

RESULTS of HUSBANDRY SURVEY.

1) Would your institution be interested in receiving additional pig-nosed turtles?

Columbia	Yes	0.0.?
Dallas	No	
Fort Worth	Yes	0.1
Metro Zoo	Yes	1.1
NY Bronx	Yes	0.4
Oklahoma	No	
Philadelphia	Yes	0.0.?
Toronto	No	
Steinhart	No	
St. Louis	No	

2) Would your institution be interested in surplusing any pig-nosed turtles?

Columbia	None
Dallas	None
Fort Worth	None
Metro Zoo	None
NY Bronx	None
Oklahoma	None
Philadelphia	None
Toronto	Yes 0.1
Steinhart	None
St. Louis	None

3) Do you find the Pig-nosed turtle to have a High/Average/Low Visitor appeal?

Columbia	N/A
Dallas	High
Fort Worth	Average
Metro Zoo	Average
NY Bronx	High
Oklahoma	Low
Philadelphia	High
Toronto	High
Steinhart	Average
St. Louis	Average

4) Experience with co-housing Pig-nosed with each other.

Chattanooga	Individuals number 169 and 170 chase each other. Not interpreted as very aggressive, but as obvious courting.
Columbia	Never housed with other pig-nosed turtles.
Dallas	Never housed with other pig-nosed turtles.
Fort Worth	Ongoing conflicts/stress noted, with injurious encounters, the animals were separated.
Metro Zoo	Ongoing conflicts/stress noted, with injurious encounters (minor bruising which developed fungus), the animals were separated. We are keeping 1.1 adults in a large (15 foot diameter) outdoor pool with no problems.
NY Bronx	Initial and ongoing conflicts/stress noted, with injurious encounters. Sometimes separation is employed to stop conflicts with other <i>Carettochelys</i> . One exhibit consists of three pools and turtles have been moved from one pool to another. Sometimes the animals move from one pool to another on their own. On other occasions conflicts stop without intervention.
Oklahoma	Conflicts/stress noted initially and ongoing, with injurious encounters, resolved with a change or separation.
Philadelphia	Each individual is housed separately upon acquisition.

- Toronto Ongoing conflicts/stress noted, with injurious encounters, the animals were separated. Injuries were not serious, but were superficial wounds.
- Steinhart Initial conflicts noted without injurious encounters. Larger tank was used with more furnishings.
- St Louis All individuals housed separately
- 5) Experience with co-housing Pig-nosed turtles with other species.
- Chattanooga Individual 158 has been trying to mount a *Chelodina expansa*. Does not seem too aggressive, no biting, just maneuvering for position.
- Columbia No mixed species experience.
- Dallas No mixed species experience.
- Fort Worth Other animals co-housed with the pig-nosed turtles are 3 gharials 8 to 11 feet long, 7 *Callagur borneoensis* 10 to 30 pounds, and 0.1 *Podocnemis unifilis* at 6 to 7 pounds. Conflicts involve one pig-nosed turtle swimming into middle of a gharial feeding frenzy trying to steal a trout. Several small nicks have been noted but none warranting treatment. Ongoing conflicts/stress noted, injurious encounters with others species, not the Pig-nosed turtles, resulting in the animals no longer conflicting/ stressing each other without separation or exhibit change.
- Metro Zoo No conflicts/stress or injuries noted when mixed with 1.1 adult *Varanus salvator* or numerous fish including barbs, knives, catfish, etc.
- NY Bronx In one exhibit, other species include large adult *Batagur baska*, *Callagur borneoensis*, *Geoclemmys hamiltoni*, *Hieremys annandalei*, *Orlita borneensis*, *Pelochelys bibroni*, and *Gavialis gangeticus*. Some injurious encounters with *G. gangeticus*, seem to have occurred during feeding. In another exhibit, 450 gallons, the *Carettochelys* have initially dominated *Chelodina expansa*.
- Oklahoma No mixed species experience.
- Philadelphia No mixed species experience.
- Toronto No conflicts/stress or injuries noted when mixed with 2.2 green tree monitors and 2.3 white-lip frogs.
- Steinhart No conflicts/stress noted with a school of Bleher's rainbowfish.
- St. Louis No mixed species experience.
- 7) Frequency and types of food offered.
- Columbia Nasco Turtle Brittle, sweet potato, pathos, Tetra Reptomin, offered three times per week
- Fort Worth Nasco Turtle Brittle, banana, cantaloupe, apple, sweet potato, grapes, carrot, trout(one specimen only). Different individuals show different preferences at different times. Individual 116 eats nearly all of the above, while individuals 162 and 165 will only eat Nasco Turtle Brittle.
- Metro Zoo Fly River Turtle Diet:  
Ingredients: Turtle Chow, 2-3 bananas, 2 apples, 1 bunch kale, 6 smelt, grapes, 8 envelopes gelatin, 1 teaspoon Nekton R, water.  
Preparation: Cover bottom of large pan with turtle chow. Cover with water, let soak until soft. In 1 cup of water sprinkle the gelatin and let it sit for a few minutes. Microwave for about two minutes and stir to dissolve. In Blender mix fruit, fish, kale, vitamins and chow. Add small amounts of water at a time so that mixture stays thick but still moves around in blender. Pour into pan and mix in dissolved gelatin. Do not mix gelatin with produce/fish/chow mixture in Blender! Leave in refrigerator overnight, then cut into cubes and freeze. Turtles can be fed ripe bananas and grapes also.
- NY Bronx Fed three or four times a week. Offered items include Turtle Chow, Trout Chow, Turtle Brittle, shiners (gold fish have been used in the past), worms, greens (turnip, mustard, dandelion, kale, and chicory) mixed with carrots and apples. Bananas, grapes and cantaloupe are infrequently offered.

- Philadelphia Offered trout chow daily or every other day, as much as will be consumed in five to ten minutes. Two to four times a week a chopped fruit/vegetable mix is offered consisting of grapes, tomatoes, apples, oranges, microwave cooked carrots and sweet potato. Romaine or escarole is floated on the water surface up to twice a week in the winter and mulberry, *Morus alba* branches in the summer. Of the mulberry the leaves and small green branches and petioles are consumed as is the bark from larger branches. Once a week smelt and/or chicken is offered and readily consumed.
- Toronto Sundays: 60gm fruit bat gelatin, 120gm turtle gelatin, and 120gm beef heart gelatin. Wednesdays: 60gm fruit bat gelatin, 45gm chopped romaine/spinach, 15gm grated carrot, 15gm bean sprouts, 15gm tomatoes, 15gm avocado, 15gm melon, 15gm grapes, 30gm bananas, and 30gm apples. Fridays: 270gm softbilled gelatin.
- Steinhart Cut fish and pothos offered daily. Occasional Trout Chow and Reptomin is consumed.
- St. Louis Three times a week, Mazuri Gel diet, Trout Chow and earthworms are offered.
- 8) Temperature profiles over the course of one year.
- Columbia 80°F to 84°F (27°C to 29°C) year round.
- Dallas Were kept at 80°F (27°C).
- Fort Worth Early on the temp. was low to mid 70°F (21°C), but was increased to approximately 80°F (27°C). The pig-nosed turtles eat better and heal abrasions faster at this temperature.
- Metro Zoo Upper 60°F to low 70°F (16°C to 21°C) in winter to 80°F (27°C) plus in the summer.
- NY Bronx In one exhibit the temperature is 82°F to 85°F (28°C to 30°C) year round. In another exhibit, the water temperature is kept at 82°F (28°C) year round, with air temperature conditioned for the public to the upper 70°F's (21°C and up) during the summer. Most recently this last exhibit's winter water temperature had been reduced to 75°F (24°C) for three months and then slowly brought back up to 82°F (28°C).
- Philadelphia Adult male is kept in water at 76°F to 82°F (24°C to 28°C), the higher temp preferred when water supply allows such. 1.1 subadults are kept at 82°F to 86°F (28°C to 30°C) at all times.
- Toronto Constant 27°C to 28°C (80°F to 82°F).
- Steinhart Temperature is maintained in the range of 76°F to 80°F (24°C to 27°C).
- St. Louis 80°F to 82°F (27°C to 28°C).
- 9) Shipping parameter suggestions.
- Fort Worth We have used foam rubber in the past which seems to have worked with large specimens. We worry about materials such as cloth bags and spaghnum clogging nostrils and irritating eyes during shipping. Also it is a good idea to use boxes or containers that are only slightly larger than the animal (particularly with larger specimens) to limit shifting of the animal during shipping.
- NY Bronx We recommend wet foam lined containers.
- Toronto Packing in moist cotton bags in a crate with a sponge or foam sides and bottom was successful. If stressed minor abrasions are prone to bacterial infections. They will often not feed for several weeks post-shipping.
- Steinhart Ship in plastic boxes with furniture foam on sides and bottom to avoid bruising.
- 10) Additional information desired.
- Fort Worth Shipping considerations: This species is quite prone to injuries due to the soft and delicate nature of the shell. However, the shell also heals remarkably fast particularly at temperatures of near 80°F. When restrained and forcibly given medication, our specimens have stressed out to the point of not feeding for extended periods. Reproductive events: Individual 121 laid 15 eggs, incubation failed after a few months. Egg necropsy revealed 7 fertile, and 8 infertile eggs. Eggs were laid 27-30 July 1995 after 30 units (.5cc) of oxytocin had been administered. Mating, not observed, had occurred at NY Bronx in a multiple male situation.
- NY Bronx Several females have laid eggs following oxytocin induction. None appeared fertile.