Warm Weather Information for Your Reptiles and Amphibians

By Eric Roscoe

Summertime is here, and a significant aspect that can often influence and affect our ability to keep pet reptile, amphibian, and even invertebrate species (such as tarantulas, scorpions, and insects), as well as the ways pet owners and enthusiasts may be able to keep them, is certainly warmer weather and yearly climate depending on the state and/or region of the U.S. or even other parts of the world one resides in. Becoming prepared in dealing with these sometimes harsh temperatures during certain times of the year may need to become a part of life no matter where one resides. When it comes to reptiles, amphibians, and warmer weather, a common misconception is that they always need to be and/or will do fine under these conditions. While this is partially true based on the fact that these animals are ecothermic, all animals can be susceptible to heat related stress, and herptiles are no exception. Unlike us and other mammals which are often pets (such as dogs and cats), reptiles, amphibians, and invertebrates are **ecothermic** animals, meaning they possess differing physiology such that they are (for the most part with a few slight exceptions), unable to control or regulate their internal body temperatures, and instead do so based on their ambient or external environment. In contrast, animals that can, such as most birds and mammals, are known as **endothermic**. Even so, many species of exotic mammals and other animals that are not ectothermic still have specific temperature, humidity, and other environmental requirements as well for which much of this article can apply to as well.

In the wild, reptiles and amphibians have a wide variety of habits and thermoregulatory behaviors which

they may use to seek out and maintain their preferred optimal temperatures, such as basking, burrowing into substrate, and otherwise seeking cooler or warmer areas. Although some reptile and amphibian species are more hardy and heat tolerant than others, and may have even evolved methods for coping with warmer temperatures, even in these cases, these animals have evolved and developed these strategies gradually and over long periods of time in order to be able to do so and still cannot thermoregulate effectively if exposed to sudden or abrupt changes in temperatures. Furthermore, when in captivity, these animals, in many cases, have more limited opportunities to thermoregulate or to seek their preferred thermal gradients, and are dependent upon their keepers to provide the correct care and husbandry. In simpler terms, even an ectothermic animal in an enclosure cannot escape from a climate's temperature extremes if improperly exposed to them or proper precautions are not otherwise taken. While there may be widespread information on warm weather tips for dog and cat (and other mammal) owners, there still remain relatively few of the needed articles and other resources for the same regarding pet reptiles and amphibians, and even for exotic pets in general. This article will present important warm weather tips, information, and considerations to keep in mind for all of our scaly friends whether travelling with/transporting them, or keeping them at home.

Tips for Travelling/Transportation

- Generally speaking, avoid travelling with or transporting these animals whenever possible during periods of excessively warm weather, particularly if it is considered dangerous or if there are heat advisories or other weather related travel advisories that have been issued or are in effect. ***If one must travel with or transport animals during warm weather for any reason, the following tips and information below should absolutely be considered!***

-It is also oftentimes a viable recommendation to postpone or find other, alternative travel or transportation dates/arrangements whenever possible for until when temperatures and weather conditions improve again. Always use one's best judgement if the weather conditions or forecast appear/sound as though they will be inclement. Don't risk jeopardizing the animal's or your own health and safety beyond the normal risks if it can wait until later or be re-scheduled. These things should always be more important.

- At a bare minimum, a secure, well insulated Styrofoam or other plastic container should be used. Any animals housed within them should be properly secured in a snake bag, deli-cup, or other container as

to prevent escape, as with any travel or transportation situation.

-It is strongly recommended that additional cooling methods and insulation be used during any times during warm weather travel. Twenty four to seventy two (24-72) hour or greater cooling packs, cold water bottles, or even bags of ice to maintain hydration and cooler temperatures can be purchased inexpensively commercially or at most local department stores. Submersible cooling coils are also available, and can offer good control of temperatures, but can be expensive. Other supplies that can be kept on hand can also include blankets, towels, duct, masking, and other types of tapes.

-Consider the species, their geographic and climate origins, and any differences in their temperature, humidity, heat tolerance, and other care and husbandry which may affect or influence them being moved or transported during periods of warmer temperatures.

-NEVER leave any animal unattended inside of a vehicle or other enclosed area during warm or dangerous weather! Temperatures under these conditions can rapidly raise to fatal levels for your animals even within minutes. Rolled down windows and/or window and foil screens are also oftentimes insufficient in preventing overheating under these conditions. Under these conditions In general, it should be a top priority to return home safely with the animal as soon as possible while avoiding any unnecessary stops or delays.

Tips for at Home and in General

- There are also several summer and warm weather tips that can also be considered for keeping your herps at home. Species, room and enclosure temperatures, cage/enclosure location in the household, the type of enclosure used and their materials, type and manner of heating and lighting devices, and other husbandry aspects can also all influence the ability to keep these animals during periods of warm weather.

- The room that any animals are housed or maintained in itself can often greatly affect how these animals may be kept during warmer weather. Smaller rooms (and enclosures likewise) are often more prone to heating up more quickly. If one is looking to cool an entire room, or otherwise minimize cooling beyond what may be provided to the enclosure(s), an air conditioning, or AC unit can be used or installed, if one is not already. Central AC can be used to cool entire (or at least most of a residence),

while window mounted AC units tend to be better at cooling a single room. The type of AC will depend on what one has available and whether one rents or owns, etc.

- The location in the household of where any animals and/or enclosures are kept is another factor to consider. Consider placing or moving enclosures to cooler areas of your residence if possible or practical, such as in basements, or elsewhere where there may be cool air or drafts coming in, or take additional measures in cooling enclosures if they cannot be placed in these locations. Avoid placing enclosures in front of, near windows or doorways, or other areas where constant, direct sunlight may reach and cause overheating.

- It is also recommended that ambient room and enclosure temperatures and humidity/thermal gradients within each enclosure be more closely monitored and adjusted, especially during periods of warmer weather. Consider reducing any supplemental heating if it is not needed by shutting off some devices, or by removing them completely.

-During the summer, or periods of warm weather, pay attention to your animal's hydration and humidity, and adjust accordingly if needed. Providing the correct type of enclosure, substrate, water, or other methods of hydration can often help in preventing overheating issues. Providing a large enough water bowl or dish, other opportunities for soaking, regular or increased misting and fogging (either manually or through a number of products available), or even providing a humid hide consisting of a substrate that retains humidity well such as cypress mulch, spaghnum or peat moss, or dampened paper towels can raise and maintain hydration and humidity, but conditions must be cleaned and monitored more closely to prevent the growth of mold and other fungal and bacterial growth.

- The type of enclosure used and its materials are another important consideration, particularly during warmer weather. Wire, screen, or mesh enclosures, and enclosures with such tops or lids can lose heat and humidity more quickly/readily unless either they are placed in suitable locations in the household or additional modifications are made to them. Many of the wood/wood based, plastic, glass, or injection molded fiberglass terrariums and enclosures manufactured specifically for housing snakes (and other many other reptiles) are often better at retaining heat and humidity.

-The enclosures, as well as the rooms or other areas of the household in which they are maintained

should also still have or be adequately ventilated as well. Ventilation may need to be increased or decreased depending on your area's climate. To decrease ventilation if needed, consider covering some of the screened areas or other vents of an enclosure with tape, plastic, or sheets of glass or acrylic.

- Many different heating and lighting options and devices are available for providing heat, humidity, and proper lighting for reptiles and amphibians. These can include, but are not limited to UTHs (under tank heating devices, or heating pads), ceramic and radiant heat emitters, red/black light night bulbs, incandescent bulbs, submersible water heaters for aquatic species, battery powered heaters, and UV-A/UV-B and fluorescent lighting (although these typically do not generate much heat but still can provide other proper elements to husbandry). Each type of device has a different means of heating a space or enclosure, and their wattages, output, and other characteristics should be selected as to be able to best provide for the specific species' temperature, lighting, and heating requirements and enclosure size, type, and specifications. Still use caution as to not overheat any enclosures and animals, as this can lead to other husbandry problems, and can even be fatal to the animal.

-Always ensure that any lighting and/or heating devices are controlled or regulated appropriately to prevent overheating by using an appropriate dimmer, thermostat/thermometer, and/or rheostat or other temperature regulatory device. Cooling fans can also be used to increase air flow and dissipate any unwanted/excess heat produced by lighting and heating devices.

- In the wild, many reptiles and amphibians will "aestivate" during periods of drought or other prolonged unfavorable conditions. Aestivation is a state of dormancy and inactivity, or greatly lessened activity, where the animal's metabolic rate is greatly slowed during this time. The length of time these animals may aestivate often varies depending on many factors and climatic variables including changes in their seasonal and barometric pressures. In captivity, however, aestivation is rarely, if ever a necessary aspect of husbandry.

-Always be sure to check on and monitor your animal's progress and overall activities, particularly during the summer/periods of warm weather, but do not become overly alarmed or concerned if some changes or decreases in their appetite or activity do occur. Even animals that are captive-born or that are in captivity can still sense the seasonal and barometric pressure changes around them, and will behave accordingly. This is very common and natural, even with captive animals. Ensure that they remain active and alert/responsive, and are maintaining appropriate body weights. Take note of and

watch for any substantial changes or abnormalities in the animal's overall body weight, coloration, feces, or appearance to ensure that any health issues which may be truly serious develops. If an animal falls below its preferred/optimal temperature range, or becomes too cold, slowly and gradually raise their temperatures again rather than abruptly, as doing this can shock or disrupt their physiological systems.

-However, also always be aware and recognize any signs of heat induced stress and be prepared to take appropriate action immediately. Some general signs of heat stress in reptiles and amphibians in general can include, but are not limited to lethargy, heavy panting, breathing, or open-mouthed thermoregulatory behaviors, greatly increased activity, disorientation or loss of coordination, neurologic symptoms, or unconsciousness. In the event of a heat related medical emergency, get the animal to a cooler location immediately while applying cooling methods, and then seek your veterinarian as soon as possible thereafter.

-Pay special attention to any outdoor animal pens or enclosures as well to prevent overheating in these cases. Always ensure a source of fresh water and hydration appropriate for the species is available at all times, and is kept clean and sanitary. Also ensure that adequate shade and/or access to adequate shelters or hides is available at all times of the day to allow for proper thermoregulation and temperature control or gradients is provided.

-If one is ever unsure or uncertain of anything when It comes to transporting, travelling, or maintaining these animals during periods of warm and inclement weather, please also consider consulting with your veterinarian, area herpetological society, reptile/exotic pet specialty store, or other knowledgeable and reputable sources for information.

-Other warm weather related emergencies and power outages are covered in further detail in another article titled "Emergency Preparedness for Herps!" This article is also available upon request as well.