ANIMAL CARE SHEET

Chinese Water Dragon

Typically male Chinese water dragons reach lengths of three feet (.9 m), females are somewhat smaller. Almost 70 percent of the length is the tail. The tail is laterally flattened, banded brown and green, and ends in a fine point.

Dragons use their tails for balance and forleverage when climbing and also use them to whip potential predators. Males develop larger heads, jowls, and crests on the back and the neck, and their femoral pores are somewhat larger than those of females. The basic color of the animals is a bright dark green with males have the more vivid coloring. Males have an area under the throat that is intensely orange to yellow in color. Pink tones can be found in the lower jaw area. The tail has green and brown stripes. Head, back, and tail base are filled with high horn scales. Water dragons do not have a typical dewlap or throat pouch.

Water dragons have well developed legs. The front legs are generally much more slender than the back legs. The front legs, and strong five-toed front claws, are used to climb and grasp branches. The muscular back legs are used to climb and swim, as well as jump or leap from object to object. Water dragons can run bipedally. Their hind feet are five toed as well, with the middle toe being the longest toe. Their claws are long and thick and end in sharp needle-like points.

The tongue has a sticky surface that helps them to catch and hold their prey. Their teeth are small and pointed.

When nervous or frightened, water dragons take refuge in the water. They are strong swimmers and, if necessary, can remain submerged for long periods of time, sometimes as long as 25 minutes. Both males and females , occasionally express aggressive behavior toward each other in the form of arm waving, puffing up of the throat, head bobbing, and sometimes chasing.

Distribution and Habitat

The Chinese water dragon lives within Thailand, Vietnam, Cambodia, Laos, Burma, and in southern China.

As their name suggests, water dragons are generally found around permanent standing water. They live on banks of rivers in rainforests and swamps. They are good climbers and can drop from tree branches into the water if threatened or startled. Water dragons live in areas with an average humidity level from 80 percent in the morning and 60 percent in the evening. The temperatures average from 75 to 85° F.

Life Span

Anywhere from 10 to 20 years (from the feed back that I've received, the oldest one that I personally know of is an 11 year old male that one of my email buddies has, and this dragon is going strong, I'm sure he has many years ahead of him!) So be prepared for a long term pet! :) I have also heard that the two adult Chinese water dragons kept at the Metropolitan Toronto Zoo

are *15 and 17* years old. I was told this by a curator who has recently confirmed these ages.

Sexing

Boy this is a hard one- With age males develop larger heads, large jowls, and a larger crest behind the neck, the femoral pores of adult males are slightly larger than that of the females. When dragons are mature and able to breed, they are generally about 2 years old and 2 feet in length. They are generally considered adults when they have mature colours just under their chins. One of mine has a nice yellow chin, and the larger one has a nice peach and aqua coloration under his chin. From what I can tell it is very difficult to tell if you have a male or female until they are mature. They generally have to be about twenty inches or longer in total length before their secondary sexual characteristics begin to develop thus making males and females easily distinguishable from one another. Your vet can probe your dragon to find out, but if you have a good vet he won't do this unless your dragon is about 18 months to 2 years old. There is also the danger of damaging the dragon when this is done, please keep this in mind if you decide to have your dragon probed! A safer way to sex your dragon is to compare it to other dragons.

Food

Crickets, mealworms (normal size, jumbo and super), waxworms, and earthworms, grasshoppers, butterworms, locusts, some people try small feeder fish like goldfish, and you may also want to offer a little bit of finely shredded veggies and fruit (if your dragon will eat veggies this should make up about 10% to 15% of their diet) (if you're going to try feeding them veggies and fruit, look for Melissa Kaplan's "ig salad diet" in her Iguana Care FAQ you can find the FAQ at: http://www.anapsid.org, you may also be interested in viewing this page in order to select fruit and veggies with a good calcium to phosphorous ratio.

Adult dragons should be offered all of the above plus King mealworms (Zophobas). Supervise these feedings though, these worms bite back, some people squash their heads before feeding them to their lizards!), pinkies (newborn hairless mice) and Fuzzies (slightly older baby mice, just starting to get hair).

INSECTS are fairly high in phosphorus and low in calcium, but do have nutritious value if not fed in abundance or as the soul diet. Most insects also have a hard indigestible exoskeleton that could cause a bowel impaction if fed in large quantities. All insects should be gut loaded with well balanced offerings of veggies and perhaps even some calcium and vitamins before being offered to reptiles. (See fruit and veggies below for some gut loading ideas)

Insects that are fairly easy to purchase: crickets, mealworms (tenibrio), Super worms (tenibrio mealworms on steroids- I don't recommend these!), King mealworms (zophobas), and wax worms (very high in fat and very low in calcium- use only as a treat!), and earthworms.

Insects that can occasionally be found locally or may be purchased by mail order: butterworms, grasshoppers, locusts, Hissing Roaches, cicadas, and silkworms ... (I'm sure there are many others!)

EARTHWORMS are fairly high in calcium, and are fairly well balanced nutritionally. They are also soft so the risk of impaction is lessened.

WHOLE PREY food items are generally high in calcium and protein, and due to the calcium content should be included as part of the diet. Mader states in his Reptile Medicine and Surgery " Carnivorous lizards should be fed pre-killed whole prey. Rodents are preferable to chicks, and chicks are preferable to fish." he also goes to state " If mice, rats, rodents, rabbits and chicks make up the bulk of the diet, vitamin and mineral supplementation should not be necessary. It should be noted that newborn pinkie mice have less total calcium than do adult mice, and a calcium should be supplemented if these are used."

A selection of whole prey food items would range from pinkie, fuzzie and adult mice, rat pups, some people have offered gerbil fuzzies?, young chicks (Mader himself used to feed his dragons

chicks), and feeder fish such as minnows. Some people also offer small lizards such as anoles to their dragons as a food source.

Most people feed these mice and other wholeprey food items dead to their dragons. It's much more humane. Besides if you are buying them live, then they must be eaten within 24 hours or else they will die anyway, plus when you buy frozen you can buy in bulk! (thaw before feeding to your dragon! :)) If you have a large adult dragon you may even feed it adult mice or even new born rat pups. Please see Why you should NOT feed live Rodent prey to your reptiles: for more on the dangers of feeding live prey.

Temperature

Day time temperatures should be between 84 and 88 F (28.9 C - 31.1 C), night time temperatures should be between 75 and 80 F (23.9 C - 26.7 C).

It's a good idea to have at least two thermometers in the cage. One should be on the cool side, and one thermometer should be placed on the warm side of the enclosure. Improper temperature ranges can result in your dragon becoming ill with a respiratory infection or make him more susceptible to other common ailments due to weakening of the immune system and inadequate digestion of nutrients due to slower metabolism when kept at too cool a temperature.

You'll have to play with different light wattages, or put your heat sources on a thermostat or dimmer switch to get the temps just right. I can't tell you exactly what wattage of bulb to use in your water dragons enclosure because this will depend upon the temperature of the room that the water dragon is housed in. If the room is generally cool you will need a higher wattage of basking light, if the room is kept fairly warm you will probably get away with using low wattage basking bulbs to heat the cage. Your lights should be on a timer so that your dragon will get a proper photo period. My lights come at 8 am and go off at 8 pm.

Many keepers have problems regulating the temperature of their enclosures in the summer and in the winter. If the cage is too hot in the summer try using basking lights with lower wattages. If the cage is too cool in the winter increase the wattage of your bulbs, and possibly put some insulation on the outside walls of the enclosure to keep the heat in.

Lightning

We know that natural unfiltered sunlight is the very best form of lighting to provide for water dragons as well as most other herps, unfortunately many people who own water dragons are unable to provide natural sunlight at all (due to busy lifestyles or because they live in apartments and do not have the ability to provide adequate access to outdoor facilities for their dragons) so, you will note that I will only discuss the provision of artificial UVB light sources for the remainder of this care doc. If you are able to provide natural unfiltered sunlight for your water dragons by all means do so, but please supervise your water dragon while it is sunning itself in order to prevent either escapes or overheating (to prevent overheating in the sun please provide your dragon with a shady area to go to in case it gets too hot, and never put a dragon in a glass tank in direct sunlight either as this could cause severe overheating and death!). :)

You will definitely need to provide UVB in the form of fluorescent lighting. Incandescent bulbs do not produce UVB rays, they usually only provide UVA lighting. The dragon needs UVB to produce vitamin D3 in order to absorb the calcium in the diet, without this lighting the dragon will get very little calcium from the food and supplements that you are giving it and will very likely develop Calcium Deficiency in herbivore and omnivorous reptiles or MBD (metabolic bone disease) which is basically a calcium deficiency, but can also be caused by too much vitamin D3 supplementation as well (please see Kidney failure/metabolic bone disease/ vitamin D supplements in reptiles and

amphibians for more information on calcium deficiency caused by over supplementation of vitamin D3).

If your dragon gets calcium deficiency it may first exhibit symptoms such as shaking trembling limbs and body, rubbery pliable lower jaw, swollen limbs, which will progress to inability to move legs i.e. drags itself around ... and death! The first sign may also be swollen bumps on limbs which could be a sign of a broken limb - a sign of weak bone structure. Most of the above symptoms are generally reversible if caught early. The vet will probably get you to give the dragon injections of calcium and get you to give your dragon oral liquid calcium suppliments at home both of which usually begins to reverses the symptoms in about two weeks. However if you provide UVB fluorescent lighting, and supplement the dragons diet you will probably never have to go through this! :)

So again the first thing you need is a UVB light source that the dragon can bask under. The light should be set up so that the dragon is not more than 10 inches away from the light source when basking, otherwise the effects of the UVB light will decrease the further away the dragon is from it. The tube should also be set up so that there is no glass or plastic between the light and the lizard as this filters out UVB rays. If you have a screen lid between your dragons UVB tube and the dragon please try to use large holed screen as screen with very tight mesh can block out up to 30% of the UVB rays, glass and plastic between the light and dragon block out 80 to 90% of the UVB rays. Fluorescent lights do not produce much heat so there is little fear of your dragon burning himself on it, but I wouldn't count this as one of your heat sources. Try Zoomed's reptisun, iguana 5.0, or a vitalight. UVB fluorescent tubes only produce UVB for approximately 6 months- they will have to be replaced twice a year as a result even though the tubes themselves will still produce light they will no longer be outputting much if any UVB after a 6 month time period.

UVB rays are produced in the 290 to 320 nm (nanometer) range. The average florescent tube used for lighting in a house or office of even for plant growth does NOT produce rays in this range. They produced light at higher ranges and therefore only produce UVA. When purchasing a florescent light please make sure that it states somewhere on the package that it produces light in the 290 to 320 nm range.

Remember- round or incandescent bulbs do not produced UVB- they produce UVA. Many incandescent basking bulbs state on the package that they are full spectrum but this only means that they produce "light" in the full spectrum of colours ... not the actual full spectrum of light rays. Don't be fooled by marketing promo on packages- check the labels and make sure you really are getting something that produces UVB. Having said this please note that there is a new form of UVB producing light that is in bulb form it's called a UV heat light. I still haven't made up my mind as to how safe these bulbs are for humans or pets or if they are as effective as UVB tubes.

Heat Source

You will also need one or two basking lamps. This can be any incandescent light, either a specialized basking lamp or a regular bulb. You may have to buy different wattage to provide the right amount of heat. i.e. anywhere from 50 watt to 150 watt bulbs. These lights get hot so make sure that your dragon can't get near them!

Another good heat source might be a Zoomed, or Pearlco ceramic bulb (Ceramic Heat Emitter or CHE). These come in different wattages, and get extremely hot! make sure your dragon can't touch it at all! It will sear flesh!!! If you get one of these definitely put it on a thermostat or dimmer. Ceramic heaters are a great way to provide heat at night since they don't produce light. If you use one of these ceramic heat emitters and you are afraid that your lizard might at some point come in contact with the bulb you should try to build a protective wire cage around the bulb so that the lizard can never actually touch the CHE.

Another good source of heat at night would be a nocturnal bulb. There are many commercial brands available in pet stores.

Human heating pads, are good to bask on but don't raise the ambient cage temperature very much. They may be placed directly inside the enclosure or underneath a slightly propped up tank.

I don't like the stick on heating pads that the stores are selling lately. You cannot move these if you end up putting them in the wrong area, because if you do try to do this the pad usually tears and this will render it unsafe for reuse. These stick on heating pads also make direct contact with the glass tank and can cause the glass to become extremely hot and could actually cause the glass to crack as well. I've heard of a number of reptiles being badly burned when these sticky pads have been used.

Do not get a hot rock!, Many lizards, and snakes have been badly burnt by them! Hot rocks can crack, short, smoke and can develop hot spots over time that can burn your lizard. Some people try to get around these short falls by wrapping the rock in a cloth material or burying the rock in the substrate- but then how can you check to see if the rock really is developing hot spots or it has cracked? Hot rocks are also not good when in contact with moist substrates or moist humid environments- this is when they might short out and possibly electrocute your lizard. Many house fires have been traced back to the use of hot rocks in a reptiles cage. For all of these reasons I suggest that if you have already purchased a hot rock that you cut the cord off and use it only as cage decor- for your own and your lizards safety.

You should also have good ventilation in the cage, and the temperature should be on a gradient i.e. top of cage warmer or cooler, or have a warm side and a cooler side so the dragon can thermo-regulate. Typically the basking area is going to be the warmest but the dragon will need a cooler place in case it gets too hot! You should have a couple of thermometers in the cage to measure the temps in different areas!

Water

Water dragons love water, (well not all of them, but most do!) you should provide a fairly large area of water by either using a large plastic container (kitty litter pan) or make a nice water area using an aquarium or something with a water filter and waterfall for example. It can be as simple or as complex as you like. Whatever you use you need a container that is large enough for the dragon to enter and exit easily, and it must be filled with enough water that he can immerse up to 50% of his body height. You should be able to remove the water container easily for cleaning and disinfecting, as well as refreshing the water supply. The water container should be changed daily. You will probably find that your dragon goes to the washroom in the water. This is a good thing as it means the rest of the cage stays cleaner longer! The water doesn't have to be heated, room temp. is good enough. You might want to use a filter in the water though to keep it cleaner longer. :)

When changing the water in the container please be sure to clean the dish with soap and water, rinse well, then disinfect the container with a 5-10% bleach solution, rinse the dish thoroughly afterwards before replacing the water container in the dragons enclosure. * soap and bleach may produce toxic fumes when uses together- so please use them separately and rinse the container well between use of the soap or bleach solution.* Other disinfecting solutions may be used rather than bleach if you prefer- a novosolin or quatracide solution will provide adequate disinfection as well.

Humidity

Humidity should be about 80%, even with a water container in the cage this can be difficult to maintain. I have live pothos and dracenae plants in my cage, planted in soil, so watering and misting these plants also helps to provide a humid atmosphere. You should get a gage that

measures the humidity. Try to mist the enclosure twice a day. If you are really having problems keeping the humidity above 50% or higher try covering part of the top of the enclosure if it has a screen cover- you could put a piece of plexiglass or even saran wrap or foil over part of the opening- this should help a bit- but, by all means never cover the whole top of the enclosure there must always be air circulating in the cage!

Some people feel that maintaining a humid environment is not necessary. I do not feel this way. Water dragons are from a tropical humid climate, and being kept in the harsh warm dry conditions of captivity can be harmful to your dragons health.

Iguana's also come from tropical humid areas and it has been found that if they are kept in captivity in a too dry enclosure they will more easily become dehydrated. Once an iguana becomes dehydrated the kidneys start to become affected. Many iguana's die every year from kidney failure. Some of these deaths are the result of animal protein in their diet, and some of these deaths are caused by chronic dehydration.

While iguana's and water dragons come from different areas of the world I feel that their habitat and living environment are very similar. Please mist your cages once or twice a day, and make every effort to maintain a proper humidity level for your dragons sake- his life span could be affected as a result of low humidity levels.

Substrate

You can use a combination of soil and orchid bark but the dragon may accidentally ingest some of this when eating its food items on it, or you can use astroturf (but melt/bind the edges so the little pieces of green fibre doesn't fray as this may be ingested too!) With ingestion of substrate you run the risk of your dragons digestive track getting impacted, this could be very serious!

Substrates that I've heard other people mention with few problems resulting in their use are: Sterile soil and playground sand mixture; sterile soil and cypress mulch, or orchid bark mixture; Astroturf with bound or melted edges; bed sheets; newspaper, or butcher paper; paper towels; ceramic tiles, and alfalfa pellets.

I generally prefer to suggest that people use sterile top soil or a soil that has no additives or at most only some sphagnum moss added to it. This has proved to be a generally safe medium and it will also help keep the cage humidity in the proper range. If the soil is not marked "sterile" it would be wise to bake the soil at 300 F for 30 minutes or so in order to kill off some of the bacteria, fungus and or little bugs that could be in the soil before using it in the dragons cage. Some soil mixes have additives such as vermiculite (the shiny stuff) and or perlite (the tiny white styrofoam like balls) that are undigestable but extremely attractive to curious water dragons. Please don't use soils with these additives. Also don't use soils that have added fertilizers. Fertilizers could be extremely toxic to your dragon and I'm sure you'd hate for anything to happen to your dragon because you used a soil with fertilizers added to it.

Substrates that have been known to cause problems are: Commercial brands sold in pet stores such as bark, shavings and other products made with moss- All of these commercial products are easy for the dragon to accidentally ingest, and have been known to cause impaction in several reptiles and amphibians. Whatever you use as substrate don't use cedar or pine as they emit fumes and resins which are toxic to herps!

Credit

http://www.triciaswaterdragon.com