

# Museum Specimens

## Class Reptilia

### **Specimens for Class Reptilia –**

*Chelone, Trionyx, Draco, Uromastix, Varanus, Chamaelon, Hemidactylus, Naja, Vipera, Ophiosaurus, Hydrophis, Crocodylus.*

Compiled by Dr. Sadqua Shameem

Diagram credits

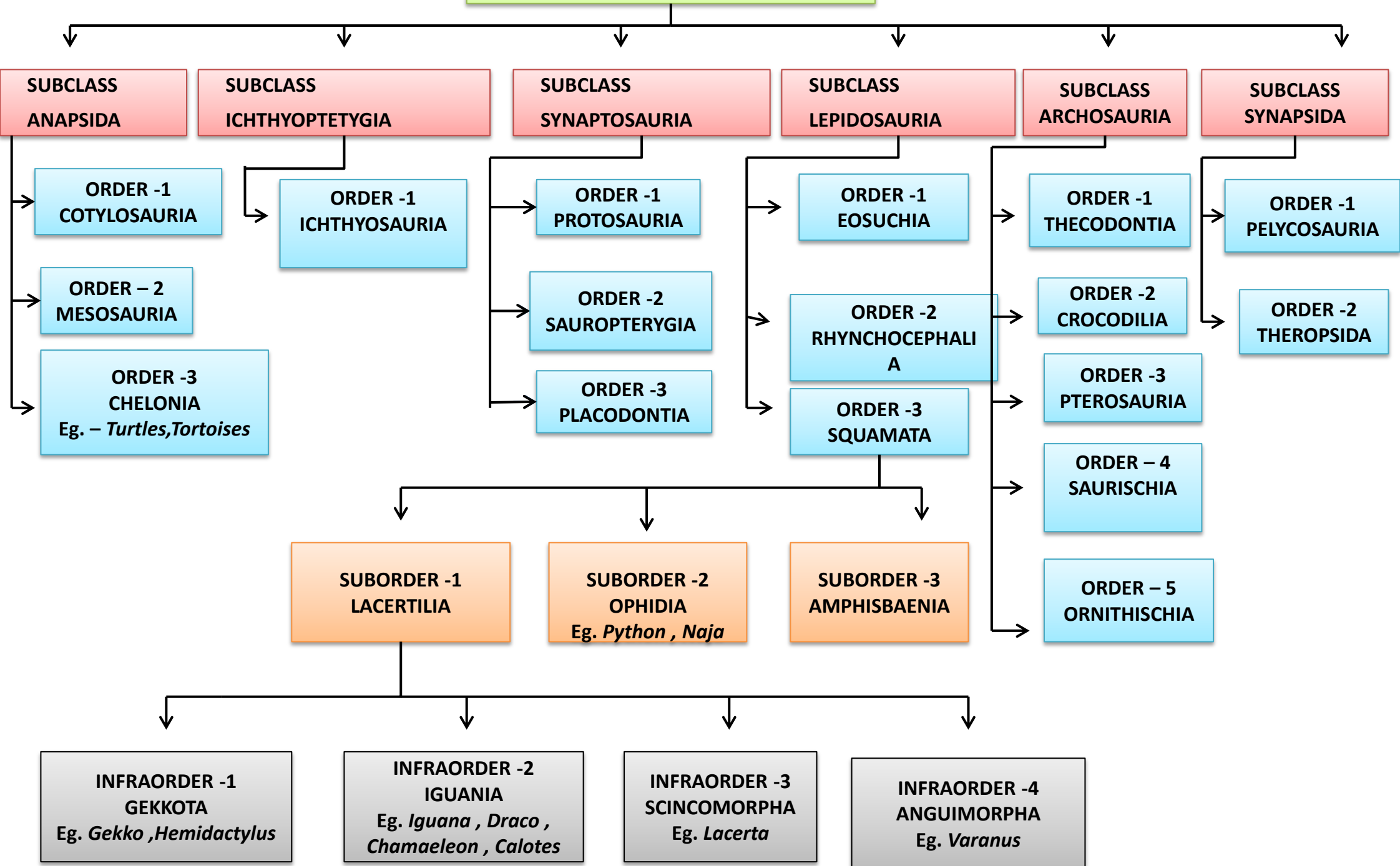
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Ms. Nishita Singh. [B.Sc.(H) Zoology]



## Flow chart - Reptilia

### CLASS - REPTILIA



## *Chelone*

**Common name:** Green Turtle

**Geographical Distribution :** *Chelone* is found in the Atlantic, Indian and Pacific Oceans . But very common found in the Islands of Ascension West Indies and Bay of Bengal.  
Upper Cretaceous to Recent.

### **Scientific Classification with Justifications:**

**Phylum: Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** : Jawed Vertebrates

**Class:: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Anapsida** : Primitive reptiles. Skull having solid roof without temporal fossae , body enclose in the carapace and plastron

**Order: Chelonia** :Jaws without teeth but with horny sheaths, thoracic vertebrae and ribs usually fused with body shell

**Genus** - *Chelone*



***Chelone***

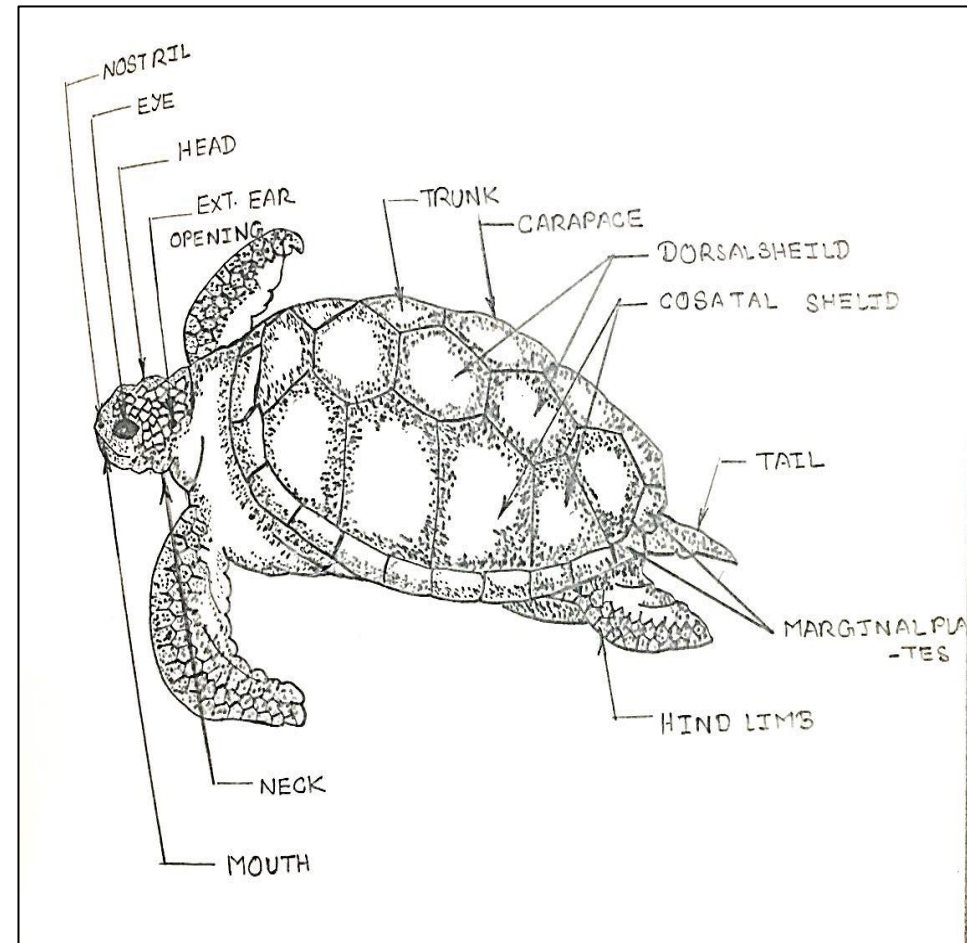
### Characteristic feature:

- The colour is olive or brown above with yellowish spots and pale yellow below.
- It measures from 85-110 cm in length. Body is divided into head, trunk and tail.
- Body is enclosed in a rigid shell. Carapace flat covered with smooth bony shields.
- Plastron joined with carapace by ligament.
- Head short, tail and limbs are retractile inside the carapace
- Fore limb and hind limb form wing-like paddles. Only first digit of forelimb is clawed , while hind limbs are clawed.
- Jaws with denticulate edges

### Additional resources :

[www.youtube.com/watch?v=ePA3aZQNUBE](http://www.youtube.com/watch?v=ePA3aZQNUBE)

[www.youtube.com/watch?v=zE0qp3Yje6Q](http://www.youtube.com/watch?v=zE0qp3Yje6Q)



***Chelone***

## *Trionyx*

**Common name:** Tortoise or soft-river terrapin

**Geographical Distribution:** It is distributed in the rivers of India, Asia, Africa, Malaysia Archipelago and North America.

### **Scientific Classification with Justifications:**

**Phylum: Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** : Jawed Vertebrates

**Class:: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Anapsida** : Primitive reptiles. Skull having solid roof without temporal fossae , body enclose in the carapace and plastron

**Order: Chelonia** :Jaws without teeth but with horny sheaths, thoracic vertebrae and ribs usually fused with body shell

**Genus -*Trionyx***



***Trionyx***

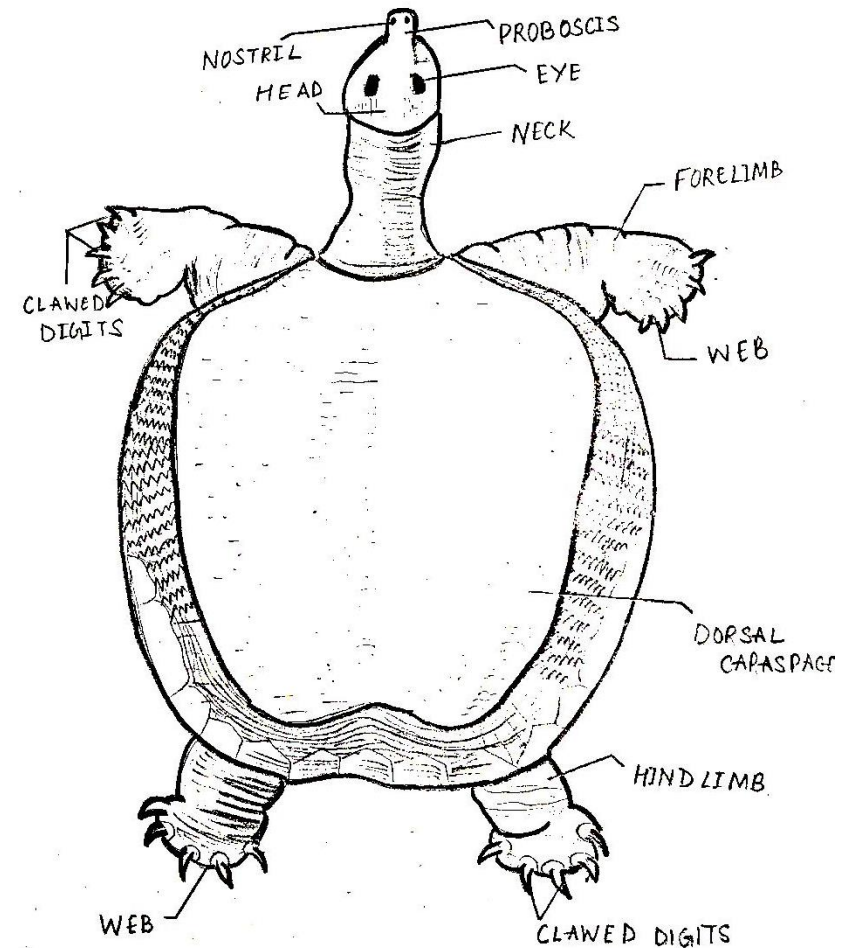
### Characteristic feature:

- Body is enclosed in a bony shell comprising the dorsal carapace and ventral plastron. Skin is smooth and leathery.
- Head is large, triangular having a proboscis and provided with mouth, eyes with eyelids, nares and external ear openings. Nostrils located at the tip of fleshy proboscis.
- Limbs are flipper-like, webbed and each limb bears five clawed digits.
- Jaws are devoid of teeth but provided with horny sheaths.
- Head, neck and limbs retractile into bony shell.

### Additional resources:

[www.youtube.com/watch?v=H7w-Fw5QdVM](http://www.youtube.com/watch?v=H7w-Fw5QdVM)

[www.youtube.com/watch?v=T4O6Mj0NWjc](http://www.youtube.com/watch?v=T4O6Mj0NWjc)



***Trionyx***

## *Draco*

**Common name:** Flying lizard

**Geographical Distribution:** Found in Sumatra , Java, and Borneo. Found in Madras in India.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

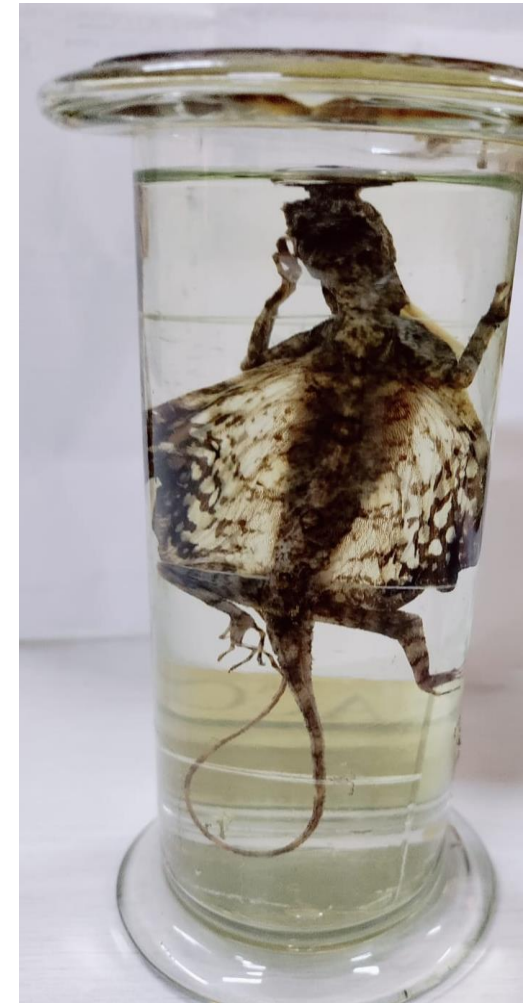
**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye

**Order: Squamata** Body covered with horny epidermal scales. Teeth pleurodont.

**Sub-Order: Lacertalia** Limbs pentadactyle and are usually present. Terrestrial.

**Genus : *Draco***



***Draco***



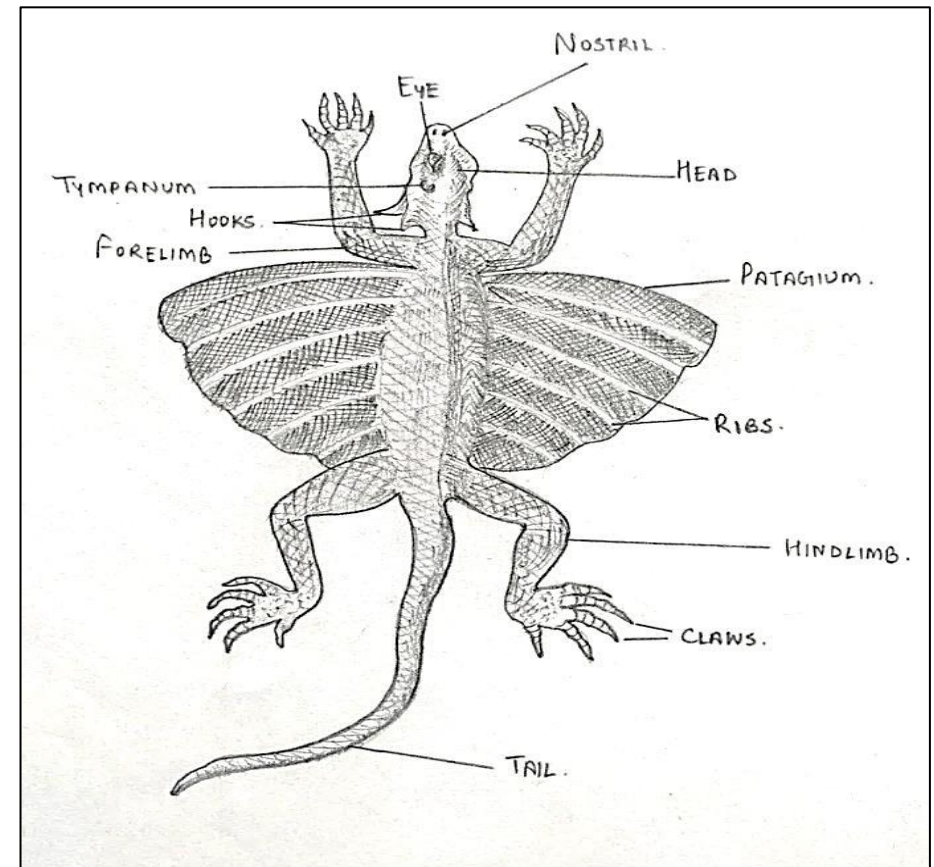
### Characteristic features:

- **Body**- dorso-ventrally compressed.
- **Body length**-25 cm.
- **Eyes**-very small eyes, but eyelids are complete.
- **Tail**- it is very long and slender in shape.
- The sides of the body , between the forelimbs, extended as a pair of large wing-like
- The **patagia** , which are supported by five or six much elongated posterior ribs . These are used as parachutes during flight. These wing-like membranes can be folded up like a fan .
- Hind limbs have three toes with a greatly reduced web
- Sexual dimorphism exists. Male has a small nuchal crest. Distensible gular pouches are present
- Below the neck in both sexes, which are larger in males.

### Additional resources:

[www.youtube.com/watch?v=ewCCwMC46Pk](http://www.youtube.com/watch?v=ewCCwMC46Pk)

[www.youtube.com/watch?v=n6FPVtPw7BY](http://www.youtube.com/watch?v=n6FPVtPw7BY)



***Draco***



## *Uromastix*

**Common name:** Spiny-tailed lizards

**Geographical Distribution:** Found in North Africa and the Middle East and in parts of Southern Asia

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body covered with horny epidermal scales. Teeth pleurodont.

**Sub-Order: Lacertalia** Limbs pentadactyle and are usually present. Terrestrial.

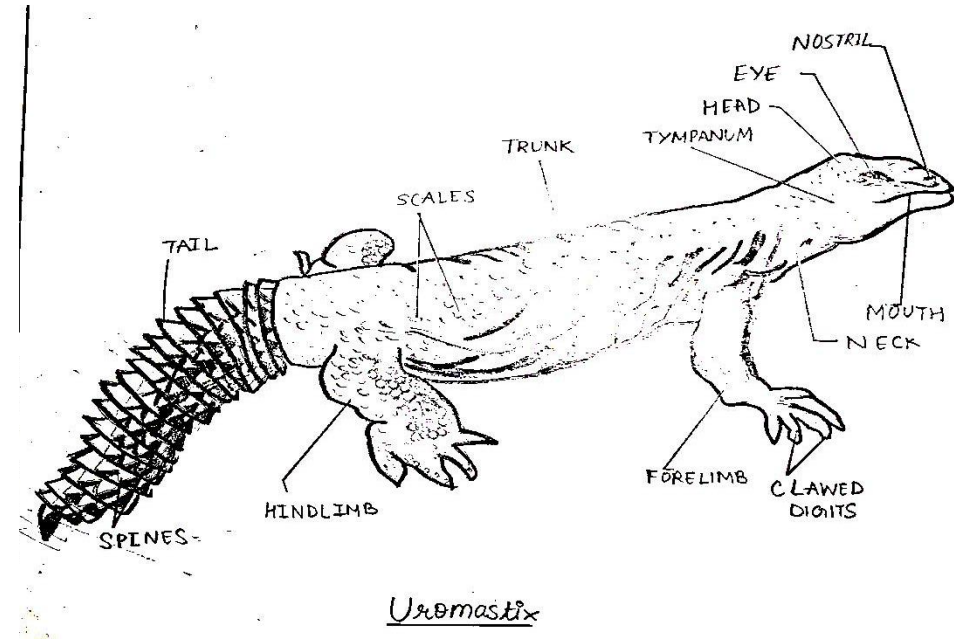
**Genus : *Uromastix***



***Uromastix***

### Characteristic features:

- They have scaly bodies with broad heads, well-developed legs, and a moderately long tail;
- They are both ground-dwelling and arboreal species.
- The Uromastix is characterized by spines that stretch from the base of the tail to the end of the tail in horizontal rows.
- Uromastix use their spiny tail, which is strong and muscular, to swing at their opponent, both to intimidate as well as strike and harm.
- When basking, the lizards color changes from darker in cool weather to lighter in warm weather.
- Uromastix sleep in their borrows with the tails pointing to or leaning against the opening as way of defending from unwanted intruders to the nest or dwelling.
- The females of this species are smaller and with less outstanding markings and color than the males.



***Uromastix***

### Additional resources:

[www.youtube.com/watch?v=eCKNDZWgWuw](http://www.youtube.com/watch?v=eCKNDZWgWuw)

[www.youtube.com/watch?v=MPcZOGSE1JI](http://www.youtube.com/watch?v=MPcZOGSE1JI)

## *Varanus*

**Common name-** Common Indian monitor.

**Geographical Distribution:** This species is widely distributed from Afghanistan to Java, including southeastern Iraq, Iran , Pakistan, India, Southern Nepal, Bhutan, China, North and South Vietnam.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body covered with horny epidermal scales. Teeth pleurodont

**Sub-Order : Lacertalia** Limbs pentadactyle and are usually present. Terrestrial.

**Genus : *Varanus***



***Varanus***



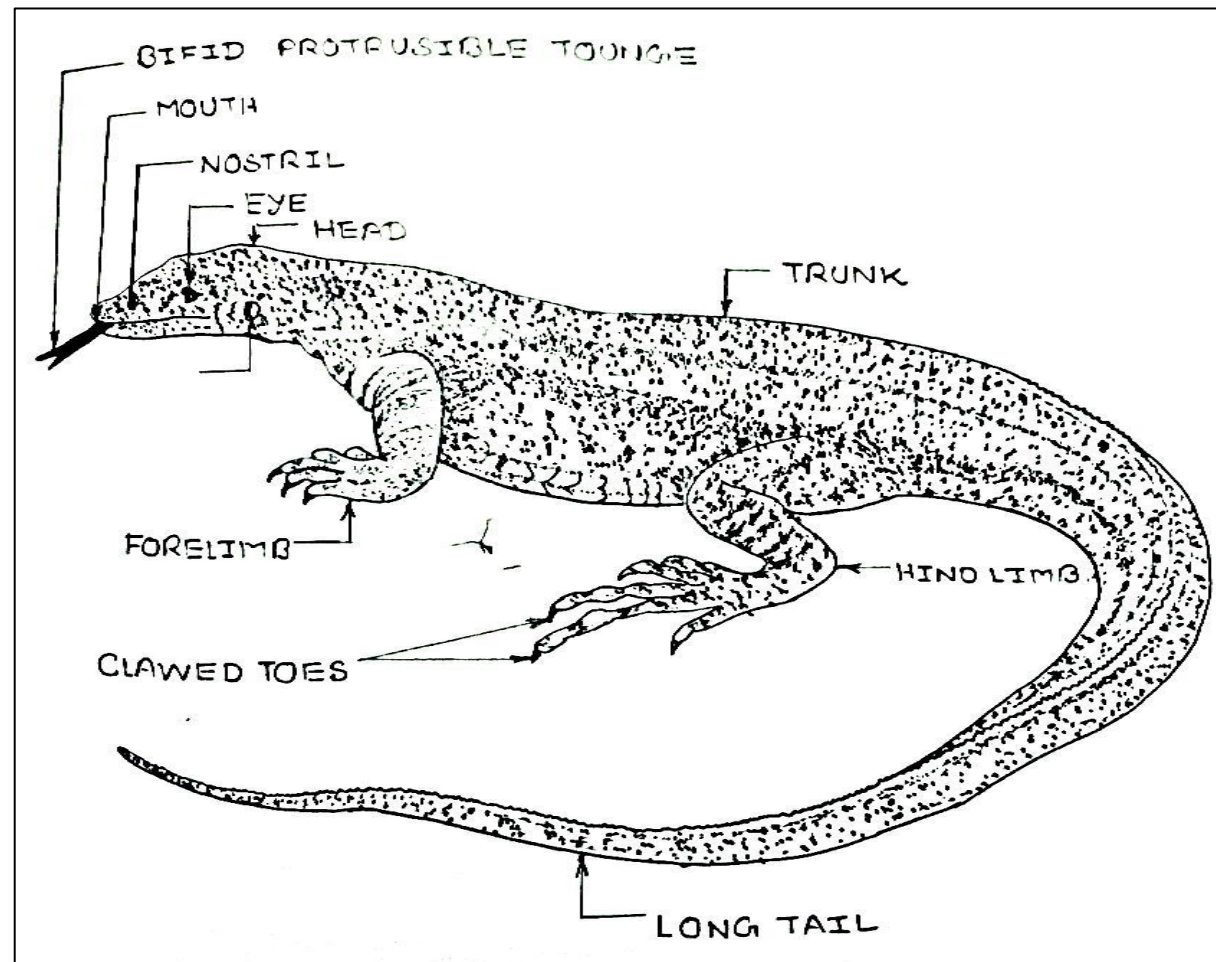
### Characteristic features:

- **Habitat**-burrows and trees.
- **Food**-reptiles, mammals and dead bodies etc.
- **Body length**-60 cm.
- **Body color**-brownish color with darker spots in rows.
- **Integument**-skin is covered with scales -dorsal and ventral.
- Dorsal side a very small scales with tubercles and ventral scales are arranged in rows.

### Additional resources:

[www.youtube.com/watch?v=h7QBd8KHlcw](http://www.youtube.com/watch?v=h7QBd8KHlcw)

[www.youtube.com/watch?v=E1DUwSnpoZU](http://www.youtube.com/watch?v=E1DUwSnpoZU)



*Varanus*

## *Chamaelon*

**Common name-** Arboreal lizard

**Geographical Distribution:** It is found in Africa, Madagascar, South Arabia, Europe, South India, and Sri Lanka.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body covered with horny epidermal scales. Teeth pleurodont

**Sub-Order : Lacertalia** Limbs pentadactyle and are usually present. Terrestrial.

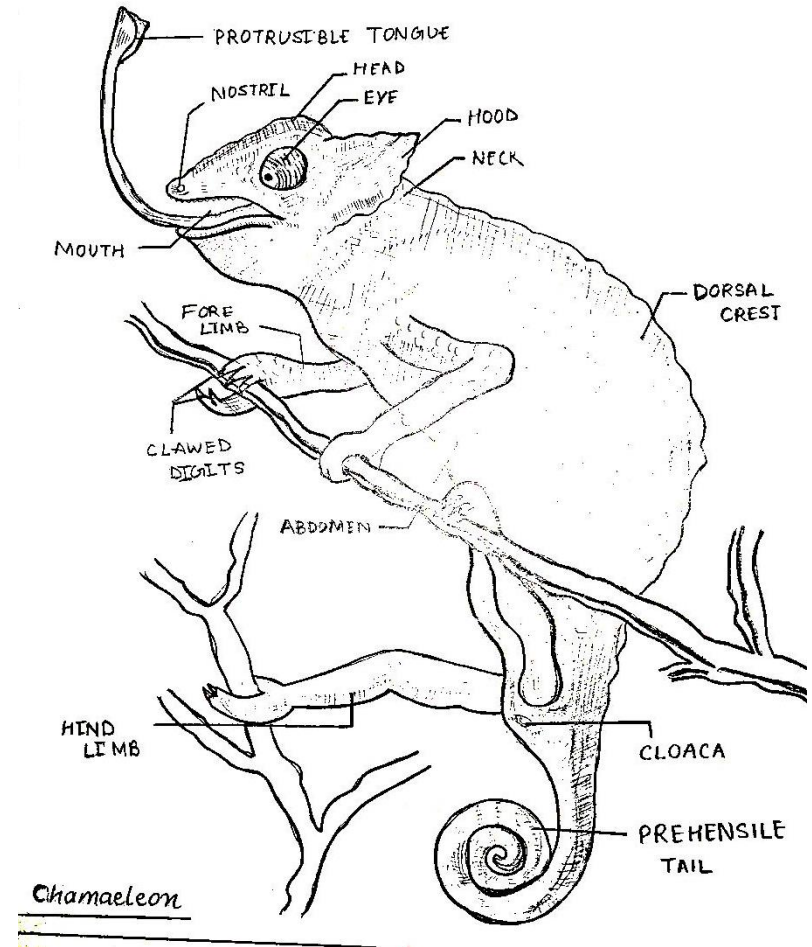
**Genus : Chamaelon**



***Chamaelon***

## Characteristic features:

- **Chamaelon** body is laterally compressed and covered with minute tubercles or granules (scales).
- Body is divided into head, neck, trunk and long tail.
- Head has wide mouth, large eyes, nostrils, ear openings and backwardly directed hood (helmet) formed by squamosal and occipital bones. Proatlas is present between skull and atlas vertebra.
- Eyes are large but the eyelids are united into one fold with a small central opening for pupil and adapted for binocular vision. The right and left eye can be moved separately from each other.
- Tongue is clubshaped, extremely protrusible and covered with a sticky secretion and can be shot out for catching insects.
- Tail is long prehensile.
- Teeth are acrodont.
- Jacobson's organs are absent



**Chamaelon**

## Additional resources:

[www.youtube.com/watch?v=bPZwvqQeMiE](https://www.youtube.com/watch?v=bPZwvqQeMiE)

[www.youtube.com/watch?v=ioblgpA5eTo](https://www.youtube.com/watch?v=ioblgpA5eTo)



## *Hemidactylus*

**Common Name:** House lizard.

**Geographical Distribution:** *Hemidactylus* is found in India, Sri Lanka, China, Europe, Africa and U.S.A., and also common to all other warmer countries.

### **Scientific Classification with Justifications:**

**Phylum – Chordata:** The presence of a notochord.

**Subphylum – Vertebrata:** Notochord replaced by Vertebral Column

**Superclass – Gnathostomata:** Jawed Vertebrates

**Class – Reptilia:** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass – Lepidosauria:** Skull roof with two openings behind eye.

**Order: Squamata** Body covered with horny epidermal scales. Teeth pleurodont

**Sub-Order – Lacertalia:** Limbs pentadactyle and are usually present. Terrestrial.

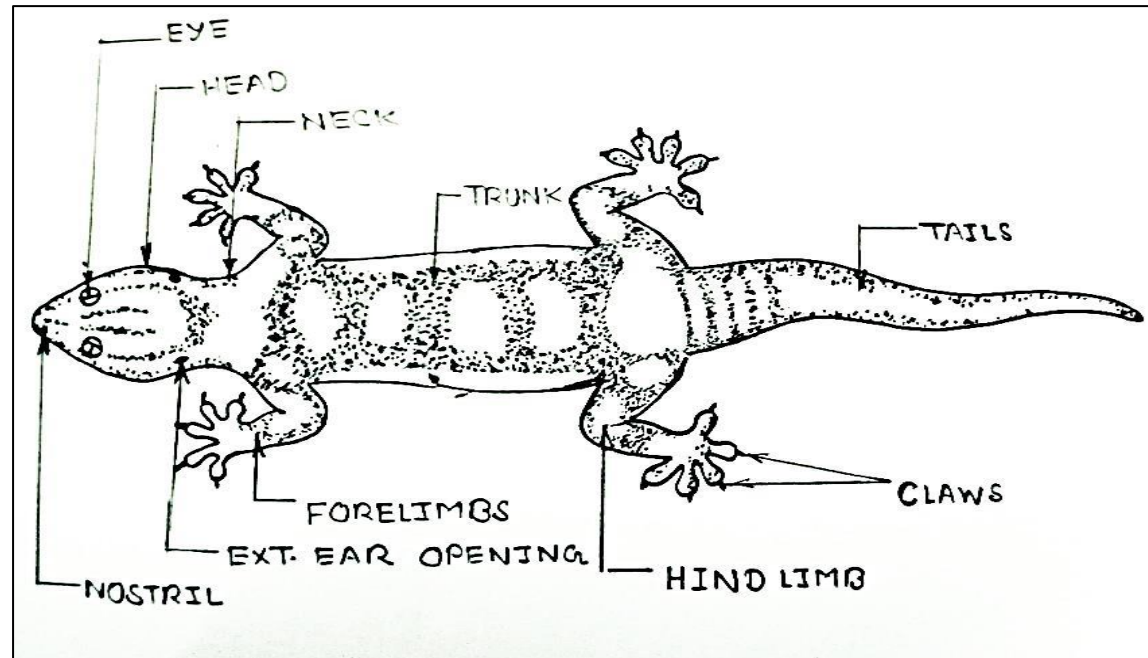
**Genus -*Hemidactylus***



***Hemidactylus***

### Characteristic features:

- **Body length**-25 cm.
- **Body color**-pale green.
- **Integument**-scaly , minute and smooth scales.
- **Eyes**-small eyes but eyelids are fused.
- **Ears**-like openings which are vertical.
- **Food**-insects.
- **Tongue**-short, sticky and slightly notched.
- **Tail**-long tail having a great power of regeneration.
- **Digits**-smooth surface , clawed and two rows of ridged lamellae which help in movement.



*Hemidactylus*

### Additional resources:

[www.youtube.com/watch?v=eDEZhbOlnAA](http://www.youtube.com/watch?v=eDEZhbOlnAA)

[www.youtube.com/watch?v=94IBtMistf4](http://www.youtube.com/watch?v=94IBtMistf4)

# *Naja*

**Common name:** Cobra

**Geographical Distribution :** *Naja* is widely distributed in China, Philippines, India, Malaya islands , Australia, Tasmania and Africa.

## **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body is covered by horny epidermal scales or shields.

**Sub-Order: Ophidia** Terrestrial or aquatic, arboreal or burrowing. Limbs absent.

**Genus : *Naja***

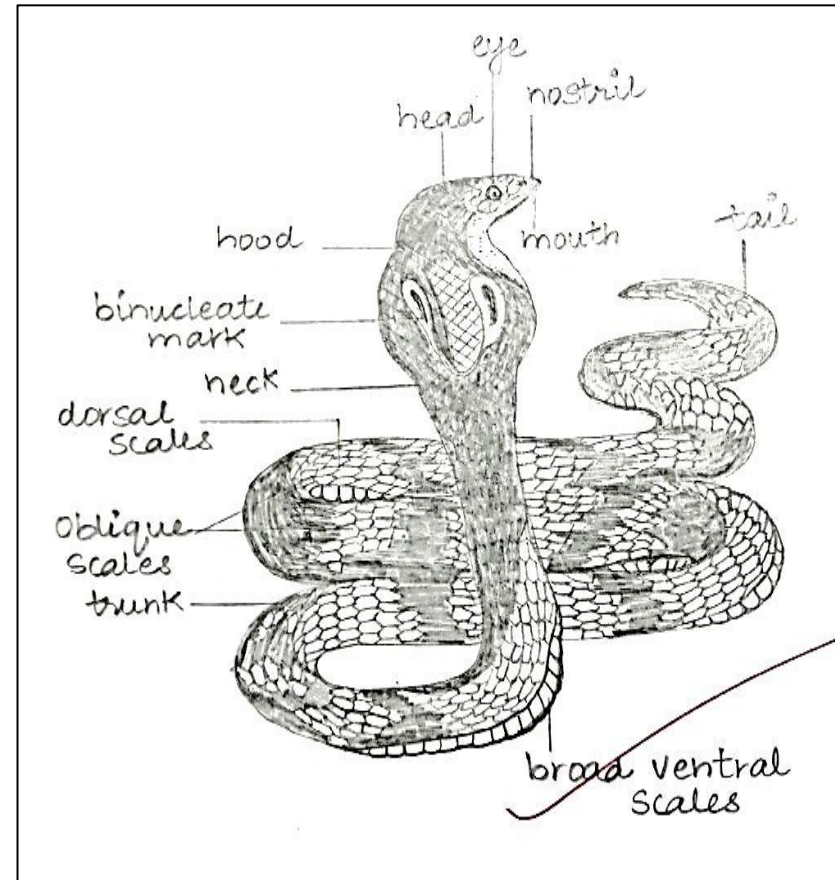


***Naja***



## Characteristic features :

- Body is elongated measuring one and a half to metres in length and divided into head , neck, trunk and tail.
- Head is not differentiated from neck. Head bears mouth, very small eyes with round pupils, nostrils between nasals and intranasal.
- When a cobra is not disturbed its hood lies flat on its head and the cobra looks much like other snakes
- The colour of the body is brown or black
- The lower surface of the hood bears two dark round spots running to four scales surrounded by white lateral borders
- Cobras are fast, graceful poisonous snakes that have a hood and raise the front part of their body off the ground in a distinctive way.
- Cobra is deadly poisonous and its venom is neurotoxic and fatal. When it bites there is light pain and swelling, irritation and death due to respiratory failure.
- They inject the poison through relatively small fangs



**Naja**

## Additional resources :

[www.youtube.com/watch?v=vdg9gkmWsEA](http://www.youtube.com/watch?v=vdg9gkmWsEA)

[www.youtube.com/watch?v=MQ\\_P9sDKa7](http://www.youtube.com/watch?v=MQ_P9sDKa7)

## *Viper*

**Common name:** Daboia

**Geographical Distribution :** *Viper* is distributed in India, Sri Lanka, Myanmar and Thailand.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body is covered by horny epidermal scales or shields.

**Sub-Order: Ophidia** Terrestrial or aquatic, arboreal or burrowing. Limbs absent.

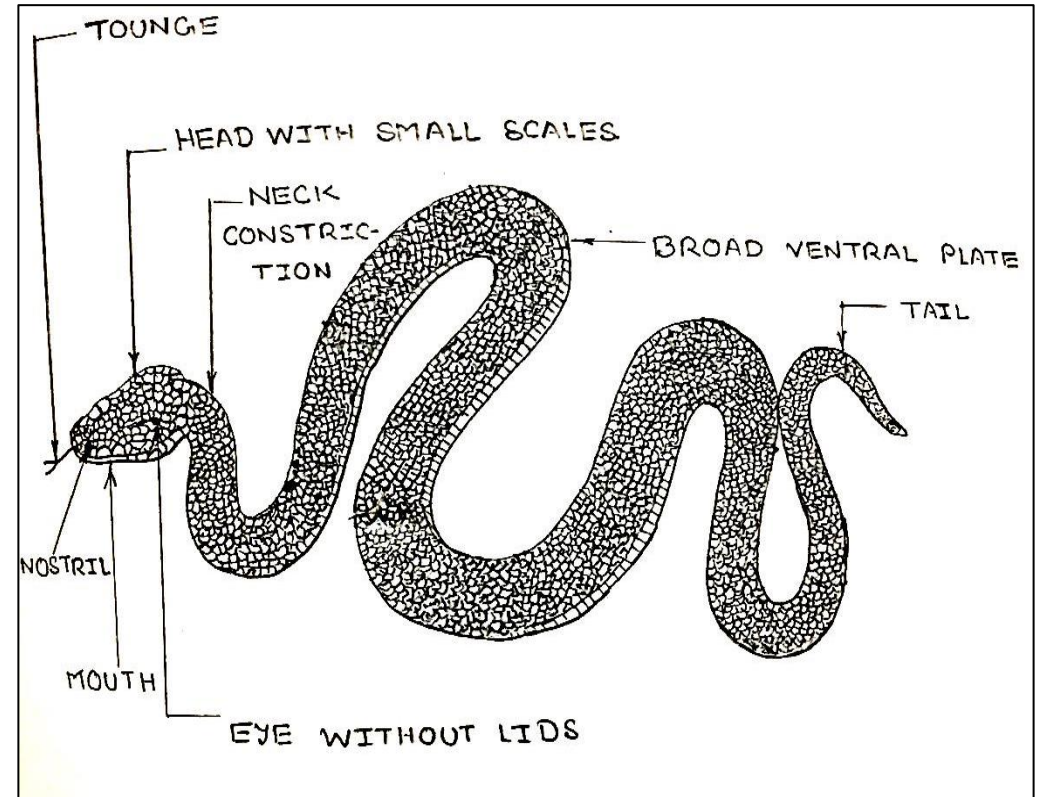
**Genus :Viper**



***Viper***

## Characteristic features:

- **Body** is elongated, divided into head, neck, trunk and tail and measures up to one and a half metre in length.
- **Body color** -The general colour is pale brown above with three longitudinal series of black spots and under parts are yellowish white.
- **Body length**-one and a half of meter.
- **Head** bears mouth, nostrils and eyes without eyelids and with golden iris and elliptical pupil.
- **Snout**-angulate, nasal opening is quite prominent.
- Very **poisonous**. Venom is **haemotoxic**. It hisses loudly before striking and also swells its body.



**Viper**

## Additional resources:

[www.youtube.com/watch?v=5148jAGIDUI](https://www.youtube.com/watch?v=5148jAGIDUI)

[www.youtube.com/watch?v=Hcq0gM24PxU](https://www.youtube.com/watch?v=Hcq0gM24PxU)



## *Ophiosaurus*

**Common name:** Glass-snake or limbless lizard.

**Geographical Distribution :** *Ophiosaurus* is found in Eastern Himalayas and Myanmar , North America, South Russia , Asia Minor and Morocco.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body is covered by horny epidermal scales or shields.

**Sub-Order: Ophidia** Terrestrial or aquatic, arboreal or burrowing. Limbs absent.

**Genus : *Ophiosaurus***



***Ophiosaurus***

**Characteristic features:**

**Body**-long, cylindrical and similar to snake.

**Head**-similar to the typical lizard.

**Eyes**-movable eyelids on eyes.

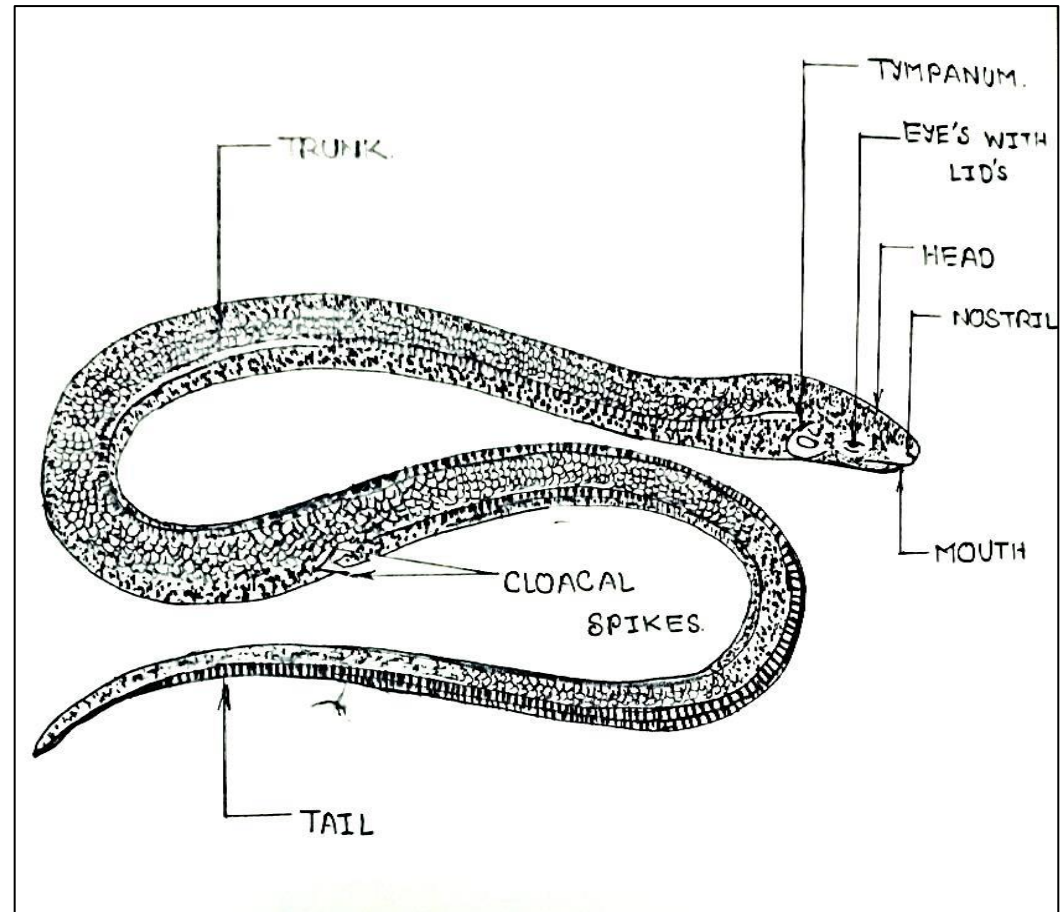
**Ear**-openings represents the ear.

**Tongue**-consist of anterior(thin , extensile and retractile) and posterior(thicker).

**Integument**-covered by scales which is further underlining by bony plates.

**Limbs**-reduced to small cloacal spikes(a pair).

**Tail**-long and very brittle.



*Ophiosaurus*

**Additional resources:**

[www.youtube.com/watch?v=iW4MrJSoYHA](https://www.youtube.com/watch?v=iW4MrJSoYHA)

[www.youtube.com/watch?v=b2\\_KXJyfa-w](https://www.youtube.com/watch?v=b2_KXJyfa-w)

## *Hydrophis*

**Common name:** Sea snake

**Geographical Distribution :** *Hydrophis* occurs in the Bay of Bengal, Malaya Archipelago, Pacific Coast from Mexico to South America.

### **Scientific Classification with Justifications:**

**Phylum : Chordata** The presence of a notochord.

**Subphylum: Vertebrata** Notochord replaced by Vertebral Column.

**Superclass: Gnathostomata** Jawed Vertebrates

**Class: Reptilia** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Lepidosauria** Skull roof with two openings behind eye.

**Order: Squamata** Body is covered by horny epidermal scales or shields.

**Sub-Order: Ophidia** Terrestrial or aquatic, arboreal or burrowing. Limbs absent.

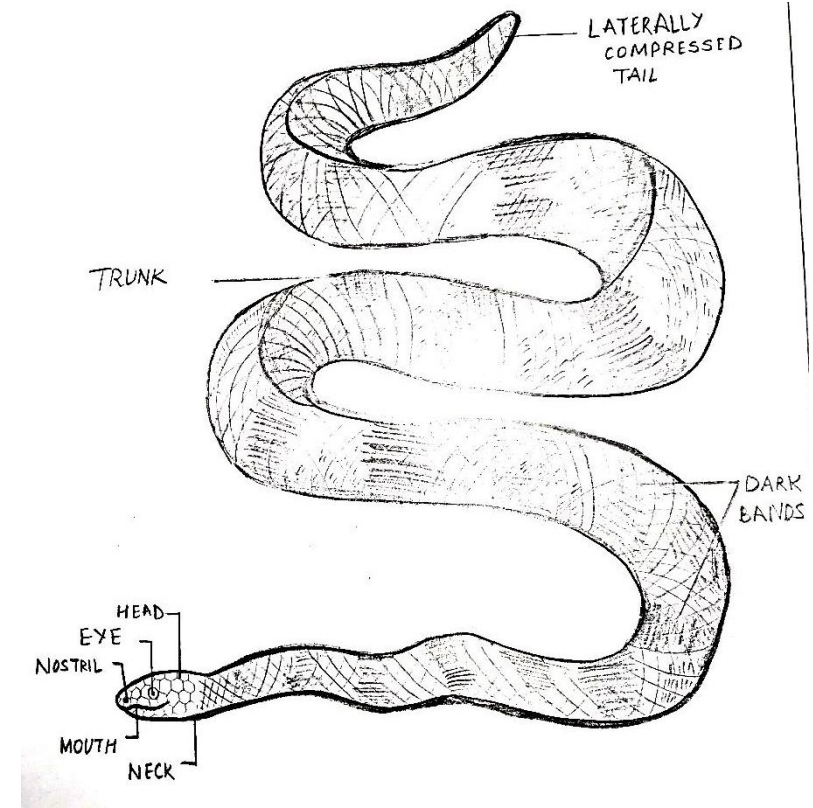
**Genus :*Hydrophis***



***Hydrophis***

### Characteristic features:

- *Hydrophis* is a marine snake, feeding on fishes. Oviparous.
- The body is long and laterally compressed posteriorly ,about 2 metres in length covered by small scales.
- Body is divided into head , neck, trunk and tail.
- Head and neck are very slender. Indistinct head bears mouth, eyes and nostrils.
- The general colour is dark olive-green above with yellowish cross bars and below.
- Head is covered with shields. Loreal-shields is absent.
- Tail is laterally compressed and acts like paddle in swimming
- *Hydrophis* is deadly poisonous and its venom is neurotoxic.



***Hydrophis***

### Additional resources:

[www.youtube.com/watch?v=5gOkCys5cPk](https://www.youtube.com/watch?v=5gOkCys5cPk)

[www.youtube.com/watch?v=spB1ElbnyPw](https://www.youtube.com/watch?v=spB1ElbnyPw)



# *Crocodylus*

**Common name:** Crocodile

**Geographical Distribution :** *Crocodylus* has a wide distribution and found in India, Sri Lanka, Myanmar, Malacca, Malaya Islands and Baluchistan. Triassic to Recent.

## **Scientific Classification with Justifications:**

**Phylum: Chordata:** The presence of a notochord.

**Subphylum: Vertebrata:** Notochord replaced by Vertebral Column.

**Superclass : Gnathostomata:** Jawed Vertebrates

**Class: Reptilia :** Cold blooded, terrestrial or aquatic vertebrates.

**Subclass: Archosauria :** Skull with closed upper temporal vacuity but possesses both temporal arches, anterior orbital vacuities are usually present, teeth thecodont, humerus with foramina.

**Order: Crocodilia :** Freshwater. Body covered with an exoskeleton of thick horny epidermal scales, tail long laterally compressed, thecodont teeth, quadrate immovable.

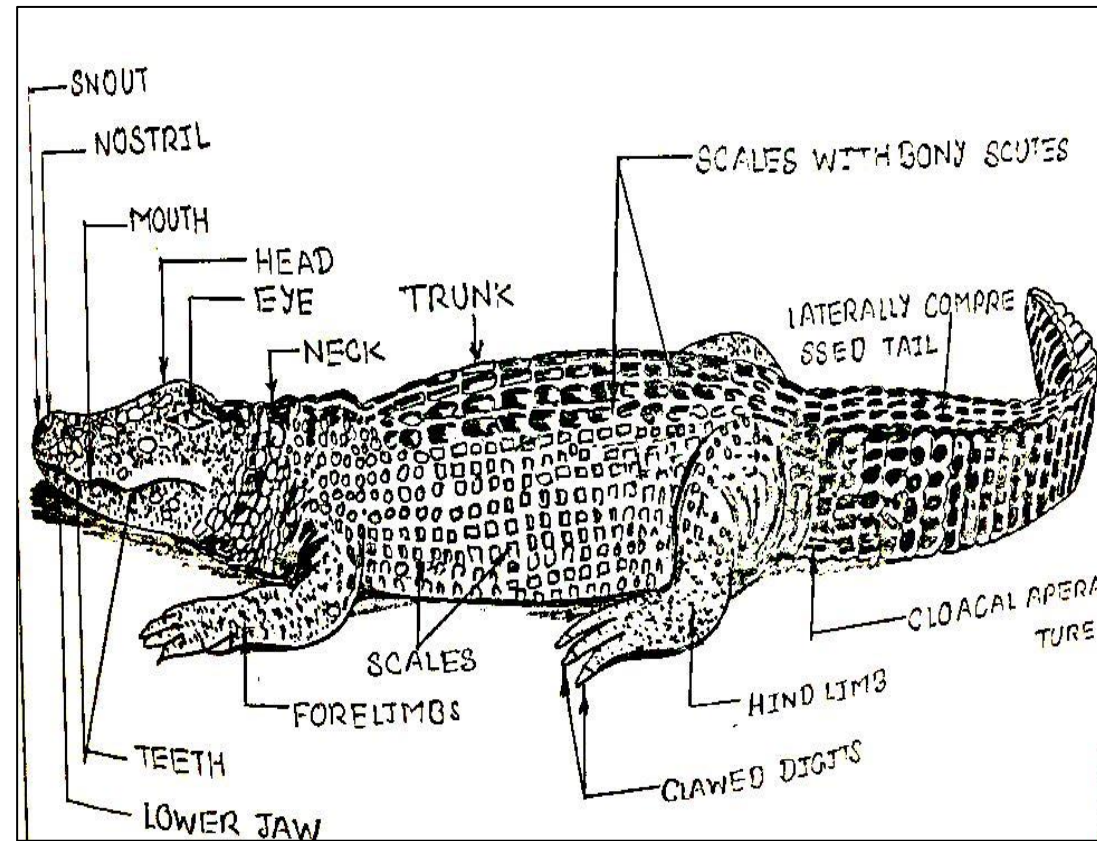
**Genus : *Crocodylus***



***Crocodylus***

## Characteristic features:

- Body is stout, 4-5 metres long and covered with an exoskeleton of horny thick epidermal scales
- Over dermal bony plates.
- The general colour of the upper parts is dark olive-brown with black spots or bands.
- The head is triangular and rough at the top, snout is broad, and provided with large wide
- Mouth, Nostrils at the tip of snouts, eyes with eyelids and ear opening protected by a movable flap of skin.
- The tail is long, laterally compressed and powerful
- Limbs are pentadactyle with five fingers and four toes. The fingers are webbed at the base and the outer toes are broadly webbed.
- The dorsal shield is composed of four, sometimes of six rows of larger scutes of which the central pair is the broadest.
- Heart is four chambered. Urinary bladder absent



***Crocodilus***

## Additional resources:

[www.youtube.com/watch?v=sO0D7N5JNh8](http://www.youtube.com/watch?v=sO0D7N5JNh8)

[www.youtube.com/watch?v=4h9re1bHt40](http://www.youtube.com/watch?v=4h9re1bHt40)

[www.youtube.com/watch?v=DFTZgruYPL4](http://www.youtube.com/watch?v=DFTZgruYPL4)