

**INDIAN IDENTIFICATION MANUAL
SPECIES AND DERIVATIVES IN TRADE
1993**

Editors

Iqbal Malik
Vivek Menon

Prepared by
TRAFFIC-India
a division of
WWF-India



Sponsored by
Ministry of Environment and Forests
Government of India

Identification Manual Scientific Committee

Iqbal Malik	:	Primates and Derivatives
Vivek Menon	:	Birds and Derivatives
B.C. Choudhury	:	Turtles and Otters
Ranjit Daniels	:	Reptiles
Romulus Whitaker	:	Reptiles
Issac Kehimkar	:	Butterflies
Renee Borges	:	Small Mammals
Ajith Kumar	:	Civets and Mongooses
R.P. Mukherjee	:	Primates
P.K. Hajra	:	Plants
G.S. Rawat	:	Plants
Rishad Naoroji	:	Birds of Prey

Production Support Group

Akhil Chandra	:	Design and layout
Tapan Ghosh	:	Production
Robson Ivan	:	Cartography
Amenita Ivan	:	Editorial assistance
Mohit Aggarwal	:	Production assistance
Rajeev Patial, Girija Raman and Sudha Mohan	:	Computer assistance

FOREWORD

India has always been a major entrepot for trade in wildlife species and the derivatives thereof. With a view to curb the burgeoning trade, India has enacted comprehensive legislation and put into place an enforcement machinery, made up of the wildlife and forest officials as well as the customs, police and other personnel. However, one major stumbling block in enforcement has been the identification of species and derivatives thereof.

The *Indian Identification Manual* is aimed at meeting this long felt need. It has been put together with the help of leading scientists and other experts of the country. The whole exercise has been coordinated by TRAFFIC-India, which is the wildlife trade monitoring division of WWF-India. I hope this Manual will be widely used by the concerned enforcement agencies and help them in discharging their duties more efficiently and effectively.

Samar Singh
Secretary General
WWF India

EDITORS' INTRODUCTION

International trade in wildlife species and their derivatives is now worth US\$ 20 billion a year. Of this, upto one-third is illegal, making it a possible candidate for being the second largest illegitimate business in the world (only narcotics are worth more). With snow leopard coats worth US\$ 35000, musk from the Himalayan musk deer worth US\$ 50000 per kg in Japan and a recent collection of 90 bird's eggs valued at US\$ 20000, the international wildlife mafia is making big profits. It is also threatening at least 500 animal and plant species with extinction and endangering 2000 or more animals and 24000 plants.

In India, we have more than 1200 species of birds, 340 species of mammals, 420 reptiles, 2000 fish and 50000 species of insects. Apart from this, the country is endowed with 45000 species of rare plants out of which at least 10 per cent are endangered and 4900 species are completely endemic to the country.

In 1973, alarmed by the deleterious effect of the ever-growing trade on wildlife populations, 80 countries signed the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). The treaty, which was meant to monitor and regulate trade in endangered species has today 120 signatories. CITES regulates commerce in more than 26000 species of animals and plants through its system of appendices that bans trade in heavily exploited species and monitors it in other less endangered but potentially threatened species.

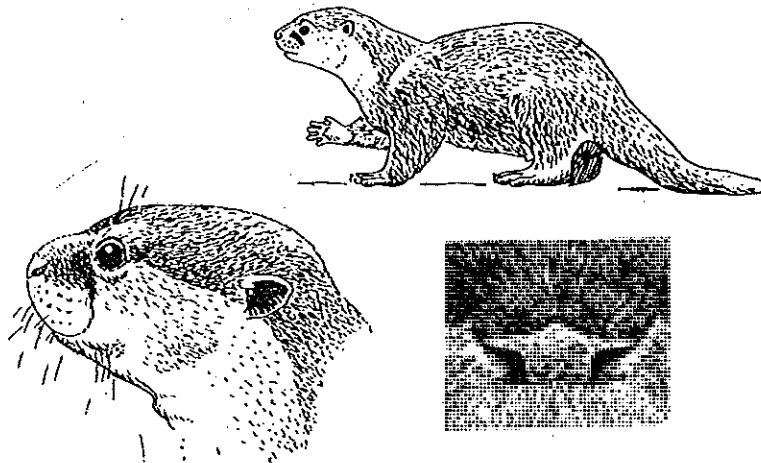
In addition to CITES, stringent national legislation for India came with the 1991 amendment of the Indian Wildlife (Protection) Act, 1972 that bans hunting of any wild fauna and includes specified endangered flora in its protected list. The Import Export Control Act of India also bans the export of any wildlife and its derivatives. Despite all these legislations, the period of 1991-93 saw more than 200 different seizures all over the country indicating that the trade was still going on in a covert fashion. These seizures represent only a fraction of the illegal trade in the country. Enforcement agencies ranging from wildlife and forest officials to the Indian Customs, the paramilitary, and the police among others, are all in one way or the other responsible for curtailing this trade. In the field, however, the personnel of these agencies face a multitude of problems. Prominent among them and one that crops up every now and then is their inability to ensure quick and correct identification of the goods that they examine. Even scientists find it difficult at times to distinguish between say ivory and bone or between original furs and clever stencilled imitations. To tell the difference between shed and sawed-off antlers or between fake and true musk pods requires a higher degree of expertise. Equally difficult is the identification of flora, say between medicinal plants of various kinds or between the bulbs of cultivated and wild collected orchids. At a tertiary level of

MAMMALS

Aonyx cinerea (Illiger, 1815)

Common names:	English	: Asian/Oriental small clawed otter
	Hindi	: Ud, Udbilao, Jal manus, Pani kutta
	Marathi	: Pan manjar, Jal manjar
	Kannada	: Neer nai
	Malyalam	: Neer nai
	Tamil	: Neer nai
	Telugu	: Neru kuka
	Oriya	: Odho
	Bengali	: Oudh
	Myanmarese	: Peerau

Scientific synonyms: *Amblonyx cinerea*
Micraonyx cinerea



Characteristics:

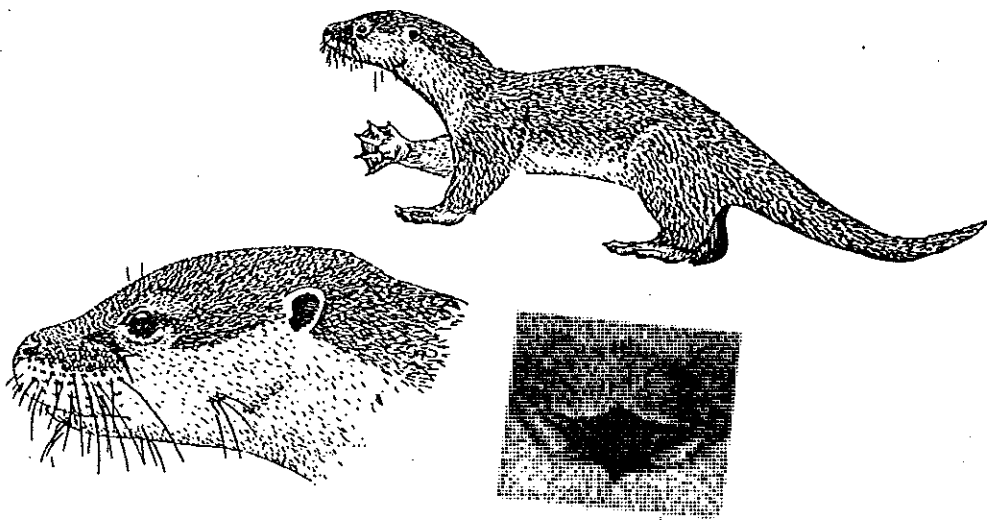
Adult:

General appearance:	Small sized carnivore. Throat noticeably light whitish to greyish, sharply separated from colour of upperside, blending gradually into chest colour.
Measurements:	Head and body length 406-635 mm; Tail 246-350; Total length 652-939 mm
Head:	Hair texture velvety. Hair length-Guard hair:12-14 mm, Underfur: 6-9 mm.
Face:	Nose pad pink or dusky, upper border convex to peaked.
Hands and feet:	Feet narrow, webbed only to about last joint toes; claws blunt, peg like, rudimentary.
Tail:	Tapered
Coat:	Burnt amber to dusky brown.
Similar species:	Eurasian otters - smooth coated, pelt difficult to distinguish.

Lutra lutra (Linnaeus 1758)

Common names:	English	:	Eurasian otter, Common otter
	Hindi	:	Ud, Udbilao, Jal manus, Pani kutta
	Marathi	:	Pan manjar, Jal manjar
	Kannada	:	Neer nai
	Malyalam	:	Neer nai
	Tamil	:	Neer nai
	Telugu	:	Neru kuka
	Oriya	:	Odho
Bengali	:	Oudh	
Myanmarese	:	Peerau	

Scientific synonyms: *Lutra vulgaris*
Lutra whitleyi



Characteristics:

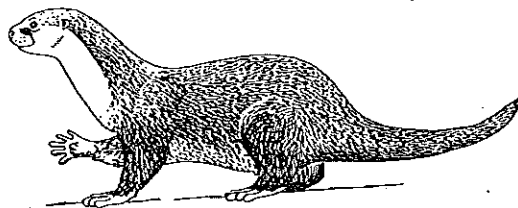
Adult:

General appearance:	Medium to large in size. Throat buff to cream in colour with noticeable demarcation on dorsal side. Muzzle may be spotted with cream spots, lighter in colour generally.
Measurements:	Head and body length 570-700 mm; Tail 350-400; Total length 1020-1370mm
Head:	Hair texture moderately coarse. Hair short in length. Length: Guard hair:17-18 mm, Underfur: 8-9 mm.
Face:	Nose pad naked, large and shield shaped.
Hands and feet:	Feet well webbed, claws strong.
Tail:	Thick at the base, tapered and flattened at sides.
Coat:	Fuscous to dusky brown in colour, lighter in Asian races.

Lutra perspicillata (Geoffroy 1826)

Common names:	English	:	Smooth coated otter
	Hindi	:	Ud, Udbilao, Jal manus, Pani kutta
	Marathi	:	Pan manjar, Jal manjar
	Kannada	:	Neer nai
	Malayalam	:	Neer nai
	Tamil	:	Neer nai
	Telugu	:	Neru kuka
	Oriya	:	Odho
	Bengali	:	Oudh
Myanmarese	:	Peerau	

Scientific synonyms: *Lutogale perspicillata*
Lutra tarayensis



Characteristics:

Adult:

General appearance: Medium to large in size. Muzzle not spotted.

Measurements: Head and body length 655-790 mm; Tail 406-505mm; Total length 1067-1300 mm

Body weight:

Head: Short hair with velvety texture. Length - Guard hair: 12-14 mm, Underfur: 6-8 mm.

Face: Cheeks very light grey, almost white in some specimens, sharply demarked from colour of upper parts. Nose pad bare.

Limbs: Feet large and thick, well webbed, claws strong.

Tail: Tapered with slight flattening at sides.

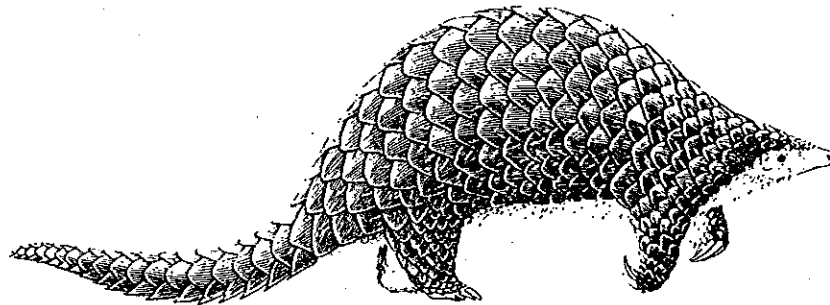
Coat: Upper parts raw umber to smoky grey brown; underside a lighter drab colour.

Manis pentadactyla (Linnaeus, 1758)



Common Names: English : Chinese Pangolin

Scientific synonyms: *Manis auritus* Hodgson, 1836
Manis brachyura Erxleben, 1777
Manis dalmanni Sundevall, 1843
Manis pusilla J. Allen, 1906
Phatages bengalensis Fitzinger, 1872
Pholidotus assamensis Fitzinger, 1872
Pholidotus kreyenbergi Matschie, 1907



Characteristics:

Adult:

General appearance: Scales dark brown to blackish brown; hair and unscaled skin greyish white to brownish white. Scales: Small; median dorsal scale row unpaired down to tip of tail, with 32-33 scales on head and body; cross row of 15-18 rows of scales around mid-body; posterior margin of mid dorsal scales mostly truncate.

Measurements: Head and body length : 450-600 mm,
Tail : 250-400 mm.

Face: Eyes and ears comparatively large.

Limbs: Claws on hind feet much less strong than on fore feet.

Tail: Brown tail usually with naked pad on underside of tip; 53-67% of head-body length. 16-19 scales along edge of tail; bristles between scales; scales on lower parts of fore and hind legs; membraneous terminal scales under tail.

Juvenile: Scales of juveniles are purplish brown and distinctly keeled on flanks and hind feet.

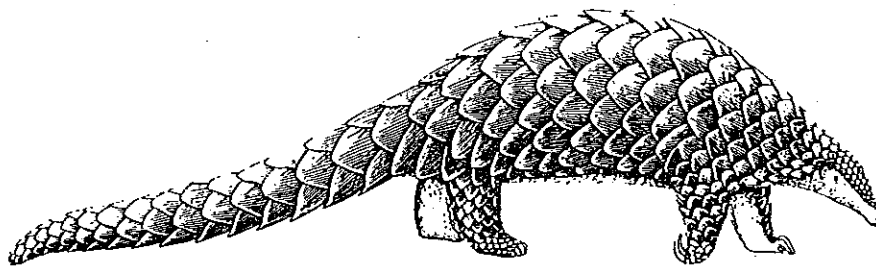
Intraspecific variation: 3 subspecies listed by Ellerman and Morrison-Scott (1951).

Distribution:

Manis crassicaudata (Gray, 1827)

Common names:	English	: Indian Pangolin
	Hindi	: Bajra kit, Bajra kapta, Suraj mukhi, Silu, Sal sala
	Marathi	: Khawala manjar
	Telugu	: Alawa
	Tamil	: Alangu
	Malayalam	: Alangu.

Scientific synonyms:	<i>Manis crassicaudatus</i> Gray, 1827
	<i>Manis laticauda</i> Illiger, 1815
	<i>Pholidotus indicus</i> Gray, 1865



Characteristics:

Adult:

General appearance:	Scales light brownish yellow or sandy grey; centre of scales darker than edges; scales along edge of tail brownish; hair and unscaled skin brownish; 11-13 rows of scales around mid-body; posterior margins of mid-dorsal scales mostly convex.
Measurements:	Head and body length: 600-750 mm, Tail: 450-500 mm.
Face:	Small eyes and ears.
Hands and feet:	Claws on hind feet much less strong than on fore feet.
Tail:	Brown tail occasionally with naked pad on underside of tip; 73-81% of head body length; 14-15 scales along edge of tail; hard terminal scale under tail.
Intraspecific variation:	None
Distribution:	
India:	Throughout most of India except north-east region.
Extralimital:	Pakistan, Sri Lanka, possibly Bangladesh.

Ratufa macroura (Pennant, 1769)

Common names: English : Grizzled Indian Squirrel Ceylonese Giant Squirrel
Tamil : Peria-anathan.

Scientific synonyms: *Sciurus ceilonensis* Boddaert, 1785
Sciurus ceylonicus Erxleben, 1777
Sciurus macrourus Pennant, 1769
Sciurus tennentii Blyth, 1849



Characteristics:

Adult:

General appearance: Large squirrel but smallest species of the genus. Dorsal pelage and tail black or grizzled, ventral pelage cream to yellowish. Inconspicuous ear tufts. Crown distinctly separated from nape by pale band. Two main pelage types. One corresponding to the type species is black dorsally with dark cheeks, while the other is grizzled overall dorsally with black streaked with grey and white and with pale cheeks.

Measurements: Head body length: 340-380 mm;
Tail: 310-415 mm;
Hind foot: 75-84 mm.

Body weight: About 1000 - 1500 g.

Head: Crown blackish with pale cheeks.

Limbs: Digits are black or blackish. Dorsal pelage of feet, ankles and forearms yellowish buff.

Tail: Black or black streaked with grey with pale mid-ventral line.

Intraspecific variation: 3 subspecies are recognized by Moore and Tate (1965).

Distribution:

Indian region: South India in Kerala (Chinnar Wildlife Sanctuary), Tamil Nadu (Srivilliputtur Grizzled Giant Squirrel Sanctuary, Amaravathy, Plani Hills - Kudraiyar, Siruvattukadu Kombai, Manjalar valley), and Karnataka (Cauvery Wildlife Sancturay).

Common names:	English	:	Indian Giant Squirrel Malabar Giant Squirrel
	Hindi	:	Badi gilheri, Parvat chooha
	Marathi	:	Shekra, Shekru, Shekat
	Kannada	:	Anilu, Mara anilu
	Konkani	:	Innachi
	Telugu	:	Paida udta
	Tamil	:	Anilu, Mara anilu

Scientific synonyms:	<i>Sciurus bombayus</i> Boddaert, 1785
	<i>Sciurus elphinstoni</i> Sykes, 1831
	<i>Sciurus indicus</i> Erxleben, 1777
	<i>Sciurus malabaricus</i> Scopoli, 1786
	<i>Sciurus maximus</i> Schreber, 1784
	<i>Sciurus purpureus</i> Zimmermann, 1777



Characteristics:

Adult:

General appearance: Large squirrel. Rust-red or maroon to black dorsally and on tail; creamy beige ventrally. Crown separated from nape by distinct pale band. Conspicuous ear tufts.

Measurements: Head-body length: 340-450 mm; Tail: 380-490 mm; Hind foot: 60-90 mm.

Body weight: About 1000-2300 g.

Head: Sides of head pale brown or light cream with a dark, narrow, vertical stripe at posterior end of cheeks.

Limbs: Hindlimbs dark, forelimbs pale.

Tail: Long tail either all black or with varying shades of red coupled with a white or yellowish tip and pale mid-ventral line.

Coat: Considerable variation in colour of dorsal pelage and tail on the basis of which subspecies are identified.

Intraspecific variation: 4 subspecies are recognised by Moore and Tate (1965). There is a colour cline present along the Western Ghats with the darkest individuals in the extreme south.

R. i. indica of the mid western ghats has a red maroon back and a white yellow tail tip of varying extent.

R. i. maxima in the extreme southern Western Ghats has an all black tail, black shoulders, nape, rump and thighs;

R. i. centralis of central India and Eastern Ghats has black shoulder patches;

Ratufa bicolor (Sparrmann, 1778)

Common name: English : Black Giant Squirrel Malayan Giant Squirrel
Pied Giant Squirrel

Scientific synonyms: *Ratufa celaenopepla* Miller, 1913
Ratufa fellii Thomas & Wroughton, 1916
Ratufa phaeopepla Miller, 1913
Sciurus bicolor Sparrmann, 1778
Sciurus giganteus M' Clelland, 1839
Sciurus macruroides Hodgson, 1849



Characteristics :

Adult:

General appearance: Large squirrel with dorsal dark brown or black pelage. Ventral pelage pale orange-yellow or buff. Dorsal pelage unbroken at nape. Small ears generally without tufts. Sometimes a pale patch between upper surface of wrist and elbow of forelegs.

Measurements: Head and body length: 365-415 mm;
Tail: 390-500 mm;
Hind foot: 75-79mm.

Body weight: About 1300 - 1900 g.

Head: Sides of head pale brown. A black moustachial stripe extends downwards from the black rostrum through the whiskers. Two dark oval spots (some-time fused) on the pale undersurface of chin.

Limbs: Forelimbs and hindlimbs dark.

Tail: Dark brown or black.

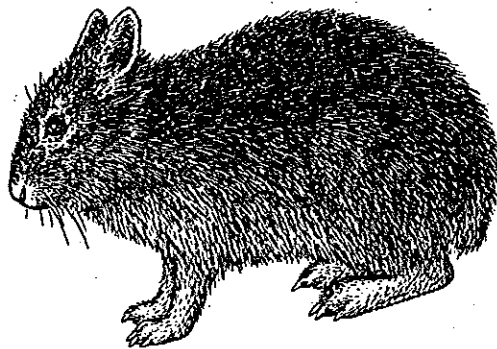
Intraspecific variation: 8 subspecies are recognized by Moore and Tate (1965). For example, *Ratufa bicolor gigantea*, from Nepal through Sikkim, Assam, northern Burma to Hainan, has entirely black dorsal pelage on legs and has tufted ears.

Distribution:

Caprolagus hispidus (Pearson, 1839)

Common names:	English	: Hispid Hare, Assam Rabbit, Bristly Rabbit, Harshfurred Hare.
	Bangla	: Chagli pa khargosh
	Nepali	: Thulo kharayo
	Tharu	: Bodana
	Hindi	: Bada khargosh
	Arunachal Pradesh	: Kala hohapohu

Scientific Synonyms: *Lepus hispidus* (Pearson, 1839)



Characteristics:

Adult:

General appearance: About the size of the Indian Hare, it has a shorter tail, smaller ears and an overall brownish upperside.

Measurements: Head and body length: 370-500 mm;
Tail: 30 mm;
Ears: 56 mm;
Hindfoot: 95-100 mm;

Body weight: males:-2248 g (1810-2610 gm), females:- 2518 gm (1885-3210 g)

Head: Ears very short.

Limbs: Brown, short and stout, feet with strong claws.

Tail: short, brown.

Coat: Upper parts blackish-dark brown coarse and bristly hair with numerous scattered whitish bristly hairs and finer underfur beneath; under parts: brownish white.

Similar species: Rufous tailed hare *Lepus nigricollis ruficaudatus*. Much longer ears than *C. hispidus*.

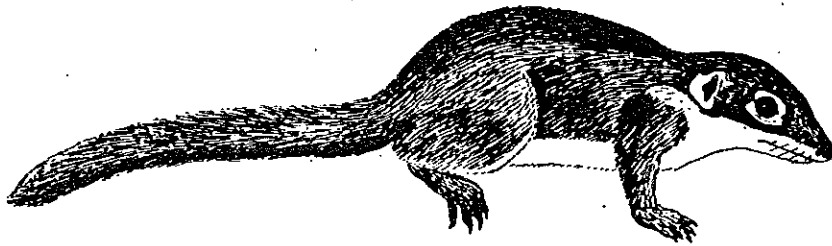
Intraspecific variation: unknown

Distribution:

Anathana ellioti (Waterhouse, 1850)

Common names: English : Indian Tree Shrew,
Madras Tree Shrew
Tamil : Munghil anathana

Scientific synonyms: *Tupaia ellioti* (Waterhouse, 1850)
Anathana pallida (Lyon, 1913)
Anathana wroughtoni (Lyon, 1913)



Characteristics:

Adult:

General appearance: Squirrel-like, medium-sized tree shrew with a long and well-furred tail. Ears cartilaginous. Ear flaps rather large, the lower lobe being larger than the upper one. The inner side of the ear is thicker haired than in *Tupaia*.

Measurements: Head-body length : 160-185 mm;
Tail : 165-195 mm.

Body weight: 160 gm.

Head: Without conspicuous markings. The snout is rather short and heavy. The naked nose pad is more coarsely reticulated than that of *Tupaia*.

Tail: Bushy, long, approximately equal to head and body length. Covered with long hairs on the dorsal side and shorter hairs on the ventral side.

Coat: Brown or grey-brown above, speckled with black and sometimes tinged with reddish, whitish or buff below. Shoulder stripe present, light buff or white. Pale areas around the eyes. The hairs are rather short and stiff.

Sexual dimorphism: Not significant. Females with 3 pairs of teats.

Similar species: *Tupaia* spp. Lower ear lobe smaller. Ear less haired. Fur softer. Muzzle in most species longer.

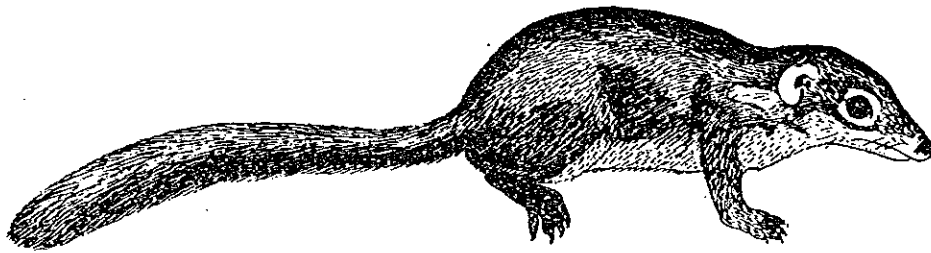
Tupaia glis (Raffles, 1821)

Common names:

English	:	Common Tree Shrew
Lepcha	:	Kalli-taug-zhing
Myanmarese	:	Tswari
Malay	:	Tupai-munchong, Tupai-tana, Kenchong.

Scientific synonyms:

- Cladobates belangri* (Wagner, 1841)
- Tupaia peguanus* (Lesson, 1842)
- Tupaia chinensis* (Anderson, 1879)



Characteristics:

Adult:

General appearance: Small to large tree shrews with long, well-furred tail. Scent glands located in the middle of the chest in both sexes.

Measurements:

- Head-body length: 105-240mm,
- Tail: 129-215 mm;
- Hind foot : 28-45 mm;
- Ear : 10-17 mm.

Body weight: 85-185 gm.

Head: Without conspicuous markings. Numerous, but rather short tactile hairs on the brows, lips and cheeks. The naked nose pad is finely reticulated and cut squarely across. It does not extend backwards on to the furred part of the nose. Cartilaginous and rather small ears with lower lobe being smaller than the upper one.

Tail: Long, approximately equal to head-body length. Covered with long hairs on the dorsal side and shorter hairs on the ventral side.

Coat: Upper parts dark brown, pale brown, reddish, grizzled olivaceous grey, blackish grey or grizzled black, according to species. With or without a paler, oblique shoulder stripe. Sometimes a narrow dark dorsal stripe is present. Underparts lighter, whitish, orange or rusty red, buff or dark brown.

Sexual dimorphism: Not significant. Females with 1-3 pairs of teats.

Nycticebus coucang (Boddaert, 1785)

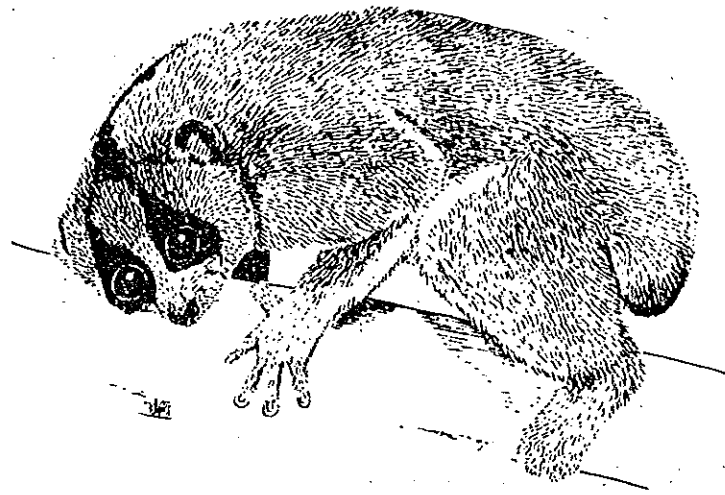


Common names:

English	:	Slow Loris
Hindi	:	Sharmindi billi
Bengali	:	Lajjabati bannar
Malay	:	Kongkang, Keraduku
Myanmarese	:	Myauk - maung-ma, Myauk-lay-bway, Tha-say, Ling-lom.

Scientific synonyms:

- Tardigradus coucang* (Boddaert, 1785)
- Lemur tardigradus* (Linnaeus, 1766)
- Stenops tardigradus* (Illiger, 1811)



Characteristics:

Adult:

General appearance: Nocturnal; small and woolly, about the size of a small cat; short ears; stumpy tail, large round eyes, each encircled with a brown ring.

Measurements: Head-body length: Male 26.5-38.0 cm, Female 26.8-33.5 cm.

Body weight: Male 0.85-1.67 kg, Female 0.90-1.32 kg.

Head: Brown streak present on the crown and the back.

Face: Pale brown to whitish with dark markings.

Limbs: Stout limbs, second toe clawed and other toes furnished with flat nails.

Tail: Very small.

Coat: Very dense; varies in colour, grey to varying shades of grey-brown with dark patches around the eyes, separated by a white line and with wide dark band on the middle of the back.

Sexual dimorphism: No marked difference.

Infant: Newborn has eyes open at birth, a coat of dense fur, numerous, long,

Loris tardigradus (Linnaeus, 1758)

Common names:	English	: Slender Loris
	Marathi	: Wanur-manushya
	Tamil (India)	: Kattu-papa, Kattu-pullaye, Thevangu
	Tamil (Sri Lanka)	: Thevangu, Kadu-papa
	Telugu	: Arawe-papa, Devanga-pilli
	Sinhalese	: Unahapuluva, Kalu-unahapuluva.

Scientific synonyms:	<i>Lemur tardigradus</i> (Linnaeus, 1758)
	<i>Loris gracilis</i> (Geoffrey, 1812)
	<i>Stenops gracilis</i> (Kuhl, 1820)
	<i>Nycticebus gracilis</i> (Schlegel, 1876)



Characteristics:

Adult:

General appearance:	Nocturnal prosimian; small, thin and lanky, about the size of a large kitten.
Measurements:	Head-body length: Male 18.6-26.4 cm, Female 19.8-24.9 cm.
Body weight:	Male 0.08-0.35 kg, Female 0.08-0.27 kg.
Head:	Head with large ears; eyes round, large and directed forward and with black or dark brown circle.
Limbs:	Long, slender limbs, well developed index finger.
Tail:	Either absent or very small; about 0.7 cm long.

Macaca mulatta (Zimmermann, 1780)

Common names:	English	: Rhesus Macaque, Rhesus Monkey
	Hindi	: Bandar
	Bengali	: Markat
	Kashmiri	: Punj, Ponj
	Myanmarese	: Myauk-nee, Mayauk-sat,
	Shan	: Ling-Leng

Scientific synonyms: *Cercopithecus mulatta* (Zimmermann, 1780)
Simia rhesus (Audebert, 1798)



Characteristics:

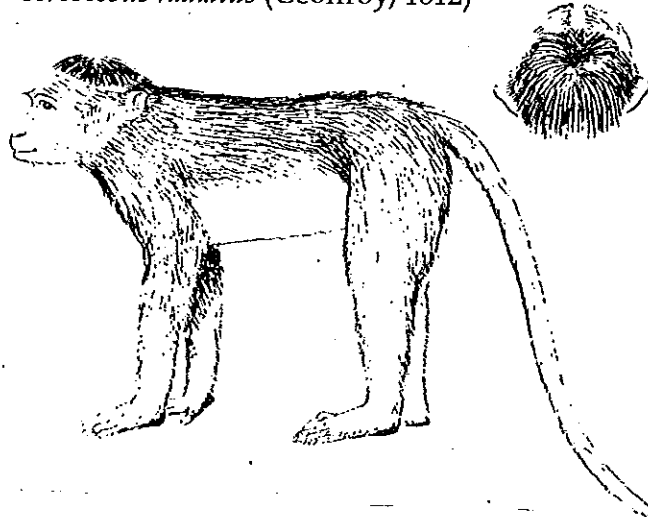
Adult:

General appearance:	A medium-sized macaque, with hind quarters of the body brighter (orange-red hue) than fore quarters and a short tail, less than half the length of head and body.
Measurements:	Head-body length: Male 455-635 mm, Female 370-580 mm Tail: Male 200-317 mm, Female 163-284 mm
Body weight:	Male 5.6-14.5 kg; Female 3.0-10.7 kg.
Head:	Crown-hairs directed backwards from the brows and without a median parting, whorl or cap.
Face:	Bare; light pink to reddish; cheek hairs short, forming a whorl located inferiorly.
Hands and feet:	Colour same as of the back.
Tail:	Short, less than half the length of head and body; uniformly haired.
Coat:	Upper back olive to greyish brown; loins, rump and base of tail orange-red, more brightly coloured than the forequarters; skin around ischial callosities naked; under surface sparsely haired and paler than above.
Sexual dimorphism:	Females are smaller and lighter in weight than males.
Infant:	The newborn is dark brown, almost black. Crown hair with center parting.
Similar species:	<i>Macaca assamensis</i> : Characterised by hind quarters of body being less

Macaca radiata (Geoffroy, 1812)

Common names:	English	: Bonnet Macaque
	Hindi	: Bandar, Bandra
	Marathi	: Maakad, Makadu, Lal manga, Wanar, Kerda
	Malayalam	: Vella manthi, Korangan
	Tamil	: Kurangu
	Telugu	: Koti.

Scientific synonyms: *Cercocebus radiatus* (Geoffroy, 1812)



Characteristics:

Adult:

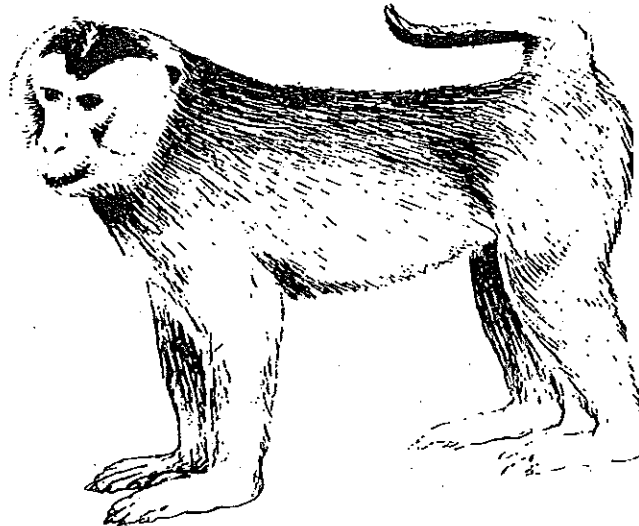
General appearance:	A medium-sized macaque, with crown-hairs radiating from whorl to form a sub-elliptical cap, that extends anteriorly midway between vertex and brows, a median parting of hairs behind the brows, and the tail longer than head and body length.
Measurements:	Head and body length: Male 450-600 mm, Female 375-525 mm. Tail: Male 475-690 mm, Female 480-635 mm.
Body weight:	Male 5.44-11.60 kg Female 2.9-5.5 kg.
Head:	Crown-hairs radiating from a central whorl to form a sub-elliptical cap, that extends midway between vertex and brows; hairs behind brows parted in the middle.
Face:	Bare; pale pink to scarlet in colour.
Hands and feet:	Ochraceous to yellowish brown.
Tail:	Longer than head and body, sub cylindrical and smooth-haired; dusky brown above and greyish below.
Coat:	Dorsal pelage dark greyish-brown to yellowish-brown, drabber on the lower back; ventral surface pale buff. Skin of chest and belly may be pigmented dark bluish-grey or unpigmented.
Sexual dimorphism:	Females are smaller and lighter in weight than males.

Macaca nemestrina (Linnaeus, 1766)



Common names:
English : Pig-tailed Macaque
Naga : Kangh
Myanmarese : Myauk-padi, Myauk-mai, Ta-o-ti
Arakanese : Myauk-la-haing

Scientific synonyms:
Simia nemestrina (Linnaeus, 1766)
Inuus leoninus (Blyth, 1863)
Macaca andamanensis (Bartlett, 1869)
Macacus pagensis (Miller, 1903)



Characteristics:

Adult:

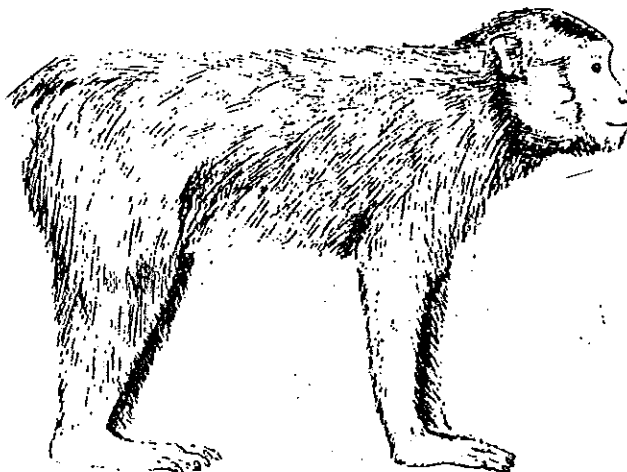
- General appearance:** A large macaque, having the crown of head, and the dorsal surface of tail dark brown to blackish, the tail about one-third the length of head and body.
- Measurements:** Head-body length: Male 508-775 mm, Female : 400-576 mm.
Tail: Male 160-281 mm, Female 137-200 mm.
- Body weight:** Male 6.2-14.5 kg, Female 4.5-10.8 kg.
- Head:** Crown-hairs short, blackish, radiating to form a whorl centred at the vertex; a black crown-patch, anteriorly broad in the nominate subspecies but narrower in *leonina*.
- Face:** Pinkish brown, sparsely covered with hairs; whiskers short and dark-tipped in *nemestrina*, but long, pale ochraceous buff and concealing the ears in *leonina*.
- Hands and feet:** Yellowish brown to golden brown.
- Tail:** Small and slender, about one-third of the length of head and body, blackish above and buff below, clothed throughout with short closely appressed hairs.
- Coat:** Dorsal pelage from yellowish to golden brown, grizzled and with variably developed blackish patch or spinal band; flanks and limbs light olive;

Macaca arctoides (Geoffroy, 1831)

Common names:

English	:	Stump-tailed macaque
Naga	:	Chantee
Assamese	:	Mawka
Malay	:	Berok Kentoi

Scientific synonyms: *Papio melanotus* (Ogilby, 1839)
Macacus ursinus (Gervais, 1854)



Characteristics:

Adult:

General appearance: A large macaque, having a blotched red face, bald forehead, thick limbs, stumpy tail about 1/10 the length of head and body and lanceolate glans, more than 40 mm in length.

Measurements: Head-body length: Male: 482-700 mm, Female: 495-585 mm
Tail: Male: 41-100 mm, Female: 10-61 mm

Body weight: 6-18 kg.

Head: Crown-hairs radiate from centre of the crown, shorter in front and longer at the back and on the sides making forehead bald.

Face: Purple red and blotched, side whiskers sweep backwards, concealing the ears; hairs under the chin developed into beard.

Hands and feet: Brown.

Tail: Thinly haired and stumpy, one tenth the length of head and body.

Coat: Dorsal pelage dark chestnut, varies from blackish to burnt orange, becoming grizzled with age; fur on chest and belly thin and slightly paler than on the back; hairs on nape, shoulders and back shaggy, shorter on loins and limbs; skin around callosities naked.

Glans: Lanceolate, gradually tapers to a slightly upturned point, more than 40 mm in length.

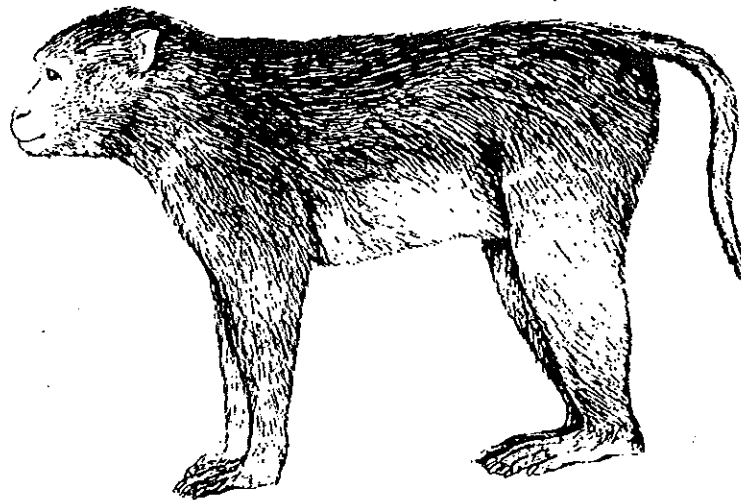
Order: Primates / Family: Cercopithecidae

Macaca assamensis (McClelland, 1840)



Common names:	English	: Assamese Macaque, Assam Macaque
	Pahari	: Bandar
	Lepcha	: Sahu
	Bhotia	: Pio
	Myanmarese	: Myauk-sai
Shan	: Lin-kun-leng, Lingikum	

Scientific synonyms:	<i>Macacus pelops</i> (Hodgson, 1840)
	<i>Macacus problematicus</i> (Gray, 1870)
	<i>Macacus rheso-similis</i> (Sclater, 1872)



Characteristics :

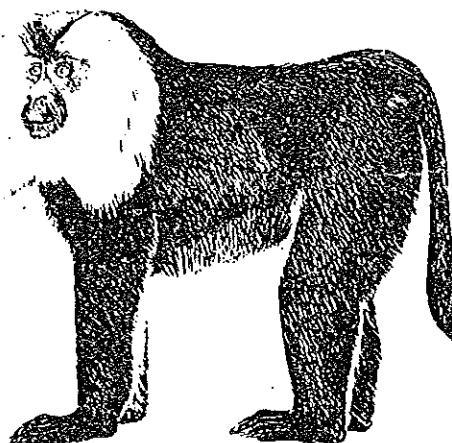
Adult:

General appearance:	A large-sized macaque, having a prominent muzzle, the hind quarters not more brightly coloured than the fore quarters, tail from half to more than half the length of head and body, and the skin around ischial callosities hairy.
Measurements:	Head and body length: Male: 510-649 mm, Female: 437-720 mm. Tail: Male: 192-350 mm, Female: 193-380 mm.
Body weight:	Male 7.9-15 kg. Female 4.8-8.6 kg.
Head:	Crown-hairs directed backwards or in form of a whorl, and with a short median parting behind the brows; yellow tinge prevalent on crown and nape.
Face:	Pinkish and naked except for a few scattered hairs; whiskers prominent, dark grey to buffish, forming a crest in front of ears.
Tail:	Well haired and pendulous; uniformly brown; length from one-half to more than that of head and body.
Limbs:	Colour same as of the body.
Coat:	Soft and smooth; dorsal pelage golden brown on fore quarters and drab

Macaca silenus (Linnaeus, 1758)

Common names:	English	: Lion-tailed Macaque, Wanderoo.
	Hindi	: Siah bandar
	Bengali	: Neel bandar
	Kannada	: Singalika
	Coorgi	: Karingode
	Malayalam	: Nella manthi, Chingala
	Tamil	: Karim kurangu, Arakkan
Telugu	: Kondamachu	

Scientific synonyms:	<i>Simia silenus</i> (Linnaeus, 1758)
	<i>Cercopithecus veter</i> (Erxleben, 1777)
	<i>Simia ferox</i> (Shaw, 1793)



Characteristics:

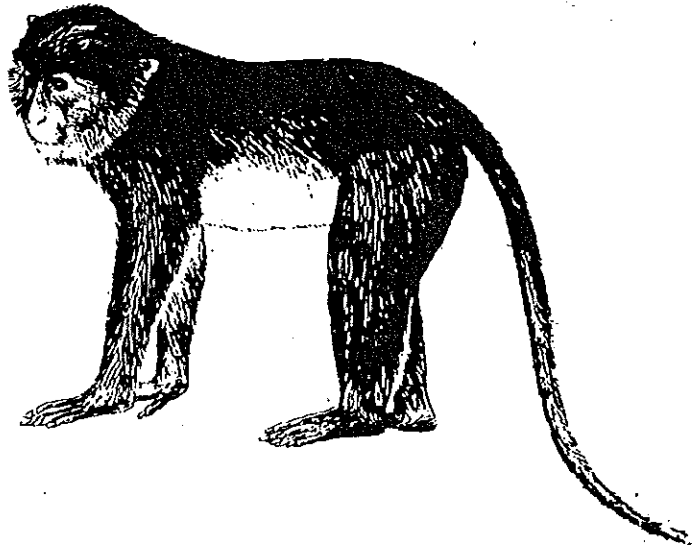
Adult:

General appearance:	A medium-sized macaque, having glossy black pelage, brownish-grey to greyish-white facial ruff, and a tufted tail, two-thirds of the length of head and body.
Measurements:	Head-body length: Male 508-610 mm, Female 415-481 mm. Tail: Male 254-386mm, Female 254-318 mm.
Body weight:	Male 3.15-6.75 kg, Female 2.28 kg.
Head:	Crown blackish; frontal hairs directed backwards; hairs on vertex radiating to form a whorl.
Face:	Blackish; massive ruff on either side of head, meeting below the chin, brownish to greyish-white in colour; lips black.
Limbs:	Black.
Tail:	About two-thirds the length of head and body and tufted at the tip.
Coat:	Dorsal pelage, limbs and the tail black; ventral surface thinly haired and from greyish-brown to brown in colour; ischial callosities pink.
Sexual dimorphism:	Males are larger in size and the tail-tuft more developed than that of females.

Macaca fascicularis (Raffles, 1821)

Common names:	English	:	Crab-eating Macaque
	Burmese	:	Myauk-ta-naga
	Arakanese	:	Ta-o-tan
	Karen	:	Daouk, sha-ok-li
	Malay	:	Kra

Scientific synonyms:	<i>Macacus irus</i> (F. Cuvier, 1818)
	<i>Simia fascicularis</i> (Raffles, 1821)



Characteristics :

Adult:

General appearance:	A medium-sized macaque, having the crown-hairs directed backwards and a long blackish tail, sub-equal to head and body length.
Measurements:	Head-body length: Male 361-648 mm, Female 315-530 mm. Tail: Male 360-670 mm, Female 325-550 mm.
Body weight:	Male 3.5-9.5 kg, Female 2.5-5.7 kg.
Head:	Crown-hairs short, directed backwards and not darker than the body in colour.
Face:	Pinkish; skin naked around eyes and across the bridge of nose; whiskers long and bushy, forming a whorl in front of ears; a beard adorns the chin; ears erect, pointed, bare and blackish.
Hands and feet:	Colour same as of dorsal pelage.
Tail:	Cylindrical and as long as or even longer than the head and body; above blackish, becoming paler near tip.
Coat:	Colour variable; dorsal pelage reddish-brown, ochraceous-rufous, greyish or blackish-brown, drabber on sides and limbs; ventral surface and inner

Presbytis phayrei (Blyth, 1847)

Common names:	English	: Phayre's leaf monkey
	Hindi	: Chasma banar
	Bengali	: Dodhi mukha
	Karen	: Dathwa, Shwame
	Thai(Shan)	: Lingmun
	Myanmarese	: Myaok-ugenyo, Myauk-myet, Kwinbyu, Myouk-hgnyo.

Scientific synonyms:	<i>Semnopithecus phayrei</i> (Blanford 1888)
	<i>Semnopithecus holotepherus</i> (Khajuria, 1954)
	<i>Trachypithecus phayrei</i> (Pocock, 1939)



Characteristics:

Adult:

General appearance:	Medium sized monkey; body is dark ashy brown to grey brown, the head sometimes has a crest but not a cap. Back from shoulder to loin is silvery. The under parts are whitish.
Measurements:	Head and body length Male -50.1-54.7 cm Female -45.1-52.9 cm Tail: 64.8 - 86.4 cm
Body weight:	Male: 7.9-8.7 kg, Female: 5.6-6.8 kg
Head:	Colour on the head is darker, head sometimes has crest.
Face:	The face is black except for the lips and the area around the mouth and eyes which is white.
Hands and feet:	The hands and feet are long and are of the same colour as the body.
Tail:	Longer than head and body length. The tail tip is darker in colour.
Coat:	Upper side grey to blackish-grey with some glistening hairs; breast, throat and whiskers almost tinged with buff, abdomen greyish-white.

Presbytis entellus (Dufresne, 1797)

Common names:	English	:	Hanuman langur
	Hindi	:	Langur, Hanuman
	Kumaun	:	Gooni
	Gujrati	:	Vandar
	Rajasthani	:	Langur, Languria
	Marathi	:	Wanga, Wanar, Maka
	Tamil	:	Korungoo, Vellamanthi
	Telegu	:	Kum damuchu
	Bhotia	:	Propyaka
	Myanmarese	:	Meeauk
Sinhalese	:	Wandroo, Vandhura	

Scientific synonyms: *Simia entellus* (Dufresne, 1797)
Semnopithecus entellus (Blanford, 1888)

Characteristics:

Adult:

General appearance: A large, grey-bodied langur, with long limbs; sex skin well developed in adult males but does not show cyclic changes. Tail longer than head and body.



Measurements: Head and body length: Male : 58-64 cm Female: 55-57 cm
Tail: Male : 85-106 cm Female: 79-88 cm

Body weight: Male: 9-20.9 kg, Female: 7.5-18.0 kg

Head: Adults have hair behind the brows radiating from a frontal whorl, crown hair rise into a crest or tuft, eye brows well developed.

Face: Black.

Hands and feet: Black; the black colour varies from season to season.

Tail: Longer than head and body. The animals differ in their tail carriage and show geographical and subspecific variations.

Coat: Greyish black in Northern India, paler in south and almost whitish in dry zone of south-east India.

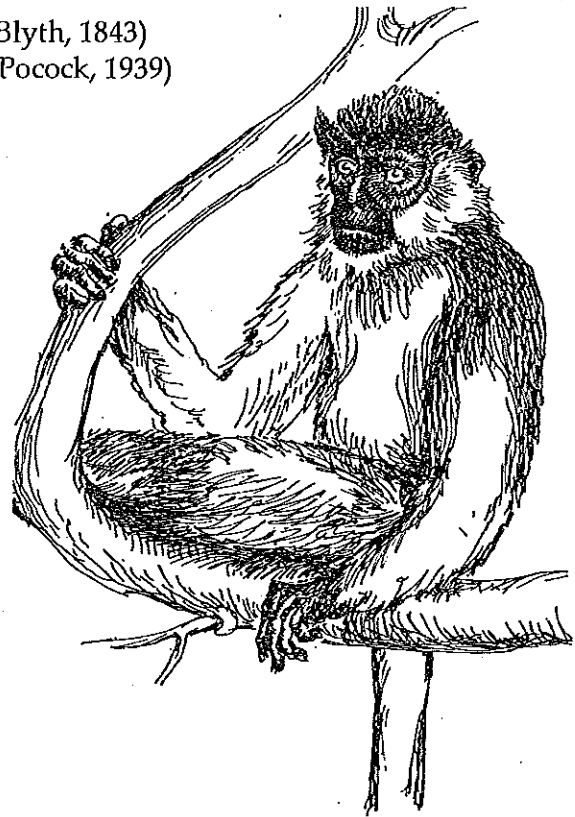
Sexual dimorphism: Females smaller and lighter than males.

Order: Primates / Family: Cercopithecidae

Presbytis pileatus (Blyth, 1843)

Common names: English : Capped langur

Scientific synonyms: *Semnopithecus pileatus* (Blyth, 1843)
Trachypithecus pileatus (Pocock, 1939)



Characteristics:

Adult:

General appearance: A large and robustly built monkey; with a cap on the crown; the colour of its back is dusky grey to ashy grey, the middle portion of the back is dark brown or black, cheeks and the sides of the neck are pale fulvous to golden brown; the hindquarters and inside of the thighs are suffused with light cobalt blue; the scrotal sac in adult male is generally not visible.

Measurements: Head and body length Male - 68.4-70 cm Female - 59-67 cm
Tail: Male - 94-104 cm Female-78-90 cm

Body weight: Male: 11.5-14 kg, Female: 9.5-11.3 kg

Head: The crown is covered with long hairs, hairs directed backwards from the forehead, the crown is dark brown or black.

Face: The face is black in colour, the hair on the cheeks are long and partly cover the ears.

Hands and feet: The hands and feet are long and dark brown or black in colour.

Tail: Longer than head and body. Dark brown; distal half is blackish.

Coat: Coat colour at back is dusky grey to ashy grey, cheeks and sides of the neck are golden brown which may be light to deep in colour.

Presbytis johnii (Fischer, 1829)

Common names:	English	: Nilgiri langur
	Coorgi	: Kari-mushya
	Bengali	: Dodhi mukha
	Tamil	: Manthi, Karu manthi, Karum kurangi.
	Malayalam	: Vella manthi

Scientific synonyms:	<i>Cercopithecus johnii</i> (Fischer, 1829)
	<i>Semnopithecus johnii</i> (Blanford, 1888)
	<i>Kasi johnii</i> (Pocock, 1939)



Characteristics:

Adult:

General appearance: It is almost the size of the Hanuman langur. The body is glossy black or uniformly buff. Old monkeys have white hair on the back and rump. The colour of the throat is blackish brown. Rump grizzled. Females with white patch on the inside of the thighs. Young females also show white patch on the inside of the thighs.

Measurements: Head and body length Male-78 cm Female-58.4 cm
Tail: 68.5 - 96.5 cm

Body weight: Male: 9.1-13.2 kg, Female:10.9-11.3 kg

Head: The back of the head is yellowish brown, the crown brown or buff, the hairs on the head are long and non- radiating.

Face: Black

Common names: English : Golden langur
Hindi : Langur
Bhutanese : Sugrib

Scientific synonyms: *Presbytis pileatus geei* (Oboussier & Maydell, 1960)



Characteristics:

Adult:

General appearance: Rich golden to cream buff coloured, the back is almost uniformly deep cream in dull light, golden in sunlight, the sides are darker and almost reddish, hairs on the flanks are longer and reddish, ventral surface is pale and mixed with varying shades of red, showing variation in colour. It becomes cream coloured or almost white in summer and dark golden to chestnut in winter.

Measurements: Head and body length: Male - 64-72 cm, Female - 48.8-61 cm
Tail: Male - 78-94 cm, Female - 71-80.5 cm

Body weight: Male: 10-12 kg, Female: 9.5 kg

Head: An ill-defined half whorl is present on the forehead with hair radiating backwards and sideways.

Face: The face is black and hairless except for a pale and long beard.

Limbs: The hands and feet are long and body flesh coloured.

Tail: Longer than head and body length and is slightly tassellated.

Coat: Uniform deep cream to bright golden colour depending upon the light conditions.

Hylobates hoolock (Harlan, 1834)

Common names: English : Hoolock gibbon
Hindi : Uluk
Assamese : Hulu

Scientific synonyms: *Simia hoolock* (Harlan, 1834)



Characteristics:

Adult:

General appearance: Small in size, slender bodied, tailless; adult males are black, females are brown, young females are also black. Silvery white band above the eye brows. Males and young females have brown, white or pale grey beard-like tuft in the groin. Mature females are paler and generally gold, buff or brownish-grey in colour. The canines are large.

Measurements: Head and body length Male - 45.7-63.0 cm
Female - Almost the size of male

Body weight: Male: 6.1-7.9 kg, Female: 6.0-6.6 kg

Head: Small and round.

Face: Black with silver white band above eyebrows, snout is not protruding, nostrils are widely spaced.

Limbs: Long, arms are long and more than double the length of legs.

Coat: Fur shaggy, long and dense.

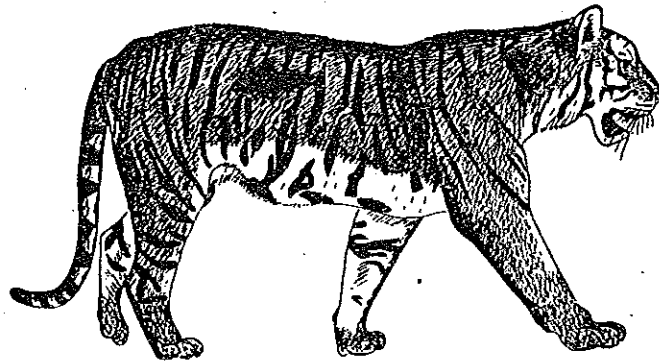
Sexual dimorphism: The females are smaller than males. Females are gold, buff or brownish-grey; males are black. Female has a long clitoris.

Infant & Juvenile: At birth the infant is pale greyish-white with a yellowish tinge. Face, palms and soles are black. The body colour gradually darkens with age and

Panthera tigris (Linnaeus, 1758)

Common names:	English	:	Tiger
	Hindi	:	Bagh, Sher
	Marathi	:	Wagh
	Tamil & Tel	:	Pulee
	Malayalam	:	Nari
	Kannada	:	Hoolee
	Myanmarese	:	Char

Scientific synonyms: *Felis tigris*
Tigris spp.



Characteristics:

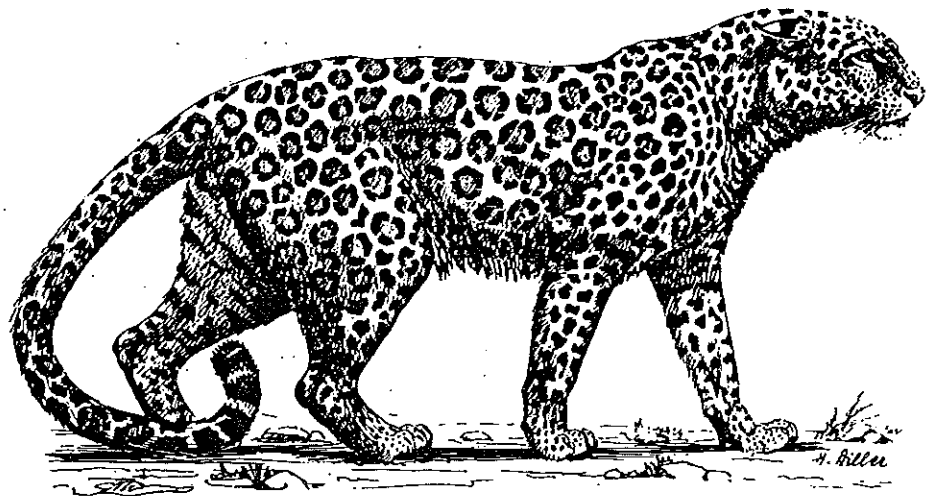
Adult:

General appearance:	Largest cat, unique by its striped coat.
Measurements:	Head-body: 140-280 cm, Tail: 60-110 cm, Hind foot: 30-40 cm, Height at shoulders: 95-110 cm
Body weight:	Male 180-280 kg, Females: 115-185 kg.
Head:	Cranium domed, muzzle relatively long. The face is framed by a ruff of longer hair. Nose pad pink sometimes with black spots. Iris yellow, pupil round. Ears short and rounded it's backside black with conspicuous white spots.
Legs:	The forelimbs are more powerfully built than the hind limbs. Large pads.
Tail:	Relatively long with stripes and rings. Tip usually black. No terminal tuft.
Coat:	Rather coarse. Summer coat short and flat, winter coat considerably longer, tufty, especially in the northern parts of the area. Frequently a short mane on the neck and shoulders. Black stripes on a light reddish-yellow or ochre ground. Underparts and inner side of limbs almost white or with a light

Panthera pardus (Linnaeus, 1758)

Common names:	English	: Leopard
	Hindi	: Tendwa, Chita, Sona chita, Chita bagh
	Marathi	: Karda, asnea
	Kannada	: Chirchu, chirate
	Tamil	: Chiruthai
	Telegu	: Chinna pulee
	Malayalam	: Pulee

Scientific synonyms:	<i>Felis pardus</i>
	<i>Leopardus pardus</i>



Characteristics:

Adult:

General appearance:	Big, powerfully built cat with a very elegant shape. Body long with comparatively short, stout legs and long tail.
Measurements:	Head-body: up to 160 cm, Tail: up to 100 cm, Hind foot: 20-27 cm, Height at shoulders: 50-70 cm.
Body weight:	30-80 kg
Head:	Rather small. Profile convex. Nose pad pink, brown or black. Iris yellow, green or grey. Pupils round. Ears rounded with a black back and a conspicuous median white spot.
Legs:	Rather short and stout.
Tail:	Without terminal tuft, tip black. Tip reaches the ground when animal is standing.
Coat:	Dense and soft. Rather short, marked with numerous black spots in the form of 'rosettes' on a buff or yellowish-tawny ground colour. Rosettes in most individuals without central spots. Underparts and inner side of limbs white, less densely spotted.
Sexual dimorphism:	No marked sexual dimorphism. Scrotum evident. Some males with a short mane on the neck.

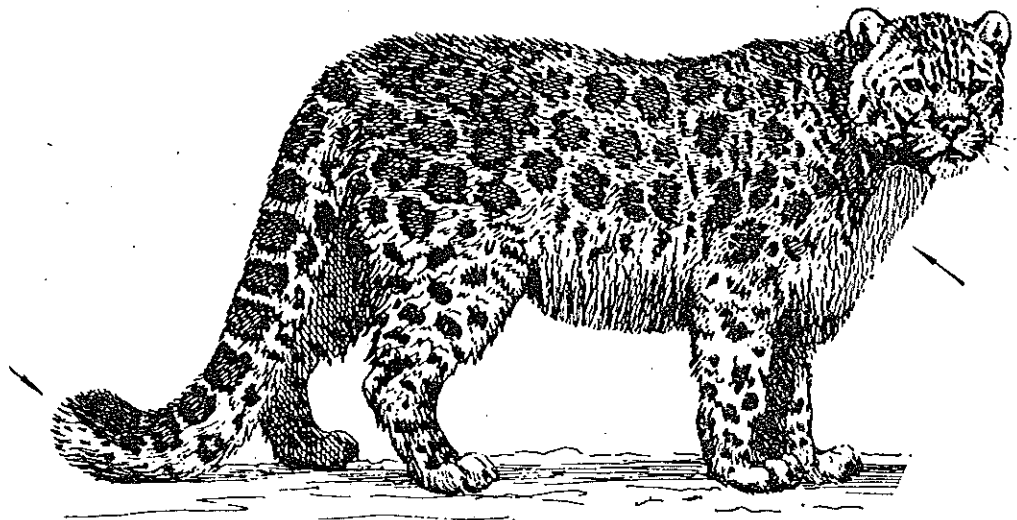
Order: Carnivora / Family: Felidae

Panthera uncia (Schreber, 1775)

Common names:

English	:	Snow leopard, ounce
Bhotia	:	Kar, zig, sachak
Hills North of Simla	:	Barhal he
Kunawar	:	Thurwagh
East of Kumaon	:	Burhel haye

Scientific synonyms: *Uncia uncia*
Felis uncia



Characteristics:

Adult:

General appearance: Big spotted cat with relatively short legs and extremely long tail.

Measurements: Head-body: 100-150 cm, Tail: 90-105 cm, Hind foot: 23-26 cm. Height at shoulders: 50 cm, Height at croup: 60 cm.

Body weight: 30-40 kg.

Head: Somewhat similar to that of cheetah. Relatively small with short muzzle, high cranium and vertical chin. Profile concave. Iris pale yellow-grey. Pupils round. Ears short and rounded, tips and margin black.

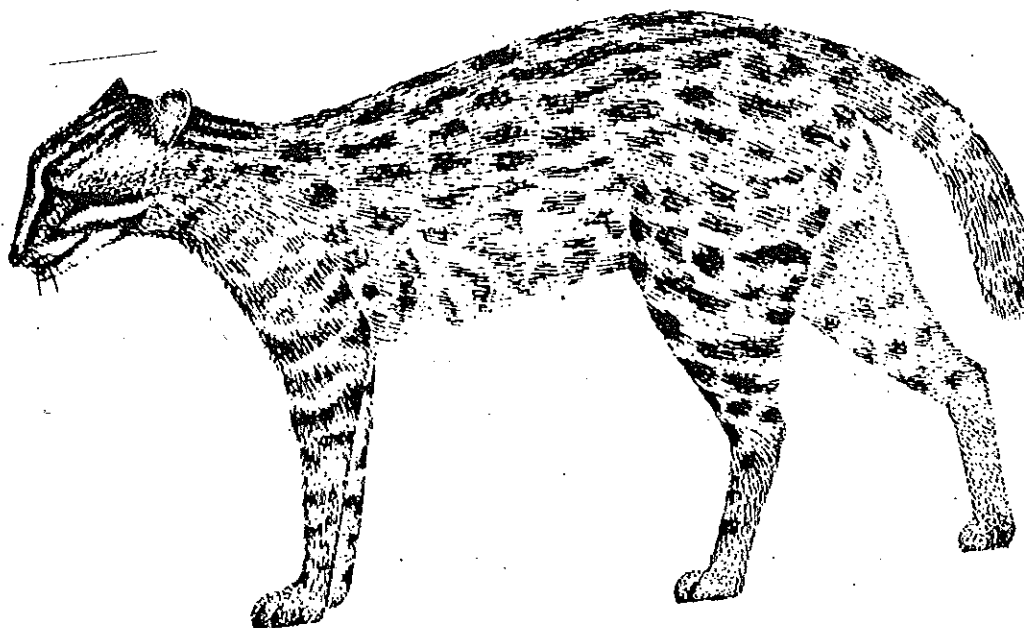
Legs: Rather short and stout, with large padded feet.

Tail: Extremely long and tufty, spotted, some spots forming incomplete rings. Tip dark at its upper side.

Coat: Dense, soft and tufty, especially in winter. Large 'rosettes' which are paler and less distinct than in other spotted cats. Ground colour soft grey,

Common names: English : Fishing Cat

Scientific synonyms: *Prionailurus viverrinus*



Characteristics:

Adult:

General appearance: Small to medium sized, heavily built with elongate head, rather short legs and a short tail.

Measurements: Head-body: 70-86 cm, Tail: 25-33 cm, Hind foot: 16 cm. Height at shoulders: 38-41 cm

Body weight: 7.7-15 kg.

Head: Big and broad. Face longish. Nose pad brownish. Iris greenish, pupils contracting into vertical slits. Ears rather short and rounded. Backside black with a conspicuous white spot.

Legs: Short. Fore limbs with two distinct elbow bars. Fore feet with moderately developed interdigital webs. Claw sheaths small, not enclosing completely the retracted claws.

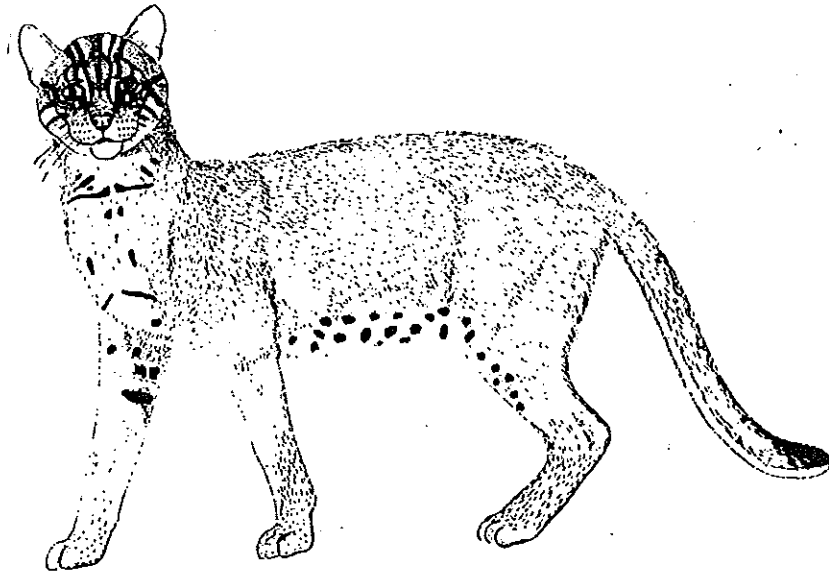
Tail: Relatively short, less than half of head and body length, and thick, marked with incomplete rings. Tip black.

Coat: Short and coarse. Grizzled grey or olive, tinged with brown. Elongate dark spots, arranged in longitudinal rows and extending over the entire body, 6-8 dark lines from the forehead to the neck. Belly whitish, marked with spots.

Similar species: None

Common names: English : Temminck's Golden Cat

Scientific synonyms: *Profelis temmincki*



Characteristics:

Adult:

General appearance: Medium sized, powerfully built cat with fairly long legs and a rather long tail.

Measurements: Head-body: 75-105 cm, Tail: 49-56 cm, Hind foot: 17-18 cm.

Body weight: 7-15 kg.

Head: Rather small with a heavy muzzle. Horizontal white or buff cheek stripe edged with black. Conspicuous white stripes also on the inner side and along the lower margin of the eye. Chin white. Nose pad flesh-coloured, upper margin black. Iris greyish-green or amber, pupils contracting into vertical ovals or circles. Ears rounded. Backside black with a whitish central area (no distinct patch).

Legs: Stout and rather long, with large padded feet.

Tail: Between one-half and two-thirds of head and body length. The underside is white in its terminal third. Upper side of tip dark.

Coat: Moderately long, dense and rather harsh. Colour highly variable. Upper side either uniformly red, brown or grey, or more or less heavily spotted. Chest, belly and the inner side of the legs cream or white with more or less distinct dark spots.

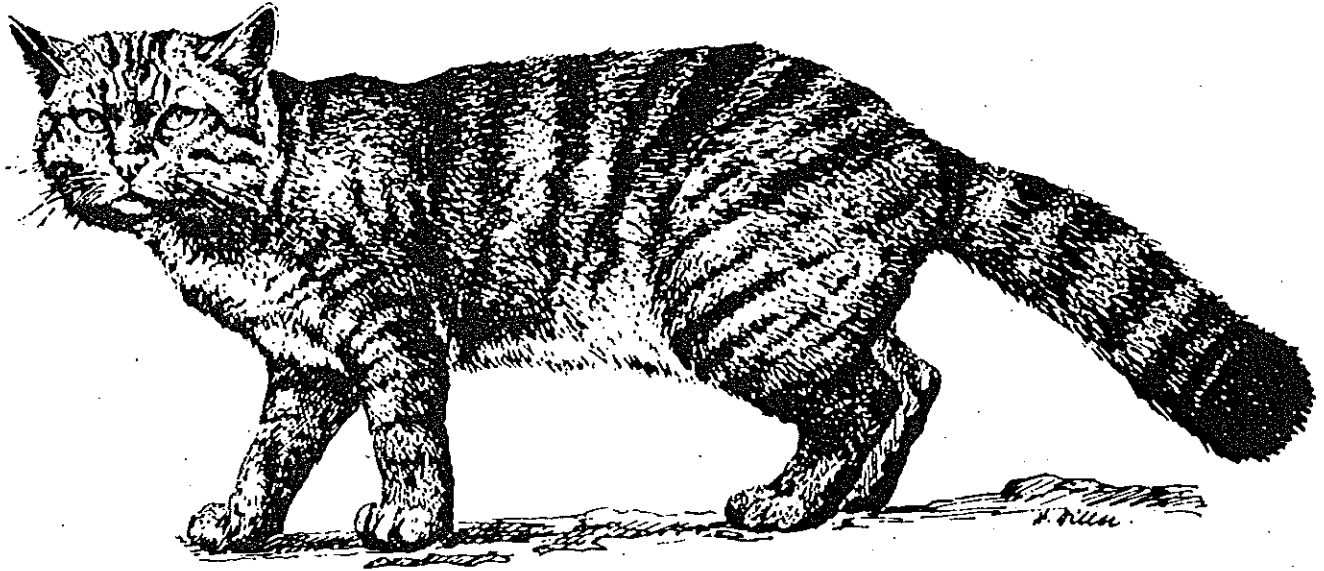
Order: Carnivora / Family: Felidae

Felis silvestris (Schreber, 1777)



Common names: English : Desert cat
Cutch : Jhang meno

Scientific synonyms: *Felis lybica*
Felis ornata



Characteristics:

Adult:

- General appearance:** Like a domestic cat, but somewhat larger in size and with tail relatively shorter.
- Measurements:** Head-body: 55-80 cm, Tail: 25-40 cm, Hind foot: 11-15 cm, Height at shoulder ca. 25-35 cm.
- Body weight:** Males up to 5 kg, Females 3.5-4 kg.
- Head:** Somewhat broader than in the domestic cat. Nose pad pink. Two distinct parallel black streaks on each cheek. Forehead striped. Iris greenish yellow. Pupils contracting into vertical slits. Ears rather small, pointed, with only faint black tufts and coloured like the back.
- Legs:** Slightly longer than in the domestic cat. Soles black. Numerous dark cross lines on the outside of the limbs. Two black bars on inner side of forearm.
- Tail:** About half of head and body length or less, well furred, ending bluntly. Terminal part marked with black rings. Tip black.
- Coat:** Dense and rather thick, with abundant woolly underfur. Basic colour yellowish-grey with numerous black spots throat whitish, underparts cream. Black stripes on the forehead and neck merging into a more or less

Order: Carnivora / Family: Felidae

Felis rubiginosa (Geoffroy, 1831)



Common names: English : Rusty-spotted cat

Scientific synonyms: *Prionailurus rubiginosus*



Characteristics:

Adult:

General appearance: A very small, slender cat with a moderately long tail.

Measurements: Head-body: 35-48 cm, Tail: 15-25 cm

Body weight: Males up to 18 kg, Females up to 16 kg.

Head: Short and rounded. Marked with two white streaks from the inner edge of the eye towards the crown, several dark stripes on the forehead, and two dark streaks on each cheek. Chin and cheek whitish. Nose pad pink. Iris greyish-brown or amber. Pupils contracting into vertical ovals. Ears short and rounded. Backside rufous grey with dark tips and lighter basal spot.

Legs: Rather short. The soles of the feet are black.

Tail: About half of head and body length. More rufous coloured than the body. No pattern or only indistinctly coloured.

Coat: Short and soft. Grizzled grey with a rufous tinge, and marked with brown or rusty bars and spots arranged in more or less regular lines. The belly and the inner sides of the legs are white with large dark spots.

Sexual dimorphism: Females are somewhat lighter than the males.

Juvenile: Colour somewhat more greyish than in adults. Iris light blue.



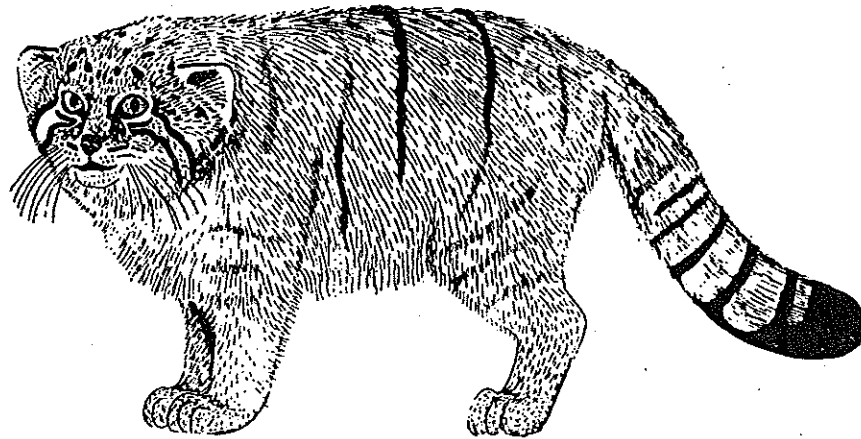
Order: Carnivora / Family: Felidae

Felis manul (Pallas, 1776)



Common names: English : Manul, Pallas' Cat

Scientific synonyms: *Otocolobus manul*,
Trichaelurus manul



Characteristics:

Adult:

General appearance: Small cat with a broad head, low set ears and extremely thick fur.

Measurements: Head-body: 50-65 cm, Tail: 21-31 cm, Hind foot 12-13 cm.

Body weight: 2.5 - 4.5 kg.

Head: Forehead extremely broad and highly domed, with scattered black spots. Muzzle short. Ears low set. Nose pad pinkish-brown. 2 distinct parallel black bars on each cheek. Small side whiskers. Lips, chin and throat white. Iris yellow, pupil contracting into vertical rhombs. Ears short and bluntly rounded. Backside buff without black tip.

Legs: Short and stout.

Tail: Medium length. Rather long and thick, with a broad terminal tuft, preceded by five or six narrow black rings.

Coat: Extremely thick, dense and soft with abundant dark underwool. Colour varies from light grey to yellowish buff and russet. The white tips of the hair produce a frosted appearance. No spinal band. Some faint black stripes on the sides. The fur on the underside is dark and longer than above.

Sexual dimorphism: Sexes alike.

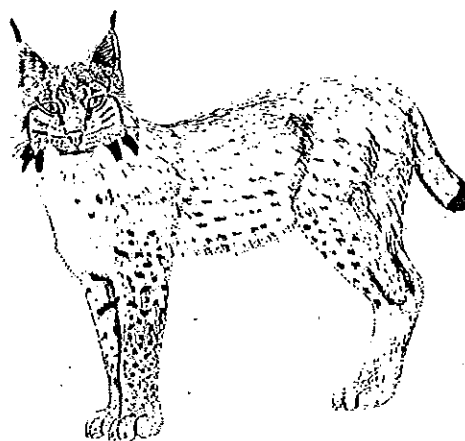
Juvenile: Kittens with a dark woolly coat without the frosting. Pattern more conspicuous than in adults.

Order: Carnivora / Family: Felidae
***Felis lynx* (Linne, 1758)**



Common names: English : Lynx
Kashmiri : Patsalam
Lahul : Phiauku

Scientific synonyms: *Lynx lynx*
Lynx canadensis
Lynx pardellus
Lynx pardinus



Characteristics:

Adult:

General appearance: Rather large cat with long legs and an extremely short tail.

Measurements: Head-body: 80-130 cm, Tail: 10-25 cm, Hind foot 19-22.5 cm, Height at shoulder ca. 50-75 cm.

Body weight: 17-38 kg (varied in different regions)

Head: Distinct ruff or fringe of pendant hairs framing the face. Iris yellow brown or whitish yellow-green. Pupils contracting into vertical rhombs. Ears large and pointed. Tips with long erect tufts of dark hair. Backside black towards the tip.

Legs: Long and stout, very large padded feet with distinct interdigital webs.

Tail: Short. Tip black.

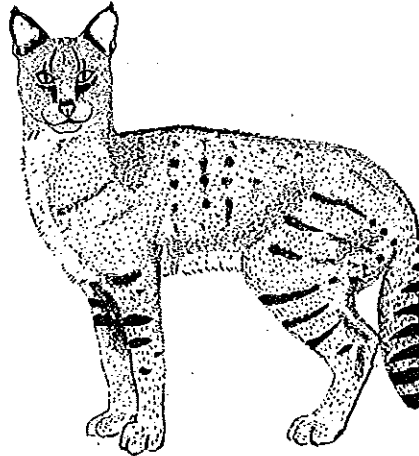
Coat: Soft and dense, hair long, up to 5 cm at the back and up to 7 cm at the belly

Sexual dimorphism: Sexes alike. Males are somewhat larger and heavier than females.

Juvenile: Ear tufts and ruff shorter than in adults.

Common names:	English	:	Jungle Cat,
	Hindi	:	Khatas, Jangli billi
	Bengali	:	Ban bilar
	Marathi	:	Baul, Baoga
	Telegu	:	Junka pilli
	Tamil	:	Karrupu ponnay
	Malayalam	:	Karruta poocha
Kannada	:	Kada bekku	

Scientific synonyms: *Chaus chaus*



Characteristics:

Adult:

General appearance: Medium sized cat with long legs and a short tail.

Measurements: Head-body: 56-94 cm, Tail: 20-31 cm, Hind foot 14-18 cm, Height at shoulder ca. 40 cm.

Body weight: 4.5-8.5 kg

Head: Rather narrow with a high-domed forehead and a long muzzle. Ears set close together. Nose pad brick coloured with a distinct median concavity. Chin and upper throat nearly white. Iris bright yellow, pupils contracting into vertical slits. Ears large with distinct tufts of up to 1.5 cm in length. Backside reddish with black tips and a pale central spot.

Legs: Long and slender, Two distinct elbow bars.

Tail: Medium length, about one third of head and body, conspicuously ringed with black. Tip black.

Coat: In summer rather harsh, in winter soft and rather long, with abundant, fine, woolly underfur. Ground colour grizzled reddish-brown, light grey-brown, light or tawny-olive, with a darker spinal band. Some inconspicuous spots and stripes on the sides, or pattern completely absent. Throat and chest pale ochre. Underparts pale cream or rufous.

Felis caracal (Schreber, 1776)

Common names: English : Caracal, African lynx
Hindi : Siyeh gush

Scientific synonyms: *Caracal caracal*
Lynx caracal.



Characteristics:

Adult:

General appearance: Medium sized cat with long legs and a short tail.

Measurements: Head-body: 62-82 cm, Tail: 23-32 cm, Hind foot 17-21 cm, Height at shoulder ca. 45 cm.

Body weight: 8-14 kg

Head: Cheeks without any pronounced ruff of hair. Characteristic dark spot on both sides of the muzzle and two short vertical bars above the eyes. Ears fairly close together. Nose pad dark brown or pink or both combined. Iris golden or greyish green. Pupils contracting into vertical slits. Ears large and rounded, tips with long erect tuft of hair, backside black with frosting of white hairs.

Legs: Long and slender, no elbow bars.

Tail: Short. Slightly tapering at the tip.

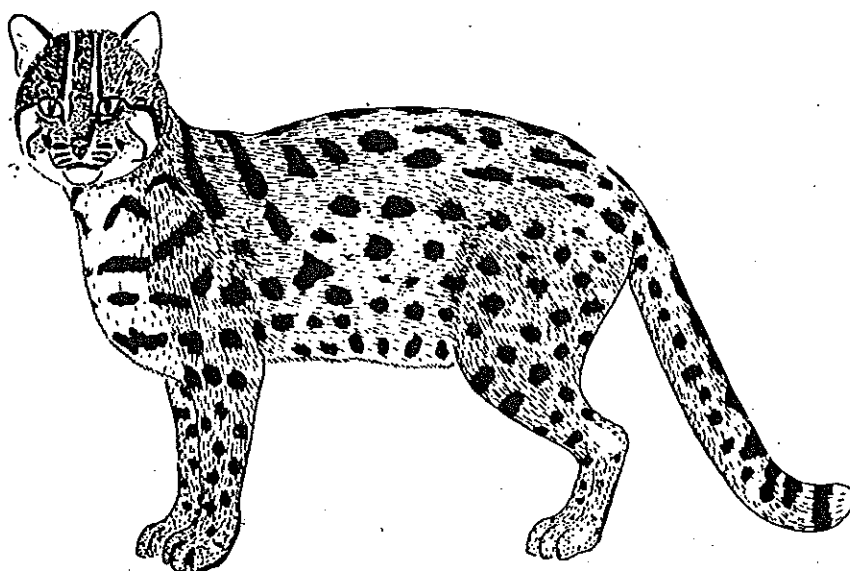
Coat: Dense, short and close at the back, longer, looser and woolier on the belly. Uniformly black red or reddish-sandy coloured, without trace of pattern, except some faint spots on the underside of the chest and buffy stripes on the inner side of the fore limbs. Under parts creamy buff.



Felis bengalensis (Kerr, 1792)

Common names:	English	: Leopard cat
	Hindi	: Chita billi
	Marathi	: Wagati
	Bengali	: Ban bilar

Scientific synonyms: *Prionailurus bengalensis*
Mayalurus iriomotensis.



Characteristics:

Adult:

General appearance:	Small spotted cat, about the size of a small domestic cat, but rather long in the legs.
Measurements:	Head-body: under 60 cm, Tail: 28-30 cm, Hind foot 12 cm.
Body weight:	3-4 kg
Head:	Relatively small, with a short, narrow muzzle. There are 2 narrow black stripes enclosing a white area between them, and 2 white and 4 black stripes running up from the inner corners of the eyes. Chin white. Nose pad brick coloured. Iris golden brown. Pupils contracting into vertical slits. Ears moderately long and rounded. Backside black with a conspicuous white central spot.
Legs:	Longer than that of domestic cat. Black elbow bars.
Tail:	About half of head-body length. Spotted above and indistinctly ringed towards the buffy tip.
Coat:	The colouration is highly variable. The ground colour above is ochraceous, bright buff or yellowish, with all black spots or rusty spots bordered with black. The stripes running from the forehead breakup into elongate spots on

Order: Carnivora / Family: Felidae

Felis marmorata (Martin, 1837)



Common names: English : Marbled cat

Scientific synonyms: *Pardofelis marmorata*
Felis diardii



Characteristics:

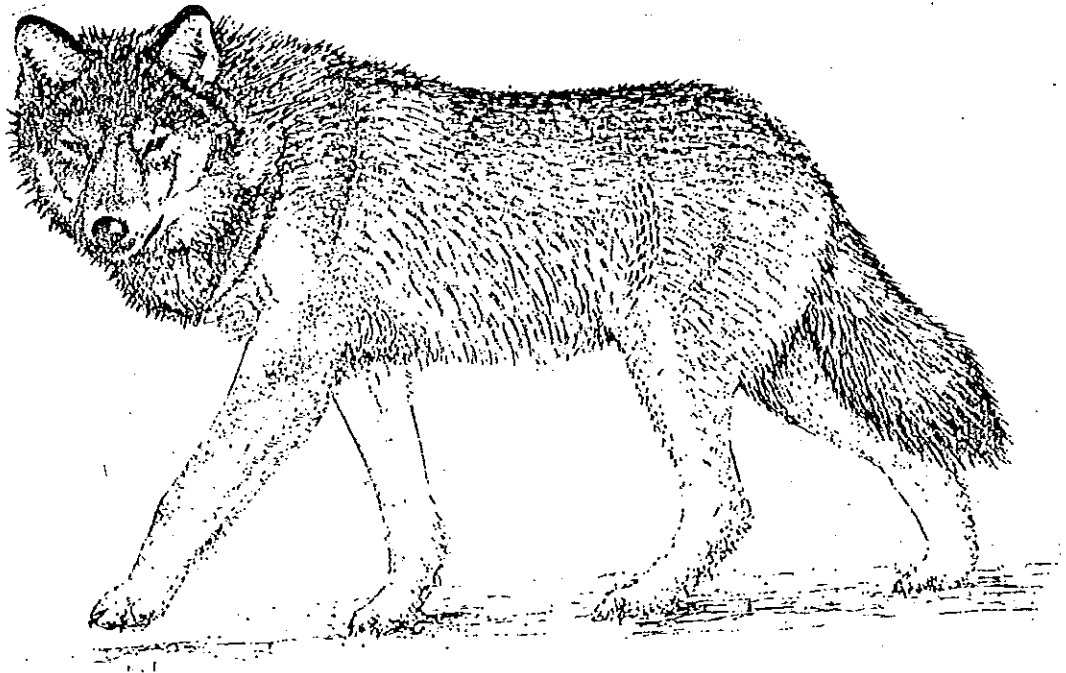
Adult:

- General appearance:** Small cat with a clouded pattern and an extremely long, bushy tail. Posture frequently humpbacked.
- Measurements:** Head-body: 45-61 cm, Tail: 35-54 cm
- Body weight:** 6 - 8 kg
- Head:** Short, broad and rounded. Marked with one black stripe running up from the upper margin of each eye, two black stripes on each cheek, and small spots on the forehead. Nose pad pink. Iris light brown, pupils contracting into vertical ovals. Ears short and rounded. Backside black with grey median bars.
- Legs:** Rather short with large padded feet.
- Tail:** Darker in colour than coat, obscure pattern.
- Coat:** Thick and soft, with abundant underwool. Basic colour above brownish-grey to bright yellow or rufous brown. Back and neck striped 'clouded' or 'marbled' pattern of large irregular blotches; edges with black on the sides; smaller solid spots on the limbs. Underparts light grey or whitish, marked with solid black spots.
- Juvenile:** Spots dark brown. Tail marked with rings.

Canis lupus (Linnaeus, 1758)

Common names:	English	: Indian Wolf
	Hindi	: Bheriya, Nekra, Bighana
	Marathi	: Landga
	Tibetan	: Changu

Scientific synonyms: *Canis lycaon*, *Canis nubilus*, *Canis pallipes*, *Canis hodophilax*, *Canis variabilis*, *Lupus orientalis*, *Lupus laniger*, *Canis chanco*, *Canis niger*, *Canis pambasileus*, *Canis tundrarum*, *Lupus altaicus*, *Lupus tschiliensis*, *Lupus filchneri*, *Lupus karanorensis*.



Characteristics:

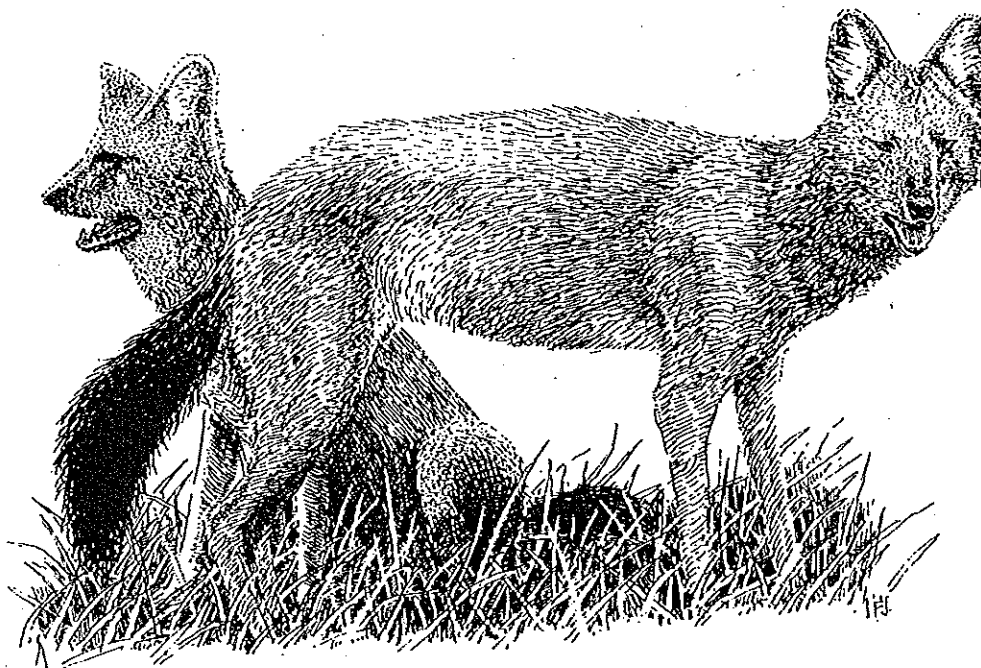
Adult:

General appearance:	Similar to a German shepard dog although with a narrower chest and longer legs.
Measurements:	Head-body: 100-140 cm, Tail: 30-50 cm, Height: 60-95 cm.
Body weight:	18-80 kg.
Head:	Neck strong and thick; ears prominent; broad snout with large nose pad. Often whitish markings below and between the eyes. Upper lips buff coloured.
Legs:	Long, fore ones stronger, fore feet have a fifth toe with a dew claw. Colour is lighter than that of body and feet, almost whitish, Very often a vertical dark band on front leg.
Tail:	Straight, darker on upper surface and often black tipped.

Cuon alpinus (Pallas, 1811)

Common names:	English	: Asiatic wild dog, Dhole, Indian wild dog, Red dog.
	Hindi	: Dhole, Son, Ram, Jangli Kutta, Ban kutta.
	Marathi	: Kolsun, kolsa
	Gujarati	: Kol kutta
	Kannada	: Kadu nai, chira nai
	Telegu	: Reza kutta
	Malayalam & Tamil	: Chennai, kattu nai

Scientific synonyms: *Canis alpinus*, *Canis javanicus*, *Canis dukhunensis*, *Canis primaevus*, *Cuon rutilans*, *Cuon sumatrensis*, *Cuon grayiformes*, *Cuon lepturus*, *Anurocyon clamitans*.



Characteristics:

Adult:

General appearance: A medium sized dog of light and graceful proportions. 16 mammae rather than the usual 10 of genus *Canis*.

Measurements: Head-body: 75-110 cm, Tail: 41-50 cm, Height: 42-50 cm.

Body weight: 10-20 kg.

Head: Muzzle shorter than that of most canids, with large nose pad; ears rounded and erect; 40 teeth, third lower molar absent. Top of muzzle and patches below eyes may be darker in colour.

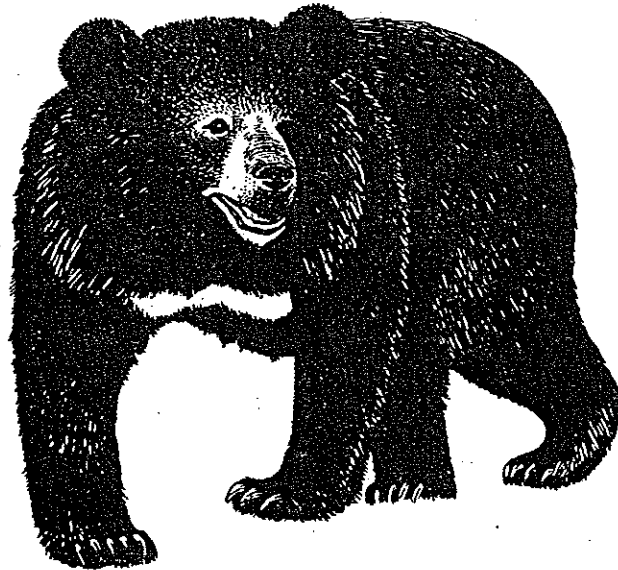
Legs: Outer parts of body coloured; inner parts paler, paws can be white.

Tail: Darker than body and usually black tipped. Long.

Coat: A typical uniform coat dorsally red or yellow or rust; underparts and throat

Common names:	English	:	Asiatic Black bear, Himalayan Black bear, Moon bear
	Hindi	:	Reech, bhalu, rinch
	Kashmiri	:	Haput
	Nepali	:	Sanar
	Bhotia	:	Dom
	Assamese	:	Satun, Sitam, mapol
Myanmarese	:	Wet woon	

Scientific synonyms: *Ursus thibetanus*



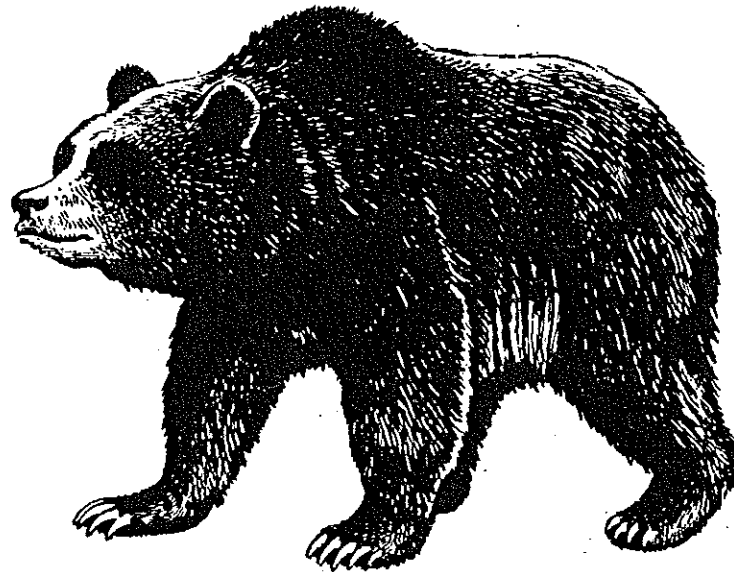
Characteristics:

Adult:

General appearance:	Large black bear, with a compact body and characteristic 'V' shaped breast mark.
Measurements:	Length: 120-220 cm, Shoulder height: 75 cm. Tail: 7.5-10 cm.
Body weight:	90-180 kg
Head:	Shortish muzzle and straight facial profile, thick neck, large, widely spaced ears. Nose black.
Legs:	Soles naked, claws markedly curved, black or brownish, slightly longer on fore foot (3-4.5 cm) than back (1.8-3.6 cm).
Coat:	Jet black or occasionally dark brown or reddish-brown with a brown, grey or tan muzzle, buff or white lower lip, chin and usually a white, cream or buffy brown breast mark or 'collar' highly variable in shape, feet sometimes dark brown. Hair smooth dense, shiny and relatively short (4-8.5 cm) except on the neck where longer hair (15.5 cm) forms a fringe or crest. Animals from lower elevations in the southerly part of the range have shorter, coarser coats

Common names:	English	: Himalayan Brown bear
	Hindi	: Lal bhalu, safed bhalu, siale reech, barf ka reech
	Kashmiri	: Haput
	Ladak	: Drin mor
	Baltistan	: Drengmo

Scientific synonyms:	<i>Ursus horribilis</i>
	<i>Ursus middendorffi</i>



Characteristics:

Adult:

General appearance: Medium to massive. Prominent shoulder hump. Tail like a stump.

Measurements: Length: 150-470 cm, Shoulder height: 80-150 cm.

Body weight: 65-780 kg .

Head: Neck short and thick, broad concave "dish" face, Ears rounded.

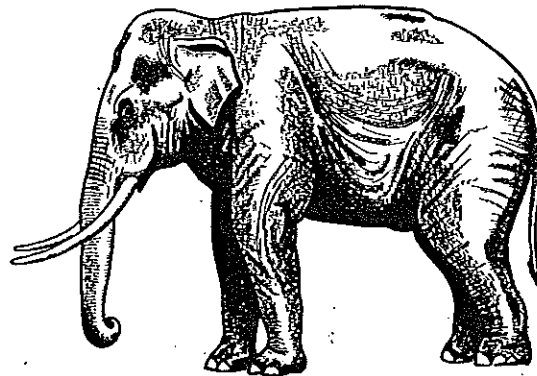
Legs: The heel of the front is hairy, front claws are much longer (3.7-10 cm) than back (1.6-4.6 cm), they are straight or slightly curved, either uniformly white, pale yellow in colour, stripe or banded.

Coat: Many colour variations known e.g., almost black, dark cinnamon, reddish-brown, tan, greyish-brown, beige, creamy-yellow, sandy, silver grey, greyish-olive straw, dark brown frosted with white. Often there is variation on the same animal such as legs much darker than back, a darker or lighter dorsal stripe or shoulder patch, or a lighter head. White collars across the shoulders also occur. Individual hairs usually vary in colour along their length, the central portion darker and tips lighter or frosted. They are moderately long (6-14 cm on the backs) and the underwool is usually dense.

Elephas maximus (Linnaeus, 1758)

Common names:	English	:	Asiatic Elephant, Indian elephant
	Hindi	:	Hathi (male), Hathini (female)
	Tamil	:	Anai
	Malayalam	:	Ana
	Kannada	:	Ane
	Myanmarese	:	Tor sin

Scientific synonyms: *Elephas indicus*



Characteristics:

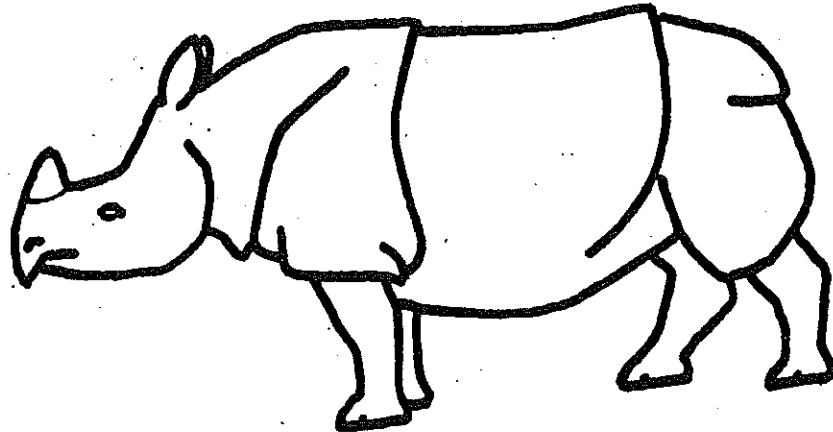
Adult:

General appearance:	Large mammal. Outline of back convex, the top of the head is the highest point of the silhouette, hind quarters sloping.
Measurements:	Head-body: 5.5-6.4 m, Tail: 1.2-1.5 m, Height at shoulders (in males): 3.3 m.
Body weight:	Upto 5000 kg in males.
Head:	Very large, forehead flat, vertical with two humps on top.
Trunk:	Surface rather smooth. One finger like projection at the tip (above).
Ears:	Relatively small, more or less pentagonal in shape.
Tusks:	Females nearly always, male sometimes without visible tusks. If present, curved and rather massive.
Legs:	Short, five nails on each fore foot, four nails on each hind foot.
Tail:	With a terminal tuft of coarse hairs.
Coat:	Smoother. Colour dark grey to brown, often mottled about the forehead, ears, base of trunk, and chest with flesh-coloured blotches. The hair covering

Rhinoceros unicornis (Linnaeus, 1758)

Common names: English : Great Indian one-horned Rhinoceros.
Hindi : Gairda

Scientific synonyms: *Rhinoceros asiaticus*
Rhinoceros indicus



Characteristics:

Adult:

- General appearance:** A heavily built rhino with pronounced skinfolds.
- Measurements:** Head-body: 420 cm, Height at shoulders: 160-186 cm.
- Body weight:** Male: 2100 kg, females: 1500 kg
- Head:** Upper lip with prehensile tip. Ears narrow, fringed by short hair.
- Horns:** One nasal horn which rarely exceeds 30 cm.
- Coat:** Skin naked (hairless), divided into shields with epidermal knobs. Colour brownish-grey, in the folds pinkish. The posterior cervical folds turns backwards and does not cross the shoulders. Subcaudal fold evident.
- Sexual dimorphism:** Males larger with more pronounced skin folds on the neck and the horn is thicker at the base and often split at the end.

Juvenile: Weight at birth 59-71 kg, in rare cases up to 81 kg.

Similar species: *Rhinoceros sondaicus*: also one horn and skin divided into shields, but smaller and post-cervical fold crossing the shoulder.

Intraspecific variation: None.

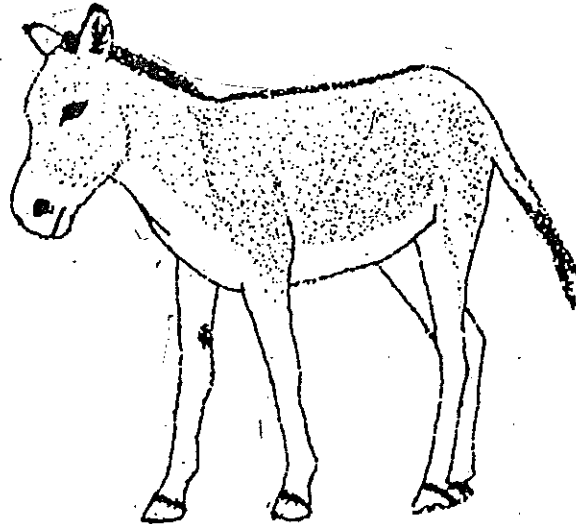
Order: Perissodactyla / Family: Equidae

Equus hemionus (Pallas, 1775)



Common names: English : Asiatic Wild Ass
Hindi : Ghor khar

Scientific synonyms: *Equus luteus*



Characteristics:

Adult:

General appearance:

The Asiatic wild ass is a rugged and robust equine, yellow-brown to reddish brown in colour, with an erect mane and an ass like tail. It has a smooth, short hair coat in warm weather, but grows a heavy, and very shaggy coat in winter. Winter coat may remain until early summer. It is well known for its stamina and intractable temperament.

Measurements:

Height average: 144 cm. Ear length: 17 cm, Hoof breadth: 7.6 cm.

Head:

Low nasals, Medium orbitals.

Legs:

Dark hoof ring present. White wedge above elbow: little or none.

Tail:

Dorsal stripe on tail reaches tuft.

Coat:

General colour of coat varies from reddish-grey to fawn to pale chestnut.

Similar species:

Equus africanus : Usually larger size, brown colouring and sturdier physique.

Equus przewalskii : Shorter mane and ass-like tail, as opposed to the horse's fully haired tail.

Intraspecific variation:

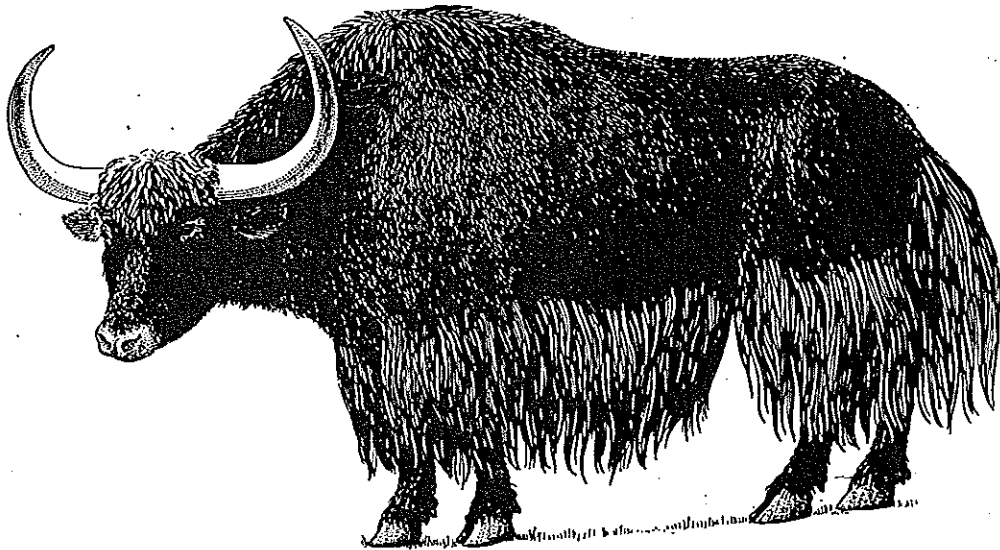
Two subspecies have been described in India.

Equus. h. khur - kutch

Equus. h. kiang - Ladakh

Common names: English : Wild Yak

Scientific synonyms: *Bos grunniens* (Linnaeus, 1766)
Bos poephagus (Pallas, 1811)
Bos grunniens mutus (Przewalski, 1883)
Poephagus mutus (Przewalski, 1883)



Characteristics:

Adult:

General appearance: Large, woolly bovine with massive, long body, a small hump on high shoulders and what appears to be short legs; large and heavy head.

Measurements: Head-body: 200-325 cm. Height at shoulder: 150-205 cm, Tail: 70-100 cm, horns up to 95 cm.

Body weight: 325-1000 kg.

Head: Drooping head with short hair. Ears rather small. Horns large, spreading horizontally outward, then curving upward and forward, while the tips are slightly bent backward and inward.

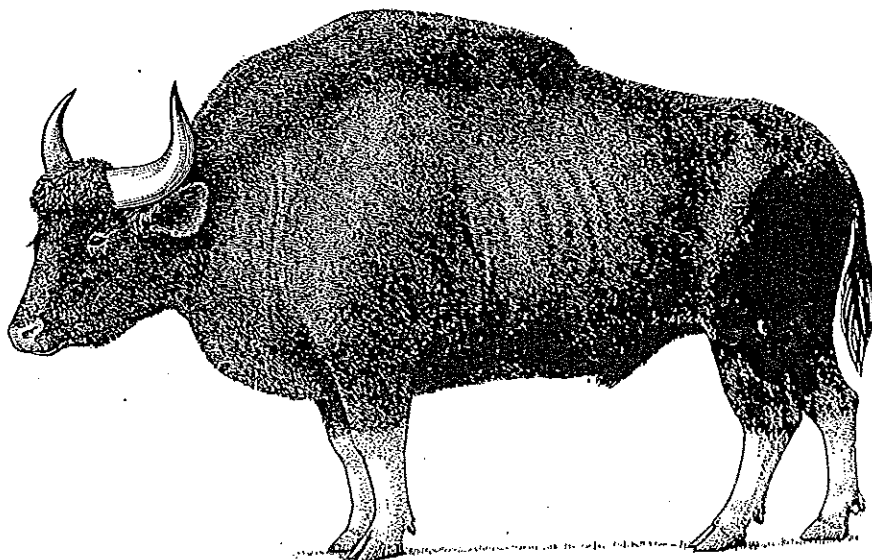
Tail: Enormous brush of long and dense hair.

Coat: Colour is a uniform blackish-brown with a little white over the muzzle. Hair rather short on neck and back, curly on forehead; long coarse hair (up to 60 cm) forms shaggy fringes which hang from its flanks, underparts and thigh dense, soft and closely matted underfur.

Bos gaurus (Smith, 1827)

Common names:	English	: Gaur, Indian Bison
	Hindi	: Gaur, Gaur gai
	Marathi	: Gaviya, gawa
	Kannada	: Kadu yethu, kartee
	Tamil	: Kattu erumar
	Malayalam	: Katu poth
	Myanmarese	: Peeoung

Scientific synonyms:	<i>Bos frontalis</i> (Lambert, 1804)
	<i>Bos gour</i> (Hardwicke, 1827)
	<i>Bibos subhemachalus</i> (Hodgson, 1837)
	<i>Bos cavifrons</i> (Hodgson, 1837)
	<i>Bos gaur</i> (Sundevall, 1846)
	<i>Bos asseel</i> (Horsfield, 1851)



Characteristics:

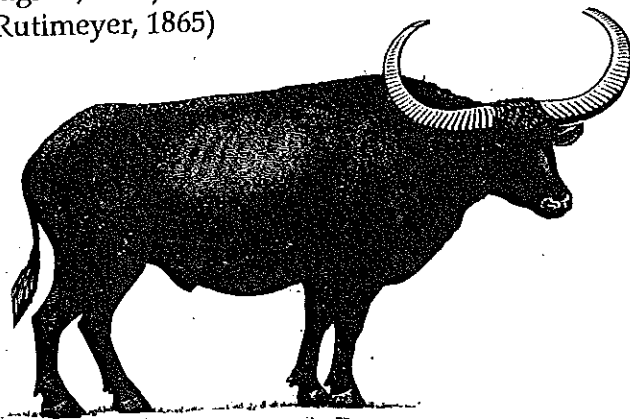
Adult:

General appearance:	Among the largest of bovines. Huge head, massive body, sturdy limbs. On their shoulders they have a striking muscular ridge that slopes down to the middle of the back, where it ends in an abrupt dip.
Measurements:	Head-body: 260-320 cm, Height at shoulders: 160-210 cm, Tail length: 85-100 cm, horns: 60-115 cm.
Body weight:	600-1000 kg
Head:	Ears large and broad. Horns crescent shaped, curving upward and backward and tapering to a sharp point; creamy yellow with black tips; distinct hairy ridge between the horns.
Tail:	Tufted.
Coat:	Hair short and glossy; adults, especially bulls are almost hairless except on the head, chest, underparts and the lower parts of the legs. Colour deep brown, old bulls tending to jet black, cows to reddish; underparts brownish-

Bubalus arnee (Kerr, 1792)

Common names: English : Wild Water Buffalo, Wild Water Buffalo,
Wild Asiatic Buffalo.
Hindi : Arna (male), Arni (female)
Marathi : Jungli mhaus

Scientific synonyms: *Bos bubalis* (L., 1758)
Bubalus bubalis (L., 1758)
Bos bubalus (Gmelin, 1788)
Bos arnee (Kerr, 1792)
Bos buffelus (Blumenbach, 1821)
Bos arni (Smith, 1827)
Bubalus arna (Hodgson, 1841)
Buffelus indicus (Rutimeyer, 1865)



Characteristics:

Adult:

General appearance: Large, massive bovine with huge horns and long, narrow face.

Measurements: Head-body: 250-300 cm. Height at shoulder: 150-180 cm, Tail: 60-100 cm, horns up to 195 cm.

Body weight: 700-800 kg

Head: Ears rather large, pointed and sparsely tufted.

Tail: Long, with bushy tip.

Coat: Hair, coarse and sparse, except between horns; on back directed forward from the haunches to the head. Colour ash-grey to black.

Sexual dimorphism: Virtually none.

Similar species: *Bubalus mindorensis*: Smaller and looks like a miniature water buffalo; short, stout horns.
Bubalus depressicornis and *B. quarlesi*: both these species are smaller.
Bos gaurus: has crescent shaped, shorter horns with a round cross-section, a distinct dorsal ridge, white stockings and is somewhat larger in build.

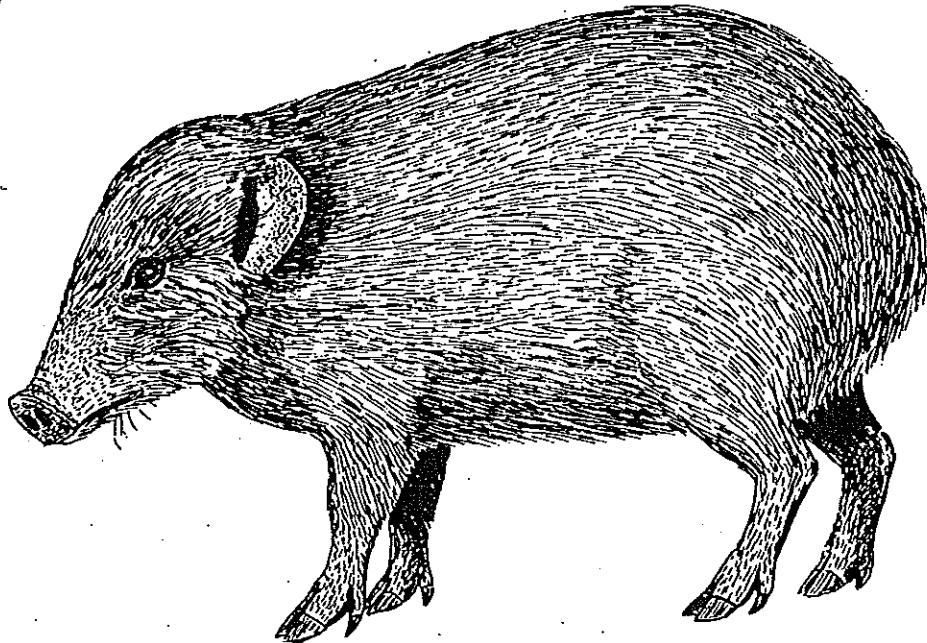
Order: Artiodactyla / Family: Suidae

Sus salvanius (Hodgson, 1847)



Common names: English : Pygmy Hog

Scientific synonyms: *Porcula salvania*



Characteristics:

Adult:

General appearance: Very small wild pig with a short tail.

Measurements: Head-body: 66-71 cm in males and 55-62 cm in females; Height at shoulders: 23-30 cm in males, 20-22 cm in females. Tail length: 22-36 cm.

Body weight: Male: 7.7-11.8 kg, females: 6.6-7.6 kg

Coat: Blackish-brown bristles on grey-brown skin.

Sexual dimorphism: Males are larger and have larger canines.

Juvenile: At birth uniform pinkish-grey, later striped, Head-body 16-19.5 cm, weight 133-250 gm.

Similar species: None

Intraspecific variation: None.

Distribution:

India: Assam, Sikkim.

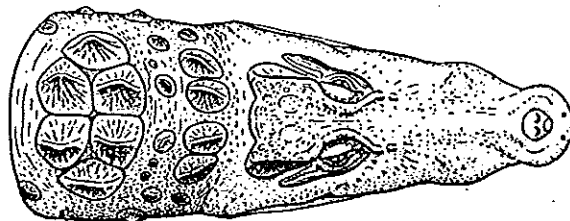
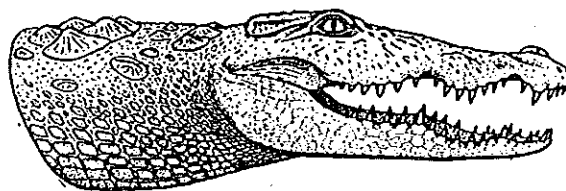
Extralimital: Nepal, Bhutan.

REPTILES

Crocodylus palustris (Lesson, 1831)

Common names:	English	: Marsh Crocodile, Mugger, Indian Freshwater Crocodile
	Hindi	: Mugger
	Marathi	: Mugger
	Gujrati	: Mugger
	Oriya	: Kuji Khumbiora
	Bengali	: Kuhmir
	Tamil	: Mothalai
	Kannada	: Mosalay
	Telugu	: Mosali
Malayalam	: Cheenkanni	

Scientific synonyms: *Crocodylus palustris kimbula* (Deraniyagala, 1936)



Characteristics:

Adult:

General appearance: Dark greyish-olive crocodile. Dorsal scutes separated from the cluster of nuchal humps and arranged somewhat irregularly in 17 to 18 transversal rows and 4 to 6 more or less juxtaposed longitudinal rows. The scutes of the middlemost pair of longitudinal rows may be somewhat broadened in specimens of the Asian mainland, but not conspicuously. Outermost longitudinal rows on both sides rather discontinuous.

Measurements: Length Up to 6 m, usually about 4 m.

Head: Snout comparatively short and bluntly rounded at its tip, only 1.3 to 1.5 times as long as broad at the level of the front corners of the eyes. Surface smooth or wrinkled in old specimens, without bony ridges or elevated areas in front of the eyes. Iris greenish. Dentition: upper jaw 5 + 13 to 14, lower jaw 14 to 15. Mandibular symphysis extending backwards to the level of the 4th to 5th pair of teeth. Margins of the cranial plate not swollen.

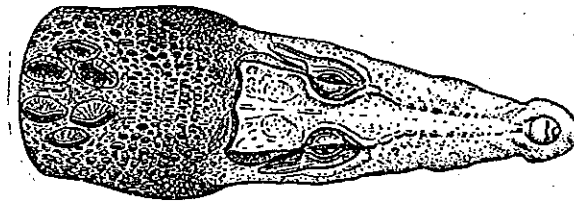
Neck: Postoccipital humps arranged in a single transversal row of 4 to 6 enlarged scales, and followed by a less distinct transversal row of some smaller humps. Nuchal humps arranged in a cluster, of which 4 large humps form a square flanked on both sides by a smaller one.

Tail: Keel rows on the middle pair of dorsal scutes passing backwards parallel

Crocodylus porosus (Schneider, 1801)

Common names: English : Saltwater Crocodile
Oriya : Baula Khumbira

Scientific synonyms: *Crocodylus biporcatus* Cuvier, 1807



Characteristics:

Adult:

General appearance:

Rather small to mugger but colour variable. Commonly light yellow with dark spots on the upper side only, Dorsal scutes on back widely separated from the cluster of nuchal humps, ossified only in their centre (in contrast to all other existing crocodiles), arranged rather regularly in 16 to 17 transversal rows and 6 to 7 longitudinal rows.

Measurements:

Length upto nearly 10 m. usually about 5.5 m.

Head:

Snout rather long, about 1.7 to 2.1 times as long as broad at the level of the front corners of the eyes. In front of each eye a bumpy bony ridge extending forwards nearly to the nasal swelling. Iris light greenish. Dentition: upper jaw (5) 4 + 13 to 14, lower jaw: 14 to 15. Mandibular symphysis extending backwards to the level of the 4th to 5th pair of teeth.

Neck:

Postoccipital humps completely absent or developed only feebly, often on one side; in some specimens, especially from Sri Lanka, somewhat larger and arranged more or less in a single transversal row. Nuchal humps arranged in a cluster of which 4 large humps form a square flanked on each side by a smaller hump.

Tail:

Keel rows on the middlemost pair of dorsal scutes passing backwards parallel along the tail root without meeting. Both halves of the double caudal crest meet not before the level of the 20th to 22nd caudal whorl.

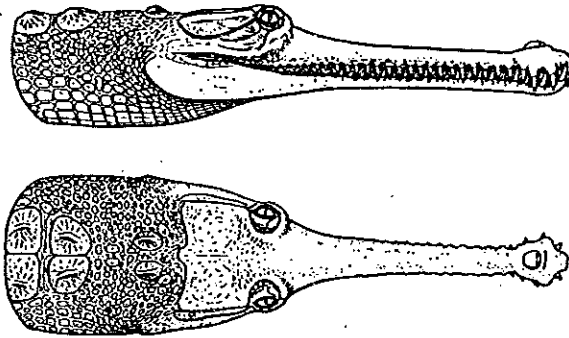
Skin:

Upper surface in young animals and semi-adults remarkably light yellowish olive, with numerous dark spots all over the upper surface of the body; adult animals become somewhat darker in the course of growth. Lower surface uniformly light, without dark spots or blotches.

Gavialis gangeticus (Gmelin, 1789)

Common names:	English	:	Gavial, Gharial, Long-snouted Crocodile
	Hindi	:	Gharial
	Bengali	:	Mecho kumhir
	Oriya	:	Thantia kumhira
	Bihari	:	Nakar, Bahsoolia nakar

Scientific synonyms: None



Characteristics:

Adult:

General appearance: Snout extremely long and slender, abruptly narrowed against the brain part of the skull, about 3.5 to 6 times as long as broad at the level of the front corners of the eyes. Dorsal scutes on back not different from the nuchal humps and arranged regularly in 21 to 22 transversal rows and 4 to 6 adjacent longitudinal rows.

Measurements: Length upto 7.2 m, usually about 4.5 m.

Head: No elevated structures in front of the eyes. Dentition: upper jaw: 5+23 to 24, lower jaw: 25 to 26. Mandibular symphysis extending backwards to the level of the 23rd to 24th pair of teeth.

Neck: Postoccipital humps, a single transversal row consisting of only one pair of humps. Nuchal humps not different from the dorsal scutes, the first transversal rows composed each by 2 humps (scutes).

Tail: Keel rows on the middlemost pair of dorsal scutes passing backwards parallel along the tail root without meeting. Both halves of the double caudal crest meet at the level of the 19th to 21st caudal whorl.

Skin: Upper surface in adults almost greyish black, lower surface uniformly light, without dark blotches.

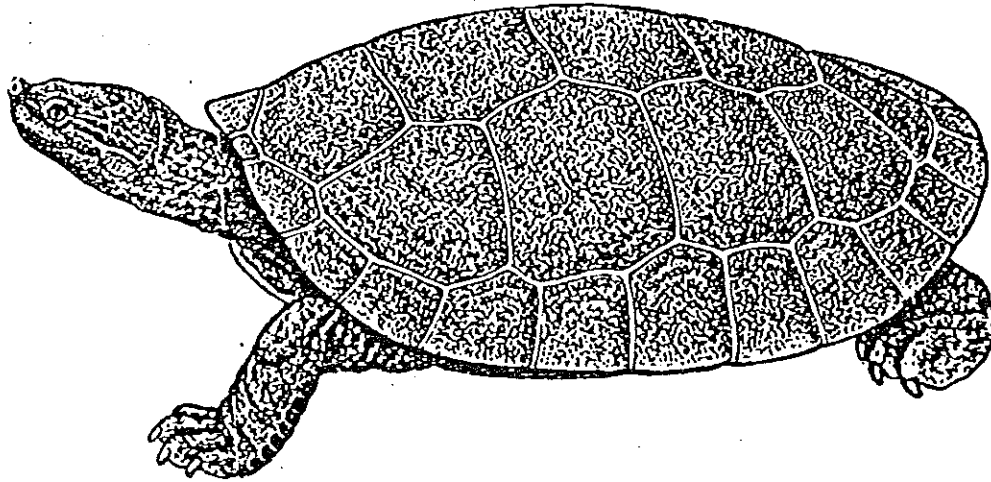
Juveniles: More or less dark olive, speckled with black and with black crossbands. Iris greenish.

Order: Chelonia / Family: Bataguridae
***Batagur baska* (Grey, 1831)**



Common names: English : River Terrapin
Bengali : Bara katha, Ram Kachim

Scientific synonyms: *Emys baska* (Grey, 1831)



Characteristics:

Adult:

General appearance: Large hardshell species with four claws in each forelimb. Upper and lower jaws with denticulated ridge. Plastron long, convex with a posterior notch and yellow in colour.

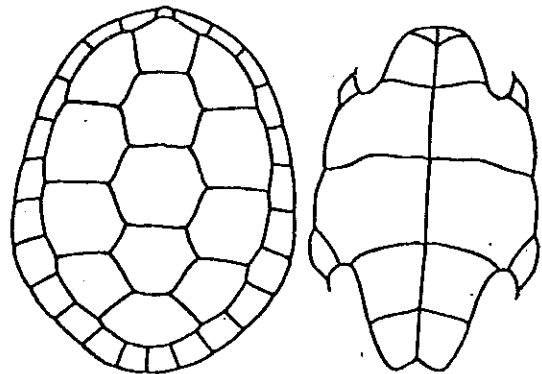
Measurements: Grows up to 60 cm in shell length.

Body weight: 15-20 kg

Head: Black; upper and lower jaws with denticulated ridge

Shell: Brown, domed (elevated), buttressed and smoothened scutes in old individuals.

Limbs: Four claws on the forelimb and digits webbed.



Juvenile: Relatively flatshelled with serrated margins.

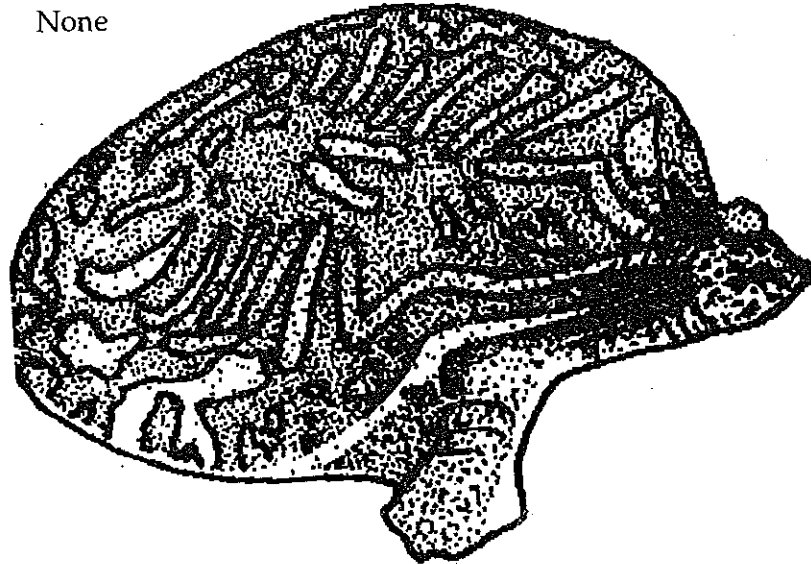
Similar species: *Kachuga kachuga*; riverine hardshell species different from *Batagur baska*:

Order: Chelonia / Family: Trionychidae
***Chitra indica* (Gray, 1831)**



Common names: English : Narrow-headed Softshell Turtle
Hindi : Chitra
Oriya : Baluri kaincha
Bengali : Dhush kachim

Scientific synonyms: None



Characteristics:

Adult:

General appearance: The largest softshell river turtle with extremely narrow head. Eyes set close to the nostrils. Broad and short neck. Plastron cream or pale pink with four callosities.

Measurements: Upto 150 cm

Body weight: Average 40-50 kg

Head: Narrow head, eyes set closer to nostril; olive-green in colour with reticulations.

Shell: Carapace flat, depressed, oval, dull olive or bluish-grey with reticulated markings continuing upto the neck.

Limbs: With three claws.



Juvenile: With four oval eye-like markings on the carapace and numerous black elongated markings.

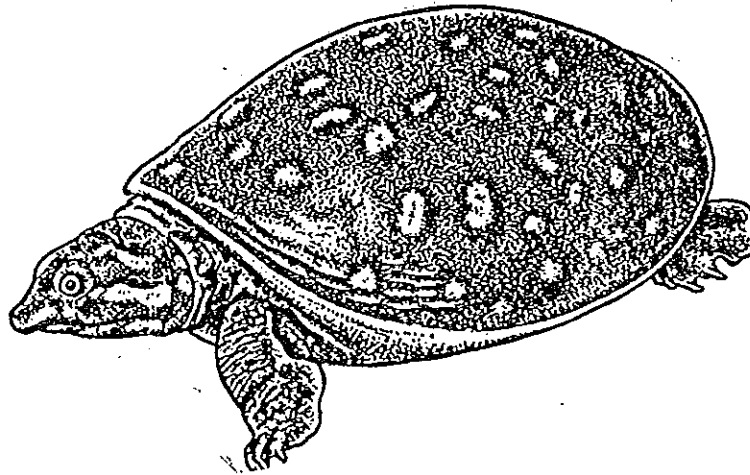
Distribution:

India: In river Indus, Ganges, Lower Brahmaputra, Mahanadi, Godavari and

Lissemys punctata (Lacepede, 1788)

Common names:	English	: Indian Flapshell Turtle
	Hindi	: Sundri, Matia
	Gujarati	: Pani no Kachbo
	Tamil	: Pal aamai
	Telugu	: Neeti tabelu
	Oriya	: Panka kaincha
	Assamese	: Baghdura, Baminy Kasso
Bengali	: Til Kachim, Mate kachim	

Scientific synonyms: *Testudo punctata* (Bonnaterre, 1789)



Characteristics:

Adult:

General appearance: The commonest softshell turtle with a grey-green coloured body with many black bordered yellow spots. A light coloured marginal rim. However, colours may differ from olive green to olive brown. Soft flaps on the posterior side of the plastron under which the hind limbs are retracted. The anterior end is hinged for the retractable neck and head. Plastron pale pink colour with seven bone-like callosities. Also with flexible flaps.

Measurements: Maximum size: (Carapace length) 35 cm .

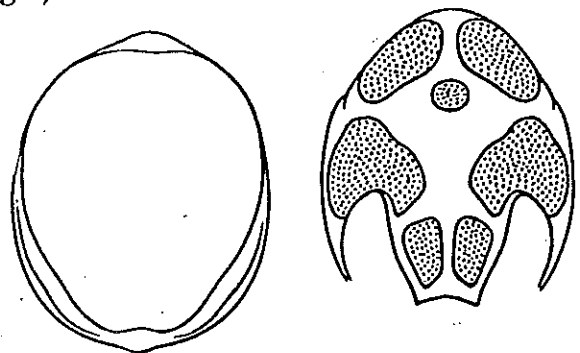
Body weight: 4-5 kg

Head: Greenish with 3 oblique parallel black stripes, prominent in young individuals.

Shell: Carapace flat and oval with or without spots.

Limbs: Limbs with three claws which are webbed.

Similar species: None

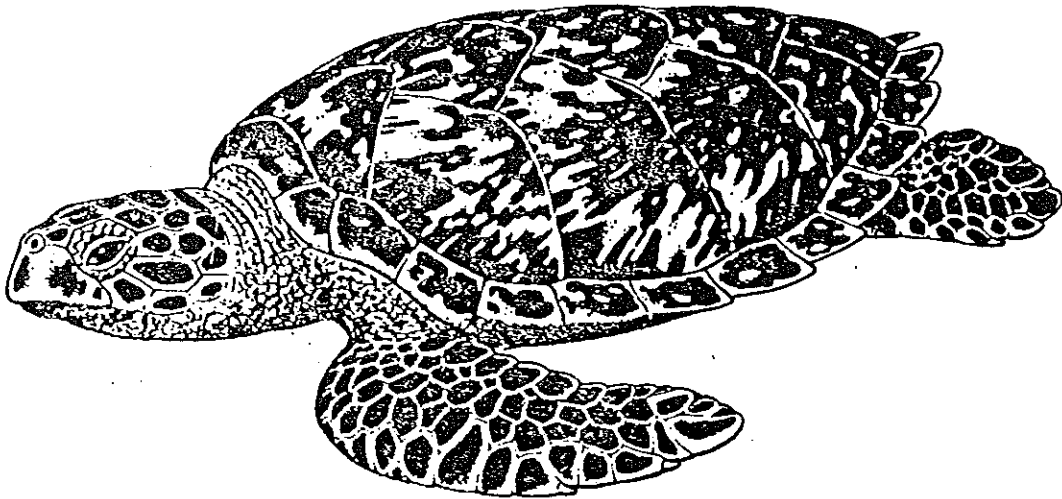


Order: Chelonia / Family: Cheloniidae

Eretmochelys imbricata (Linnaeus, 1766)



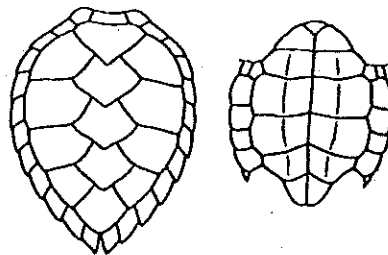
- Common names:** English : Hawksbill
- Indian names:** Hindi : Kangha kachua
Tamil : Seep' amai, Ot amai, Kadal amai
Gujarati : Dariyani moti kachab
Nicobarese : Kap sah, Kap kael
- Scientific synonyms:** *Chelone imbricata* (Linnaeus)



Characteristics:

Adult:

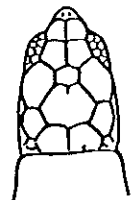
General appearance: A moderately small marine turtle with distinctly overlapping horny plates on the carapace, which may not be overlapping in very old and large specimens. Head relatively narrow, parallel sided, with 2 pairs of prefrontal shields. Strong horny beak. Plastron: 4 inframarginal scutes.



Measurements: Size (Carapace length) 90 cm.

Body weight:

Head: Carapace narrow and strongly serrated. Shields thick, strongly overlapping. 4 costal and 5 central shields usually 11 marginals. Supercaudal divided, often covered with barnacles.



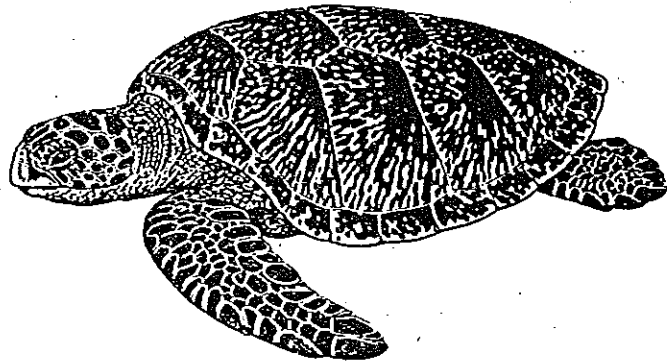
Order: Chelonia / Family: Cheloniidae

Chelonia mydas (Boulenger, 1899)



Common names:	English	: Green Turtle
	Hindi	: Dudh kachua, Samudra kachua
	Andamanese	: Yadi da
	Gujarati	: Durya ni kachbi
	Malayalam	: Kadalama
	Tamil	: Pal amai, Peer amai, Kadal amai

Scientific synonyms: *Testudo mydas* (Linnaeus, 1889)



Characteristics:

Adult:

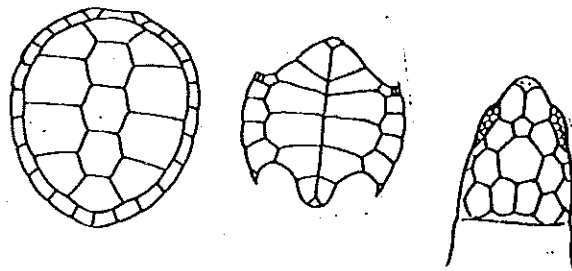
General appearance: The largest of the hardshell marine turtles with a relatively small head and a single pair of pre-frontal shields and four postoculars. The domed carapace is oval to heartshaped, with sloping marginals. Plastron pale green with four inframarginal shields.

Measurements: Size (Carapace length) 70-153 cm.

Body weight: 150 kg

Head: Snout not hooked, single pre-frontal.

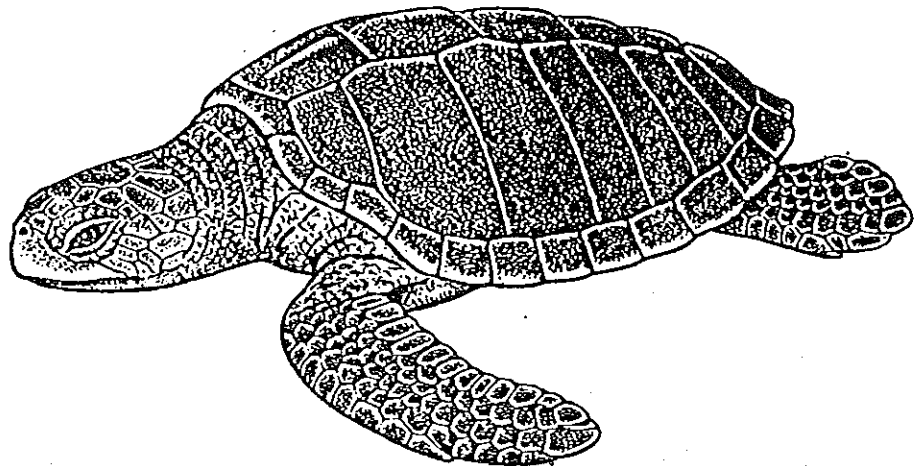
Shell: Four costal shields, five central shields and eleven marginal shields. Supracaudal shield divided. Scutes thin and juxtaposed. Marbled olive in colour.



Lepidochelys olivacea (Eschscholtz, 1829)

Common names:	English	: Olive Ridley, Pacific Ridley
	Hindi	: Gadha kachua
	Tamil	: Pul amai, Sith amai, Kadal amai
	Bengali	: Samudrik katha
	Oriya	: Samudrik kachchima
	Telugu	: Samudrum thabelu

Scientific synonyms: *Chelonia olivacea* (Eschscholtz, 1829)



Characteristics:

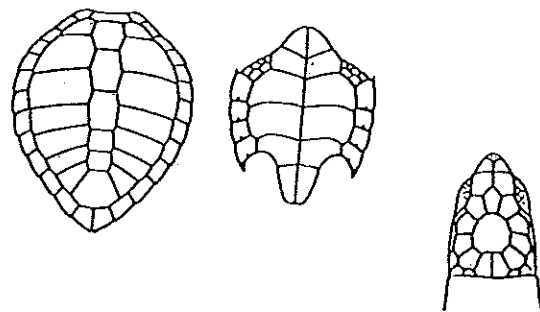
Adult:

General appearance: A small species of sea turtle. Head relatively narrow and small, with 2 pairs of pre-frontal shields. Carapace nearly circular in outline. Plastron with four pairs of inframarginal shields, each with distinct pores.

Measurements: Size (Carapace length) 74 cm.

Head: Upper jaw hooked; 2 pairs of pre-frontals.

Shell: Carapace relatively flat, with sloping sides and a flattened dorsal region. The number of costal shields is highly variable and may number between five and nine. The central shields may also number up to nine.

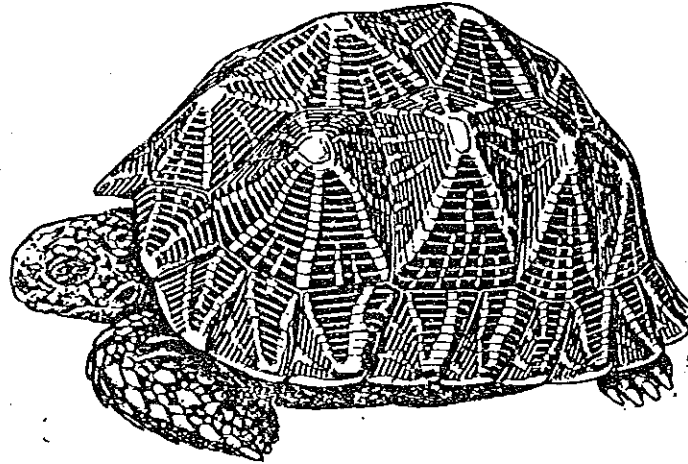


Flipper: Only one claw in each of four flippers.

Geochelone elegans (Schoepff, 1795)

Common names:	English	: Star tortoise, Indian Starred Tortoise
	Hindi	: Suryamukhi
	Gujarati	: Khad no Kachbo, Suraj Kachbo
	Tamil	: Katu aamai
	Telugu	: Meta tabelu
	Oriya	: Tara kaincha
Urdu	: Tarivale kachha	

Scientific synonyms: *Testudo elegans* (Schoepff, 1795)



Characteristics:

Adult:

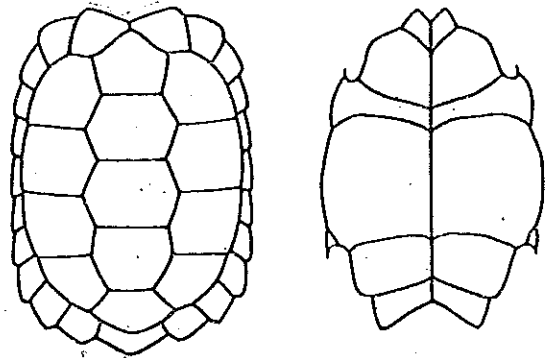
General appearance: Dome shaped land tortoise. Generally black in colour with yellow star marks, both dorsally and ventrally. Western India populations larger in size and less brightly coloured, shell dirty brown. Southern population smaller and more brightly coloured. Males with larger tail. Plastron concave in males.

Measurements: Upto 35 cm (carapace length)

Body weight: 4.5 kg

Head: Black with yellow spots.

Shell: Yellow, more or less spotted. Carapace highly domed, marginal shields serrated and posteriorly flared.



Limbs: Limbs stumpy, conical, usually yellow with black pigments.

Juvenile: Almost entirely a replica of adults with much brighter colours.

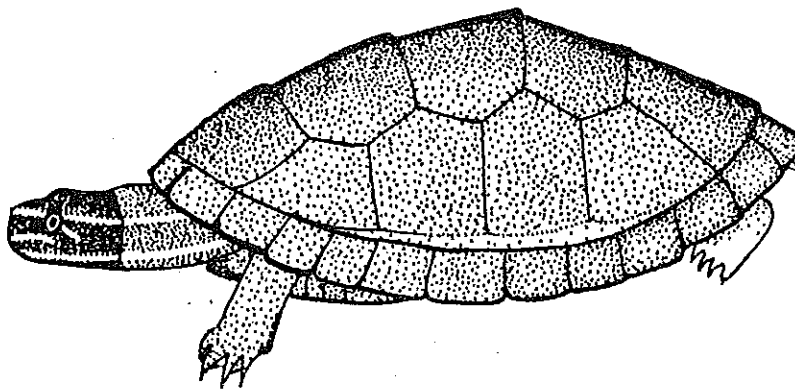
Order: Chelonia / Family: Emydidae

Hardella thurjii (Grey, 1831)



Common names: English : Crowned River Turtle
Bengali : Kali katha

Scientific synonyms: *Emys thurgii* Boulenger, 1890



Characteristics:

Adult:

General appearance: A large hardshell with brown shell, head with orange or yellow stripes. Plastron yellow with a black blotch in each scute.

Measurements: Carapace length: Male: 20 cm, Female: 60 cm

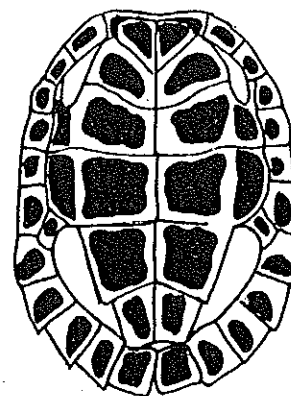
Body weight: 20 kg

Head: Black with four orange-yellow bands on either side of head.

Shell: Depressed with interrupted vertebral keel. Dark brown with grey-black keel. Orange band on either side.

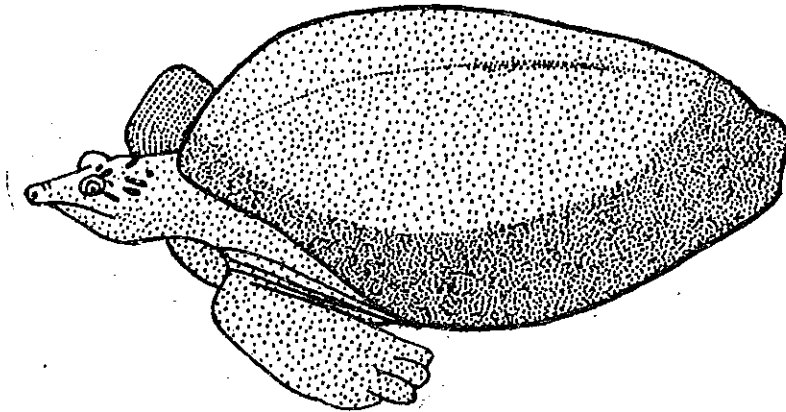
Limbs: Brownish with yellow edges.

Sexual dimorphism: Male one third of the size of the female.



Common names:	English	: Leith's Softshell Turtle
	Kannada	: Palepoo
	Telugu	: Nadi, Pedda, Tebelu
	Tamil	: Peria Aamai
	Oriya	: Nadi kaincha

Scientific synonyms: *Trionyx leithii*, *Trionyx sulcifrons* (Annandale, 1915)



Characteristics:

Adult:

General appearance: A large river turtle with a large head and a long snout. Greenish head with black streaks from eye to the neck, 2-3 dark lines on the sides of the head and one backward from the eye. Yellow or orange spots at the corner of the mouth. Plastron cream coloured with four large callosities.

Measurements: Maximum size: (Carapace length) 60 cm

Body weight: 20 kg

Head: Green with black streaks on the sides of the head.

Shell: Green with warty patches on the shell.

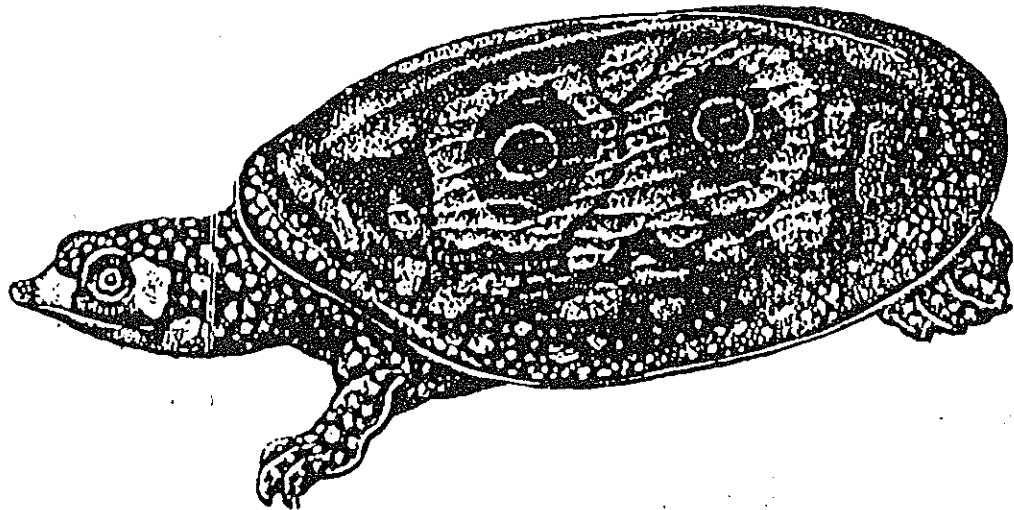
Limbs: Three claws on both fore and hind limbs, outer surface olive and inner cream coloured.

Juvenile: Yellow markings on the shell and 4-6 eye like marking with lighter borders.

Aspideretes hurum (Grey, 1831)

Common names: English : Indian Peacock Softshell Turtle
Bengali : Dhum kachim
Assamese : Bon kasso

Scientific synonyms: *Trionyx hurum*, *Trionyx buchanani*



Characteristics:

Adult:

General appearance: Large saltshell turtle. A large head with black reticulations and large orange patches behind the eyes. Snout strangely down turned. Plastron light grey with five large callosities.

Measurements: Average size: 60 cm

Head: Dark olive low and oval with yellow rim, four sometimes six eye-like markings and yellowish spots.

Limbs: Three claws in both fore and hind limbs.

Juvenile: Bright coloured with prominent eye like markings on the carapace.

Similar species: *Aspideretes gangeticus* and *Aspideretes leithii*.

Intraspecific variation: Bangladesh variety is much darker in colour.

Distribution:

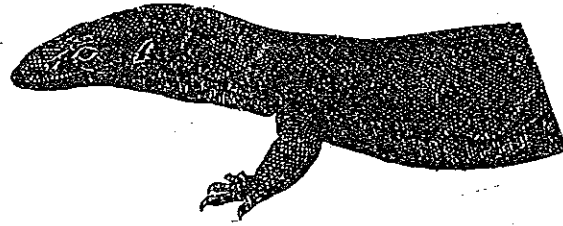
India: In Northern India, in the basins of river Ganga, Brahmaputra and Indus. Also in Subarnarekha Assam, West Bengal and Bihar.

Common names:	English	:	Common Monitor, Bengal Monitor
	Hindi	:	Gho
	Bengali	:	Krishna Godhika, Gho-sap
	Gujarati	:	Patla Gho
	Oriya	:	Godhi
	Marathi	:	Ghorpad
	Tamil/ Malayalam	:	Oodoombu
	Kannada	:	Ooda, Chaape
	Telugu	:	Ooder
	Trade	:	Agra Lizard

Scientific synonyms: None

Characteristics:

Adult:



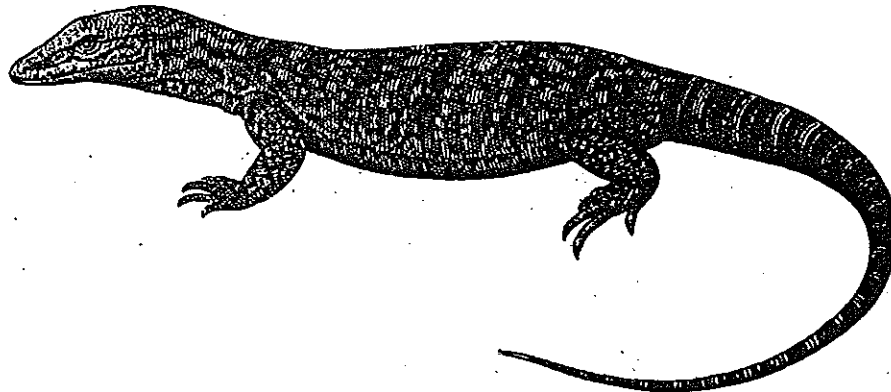
General appearance:	Small sleek monitor lizard. Appears blackish.
Measurements:	Approximately 1,7 m (total length).
Head:	Nostril and oblique slit a little nearer the orbit than the tip of the snout. Scales on the crown of the head larger than the nape scales which are rounded not keeled.
Tail:	compressed and keeled above. Tail one to three times the length of head and body.
Skin:	Dorsal surface yellowish, brownish, or olive with numerous blackish dots; a distinct dark temporal streak. Ventral surfaces yellowish, uniform or dotted with black, these dots are most numerous on the throat.
Scalation:	Scales on head small, mid-body scales in 70-110 rows. Caudal scales keeled.
Juveniles:	Dark olive with numerous white ocelli frequently alternating with blackish transverse bands. Ventral surface whitish with narrow dark transverse bars which may be broken into spots.
Similar species:	<i>Varanus grayi</i> has more mid-body scale rows (180-190), undersurface is uniformly grey. <i>Varanus flavescens</i> has keeled head scales, undersurface with indistinct brown cross bars.
Intraspecific variation:	<i>Varanus bengalensis nebulosus</i> is distinguished from the nominate race by fewer mid-body scales (70-90 rows). Greyish or brownish olive, with irregular and feeble dark bands. Chin and throat sometimes with transverse black bands or marbled with black. The median supraoculars are usually transversely enlarged.

Varanus griseus (Daudin, 1803)



Common names:
English : Desert Monitor
Trade : Baghdad Small Grain
Hindi : Gho

Scientific synonyms:
Tupinambis griseus (Daudin, 1803)
Varanus (Psammosaurus) *griseus* (Mertens, 1942)



Characteristics:

Adult:

General appearance: Small monitor lizard having a yellowish appearance.

Measurements: Total length : 1 to 3 m (Approx)

Head: Nostril oblique and four times further from the tip of the snout than the orbit.

Tail: Rounded or slightly compressed distally and 1.5 time the length of head and body.

Skin: Greyish-yellow dorsally with small spots and 2-3 longitudinal, distinct, brown cross bars on the back and tail; brown streaks along the neck. Ventral surface yellowish.

Scalation: scales small and granular, caudal scales indistinctly keeled. Mid-body scales in 110-125 rows.

Juveniles: Round yellow spots and dark brown cross bars with temporal and cervical streaks. A few brown lines across the snout and short vertical brown lines on the lower lip.

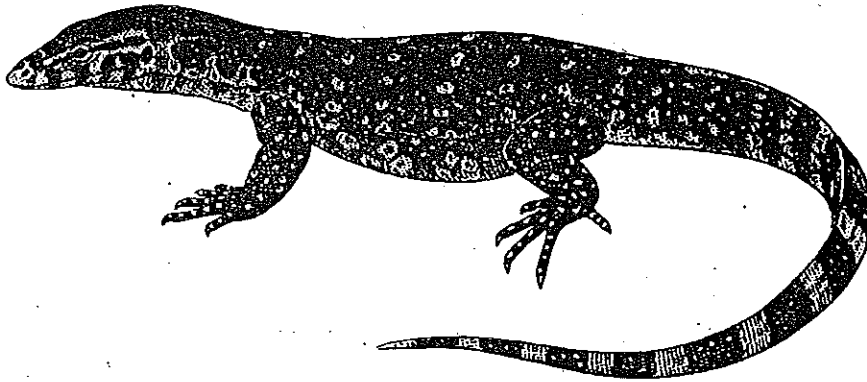
Similar species: *V. griseus* can be distinguished from other species by its round or slightly compressed tail and the slit nostril which is nearer to the orbit than the end of the snout.

Intraspecific variation: *V. g. caspius*: posterior half of tail slightly compressed laterally, dorsally 5-8 (usually 6) narrow dark sepia coloured transverse bands, apart from the

Varanus salvator (Laurenti, 1768)

Common names: English : Water Monitor
Trade : Ring Lizard
Bengali : Ram Godhika

Scientific synonyms: *Lacerta monitor* (Linnaeus, 1758)
Stelio salvator (Laurentu, 1768)



Characteristics:

Adult:

General appearance: Largest Indian monitor lizard, generally black with bright yellow spot.

Measurements: Total length : 2.2 m (Approx).

Head: Nostril oval and at least twice as far from orbit as from the tip of the snout.

Tail: strongly compressed, keeled above. Caudal scales keeled.

Skin: Dorsal surface usually dark brown or blackish with yellow ocelli, snout generally lighter with transverse black-bars, most distinct on the lips and continued across the chin. A black temporal streak bordered by a yellow band which occasionally extends along the side of the neck. Ventral surfaces yellow.

Scalation: Head scales moderate size, abdominal scales feebly keeled. Mid-body scales in 85-95 rows.

Sexual dimorphism:

Juveniles:

Blackish above with small yellow spots and larger ocelli arranged in transverse rows. Underparts yellowish with narrow, black, vertical V-shaped marks extending onto sides of body. Tail alternatively banded black and white

Similar species:

Varanus indicus has 110-180 mid-body scale rows, tail 1,8 time the length of head and body.

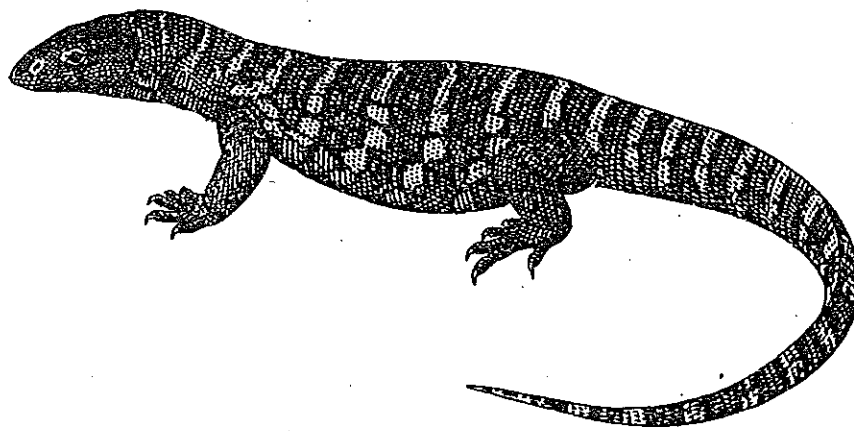
Intraspecific variation:

Varanus salvator nuchalis (Negros and Guimaras Islands - Philippines): nape scales larger than occipital scales, much larger than scales on back.
V.s. cumingi (Mindanao, Leyte, Cebu and Samar Islands- Philippines): scales on neck smaller than occipitals, predominant pale colouring on head.
V.s. togianus (Togian Islands and Sulawesi - Indonesia): back dusky brownish black marked with scattered scales tipped with gold; 75 rows of ventral scales.

Varanus flavescens

Common names:	English	: Yellow Monitor
	Bengali	: Sarna Godhika
	Hindi	: Gho
	Trade	: Oval grain

Scientific synonyms:	<i>Monitor flavescens</i> (Hardwicke & Gray, 1827)
	<i>Varanus russelii</i> (Heyden, 1830)
	<i>Varanus picquotii</i> (Dumeril & Bibron, 1836)
	<i>Monitor exanthematicus indicus</i> (Schiegel, 1844)
	<i>Varanus diardii</i> (Hallowell, 1856)
	<i>Varanus (Empagusia) flavescens</i> (Mertens, 1942)



Characteristics:

Adult:

General appearance: Smallest monitor lizard generally appearing yellow.

Measurements: Total length 90 cm (Approx)

Head: Nostril and oblique slit a little nearer the tip of the snout than the orbit. Nape scales larger than those on crown of head. Snout convex.

Tail: slightly compressed, keeled above. Tail same length as head and body.

Skin: Dorsal surface olive or yellowish brown, irregular darker markings in broad cross bands. A blackish temporal streak; ventral surface yellowish with rather indistinct brown cross bars which are most distinct on the throat.

Scalation: scales small and keeled. Mid-body scales in 65-75 rows. Caudal scales keeled.

Juveniles: Dark brown above with yellow spots coalescing into cross bars; lower surfaces yellow, with dark brown cross bars. A dark temporal streak.

Uromastix hardwickii (Gray, 1827)

Common names: English : Spiny-Tailed Lizard
Hindi : Sanda

Scientific synonyms: None



Characteristics:

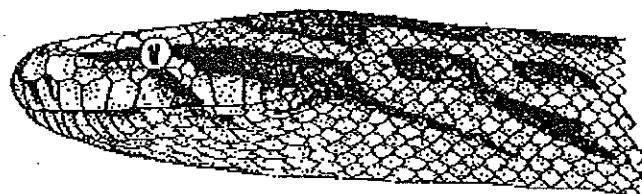
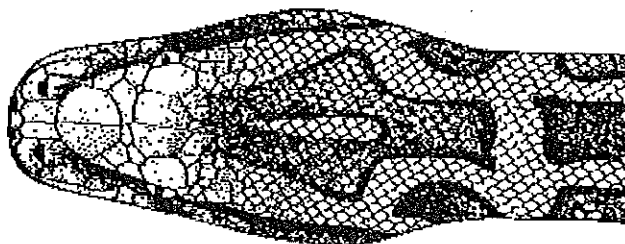
Adult:

- General Appearance:** Body flattened, spine rows are separated from each other by 4-6 rows of smaller scales. Snout covered with small shields, the remainder of head being finely granular with the exception of few larger tubercles between the orbit and the tympanum.
- Measurements:** Average length (male): 350 mm
Average length (female) : 300 mm
- Head:** Short and obtuse head with a short snout. Tympanum naked. Nostril lateral, eyes small, eyelids scaly.
- Limbs:** Legs stout and armed with strong claws. Distinctive black spot on the front of the thigh. Toes short with keeled scales below.
- Tail:** Tail thick at the base and depressed with whorls of spiny scales.
- Colour:** The skin of body is loose and gives a wrinkled appearance. Dorsal part yellowish brown with black spots and vermiculations.
- Sexual dimorphism:** Male bigger in size and with a longer tail than female.

Python molurus (Linnaeus, 1758)

Common names:	English	: Indian Rock-Python
	Hindi	: Azgar
	Marathi	: Azgar
	Malayalam	: Malam pamu
	Tamil	: Periya pamu, Malai pambu, Dasari pambu
	Telugu	: Pedda poda
	Trade	: Python

Scientific synonyms: None



Characteristics:

Adult:

General Appearance:

A heavy-bodied, smooth scaled snake with bright yellow or dark brown blotched pattern. Pythons have well developed spurs, which are vestigial legs on either side of the anal vent. The snakes are equipped with heat sensors, small slits near the nostrils. Body of snake is rounded in outline and thickest in the middle, tapering towards head and anus.

Measurements:

Average length : 3 m
Maximum length: 6 m;
At birth : 50 cm.

Body weight:

Maximum recorded : 91 Kg

Head:

Lance-shaped and flattened with a spear shaped mark. Neck distinct. Nostrils large, directed upwards and situated high on the long snout. Eyes small, pupil vertical, iris flecked with gold. Chin with well defined mental groove.

Hands and Feet:

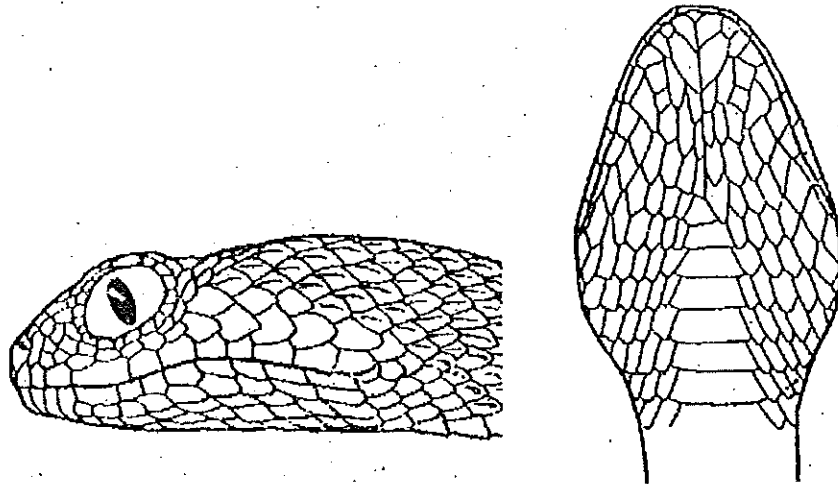
Hind limbs rudimentary, as curved claw-like processes on either side of anus.

Tail:

Short and prehensile, tapering rapidly.

Common names:	English	: Saw-scaled Viper
	Hindi	: Afai
	Marathi	: Phoorsa
	Malyalum	: Churute
	Tamil	: Suratai pamboo

Scientific synonyms: None



Characteristics:

Adult:

General Appearance:

It gets its name from the saw-edged keels of its lateral scales. Distinguished by the absence of shields on the head, the broad ventrals covering the whole belly and the undivided subcaudal shields. Body cylindrical, short and stout, rough because of the serrated flank scales, tapering towards both neck and vent.

Measurements:

Average size: 46 cm (West & North India)
Average size: 30 cm (South India)
Maximum : 80 cm
At birth : 13 cm;

Head:

Wider than neck. Head subovate with short rounded snout. Eyes large, iris golden yellow, pupil vertical. Distinct cross on head

Tail:

Short and stubby.

Colour:

The body is brown, greyish or sandy with a darker zigzag pattern on the back. The underside is white with brown speckles.

Intraspecific variation:

Size difference; some regional dark/light variations

Distribution:

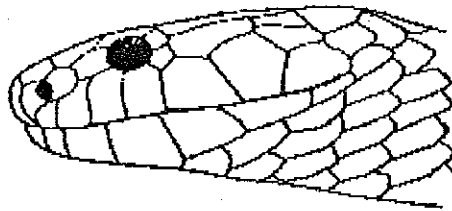
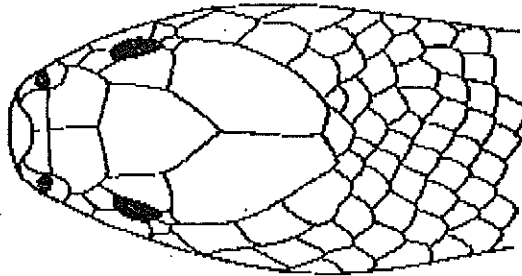
India:

Parts of Southern India and West of the Ganges in the North.

Bungarus caeruleus (Schneider, 1801)

Common names:	English	: Common Indian Krait
	Hindi	: Maneer, Krait
	Marathi	: Manyar,
	Malayalam	: Valla pamboo
	Tamil	: Kattu viriyan or Karuvelan pamboo
Telugu	: Kalta pamoo	

Scientific synonyms: None



Characteristics:

Adult:

General Appearance:

Smooth and glossy snake. Body long and cylindrical. Steel blue or dark above with about 40 thin, white rings commencing from neck to tail. The cross bars on the back may often break up into spots in the anterior part of the body.

Measurements:

Average size : 1 m
Maximum size : 1.75 m (male);
At birth : 25 cm .

Head:

Head slightly wider than neck. The eye is small and very dark which makes the pupil invisible.

Tail:

Short, 1/6 to 1/11th of total length.

Colour:

Dorsal blue and ventral white.

Sexual dimorphism:

Male is longer than female.

Juvenile:

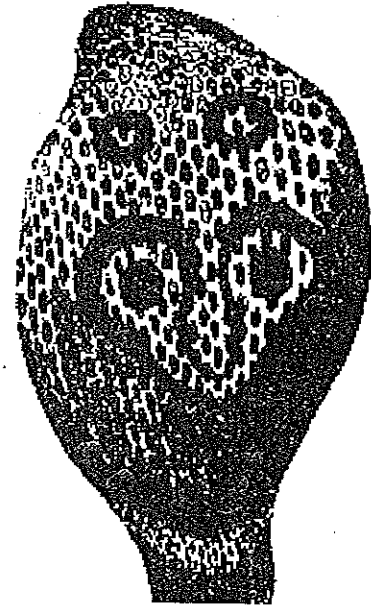
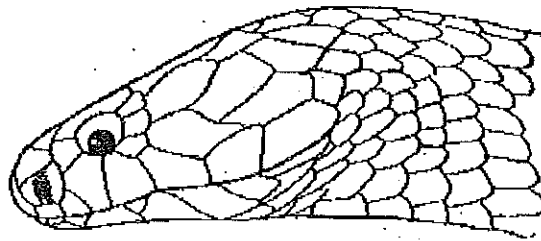
Young ones with white spots along the first third of the backbone in place of the cross lines.

Order: Serpentes / Family: Elapidae
Naja naja (Linne, 1758)



Common names:	English	: Indian Cobra/Spectacled Cobra
	Hindi	: Nag
	Malayalam	: Moorkan
	Tamil	: Nalla pambu, Naga pambu
	Trade	: Cobra

Scientific synonyms: None



Characteristics:

Adult:

General Appearance:

The Indian or Spectacled Cobra is a medium to large sized snake named after the spectacle-like markings on the hood. Brownish to black above and white or yellowish below. Easily distinguishable from other land snakes by the presence of a small 'cuneate' scale between the 4th and 5th infralabials. Body with a more or less distinct groove down the spine.

Measurements:

Average length : 1 m
Maximum: 2.25 m (male);
At birth: 25 cm.

Head:

Flattened with short and rounded snout. Nostrils large. Pupil round. An obvious swelling at the temporal region over the underlying poison gland. Wide black band on underside of neck; distinctive hood marking on top of neck.

Skin:

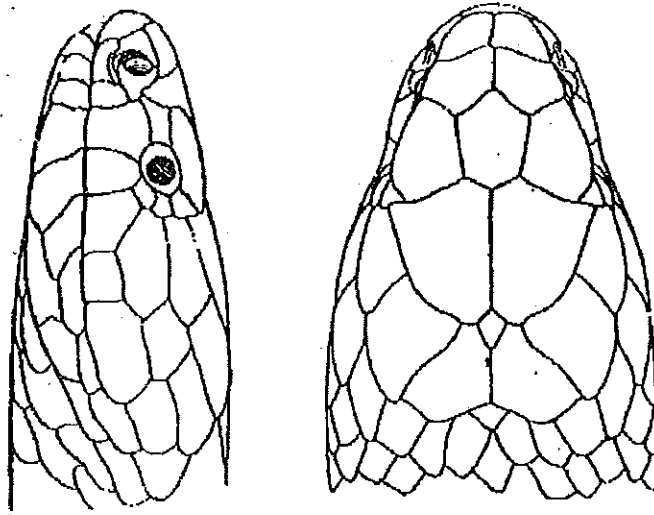
Entire skin easily distinguishable by spectacled or monocled hood; scales smooth, the dorsal ones narrow, elliptical and quite close together; lateral scales slightly drop-shaped; some skins with indistinct grey transversal bands, the mark on the hood black; occasionally one or two scale rows darker forming a narrow longitudinal dorsal stripe; scale rows 23-33 over the hood, 19-23 at middle of the body, 15-19 on the last third; ventrals 174-195. Width of commercial skins 10-17 cm.

Juvenile:

Young ones are perfect replicas of the parents.

Common names:	English	: King Cobra or Hamadryad
	Hindi	: Kala nag, Naga raja
	Malyalum	: Krishna sarpam
	Tamil	: Krishna nagam, Raja nagum, Karru nagam
	Bangla	: Sankhachoor
	Kannada	: Kalinga sarpa
	Oriya	: Ahiraja, Sankhachuda, Manichuda

Scientific synonyms: None



Characteristics:

Adult:

General Appearance: Fairly robust body with glossy scales. The presence of a pair of large occipital shields and costals in 19:19: 15:15 rows are distinctive. The hood is less dilatible than the cobra.

Measurements: Maximum length : 5.5 m

Body weight: Maximum : 12 kg

Head: Flat; snout rounded and eyes moderately round with round pupil. Nostril between two nasals. Maxillary with a large fang in front, which is perforated at the end.

Tail: Each scale of the tail with a very distinct white, black-edged ocellus.

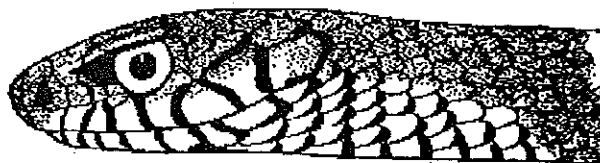
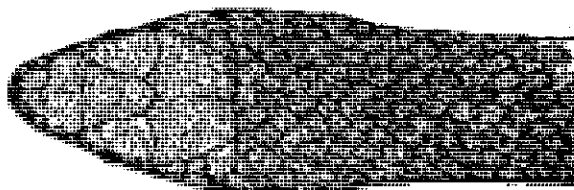
Colour: Dorsal blackish brown with 32-43 lighter bands round the body and 11-13 around the tail. Head olivaceous-brown. Throat creamy to dull orange. Underparts mostly black.

Ptyas mucosus (Linne, 1758)



Common names:	English	: Indian Rat Snake
	Hindi	: Dhaman
	Marathi	: Dhaman
	Malayalam	: Chera
	Tamil	: Sarai pamboo
	Telugu	: Jeri potoo
	Kannada	: Kerre
Trade	: Whipsnake	

Scientific synonyms: *Coluber mucosus* (Linne, 1758)



Characteristics:

Adult:

General Appearance:

Large streamlined body with shiny scales. Dorsal rows keeled. Skin bears interscale markings which show up when snake puffs up in defence position. The ventral has cross bars in specimens from Northern India. Costal 17-19 two head lengths from head; 17-16 midbody and 14 or 12 two head lengths before vent.

Measurements:

Average length : 2 m
Maximum length: 3.5 m (male);
At birth : 32 cm.

Head:

Pointed head, thin neck and large and lustrous eyes. Horizontal streaks on the lower lip.

Tail:

Long, slender and prehensile and about one fourth of total length.

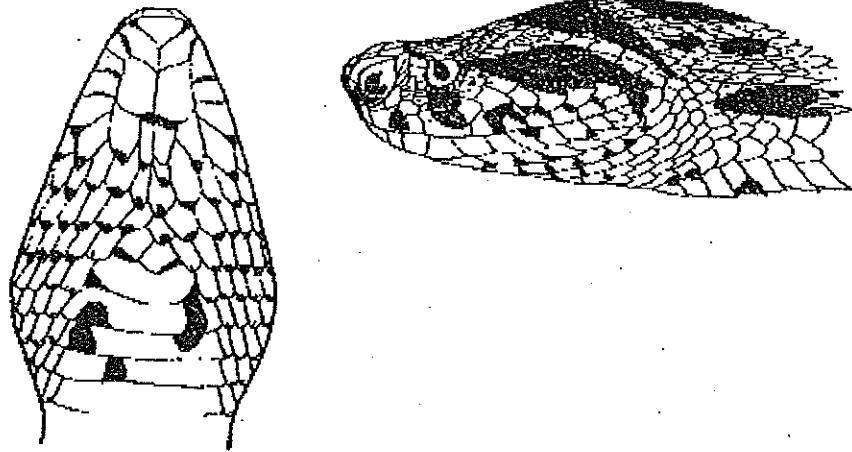
Colour:

Body uniformly coloured light yellow in the plains to jet black in the hills. Scales squarish, anterior parts of skin guttiform, Lateral scales bigger and central scales close together. In the posterior third of the body, badly defined brown transverse bands.

Vipera russellii (Shaw, 1797)

Common names:	English	: Russell's Viper
	\Marathi	: Ghonas
	Malayalam	: Mandali
	Tamil	: Kennadi virian, Retha aunali
	Telugu	: Katuka rekula
	Trade	: Viper, Chainsnake

Scientific synonyms: None



Characteristics:

Adult:

General Appearance: Medium sized to large snake; strongly keeled scales; regular chain-like patterns. Body usually brown with dark round spots edged with white and black. Body short, cylindrical and tapering.

Measurements: Average length : 1 m;
Maximum : 1.8 m
At birth : 24 cm;

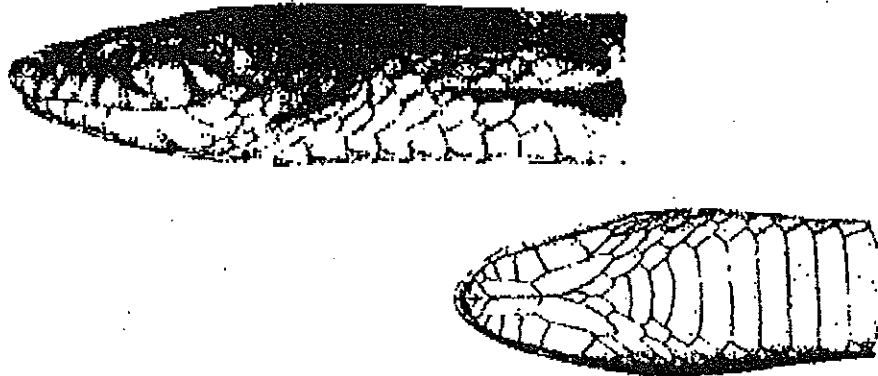
Head: Flat, triangular shaped with short snout. Head covered with small scales and without shields. Large gold-flecked eyes with vertical pupil and large open nostrils. Neck constricted.

Colour: Ground colour brown of varying shades with three series of large ovate spots. Spots brown in the centre and margined by black and white or buff, though in western India the spots are not edged. A dark streak, margined with white behind the eye. A dark stripe from eye to lip. Underside white with a few dark half moon markings of the anterior ventrals.

Juvenile: Young ones are exceedingly bright replicas of the parents.

Common names:	English	: Checkered Keelback Watersnake
	Hindi	: Pani ka samp
	Marathi	: Virola
	Malayalam	: Neer Kolee
	Tamil	: Thaner pamboo
	Kannada	: Neer hao

Scientific synonyms: None



Characteristics:

Adult:

General Appearance:

Checkered Keelback Watersnakes vary in colour from black to bright yellow with characteristic white and black checkered pattern. The scales are strongly keeled. Distinguishing characters are upper lip scales touching eye, presence of pair of internasals and an undivided anal shield.

Measurements:

Average length; 0.60 m
Maximum 1.75 m;
At birth: 12 cm.

Head:

The head is obtusely pointed and distinct from the neck. Large eyes with a decidedly upward inclination. One or two black eye streaks are distinctive.

Tail:

Long and one third to one fourth total length.

Colour:

The ground colour is bright yellow or dark olive brown making the appearance glossy. Underside usually shiny and pure white.

Sexual dimorphism:

Females longer than males.

Variation:

In the Andamans, specimens are very different, being striped or blotched or a combination of the patterns. Black diagonal eye stripe prominent.