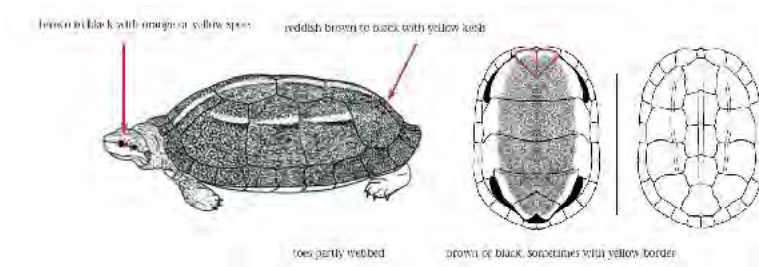


Ventral view of *Melanochelys trijuga*



Map showing global distribution of *Melanochelys trijuga*





Line diagram of *Melanochelys trijuga*



Photo: Shailendra Singh

*Melanochelys trijuga indopeninsularis* from India



Photo: Ruchira Somaweera

*Melanochelys trijuga thermalis* from Sri Lanka

GEOEMYDIDAE

Photo: Ruchira Somaweera



*Melanochelys trijuga parkeri* from Sri Lanka



## Brown Roofed Turtle

*Pangshura smithii* (GRAY, 1863)

**Characteristics:** Carapace oval and low. Vertebral I, III and IV longer than wide, II and V wider than long. Marginals in 12 pairs. Upper jaw with weak notch. Plastron almost as long as carapace, angulate laterally and truncated anteriorly, notched posteriorly. Inguinal large and axillary small. Fingers and toes webbed.

Carapace olive with middorsal brown or black stripe prominent anteriorly. Head and neck olive with orange or red spot behind eye. Lateral part of neck with yellow or cream stripes. Plastron white, largely pigmented.

**Recognised Subspecies:** *P. s. smithii* has dark pigmentation on plastron and body in general is pigmented. In *P. s. pallidipes*, plastron is lighter and body in general has reduced pigmentation.

**Global Distribution:** Bangladesh, India, Nepal, Pakistan.

**Habitat and Ecology:** Semi aquatic species mainly found in places with riparian vegetation. An omnivorous species showing more affinity to plant products.

**Breeding:** Clutch size 3–11, incubation period 140–156 days.

**IUCN Redlist Status:** Near Threatened.

**CITES:** Appendix II.

**Threats:** Hunted for food and pet trade.

**Size:** 23 cm.



GEOEMYDIDAE



Photo: Jayaditya Purkayastha

*Pangshura smithii*



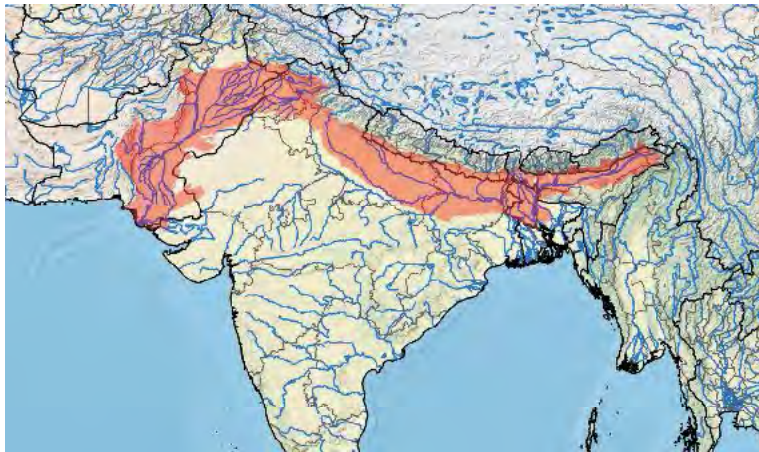
Photo: Jayaditya Purkayastha



Photo: Anirban Chauhuri



Ventral view: Left: *P. s. smithii*, Right: *P. s. pallidipes*



Map showing global distribution of *Pangshura smithii*



GEOEMYDIDAE

## Assam Roofed Turtle

*Pangshura sylhetensis* JERDON, 1870

**Characteristics:** Carapace oval, elevated, serrated posteriorly. Vertebral I (sometimes as wide as long), II and V wider than long, III and IV longer than wide. Marginal 13 pairs. Plastron almost as long as carapace, angulate laterally and truncated anteriorly, notched posteriorly. Inguinal and axillary shield large. Fingers and toes webbed.

Carapace olive or brown. Plastron yellow, with large dark spot in each scute. Head brown, a crescent orange mark present behind eyes. Neck stripes few in number or absent.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Bhutan, India.

**Habitat and Ecology:** A semi-aquatic species mainly found in fast flowing water bodies, also in creeks, rivulets. Carnivorous.

**Breeding:** Clutch size 6–12, incubation period around 140 days.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for food and pet trade.

**Size:** 18.5 cm.

Photo: Jayaditya Purkayastha



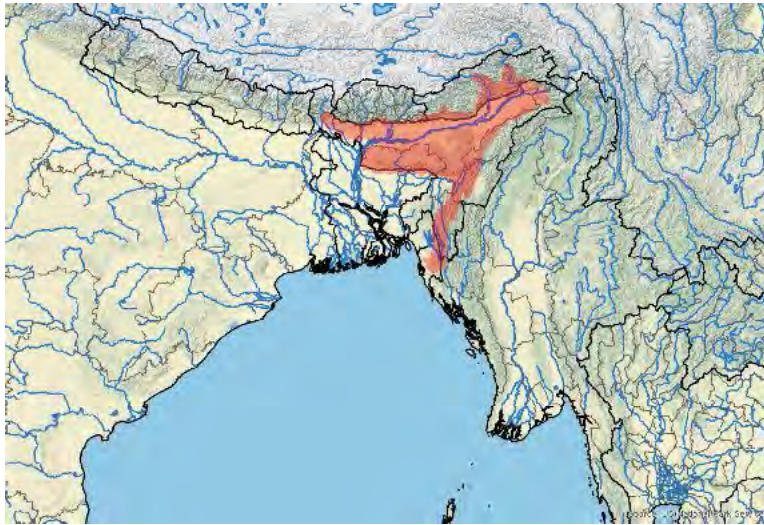
*Pangshura sylhetensis*

GEOEMYDIDAE

Photo: Jayaditya Purkayastha



Ventral view of *Pangshura sylhetensis*



Map showing global distribution of *Pangshura sylhetensis*





## Indian Roofed Turtle

*Pangshura tectum* (GRAY, 1831)

**Characteristics:** Carapace oval, elevated. Vertebral keels present. Vertebral I (sometimes as wide as long), III and IV longer than wide, V much wider than long, II of variable size. Marginals in 12 pairs. Plastron almost as long as carapace, truncated anteriorly, notched posteriorly. Inguinal and axillary shield subequal. Fingers and toes webbed.

Carapace brown or brownish-green with yellow or orange edge. Lateral part of neck with yellow or white stripes (more than in any other *Pangshura* species). Plastron cream or yellowish with black spots (over one per scute). Orange spot present in temporal region.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Bhutan, India, Nepal, Pakistan.

**Habitat and Ecology:** A semi-aquatic species mainly found in slow or standing water bodies. Predominantly herbivorous species.

**Breeding:** Clutch size 4–11, incubation 70–78 days.

**IUCN Redlist Status:** Least Concern.

**CITES:** Appendix I.

**Threat:** Hunted for pet trade.

**Size:** 17.3 cm.

Photo: Jayaditya Purkayastha

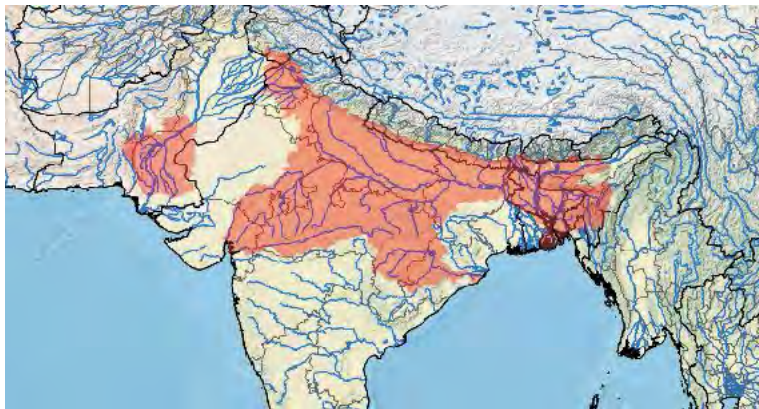


*Pangshura tectum*

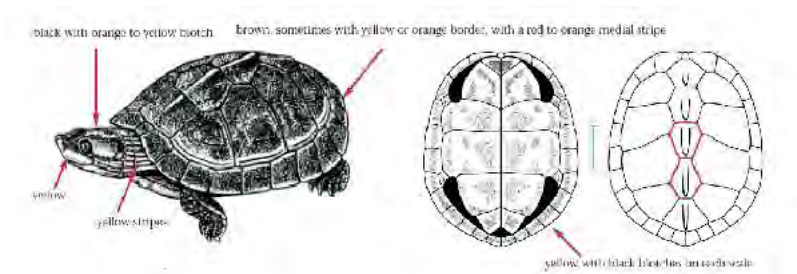


Photo: Jayaditya Purkayastha

Ventral view of *Pangshura tectum*



Map showing global distribution of *Pangshura tectum*



Line diagram of *Pangshura tectum*



Photo: Jayaditya Purkayastha



Fight between *Pangshura tentoria* and *Pangshura tectum*, Ugratara Temple, Guwahati





## Indian Tent Turtle

*Pangshura tentoria* (GRAY, 1834)

**Characteristics:** Carapace oval, elevated. Vertebral keels present. Vertebral I and II almost as broad as long, III and IV longer than wide, V wider than long. Marginals 12 pairs. Plastron almost as long as carapace, truncated anteriorly, notched posteriorly. Fingers and toes webbed.

Carapace olive with yellowish marginal edges. Neck stripes less numerous than in *Pangshura tecta*. Orange spot in temporal region faint or absent. An orange or red spot present behind tympanum. Plastron cream or yellowish with large dark blotches.

**Recognised Subspecies:** *P. t. tentoria* (Northern, Western and Central India) has brown carapace. Plastron yellow or cream with large black blotches. *P. t. circumdata* (Northern India, Nepal) has an olive green carapace. Plastron yellow or cream with large black blotches. A pink or orange ring runs through carapace circumference at junction between pleurals and marginal. *P. t. flaviventer* (Northern and Eastern India, Bangladesh) has a brownish olive carapace. Plastron yellow or cream in colour without blotches.

**Global Distribution:** Bangladesh, India, Nepal.

**Habitat and Ecology:** A semi-aquatic species, mainly found in river and associated systems. Omnivorous.

**Breeding:** Clutch size 3–10, incubation period 95–144 days.

**IUCN Redlist Status:** Least Concern.

**CITES:** Appendix II.

**Threat:** Hunted for food and for pet trade.

**Size:** 27cm



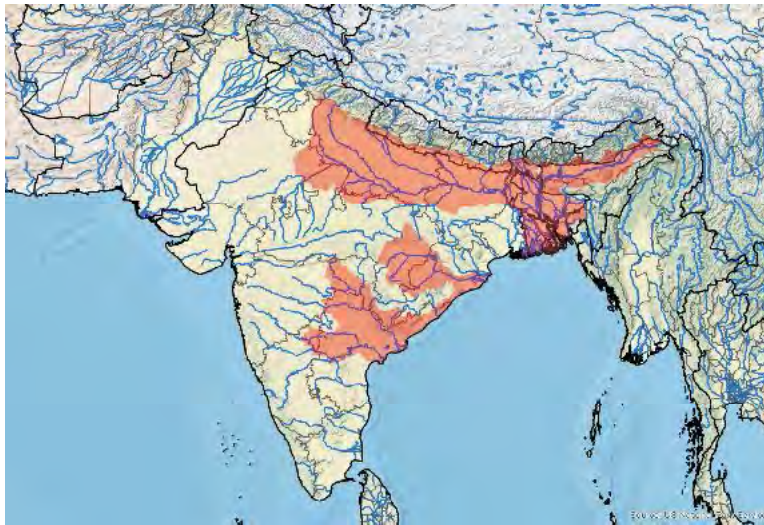
Photo: Jayaditya Pankayastha

*Pangshura tentoria*

Photo: Jayaditya Purkayastha



Ventral view of *Pangshura tentoria*



Map showing global distribution of *Pangshura tentoria*



GEOEMYDIDAE

## Arakan Forest Turtle

*Heosemys depressa* (ANDERSON, 1875)

**Characteristics:** Carapace depressed. Posterior edge of carapace serrated. Strong vertebral keel. 1<sup>st</sup> vertebral subequal. Plastron as long as carapace, truncated anteriorly. Axillary and inguinal scutes present. Upper jaw weakly bicuspid. Digits half webbed.

Carapace olive brown or brown sometimes with dark speckles. Head dark grey. Plastron yellowish brown with dark brown or black blotches.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Myanmar.

**Habitat and Ecology:** A semi-aquatic freshwater species. Predominantly omnivorous.

**Breeding:** Not much data exists but clutch size in one case was 4 and incubation period about 100 days.

**IUCN Red list Status:** Critically endangered .

**CITES:** Appendix II.

**Threats:** Local consumption as food, hunted for pet trade and for traditional Chinese medicine.

**Size:** 25 cm.





Photo: Shahrar C. Rahman

*Heosemys depressa*

GEOEMYDIDAE



Map showing global distribution of *Heosemys depressa*



Ventral view of *Heosemys depressa*

Photo: Shahriar C. Rahman



Head shot of *Heosemys depressa*

Photo: Indraneil Das



## Elongated Tortoise

*Indotestudo elongata* (BLYTH, 1854)

**Characteristics:** Carapace elongated, convex, its edge serrated. Vertebrae broader than long (I may be as broad as long), nuchal long and narrow. Plastron truncated anteriorly, notched posteriorly. Inguinal larger than axillary scute. Frontal usually subdivided. Upper jaw tricuspid.

Carapace brownish-yellow, with black blotches. Plastron yellow with black blotches.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Bhutan, Cambodia, China, India, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam.

**Habitat and Ecology:** Terrestrial species, mainly associated with Sal forests. Predominantly herbivorous.

**Breeding:** Clutch size 1–7, incubation period 96–165 days.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Pet trade, hunted for food and used in traditional medicine.

**Size:** 30 cm.

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TESTUDINIDAE



Photo: Jayaditya Purkayastha

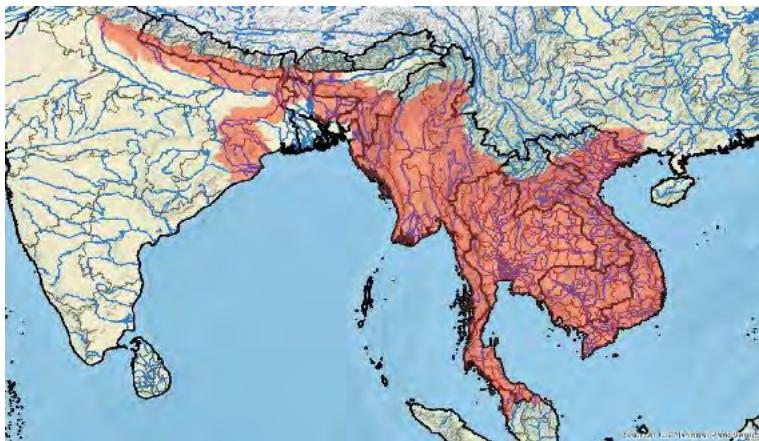
*Indotestudo elongata*



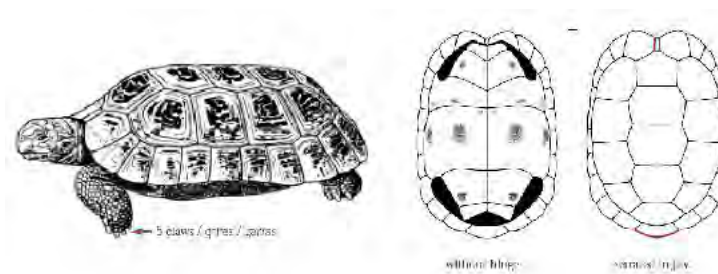


Photo: Jayadiya Purkayastha

Ventral view of *Indotestudo elongata*



Map showing global distribution of *Indotestudo elongata*



Line diagram of *Indotestudo elongata*



TESTUDINIDAE

## Travancore Tortoise

*Indotestudo travancorica* (BOULENGER, 1907)

**Characteristics:** Carapace elongated, convex, edge slightly serrated. Shell scutes similar to *I. elongata* except nuchal generally absent (and if present, is wedge-shaped). Plastron truncated anteriorly, notched posteriorly. Inguinal larger than axillary scute. Frontal usually entire. Upper jaw tricuspid.

Carapace brown or chocolate brown with black blotches. Plastron chocolate brown with dark blotches on each scute. Head yellowish or greenish-brown.

**Recognised Subspecies:** None.

**Global Distribution:** India.

**Habitat and Ecology:** Terrestrial species mainly associated with forests with rocky streams. Omnivorous.

**Breeding:** Clutch size 1–5, incubation period 141–149 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix II.

**Threats:** Hunted for food and habitat loss.

**Size:** 33 cm.



Photo: S. I. Iarickrishnan

*Indotestudo travancorica*



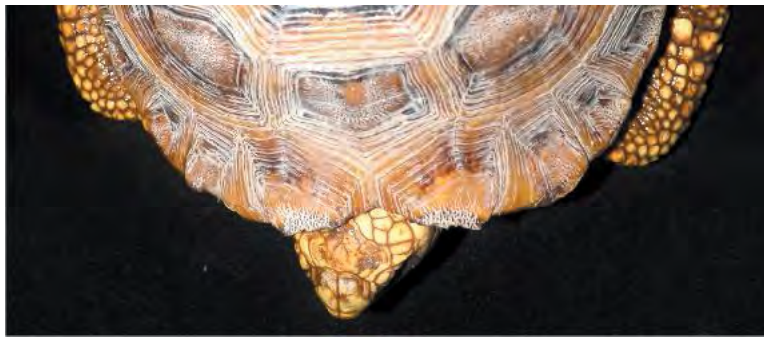
TESTUDINIDAE

Photo: Jayaditya Purkayastha

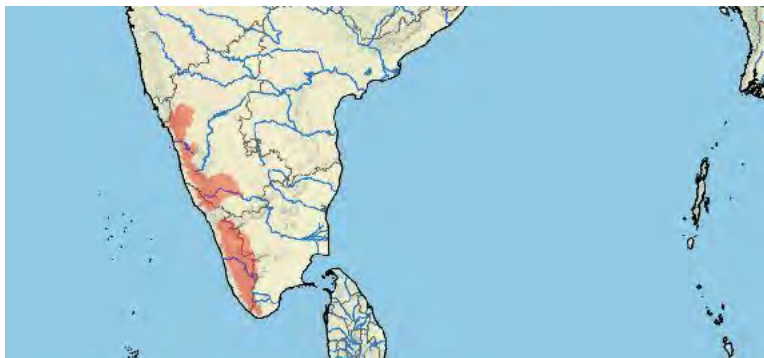


Ventral view of *Indotestudo travancorica*

Photo: Jayaditya Purkayastha



Nuchal absent in *Indotestudo travancorica*



Map showing global distribution of *Indotestudo travancorica*





## Asian Giant Tortoise

*Manouria emys* (SCHLEGEL & MÜLLER, 1844)

**Characteristics:** Carapace convex, vertebral scutes broad, 2 supracaudal scutes. Plastron sometimes larger than carapace, inguinal scute divided into two. Upper jaw feebly hooked.

Carapace dark brown or blackish-brown. Plastron greyish-black.

**Recognised Subspecies:** *M. e. emys* (Southern Thailand, Peninsular Malaysia, Sumatra and Borneo) has separated pectoral scutes while *M. e. phayrei* (Bangladesh, India, Myanmar, North-Western Thailand) has pectoral scutes that meet at the plastral midline.

**Global Distribution:** Bangladesh, India, Indonesia, Malaysia, Myanmar, Thailand.

**Habitat and Ecology:** A terrestrial species, mainly associated with hill forests. Predominantly herbivorous.

**Breeding:** Clutch size 23–51, incubation period 63–71 days.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for flesh, shell used by indigenous tribes.

**Size:** 60 cm.



Photo: Jayaditya Purkayastha

*Manouria emys*

Photo: Jayaditya Purkayastha

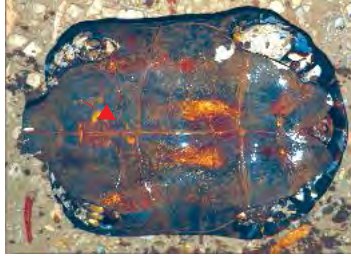
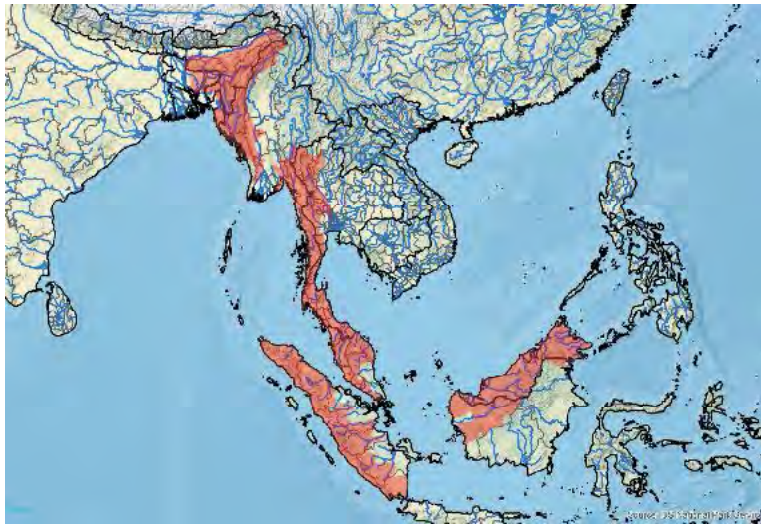
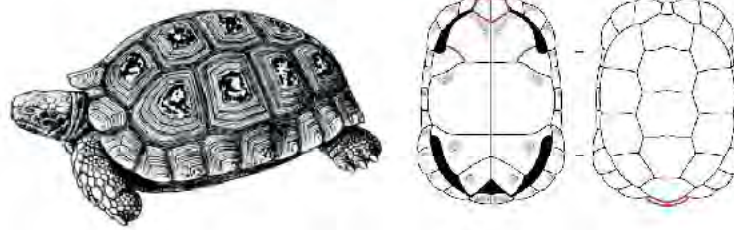


Photo: Anirban Chaudhuri

Left: *M.e.phayrei*, Right: *M.e.emys*



Map showing global distribution of *Manouria emys*



Line diagram of *Manouria emys*



TESTUDINIDAE

## Indian Star Tortoise

*Geochelone elegans* (SCHOEPF, 1795)

**Characteristics:** Shell elongated, dome-shaped. Nuchal absent, vertebral I as long as broad; II, III, IV, and V broader than long. Single axillary and inguinal scute present on each side of bridge. Upper jaw weakly bi- or tricuspid.

Carapace and plastron brown or black in colour with distinct yellow star patterns. Head darker in colour.

**Recognised Subspecies:** None.

**Global Distribution:** India, Pakistan, Sri Lanka.

**Habitat and Ecology:** A terrestrial species, mainly associated with dry conditions. Predominantly herbivorous species, but may scavenge on dead animals.

**Breeding:** Clutch size 1–7, incubation period 47–178 days.

**IUCN Redlist Status:** Least Concern.

**CITES:** Appendix II.

**Threats:** Hunted for pet trade, habitat loss.

**Size:** 38 cm.



Photo: Jayaditya Putkayastha



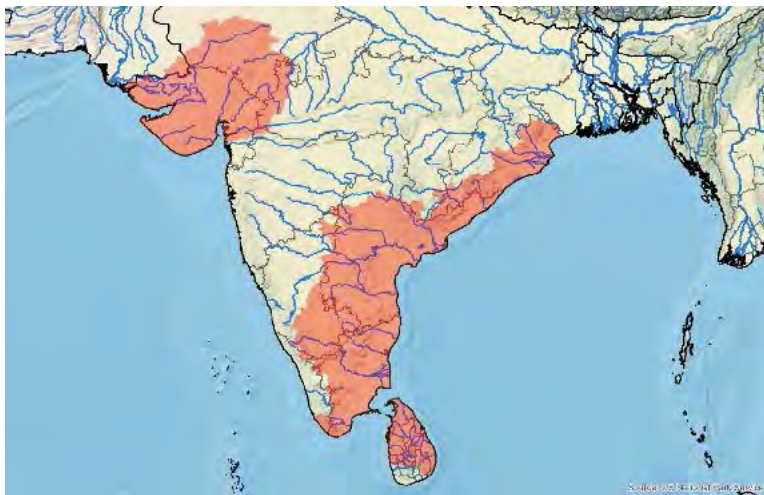
*Geochelone elegans*

TESTUDINIDAE

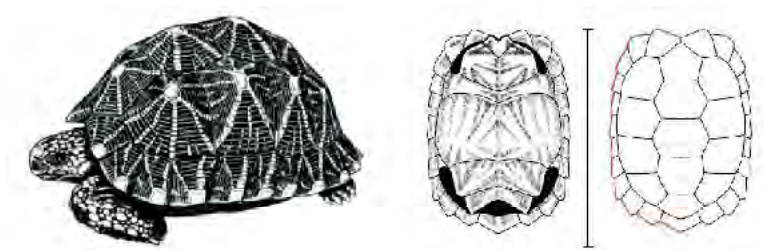
Photo: Jayaditya Purkayastha



Ventral view of *Geochelone elegans*



Map showing global distribution of *Geochelone elegans*



Line diagram of *Geochelone elegans*



## Central Asian Tortoise

*Testudo horsfieldii* GRAY, 1844

**Characteristics:** Carapace rounded, flattened. Vertebrae broader than long. Nuchal narrow. Marginals 12 pairs. Upper jaw tricuspid. Plastron almost as long as carapace, truncated or with light notch anteriorly and notched posteriorly. Axillary and inguinal scutes small. Digits webbed, toes without webbing (or with faint webbing).

Carapace brown to olive with back blotches on each scute. Plastron similar to carapace. Head yellowish brown.

**Recognised Subspecies:** None.

**Global Distribution:** Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan.

**Habitat and Ecology:** A terrestrial species adaptable to dry conditions. Predominantly herbivorous.

**Breeding:** Clutch size 2–9, incubation period 60–128 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix II.

**Threats:** Hunting for food and pet trade.

**Size:** 22 cm.



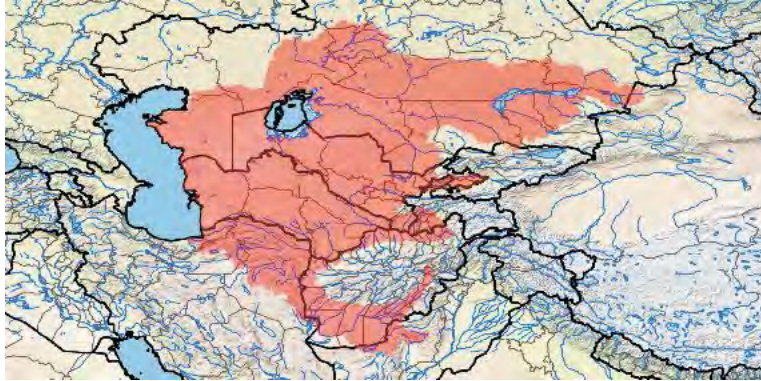
TESTUDINIDAE



Photo: Vladimir Motyaka

*Testudo horsfieldii*



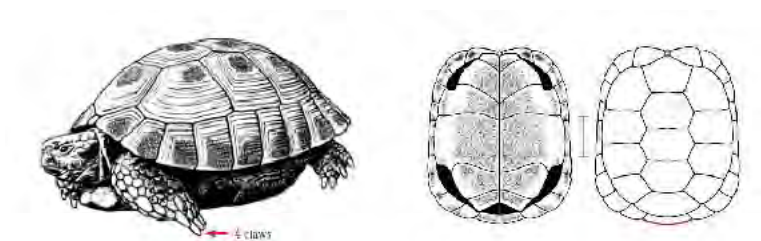


Map showing global distribution of *Testudo horsfieldii*



Photo: Jayaditya Purkayastha

Ventral view of *Testudo horsfieldii* (museum specimen)



Line diagram of *Testudo horsfieldii*



TRIONYCHIDAE

## Asiatic Softshell Turtle

*Amyda cartilaginea* (BODDAERT, 1770)

**Characteristics:** Carapace oval and flat. Pleurals eight pairs with last pair in contact with each other at midline. One neural plate between first pair of pleurals. Triturating surface of upper jaw with longitudinal ridges. Four, often poorly-developed plastral callosities present in adult. Digits strongly webbed, with large claws on three digits.

Carapace olive brown or olive green, with black reticulation or spots. Prominent black blotches present. Head and neck with yellow spots. Plastron grey. Juveniles with 4 dark circular spots on carapace.

**Recognised Subspecies:** None

**Global Distribution:** *Amyda cartilaginea* represents a species complex, distributed over Bangladesh, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, Vietnam. The taxonomic identity of population from Bangladesh and India remain uncertain.

**Habitat and Ecology:** Aquatic species, mainly found in slow-flowing rivers and lakes. Predominantly carnivorous.

**Breeding:** Clutch size 5–40, incubation period 95–140 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix II.

**Threats:** Hunted for food and habitat loss.

**Size:** 83 cm.



Photo: V. L. Hirima

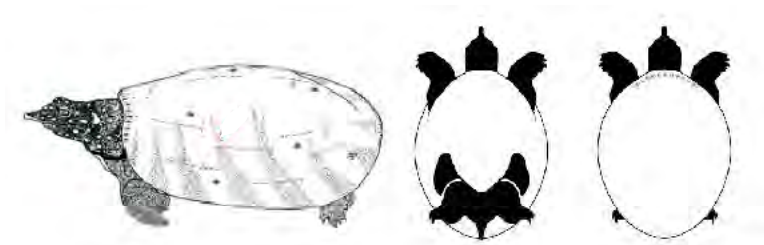
*Amyda carilaginea*

TRIONYCHIDAE

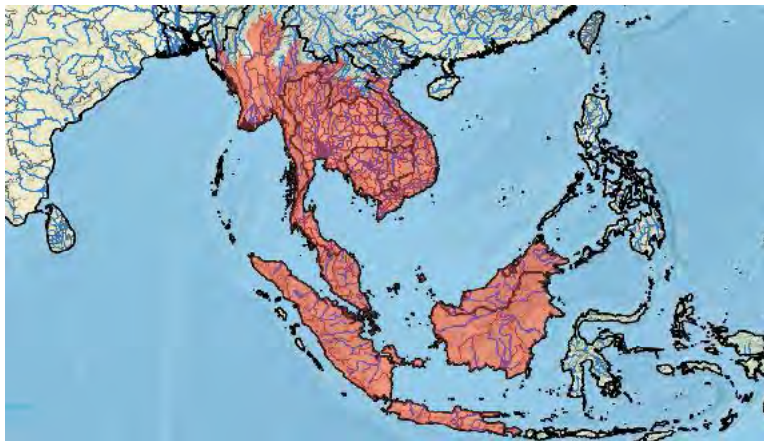
Photo: V. L. Hritina



Ventral view of *Amyda cartilaginea*



Line diagram of *Amyda cartilaginea*



Map showing global distribution of *Amyda cartilaginea*





## Indian Narrow-headed Softshell Turtle

*Chitra indica* (GRAY, 1831)

**Characteristics:** Carapace flat, a single neural present between first pair of pleural. Eyes set very close to tip of pointed snout. Short proboscis. Four plastral callosities present. Digits completely webbed. Limbs three-clawed.

Carapace and head olive grey. Grey lines with black border radiates from behind neck. Over carapace such line form reticulation pattern. Juveniles show greater contrast than adults. Plastron white.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, India, Nepal, Pakistan.

**Habitat and Ecology:** Aquatic species, associated with river systems. A specialised fish-eater, but may also ingest macroinvertebrates.

**Breeding:** Clutch size 60–170, incubation period 40–70 days.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for food and for traditional medicine, river development programme including construction of dams.

**Size:** 70 cm.

TRIONYCHIDAE

Photo: Jayaditya Purkayastha



*Chitra indica*



Photo: Jayaditya Purkayastha

Dorsal view of *Chitra indica*



Photo: Jayaditya Purkayastha

Ventral view of *Chitra indica*

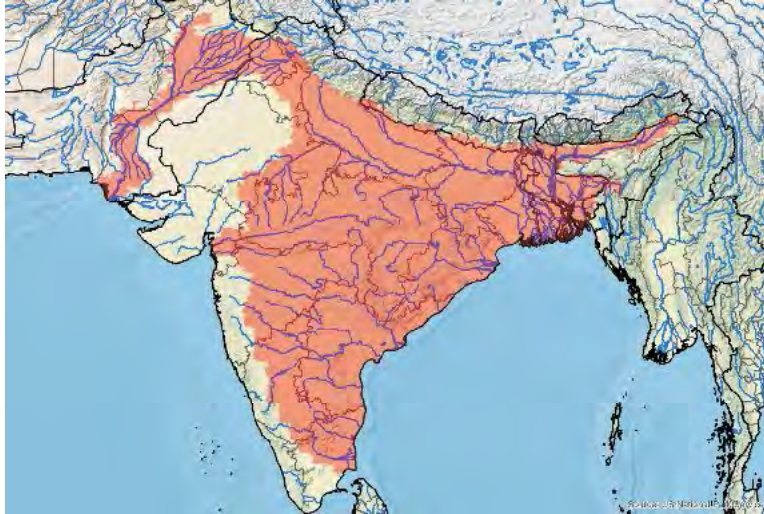


Photo: Jayaditya Purkayastha

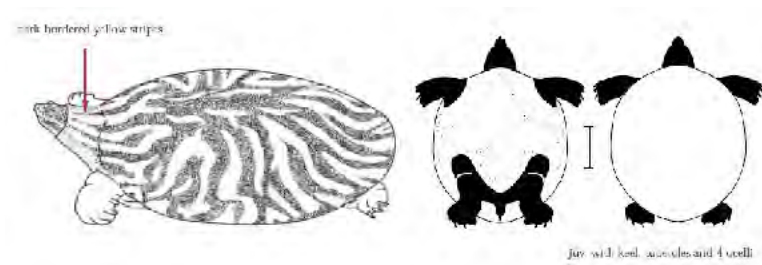
Head shot of *Chitra indica*



TRIONYCHIDAE



Map showing global distribution of *Chitra indica*



Line diagram of *Chitra indica*





## Sri Lankan Flapshell Turtle

*Lissemys ceylonensis* (GRAY, 1856)

**Characteristics:** This turtle was separated from Indian Flapshell (*Lissemys punctata*) based on molecular evidences (genes were 12S rRNA, Cytochrome b, ND4+). As of now, there is no confirmed morphological way to tell apart both the species (for morphological description, see *L. punctata*). Based on molecular data population of flapshell of Sri Lanka is differentiated from that of Indian population and assigned the name *Lissemys ceylonensis*.

**Recognised Subspecies:** None.

**Global Distribution:** Sri Lanka.

**Habitat and Ecology:** An aquatic species, associated with rivers, streams, ponds and lakes; also encountered in brackish water. An omnivorous species.

**Breeding:** No Data available, perhaps similar to *Lissemys punctata*.

**IUCN Redlist Status:** Not Evaluated.

**CITES:** Appendix II.

**Threats:** Hunted for flesh and harvesting of eggs.

**Size:** 30 cm.

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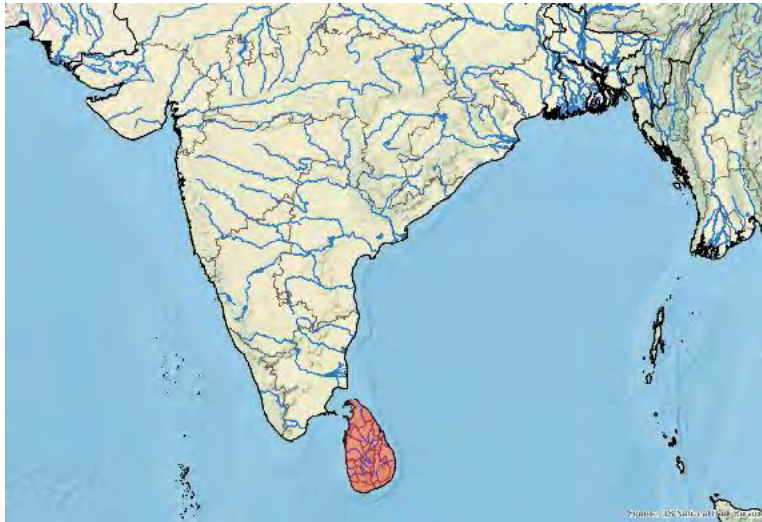
Photo: Ruchira Somaweera

*Lissemys ceylonensis*



Photo: Ruchira Somaweera

Head of *Lissemys ceylonensis*



Map showing global distribution of *Lissemys ceylonensis*



TRIONYCHIDAE

## The Indian Flapshell Turtle

*Lissemys punctata* (BONNATERRE, 1789)

**Characteristics:** Carapace oval, dome-shaped. Eight pair of pleurals, with 8th pair meeting medially. Two neural plates present between first pair of pleurals. Plastron with flaps and seven plastral callosities present in adults. Peripheral bones present. Digits strongly webbed with large claws.

**Recognised Subspecies:** *L. p. andersoni* (Pakistan, Northern India, Nepal, Bangladesh, Myanmar). Carapace olive with yellow spots. “V” shaped mark present behind eyes on the dorsal surface of head. Plastron white. In the other two subspecies *L. p. punctata* (Peninsular India) and *L. p. vittata* (India, Bangladesh), carapace lacks spots. Hybrids between *L. p. andersoni* and *L. p. vittata* are known.

**Global Distribution:** Bangladesh, India, Myanmar, Nepal, Pakistan.

**Habitat and Ecology:** An aquatic species, associated with rivers, streams, ponds and lakes; also encountered in brackish water. An omnivorous species.

**Breeding:** Clutch size 2–15, incubation period.

241–412 days.

**IUCN Redlist Status:** Least Concern.

**CITES:** Appendix II.

**Threats:** Hunted for flesh and harvesting of eggs.

**Size:** 35 cm.





Photo: Jayaditya Purkayastha

*Lisssemys punctata*

Photo: Jayaditya Purkayastha



Ventral view of *Lissemys punctata*

Photo: Jayaditya Purkayastha

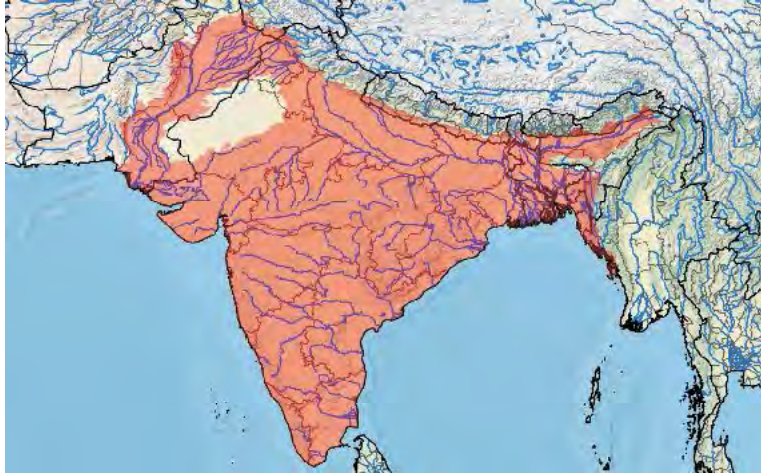


*Lissemys punctata vittata*

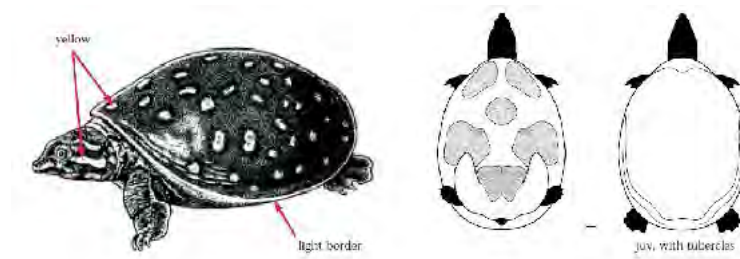
Photo: Indraneil Das



*Lissemys punctata punctata*



Map showing global distribution of *Lissemys punctata*



Line diagram of *Lissemys punctata*





TRIONYCHIDAE

## Peacock Soft-shelled Turtle

*Nilssonina hurum* (GRAY, 1831)

**Characteristics:** Carapace oval and flat, longitudinal rows of tubercles present. Pleurals in eight pairs. One preneural and two neural plates present between first pair of pleurals. Triturating surface of upper jaw without ridges. Five plastral callosities present in adults. Digits strongly webbed with large claws present on three digits.

Carapace olive green, head with black reticulation. Prominent, large grey, orange or yellow blotches present on snout and behind eyes. Plastron white. Juvenile with 4–6 dark circular spots bordered by yellow or orange on carapace.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, India, Nepal, Pakistan.

**Habitat and Ecology:** An aquatic species, associated with rivers, ponds and lakes. Predominantly carnivorous.

**Breeding:** Clutch size 10–30, incubation period unknown.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix I.

**Threats:** Hunted for food and harvesting of eggs. This species may be also affected by aquatic pollution.

**Size:** 60 cm.



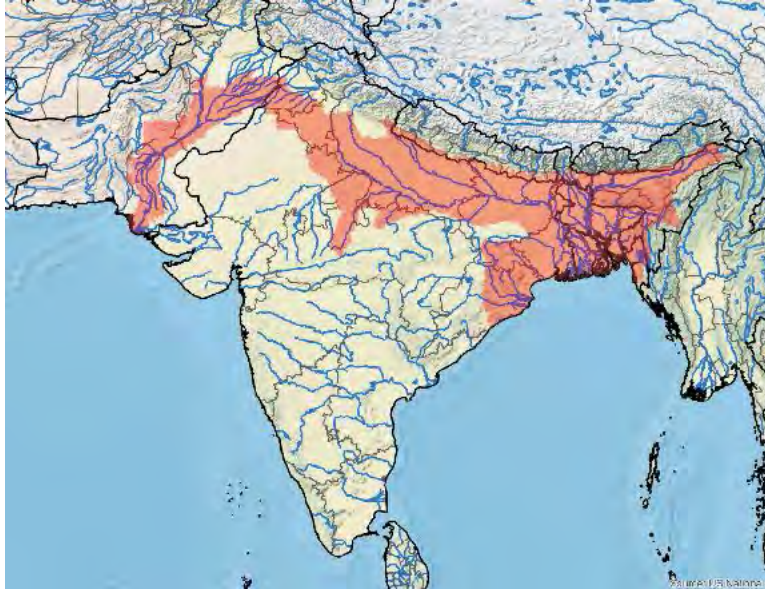


Photo: Jayaditya Purkayastha



*Nilssonia hurum*

TRIONYCHIDAE



Map showing global distribution of *Nilssonia hurum*

Photo: Jayaditya Purkayastha



Ventral view of *Nilssonia hurum*





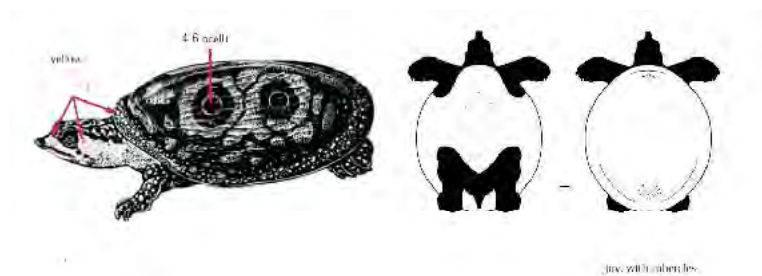
Photo: Jayaditya Purkayastha

Juvenile of *Nilssonina hurum*



Photo: Jayaditya Purkayastha

Head shot of *Nilssonina hurum*



Line diagram of *Nilssonina hurum*



TRIONYCHIDAE

## Ganges Softshell Turtle

*Nilssonia gangetica* (ANDERSON, 1875)

**Characteristics:** Carapace oval and flat. Pleurals in eight pairs. A preneural and one neural plate present between first pair of pleurals. Triturating surface of upper jaw ridge less. Five plastral callosities present in adults. Digits strongly webbed with large claws present in three digits.

Carapace grey or green with black reticulation. Head with oblique black lines running from behind eyes to nape. Plastron cream in colour. Juvenile with 3–6 dark circular spots on carapace.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, India, Nepal, Pakistan.

**Habitat and Ecology:** An aquatic species, mainly found in rivers, lakes. Predominantly carnivorous.

**Breeding:** Clutch size 25–35, incubation period 217–287 days.

**IUCN Redlist Status:** Vulnerable.

**CITES:** Appendix I.

**Threats:** Hunted for food and harvesting of eggs. Also affected by river development projects and removal of sand.

**Size:** 72 cm.





Photo: Gyanendra Deka/Sumit Das

*Nilssonina gangetica*

TRIONYCHIDAE

Photo: Gyanendra Deka/Sumit Das



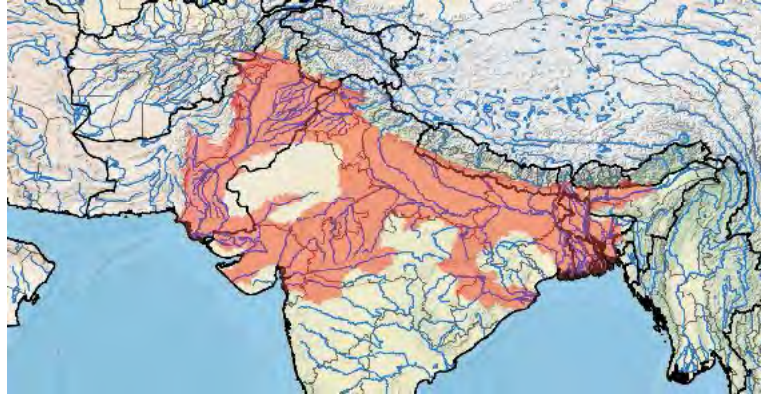
Head shot of *Nilssonia gangetica*

Photo: Gyanendra Deka/Sumit Das



Ventral view of *Nilssonia gangetica*



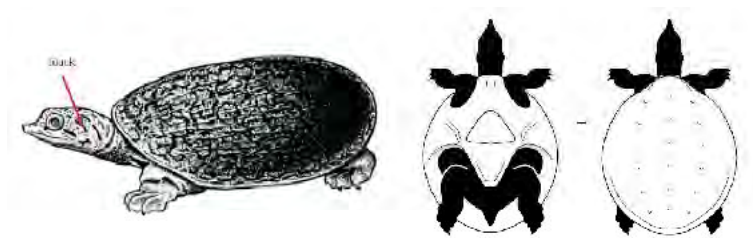


Map showing global distribution of *Nilssoniana gangetica*



Photo: Jayadiya Turkayastha

Juvenile of *Nilssoniana gangetica*



Line diagram of *Nilssoniana gangetica*



TRIONYCHIDAE

## Leith's Softshell Turtle

*Nilssonina leithii* (GRAY, 1872)

**Characteristics:** Carapace oval and flat. Pleurals in eight pairs. A preneural and one or two neural plates present between first pair of pleurals. Triturating surface of upper jaw flat with a median groove. Tubercles often present on anterior mesial edge of carapace.

Five plastral callosities present in adults. Digits strongly webbed with large claws present in three digits.

Carapace olive green, head with black lines running from behind eyes to nape. Yellow or orange spots present at the edge of jaw. Plastron white. Juveniles with 4 to 6 dark circular spots bordered by yellow or orange on carapace.

**Recognised Subspecies:** None.

**Global Distribution:** India.

**Habitat and Ecology:** An aquatic species mainly found in rivers. Predominantly carnivorous.

**Breeding:** Clutch size and incubation period unknown.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for food and collection of eggs.

**Size:** 70 cm.

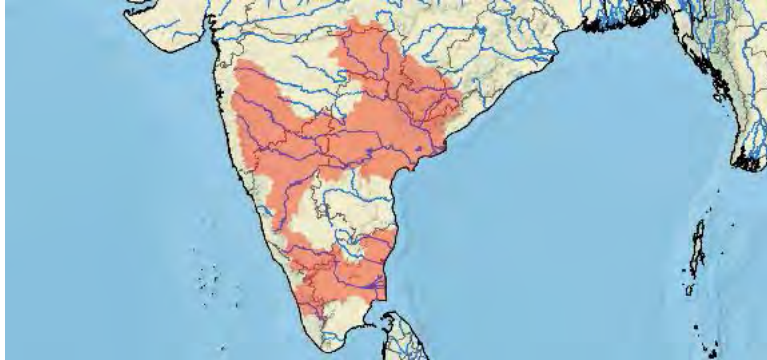




Photo: Shashwat Sirsi/TSA-India

*Nilssonia leithii*

TRIONYCHIDAE



Map showing global distribution of *Nilssonia leithii*

Photo: Shashwat Sirsi/TSA-India



Ventral view of *Nilssonia leithii*

Photo: Shashwat Sirsi/TSA-India



Head shot of *Nilssonia leithii*



## Black Softshell Turtle

*Nilssonina nigricans* (ANDERSON, 1875)

**Characteristics:** Carapace oval and flat, with longitudinal rows of tubercles. Pleurals in eight pairs. A preneural and two neural plates present between first pair of pleurals. Triturating surface of upper jaw with internal longitudinal ridges.

Five plastral callosities in adults. Digits strongly webbed with large claws present only in three digits.

Carapace olive green, head with black reticulation. Plastron white. Juvenile carapace with four dark circular spots bordered by yellow or orange.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, India.

**Habitat and Ecology:** An aquatic species of riverine systems, mainly present in community ponds across its range. Predominantly carnivorous.

**Breeding:** Clutch size 10–38, incubation period 92–108 days.

**IUCN Redlist Status:** Extinct in the Wild. Category needs revision.

**CITES:** Appendix I.

**Threats:** Hunted for food. Captive populations face fungal diseases in confined water of ponds.

**Size:** 90 cm.



TRIONYCHIDAE



Photo: Jayaditya Purkayastha

*Nilssonina nigricans*

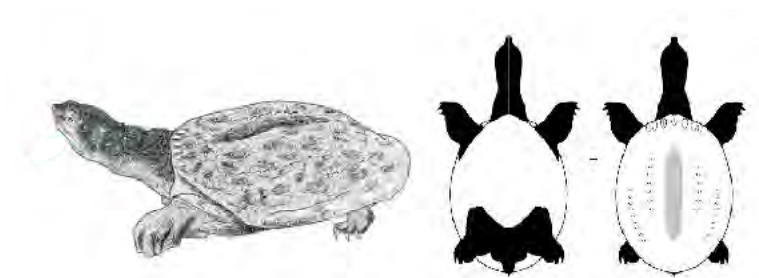


Photo: Jayaditya Purkayastha



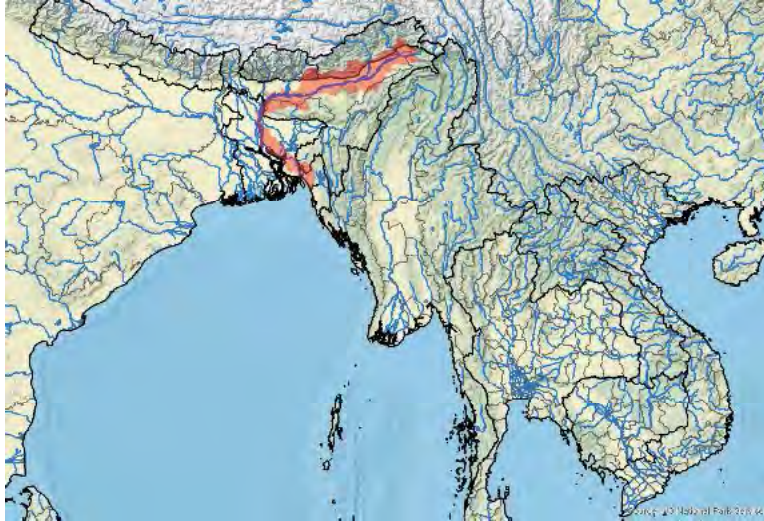
Photo: Jayaditya Purkayastha

Head shot of *Nilssonia nigricans*



Line diagram of *Nilssonia nigricans*

TRIONYCHIDAE



Map showing global distribution of *Nilssonia nigricans*





## Asian Giant Softshell Turtle

*Pelochelys cantorii* GRAY, 1864

**Characteristics:** Carapace oval and flattened. Pleurals in eight pairs. One or two neurals plates present between first pair of pleurals. Four plastral callosities present in adults. Digits strongly webbed with large claws present in three digits.

Carapace olive, greenish-brown with black reticulation pattern. Head and neck olive. Plastron cream coloured.

**Recognised Subspecies:** None.

**Global Distribution:** Bangladesh, Cambodia, China, India, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam.

**Habitat and Ecology:** An aquatic species associated with variety of aquatic environment including salt water. Predominantly carnivorous.

**Breeding:** Clutch size 24–70, incubation period unknown.

**IUCN Redlist Status:** Endangered.

**CITES:** Appendix II.

**Threats:** Hunted for food and egg collection; pet trade and habitat loss may also be important factors.

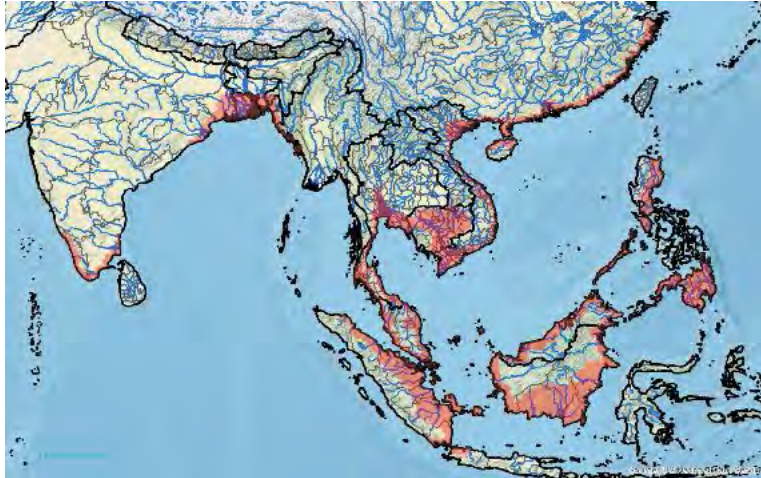
**Size:** 100 cm.

TRIONYCHIDAE



Photo: Indraneil Das

*Pelochelys cantorii*



Map showing global distribution of *Pelochelys cantorii*



Photo: Peter Praschag

Ventral view of *Pelochelys cantorii*



Photo: Indraneil Das

Head shot of *Pelochelys cantorii*



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**Saibal Sengupta** (born 1955) did his schooling at Bengali Higher Secondary School. He studied degree course with honors in Zoology at Cotton College and obtained Ph.D. from Gauhati University. He retired from Arya Vidyapeeth College as Associate Professor and is presently working as Professor in Zoology, University of Science & Technology, Meghalaya. He studied the amphibian and reptiles of northeast India, especially focusing on taxonomy and ecology. He has published several books and articles and more than 70 scientific papers.





