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The Matamata: A Turtle Enthusiast's Dream

By: Shawn Matsalla



Welcome To Vol. 1!

Welcome to the inaugural issue of the HISS online newsletter!

I agreed to edit and compile the submissions for this newsletter in hopes that it will serve as a powerful tool for building HISS, and herptoculture in general in Saskatchewan.

I hope that you enjoy this issue! We have a great article about the fascinating matamata turtle by turtle enthusiast Shawn Matsalla, a wonderful history of Creamsicle emoryi/corn snakes by breeder Mary VanderKop, a quick update about the goings on of the reptile rescue by your humble editor, and last but certainly not least a fantastic article from Tim Cranwill with some great tips for those interested in breeding herps.

ENJOY! Kaley

Anyone with a serious passion for turtles will be well aware of the matamata turtle (*Chelus fimbriatus*). Its out of this world appearance, along with its unique feeding habits, make it quite the oddity and prize addition to one's collection.

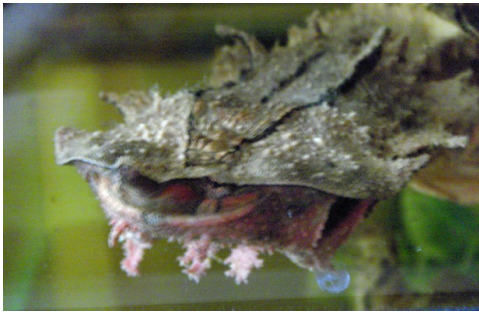
The matamata hails from South America, where it inhabits the Amazon and other surrounding river systems. Its name is an Indian word, meaning "I kill"; its Latin name means "fringed turtle".

It is exclusively aquatic, and is for the most part a bottom dweller. This species walks along the bottom rather than swimming in the slow moving, murky, black water conditions.

The cause of its outrageous appearance is mostly due to its head and neck area. Its head is arrow shaped accommodating very tiny well hidden eyes within its color and pattern makeup. A snorkel like proboscis allows the matamata to penetrate the surface of the water for a breath of air along with the help of its long neck. This allows the turtle to stay



hidden and not give itself away to potential prey. Skin flaps decorate and protrude from its neck and chin, and these are used as sensory structures to detect vibrations and currents in the surrounding water, making it a device to recognize prey in the area. The matamata is also armed with a big, full face smile at all times as well, that lends itself to being quite personable.



As with all aquatic turtles, creating a healthy, clean environment is essential. Preparing and maintaining a proper habitat is time consuming and requires regular maintenance as well as the know how and knowledge to provide the specific conditions. Out of all the turtles I maintain, I have found that the matamata requires much more accurate and specific conditions than most. This alone makes the matamata a poor candidate for a first time or inexperienced turtle keeper.

I keep my matamata in a 30 gallon tank at the moment, for its only 6 inches in carapace length. I keep the water at a level of about 4-6 inches deep. This allows the turtle to access the surface with ease while lying on the bottom. I recommend using no substrate - in fact I never use any sort of substrate within any of my aquatic turtle enclosures. Using rocks or sand creates a hazard of possible ingestion when feeding, and

makes for a lot more work in cleaning the tank. I have never found any of my turtles to have suffered in any way from having a "substrate free" floor.

I keep the decor in the tank to a minimum, and provide a big area of open space that is obstacle free within the tank. A small rock and hanging plastic plant provide cover for the turtle and also offers as a water break for the returning water that is circulated back into the tank by means of a spray bar. This softens the initial force of the returning water creating a slow flow more natural to the matamata. Without the "waterfall effect" the water would be too turbulent, thus hindering the accurateness of the representation of the turtle's environment. I believe it would also cause the matamata comfort issues and therefore would not act naturally and find the conditions stressful.



Although matamatas use their food quite efficiently, a good filtration system is key in order to maintain them successfully. As of now, I am using a Rena Filstar 3 canister filter to do the job.



In general any filter system will work, as long as it offers a variety of compartments for media within the filter. The media in the filter goes along way in providing the water conditions necessary.

Inhabiting slow, murky waters in the Amazon, the matamata requires soft acidic water. This means a very low pH level. Certain waters within the Amazon River systems were found to have a pH level as low as 3.2, with an average of 4.4 being the norm. I maintain my tank at 5.0, give or take a bit. With my setup now, I actually use bought water to fill and top up my tank. It already has a low pH level and allows me to have to use fewer chemicals to get it to where I want it. In addition, I use Tetra's "Black water extract" to tan the water - it also helps maintain the soft acidic water conditions. Small pieces of driftwood are used too, to release beneficial tannins into the water.

So, the key here is water quality. Within my filter I use a lot of peat based media, such as peat fiber, peat granules, and even peat moss based potting soil. When using the soil, make sure you put in a filter media bag and then put that between some filter sponge or foam of some sort to keep it contained. I also use media to take out ammonia and other

such toxins. When changing your filter media make sure to only change out 1 or 2 elements and not the whole works. Beneficial bacteria eventually accumulate within the media and the filter and these bacteria feed on harmful bacteria, breaking down the amount of harmful nitrates and other toxins. Changing out the whole works results in having to build up and start all over.



I top off the water regularly, thus refreshing it and keeping it in healthy condition and a state of freshness. When doing this make sure you are adding in water that is the same temperature as what is already in the tank.

The pH level is critical and I check it's level at least twice a week with a good quality water test kit. My tank also accommodates a pH indicator that gives me a constant reading at any time.

Right along with the importance of the water quality is the temperature. The right temp is important both in the water and out. A temperature of 78-82 degrees Fahrenheit is required for the water. The ambient air temp must also be the same or even slightly higher, up to 85. There is much concern that respiratory issues can arise if your matamata is breathing cool air when it penetrates the surface of





the water. I monitor the water temp through a digital water thermometer and I use one for the air temp of the room as well. My matamata's tank is located within a "turtle room" where a lot of other turtles are housed and the room is maintained at around 78 degrees F. Atop my mata's tank are 2 heat lamps. One contains a ceramic heat emitter and the other a 100 watt light that also raises the temp of the air right above the tank. At night I switch the light to a second ceramic heat emitter.

also offer it pinky mice, although getting it to take them at the start was difficult. When feeding frozen fish, I take the opportunity to beef up its nutrients and variety. I force Reptomin turtle pellets into the fish's mouth, filling its body cavity. I also dampen the Reptomin and then place it in calcium powder to prevent any calcium deficiencies. I have also used cuttlebone and forced it into the mouth of a prey fish as well. My matamata will refuse Reptomin balls and is quick to spit them out if offered on



their own. Stay away from goldfish feeders when

The matamata is a fish specialist and it's methods of feeding are most unique. Much like my snapping turtles, (*Chelydra serpentina osceola*), and (*Macrolemys temminckii*) the matamata sucks and snaps up its prey with great speed. Its technique is a lot more pronounced and advanced than the snappers, mind you. Thrusting out its neck and opening its gaping mouth, the turtle vacuums fish in whole with the help of its muscular neck. It does not have a mouth for chewing and engulfs its prey whole. Food must be offered beneath the waters surface, for the matamata is reluctant to feed otherwise. It is easy to understand why. The turtle would get a mouthful of air when sucking in food at the waters surface with its feeding practices.

feeding live fish, for they tend to harbor large amounts of copper sulfate that can get toxic after long term feeding. I feed minnows, guppies and any other feeder fish of appropriate size. I hold prey on the end of tongs and offer a rest between each prey item for the turtle.

I offer food every other day. I feed live fish along with frozen thawed fish. I

I believe they can be too eager at times and take food too fast, not allowing the initial one to be ingested or swallowed totally first. My matamata is very alert and at feeding time it always displays a head waggle when I offer it dead prey. When feeding live it sits still and waits in ambush and never displays the head waggle. Along with all my other turts , this one too associates me with food and when ever I enter the room it is quick to come to the front of the tank and seem to beg for food by doing its interesting waggle. I believe it stimulates its skin flaps and is sensing the water by exhibiting this behavior.





The matamata, along with all other large aquatic turtles, take time and dedication to maintain. Any turtle keeper knows the challenges of creating and maintaining their water environments. The matamata can reach 16-18 inches in carapace length, making it a large turtle to accommodate. Arrangements and adjustments will have to be made to house the turtle when it is an adult. This will require a pool type setup and a bigger, better filtration system. Make sure you can house and provide such enclosures and space, before trying to get one.

Matamatas are hard to come by and usually are quite pricy as well. They average any where from 300-800 dollars from what I have seen. Their setup is costly as well and changes are a constant. This is not a deterrent; just make sure you know what you are getting into.

Habitat loss threatens this turtle in the wild and with the majority of hatchlings being taken from the wild along with tropical fish shipments, its future is uncertain.

I have found very little information on this turtle and finding anyone with these turtles, let alone anyone breeding them, is rare. I find the matamata to be very personable and it displays very interesting behaviors, which lend it to being a pleasure to keep, and a favorite by far. With proper husbandry practices this turtle seems to thrive in

captivity and my hopes are to increase my numbers of this turtle in the future and to focus on establishing a healthy breeding colony. Its quick acclimation leads me to believe it has the capacity to produce well in captivity and I'm looking forward to working towards the opportunity to breed and hopefully produce offspring of these great creatures in the near future. There is a lot not known about this specie of turtle and there is a lot of room to expand its profile.

I hope anyone who has a matamata realizes they have a true marvel in the turtle world and as far as that goes the whole class reptilia. As a collective, I hope we can share our experience and knowledge and sustain a good foot hold for this turtle in captivity as to ensure its future in the wild.

Join me at the new Matamata Forum:
<http://matamatamania.proboards60.com>





Creamsicles – Not Just Another Color Of Corn Snake!!

By: Mary VanderKop



Corn snakes are produced in an almost endless variety of colors and patterns these days, ranging from the classic wild type with an orange body, red saddles lines and black borders, through all shades of grey, tan, yellow, white and even lavender!! However, creamsicles are unique because they originated from deliberate crossbreeding of corn snakes with the closely related species, the Great Plains rat snake. The Great Plains rat snake is often referred to as an emoryi rat snake based on the scientific name. Creamsicles and other lines that are crosses between corns and Great Plains rat snakes are also called 'emoryi/corns' to distinguish them from pure line corn snakes.

Corn snakes are native to the southeastern regions of the United States and typically have red saddles on an orange background color, with prominent black belly checkers. There is some variation within the species with

Miami phase animals showing a lighter background color that ranges from grey to tan. The Key's phase snakes have very thin borders, light orange saddles and background color and fewer belly checkers. The famous Okeetee phase has the darkest red saddles with wide black borders, but all normal corn snakes are essentially red and orange.

The Great Plains rat snake is closely related to the corn snake – they have been considered to be part of the same species. They are the western relative, occurring mostly in states west of the Mississippi river. They are drab by comparison with corn snakes, with dark brown saddles on a light greyish brown background and very thin borders. They tend to be shorter and stockier than corn snakes. They will typically interbreed with corn snakes, but their ranges in the wild do not overlap and while natural crossbreeds have been reported, they are not consistently recognized. The corn snake and Great Plains rat snake have recently been classified as separate species.

During the early captive breeding of corn snakes, amelanistic (red albino or amels) animals were identified that genetically lack the ability to produce melanin (black) pigment. These corn snakes had red saddles and orange background, but were white everywhere that normal corn snakes are black. These are now the most common variety of corn snake sold.



People immediately began to breed these beautiful snakes for specific characteristics. Some lines of amelanistic corns were developed to show wider white borders (reverse okeetee) or reduced white borders (sunglow)

between the red saddles and orange background.

Breeders recognized that the red coloration might be reduced to orange if amelanistic corn snakes were crossed with Great Plains rat

snakes, and this could create a snake that was various shades of orange and white. Because the amelanistic gene is recessive, these original crosses were intermediate between normal corn snakes and normal Great Plains rat snakes – they had dark brown saddles with a tan background, with minimal red color. The brown coloration earned them the name ‘rootbeer’ corns.

When the rootbeer corns were bred to amelanistic corn snakes, the creamsicle was produced – dark orange saddles on a paler orange background with varying degrees of white trim. This unique color was very popular and the cross breeding was not seen as an issue because the two parent lines were believed to be part of the same species. Most creamsicles now are actually produced by breeding creamsicle to creamsicle and the pure Great Plains rat snake is not often used in breeding programs. There are now distinct varieties of creamsicle such as

frosted creamsicle and reverse okeetee creamsicle.

The creamsicle lines were introduced to many other varieties of corn snake in the past because they tended to have light



background color. Those people working to create ‘candy cane’ corn snakes that had red saddles on a white background often used creamsicle lines to help get a lighter background color and more contrast.

Recently there has been more concern with keeping corn snake lines ‘pure’, so many breeders try to avoid having creamsicle lines in their corn snake’s background and it is important for breeders to honestly represent the animals they produce.

Just as creamsicles have a distinct orange color and rootbeers are more brown than normal corn snakes, the great plains rat snake lineage has an effect on other corn snake colors. Many other corn snake genes are being incorporated into creamsicle lines to produce variants with Great Plains rat snake bloodlines but corn snake colors. Cinnamons are examples of this that show the hypomelanistic gene from corn snakes, but are a distinctive bright brown color, like cinnamon, when they carry Great Plains rat snake bloodlines. The creamsicles that correspond to sunglow corn snakes, with no white between the saddles and background color have been



called 'harvest' corns. Snow, ghost, caramel, butter and anerythristic (black and white) versions of the emoryi/corn have been produced but these varieties don't have well established trade names yet.



Creamsicles and other varieties of emoryi/corn tend to be somewhat stockier than 'pure' corn snakes. They often are larger as hatchlings, grow more quickly and when mature the females tend to lay larger, but fewer eggs. These characteristics, as well as the distinctive orange toned colors tend to diminish as the percentage of Great Plains rat snake decreases, and since creamsicles have been bred with corn snakes very extensively, it can be impossible to tell if a snake has creamsicle background based on appearance. Not all of those produced have the desirable color, but if the parents have the best color, then the offspring have a better chance to be good examples. The creamsicle is certainly the 'flavor' that I like best!!

Reptile Rescue Update

By: Kaley Pugh

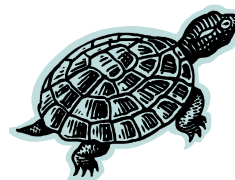
I have been the Director of the Saskatchewan Reptile Rescue since its inception in 2000. I run the rescue with help from my husband Byron and my parents. My parents were bitten by the turtle bug after I "borrowed" their back yard to house a kiddie pool for two huge Yellow-bellied sliders.

The Rescue mainly deals with Red Eared sliders (RES), but we've also had a female Western Painted turtle and an Eastern Box turtle (who quickly turned into my pets!), a couple Yellow-bellies, and the odd Tiger salamander! We also used to take in a few Iguanas.

This winter the rescue had some interesting charges – 13 adult Leopard geckos who needed to find new homes due to their owner's illness. We kept 5 for ourselves, and happily we were able to find great homes for the rest.

The rescue is currently housing 3 adult female RES and a nice little male. I would estimate that we have found homes for about a dozen RES in the last year or so, but the stream of turtles needing good homes never seems to end, unfortunately.

If anyone would like to adopt a turtle, or would like to volunteer to foster turtles while they wait for homes, please let me know!!





8 Simple Rules To Follow To Make Your Breeding Dreams A Reality!

By: Tim Cranwill

Keeping reptiles and amphibians has reached unseen heights of popularity in the past decade. It is a hobby than can be both rewarding and disappointing, profitable and expensive, it can raise the hairs on the back of your neck and make the hairs on your head fall out! It is a hobby driven by passion and its rewards reach far beyond the potential monetary gain.

More and more, herp keepers are becoming herp breeders. Here are a few rules to follow that can and will help you avoid the common pitfalls most new breeders face at one time or another as you strive to make your breeding dreams come true!

Rule #1- Quality over quantity

This is a universal rule that definitely applies to breeding herps! Buying en masse to acquire a vast breeding stock might seem like a great way to get started and save a few bucks per animal. Lots of people looking to get in the door quickly will try this method. But starting with a small, hand picked breeding group will not only be easier to manage and find breeding success with, it will also make it much easier to find homes for the babies your stock produces.

Starting out too big too fast is also a

classic recipe for failure. Equipment and feeders are an often unforeseen expense that can bankrupt a breeder before he or she even sees some mating!

Starting small allows the breeder to properly oversee each aspect of the animals' behavior and learn some key lessons on a small scale... when they are still cheap lessons!



Rule #2- A little extra money can go a long way!

This is an important one to follow, especially when you're someplace like a reptile expo where you will find many examples of the same species. You will see vastly different levels of quality and appearances and equally vast differences in price!

Imagine that you are at a reptile expo and have the choice of 3 different animals, let's say common boas, from 3 different breeders with 3 different prices. Breeder A has an average looking one on his table for \$85. This is not a showcase animal but it's also not a bad price. Breeder B has an attractive boa,





much nicer than Breeder A's stock for \$100. Breeder C has an absolute jaw dropper at his table for \$140. Which one would you choose?

When your aim is breeding, you should always get the best looking animals you can afford... or even ones you can barely afford! As people see your stock grow and mature, they will line up for offspring. Trust me. And heck, what's an extra \$55 when you get to look at that beautiful animal for years and years to come and have such a stunning representation of your collection to show off?!?



Another point that applies to this principal would be to make sure you know who you are buying from. Find out what kind of breeder they are, find out about their commitment to quality, how they treat their animals and customers and what the parents of your potential purchases look like. A good breeder that is proud of their stock won't be afraid to answer these types of questions. This type of investigating is especially

important when making purchases online.

Rule #3 – Buy them young

Buying proven breeders or older animals is a shortcut many, many new breeders have tried. While it does have the possibility to work in your favor, I have found that most of the time it doesn't. I would venture to say that more than half of the times I have bought proven breeders, they have taken just as long as hatchlings to produce for me. At times, these proven breeders even died a short time after I bought them from causes that seemed to be out of my control.

Buying proven breeders hasn't amounted to much of a shortcut in my experience.

Not all proven animals being sold are a bad choice though. There are some perfectly healthy mature animals put up for sale every day. Some will pay off that first year and every year after for years to come. It depends on the animal's age, how often they were bred, who kept them, how they were

kept and many other factors. This one falls under "buyer beware" for me. I have learned this one the hard way a few too many times and am very cautious when considering older animals now.

In the end, my advice is to buy babies and enjoy watching them grow. You'll usually pay less for babies and get full control over how they are grown and most other aspects of their health!





Rule #4 – Slow and steady wins the race!

It's been said hundreds of times: "herps are addicting", and it's true! There are so many beautiful animals being advertised on a daily basis that the temptation to get deep into the hobby very quickly is hard to resist. There are, however, a few major growing pains that can cripple a budding breeder's dreams. The cost of feeders and the cost of housing are both unavoidable expenses and two aspects that cannot be shortchanged.

With the slow and steady approach, a breeder will be able to generate some income from their select breeding pairs to offset the cost of growing their hobby.

Obviously everyone has a different amount of spare money (if there is such a thing). The trick is to figure out what you can afford to properly maintain before you figure out what animals you can afford to buy!

Rule #5 – D.R.I.P. – Dividend Reinvestment Plan

This is a stock investment term where a certain amount of money made on an investment is automatically reinvested in the stock. What does that have to do with breeding herps? Well, I feel it has a lot to do with it. Let me explain why. When there is money being made off of selling the herps you've produced, I feel a certain amount of that money should go back into your animals and setup. For example, you can invest in better cages, better thermostats, more females to allow your founding stock some time off

every few years, cage decorations, a setup that allows you to do more cleaning in less time, radiant heat panels or whatever else you feel your animals need.

Another suggestion that fits under this heading is to remember that animals that are bred on a regular basis, especially females, will often have a shorter life span. Replacement breeders should be raised up every few years.



Rule #6 – It's all in the details

The details of how you house and care for your animals and the equipment you choose are of great importance. I feel it is necessary to choose your equipment and housing with the future in mind. Choose only top quality products and more often than not, you will only have to buy that piece of equipment once. If you choose to go the cheap route, you might find yourself paying a lot more in the long run.





Being a person that pays attention to detail is a huge advantage in this hobby. It is especially important when it comes time to breed your herps. With a lot of herps, there are subtle cues that represent integral moments in the breeding process. Being able to spot, identify and take advantage of these cues takes a keen eye and a vast knowledge base of your particular animals' behavior. This information can mean the difference between failed and a successful breeding year.

Rule #7 – Read! Read! Read!

Knowledge is power and in this hobby it is also ability. Without the knowledge and ability to properly care for your herps, your hobby and budding breeding business will suffer. But more importantly than that, the animals will suffer. Reading about the animals you are interested in keeping and breeding will be time well invested. The knowledge you will gain is a prerequisite to success. Read books, read articles, read caresheets, read the online forums and then read them again. There is a lot of information out there. Some of it is very good and some of it is not so good. Take in as much information as you can before you start acquiring your breeding stock. The more information you take in, the easier it will be to filter out the “not so good” information. Online forums are a great “give and take” platform to ask questions and gain insight from experienced keepers. I highly recommend becoming active on a quality online forum.

Aside from hands on experience, reading will be your best tool in mastering the husbandry of your herps.

But without the reading, the hands on experience will not be nearly as positive!

Rule #8 – Work with what you love.

This is the final point and in a lot of ways, the most important one. Work with the species that really interest you. Pay no attention to the resale value or yearly reproduction output of the average adult female. Just focus on what it is all about: passion. If your collection is based on passion, the work will almost never seem like work. If your collection is only based on market projections and fiscal budgets, cleaning 300 cages and water bowls twice a week will get old really fast! Everyone needs more passion in their life. None of us need another chore!

There you have it: 8 simple rules for making your breeding dreams a reality! If you are thinking of turning your herp hobby into a small business, I am sure that following these rules will help you out in your quest. I know that even after 5 years of pursuing the breeding side of the hobby, I still have to remind myself of these points every so often. Breeding herps is an exciting hobby and it's hard to not let that excitement carry you away at times!

