Got Bugs? How to Deal With "Bugs" in the Reptile Room and/or Enclosures!

Got bugs? As it turns out, one very likely does, whether in and/or around their homes, or in the case of this educational article, in or around their reptile rooms and/or reptile enclosures. It is estimated that the average American household has anywhere from at least one hundred or more different species of invertebrates living in or amongst their household, whether knowingly or unknowingly. And by "bugs", we are referring to, more often than not, the "uninvited guests" which may show up in, or be attracted to our households, whether they be insects, arachnids, other types of arthropods, or other types or groups of invertebrates, as well as neither the types of pet invertebrates we choose to keep in our homes such as tarantulas or other spiders, pet centipedes and millipedes, or other species of insects or other invertebrates that we tend to keep amongst herpetoculture and within the pet industry. This is also not including many of the feeder "bugs" or other invertebrates commercially which may occasionally escape or get loose, and which are produced in captivity that we might give to many of our reptiles such as domestic crickets, tropical roaches, mealworms, waxworms, and other such feeder insects.

Some of these "bugs" can be harmful or detrimental to one's captive reptiles, other pets living in the household, and/or to us humans, and steps should probably be taken to eradicate or eliminate them at all costs if they are seen or detected. Others which can appear within our households can simply be more merely an "annoyance" to us and/or our pets, but typically tend to do little to no damage or harm, while others yet can be beneficial to have around, and may be ones which one might wish to actually encourage. So what does one do if one's household, reptile room, and/or reptile enclosure has "bugs", which ones may be ones to be concerned about, and what tend to be the most commonly encountered "bugs" in reptile rooms and/or enclosures and how should they be dealt with?

For many of these "bugs" which will be mentioned, perhaps one of the most important steps which can be taken in general to prevent, or at least greatly reduce their infestations will be to simply maintain clean, hygienic conditions in and amongst the household, and within one's reptile room and enclosures. Maintaining good, clean substrates, clean and regularly changed water, and removing and spot-cleaning any uneaten or spoiled food items can help to prevent attracting pests. In some other cases, in order to prevent the "bugs" which we absolutely do not want to have in our reptile rooms or enclosures, practicing good buying habits, such as purchasing only from reputable breeders or other sources, practicing good quarantine and monitoring measures of any newly acquired animals, among other steps, can be other ways of reducing the likelihood of having to deal with "bugs" later on.

Many different types of "bug" infestations can also be controlled or eliminated through employing various chemical and pest control methods. However, an important ***disclaimer here should be that one should always take the time to carefully read any of the product labels and instructions for usage when doing so***, as many chemical pest control methods and repellants can be toxic or harmful if they are enabled to come into direct contact with one's reptile or amphibian, as well as potentially other pets or animals in the household, as well as kids and even to ourselves if they are improperly used or

handled. ***Do not use any pest control products or chemicals outside of their intended use, labels, or instructions***. This article is not necessarily to recommend or endorse any specific products, methods, or techniques, as each case or circumstance may be different, although in general, some of the safest and most commonly used methods used to control or eradicate them may be touched upon in this article. Similarly, these are important considerations to factor in should the decision need to be made to hire or recruit a professional exterminator or pest control company to come in to deal with the problem or infestation which might affect one's reptiles or other pets living in the household.

While certainly not all-inclusive, and without further a due, here is a guide to the most commonly encountered "bugs" which one may encounter in one's household, or at least ones which most commonly tend to make their way into our reptile rooms and enclosures, what to do about them, how they might affect or interact with your pet reptiles, and whether or not they should be a cause for concern. If you can think of any other types of "bugs" which might commonly appear in the reptile room or enclosure, feel free to let us know about them, so we can add them to this article!

Color Code:

***Red**: Harmful to Your Reptile; Eradicate or Eliminate at all costs!

***Yellow**: Not Harmful to Your Reptile, but May Cause Other Problems for Humans and/or the Household. Eradication Strongly Recommended.

***Orange**: Harmless to Your Reptile, Causing Little to No Harm, but Can be an Annoyance. Eradication or Elimination Suggested.

***Green**: Harmless to You and Your Reptile, and Beneficial to Have Around; Presence Might be Encouraged

***Blue**: Varies Depending on the Species or Circumstances. Or Otherwise "Neutral" "bugs".

Snake Mites (*Ophionyssus natricis*) And Other Mites

Perhaps the worst, and least desirable "bug" one can find in their reptile rooms, or enclosures, and which should be eradicated at all costs, is the snake mite (Ophionyssus natricis). Although their exact origin is not known or clear, it is most likely that they originally came on imported animals from Africa or other areas of the world where they are possibly native to. Snake mites are small, parasitic arachnids related to ticks which feed and reproduce upon the blood of captive pet snakes and other reptiles, and can spread quickly and can also be very difficult to eradicate if the products used also do not kill the eggs or larvae.

In many cases, the adult females are the life stages which tend to be most readily visible to the naked eye, appearing like small, dark "poppy-seeds" at the bottom of a water-bowl, or which can be seen moving about on or near one's snake or other reptile. Being a snake, or reptile-specific parasite, it is usually unlikely that one's home would otherwise have snake mites if one didn't already have reptiles in the household. For much more in-depth details and information about snake mites and mite infestations, which are also known medically as "Acariasis", see our other article on ***"Dealing with Acariasis: The Dreaded Snake Mite".***

There are also many other types or species of mites which might also make their way into a reptile room or enclosure, but many of which tend to be much tinier and more difficult to see with the naked eye. The House Dust mites (*Dermatophagoides spp*.), are one such example which usually are present by the tens or hundreds of millions in households but are generally harmless in most cases (unless dust and allergen buildup become so severe as to create human health problems as well in the household). Other species or types of mites can be parasitic to birds, mammals, and/or humans, but not to reptiles, although at least a few other species such as Chiggers (*Eutrombicula spp*.) can also be parasites of reptiles, but are generally less likely to find their way indoors. Many other types of mites tend to be more benign scavengers or even beneficial predators of other insects or arthropods.

Ticks (*Order Ixodida*)

Another, larger relative of the mites which can often parasitize reptiles, birds, mammals, and humans, are ticks. Generally, in most cases, ticks tend to be more prevalent of an issue on wild-caught or imported animals, and it is quite unlikely that most healthy, captive-bred animals in our homes would have these parasites. Although rather unlikely, it may be possible however for ticks to be transferred or carried to reptiles within a household by any dogs, cats, or by humans. If a tick is discovered on your reptile, by any chance, they can usually simply be carefully removed individually with tweezers, although one will want to ensure the "head" is not left embedded in the skin, which can cause further irritation and infection.

In some cases, ticks can be more prevalent of an issue in outdoor or backyard reptile pens or enclosures that they can get into; in cases such as these, periodically monitoring the animals for ticks, and removing them from the animal, as necessary, and treating the enclosure/perimeters with a permethrin if infestations are severe, may on rarer occasions become necessary course of action. Keeping the grass or other foliage and vegetation as well-trimmed and maintained as possible in and around any outdoor reptile enclosures can also go towards reducing the likelihood of ticks (or other outdoor parasitic mites) from becoming a problem for animals housed outdoors for all, or parts of the year.

Termites (*Isoptera* Infraorder)

Termites are well known, highly gregarious or eusocial insects consisting of well over 2,900 different species found worldwide. They are well known for consuming a wide variety of dead and decaying plant, wood, leaf litter, and soil humus matter, and can have many different life stages and social rankings, including workers and soldiers, which are usually sterile males, and sexually active kings and queens usually forming a monogamous pair in most termite colonies. These highly successful insects have colonized nearly every landmass on Earth, particularly in Africa, where they are important recyclers and decomposers in the environment.

Many species of termites are well known structural and/or household pests which can cause structural decay and damage over time if a colony is allowed to persist. While they are not associated with reptiles in particular, they can infest the room or area in which reptiles and kept incidentally. Termites are not likely to harm your reptiles at all, and can be a snack for any insectivorous animals should any get into your enclosures; however, if one is utilizing wooden or custom-built, do-it-yourself enclosures, structural damage to enclosures can occur as a result. Termites generally are unwanted houseguests which have the potential of causing serious household and structural damage, and so they should probably be eliminated if they do happen to be detected by contacting a professional pest control service.

Ants (*Family Formicidae*)

One very common type or group of household pest or "uninvited" guest which may find their way into reptile rooms or enclosures, are ants. Ants are an extremely large group of highly social insects which consist of well over 22,000 different species found worldwide, so there are certainly many, many different types or species of ants.

In most instances, ants tend to be attracted to the insides of our homes due to the prospects of spoiled, leftover, or uneaten foods or other wastes, and so, as previously mentioned, ants are typically among those uninvited guests which can be prevented or discouraged by maintaining clean and sanitary conditions. They may find their way inside through cracks or crevices, or be attracted to a reptile room or enclosure from other areas of the house. Other species tend to live more closely or exclusively

indoors amongst humans, and can sometimes be more problematic to get rid of in some cases.

Most ants are not really harmful to your reptile, and usually tend to be more of an unwanted annoyance for us human keepers to deal with, although some can bite or sting your reptile if they are threatened, and some can give off a foul or distasteful odor or taste as well. Some insectivorous reptiles might take to eating them on the flipside. In much more extreme cases, however, some ants such as fire ants (*Solenopsis spp*.) can be much more aggressive and can potentially attack or kill small reptiles or other small animals if they are housed outdoors, are not controlled or eradicated, or if your reptile is left with no way of escaping from them.

Many different pest repellants and other products or techniques may be used to control or eliminate ants inside or outside the household, although whichever product or chemical one uses should be done so with great care as to not come into direct contact with any animals or surfaces in which the animals might frequently use. Always carefully read and follow any product labels or instructions, also as previously mentioned.

Flies and Gnats (Order Diptera)

Another group of common “bugs” or insects which often make their way into our homes, are flies, gnats, and other related groups of winged insects which typically undergo several different life stages, from eggs, to larvae or maggots, to pupae, and finally adult flies. There are well over 125,000 different recognized species of flies and gnats (which belong to the suborder of flies known as Nemotocera), although many more are still yet to be described.

Many different types or species of flies and gnats can have many different lifestyles and reproductive habits, although some of the ones which might be most commonly attracted to uneaten, leftover, or soiled foods, wastes, damp or unsanitary conditions, or other favorable conditions might include the House flies (*Musca spp*.), the Blow or Carrion flies (*family Calliphoridae*), Cluster flies (*Pollenia spp*.), the Fungus Gnats (*Family Sciaridae*), and Fruit flies (*Drosophila spp*.). Mosquitoes (*family Culicidae*) are another group of well-known flies which can often be pests and parasites of humans, birds, mammals, and reptiles, but more commonly in outdoor settings.

Indoors, and when it comes to our reptiles and amphibians that we keep in captivity, most types or species of flies and gnats, like ants, tend to be more of an annoyance for keepers to deal with, although some species can be parasitic, either feeding on the blood of animals directly (in the case of mosquitoes or some other groups of flies), or laying their eggs on or near any open wounds or sores, which may hatch and live off of the reptile internally or externally until they pupate into adult flies. Myiasis, as this is known, usually tends to be more common in outdoor settings or where animals may be housed

outdoors for all or parts of the year. Some insectivorous reptiles might eat them as well, although this is also not counting the fruit fly cultures, or sometimes other types of flies that we might provide to some animals deliberately as parts of their regular diets.

As with ants, there are similarly many different chemical pest control products which may be used for flies and gnats, although these too, should be used carefully around animals. If flies do become an annoyance or an issue in the reptile room or enclosure, simply utilizing or hanging several fly-strips in the room, while ensuring they cannot come into direct contact with any pets or other animals, might be the safest option as opposed to spraying for them. If much tinier fruit flies or fungus gnats, and the like become an issue, regularly changing out substrates, and uneaten foods, can go towards controlling or eliminating these groups of tinier flies or other flying insects.

Cockroaches (*Order Blattodea*)

Cockroaches, or simply “roaches” are another widely successful group of insects found in temperate to tropical areas most of worldwide. Widely holding the negative reputation as being associated with filth, unclean, and unsanitary conditions in and around human households, it may actually be worth noting that out of the approximately 3,400 different species of “roaches” found worldwide, only 30-some species are closely associated with human habitations and only about four species are widely regarded as true or serious household pests. These most often tend to be the German Cockroach (*Blattella germanica*), Oriental Cockroach (*Blatta orientalis*), Australian Cockroach (*Periplaneta australasiae*), and the American Cockroach (*Periplaneta americana*). Many other species of roaches, including the species we tend to utilize much more commonly as feeders, tend to be more solitary or tropical species, and thus are much less likely to thrive or cause infestations in our homes.

While not specifically attracted to or associated with reptiles, these particular species of roaches can be found in or amongst conditions in a reptile room, particularly if they are allowed to deteriorate in general and are unkempt or unhygienic. While roaches are typically not likely to directly harm reptiles, they may start to nibble on them if in great numbers, and their presence in the household more often than not carries a much more negative human and public health perspective, and for these reasons, they should probably still be eradicated for our sake less so than the animal’s, even though some of our insectivorous animals may eat them or enjoy an occasional meal of them should they get into your reptile’s enclosure.

Springtails (*Suborder Collembola*) and Isopods (*Order Isopoda*)

Springtails and isopods are another two groups of very different invertebrates or "bugs" which are often seen in and around reptile rooms or enclosures. Springtails, once considered insects, but now belong to their own order of modern hexapods, are tiny, omnivorous, free-living invertebrates that are most often found in moist conditions. Most springtails tend to be relatively tiny, typically ranging from 6 mm or less in size, and are so-named for most species having long, tail-like appendages known as their furcula that enables them to "spring" up into their air as a rapid and fast means of travel or evasion. Isopods, on the other hand, which are also often referred to as the "woodlice", "pill-bugs", and "sow-bugs", are an order of terrestrial to aquatic crustaceans with rigid, segmented exoskeletons, and both of which feed typically on dead or decaying plant and animal matter. Some isopods can also be more predatory in nature, and some can also be parasitic, but mainly in fish.

There are over 10,000 different species of isopods found worldwide, and over approximately 8,500 species of springtails worldwide. And, as one could imagine, some of them, both isopods and springtails, often show up in or around one's reptile rooms or enclosures, sometimes raising concerns as to whether they are "snake mites" or other harmful parasites. The good news, are that both the many species of isopods and springtails are harmless and benign to your reptile, in spite of commonly being seen amongst the substrate, on driftwood, bark, or other cage and enclosure furnishings, or sometimes seen crawling on the reptiles themselves, where they do no harm.

In fact, springtails and isopods can often be beneficial "bugs" to have around, as they will act as a natural "clean-up" crew, at least to some extent, in consuming wastes, and uneaten foods (although they should not always become a substitute for spot-cleaning or other required cleaning and maintenance). They can also often act as a self-sustaining food source for many reptiles and amphibians as well in captivity. In fact, these springtails and isopods are components of what are also known as "bioactive setups", where these benign bugs live harmlessly amongst your reptiles or amphibians while consuming or breaking down at least some of the wastes in and around the enclosures.

If, however, for whatever reason, one does not want isopods or springtails around, or still wishes to eliminate them as an option, baking any substrates and furnishings in an oven at 350 degrees or so for an hour or two can be done to kill or eliminate any living organisms there may be inside or amongst them.

Spiders (*Order Araneae*)

Spiders are another extremely large and diverse group of arachnids, with well over 50,000 different species found throughout much of the world. Furthermore, it is estimated that the average U.S. household has roughly 60 or more spiders living amongst us that we often do not see or are aware of. Spiders can have an extremely diverse array of hunting, mating and reproduction, and overall natural histories; many different species build different types of webs for capturing prey, for shelter and refuge, and for mating and reproduction, while others do not build webs and tend to be more active hunters or wanderers. They may include the cellar spiders and cobweb weavers, which tend to build "messy" webs in infrequently used corners of our garages, attics, basements, or bathrooms, wolf spiders and grass spiders, the well-known orb-weavers of many different species and colors, the small but bold jumping spiders, and many others. Some species can be relatively short-lived of less than a year or so in lifespan, while other can be longer lived, and may live for 10 to 20 years or more.

Different species of spiders can oftentimes enter our homes at different times of the year and/or for different reasons. Some species are well-adapted for living closely alongside humans indoors throughout the year, while others may find their way indoors, especially in the summer or fall, when they may be in search of food, mates, or to simply seek refuge from the outside elements. Some species of spiders have widely feared or negative reputations for being deadly and dangerous to humans, particularly the Black Widows (*Latrodectus spp*.) and the Brown Recluse (*Loxosceles spp*.), both of which often tend to reside around human habitations. However, depending on where one lives in the U.S., or the world, one, or both of these species of spiders may not actually be present, or may only be very rare, in at least many areas. Furthermore, serious envenomations and/or deaths caused by either of these, or other spiders tend to statistically be quite rare, and even these so-called "medically-significant" spiders tend not to bother or cause any issues to our captive reptile pets, at least as far as we have ever heard of or are aware.

For these reasons, most, if not all spiders in and around the household can be considered highly beneficial "bugs" (they are arachnids, of course, rather than bugs or insects), as many spiders are predatory and will catch and consume many other types of insects and other invertebrates which can be pests to us or our pets. If, however, wayward spiders must be controlled or removed, they can simply be released outside, or if any chemical treatments absolutely must be used for spiders, use care and caution when using them, as should be the case for any other the other examples mentioned above.


Beetles (*Order Coleoptera*)

Beetles comprise of one of the largest and most diverse groups of insects found throughout the world, with at least 400,000 or more recognized or described species found throughout the world in nearly all types of habitats or environments. Some can be relatively tiny in size, of less than 1 inch as adults, or only a few millimeters, while others can be much larger, and are among the largest insects in the world. Many are detrivores, feeding on dead or decaying plant and animal material, while others feed more on living plant saps, nectar, or leaves and foliage. Others, still can be more predatory, hunting and consuming other insects and invertebrates. One of the common defining characteristics of beetles are their characteristic hard coverings over their forewings and abdomens.

There are many different species and orders of beetles which are can be found in and around households, or that are associated closely with human households. Some can be pests of food and food preparation materials, while others can be structural pests of the woodwork, carpeting, clothing, linens, or other fabrics or preserved materials. Some tend to be pests of backyards or gardens, or of agricultural crops. Others might simply accidentally find their way inside from time to time, but are typically not pests or cause any damage.

While many of these types of beetles can be found, or make their way into a reptile room from time to time, generally, the most common types of beetles which are more specifically associated with reptiles tend to be the Darkling Beetles (*Tenebrionidae*), which are the fully matured adult forms of many of the feeder insect larvae we give to our insectivorous reptiles, such as mealworms, waxworms, superworms, and the like. Sometimes, when left uneaten, these feeder larvae can mature into fully mature adult beetles. These do not cause any harm to your amphibian or reptile, and they can eat them, but are often more difficult to digest due to their hard shell coverings and chitinous exoskeletons.




Boxelder Bugs (*Boisea trivittata*), Lady Beetles (*Family Coccinellidae*), Western Conifer Seed Bugs (*Leptoglossus occidentalis*), and Stink Bugs (*Halyomorpha spp.*)

This next group of “bugs” which may be commonly found indoors and among reptile rooms during certain times of the year, particularly on warm days in the fall, are the boxelder bugs (or box bugs or

Maple Bugs), lady beetles (or lady “bugs” or “ladybird” beetles), the western conifer seed bug, and the stink bugs, particularly the nonnative Brown Marmorated Stink Bug. All of these “bugs”, or insects belong to different families and orders of insects, and each have their own lifecycles and natural histories.

However, what all of these species of “bugs” have in common is that they all tend to congregate together on the outer walls of houses and other buildings during warm days in the fall, in preparation of seeking places to overwinter for the upcoming winter, and oftentimes, these “bugs” find their way indoors, including porches, garages, and other areas of the house. During most other times of the year, they normally live outside on their own, feeding on plants or plant saps and nectars, while some can be predatory. When they appear inside the home, it is usually for only relatively short periods of time before they either die or find overwintering accommodations elsewhere, and thus should not be cause for concern other than occasionally having to vacuum or sweep them up if large numbers of these “bugs” are present indoors. Sometimes, the non-native Asian ladybeetles which often make their way indoors during the fall can also be a slight annoyance to us in that they can bite as well.

Many of these types of “bugs” can also emit a foul-smelling and/or distasteful substance from along their bodies or abdomens as a defense when they are threatened or crushed, and thus, some care should probably be taken to prevent one’s insectivorous reptiles from eating them should any get into your reptile’s enclosure. Further research is needed to determine whether these bugs are actually toxic to reptiles, as is commonly believed, or whether they are simply distasteful to captive pet reptiles. However, it is typically unlikely that large numbers of any of these bugs will make their way into most reptile enclosures provided they are otherwise adequately sealed and escape-proof.

Other Common Types of Household Pests Which May Appear in Reptile Rooms

Silverfish and Firebrats (*Order Zygentoma*): Harmless to Reptiles.

Field Crickets (*Gryllinae spp.*) and Other Non-Feeder species of Crickets:
Harmless to Reptiles. Can be fed to reptiles, but also have hard, chitinous exoskeletons.

Earwigs (*Dermaptera spp.*): Harmless to Reptiles.

House Centipedes (*Scutigera coleoptrata*) and Other Centipedes: Harmless to Reptiles. Can be beneficial "bugs" to have around as predatory control of other household or reptile room pests.

Clothes and Meal Moths (*Order Lepidoptera*). Harmless, No Substantial Impacts on Reptiles.