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## Oriental Garden Lizards (*Calotes spp.*)

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### **“Bloodsuckers” in Name Only**

Also widely known as the “Garden Lizards”, “Forest Lizards”, and “Changeable Lizards”, this genus of relatively small to mid-sized agamids consists of approximately 27 species widely distributed as a whole from the Middle East, through southern and southeastern Asia, oftentimes in and around human habitations. The most widespread and frequently kept species in captivity tend to be the Oriental Garden Lizard (*Calotes versicolor*), and the Indo-Chinese Forest Agama (*Calotes mystaceus*), although other species may also occasionally appear in the trade. These lizards are active, diurnal hunters and climbers, and can be extremely variable in their colors and patterns depending on the species, age, sex, and breeding and reproductive status. Males of several species are light yellowish to pale orangish, and develop reddish-orange heads, throats, and forebodies, which often earn these lizards another unique name of the “Bloodsuckers”, although these lizards do not actually drink or suck blood. More typical coloration of many of these species ranges from a dull brown, grayish, or olive-brown with dark, irregular spots, barring, and/or crossbanding. Their heads and bodies are also large and compact, and distinct, low nuchal crests, dewlaps, or spines along their backs are also often evident. Garden lizards are a unique, and personable group of agamids that can be kept and propagated readily in captivity, are fairly inexpensive, and can make great and enjoyable pet reptile species for the novice-intermediate level enthusiast.

### **Taxonomy**

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Reptilia

**Order:** Squamata

**Suborder:** Lacertilia

**Infraorder:** Iguania

**Family:** Agamidae

**Subfamily:** Draconinae

**Genus:** *Calotes*

**Species:** *Calotes spp.*\*

*\*Taxonomy subject to change and revision.*

### **Lifespan and Longevity**

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Longevity in the wild is not yet fully understood, but captive garden lizards can attain longevity of at least 8 to 10 years or potentially more.

### **Distribution and Habitat**

Oriental garden lizards from the genus *Calotes* are, as a whole, a widely ranging group of lizards found over much of the Middle East, and southern to southeastern Asia, where they may inhabit tropical to sub-tropical rainforests, woodlands, and savannahs, to more urban and suburban human habitations and agricultural settings. The Oriental garden lizard, *Calotes versicolor*, tends to be the most common and widely ranging species, ranging from southeastern Iran and Afghanistan, to Pakistan, India, Sri Lanka, and Indonesia to southern China. Several species have also been introduced in several other areas of the world as well, including Florida in the United States.

### **Conservation Status**

Conservation status dependent upon the species. Some species are IUCN Least Concern (LC). Some are IUCN Near Threatened (NT), Conservation Dependent (CD), Vulnerable (VU), Endangered (EN), to Critically Endangered (CE). Some Not Evaluated for the IUCN Red List (NE) or otherwise Data Deficient (DD).

### **Legal and Regulatory Status(\*Subject to Change)**

Consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

### **Experience Level Required**

Novice/Beginner to Intermediate/Moderate.

### **Size**

Adult Oriental garden lizard species can vary in size depending on the exact species, as well as sex and age of the animal. Individuals of most species range from 7 ½ to 18 inches as adults, although up to 10 to 12 inches are more typical.

### **Housing and Enclosure**

Housing must be sealed and escape proof. Hatchling or juvenile agamas can be housed in a 10 to 15 gallon tall terrarium or enclosure. A single adult lizard can be maintained in a minimum of a 20 to 40 gallon “tall” front or top opening terrarium. These agamas can be housed together in pairs of the same species, but increasingly larger housing should be provided accordingly. Adult males should not be housed together however as they are territorial. For substrate, these dragons will require a medium that can retain higher humidity such as pesticide free potting soil, cypress mulch, coconut husk bedding, orchid bark, or sphagnum moss. A large, shallow water bowl or dish should also be provided and be changed and cleaned regularly. Many of the commercially available misters or foggers can also help maintain adequate hydration for these lizards as well since they will also acquire much of their hydration from the moisture and condensation on their bodies as well as surrounding vegetation. Garden lizards are arboreal species, and appreciate additional climbing, basking, and hiding opportunities. Provide vertical and horizontal artificial foliage, driftwood, rocks, logs or branches and other perches. A variety of live or planted vivarium plants and/or mosses can also provide additional naturalistic basking and hiding areas, and help raise and maintain humidity levels these agamids require at about 60 to 90% humidity overall.

### **Temperature, Lighting, and Humidity**

These agamas originate from cooler, mountain or higher altitude areas, and this natural history

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should be considered when providing basking and ambient heating temperatures for them. For basking, create a thermal gradient (or a warm side) in the cage/enclosure. Ideal ambient and cool side temperatures for these lizards range from 75 to 85 degrees F and approximately 90 degrees F on the warm, basking side. Under tank heating pads, ceramic heat emitters, and/or infrared bulbs will help maintain adequate ambient temperatures. Exceeding these basking temperatures by much more will not be tolerated by these lizards, which may become heat stressed as a result. Relatively cooler temperatures and high humidity are key to maintaining these lizards. Nighttime temperatures can be allowed to drop to 65 to 75 degrees F. A day and night photoperiod or light cycle of 10 to 12 hours should also be given. Providing the correct amounts of UVA/UVB overhead incandescent and florescent lighting, and calcium-to-phosphorus ratios is essential for ensuring the health and overall well-being of these lizards in captivity. Without UVA/UVB, or adequate amounts of it, they can be susceptible to the abnormal bone growth and development known as Metabolic Bone Disease (MBD), and other health and development maladies. Also be sure to spot clean the enclosure for urates, feces, or uneaten food at least twice per week. Be sure to periodically replace the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Feeding, Diet, and Nutrition**

***Insectivorous to Omnivorous***; In the wild, garden lizards are primarily insectivorous, although they will eat both plant and animal matter. They will eat an assortment of insects and other invertebrates, fruit and vegetable material, and even other small vertebrates on occasion. In captivity, these lizards will readily accept a variety of appropriately sized feeder insects including but not limited to crickets, mealworms, superworms, feeder roaches, and waxworms. Gut load these prey items by feeding them commercially available diets for added nutritional value. These lizards may also accept other prey items such as newborn small pre-killed rodents, earthworms, redworms, and feeder goldfish or other small feeder fish, but feed them these sparingly. They can be given these food items from a securely fastened arboreal perch or dish daily to every other day. Gutloading insect food items and providing sufficient calcium, multivitamin, and vitamin D3 supplements in Oriental garden lizard diets helps raise their nutritional value and should be used to supplement the diets of any age or size of animals. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Handling**

As with many reptiles, younger, or hatchling garden agamas often tend to be, at least initially, more nervous and defensive, but usually tend to become mild mannered and docile as adults, and can be readily handled or interacted with. Handle any age or size of garden agama gently and deliberately, but do not drop or injure the animal. Most adult lizards will settle down considerably and become quite tame and personable pets to keep. These agamas overall are a mild mannered, personable, and highly enjoyable pet reptile species to maintain for any beginning to intermediate level reptile or amphibian enthusiast.

**\*\*Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens\*\***

### **Contact**

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at [info@madisonherps.org](mailto:info@madisonherps.org)

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