

Care of Iguana Eggs

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This iguana breeding season we have had numerous inquiries as to the proper care of iguana eggs. It would seem that many more people are trying to successfully hatch their iguana eggs and meeting with mixed success. The information in this article has been compiled from our twelve years of practical experience in breeding, *Iguana iguana*, *Cyclura cornuta* and *Cyclura nubila nubila*.

The first and most crucial step in producing live hatchlings is to make sure that you produce good fertile eggs. This obviously means that you must have a male and female of a particular species. The adult animals must be in top physical condition. They will have been on a nutrient rich vegetarian diet. They will have either been exposed to 3 to 6 hours of natural sunlight daily or 12 hours of artificial UV A & B. They will have had access to a good calcium supplement for at least three or four months prior to egg production. Since green

iguanas generally start their breeding activities in December, calcium supplements should start in September. Adult males need less calcium than the females. Caribbean rock iguanas usually start their breeding activities in March through May depending on species, so it makes sense to supplement with calcium from December to March. At that time, your adults should become more colorful, look robust, have nice fat tails and be reasonably active during their normal feeding times. If they do not show these traits your chances of getting eggs with good potential will be greatly diminished.

Once your female has been successfully bred, she will lay her eggs in roughly 45–60 days. As the time to lay approaches you should notice several things. A couple of weeks before laying she will probably refuse even her favorite foods and you should observe a decrease in the girth of her tail and pelvis as she lives off her stored fat. There is literally no room in her body for digestive contents



Hatching green iguana newly pipped through. Photograph: Carl Fuhri

to pass through due to the volume of the egg mass in her abdomen. It is critical, however, to provide fresh drinking water during this period. Several days before she actually lays her eggs, she will become very restless and pace the bottom of her cage or enclosure. She is looking for a nest site that is acceptable to her. You must provide a site for her, or you will stand a good chance of losing the eggs and possibly the female. Some females will retain their eggs to the point of becoming egg-bound if they cannot find an acceptable site. If she does lay her eggs without a proper nest site and you don't find the eggs immediately, some of the eggs may be lost.

A nest site attractive to a female iguana would be a box full of damp soil or sand. Personally, we prefer to provide our females with clean washed sand. The material should be damp to the touch but not soaking wet. If possible, provide the medium in a plastic container with easy access for the animal. We sometimes place a new mother in the container several times. It is desirable to have the container in the cage several weeks before egg laying so that the female is familiar with it. To mimic a natural entrance to the box or tub, place

the end of a piece of pipe that is about three feet long and wide enough for the gravid female to pass through, into the side of the box. In the wild, these animals would normally dig a burrow a couple of feet to several yards long depending on the geographical make up of the territory. Make sure you have access to the nest chamber through a lid so you do not have to move the nest box to get to the eggs. Once she lays her eggs and back fills the opening, she will look thin and will be extremely thirsty. To help her through the physical stress of the occasion, provide her with a large dish of clean water and an assortment of fresh vegetables. You will also want to supplement her food with calcium for a month or two.

You should prepare enough containers ahead of time to hold the possible number of expected eggs. We use clear plastic airtight containers that are deep enough to hold about 1½ inches of perlite and 1½ inches of free air space. Over the years we have used both vermiculite and perlite for incubating the eggs. We now use perlite exclusively for two reasons. One of the most bothersome things you will deal with is fungus on the eggs. Perlite will hold the moisture needed for proper egg



Nest box in Rhino pen as described above. *Photograph: Carl Fuhri*

Right: Green iguana after laying 59 eggs. Note normal emaciation.
Below: Home made incubator. Heating element by Hovabator, Fan from old computer.
Photographs: Carl Fuhri



growth without keeping the moisture in direct contact with the egg, therefore eliminating much of the problem. Secondly, when the eggs hatch and the young animals emerge they are naturally damp. Vermiculite sticks to the babies and covers them for days. Perlite does not bind to the skin, leaving cleaner resting hatchlings.

Preparation of the containers consists of thoroughly cleaning and disinfecting the containers with a mixture of 25% bleach to 75% water. In the past we have placed the perlite in baking pans and heated it in our oven at 200+ degrees for an hour.

We have also used the perlite right out of the bag with equally successful results. We then prepare the medium by mixing it with water. Some people like distilled water; we have a well and use the water straight from the tap. If you are using chlorinated or treated water let it stand for at least 24 hours in a separate container. Most articles suggest a mixture of medium and water at 50/50 by weight. Some breeders advocate even a little more water than 50%. Personally we have found that we eliminated most fungus problems by mixing light on the water, closer to 45% water and 55% medium. Some breeders have had success with even less water. If you use less, keep an eye on the eggs to make sure they are growing properly. Within a few days of being placed in the container, they should have absorbed enough water to completely fill the egg which should feel firm to the touch. The combination of a little less water and the perlite keep the egg's surface dry but the atmosphere within the container moist so that the eggs can expand normally.

As soon as you have noticed that the female has laid her eggs, it is time to remove them from the nesting site. The female will probably be standing by the box protecting it. Gently push her aside and carefully begin to dig through the moist sand. You will most likely find the eggs in one of the two bottom corners farthest from the entrance of the box. Once you have found the eggs, carefully pick them up one at a time without turning them. If you have been watchful and gotten to the eggs



Left and below:
Newly hatching baby
iguana. Note some perlite
adhering to skin.

Photographs: Carl Fuhri

within a few hours of them being laid, they should separate easily. Place them into your incubation container. Make a depression for each egg in the medium, so that the egg will not roll around when you handle the container in the coming months. Do not bury the egg completely. Try to get it about half way into the



medium. When you place it into the container, make sure the egg does not touch its neighbors and that there is room for expansion. Occasionally you will find two or more eggs that stick together. Pulling them apart could damage the surface of one or both eggs. We recommend that you place these eggs into the medium together, and then keep an eye on them over the incubation period. Chances are both will develop normally. If a problem does arise and you lose one of the eggs, you can carefully separate the bad one from the good one even if you have to use a pair of scissors to cut the bad egg off. This is one of the times when you can see nature at its finest, the qualities of the egg shell protecting the embryo from harm.

The incubation period for iguana eggs varies quite a bit based on temperature. The warmer the

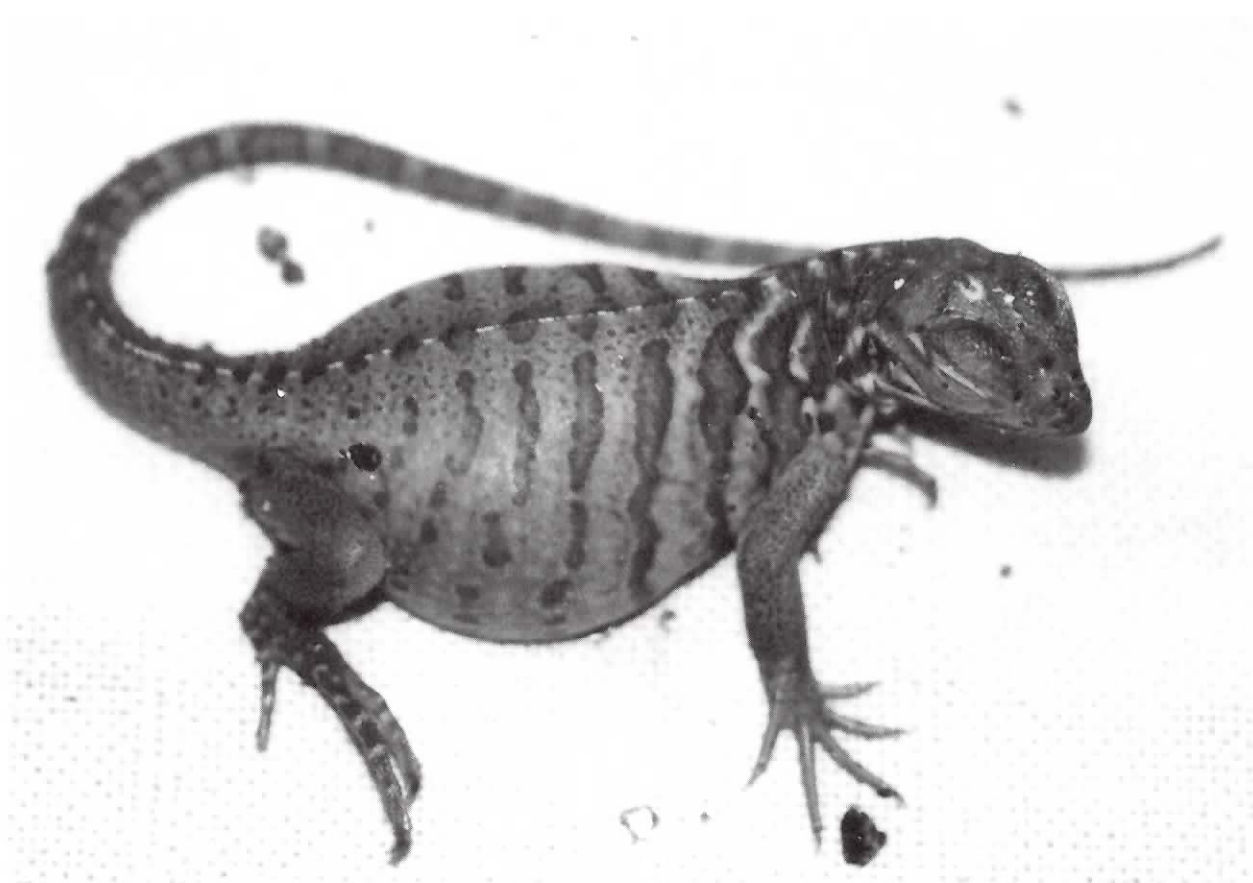
eggs are, within the safe range of 82-89 °F, the shorter the incubation period. During this period we have experimented with opening the containers occasionally to allow for a change of air. As new breeders, we had heard that the containers should be opened once a week during the process and then every three days for the last couple of weeks. Other breeders have told me that they open their containers daily and then twice a day in the last few weeks. As long as you are careful not to jostle the eggs or leave the containers open too long, there should not be a problem. My only caution is that if the containers are opened too long and too often, you will change the moisture content of the medium and not know how much new water to add without causing fungus problems. If fungus is observed we immediately apply Lotrimin foot

powder to the surface of the egg with a cotton swab. If the problem persists we remove the egg from the container and discard it. It is far better to lose one egg, than to lose a clutch trying to save one egg. On rare occasions we have had eggs begin to decay quickly and the container, even though sealed, fill with little gnat-like flies and then tiny maggots. If this happens, immediately prepare a new container. Remove all of the good eggs, checking to be sure that they are visibly clean and unbroken, with no tiny holes. Place them in the new container.

We have been asked if we take any particular precautions in handling the eggs. We do make sure our hands are clean but we do not wear rubber gloves. Approximately two weeks before the eggs are due to hatch, you will notice that condensation begins to form on the sides of the container and on the underside of the lid. The shell has made a transformation allowing this one way passage of moisture. If the egg retained all of the liquid until hatching, the possibility of the embryo drowning in the liquid would be greatly increased. At the

same time, the eggs, which over the incubation period have increased in size by approximately 50%, will begin to collapse. This is normal and to be expected. The embryos, which until this point have been completely suspended in liquid, are getting ready to hatch.

To hatch, the baby cuts several slits in the top of the egg and partially sticks its head through the slit to begin breathing air. Once the baby has cut the egg and gotten its head out, it will stay that way for 24 to 48 hours. During this time the young iguana is absorbing the yolk sack which until this point has been on the outside of the abdomen. This is a critical time for the babies. If they are overly disturbed they will try to get out of their egg prior to absorbing all of the yolk. They will reflexively start running around in the container. Depending on the stage of absorption of the yolk, this can be life threatening. Under normal conditions once the baby has absorbed the egg sack it will appear quite fat, and with young *Cyclura*, so fat that they have difficulty walking. If the yolk sack detaches in the late stages of absorp-



Newly hatched Rhino, abdomen distended with yolk. Photograph: Janet Fuhri

*Right: Clutch of day-old Rhinos.
Photograph: Janet Fuhri*

*Below: Hatching Rhino. Note umbilical
scar on ventral side of iguana.
Photograph: Carl Fuhri*



tion it is not too critical. However, when this happens before the baby can absorb most of the yolk it will lack its first food source and may not survive, or will surely be behind in its development.

One of the things we have found over the years is that reptiles have amazing recuperative capabilities and good immunity to infection. We do not worry about the babies getting infections from laying through hatching. Occasional handling of the egg does not create a problem providing we and the environment are clean. This is another reason we choose perlite over vermiculite. We do not know that a baby would be in any more danger dragging its yolk sack around on vermiculite as opposed to on perlite, but the sack can

become quite encumbered by adhering vermiculite.

The sex of the babies is determined by the temperature during incubation. We are not scientists and have not researched temperature controlled sex determination. We do observe however, that the cooler the temperature, the greater the ratio of males to females. At Dragon's Glade the incubator is set at 86 °F. At that temperature we get roughly an equal number of males and females. The incubation period for iguanas at that temperature is constant at between 86 and 92 days. We give a range of days because it naturally takes 3 to 4 days for all of the eggs to hatch.

The hatching process is quite exciting to observe. This is one of the reasons we use the clear plastic containers. You can see what is going on without disturbing the hatchlings. During this process we do open the lid slightly, everyday, for a few seconds to allow fresh air into the container. Again this must be done with caution and if it appears that it causes too much activity by first-to-hatch babies, try doing it in a low light situation. Remember that in the wild, the eggs would be buried. The air space left by the female when sealing the nest would be quite small and it would take the young lizards several days to dig out.

We hope that this article will help those of you who are just starting out or those that may have had problems in the past. The best teacher is experience, we hope you benefit from ours and enjoy your own. We wish you luck and success born of good common sense. 