

# The Maine Herpetological Society

## Newsletter



Volume 17 Number 11

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### Upcoming MHS Meetings and Regional Events Mark Your Calendar!

Saturday Jan 17	Regular Meeting Island Apt.
Sunday Jan 25	New York Metro Expo White Plains, NY
Saturday Feb 21	Regular Meeting Island Apt.
Saturday April 11	New England Reptile Expo Manchester, NH

### New and Renewed Memberships

*And we thank the following for renewing  
their MHS membership:*

Phil Roy	Waterville	Family
Chris Depew III	Dixmont	Individual
Robert & Patti Easton	Dixmont	Family
Robert Robinson	Orneville Township	Individual

### Next Meeting

At our January meeting we will be showing a veterinary video produced by Doug Kranich and Dr. Alan Slack. Recently I had a snake operated on by Alan and the snake is doing great. It will interesting to see how it was done. We will also have a business meeting. We have a lot of plans for 2009 and it would be great if we could get more members involved.

### New Year's Resolutions

As you all may have noticed the publishing of the newsletter has been a little sporadic this past year. I am not apologizing for this because for the most part there hasn't been any articles to put in it. There hasn't been a newsletter since October and I haven't received one article or submission of any type for publishing.

However, 2009 is a new year and often at this time people look to the past 12 months to see if they could have done things differently, what they liked or disliked about 2008. Well, I am not happy that the newsletter hasn't been out regularly so my New Year's Resolution is to get it out by the 2nd week of each month without fail. I'd like you all to consider some resolutions too. Possibly you could resolve to attend at least one meeting in 2009. I know Maine is a big state but it's not like you have to drive to New York to attend a meeting. Fairfield is at most 2 hours from just about anywhere in Maine (Millinocket excluded). I know it's difficult for some to come to every meeting but please consider attending at least one meeting this year. Another thing you might consider is sending in something for the newsletter. It doesn't have to be a Pulitzer Prize winning article. You can just tell us what you've been doing, a couple of paragraphs that's it.

I'll get the newsletter out each month whether I get articles or not but I would greatly appreciate a little help. Have a great year members. Hope you have lots of babies ... herps that is.

## Behavior of Juvenile Snapping Turtles ( *Chelydra serpentine*) in an Aquarium by Anthony Taylor

first published MHS Newsletter - Vol 2 No 6 - Feb 1994

One afternoon last June, bright and sunny like so many others, I was hiking in bog country near Roberts Pond in Dayton with turtle researcher Don Swann. We had inspected several vernal pools, now rapidly drying up, looking in vain for spotted turtles. Giving up, we hiked a short distance to a recently logged upland where Don had seen painted turtles nesting last year. In the middle of a clearing, a marshy pond was in the last stages of drying up. Not a turtle in sight.

We got back in the car and followed a dirt road through some farmland towards another marsh. We mounted a slight rise followed by a rollercoaster plunge, as the road dipped towards a marsh. In the distance we saw a small crowd in a sunlit clearing, staring at an object in the road. Coming closer, I could see that they were watching a two-foot snapping turtle digging in the sand.

The turtle took no notice of the people or of the occasional passing car. Mechanically, it inserted first one, then the other back foot into the hole, deftly enlarging it with circular scooping motions and emptying pawfuls of sand to a pile behind her. The female turtle was fashioning a nest, a cosy chamber in the warm moist sand for her eggs, which then began to emerge from the huge armored body one at a time, at intervals of about thirty seconds. I took photos and noted the date and time: 2:30, June 13, 1993.

Finally the turtle began shoveling sand into the hole again to cover her nest. This accomplished, the big snapper seemed to wake from a trance. As if noticing us for the first time, it made a comically frantic scramble for a nearby creek, and tumbled over the edge of a culvert to disappear in the murky water with a resounding splash.

Nearby were empty, curled, white shells scattered about on the road - all that remained of last night's turtle egg feast by skunks or raccoons. Then and there I decided to dig up a few eggs to incubate at home. The next day I returned and carefully unearthed fifteen eggs, covered the remaining eggs with sand and covered the next with a piece of wire-mesh lawn edging buried below the surface. I

marked each egg's top side with a felt-tip marker before removal so that it could be set down in the same position as it was deposited in the nest. The eggs were gently placed on a bed of sand in a plastic tub for the ride home.

### Incubation

My setup for incubating and hatching snapping turtle eggs consisted of an old-fashioned wooden soda bottle case, which was set on a table and filled with sand and covered with four more inches of sand. Heat was provided by a 100 watt bulb in a studio lamp with reflector, which was kept on twelve hours a day. Temperature was monitored by means of an aquarium thermometer buried in the sand. By adjusting the distance of the bulb, I was able to maintain a consistent daytime temperature of about 88 degrees F. A pint of lukewarm water was used to moisten the sand every third day. The height of the sand was level with the box handles, which are oval holes in opposite sides of the box. By the middle of August, a plastic tub filled with an inch or so of water was placed on a pile of books just under each box handle to catch any hatchling turtles that might venture out through the holes.

On the morning of August 25, I woke to find two hatchlings paddling around in one of the tubs. This was followed by the emergence of seven on August 26, also during the night or early morning, and one on August 28. All found their way to the tubs of water unaided with the exception of one individual I found alive but still entombed in the sand when I dismantled my brooder box on September 4. Of the original fifteen eggs, eleven produced viable hatchlings and four failed to develop.

### Aquarium Setup

Snapping turtle hatchlings are reputed to be difficult to raise. Seeking information on the subject, I contacted Nadine Wheeler, a turtle rehabilitator with the Center for Wildlife in Cape Neddick, Me. She was most helpful, and explained that hatchling snapping turtles are poor swimmers, tire easily, and may become disoriented and drown in the sort of shoreless

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aquarium suitable for the more buoyant painted turtle hatchlings.

The hatchlings first home was simple a ten gallon aquarium with an inch and a half of water and a few aquatic plants. This was soon replaced with a more elaborate setup based on a twenty-gallon tank. Its layout was planned with the following objectives in mind a) to minimize drowning and fatigue hazards, and b) to duplicate typical features of the marshy pond - sloped bottom, both open water and thickets of submerged plants, areas of both deep and shallow water, and a light gradient. I used a slate slab from a old sink to fashion a sloped bottom, with a piece of sod furnishing a bed of submerged grass at the shallow end. A Small corner filter was held in place by submerged bricks at the deep end. The bricks were stacked in step fashion against one narrow end in an L-shaped arrangement. A few strands of Rigid Hornwort were placed in the open water as a means for the hatchlings to climb to the surface. At first the water was three inches deep. This was increased an inch a time to eight inches over several weeks in October and November. On December 20, I moved the turtles to a 55-gallon tank that I had readied. The layout was similar to the first one on a larger scale, with a slate bottom slanted 30 degrees giving the effect of a shoreline and the water 12" at the deep end. At the shallow end a concrete patio slab supported on bricks provides a rest area in 3" water. At the deep end a concrete slab forms a shelf, also 3" under the water, under which is a hiding place for a resident mud turtle. An all-spectrum incandescent bulb with reflector was place 12" above the shallow end, providing a light gradient from one end of the tank to the other.

#### Behavior

A study of the habits of hatchlings of different species of freshwater turtles could be a rewarding project. For instance, does each species have its own particular brand of behavior?. From the first day the hatchling snappers showed the snapping reflex typical of most reptiles. Small objects that move are snapped at, while larger objects arouse the defense or flight reaction. Since juvenile turtles are notoriously secretive in the wild, most studies have focused on adults. Few interesting or valuable observations can be made unless the animals are kept in a place that approximates the natural environment. In an aquarium with both shallow and deeper water, brightly lit and shadowy areas, open water and wee-

choked shallows, one can observe how each area is used and which are avoided.

Analysis of marsh depth at point of capture for 1600 snapping turtles trapped in the E.S. George Reserve in Michigan revealed that younger turtles were more likely to be captured in shallower water. Their preference for plant-filled shallows over open, deeper water may help juvenile snapping turtles avoid predators (Congdon 1992).

In the first few weeks the baby snappers explored their enclosure by crawling along the bottom, and utilized the floating strands of Rigid Hornwort as a means of staying near the surface in deeper water without constant paddling. They were attracted to the thicket of submerged grass. From the start they displayed strong cryptic behavior, or tendency to hide. While some could be found resting on the submerged bricks or clinging to the edges of other shallow water perches, at least half of the turtles at any given time would be imbedded in the 'grass-root jungle', a snout or two poking up unobtrusively among the leaves and stems. Individuals were often seen asleep in the tangle of roots near the glass sides of the tank, heads just beneath the surface. A grasping reflex is well-developed. Crevices and gaps between rocks or bricks were sought as resting places where individuals could wedge themselves. When I would gently try to pick up an individual, it would resist by gripping an available surface with it claws.

At the sixth week (October 12), I thinned out the floating plants to furnish enough open water to encourage the development of swimming skills, At this stage the snappers seldom really swim unless anxious for gulp of air or a resting place near the surface. Occasionally, an individual would launch itself off a perch into deeper water. A few strokes of ineffectual paddling and the turtle lands on the bottom to continue on its way, half crawling, half swimming. The commercial floating food sticks are useful as a stimulus to swimming activity. Once carapace length exceeds 2", juveniles are more buoyant, and can float effortlessly. A few weeks of favorable feeding conditions is evidently all it takes to transform the sluggish, uncoordinated bottom crawler of 1- 1/2" carapace into an inquisitive, highly mobile and maneuverable swimmer of 2-3" size range.

#### Snorkeling and Basking

When approaching the shallow end of the tank, young snappers will adopt one of two characteristic

snorkeling postures. A 6" individual will stop at a point on the slope where the water is 5" deep and raise itself vertically, balancing on a tripod of the hind legs and tail. The long neck, which is used to break surface, breath, and look about, can be instantly withdrawn. This has obvious safety value. The other position, in shallower water, is a four footed stance with the body tilted up on the front legs, or body tilted up and floating, rear legs lightly touching the bottom. The tail has a stabilizing role in preventing a vertically snorkeling turtle from failing over backwards. Some turtles do, in fact, occasionally lose their balance when thus extended, and fall over backwards.

Soon after hatching the turtles showed a liking for gathering in apparently social fashion on the shallow water perches, similar to communal basking behavior of other freshwater species. Often several would be seen lining up vertically at the stepped bricks, giving the impression of a bunch of guys lined up at the bar. The area around the bubbling filter proved especially attractive. For months the turtles showed no inclination to leave the water, even when dry, well lit islands were provided. In mid-January I noticed one of the bigger turtles making futile efforts to climb the glass sides of the tank. Taking this action as a cue, I made a basking island under the all-spectrum bulb. Soon there were four or five individuals at a time piled on top of each other on the island. It appears that the basking habit doesn't appear until the turtles attain at least a 3" carapace length. Perhaps this is related to the necessity of keeping out of sight while still small enough to fit down a bittern's gullet!

Small earthworms were seized and devoured greedily from the first day of hatching. Other staples include Reptomin ( a brand of floating fish-meal sticks), and chopped fish, beef, and lettuce. Anything introduced in the tank is investigated with curiosity. A floating glass thermometer, plastic siphon hose, and my fingers were bitten at. Guppies put in the tank prompted frenzied pursuit. Interest slackened when the turtles discovered that the fish could elude their frantic efforts. A small crayfish found itself stalked by a pair of turtles, and soon vanished.

Growth in aquarium-raised snappers is apt to be rapid but uneven for a group of hatchlings. By the fifteenth week, differences in size were pronounced, ranging from 1 7/8" to 3 1/4" carapace length. In mid-December I noticed one individual whose growth was lagging behind the others. When I removed a fouled portion of submerged

sod, I noticed him paddling and thrashing about ineffectually. When a fresh grass mat was introduced, the turtle promptly burrowed in. Closer observation revealed that this smallest of the turtles swam with it front limbs only, rather than with the coordinated paddling of front and back legs on opposite sides in unison, as is typical of aquatic turtles.

With diced fish, I find that feeding them individually is far less messy than simply dumping it in. If I'm quick enough each gets a piece or two and we avoid the mad scramble in which chins and legs are bitten. At feeding time the normally amiable creatures are in an eager frenzy. Any food sticking out of a turtles beak is fair game for another turtle to snap at. "Snap" is too decorous a word to describe the piston-like lunge of the head, followed by a vise-like grip that won't let go. The sight of two turtles hinged together by a misplaced bite and thrashing about convinced me of the advantages of hand-feeding. Yet these misadventures appear to be the accidental seizing of a competitor's flailing limbs rather than overt aggression. Even in the unduly crowded of captivity, I've never seen any animosity among individuals beyond a halfhearted snap as a 'back-off' gesture aimed at a turtle climbing on to another's carapace in the water.

After a feeding, some individuals are industriously checking out every square inch of the bottom, looking in corners for an overlooked morsel. You can read a turtle's thoughts by the way it pokes its head this way and that, scrutinizing each speck. This kind of patrolling behavior must be rewarded occasionally. With each feeding of fish I provide two or three times as much chopped lettuce. The lettuce floats at the surface and is hunted down by the scavenger crew much like the Reptomin, but at a more decorous pace.

By turns placid and bellicose, the snapping turtle's disposition is influenced by whatever is going on at the moment.. While kayaking on Robert Pond, I came across a large snapper browsing contentedly on lush submerged plants. I saw a tell-tale movement of the vegetation, rushed over in time to see the turtle take a bite before it saw me and silently dove for the safety of the murky depths.

## Diamond Python (*Morelia spilota spilota*)

by  
Josh Easter



The Diamond Python is indigenous to the extreme Southeastern Coast of Australia, from the Central Coast of New South Wales to Northeastern Victoria. This range makes them incredibly tolerant of temperature extremes, where Summer highs can reach 100+ F and Winter lows dip below freezing. Unlike most pythons, which come from an area with a well defined wet/dry seasonal cycle, the Diamond Python's range has four discernible seasons.

The average size for this subspecies is a slender 6-8ft. They are very active compared to most pythons, and will make use of any climbing opportunities. During Summer they are predominantly nocturnal, seeking refuge during the heat of the day and becoming active at night when temperatures begin to drop. They have a very strong feeding response during this time, and care should be taken to avoid any bites. Although they are generally a very mild mannered species, the urge to feed takes over whenever a warm blooded animal or hand is nearby. In Winter, these snakes will curl up in a very tight coil to conserve heat at night, often for several days before coming out to bask. Winter night time low temperatures can easily drop below 50F with no ill effects. It is strongly recommended

that a basking spot be available for several hours during the day, which the snakes will use off and on throughout the winter. It is recommended that Diamonds be housed separately. I keep my pair together in Winter to take advantage of the coldest enclosure in my snake room. They are separated in February or March, when the temperatures begin to reach a level that would cause them to engage in hunting activity. There is at least one account of cannibalism in this species.

Being an active, medium sized python, a large cage is necessary for Diamonds. As hatchlings, a standard plastic tub with paper substrate, a water bowl, perch and hidebox is all that is required, increasing the tub size as the snake grows. As adults, a cage measuring 4-6 feet long, and at least 2ft high is required to allow for their active nature. A larger enclosure also makes it easier to create the temperature range that this species requires to thrive. An ambient temperature of 65F with a basking spot of 85F works well in summer, and a night time low in the 60s. In Winter, I recommend ambient temperatures around 60F during the day and into the low 50s at night. A basking area of 80F works well. I stop feeding Diamonds when the night

time low starts getting below 60F, usually in late October.

Humidity requirements for Diamonds are not overly specialized. They do well with an average ambient humidity between 50-80%. Care should be taken to avoid too much moisture, especially during winter. Generally, a large water bowl will be all that's required to meet their needs. Diamonds will sometimes soak in their water bowl if they can't find a suitably cool area in their cage.

Diamond Pythons have proven problematic for many breeders, which has resulted in many people crossing them to more prolific species, such as Coastal and Jungle Carpet Pythons. Through selective breeding, these crosses have come to resemble pure Diamonds, leading to a lot of controversy regarding the purity of many examples. There is no fool proof method of discerning purity in a Diamond Python, but there are a few indicators to look for. The Diamond crosses will usually breed in late Winter, as opposed to pure Diamonds, which breed in mid Spring. A hatchling Diamond Python available in March is certainly a red flag. In my experience, pure Diamonds tend to have a darker overall appearance compared to the crosses. Given the variability of Diamonds, this is not a certainty, but one of several factors to take into consideration. The surest way of getting a pure Diamond is to do your research. If a breeder is reluctant to answer questions regarding lineage, or isn't sure, it's probably best to keep looking.

There are some health issues associated with Diamonds. The most notable is Diamond Python Syndrome (DPS). Almost nothing is known of the cause, but the symptoms include loss of muscle tone, brittle bones, and sudden death. It has been compared to Metabolic Bone Disease, often seen in diurnal lizards. Ultraviolet light and vitamin supplementation don't seem to prevent this in Diamonds. Overfeeding is often suggested as a possible cause. Diamonds generally only eat for about 6-8 months out of the year, and too much food intake could certainly tax the organs and cause digestive issues, including an inability to process food properly, leading to vitamin and/or mineral

deficiencies.

It is also commonly thought that the Diamond Python's natural lifespan is very short, only 7-12 years on average. This has been proven false by Gary Valle, a breeder located in Southern California. In 2008, Gary got viable eggs from a pair of Diamonds hatched in 1988, making this pair 19.5 years old at the time of egg laying.

My personal opinion on the health problems associated with Diamonds relates to husbandry. I be-



lieve that many keepers are either keeping them too warm or feeding them too much, or both. As hatchlings, feeding every 7-10 days works well. I feed yearlings every 2 weeks, and add a week between feedings after each Winter. At 3 years old, my Diamonds were offered food approximately every 3 weeks. This leads to slow growth with ideal body proportions. An adult male may only eat one large rat every 4-6 weeks. It will take 5-6 years to raise a female to breeding size, which is comparable to their growth rates in their native range.

Being a species specifically adapted to a temperate environment with significant seasonal changes, Diamond Pythons are an ideal species to work with in Maine. Their behavior is quite unique, and they are often visible within the enclosure. Their calm demeanor, manageable size, and striking beauty make them a great display animal, pet, or breeding project.

**The Lizard King** *The True Crimes and Passions of the World's Greatest Reptile Smugglers* By Bryan Christy  
241 pages. \$24.99.

I received this book as a requested Christmas gift. It deals with the seedy world of reptile smuggling around the world. Mostly told by interviews with Mike Van Nostrand, owner of Strictly Reptiles in Florida and friends and co-workers of Special Agent Chip Bepler of the US Fish and Wildlife Service.

To be honest I was stunned by the magnitude of the smuggling operations and the huge amounts of money involved. We are not talking about a dozen bearded dragons smuggled out of Australia. We are talking about 100 radiated tortoises per shipment from Madagascar. It seemed no group was without some unscrupulous individuals caught up in the smuggling. Zoos, pet shops, hobbyists as well as government officials from around the world were involved. In fact, according to Christy, for a while zoos were the knowing recipients of some of the rarest smuggled reptiles.

It was fun for me to read because I have purchased

reptiles from most of the individuals mentioned in the book. I purchased my first boa from Ed Chapman at the Miami Pet Fair where Van Nostrand met his wife Michelle.

The book is easy to read, a little hokey in places and makes you sick to your stomach at other times. It points out the extreme difficulty that wildlife officials have in investigating and prosecuting these type of crimes and the ease with which these criminals could find ways to circumvent the laws meant to protect wildlife. Even to the point of using loop holes to work against the officials and forcing them to legitimize the illegal imports.

It is scary to think that this is still going on all over the world and often governments simply to not care.

My only complaint is that it appeared to glorify Mike Van Nostrand a little too much. Probably because Christy helped out at Strictly Reptiles for a few years while doing research for the book. Other than that this is an interesting read.

Kevin Murphy

## Classified Advertisements

Classified advertisements are free to dues paying members. The format for the ads should be as follows: 1.1.1 The first number represents the number of males, the second represents the number of females, and the third, the number of unknown sex. Please use the species name whenever possible. The Maine Herpetological Society is not responsible for content, prices, or errors in classified ads, nor do we receive any compensation from the sales resulting from these ads. \*\*

MHS Items for sale Members prices: New MHS T-shirts and hats \$10 ea. 4 sizes available, Adult S,M,L,XL Maine Reptile and Amphibian Book including the frog CD, \$15 each; ME Herp Posters, 4 varieties, snakes, turtles, amphibians and vernal pools. \$3 ea.; They are also available by contacting Doug Kranich (723 4108) or [kranich@verizon.net](mailto:kranich@verizon.net) They can be mailed but shipping will be added to the cost.

Patterson Reptiles Availability Male "Calico/Ghost" Albino House Snake \$10,000; Male Albino Jungle House Snake \$300, (L.fulgiosa X L.l.lineata), 2 Male Albino Patternless House Snakes \$300 each, 2 Male Whitewater Rosy Boas (Het Albino) \$50 each; Male Striped Cornsnake (het albino) \$25; Male VR Strain Orange Thayeri \$125 Male Sinaloan Milksnake \$150 ; (possible Double Het Hypoerythristic & Spotted); 3.2 Nelson's Milksnakes \$35 each ; Male Aberrant Nelson's Milk Snake \$50; FedEx certified, USA shipping ONLY, Live Arrival Guarantee, Terms on website: Contact Jason Patterson, <http://www.pattersonreptiles.com/>.

For Sale: For Sale: 08 Tangerine albino Hondurans, wickedly beautiful. \$125ea or \$225pr. 08 Eastern chain kings \$40 ea. or \$75pr. 08 Transpecos ratsnakes (het blonde) \$55ea or \$95pr; Doug Kranich, Millinocket 723-4108 or email [kranich@verizon.net](mailto:kranich@verizon.net)

For Just about everything J & J Reptiles, Check out his web site at: [jnreptiles.com](http://jnreptiles.com) if he doesn't have what you want call him at (207) 479-6658 and Josh will get it for you.

For Sale: Nicaraguan boas \$125.00 ea.; ball pythons \$25.00 ea. Contact Kevin Murphy - 207-576-0157 [kmurphy70192@roadrunner.com](mailto:kmurphy70192@roadrunner.com)