

# *Calotes*

## EXTERNAL MORPHOLOGY

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# Systematic Position

Phylum	Chordata
Subphylum	Vertebrata
Division	Gnathostomata
Superclass	Tetrapoda
Class	Reptilia
Subclass	Diapsida
Order	Squamata
Suborder	Lacertilia
Family	Agamidae
Type	<i>Calotes versicolor</i> (Garden lizard)

- *Calotes*, the common garden lizard is known as 'g i r g i t' in North India.
- It is often called a "b l o o d sucker," because of the red colour of throat.
- The most commonly distributed Indian species is, *Calotes versicolor*

# Habit and Habitat

- *Calotes* is a common *arboreal* lizard of fields and gardens.
- It is *diurnal*, often seen during day, sitting on tree branches, shrubs and hedges.
- It is mainly *insectivorous* but is also told to feed on smaller lizards, frogs, crabs and earthworms.
- It runs swiftly on ground and even swims in water.
- Sexes are separate and difficult to distinguish externally.
- It breeds from May to November, when it can change its colour like a chamaeleon.
- It often lives in crevices and lays eggs there or in debris.
- Development is direct and the young resemble the parents
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# External Features



## Shape, size and color

- Body is elongated, slender, lizard-like and clearly divisible into 4 parts —*head*, *neck*, *trunk* and *tail*, Male is brightly colored, golden yellow with a greenish tinge.
- Throat is scarlet red, often with a black transverse bar. Female is not so brightly colored. The male is stronger and larger than female and measures about 35 cm in length including tail .

*Calotes versicolor* : The Garden Lizard

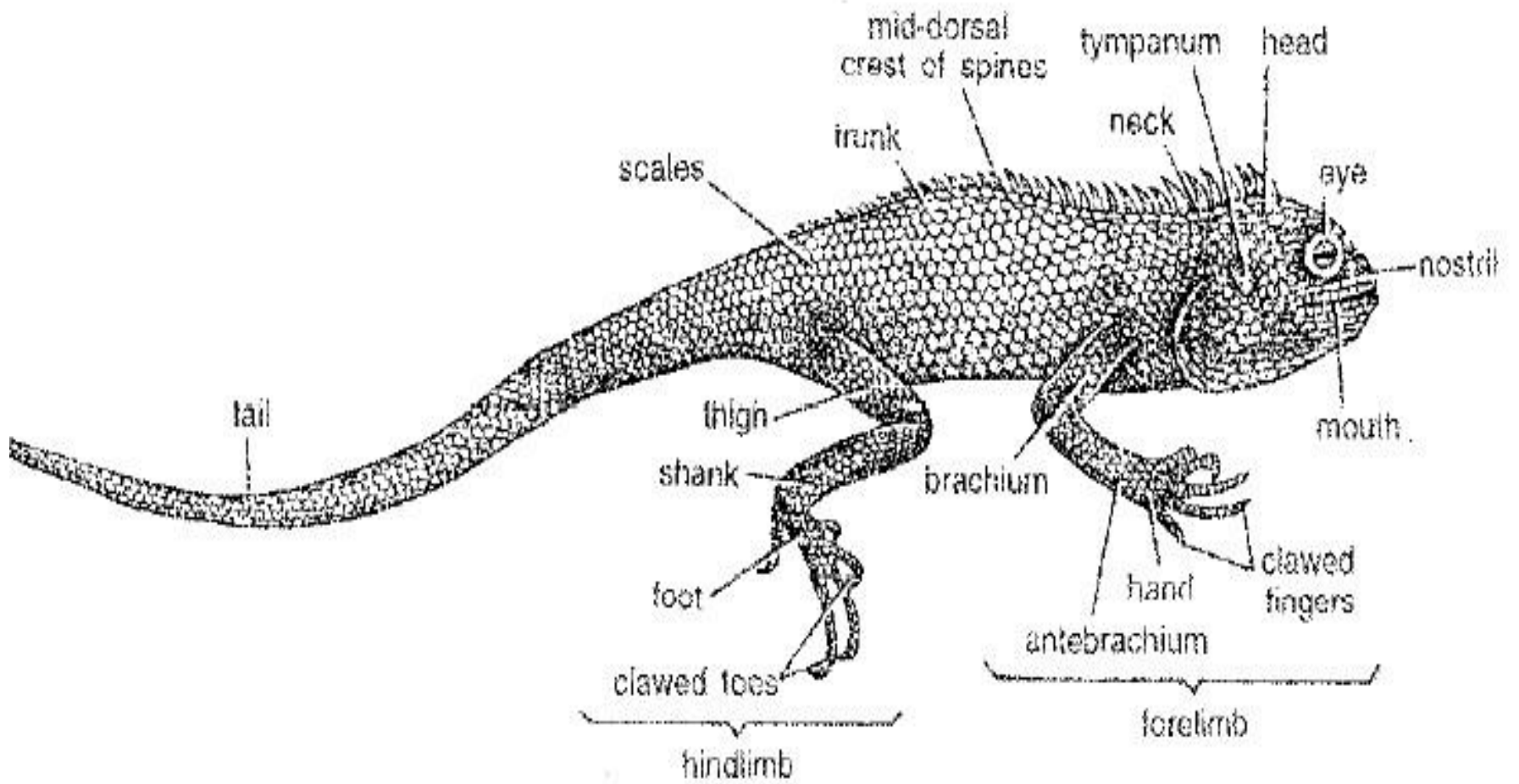


Fig. 1. *Calotes versicolor*. External features.

# External Features

- Head. The large head is pyramidal in shape with a short conical *snout*, bearing a wide slit-like transverse terminal *mouth* and a pair of small oval apertures, the *external nares*. Lips are absent. The lower jaw of male shows a characteristic curve not present in female. Each *eye* is shielded by movable eyelids and a nictitating membrane.
- Behind each eye is a shallow *external ear opening*
- provided with a tympanum at its bottom.

- **T r u n k .** A short neck connects the head with an elongated trunk which is compressed laterally but flattened ventrally. Between trunk and tail mid-ventrally opens a transverse slit-like *vent* or *cloacal aperture*. A large *cloacal plate* is found at front of the cloacal aperture. The trunk bears 2 pairs of limbs, the hind limbs being longer than the forelimbs. Each *forelimb* comprises antebrachium, brachium, manus and 5 clawed fingers; while each *hind limb* comprises femur, tibia, pes and 5 clawed toes.



- **Tail.** Tail is cylindrical, tapering like a whip and two and a half times longer than the head and trunk. In adult male the base of tail just behind the cloacal aperture becomes markedly swollen due to hemipenes. The tail shows alternate dark and light annuli.
- **Skin and exoskeleton.** The entire body is covered by rough epidermal horny, imbricate and backwardly directed *scales* of unequal size. On the head, a prominent shield covers the parietal foramen and 2 spines are present above each ear opening. On head and trunk, along mid-dorsal line, is a characteristic *frill* or *crest* of larger spine-like movable scales pointed backwards and gradually diminishing in size posteriorly. Scales are shed periodically in *ecdysis*. Skin is dry and devoid of glands; femoral pores on thighs are absent in females. In males, these glands become functional during breeding seasons.

# Scales.

Scales and claws form the exoskeleton of most of the reptiles including *Calotes*.

**Scales.** Scales form a continuous cover over the body of *Calotes*, but become thinner in the grooves between the scales. Scales on the body of

*Calotes* are of two types viz., large scales and small scales. Sensory devices in the form of bristles are present on both the scales called *prototrichus* (plural of *protothrix*). It is believed to evolve into hair in mammals, during the course of evolution. Scales are epidermal in origin, develop from malpighian layer. Each scale is a plate like structure supported by a *bony plate or ossicle*

## Claws.

Tips of the digits of *Calotes* are provided with sharp claws. Each made up of a dorsal and ventral scale like horny plate. Dorsal plate is called *unguis* and ventral one is called *subunguis*. The latter is flattened. Both these plates are derived from the malpighian layer and placed in such a way, that they converge to form a sharp claw. Cellular structure of skin is similar to that of *Uromastix*.