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## Chameleon/Angle-Headed Agamas (*Gonocephalus* spp.)

### Awesome and Amazing “Angleheads”

Also known as the chameleon agamas, anglehead agamas, or anglehead lizards, the chameleon agamas are a genus of small to mid-sized, arboreal to semi arboreal agamid lizards generally indigenous to the humid and tropical areas of southern to southeastern Asia, with range depending largely on the species. There are currently 17 species in the genus *Gonocephalus*, with perhaps 2 to 3 being most commonly seen and available in the pet trade. These are the Chameleon Anglehead Agama (*G. chamaeleontinus*), Doria’s Anglehead Agama (*G. doriae*), Borneo Anglehead Agama (*G. bornensis*), and occasionally other species. These tree-dwelling agamas can be quite variable in color and appearance depending on the species, but generally have short, angled heads with casques, lending to their common name of “anglehead” agamas. A distinctive nuchal crest and ridge along their short, compact bodies with spines is characteristic of most species. The chameleon anglehead agamas are perhaps the most colorful and attractive of the species, ranging in color from brown, to vibrant green or even turquoise blue-green with paler white to yellow spots, dashes, and streaks. Most anglehead agamas are seldom available as CBB specimens for the pet trade, and are rather wild collected and imported. However, for the more intermediate level enthusiast, they can make for very colorful, attractive, and rewarding pets to maintain.

### 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:** *Gonocephalus*

**Species:** *Gonocephalus* spp.\*

\*Taxonomy subject to change and revision.

### Lifespan and Longevity

While little else is known about the natural history of these lizards, or their captive and wild

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longevity, they can attain longevity of at least 10 to 15 years or potentially more under the right conditions.

### **Distribution and Habitat**

The anglehead agamas are generally indigenous to the humid, tropical to sub-tropical rainforests, forests, woodlands, and savannahs of southern to southeastern Asia. Range is dependent upon species, but most can generally be found in Java, Indonesia, Sumatra, Malaysia, Thailand, and the Philippines.

### **Conservation Status**

Conservation status dependent upon the species. Some species are IUCN Least Concern (LC). Some are 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**

Intermediate/Moderate.

### **Size**

Adult chameleon, or angle headed agamas can vary in size depending on the exact species, as well as sex and age of the animal. Anglehead agamas of most species range from 10 ½ to 18 inches as adults.

### **Housing and Enclosure**

Anglehead agamas are primarily diurnal, arboreal lizards, and should therefore be housed accordingly. 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 anglehead agama can be maintained in a minimum of a 20 to 30 gallon “tall” front or top opening terrarium. Anglehead 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 agamas will require a medium that can retain higher humidity such as pesticide free potting soil, cypress mulch, coconut husk bedding, or sphagnum moss. For water, mist hatchlings and juveniles at least twice per day and adults at least 2 to 3 times daily as well as their food. 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. Provide vertical and horizontal artificial foliage, driftwood, rocks, logs or branches and other perches for additional ample basking, climbing, and hiding opportunities that these agamids will enjoy and utilize. A variety of live or planted vivarium plants and/or mosses can also make an enclosure more aesthetically pleasing, as well as provide additional naturalistic basking and hiding areas, and help raise and maintain humidity levels these agamids require, at about 80 to 95% humidity overall. Anglehead agamas originate from humid, tropical areas, and this natural history should be considered when providing basking and ambient heating temperatures for them.

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

For basking, create a thermal gradient (or a warm side) in the cage/enclosure. Ideal ambient and cool side temperatures for these agamas range from 75 to 85 degrees F and approximately 85 to

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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 anglehead agamas. 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 anglehead agamas 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, anglehead agamas 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, anglehead agamid 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 agamids may also accept other prey items such as 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 these agamid's diets helps raise their nutritional value and should be used to supplement the diets of any age or size of animals for essential health and well-being. 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 anglehead 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 anglehead agamas gently and deliberately, but do not drop or injure the animal. Most adult agamids will settle down considerably and become quite tame and personable pets to keep. These lizards overall are a mild mannered, personable, and highly enjoyable pet reptile species to maintain for any 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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