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## Antlions (Family Myrmeleontidae)

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### **Ferocious Miniature Predators**

Antlions are a group of predatory insects from the family Myrmeleontidae consisting of approximately 2,000 species found worldwide. They are perhaps most well-known from their larval stages, which can be voracious predators of ants and insects, as well as other small invertebrates and even other small animals. Antlion larvae are well known for their construction of their conical or funnel shaped pits or traps built in loose, sandy or loamy soil that can be up to several inches deep and across designed to trap unwary prey. Any unfortunate prey that falls within these pits is quickly seized by the antlion's large sickle shaped mandibles and is injected with a strong set of enzymes to paralyze and consumed. Once prey is consumed, the empty exoskeletons are flung by the antlion from the pit. Some species of antlions, however, do not construct a funnel, and instead are active or sedentary ambush predators. Also popularly known as "doodlebugs" from the tracks larval stages make in the sand, larval antlions undergo three stages of metamorphosis before becoming adults. As adults, antlions superficially resemble damselflies or dragonflies, but are members of the lacewing insect family and have thin, transparent lace or vein like wings. Antlions are available from several different local and online sources specializing in insects, and can make for very intriguing, low maintenance pets.

### **Taxonomy**

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

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum:** Arthropoda

**Subphylum:** Chelicerata

**Class:** Insecta

**Order:** Neuroptera

**Superfamily:** Myrmeleontoidea

**Family:** Myrmeleontidae

*\*Taxonomy subject to change and revision.*

### **Lifespan and Longevity**

As with many groups of insects, the larval stages are much longer lived than the adults, and may see longevity of around 2 to 3 years, while adults typically live for only 25 to 45 days.

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### **Distribution and Habitat**

Depending on the genus and species, antlions can be found throughout much of the world in dry, sandy, arid to semi-arid environments, and may be tropical, to sub-tropical, to temperate. The greatest diversity of antlion species, however, occur in tropical regions.

### **Conservation Status**

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.

### **Size**

Antlions can vary in size depending on their life stages, as well as species. Generally, antlion larvae are around ½ to 1 inch in size, while adults can be 1 ½ to 2 inches, with wingspan of up to 4 ½ inches.

### **Housing and Enclosure**

Antlions are quite simple and inexpensive to house and maintain, with only a few considerations. Although antlion larvae cannot climb or jump, a small, sturdy, secure, escape proof 5 gallon glass terrarium, plastic container, or plastic Kritter Keeper of similar dimensions can be used to house antlions. Several of the acrylic displays and enclosures that are now manufactured for housing arachnids, insects, and other invertebrates can also be used. A fine, dry sand substrate at least 12 inches deep should also be provided to enable the larvae to burrow and construct their funnel pits. Few other furnishings are required as long as sufficient opportunities to burrow are provided.

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

Antlions require little water or hydration, and derive much of this from their prey that they consume. They can, however, be lightly misted once every two weeks, but do not allow conditions to become too wet, moist, or humid. Most species can also be kept at room temperatures from 70 to 80 degrees F without added UVA/UVB lighting or heating, although a low wattage incandescent, radiant or ceramic heat emitter, or UTH pad (under tank heater) can be used for some tropical species or when otherwise needed. 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 Carnivorous*; Antlions are carnivorous and predatory, feeding on ants and other unfortunate smaller insects and other invertebrates that either fall into their funnels, or can be trapped by the antlions by sand flicking, or other means. Adult antlions can also be predatory to frugivorous, feeding on fruits, vegetables, and nectar, or sometimes are non-feeding. In captivity, antlion larvae can be given most any sorts of feeder insects such as crickets, roaches, black ants, wingless fruit flies, and other invertebrate feeders. They may feed several times per day, but can go for one week or more without food. Feeding once per day to every other day should be sufficient. No additional supplementation is required. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of

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one's animals can be given as well.

### **Handling**

Antlions are not venomous or poisonous to humans, but can use their large mandibles to bite or pinch if handled carelessly. Antlions can be handled in the palms of the hands, but require gentle and careful handling in order to prevent injuring them. Antlions can also be more gently and safely moved using a tea spoon or other scoop. Antlions may also feign death if handled as well. \*\*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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