IMPACTION

Causes and Prevention

One issue occasionally experienced by reptile keepers is a condition called impaction. There are many views surrounding the causes, treatment, and prevention of impaction in captive reptiles. There are a tremendous amount of opinions on this subject held by passionate keepers, and we seek to dispel some of the myths, and address the true issues at hand surrounding impaction.

Impaction is the accumulation of debris in the gut or intestines, whether it be substrates, food, foreign debris, or just about anything else. The truth of the matter is that almost anything can become impacted in an animal's stomach. Impaction is a secondary condition brought on by deficiencies in the diet, temperature regime, or other inadequate conditions found in captivity. Reptiles will ingest substrates occasionally while capturing food, however this avenue of ingestion is minimal, and will usually not lead to severe impaction. Impaction almost certainly occurs in nature on occasion, and probably proves fatal in some cases naturally.

To understand impaction in captive animals, we must briefly explore animal physiology, ecology, behavior, husbandry practices and the causes of substrate ingestion. In nature, animals experience fluctuations in resource availability. For example, a typical year in the northern hemisphere sees the changing of seasons. As seasons change, the availability of food changes and temperatures change. Many animals have natural behaviors that enable them to deal with shortages and abundances of food. Many different types of animals, including many reptile species; will ingest dirt, rocks, and other natural debris. This is believed to be a behavioral response to mineral deficiencies in the diet. This behavior is known as geophagy. **If an animal is not receiving the proper nutrition they may resort to eating "substrates" in an effort to get needed minerals, vitamins, or calcium that are lacking in the diet.** Just as we know when we are thirsty, scientists believe animals "know" when they need additional minerals in their diet. In short, reptiles that eat excessive substrates are not receiving a full balanced diet or are not being kept at the proper temperatures.

Reptile physiology is dependent on many environmental factors that need to be addressed in captivity. Reptiles require specific temperatures for digestion, and exposure to UVB for Vitamin D_3 synthesis and calcium absorption. If temperatures are not regulated properly, then metabolism and digestion will be compromised and may lead to impaction. If the diet offered lacks essential minerals and nutrients, reptiles may attempt to obtain these resources from inanimate objects in their environment.

The causes of impaction mentioned above will compound each other if husbandry requirements are not met. The most effective way to address impaction is through educating keepers of the true causes and signs of malnutrition, and the importance of temperature gradients. Reptiles that are provided with varied diets, supplemented with calcium, multi-vitamins, have access to UVB lighting and are kept at proper temperatures should not experience impaction.