



ANIMAL CARE SHEET



Giant Green Iguana

The (giant) green iguana is an arboreal (tree living), diurnal (daytime active), lizard that is found in Central and South America. It is by far the most popular of all reptile species currently being kept in captivity. These lizards are herbivorous (plant eating) and require a plant diet that is high in Calcium and low in Phosphorus. With proper care iguanas can live for up to 15 years and grow to a total body length of 6 feet. It is for this reason that the term giant is used in the title. Often times potential iguana owners visit their local pet store to purchase a cute little baby iguana only to find out that when it reaches its full adult size that it has become too much reptile to handle or house. For this reason it is important to be sure that before purchasing a green iguana that you are prepared to care for and house this animal for the rest of its life.

Selection

The single most important factor in keeping a healthy iguana is to start off by selecting a healthy iguana from the beginning. The first step is to select a healthy well established juvenile that appears to be outgoing, alert and active. Their bellies and tail base should be well rounded and their bodies should be free of lumps, bumps, scrapes and scratches. Always check their vent for a build up of dried fecal matter and look for any swelling in the limbs. Their eyes should be well rounded and they should move about in the cage flicking their tongues. A healthy young iguana will be curious about its surrounding and will not be lying on the floor of its enclosure. Often times we as humans like to select the one iguana in the enclosure that is "calm" and sits still while we hold it. This is a pretty good sign that something is wrong, because most young iguanas will be fearful of human contact at first since it is in their nature. The other fatal mistake that we as humans often make is to select the one iguana that looks sick, because we feel sorry for it and think that if we just take it home we can care for it and bring it back to health. If an iguana is showing signs of illness it is a very good bet that the illness has been present for some time and that it has progressed to the point of being critical thus making our attempts to save the "poor sick iguana" and effort in futility only to result in our disappointment and the ultimate demise of the animal. Avoid this trap by starting off with a health young iguana from the start.

Housing

Proper housing is essential to the care of a captive iguana and much care and consideration should be taken to provide the best possible enclosure. A hatchling iguana may be kept in a 10-gallon glass aquarium but will soon require a larger enclosure. A 29-gallon aquarium is suitable for a juvenile iguana, but eventually a custom built room sized cage will be required. It is therefore best to start off with a custom built cage to avoid purchasing expensive housing over and over again. The top of the enclosure should be made from coated wire to allow the passage of heat and light and to provide ventilation. If the enclosure is to be used outdoors it should not contain glass or plexi-glass and thought should be put into the fact that even small gauge wire can filter out natural sunlight and UVB rays. It is important to avoid using screen wire on any enclosure to prevent the iguana from rubbing its nose against it in an effort to escape which can result in rostral abrasions (nose rub) that can become very severe in a short period of time.

Lighting

Iguanas require a light cycle of 12-14 hours per day. This can best be achieved by providing the iguana with a commercial 50 watt basking bulb placed 6 inches from the top of the enclosure and mounted in a standard clamp type light fixture from any hardware store. To provide the proper light cycle is very simple with the purchase of an electric timer that the light may be plugged into

and set to rotate on and off every 12-14 hours. There are many timer available and range in price from expensive electronic timers with a thermostat control to a simple and inexpensive lamp timer which can be purchased in the hardware section of your local department store. It has been a long standing rule that iguanas must be provided with a full-spectrum light that provides a UVB of 310 or higher in order for the iguanas to produce vitamin D3 is essential in the absorption of calcium. It has recently been determined that iguanas have the capability to either produce their own D3 or to absorb it through their diet. As a result the proper amount of vitamin D3 may be gained through a proper diet thus eliminating the need for a full-spectrum bulb. The true value of most commercial full-spectrum bulbs sold by the pet trade for the purpose of lighting iguana enclosures has long been in question, in fact, according to recent veterinary studies on the subject performed by Dr. Fredric L. Frye it would take an average of 6-8 of these bulbs placed within 6-8 inches of the iguana for 12-14 hours a day to produce the needed levels of vitamin D3. Exposure to natural sun light is both physiologically an psychologically beneficial and should be provided as often as possible since we as humans cannot duplicate the sun in and artificial environment. Caution should always be used when placing an iguana outside to be sure and protect the iguana from predators and from over heating. NEVER PLACE AN IGUANA OUTSIDE IN DIRECT SUNLIGHT WITHIN A GLASS AQUARIUM because this has the same effect as a magnifying glass in the sun and can quickly turn an aquarium into an oven. Always provide some shade for the iguana to help prevent overheating. In defense of this information, since it tends to go against the current conventional thought on iguana lighting, William H. Gehrmann, Ph.D of the Department of Natural Sciences, Tarrant County Jr. College, Fort Worth, Texas states that: "Study of the spectral power distribution (SPD) of most commercial lamps indicates that they are not full spectrum in the sense that distribution of energy in the different color bands is not comparable to that found in natural light. Furthermore, the SPD shows that while there is a small amount of UVA (not related to vitamin D3 synthesis), there is NO UVB". There is NO replacement for natural sunlight and for this reason it is vital to pay close attention to the diet as the main source of Calcium and Vitamin D3 in iguanas that are housed indoors. During my research for information I contacted several well-known producers of "full-spectrum" lighting only to have them all tell me that their competitor's lights did not produce true UVB, but that their lights did and that they could produce studies that their company had performed to prove it while none of them could offer me information on an independent study on their products.

Temperature

Iguanas are ectothermic (regulate their body temperature using an external source of heat) and bask in the sun to thermoregulate. The Preferred Optimum Temperature Zone (POTZ) for green iguanas is 92-97 degrees F. The ambient enclosure temperature should be 85 degrees F. In order for on iguana to reach its POTZ it must be 10 degrees above the ambient temperature. Providing these reptiles with a "Hot-Rock" or a heat pad placed under ¹ of the enclosure does NOT allow the iguana to raise its body temperature to 10 degrees above the maximum heat level of the heating devise. As a result the iguana will lay on these objects to the point of thermal burns and never reach their POTZ. These types of heat sources are not designed for basking animals so as a result it is best to provide an overhead heat source such as a commercial basking light in a standard clamp type light fixture. The wattage of the bulb and the distance above the enclosure may be adjusted as needed to provide the iguana with the proper POTZ. THE HEAT SOURCE SHOULD NEVER BE PLACED INSIDE THE ENCLOSURE OR WITHIN DIRECT CONTACT WITH THE ANIMAL. Temperature is very important in the digestive process of the green iguana because the symbiotic micro-organism that is responsible for aiding in the iguana's hind-gut digestion functions best if the temperature is within the POTZ. Maintaining the proper temperature also plays a key role in treating illnesses in captive iguanas. Since iguanas are ectothermic their immune system is temperature dependent and if you are treating an iguana for an illness or injury maintaining a proper POTZ is vital to the success of that treatment.

Humidity

This is probably the single most over looked aspect of iguana care. Humidity is essential to the general health of the iguana because these reptiles receive the majority of their water intake directly from the moisture in the air. As a result a healthy iguana will never drink from a water bowl as long as the humidity level is maintained so as a result a water bowl should only be provided as a source of humidity and a place for soaking. If an iguana begins to drink from

standing water it is a good indicator that the humidity level within the enclosure is too low and that the iguana is becoming dehydrated. Humidity within the enclosure should be maintained at 95%-100%. For this reason it would be wise to purchase an inexpensive humidity indicator from your local hardware store that can be placed within the enclosure to monitor the humidity level at all times. Placing plants inside the enclosure can help to increase the humidity within it, but care should be taken to be sure that the types of plants that are used are not toxic to iguanas since iguanas will eat just about anything green. People often assume that iguanas know which plants to eat, this is not the case, if this were true then they would only eat the greens that provided them with the vitamins and minerals that their bodies need and they would avoid foods like iceberg lettuce. If you should choose to use plants inside the enclosure I would suggest using Hibiscus since this plant not only is safe, but it is also a very good food source and iguanas can eat it as part of the staple of their diet. Placing plants on and around the enclosure is a much safer way to increase humidity without the use of a humidifier, which can also be used outside the enclosure to increase humidity. Humidifiers should never be placed within the enclosure to avoid the risk of burns from the heating elements in it and to avoid the risk of electrocution from a bite to the cord or a claw piercing the wire insulation.

Diet

Iguanas are herbivorous in the wild, but have been known to eat almost anything in captivity. Although it is tempting to feed your iguana pizza it is not what these animals were designed to eat. Because of their very specialized digestive systems these reptiles are designed to eat plant matter. Iguanas use a system of digestion that is dependent on the aid of a symbiotic micro-organism that lives in the sacculated colon of the iguana and is passed on from adult iguana to juvenile iguana through the feces of the adult iguana. Iguanas require a diet that is high in Calcium and low in Phosphorous, but in order for an iguana to absorb calcium they must be provided with a source of vitamin D3. The ideal diet for iguanas is very inexpensive and should contain as the staple of the diet dark leafy greens. To be specific the diet should consist of Collard greens, Turnip greens, Mustard greens, Dandelion greens, and both Mulberry and Hibiscus. The greens that contain the highest calcium and the lowest phosphorous ratio are Collard greens with a calcium to phosphorous ratio of 7-1. Spinach should be AVOIDED because it binds calcium. Other vegetables to AVOID are Cabbage and Broccoli because they inhibit thyroid production. Other fruits and vegetables may be added to the diet and help provide variety but the staple of the diet should always remain the dark leafy greens mentioned above. Crickets and meal worms will be readily accepted by iguanas, but offer little nutritional value and have a hard exoskeleton that may cause intestinal blockages that could lead to constipation or prolapse. They are also high in animal proteins which have been linked to kidney and liver problems in older iguanas. Crickets and mealworms also contain high levels of phosphorous, which can create a calcium phosphorous imbalance leading to very serious medical conditions which will often start to appear as tremors. Foods containing high proteins should be avoided. Cat chow, dog chow, monkey chow and trout chow all fall into this category and contain too much animal protein for iguanas whose primary source of protein is in the form of plant proteins and not animal proteins. All of the foods listed above are designed for the animal's that they are named after and not for iguanas and are high in animal proteins. Some iguana farms, breeders and keepers will often feed baby food to young iguanas to speed up their growth, but this method can create very serious health problems later in life and even serve to shorten the overall life of the iguana.

Supplementation

If iguanas are fed the proper diet of dark leafy greens and provided with the proper POTZ then NO supplementation is needed. In fact supplementing an iguana on this diet can lead to health problems related to over supplementation. Most commercially sold supplements for reptiles contain calcium and phosphorous and should NOT be used since phosphorous should be avoided. The easiest way to provide your iguana with the vitamins and minerals that it needs is to provide a proper diet from the start. Supplements are not a good source of vitamins and minerals since the amount of vitamins and minerals cannot be accurately measured in powdered or liquid supplements and it is very easy to give too little or too much. Avoid spray-on vitamin supplements since vitamins cannot be absorbed through the skin. This is just a waste of your money and time. If this were the case the animal would be able to absorb water through its skin which is not physically possible in iguanas.

Feeding

Hatchling to young juvenile iguanas should be free-fed daily and adult iguanas may be free-fed every 2 days. Caution should be used in feeding adult iguanas to insure that they do not become obese in captivity. Sexually mature female iguanas may refuse to feed during the development of eggs because eggs consume most of the abdomen and do not leave room for food. After laying she should resume eating regularly and should be fed free-fed daily because egg laying will leave her anorexic. This cycle usually occurs during the dry season in the wild and since an adult female iguana may store sperm for up to 5 years and still produce fertile eggs so as a result a newly obtained adult female may still produce eggs if she was exposed to males prior to your owning the animal. This is another good reason to obtain a healthy young animal so that you will be aware of its history from the start and know if it has been exposed to a potential mate prior to your owning the animal. Since the symbiotic organisms that are responsible for aiding in the digestive process of iguanas performs best at about 85 F it is best to allow the iguana to warm up for several hours and then, after reaching its POTZ, feed it and allow it to remain at its POTZ for several hours after its meal. The best time of day for this would be between 2:00 p.m. and 3:00p.m. This will allow the iguana to digest its food properly before the end of the heat/light cycle for the day.

Salmonella

Recently there have been several reports of young children contracting Salmonella from exposure to captive iguanas, so with in this in mind it is important to pay close attention to this section especially where young children, children and adults with compromised immune systems, the elderly and pregnant or nursing mothers are exposed to all reptiles and not just iguanas. The main reason for these recent reports is because iguanas are fast becoming common household pets and are the number one reptile pet. If we do not take action by being responsible iguana owners we may very well see legislation and problems much like those involving red-ear slider turtles in the mid 1970's. ALL REPTILES CAN CARRY SALMONELLA. Iguanas should be screened for salmonella by having an experienced veterinarian do several fecal screenings for Salmonella. These screens should be conducted 3 times, 3 weeks apart because salmonella is shed periodically and may not show up on a single screening and may still be present. To help prevent the spread of salmonella you should always WASH YOUR HANDS AFTER HANDLING YOUR IGUANA, CLEANING ITS ENCLOSURE OR CLEANING ENCLOSURE FURNISHINGS. NEVER CLEAN THE ENCLOSURE IN FOOD PREPARATION AREAS OR EAT, DRINK OR SMOKE WHILE CLEANING. If you suspect that you or any member of your family has been exposed to salmonella you should not waste time and contact your family physician right away. THE SPREAD OF SALMONELLA CAN BE PREVENTED THROUGH PROPER HUSBANDRY AND REGULAR VETERINARY SCREENINGS OF ALL NEW IGUANAS. If you are concerned about the spread of this disease and would like to learn more about what you can do to prevent its spread I urge you to contact your family physician and/or your State Public Health Veterinarian for more information.

Parasites

Both internal and external parasites are common in newly acquired and imported iguanas and every new iguana should receive a veterinary check up to include a fecal exam to check for internal parasites. Be sure that when you take your iguana to the veterinarian that you bring a fresh fecal sample with you for examination. It is important that the veterinarian that you choose be experienced with examining and treating reptiles because iguanas carry some parasites that are vital to their digestion and just randomly deworming them may cause the loss of these needed parasites as well as the unwanted and harmful parasites. Mites can be present on newly imported or newly obtained animals so all new animals should be quarantined for a period of not less than 30 days in a room away from other iguanas, this will also help prevent the spread of other potential diseases. Mites can become a problem if left untreated so attention should be paid to the eyes and the tympanum for the presence of mites moving around. There are several species of mite that may be present on iguanas, but the most common are seen as white, red and brown moving specs. Mites are easy to eliminate if caught early, but if left untreated can quickly become a problem for you, your iguana and even other household pets. For this reason it

is important to not only treat the iguana for mites, but to treat the enclosure and surrounding environment at the same time.

Emergencies

No matter how hard we try to prevent illness and injury, we cannot predict or prevent every illness or injury that may occur. For this reason it is vital to understand what is considered an emergency so that we may obtain proper veterinary care and treatment as soon as possible. The following is a list of some of the most common emergencies encountered in iguanas. This is only a partial list and if you suspect that your iguana has a serious, or even a minor problem, you should contact your reptile veterinarian right away, DO NOT WAIT. The conditions listed here are EMERGENCIES and require immediate veterinary attention: 1.Uncontrolled Bleeding 2.Weakness or depression, unusually slow movement and reflexes alone or associated with any other signs. 3.Blood in the stools. 4.Runny stools. 5.Difficulty breathing, continual open mouth breathing. 6.Swelling of any of the limbs or digits. 7.Softness of the jaws. 8.Bites or traumatic wounds. 9.Vomiting (DO NOT WAIT, CONTACT YOUR VETERINARIAN IMMEDIATELY!!!). 10.Blisters or open sores on the skin. 11.Bubbling of saliva when breathing. 12.Foul odor or swelling of the lips or mouth tissues. 13.Eye injuries. 14.Bleeding toes. All of these symptoms are emergencies because iguanas have the ability to hide illness very well as a type of defense in the wild so when you do see any of these signs the illness or injury has been there for a while and is probably already well progressed. Catching illnesses early is the key to a successful treatment. There are many other illnesses and injuries that are common in iguanas that are too numerous to list here, but that will require veterinary care so if for any reason you suspect that your iguana, "just doesn't feel good", than do not wait seek the help of a qualified reptile veterinarian as soon as possible.

Calcium Deficiency

Calcium deficiency can lead to a condition commonly known as Metabolic Bone Disease or MBD. It is the most common problem seen in green iguanas and is a 100% preventable condition. If fed a proper diet as described earlier this condition can be avoided all together. The signs of this condition are a soft or deformed jaw, swelling of the limbs either uni-laterally or bi-laterally. The reason that calcium is so vital for iguanas is because it is required for neuromuscular function, blood clotting, activation of enzymes, heart contraction and bone structure. In order for an iguana to absorb calcium vitamin D3 is required to help in the process, so when an iguana does not receive enough vitamin D3 it can become calcium deficient despite the fact that it is receiving plenty of calcium in the diet. Feeding a proper diet will help to avoid these problems all together.

Aggressive Behavior

As a rule most iguanas that are obtained a young juveniles and are handled correctly do not tend to become aggressive, however there are a few exceptions to this rule. One of the biggest is the tendency for adult alpha male iguanas becoming aggressive in a home where the primary human handler is a female. The reason for this aggression has been linked to a pheromone that is produced by the human female during her menstrual cycle. This pheromone is very similar to that produced by an adult female iguana during the mating season. This behavior may be curbed by providing a surrogate mate during this period such as a stuffed animal or a rubber glove. Aggression by one iguana towards another is usually witnessed in alpha male iguanas who are very intolerable of another alpha male or even a beta male which will not mate with females. Beta males are usually very tolerant of alpha males, females and other beta males and therefore make the best captives. Aggression in females is seldom seen because females are tolerant of other females as a result of the fact that one alpha male will mate with a small group of females. Iguanas who become aggressive may often times be "tamed down" through gentle handling in a non-aggressive or threatening manner such as approaching the iguana from the front allowing it to see you approaching it and holding it by its belly allowing it to rest on your hands and arm like a branch rather than grabbing it by its back like a predator. Iguanas have a type of third eye located on the top of their head, which sees shadows. This "third eye" also serves other functions and plays a role in thyroid production, but it also allows the iguana to detect predators such as birds as they approach from above and when you reach in and grab your iguana from above by its back you become the bird and cause the iguana to become aggressive by eliciting a fight or flight response.

Cage Mates

It is recommended that iguanas all be housed separately to avoid aggression by males toward females while trying to breed and toward lesser males as well as to avoid the spread of disease by the transmission of bacteria through wounds caused by the nails of iguanas who will climb on top of each other when housed together within the same enclosure.

Conclusion

In conclusion, owning a (Giant) green iguana can be a very rewarding a pleasant experience if one takes the time to learn a few simple facts BEFORE purchasing an animal. Unfortunately for the iguana hind sight is usually 20/20, but by then it is too late for our green friends so by taking the time to start off right from the start and to provide the proper conditions you and your iguana may receive many years of enjoyment from each other. Most of the illnesses and injuries mentioned here could be 100% preventable given the proper education of an owner before deciding to make their first purchase of an iguana. All of the information contained here is based on current research and is as up to date as possible at the time of its printing, but new information is constantly becoming available so the learning should never stop the day you bring your new iguana home. There are many herpetological societies all across the country which are dedicated to keeping up with all of the new information available and providing that information to its members, so I would highly recommend joining a herpetological society in your area or nationally. More information is also available from ReptiCare Services.