

**TERRAPIN MONITORING AT POPLAR ISLAND
ENVIRONMENTAL RESTORATION PROJECT**

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A terrapin hatchling on Poplar Island.

BACKGROUND

The Poplar Environmental Restoration Project (PIERP) is a large-scale project that is using dredged material to restore the eroding island in the Middle Chesapeake Bay formerly known as Poplar Island. As recently as 100 years ago, the island was greater than 400 hectares and contained uplands and high and low marshes. During the past 100 years the island had eroded and only three, small (<4 hectares) islands remained before the project commenced. In a large-scale project, the United States Army Corps of Engineers (USACE) and the Maryland Port Administration (MPA) are rebuilding and restoring Poplar Island. A series of stone-covered dikes facing the windward shores prevent erosion. Dredged material from the Chesapeake Bay approach channels to the Port of Baltimore is filling the areas within the dikes, ultimately restoring the island to a size similar to what existed over 100 years ago. The ultimate goal of the project is to rebuild and restore the habitat for the wildlife that once existed on Poplar Island.

In the first summer following completion of the perimeter dike in 2002, diamondback terrapins, *Malaclemys terrapin*, began using the newly formed habitat as a nesting site (Roosenburg and Allman 2003; Roosenburg et al., 2005; 2004; 2003). The persistent erosion of Poplar and nearby islands had greatly reduced the terrapin nesting and juvenile habitat in the Poplar Island archipelago. Prior to the initiation of the PIERP, terrapin populations in the area likely declined due to emigration of adults and reduced recruitment because of limited high quality nesting habitat. By restoring the island and providing nesting and juvenile habitat, terrapin populations utilizing the PIERP and the surrounding wetlands could increase and potentially repopulate the archipelago. The newly restored wetlands could provide the resources that would allow terrapin populations to increase by providing high quality juvenile habitat.

The PIERP is a unique opportunity to understand how large-scale ecological restoration projects affect terrapin populations and turtle populations in general. In 2002, a long-term, terrapin monitoring program initiated documenting terrapin nesting on the PIERP. By monitoring the terrapin population on the PIERP, resource managers can learn how creating new terrapin nesting and juvenile habitat affects terrapin populations. This information will contribute to understanding the ecological quality of the restored habitat on the PIERP, as well as understanding how terrapins respond to large-scale restoration projects. The results of five years of terrapin nesting surveys and juvenile captures are summarized herein to identify how habitat created by the PIERP is used by diamondback terrapins.

As stated in the 2006 PIERP Framework Monitoring Document, the purpose for terrapin monitoring is to: quantify the use of nesting and juvenile habitat by diamondback terrapins on Poplar Island, including the responses to change in habitat availability throughout the progression of the project; determine hatchling viability, recruitment rates, and sex ratios to evaluate the suitability of the island for terrapin nesting; and to determine if the project is affecting terrapin population dynamics by increasing the amount of juvenile and nesting habitat on the island.

The terrapin's charismatic nature makes them an excellent species to use as a tool for environmental outreach and education. Some of the terrapin hatchlings that originated on the PIERP participate in an environmental education program in the Anne Arundel County and Baltimore City schools, through Arlington Echo Outdoor Education Center (AE). These programs provide students with a scientifically-based learning experience that also allows Ohio University researchers to gather more detailed information on the nesting biology of terrapins, in addition to providing an outreach and education opportunity for the PIERP. As part of the terrapin research program at the PIERP, Ohio University researchers are collaborating with staff at AE to maintain both a classroom and field experience that uses terrapins to teach environmental education and increase awareness for the PIERP. The specific goals of the terrapin outreach program are:

- 1) Provide approximately 150 terrapin hatchlings to Arlington Echo to be raised in classrooms,
- 2) Obtain sex ratio data from the hatchlings through endoscopy, and
- 3) Initiate a head-start program to scientifically evaluate this practice.



Figure 1. In red are the areas on the PIERP that were monitored for terrapin nests by the research team.

METHODS

Specific details of differences in surveys and sampling techniques used during 2002 - 2005 can be found in Roosenburg and Allman (2003) and Roosenburg et al. (2003; 2004; 2005). Since 2004, survey efforts to find nests were consistent and thorough. Details of the general survey methods and specific techniques employed during 2006 are described below.

Identification of terrapin nests: From 15 May to 1 August 2006, Ohio University researchers surveyed the following areas daily: beaches in the notch area (near Cell 4), areas between Coaches Island and the PIERP (outside of Cell 5), inside the open upland cell (Cell 6), and the

beach outside the dike in Poplar Harbor (outside Cell 3; Figure 1). The researchers occasionally searched the periphery of Cell 4DX

for signs of terrapin nesting on the surrounding dikes. Geographic positioning system (GPS) recorded nest position and survey flags identified the specific nest location. Upon discovering a nest, researchers examined the eggs to determine the age of the nest. If the eggs were white and chalky, they considered the nest greater than 24 hours old and no further excavation was conducted. Researchers excavated recent nests (less than 24 hours old) to count the number of eggs and from 2004 through 2006 weighed the individual eggs. Researchers marked nests with four 7.5 cm² survey flags, and beginning in 2005, laid 1.25 cm² rat wire over the nest location to deter avian nest predators, primarily crows.

Monitoring hatching success: After 45 to 50 days of incubation, researchers placed an aluminum flashing ring around each nest to prevent emerging hatchlings from escaping. Anti-predator (1.25 cm²) cages were also placed over nests to prevent avian predators from preying on emerging hatchlings within the ring. Beginning in late July, the researchers checked ringed nests at least once daily for emerged hatchlings. Researchers brought newly emerged hatchlings to the onsite storage shed where they measured and tagged the hatchlings.

Researchers excavated nests ten days after the last hatchling emerged. For each nest, they recorded the number of live hatchlings, dead hatchlings, and eggs that appeared to be incompletely developed. To estimate hatching success, researchers compared the number of surviving hatchlings to the total number of eggs from only the nests for which total clutch size was known. Additionally, researchers determined if the nest was still active – eggs that appeared healthy and had not completed development. The researchers allowed nests containing viable eggs or hatchlings that had not fully absorbed their yolk sac to continue to develop; however, researchers removed fully developed hatchlings from nests.

Capture of hatchlings: Researchers collected hatchlings from ringed nests and from unringed nests that were discovered by hatchling emergence. Additionally, researchers found a small number of hatchlings on the beach, which they collected and processed. Because a significant number of the 2006 nests over-wintered (hatchlings remaining in the nest until spring of the following year), researchers traveled to the PIERP on 29 March 2007 to excavate and determine the fate of over-wintering nests.

Measuring, tagging, and release of hatchlings: Researchers brought all hatchlings back to the Maryland Environmental Service (MES) shed onsite where they placed hatchlings in plastic containers with water until they were processed (measured, notched, and tagged), usually within 24 hours of capture. Researchers marked hatchlings by notching the 9th right marginal scute and 11th left marginal scute establishing the cohort ID 9R11L for 2006. From 2002 through 2005 different notch codes were used to identify specific cohorts upon subsequent recapture. Researchers implanted individually marked coded wire tags (CWTs, Northwest Marine Technologies[®]) in all hatchlings. The CWTs were placed subcutaneously in the right rear hind limb using a 25-gauge needle. The CWTs should have high retention rates (Roosenburg and Allman, 2003) and in the future researchers will be able to identify terrapins originating from the PIERP for the lifetime

of the turtle. Researchers detected tag presence or absence using Northwest Marine Technologies' V-Detector.

Researchers measured plastron length, carapace length, width, and height (± 0.1 mm), and mass (± 0.1 g) of all hatchlings. Additionally, they checked for anomalous scute patterns and other developmental irregularities. Following tagging and measuring, researchers released all hatchlings in either Cell 4DX, Cell 3D. During 2002 – 2003 hatchlings were also released in the notch. On several occasions, large numbers (>50) of hatchlings were simultaneously released. During some years, hatchlings that emerged from late in the fall were held over winter and released the following spring. The hatchlings were re-measured at the time of their release to monitor any growth while in captivity.

Measuring, tagging, and release of juveniles and adults: All juvenile and adult turtles encountered on the island were transported to the onsite shed for processing. Researchers recorded plastron length, carapace length, width, and height (± 1 mm), and mass (± 1 g) of all adults. Passive Integrated Transponder (PIT) tags were implanted in either the rear foot or in the inguinal region; anterior to the hind limb in the loose skin where it meets the plastron. Additionally, a monel tag was placed in the 9th right marginal scute. The number sequence on the tag begins with the letters PI identifying that this animal originated on Poplar Island.

Arlington Echo Education Program: In a program coordinated by MES for the USACE and MPA, 150 hatchlings were provided to the Arlington Echo Outdoor Education Center (AE) for a terrapin education / environmental outreach program. In May 2007, researchers traveled to AE to implant PIT tags and determine the sex of these animals using laparoscopy. Researchers also measured and weighed all animals at this time. In late May and early June 2007, the AE animals were returned to the PIERP for release in the notch.

Researchers summarized and processed all data using Microsoft Excel[®] and Statistical Analysis System (SAS). Graphs were made using Sigmaplot[®]. Institutional Animal Care and Uses Committee at Ohio University (IACUC) approved animal use protocols (#L01-04) and Maryland Department of Natural Resources (MD DNR) – Fisheries Division issued a Scientific Collecting Permit Number 2006-70 to Willem M. Roosenburg(WMR).

RESULTS AND DISCUSSION

Nest and Hatchling Survivorship: During the 2006 terrapin nesting season (May – August), the researchers located 191 nests on the PIERP (Table 1, raw nest data provided in Appendix 1). Of these 191 nests, 112 successfully produced hatchlings and 69 nests were unsuccessful, and predators destroyed 54 nests (Table 1). Other nests failed because of thinned shelled eggs or they were washed out because females placed the nests too close to the mean high tide in areas where erosion was significant.

YEAR	2002	2003	2004	2005	2006
TOTAL NESTS	68	67	181	282	191
NESTS PRODUCED HATCHLINGS	38	50	129	176	112
NESTS THAT DID NOT SURVIVE	1	7	17	70	69
DEPREDATED (ROOTS OR ANIMAL)	0	0	12	46	54
WASHED OUT	1	6	3	11	13
UNDEVELOPED EGGS, WEAK SHELLED EGGS, OR DEAD EMBRYOS	0	1	0	12	1
DESTROYED BY ANOTHER TURTLE OR NEST WAS IN ROCKS	0	0	2	0	0
DESTROYED BY BULLDOZER	0	0	0	1	0
DEAD HATCHLINGS	0	0	0	0	1
UNKNOWN	29	10	36	36	10

Table 1 - Summary of the diamondback terrapin nests found and their fate on the PIERP from 2002 to 2006

Since 2002, the number of terrapin nests on the PIERP has increased significantly (Table 1). Although there were fewer nests in 2006 than in 2005, the general trend still indicates an increase in nesting activity on the island. There has been a shift in the nesting activity in the different areas of the island (Figure 2). The nesting activity outside of Cell 3 has decreased by about 50% from its high in 2004. This decrease is most likely due to a major reduction in the available nesting habitat that eroded away after tidal flow was opened into Cell 3D. The resulting change in hydrodynamics most likely resulted in a current that eroded the beach on the outside of the dike at Cell 3. Previously that beach was continuous outside the dike from Cell 3A to Cell 1A; it now lies only in front of Cells 3A and 3B. Nesting activity is increasing outside Cell 5 and the notch (Figure 2). However, there was a slight decrease in nesting rates on the outside of Cell 5 in 2006. This decrease may be due to the increasing vegetation on the dike along Cell

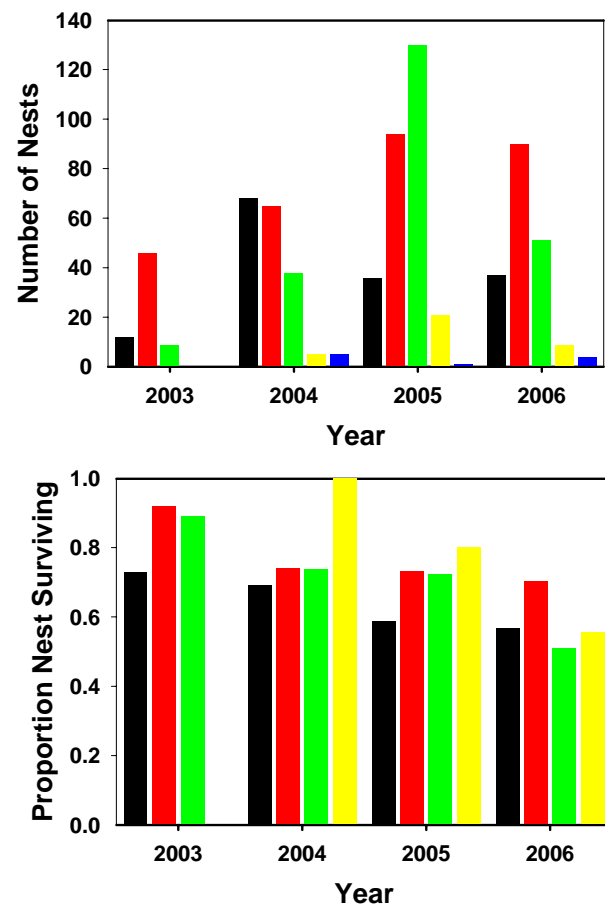


Figure 2 – The number of nests in each of the major nesting areas for each year of the study and the proportion of nests surviving



Figure 3 – Photo illustrating a protected nest to reduce crow predation (Photo by N. Boydston)

5. Increasing vegetation decreases the beach habitat utilized by terrapins to nest and also makes it more difficult to find nests that are present. The large number of nests outside of Cell 5 during 2005 is in part due to the exceptional capabilities of that summer's intern at finding terrapin nests relative to previous field assistants. From 2002-2006, there also has been a decrease in the proportion of nests that produced hatchlings. The researchers hypothesize that

the decrease outside of Cell 3 in part is caused by the loss of nesting habitat and turtles nesting in marginal areas where they are more likely to be washed out by exceptional high tides.

Along with the overall increase in the nesting activity, predation rates have increased too. The primary predators that destroyed terrapin nests were fish crows (*Corvus ossifragus*). It appears that the crows have learned to identify nests, excavate them and then eat the eggs including the shell. Because the crows consume the egg shells which clearly indicate the presence of a nest, researchers cannot distinguish depredated nests from excavations made by turtles while nesting that were abandoned prior to the laying eggs and then disturbed by crows. Researchers confirmed the crow behaviour by monitoring nests found before they were eaten and noting the absence of eggshells after predation. Other predators that have been observed eating terrapin eggs on the PIERP include willets (*Catoptrophorus semipalmatus*), eastern kingsnake (*Lampropeltus getulus*), and a small mammal, most likely a shrew (*Blarina spp.*). During the five years of the study, researchers have noticed some predation by foxes (*Vulpes spp.*). However, the elimination of foxes from the island has decreased the predation rates by foxes. During 2005, the predation rate by crows increased significantly (Table 1), however, no action by the terrapin researchers was taken to deter the predators. In 2006, because predation began earlier and at a higher rate, researchers began to place a small (0.25 m²) piece of 1.25 cm² hardware cloth over the nest held in place by the flags (Figure 3) to reduce avian predation. This practice greatly reduced predation and predation attempts observed of several protected nests occurred without the loss of eggs.

Researchers also have noted the presence of thin-shelled terrapin eggs on the PIERP. Thin-shelled eggs also have been observed in the Patuxent River terrapin population (Roosenburg personal observation). Thin-shelled eggs can occur in some of the eggs or the entire clutch. Ohio University personnel have noted that nests in which all of the

eggs have thin shells are frequently broken during oviposition and seldom hatch.. The cause of the thin-shelled eggs is unknown at this time, but it is not unique to the PIERP. Two possible causes that remain to be evaluated include first a toxicological effect by a factor ubiquitous in the Chesapeake Bay, or second, a resource limitation by the females to sequester sufficient amounts of calcium to shell the eggs.

Reproductive Output: Clutch size (Analysis of Variance; ANOVA, $F_{2,308} = 1.09$, $P > 0.05$), clutch mass (ANOVA, $F_{2,308} = 0.91$, $P > 0.05$), and average egg mass (ANOVA, $F_{2,308} = 0.67$, $P > 0.05$) did not differ significantly between 2004

Year	Clutch Size	Clutch Mass	Egg Size
2004	13.68 (0.379)	127.55 (4.372)	9.80 (0.110)
2005	13.62 (0.245)	133.11 (2.541)	9.92 (0.087)
2006	13.48 (0.248)	133.28 (2.570)	9.96 (0.081)

through 2006 (Table 2). During 2002 and 2003, researchers did not collect these data. These

Table 2. Summary of average clutch size, clutch mass, and egg size from 2004-2006 from the PIERP.

findings indicate that there is no difference in reproductive output in these parameters from one nesting season to the next. One interesting pattern that researchers detected in the terrapin data is an increase in variation in egg size within clutches as the nesting season progresses (Figure 4). Scientists discovered this pattern somewhat serendipitously when a failed weighing scale caused an interruption in the data collection in 2004. This caused a distinction between the beginning and the end of the nesting season and made a clean break that allowed comparison between eggs from the first half (early May to mid June) and the second half of the season (July). Interestingly, no difference in egg size could be detected but a difference in the standard deviation indicated that clutches were more variable in the second half of the season ($t = -3.56$, $P < 0.01$, Figure 4). This pattern is repeated in 2005 and 2006. What underlies the increase in variation in egg size as the season progresses is unknown. However, terrapins in the Chesapeake Bay can nest up to three times in a nesting season with as little as 15 days between clutches (Roosenburg, 1992). It is possible that the production and allocation of yolk to eggs and formation of the second and third clutch, which occurs in a short time interval results in more variation, and uneven distribution of resources to individual eggs relative to the formation of the first clutch, which occurs over a period of several months. The fact that thin-shelled eggs occur at a greater frequency at the end of the season also suggests that there may be resource limitations or a loss of control with regard to fine-tuning the allocation of necessary resources to individual eggs. This pattern may provide insight into how decisions to make an additional clutch during the nesting season could encounter a greater risk of nest failure because of a reduced quality of the eggs either through thinned shells or inadequate energy reserves for some eggs. . Terrapins nesting on the PIERP provide an excellent opportunity to test this hypothesis because of the high survivorship of nests.

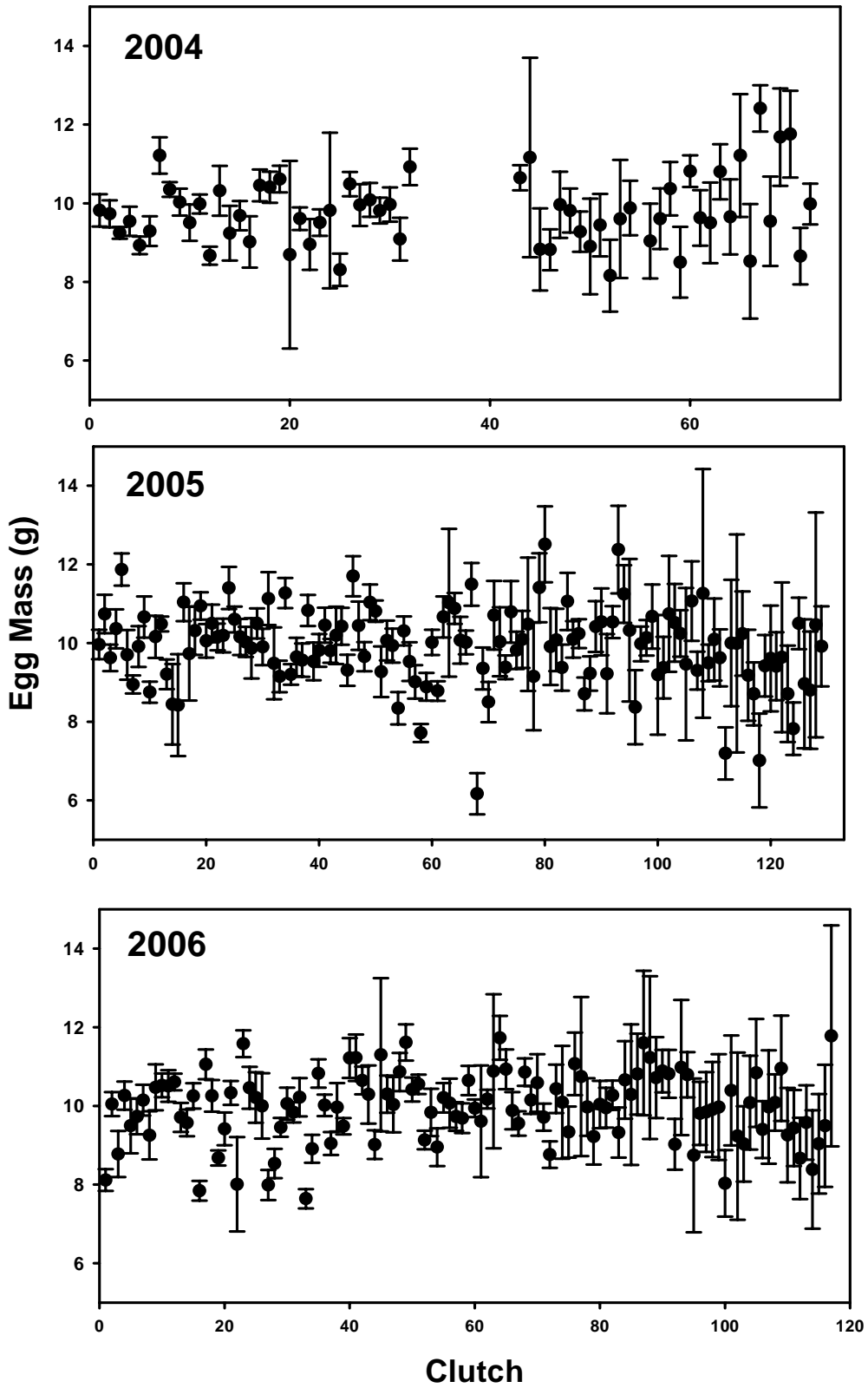


Figure 4 – Average egg mass and standard deviation of sequential clutches on PIERP from 2004 – 2006.

YEAR	NUMBER OF HATCHLINGS	MEAN CARAPACE LENGTH (MM)	MEAN MASS (G)
2002	565	31.28 (1.61)	7.52 (0.96)
2003	387	31.13 (1.50)	7.50 (0.99)
2004	1,337	31.57 (1.47)	7.61 (0.89)
2005	1,526	30.98 (1.94)	7.45 (1.10)
2006	855	30.95 (1.71)	7.38 (1.01)
Total	4,670		

Table 3 - Number of hatchlings, mean carapace length and mean mass of terrapins caught on the PIERP from 2002-2006.

The peak year occurred in 2005 and corresponds with the year when the most nests were found (Table 1). However, the substantial decrease in the hatchlings in 2006 is a result of both a lower number of nests discovered and an increase in the predation rate. The large number of hatchlings in 2004 is primarily the result of the increase in the number of nests that were discovered. In 2005, the effect of predation (Figure 2) reduced the number of hatchlings relative to the nests that were discovered. This predation effect also is reflected in 2006, combined with the lower number of nests that were discovered.

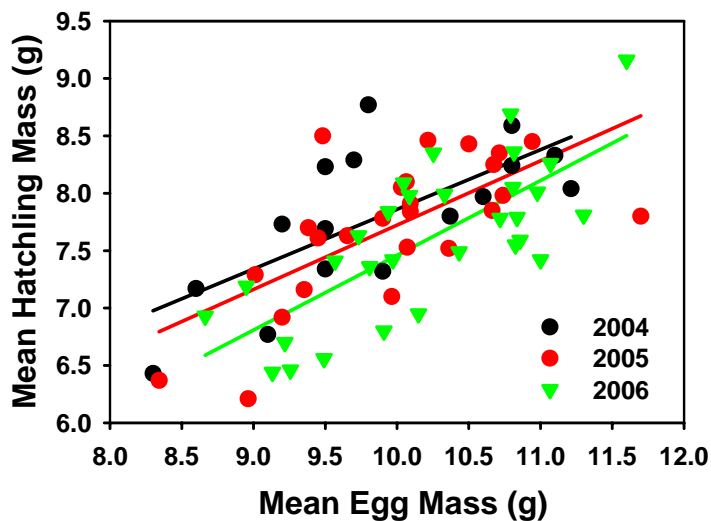


Figure 5 - The relationship between mean egg mass and mean hatchling mass for clutches in which hatching success was greater than 80%. The data suggest that hatchlings in 2006 were smaller than in 2004 and 2005. .

Hatchlings: Researchers captured 855 terrapin hatchlings on the PIERP between 7 August 2006 and 29 March 2007 (Table 3, Appendix 2). All hatchlings except for 5 were caught at their nests. This includes the ringed nests and the 1 nest that was found as the hatchlings emerged. From 2002- 2006, 4,670 hatchlings have been captured on the PIERP.

Hatchling size is similar among years of the study (Table 3). However, because of the large number of nests at the PIERP, researchers were also able to evaluate the relationship between mean egg size within a clutch and mean hatchling size (Figure 5). This analysis was restricted to nests in which the hatching rate within the nest was 80% or better to avoid potential bias due to differential mortality of different sized eggs. This comparison reveals some interesting results. The first is that in all three years for which these data are available there was a positive relationship between mean egg size and mean hatchling size among

clutches (Analysis of Covariance (ANCOVA), $F_{1,67} = 65.83$ $P < 0.0001$, Figure 4). Although this pattern occurs in laboratory incubation of all turtle species eggs, this is the first *in situ* evidence that egg size affects hatchling size in the field. Second, the data suggest that there was a significant difference in mean hatchling size among years (ANCOVA, $F_{2,67} = 4.15$, $P < 0.05$) when mean egg mass was used as a covariate. Comparison of the corrected means indicates that hatchlings in 2006 were smaller than those in 2004 and 2005. The precise cause of the smaller hatchlings is unknown. However, because 2006 was a dryer year than both 2004 and 2005, the difference may reflect dryer soil conditions that are known to affect hatchling size in the laboratory. The difference in mass is most likely due to differences in the hydration state that is typically recovered as soon as the hatchlings enter water. In general, hatchling terrapins from the PIERP are robust and appear healthy.

Over-wintering:

Perhaps one of the most interesting findings of the terrapin surveys on the PIERP is what the Ohio University researchers have learned about hatchling over-wintering. In 2004 the first terrapin nests over-wintered *in situ*; prior to 2004 researchers

excavated any nests that remained in the ground in late October. In 2004, a limited

number of nests were allowed to over-winter, and in 2005 many of the nests that presumably would have over-wintered did not because they were disturbed in late October when researchers planted temperature loggers in many of the remaining nests. 2006 was the first year where all over-wintering nests were not disturbed or excavated after the middle of October. To minimize the work required of MES personnel, only nests in the notch and the perimeter dike outside of Cell 5 were allowed to over-winter. Of the 146 nests that were laid in these areas, 33.6% of the nests emerged in the fall and 30.2% over-wintered (Table 4). Thirteen percent of the over-wintering nests failed to emerge; the hatchlings died in the nest during the winter. The survival of over-wintering nests varied among years and was lowest during 2005 (ANOVA, $F_{1,305} = 4.79$, $P < 0.05$, Figure 5). It remains uncertain what may have resulted in the lower survivorship in 2005 but this may have been a harsher winter that resulted in deeper freezing temperatures than in 2004 and 2006. The research team plans to continue to monitor over-wintering of

TOTAL NESTS - NOTCH & OUTSIDE OF CELL 5	146	
DEPREDATED NESTS AND NESTS DESTROYED BEFORE FALL EMERGENCE	47	32.2%
FALL EMERGING NESTS	49	33.6%
NEST OVERWINTERING	44	30.2%
SPRING EMERGING NESTS	33	75.0%
OVERWINTERING NESTS THAT DID NOT EMERGE	6	13.6%
UNKNOWN NESTS	11	
BOTH FALL & SPRING EMERGING NESTS	1	

Table 4 – Nest fate and over-wintering percentage of the nests outside of Cell 5 and the notch during the 2006 nesting season on the PIERP

terrapin nests with the intention of investigating environmental factors that may correlate with hatchling survivorship. Additionally, the research team is investigating the consequences of over-wintering on hatchling fitness. In 2004, 13 hatchlings were collected in the fall and 20 were collected in the spring. The hatchlings were transported to the lab at Ohio University and lipid levels were evaluated using petroleum ether extraction to compare energy levels between fall and spring emerging hatchlings. This study had several interesting conclusions. First, the only effect that was discovered was that lay date was the only factor that affected lipid levels (ANCOVA, $F_{1,28} = 7.65$, $P < 0.01$, Figure 7). However, there was no difference in lipid levels between fall and spring emerging hatchlings. This finding indicates that the length of time that the eggs / hatchlings remain in the ground during the summer is more important in determining energy levels than whether they over-winter in the nest or not. The second interesting finding in this study was that many of the fall emerging nests were laid earlier in the season but the over-wintering nest were laid throughout the nesting season and were not restricted to late season nests. This is currently launching the researchers into an investigation of the soils on the nesting beaches to evaluate factors that contribute to nest over-wintering

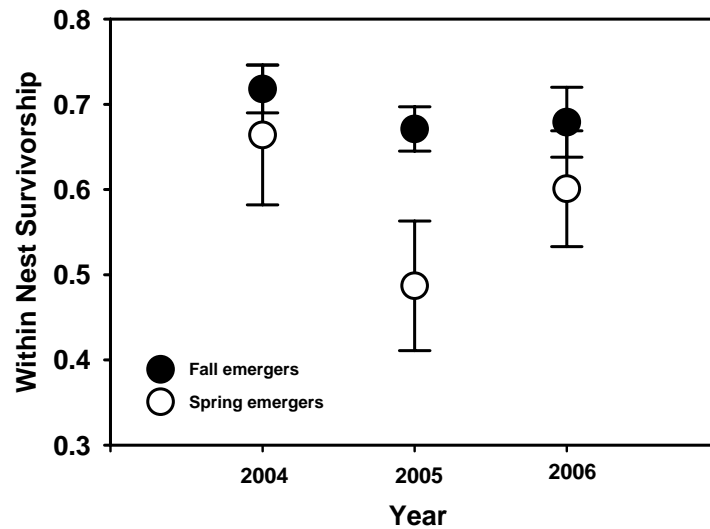


Figure 6 – Differences in survivorship between fall emerging and spring emerging nest from 2004 -2006 on the PIERP

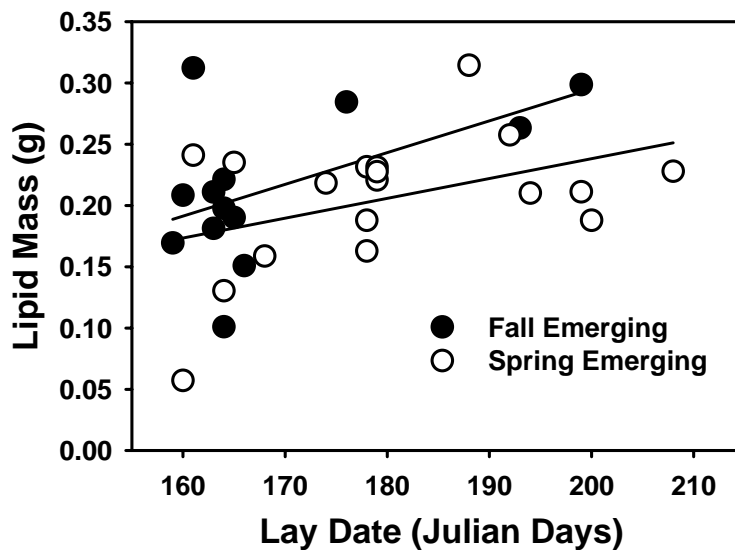


Figure7 – Lipid levels of hatchlings from the PIERP comparing fall emerging and spring emerging individuals.

(M.S. thesis research of Leah Graham; funded through Ohio University).

Adult and Juvenile Terrapins: The researchers and MES personal assisted in the capture of 11 adult females and 6 juvenile turtles on the PIERP during the 2006 nesting season. Researchers marked all females with PIT tags and a monel metal tag in the 9th marginal scute on the right side. These data can be found in Appendix 3. Two of the large females were recaptures and had been marked in previous years. The most interesting recapture was a juvenile that had been marked in 2004. The notches on this individual were still clearly visible and the CWT was detected. Unfortunately, this individual had been killed, most likely by a predatory bird (cormorant or heron) because there was a puncture in the carapace. However, this represents the first recovery of a marked hatchling from PIERP.

Researchers also PIT tagged terrapins that were part of the AE Terrapin Education Program. Researchers tagged, sexed, and processed 148 terrapins in early May (Appendix.4). Prior to PIT tagging, endoscopy was performed on these animals to determine their sex. Of the 148 animals that were part of the Arlington Echo program, 100 were female, 34 were males and 14 remained undetermined. This finding indicates that the sex ratio of terrapins on the PIERP was biased toward females during the 2006 nesting season. It also suggests that incubation temperatures in most of the nests were warmer than average because females are produced at warmer temperatures. Two to three weeks following the endoscopic surgery and PIT tag implanting, the hatchlings were transported to the PIERP and were released in the notch area. Two of the hatchlings provided to Arlington Echo died during the rearing phase of the project.

SUMMARY

Although the number of terrapin nests declined in 2006, the five-year trend indicates that there has been an increase in terrapin nesting on the PIERP. The decrease in nesting activity in 2006 was most likely due to an increase in predation by crows. The crows became efficient at finding terrapin nests before the researchers could locate the nests, and because the crows eat the egg shells the nests could not confidently be identified without the confirming egg shells nearby. Whenever, eggshells were found near an excavation, the nest was identified and counted. Researchers encountered many excavations that were suspected of being destroyed terrapin nests, but were not counted because egg shells were not in the immediate vicinity of the nest. Additionally, researchers were plagued by rains on the weekends during 2006, which made it virtually impossible to find nests on Monday following the weekend. This happened for the first six weeks of the nesting season, greatly hampering the ability to find nests and probably contributing to the reduced count in nests.

The long term nesting increase on the island is most likely because more females are discovering the nesting areas on the PIERP versus other nesting areas on Coaches Island and Jefferson Island and possibly the mainland. Because it takes female terrapins a minimum of 8 years to reach maturity, the nesting increase is not because of recruitment from the PIERP during the previous 5 years. The female terrapins are either

immigrating to the Poplar Island archipelago or are choosing to nest on the PIERP after previously nesting on Coaches or Jefferson Island. During 2006 the researchers continued their daily surveys and, under optimal nesting conditions, twice daily surveys of the nesting areas. This was possible because Eva Matthews was dedicated full-time to locating terrapin nests and was assisted throughout the nesting season by other Ohio University personnel. One nest was discovered by noting hatchlings emerging, and there were several emergence holes visible in the spring suggesting that some nests remained undetected despite the thorough nesting beach surveys. Most of these nests were probably laid over the weekend when nesting surveys were not completed.

The PIERP has resulted in providing excellent nesting habitat since the completion of the perimeter dike. While nest survivorship remains high on the PIERP relative to the mainland, it continues to decrease, primarily because nest predators are discovering the high-density terrapin nesting. During 2004, researchers began to notice increased predation of nests primarily by a small mammal that was preying on nests as the hatchlings were emerging. In 2005, the researchers noticed that crows had learned how to locate terrapin nests and excavate them. The crows depredated several nests outside of Cell 5 and the notch area. Interestingly, during 2005 most of the avian predation did not destroy all of the eggs in the nest, however, the excavation and exposure of the remaining eggs to higher than normal temperatures may have resulted in killing some of the remaining embryos. Whenever possible, researchers reburied exposed nests in the hope that the eggs had not gotten too hot. In 2006, the predation of nests by crows continued and researchers began protecting nests to reduce the predation rate. Interestingly, during 2006 the predators were becoming more efficient at destroying the entire nest. Both nest and hatchling survivorship remains high on the PIERP relative to the mainland. During 2003 nest survivorship was 71% (Roosenburg et al., 2004) compared to 72% in 2004 (Roosenburg et al., 2005) and this decreased to 67% in 2005 and 61.9% in 2006 because of the increase in predation. Hatchling survivorship has fluctuated among years from 93% in 2003 (Roosenburg et al., 2004) to 71% in 2004 (Roosenburg et al., 2005) and decreased in 2005 to 66.2% and 65.7% in 2006. The decrease in 2005 is most likely a result of the partial predation of many nests that still produced hatchlings.

The absence of efficient nest predators such as raccoons results in high nest survivorship rates that are much greater than other nesting areas that have been studied with efficient predators. As observed in 2002 through 2005 (Roosenburg and Allman, 2003; Roosenburg et al., 2004, Roosenburg et al., 2005, Roosenburg and Sullivan, 2006), the survivorship of known nests in 2006 was much higher than normally encountered for terrapins because of the lack of nest predators on the PIERP. Raccoons, foxes, and otters are known terrapin nest predators and contribute to low nest survivorship in areas where predators occur, sometimes depredating 95% of the nests (Roosenburg, 1994). Additionally, the lack of raccoons on the PIERP minimized the risk to nesting females that also may be depredated by raccoons (Seigel, 1980; Roosenburg pers. obs.). Thus, the PIERP is successfully creating terrapin nesting habitat.

As observed in summer 2002 through 2005 (Roosenburg and Allman, 2003; Roosenburg et al., 2004, Roosenburg and Sullivan, 2006), terrapin nesting on the PIERP occurred in areas where terrapins could easily access potential nesting sites. These areas are outside of Cells 3 and 5 and inside of Cell 6 and the notch. In 2004, the erosion fence along the dike around Cell 5 was extended to include the entire notch. The erosion fence prevented terrapins from crossing the road and nesting within Cell 4 as they did in 2003. Although this fence is effectively preventing terrapins from nesting in Cells 4 and 5, it also is causing many females to lay their nests at the base of the fence. Therefore, it is recommended that the effect of the fence on terrapin nesting be carefully monitored. Furthermore, since the fence was installed in 2003 and 2004 it has deteriorated substantially and needs to be replaced. Researchers recommend that a permanent and more permeable fence be constructed that allows sand to move through the fence. Most of the destruction of the fence is caused by the buildup of sand on the windward (west) side. Throughout the remainder of the PIERP, the stone face of the surrounding retaining dike is a barrier that prevents terrapins from accessing potential nesting sites. As wetland cells are completed, and the exterior dikes are breached to provide water flow, terrapins are likely to follow and begin nesting on interior parts of the island.

The PIERP continues to produce large numbers of hatchlings relative to mainland nesting sites where high predation rates destroy a majority of the nests. Hatchlings started emerging from the nests on 7 August 2006; the last hatchlings were excavated on 29 March 2007. Researchers released all of the hatchlings in Cell 4DX and Cell 3D, however, it was noted that many of the hatchlings, particularly those released in September and October, headed to shore and marsh within the cell as opposed to heading to open water. Recent data of hatchling terrapins in New York suggests that terrapins spend their first winter in terrestrial versus aquatic habitats (Draud, 2004 pers. comm.). This may be a mechanism to avoid predation and to avoid freezing in shallow marsh sediments. Researchers witnessed many of the PIERP hatchlings distinctly heading away from the water. This behavior is interesting and potentially problematic because these hatchlings may use terrestrial dispersal routes to enter cells that are targeted for filling in the upcoming fall and winter. The presence of hatchling remains on both sides of the fence in the notch and the outside of Cell 5 corroborate the terrestrial dispersal of terrapin hatchlings.

The hatchlings produced on the PIERP were similar in size and weight to those captured during previous studies in the Patuxent River in Maryland (Roosenburg, 1992) and in previous years on the PIERP. However, in 2006 researchers were able to detect a slight decrease in mean hatchling size when corrected for egg mass. This was most likely due to a hotter nesting season in 2006. The frequency of shell scute anomalies and cranial developmental anomalies, 14.8% during 2006, is close to the average for terrapin populations, approximately 10% (Herlands et al., 2002). A high frequency of shell scute anomalies was also observed in 2002 through 2005 (Roosenburg and Allman, 2003, Roosenburg et al., 2004, Roosenburg et al., 2005), particularly in 2005 when 32% of the hatchlings had shell anomalies (Roosenburg and Sullivan 2006). Warmer incubation temperatures are known to cause higher frequencies of shell scute anomalies in terrapins (Herlands et al., 2002). The high frequency of shell scute anomalies in the PIERP

hatchlings could be due, in part, to the limited vegetation on the PIERP that could provide shaded, cooler incubation environments (Jeyasuria et al., 1995). Although shell anomalies have been associated with higher incubation temperatures, there is no evidence to suggest that these anomalies have any detrimental effects on terrapins or other turtle species. Anomalies occur at higher frequency in female terrapins than in males and may be linked to temperature-dependent sex determination (TSD). For terrapins, warmer incubation temperatures produce females, and cooler conditions produce males (Jeyasuria et al., 1995; Roosenburg and Kelly, 1996). The higher frequency of anomalies may be indirect evidence that the PIERP may be producing a higher than average number of female hatchlings. Continued monitoring of the PIERP terrapins will be able to confirm this hypothesis.

During the winter of 2006/2007 a significant number of nests over-wintered successfully. The recovery of 266 hatchlings from 44 over-wintering nests continues to indicate that this is a successful strategy used by some terrapins. In addition to the over-wintering of the nests, researchers also noticed that hatchlings released after processing clearly preferred to stay on land as opposed to remaining in the water. These hatchlings actively left the water and sought higher ground. These observations are similar to those of terrapin populations in New York where the hatchlings that emerge from their nests in the fall spend their winters in terrestrial environments below the surface sometimes buried up to 10 cm (Draud, 2004 pers. comm.). The PIERP offers a wonderful opportunity to study terrapin over-wintering because of the large number of nests that survive predation.

The educational program conducted in collaboration with the AE Outdoor Education Center was a success. Students significantly increased the size of the hatchlings they raised to sizes that are characteristic of 2-3 year old terrapins in the wild. Additionally, researchers were able to get some of the first sex ratio data from the hatchlings because they had obtained sizes that were large enough to allow for laparoscopic surgery. The results of the laparoscopic surgery suggest that the sex ratio of PIERP hatchlings from 2006 was heavily biased to females. Additionally, because these hatchlings were PIT tagged the researchers hope to be able to follow the fate of these hatchlings over the years. An integral part of this project will be to compare survivorship of naturally released hatchlings versus those that have been given a head start for 9 months within the AE program. To address this question, a multi-year mark-recapture study must be conducted within the Poplar Island Archipelago.

The initial success of terrapin use of the PIERP predicts that similar projects may have success in creating terrapin nesting habitat. One of the major factors threatening terrapin populations throughout their range is the loss of nesting habitat to development and shoreline stabilization (Roosenburg, 1991; Siegel and Gibbons, 1995). Projects such as the PIERP that combine the beneficial use of dredged material and ecological restoration have the potential to create habitat similar to what has been lost to erosion and human practices. With proper management, areas such as the PIERP may become areas of concentration for species such as terrapins and thus could become a source population for the recovery of terrapins throughout the Bay.

The PIERP Framework Monitoring Document identifies three goals for the terrapin monitoring program. First, monitoring of terrapin nesting activity and habitat use will quantify terrapin activity on the PIERP. A detailed monitoring program that is successfully detailing widespread use of the island by terrapins is meeting this objective. This is supported by the large number of nests found comparable to mainland sites in the Patuxent River and the recovery in 2006 of a terrapin marked on the PIERP in 2004 as a hatchling. The second objective is to determine the suitability of the habitat for terrapins. The high nest success and hatching rates on the PIERP indicate that the island is creating good terrapin nesting habitat, although it is limited in availability because of the rock dike shoreline around most of the island. The suitability of juvenile habitat remains to be determined with a mark-recapture study within the archipelago. The final goal identified by the FMD is to determine if the project is affecting terrapin population dynamics. This also will require the implementation of the mark-recapture study in combination with the continued monitoring of nesting activity. The increase in nesting activity on the PIERP over the past five years is a strong indicator of a positive effect of the project. However, this only monitors one segment of the life cycle of the long-lived terrapin and none of the hatchlings that have been marked on the PIERP will have reached the minimum age of first reproduction of female terrapins in Chesapeake Bay.

RECOMMENDATIONS

As the PIERP continues, terrapins will continue to use the habitat for nesting. Some short-term measures can be taken to improve nesting habitat on the island. First, a suggestion that nesting areas without marsh and beach grasses be provided as terrapin nesting habitat. Nesting habitat with no or limited vegetation is preferred by terrapins (Roosenburg, 1996). During 2005, project sponsors initiated tidal flow into recently planted wetland Cell 3D; this could have contributed to the erosion and loss of most of the beach nesting habitat outside of Cell 3, however, this remains to be determined. The nesting area near outside Cell 3 was optimal habitat because it was devoid of vegetation and in the sheltered PIERP harbor. Because terrapins avoid nesting in areas with dense vegetation (Roosenburg 1996), providing open, sandy areas on the seaward side of the dikes should reduce efforts by terrapins to enter into cells under construction to find suitable, open areas. Second, predator control on the island will be paramount to the continued success of terrapin recruitment. Keeping raccoon and fox populations to a minimum will maintain the high levels of nest survivorship observed in 2002 through 2006. The increase in nest predation by crows requires more detailed monitoring. However, the placement of screen over nests is also an effective mechanism to reduce crow predation. Third, replacement of the fence in the notch and Cell 5 nesting area is needed as the fence is deteriorating rapidly. Successful terrapin fences that have lasted for several years have been constructed from "Tenax" a material permeable to sand, thus avoiding the weight burden caused by accumulated sand. and do not suffer from the accumulation of sand on the windward side of the fence. This would reduce the annual maintenance that is needed to maintain a silt fence. Fourth, Ohio University researchers are undertaking a study to investigate factors that contribute to hatchling over-wintering on the PIERP. Now that almost 5,000 hatchlings have been released in the PIERP archipelago it also would be appropriate to initiate a study to try capturing some of the marked hatchlings and determining their survival rates. Finally, efforts to promote the

use of by-catch reduction devices (BRDs) on crab pots fished in and around the PIERP archipelago will increase adult survivorship. Ohio University researchers have had a BRD research program and ongoing dialogue with MD-DNR about instituting the use of BRDs in the commercial fishery. Instituting such a conservation program would be consistent with regulation efforts to close the commercial terrapin fishery. The PIERP may be an excellent opportunity to initiate such a program in an experimental capacity. Crab pots drown terrapins and can have dramatic effects on their populations (reviewed in Roosenburg 2004). Promoting or requiring the use of BRDs in the PIERP archipelago could greatly reduce the mortality of juvenile female and male terrapins. The recommendations offered herein will contribute to the continuing and increasing use of the PIERP by terrapins. As terrapin monitoring continues, evaluating the success of these measures, if implemented, will be conducted.

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LITERATURE CITED

- Butler, J. 2004. Personal Communication. University of North Florida, Jacksonville Florida.
- Draud, M. 2004. Personal Communication. C. W. Post University, Long Island, New York.
- Draud, M., M. Bossert, and S. Zimnavoda. 2004. Predation on hatchling and juvenile diamondback terrapins (*Malaclemys terrapin*) by the Norway rat. *J. Herp* 38:467-470.

- Herlands, R. R. Wood, J. Pritchard, H. Clapp and N. Le Furge. 2004. Diamondback terrapin (*Malaclemys terrapin*) head-starting project in southern New Jersey. In C. Swarth, W. M. Roosenburg and E. Kiviat (eds.) Conservation and Ecology of Turtles of the Mid-Atlantic Region: A Symposium. Biblomania Salt Lake City UT pages 13-23.
- Jeyasuria, P., W. M. Roosenburg, and A. R. Place. 1994. The role of P-450 aromatase in sex determination in the diamondback terrapin, *Malaclemys terrapin*. J. Exp. Zool. 270:95-111.
- Roosenburg, W. M. 1991. The diamondback terrapin: Habitat requirements, population dynamics, and opportunities for conservation. In: A. Chaney and J.A. Mihursky eds. *New Perspectives in the Chesapeake System: A Research and Management and Partnership. Proceedings of a Conference*. Chesapeake Research Consortium Pub. No 137. Solomons, Md. pp. 237 - 234.
- Roosenburg, W. M. 1992. The life history consequences of nest site selection in the diamondback terrapin, *Malaclemys terrapin*. Ph. D. Dissertation. University of Pennsylvania.
- Roosenburg, W. M. 1994 Nesting habitat requirements of the diamondback terrapin: a geographic comparison. Wetland Journal 6(2):8-11.
- Roosenburg, W. M. 1996. Maternal condition and nest site choice : an alternative for the maintenance of environmental sex determination. Am. Zool. 36:157-168.
- Roosenburg, W. M. 2004. The impact of crab pot fisheries on the terrapin, *Malaclemys terrapin*: Where are we and where do we need to go? In C. Swarth, W. M. Roosenburg and E. Kiviat (eds) Conservation and Ecology of Turtles of the Mid-Atlantic Region: A Symposium. Biblomania Salt Lake City UT pages 23-30.
- Roosenburg, W. M. and P. E. Allman. 2003. Terrapin Monitoring at Poplar Island. Final Report submitted to the Army Corps of Engineers, Baltimore District. Baltimore, MD. pp. 13.
- Roosenburg, W. M., T. A. Radzio and P. E. Allman. 2004. Terrapin Monitoring at Poplar Island. Final Report submitted to the Army Corps of Engineers, Baltimore District. Baltimore, MD. pp. 26.
- Roosenburg, W. M., T. A. Radzio and D. Spontak. 2005. Terrapin Monitoring at Poplar Island. Final Report submitted to the Army Corps of Engineers, Baltimore District. Baltimore, MD. pp. 26.
- Roosenburg, W. M., S. Sullivan. 2006. Terrapin Monitoring at Poplar Island. Final Report submitted to the Army Corps of Engineers, Baltimore District. Baltimore, MD. pp. 54.

- Roosenburg, W. M. and K. C. Kelley. 1996. The effect of egg size and incubation temperature on growth in the turtle, *Malaclemys terrapin*. J. Herp. 30:198-204.
- Seigel, R. A. 1980. Predation by raccoons on diamondback terrapins, *Malaclemys terrapin tequesta*. J. Herp. 14:87-89.
- Seigel, R. A.. and Gibbons, J. W. 1995. Workshop on the ecology, status, and management of the diamondback terrapin (*Malaclemys terrapin*), Savannah River Ecology Laboratory, 2 August 1994: final results and recommendations. Chelonian Conservation and Biology 1:240-243.
- Wood, Roger. 2004. Personal Communication. Wetlands Institute, Stone Harbor, New Jersey.

Appendix 1 - PIERP 2006 Terrapin Nest Data

Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
001	5-Jun-06	N38 45.625	W76 22.762	Sun	Open	3	Y	16	113.6	8.11		26 June Completely Destroyed
002	5-Jun-06	N38 45.634	W76 22.795	Semi Shade	Open	3	N	14	130.6	10.05	14.0	Wedged in Rocks 7-Aug- Recovered
003	5-Jun-06	N38 45.657	W76 22.807	Sun	Open	3	N	17	149.2	8.78	4.0	21-Aug 3 Hatchlings, 1 Dead Hatchling, 24- Aug 1 Hatchling, 5-Sept Tropical Storm Destroyed
004	5-Jun-06	N38 45.159	W76 22.463	Semi	Edge	Notch	Y-20-Jun	13	133.4	10.26		20-Jun-Completely Destroyed
005	5-Jun-06	N38 45.141	W76 22.476	Sun	Edge	Notch	Y-6-Jun	14	132.9	9.49		Bird present 6-Jun, 14-Jun Eggs Still Present, not sure if predated from nest 6 or 7
006/007	5-Jun-06	N38.45.072	W76.22.407	Sun	Open	Notch	Partial 6-Jun, 9-Jun, 14-Jun	11	97.3	9.73	2.0	
006/007	5-Jun-06	N38 45.072	W76 22.407	Sun	Open	Notch	Partial, 6-Jun, 9-Jun, 14-Jun	15				Underneath Nest #7, Older Partial Predation, 6-Jun Bird, 14-June Eggs still found
008	5-Jun-06	N38 45.086	W76 22.368	Semi	Edge	Notch	Partial 8-Jun	13	131.9	10.15	8.0	Predation-2 egg shells found outside of nest, Eggs still found
009	5-Jun-06	N38 45.091	W76 22.361	Sun	Open	Notch	N	15	148.0	9.25		
010	5-Jun-06	N38 44.983	W76 22.051	Sun	Edge	5S	Y(9-Jun-06)	14	146.6	10.47		19-Jun Completely Destroyed
011	5-Jun-06	N38 44.968	W76 22.014	Sun	Open	5S	Partial 13-Jun	13	147.3	10.52		13-June Eggs still present
012	6-Jun-06	N38 45.005	W76 22.099	Sun	Open	5S	Y(13-Jun)	14	147.1	10.51		13-Jun Totally Destroyed, Logger Recovered
013	6-Jun-06	N38 45.070	W76 22.094	Sun	Edge	Notch	Y (8-Jun Partial, 9-Jun Complete)	15	148.5	10.61		8-Jun Partial Predation-Logger and logger left, 9-Jun Complete Predation- Logger retrieved
014	6-Jun-06	N38 45.179	W76 22.447	Sun	Edge	Notch	Partial (14-Jun) Complete (16-Jun)	15	135.9	9.71		14-Jun Some Eggs still found, 16-Jun Completely Destroyed
015	6-Jun-06	N38 45.650	W76 22.805	Sun	Open	3	N	16	153.1	9.57	16.0	18-Aug 16 Hatchlings
016	6-Jun-06	N38 45.655	W76 22.805	Sun	Open	3	N	14	153.8	10.25	14.0	7-Aug 14 Hatchlings
017	7-Jun-06	N38 44.960	W76 21.995	Sun	Open	5S	Y(26-Jun)	10	78.4	7.84	4.0	26-Jun Eggs still found, 22-Aug 2 Hatchlings, 22-Aug 2 Hatchlings escaped, 9/5/2006 T.S. Destroyed
018	7-Jun-06	N38 44.961	W76 21.998	Semi	Open	5S	N	7	77.4	11.06	2.0	6-July attempt of Predation, Small Burrow on side did not reach eggs
019	19-Jun-06	N38 45.011	W76 22.120	Sun	Edge	5S	Y(28-Jun)	14	143.6	10.26		28-Jun Eggs Completely destroyed
020	7-Jun-06	N38 45.011	W76 22.120	Sun	Edge	5S	Y (28-Jun)					7-Jun Predation by mammalian predator, Eggs shells destroyed
021	7-Jun-06	N38 45.066	W76 22.437	Sun	Edge	Notch	Y(8-Jun)	13	147.5	8.68		8-Jun Predation Non Eggs Found

Appendix 1 - PIERP 2006 Terrapin Nest Data

Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
022	7-Jun-06	N38 45.068	W76 22.442	Sun	Edge	Notch	Y(8-Jun)	12	113.0	9.42		Predation-No eggs found
023	7-Jun-06	N38 45.653	W76 22.804	Sun	Open	3	N	16	165.3	10.33	16.0	17-Aug 6 Hatchlings, 18-Aug 7 Hatchlings, 19-Aug 3 Hatchlings
024	7-Jun-06	N38 45.270	W76 23.291	Sun	Open	6	Y (13-Jun)	16	125.5	8.01		13-Jun Completely Destroyed
025	7-Jun-06	N38 45.165	W76 22.165	Sun	Edge	5M	Y(9-Jun)	16	185.3	11.58	8.0	9-Jun Bird present, Eggs still present, 7-Sept 7 hatchlings, 9-Sept 1 hatchling, Dug-no hatchlings found
026	7-Jun-06	N38 45.073	W76 22.394	Sun	Edge	Notch	Partial (12-Jun)	12	125.5	10.46		12-Jun Parial Predation, Eggs still present
027	7-Jun-06	N38 45.206	W76 22.429	Sun	Edge	Notch	Attempt (20-Jun)	14	143.0	10.21	11.0	6/20/2006 Attempted Predation by Eastern Kingsnake - eggs left, 5-Sept 9 hatchlings, 7-Sept 1 hatchling, 19-1 hatchling, 3 dead eggs
028	8-Jun-06	N38 45.015	W76 22.127	Sun	Edge	5M	Y (13-Jun) partial, (16-Jun) Complete	10	100.0	10.00		Predation suspect-bird, Eggs still found on 14-Jun, 16-Jun Completely destroyed
029	8-Jun-06	N38 45.665	W76 22.811	Semi	Edge	3	28-Jun	18	143.8	7.99		Logger from nest #21, 28-Jun completely destroyed, Logger recovered
030	8-Jun-06	N38 45.631	W76 22.792	Sun	Edge	3	N				11.0	Wedged in Rocks, Older nest, 7-Aug 3 hatchlings, 24-Aug 8-hatchlings, 5-Sept T.S. Destroyed
031	8-Jun-06	N38 45.633	W76 22.787	Sun	Edge	3					12.0	Wedged in Rocks, Older nest, 9-Aug 12 hatchlings
032	9-Jun-06	N38 45.633	W76 22.038	Sun	Edge	5M	Y (3-Jul)	14	119.5	8.54	1.0	Eggs still found-logger reburied, Lost hatchlings to T.S, 4-Oct 1 hatchling, 10/19/2006 Dug nest 1 undeveloped egg
033	9-Jun-06	N38 45.011	W76 22.124	Sun	Edge	5M	Y (19-Jun)	11	104.0	9.45		19-Jul Completely destroyed
034	9-Jun-06	N38 45.075	W76 22.382	Semi	Edge	Notch	Partial (12-Jun)	11	110.6	10.05	4.0	12-Jun Eggs still found, 15-Jun Eggs still found, 11-Sept 1 hatchling, 28- Sept 3 hatchlings, logger recovered
035	12-Jun-06	N38 45.049	W76 22.215	Sun	Edge	5	Partial (13-Jun)					Old nest Could not dig, 13-Jun completely destroyed
036	12-Jun-06	N38 45.049	W76 22.215	Sun	Edge	5	Partial (13-Jun)					Old nest Could not dig, 13-Jun Eggs still found, 16-Eggs still left
037	13-Jun-06	N38 45.089	W76 22.474	Sun	Open	Notch	Y (13-Jun)					Completely destroyed, Unflagged nest
038	13-Jun-06	N38 45.085	W76 22.478	Sun	Edge	Notch	Y(15-Jun)					Old nest Could not dig, 15-Jun Completely destroyed - no egg shells found
039	13-Jun-06	N38 44. 975	W76 22.047	Sun	Open	5S	N	19	186.9	9.84	16.0	Logger from Nest 12, 26-Aug 16 hatchlings, 28 Sept-2 undeveloped eggs, 1 Dead hatchling
040/158	16-Jun-06	N38 45.045	W76 22.205	Sun	Open	5M	Y(19-Jun)	12	113.1	9.43	3.0	19-Jun attempted predation around screen
040/158	18-Jul-06	N38 45.045	W76 22.205	Sun	Open	5M	N	8	86.7	10.84	7.0	top-bottom, 11-Oct 7 hatchlings, 1 undeveloped egg, logger

Appendix 1 - PIERP 2006 Terrapin Nest Data

Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
041	19-Jun-06	N38 45.120	W76 22.479	Sun	Edge	Notch	N	11	102.2	10.22		
042	19-Jun-06	N38 45.100	W76 22.479	Sun	Edge	Notch	Y(19-Jun)				12.0	2 Eggs found in nest, 1 eggshell next to nest
043	19-Jun-06	N38 45.086	W76 22.473	Sun	Open	Unknown	N	20	152.8	7.64	15.0	
044	19-Jun-06	N38 45.081	W76 22.293	Sun	Open	SN	N	12	106.9	8.91	9.0	28-Aug 9 hatchlings, 29-Aug 1 dead hatchling stuck between flag and screen, 28-Sept 2 undeveloped eggs/logger found
045	19-Jun-06	N38 44.988	W76 22.067	Sun	Open	5S	N	12	129.9	10.83	10.0	
046	19-Jun-06	N38 44.978	W76 22.021	Sun	Open	5S	N	14	130.2	10.02	10.0	8-Oct 1 hatchling, 19-Oct Dug Nest 1 hatchling roots took over nest/logger recovered
047	19-Jun-06	N38 45.197	W76 23.231	Sun	Open	6W	N	14	126.6	9.04		17-Oct Dug Nest Eggs killed by roots/logger found
048	19-Jun-05	N38 45.118	W76 22.764	Sun	Open	6E	Partial (6/26/2006)	14	139.5	9.96	2.0	26-Jun Some eggs still found, egg shells found, 23-Aug 2 hatchlings, 12-Sept Undeveloped egg om roots/logger recovered
049	19-Jun-06	N38 45.061	W76 22.691	Sun	Open	6E	N	17	161.2	9.48		26-June Major erosion unearthed nest-eggs still found, 27-Jun -destroyed by erosion
050	20-Jun-06	N38 45.635	W76 22.794	Sun	Open	3	Y (23-Jun)	11	123.4	11.22	1.0	27-Jun -destroyed by erosion, 3 dead eggs, 1 hatchling escaped w/o mark
051	20-Jun-06	N38 45.659	W76 22.808	Semi	Edge	3	N	14	89.8	11.23		5-Sept destroyed by thunderstorm
052	20-Jun-06	N38 45.659	W76 22.807	Sun	Open	3	Y(20 Jun, 21 Jun)					20-Jun Bird Predation, 21-Jun Completely destroyed
053	20-Jun-06	N38 45.137	W76 22.477	Sun	Edge	Notch	N	9	95.8	10.64	5.0	3-Sept 5 hatchlings, 28-Sept 4 Undeveloped /logger found
054	20-Jun-06	N38 45.115	W76 22.478	Shade	Edge	Notch	Y (21-Jun)	18	174.9	10.29	9.0	21-Jun attempted predation around screen, 10-Oct 6 hatchlings, 2-Oct 3 hatchlings, 4 undeveloped eggs, logger found
055	20-Jun-06	N38 45.079	W76 22.376	Sun	Edge	Notch	N	13	117.2	9.02	2.0	
056	20-Jun-06	N38 44.945	W76 22.026	Sun	Edge	5S	N	17	192.1	11.30	16.0	24-Aug 15 hatchlings, 25-Aug 1 hatchling, 28-Sept 2 undeveloped eggs
057	20-Jun-06	N38 44.961	W76 22.002	Sun	Open	5S	N	14	144.2	10.30	5.0	23-jun water 2 flags pulled out, screen in tact, 26-Jun rainfall, caused major damage eggs broken-some still remain, 19-Aug 1 hatchling, 20-Aug -2 hatchlings, 18-Sept 2 hatchlings, 20-Sept 4 undeveloped eggs
058	21-Jun-06	N38 45.637	W75 22.789	Sun	Open	3	Y(22-Jun)	19	200.6	10.03		22-Jun Completely destroyed
059	21-Jun-06	N38 45.643	W76 22.795	Sun	Edge	3	Y(29-Jun)	16	173.8	10.86		29-Jun completely destroyed
060	21-Jun-06	N38 45.658	W76 22.811	Sun	Edge	3	N	15	174.2	11.61	14.0	22-Aug 14 hatchlings, 31-Aug 1 undeveloped egg

Appendix 1 - PIERP 2006 Terrapin Nest Data

Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
061	21-Jun-06	N38 45.676	W76 22.809	Sun	Edge	3	N	17	177.1	10.42		5-Sept T.S. destroyed
062	21-Jun-06	N38 45.024	W76 22.156	Sun	Edge	5M	N	12	126.6	10.55		
063	21-Jun-06	N38 45.012	W76 22.122	Sun	Edge	5M	Y(21-Jun)	16	146.1	9.13	15.0	21-Jun attempted predation by bird before nest found
064	21-Jun-06	N38 45.004	W76 22.111	Sun	Edge	5S	N	15	147.5	9.83	11.0	15-Aug 9 hatchlings, 20-Aug 2 hatchlings, 20-Aug 2 hatchlings, 28-Sept 4 undeveloped eggs
065	21-Jun-06	N38 44.981	W76 22.052	Sun	Open	5S	N	13	143.2	8.95	12.0	17-Aug 1 hatchling, 20-Aug 11 hatchlings, 28-Sept dug-up nothing found
066	21-Jun-06	N38 44.658	W76 22.898	Sun	Edge	6W	N	13	132.7	10.21	9.0	15-Aug 9 hatchlings, 25-Aug Eggs found covered in roots, all dead
067	22-Jun-06	N38 45.653	W76 22.803	Sun	Open	3	Y (26-Jun)	16	161.1	10.07	1.0	26-Jun Completely destroyed
068	22-Jun-06	N38 45.661	W76 22.809	Sun	Edge	3	Y (26-Jun)	16	155.7	9.73	14.0	26-Jun Eggs still found, 21-Aug 9 hatchlings, 22-Aug 4 hatchlings, 25-Aug 1 hatchling, 5-Sept T.S.Destroyed
069	22-Jun-06	N38 45.037	W76 22.181	Sun	Open	5M	N	16	155.0	9.69	10.0	
070	22-Jun-06	N38 45.007	W76 22.108	Sun	Edge	5S	N	18	191.6	10.64	5.0	16-Aug 5 hatchlings, 28-Sept 6 undeveloped eggs/logger found
071	22-Jun-06	N38 44.986	W76 22.049	Sun	Edge	5S	N	15	149.1	9.94	14.0	20-Aug 14 hatchlings, 7-Sept-logger recovered, flooded by T.S.
072	22-Jun-06	N38 44.986	W76 22.049	Sun	Edge	5S	N	14	134.5	9.61	11.0	20-Aug 14 hatchlings, 7-Sept logger recovered-flooded by T.S.
073	22-Jun-06	N38 45.399	W76 23.362	Sun	Open	6NE	N	14	142.4	10.17		12-Oct All eggs were dead
074	23-Jun-06	N38 45.028	W76 22.167	Sun	Open	5M	N	16	163.2	10.88	12.0	1 broken egg found in egg chamber
075	23-Jun-06	N38 45.629	W76 22.788	Sun	Open	3	Y (23-Jun)				1.0	Rocks- 3broken eggs from a predator-some eggs still found but older nest, 26-Aug 1 hatchling, 5-Sept destroyed by T.S.
076	23-Jun-06	N38 45.652	W76 22.805	Sun	Open	3	Y (26-Jun)	10	117.3	11.73		26-Jun completely destroyed
77	26-Jun-06	N38 45.145	W76 22.477	Sun	Edge	Notch	Y (29-Jun)	13	142.1	10.93		29-Jun burrow under screen (completely destroyed), logger recovered
078	26-Jun-06	N38 45.052	W76 22.231	Sun	Edge	Notch	N	15	148.2	9.88	7.0	Logger from #67, 8-Oct 6 hatchlings, 12-Oct 1 hatchling, 4 dead eggs
079	15-Jun-06	N38 45.007	W76 22.122	Sun	Edge	5	N	13	124.2	9.55	8.0	Logger from #50, 24-Aug 8 hatchlings, 28-Sep 5 undeveloped eggs/logger found
080	26-Jun-06	N38 44.997	W76 22.062	Sun	Open	5	N	12	130.3	10.86	11.0	
081	26-Jun-06	N38 44.971	W76 22.022	Sun	Edge	5S	N	2	20.3	10.15	2.0	
082	27-Jun-06	N38 45.142	W76 22.487	Sun	Edge	Notch	Y(27-Jun, 28-Jun)					Predation-6 eggs found, 28-Jun small hole found above nest w/screen in place-eggs still found
083	27-Jun-06	N38 45.078	W76 22.460	Sun	Open	8a	N	12	127.0	10.58	1.0	

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Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
084	27-Jun-06	N38 45.072	W76 22.451	Sun	Open	Notch	Y(13-Jul)	15	145.7	9.71	7.0	13-July small burrow, eggshells and eggs still found
085	27-Jun-06	N38 45.069	W76 22.443	Semi	Open	Notch	N	15	157.7	8.76		
086	27-Jun-06	N38 45.093	W76 22.336	Semi	Open	5N	N				1.0	Older nest, 26-Aug 1 hatchling, 24-Sept Dug nest, 5 dead eggs
087	28-Jun-06	N38 45.090	W76 22.320	Sun	Edge	5N	N				3.0	Older nest, found with shovel-broke legg
088	29-Jun-06	N38 45.638	W76 22.773	Sun	Open	3	Y(29-Jun, 5-July, 7-July)					Predated before finding it-at least 3 eggs remain, older nest, 5-July small burrow under screen, one eggshell found, some eggs still left, 7-July completely destroyed
089	29-Jun-06	N38 45.644	W76 22.856	Sun	Open	3	Y(29-Jun)					Completely destroyed, 3 newly broken eggs found
090/094	29-Jun-06	N38 45.649	W76 22.803	Semi	Open	3	N				2.0	Older nest, 30-Jun 3 eggs remain, 9/5/2006 T.S. destroyed
090/094	30-Jun-06	N38 45.056	W76 22.227	Sun	Open	5N	Y (30-Jun)					30-Jun 3 eggs remain
091	29-Jun-06	N38 45.109	W76 22.472	Sun	Open	Notch	N				13.0	Older nest
092	29-Jun-06	N38 45.059	W76 22.246	Sun	Edge	5N	Y(29-Jun)					29-June only 2 eggs found and 1 broken egg
093	29-Jun-06	N38 44.967	W76 22.024	Sun	Open	5S	N	14	156.5	10.43	14.0	Logger from #19, 29-Aug 14 hatchlings logger remained
095	30-Jun-06	N38 45.675	W76 22.810	Sun	Open	3	N	11	111.0	10.09	1.0	Logger from #59, 27-Aug 1 hatchling , 5-Sep T.S. destroyed
096	3-Jul-06	N38 45.084	W76 23.127	Sun	Open	6 W	N	17	158.7	9.34	13.0	Logger from #76, 12-Sept runover by bull dozer- found 13 hatchlings 4 undeveloped eggs and logger
097	3-Jul-06	N38 45.653	W76 22.798	Sun	Edge	3	N	10	110.7	11.07	8.0	28-Sep 8 hatchlings, 2 undeveloped eggs, and logger
098	3-Jul-06	N38 45.095	W76 22.321	Sun	open	5N	N	13	139.7	10.75	9.0	7-Sep 7 hatchlings, 28-Sep 2 hatchlings. 3 undeveloped eggs and logger found
099	3-Jul-06	N38 45.071	W76 22.254	Sun	Open	5M	N				11.0	Older nest
100	3-Jul-06	N38 45.046	W76 22.210	Sun	Open	5M	N				11.0	Older nest
101	27-Jun-06	N38 45.022	W76 22.150	Sun	Open	5S	N	14	139.6	9.97	1.0	
102	3-Jul-06	N38 44.994	W76 22.086	Sun	Open	5S	N				13.0	Older nest
103	3-Jul-06	N38 44.990	W76 22.067	Sun	Open	5S	N	16	147.5	9.22	13.0	Weighed B-top
104	3-Jul-06	N38 44.984	W76 22.050	Sun	Open	5S	N	12			12.0	Older Nest
105	5-Jul-06	N38 45.113	W76 22.488	Sun	Open	Notch	N				12.0	Older Nest

Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
106	5-Jul-06	N38 45.112	W76 22.481	Sun	Open		Y(7/5/06)					Completely destroyed-3 eggshells found outside
107	5-Jul-06	N38 45.094	W76 22.324	Sun	Open	5n	Y(5-Jul)					Completely destroyed
108	5-Jul-06	N38 45.084	W76 22.307	Sun	Open	5N	N	11	110.4	10.04	7.0	OW 7/3
109	5-Jul-06	N38 45.018	W76 22.144	Sun	Open	5M	N	15	149.3	9.95	10.0	bottom to top OW 7/3
110	5-Jul-06	N38 45.027	W76 22.160	Sun	Open	5M	Y(5-Jul)					5-July eggs still found
111	5-Jul-06	N38 45.006	W76 22.113	Sun	Open	5S	N	15	143.8	10.27	2.0	Top to bottom OW 7/3
112	5-Jul-06	N38 45.006	W76 22.111	Sun	Edge	5S	N	13	121.2	9.32	5.0	Top to bottom OW 7/3
113	7-Jul-06	N38 45.073	W76 22.275	Sun	Open	5N	Y(7-Jul)					Completely destroyed-egg shells found
114	7-Jul-06	N38 44.975	W76 22.037	Sun	Open	5S	Y(7-Jul)					Completely destroyed
115	10-Jul-06	N38 45.652	W76 22.793	Sun	Open	3	N					weak eggs-4 found all destroyed
116	10-Jul-06	N38 45.648	W76 22.716	Sun	Open	3	N					Older nest
117	10-Jul-06	N38 45.668	W76 22.808	Sun	Open	3	Y(31-Aug)				1.0	Older nest in rocks, 19-Aug 1 hatchling, 31-Aug 2 dead from predation-in freezer, mammal tracks, 5-Sep T.S. destroyed
118	10-Jul-06	N38 45.684	W76 22.810	Sun	Open	3	N					Older nest, 14-Aug nest washed away by high tide-destroyed
119	7-Jul-06	N38 45.164	W76 22.458	Sun	Edge	Notch	N	10	106.6	10.66	5.0	Top to bottom OW 7/3, 23-Sep 4 hatchlings, 28-Sep 1 hatchling, 19-Oct- Fowler's toad frog found in egg chamber, no eggs/hatchlings, logger recovered
120	10-Jul-06	N38 45.068	W76 22.420	Sun	Open	Notch	Y(10-Jul)				3.0	10 Jul-leg left
121	10-Jul-06	N38 45.069	W76 22.407	Sun	Edge	Notch	N	17	154.3	10.29	6.0	3 broken OW 7/3 top to bottom, 23-Oct 6 hatchlings roots surrounded eggs and hatchlings/logger found
122	10-Jul-06	N38 45.080	W76 22.290	Sun	Open	5N	N				12.0	Older nest
123	10-Jul-06	N38 45.069	W76 22.259	Sun	Edge	5N	Y(10-Jul)					Completely destroyed
124	10-Jul-06	N38 45.041	W76 22.189	Sun	Edge	5M	N	11	118.9	10.81	11.0	Top to bottom OW 7/3, 3-Sep 7 hatchlings, 29- Sep 4 hatchlings and logger found
125	10-Jul-06	N38 45.037	W76 22.186	Sun	Open	5M	Y(14-Jul)	13	150.8	11.60		Top to bottom OW 7/3, 14-Jul destroyed, logger recovered, small burrow under wire
126	10-Jul-06	N38 45.033	W76 22.173	Sun	Edge	5M	Y(24-Jul)	14	157.2	11.23	6.0	Top to bottom OW 7/3

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Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
127	10-Jul-06	N38 45.001	W76 22.100	Sun	Open	5S	N	11	117.9	10.72	11.0	Top-bottom, 26-Aug 1 hatchling
128	11-Jul-06	N38 45.673	W76 22.100	Sun	Opwn	3	N	13	141.5	10.88	1.0	top -bottom, 26-Aug 1 hatchling, 5-Sep T.S. Destroyed
129	11-Jul-06	N38 45.072	W76 22.400	Sun	Open	Notch	Y(11-Jul)					Found w/egg shells, No eggs left, Top to bottom
130	11-Jul-06	N38 45.095	W76 22.361	Sun	Open	Notch	N	13	140.6	10.82	12.0	Top to bottom
131	11-Jul-06	N38 45.043	W76 22.197	Sun	Open	5M	N	13	117.3	9.02	9.0	OW-7/3, 29-Sep 9 hatchlings, Eggs-string attached to top, 4 undeveloped eggs, logger found
132	11-Jul-06	N38 44.016	W76 22.132	Sun	Open	5m	Y(11-Jul)					2 eggs remain when found
133	12-Jul-06	N38 44. 988	W76 22.055	Sun	Edge	5S	N					
134	12-Jul-06	N38 45.088	W76 22.318	Semi	Edge	5N	N	9	98.8	10.98	9.0	OW 7/3 top to bottom, 26-Aug 1hatchling, 19-Oct-8hatchlings and logger
135	13-Jul-06	N38 45.081	W76 22.315	Sun	Open	5N	Y(14-Jul, 17-Jul, 24-Jul)					Soft eggs-older nest, 14-July Eggs still found, 17-July small burrow eggs still found, 24-Jul footprints out of water, small burrow, destroyed
136	13-Jul-06	N38 44.987	W76 22.047	Sun	Open	5S	N	13	140.3	10.79	13.0	Top to bottom, OW 7/3, 20-Aug 1 hatchling, 21-Aug 1 hatchling, 10 Oct 1 hatchling, 18-Oct Dug nest 11hatchlings, logger found
137	13-Jul-06	N38 44.977	W76 22.029	Sun	Open	5S	N				13.0	Older nest, 21-Aug13 hatchlings, 13-Sep 1 dead egg
138	14-Jul-06	N38 44.872	W76 23.026	Sun	Open	6W	N	12	104.9	8.74	11.0	Top to bottom, 10-Oct wash-out, dug up nest, 11hatchlings, 1 undeveloped egg
139	14-Jul-06	N38 45.183	W76 22.449	Sun	Edge	Notch	Y(14-Jul)					Found destroyed eggshells
140	14-Jul-06	N38 45.102	W76 22.342	Sun	Open	5N	N				2.0	Older nest
141	14-Jul-06	N38 45.063	W76 22.280	Sun	Open	5N	N				1.0	Older nest
142	14-Jul-06	N38 45.049	W76 22.218	Sun	Open	5M	Y(14-Jul)					completely destroyed, found eggshells, 3 dead eggs
143	14-Jul-06	N38 44.983	W76 22.055	Sun	Open	5S	N	18	196.2	9.81	17.0	Top to bottom, logger from 125
144	17-Jul-06	N38 44.144	W76 22.386	Semi	Edge	Notch	N					Older nest
145	17-Jul-06	N38 45.080	W76 22.464	Sun	open	Notch	N	11	88.6	9.84		Top to bottom, very soft eggs, 2 broken
146	17-Jul-06	N38 45.064	W76 22.418	Sun	open	Notch	N	11	109.0	9.91	10.0	Top to bottom, 8-Oct 9 hatchlings, 9-Oct 1 hatchling, 1 underdeveloped egg and logger found
147	17-Jul-06	N38 45.101	W76 22.343	Sun	Edge	Notch	Y(17-Jul)					Found destroyed-eggshells remained
148	17-Jul-06	N38 45.089	W76 22.310	Sun	open	5N	N				9.0	Older nest

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Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
149	17-Jul-06	N38 45.081	W76 22.287	Sun	Edge	5N	Y(18-Jul)	13	129.6	9.97		Top-bottom, 18-Jul 1 egg left burrowing predator, 19-Oct Dug nest, 1 undeveloped egg, logger
150	17-Jul-06	<u>N38 45.068</u>	W76 22.256	Sun	Edge	5N	Y(18-Jul)	14	111.7	8.03		Top-bottom, 18-Jul destroyed
151	17-Jul-06	N38 45.015	W76 22.129	Sun	Edge	5M	Y(17-Jul)					Found destroyed eggshells
152	17-Jul-06	N38 44.991	W76 22.074	Sun	open	5S	N	14	145.5	10.39	2.0	Top-bottom, 28-Sep 2 hatchlings, 18-Oct- Dug nest, 5undeveloped eggs, and logger
153	17-Jul-06	N38 44.980	W76 22.046	Sun	open	5S	Y(17-Jul)					Found destroyed
154	18-Jul-06	N38 45.647	W76 22.801	Sun	open	3	N	16	147.7	9.23		5-Sep T.S. destroyed
155	18-Jul-06	N38 45.654	W76 22.808	Sun	open	3	N	9	81.3	9.03	6.0	In rocks, bottom-top, 17-Oct Dug nest, 6 hatchlings, 3 undeveloped eggs
156	18-Jul-06	N38 45.135	W76 22.478	Sun	Open	Notch	Y(18-Jul)					Found predated- 1 egg remains, 18-July burrow under mesh, destroyed
157	18-Jul-06	N38 45.072	W76 22.393	Sun	Open	Notch	Y(18-Jul)	11	110.9	10.08		18-July bird attempt, bottom-top, Destroyed
158	18-Jul-06	N38 45.045	W76 22.205	Sun	Open	5M	N	8	86.7	10.84	7.0	top-bottom, 11-Oct 7 hatchlings, 1 undeveloped egg, logger
159	18-Jul-06	N38 45.036	W76 22.183	Sun	Open	5M	N	13	122.2	9.40		Bottom-Top
160	18-Jul-06	N38 45.033	W76 22.73	Open	Sun	5m	N	14	139.6	9.97	13.0	bottom-top, 16-Oct 13 hatchlings, 1 undeveloped egg, and logger
161	18-Jul-06	N38 44.990	W76 22.071	Sun	Open	5S	Y(26-Jul)	11	141.2	10.09	10.0	Bottom-top, 26-Jul burrow under wire, eggs still found, 12-Sep 10 hatchlings and logger recovered
162	19-Jul-06	N38 45.045	W76 22.205	Sun	Open	5M	N	14	120.5	10.95	12.0	Logger from #157, Bottom-top
163	19-Jul-06	N38 45.013	W76 22.120	Sun	Open	05M	N	14	129.6	9.26	14.0	
164	19-Jul-06	N38 44.996	W76 22.089	Sun	Open	5M	N	12	133.5	9.44	9.0	Bottom-top
165	19-Jul-06	N38 45.184	W76 22.826	Sun	Open	6E	N	11	95.3	8.66	11.0	In rocks, Bottom-top, 24-Sept 8 hatchlings, 25-Sept 1 hatchling, 2 hatchlings
166	20-Jul-06	<u>N38 45.200</u>	W76 22.432	Sun	Edge	Notch	Y(20-Jul)					Found destroyed, eggshells found
167	24-Jul-06	N38 45.108	W76 22.479	Sun	open	Notch	N	10	86.2	9.58	2.0	bottom-top
168	24-Jul-06	N38 45.628	W76 22.789	Sun	Open	3	Y(24-Jul)					Found destroyed
169	24-Jul-06	N38 45.137	W76 22.478	Sun	Open	Notch	Y(31-Jul)	12	100.6	8.38		bottom-top, 31-July eggs still found, 1-Aug destroyed
170	25-Jul-06	N38 45.069	W76 22.264	Sun	Edge	5N	Y(28-Jul, 31-Jul)	15	126.5	9.04		bottom-top, 28-Jul burrow under screen, eggs still found, 31-Jul eggs destroyed
171	25-Jul-06	N38 45.102	W76 22.475	Sun	Open	Notch	Y(26-Jul,31-Jul)					26-July Found predated, 6 eggs remain, 31-July completely destroyed, bottom-top

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Nest	Date	Latitude	Longitude	Exposure	Area	Cell #	Predation	Clutch Size	Clutch mass	Mean Egg Mass	Hatchlings	Comment
172	<u>26-Jul-06</u>	N38 45.092	W76 22.353	Semi	Open	Notch	N	13	123.4	9.49	12.0	bottom-top
173	28-Jul-06	N38 44.956	W76 21.992	Semi	Open	5S	N	10	117.8	11.78		bottom-top, 28-Aug washedout by rain and tide destroyed
174	31-Jul-06	N38 45. 638	W76 22.792	Sun	Open	3	N					Older nest, 5-Sept T.S. destroyed
175	31-Jul-06	N38 45.131	W76 22.478	Sun	Open	Notch	N					Found destroyed
176	31-Jul-06	N38 45.070	W76 22.404	Sun	Open	Notch	Y(31-Jul)					Found destroyed
177	31-Jul-06	N38 45.088	W76 22.314	Sun	Open	5N	Y(31-Jul)					Found destroyed
178	31-Jul-06	N38 45.063	W76 22.255	Sun	Open	5	Y(31-Jul)					Found destroyed
179	1-Aug-06	N38 44.959	W76 21.990	Sun	Open	5S	N					Older nest, 5-Sep T.S. destroyed
180	Unknown	N38 45.093	W76 22.320	Sun	Open	5N	N				unknown	Found after hatchlings emerged
181	Unknown	N38 45.098	W76 22.482	Sun	Open	Notch	Y(15-Aug)					Found by predation
182	Unknown	N38 45.66 70	W76 22.809	Sun	Open	3	N				2.0	In rocks, found by hatchlings emerging, 2 found
183	Unknown	N38 45.971	W76 22.790	Sun	Open	3	N				unknown	Found by emerged hatchling tracks
184	Unknown	N38 45.639	W76 22.796	Sun	Open	3	N				1.0	Found by emerging hatchlings, 29-Aug 1 hatchling, 5-Sep T.S. Destroyed
185	Unknown	N38 45.062	W76 22.244	Sun	Open	5N	N				unknown	Found by emerged hatchlings
186	Unknown	N38 45.639	W76 22.796	Sun	Open	Notch	N				unknown	Found by emerged hatchlings
187	Unknown	N38 45.090	W76 22.475	Sun	Open	Notch	N				unknown	Found by emerged hatchlings
188	Unknown	N38 45.123	W76 22.479	Sun	Edge	Notch	N				unknown	Found by emerged hatchlings
189	Unknown	N38 45.085	W76 22.306	Sun	Open	5N	N				unknown	Found by emerged hatchlings
190	Unknown	N38 44.988	W76 22.066	Sun	Open	5S	N				unknown	Found by emerged hatchlings
191	Unknown	N38 45.106	W76 22.480	Sun	Edge	Notch	N				unknown	Found by emerged hatchlings

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/7/06	13265		2R9R11L	2	27.6	31.7	27.3	16.1	8.3	
8/7/06	13266		2R9R11L	2	27.7	31.7	27.7	16.7	8.4	
8/7/06	13268		2R9R11L	2	27.0	30.9	25.8	17.2	7.8	
8/7/06	13270		2R9R11L	2	27.5	30.4	27.1	15.5	7.9	
8/7/06	13271		2R9R11L	2	27.1	31.3	28.5	15.8	8.2	
8/7/06	13273		2R9R11L	2	27.4	31.0	26.5	15.1	7.9	
8/7/06	13274	13275	2R9R11L	2	27.1	31.0	27.8	15.7	8.0	
8/7/06	13276		2R9R11L	2	26.9	31.5	27.5	15.2	7.9	
8/7/06	13278		2R9R11L	2	26.2	31.3	28.6	16.2	8.2	
8/7/06	13279		2R9R11L	2	27.6	30.6	27.3	15.4	8.2	
8/7/06	13281		9R11L	2	27.5	31.7	28.0	15.8	8.2	
8/7/06	13283		9R11L	2	26.5	30.7	26.7	15.2	7.8	
8/7/06	13284		9R11L	2	28.0	31.6	273.0	16.3	8.4	
8/7/06	13286		9R11L	2	27.4	31.4	28.1	15.7	8.1	
8/20/06	13413		9R11L	3	25.9	30.4	27.7	15.9	7.3	1st-4th vertebral irregular
8/20/06	13415		9R11L	3	27.0	31.1	27.7	15.9	7.3	
8/20/06	13416	13417	9R11L	3	28.5	32.5	27.6	16.6	8.2	
8/20/06	13418		9R11L	3	27.3	31.6	27.5	16.6	8.0	
8/20/06	13419	13420	9R11L	3	28.1	31.9	27.0	16.0	7.5	
8/20/06	13421	13422	9R11L	3	29.1	33.1	28.7	16.8	8.7	
8/20/06	13423		9R11L	3	26.8	30.6	26.2	16.3	6.9	
8/21/06	13472		9R11L	3	25.7	30.9	27.3	15.8	7.1	
8/21/06	13473	13474	9R11L	3	25.7	27.9	25.1	15.5	7.3	11R and 11L marginals, 9L marginal looks notch
8/21/06	13475		9R11L	3	26.2	30.7	27.7	15.7	7.2	13R marginals
8/24/06	13548	13549	9R11L	3	27.2	31.7	27.3	15.4	7.3	
3/29/07	14214		9R11L	8	26.9	31.3	26.7	16.0	6.8	
3/29/07	14216		9R11L	8	28.9	32.4	26.9	16.0	7.1	
3/29/07	14217		9R11L	8	28.6	32.3	28.3	16.9	7.6	
3/29/07	14219		9R11L	8	27.5	31.6	27.7	16.7	7.3	
3/29/07	14221	14220	9R11L	8	27.2	31.3	27.7	15.3	6.8	
3/29/07	14222		9R11L	8	27.7	31.5	28.1	16.5	6.8	anam. V5
3/29/07	14224		9R11L	8	29.4	33.5	29.2	16.9	7.9	
3/29/07	14225	14226	9R11L	8	27.5	30.9	27.4	16.1	7.3	13 Marginal on L side
8/18/06	13373		3R9R11L	15	28.8	32.6	28.0	16.4	7.6	
8/18/06	13374		3R9R11L	15	27.9	31.4	28.2	15.6	7.4	
8/18/06	13375	13376	3R9R11L	15	28.8	32.5	29.0	16.0	7.4	
8/18/06	13377		3R9R11L	15	27.1	30.4	28.7	15.0	7.1	
8/18/06	13379		3R9R11L	15	27.2	32.0	28.3	16.1	7.5	
8/18/06	13380	13381	3R9R11L	15	28.1	32.2	28.6	15.7	7.7	
8/18/06	13382		3R9R11L	15	27.8	31.5	28.6	16.1	7.5	
8/18/06	13383	13384	3R9R11L	15	26.6	30.9	28.1	15.3	6.9	
8/18/06	13385	13386	3R9R11L	15	27.6	31.8	28.7	15.9	7.8	
8/18/06	13387		3R9R11L	15	27.6	30.9	28.1	15.5	7.0	
8/18/06	13387	13389	9R11L	15	26.9	31.6	27.8	16.3	7.4	
8/18/06	13388	13391	9R11L	15	28.0	31.7	28.1	16.4	7.5	
8/18/06	13390		9R11L	15	28.1	32.2	28.5	16.2	7.5	
8/18/06	13392	13394	9R11L	15	28.9	32.1	27.7	16.6	7.8	
8/18/06	13393		9R11L	15	26.3	31.7	28.1	16.3	7.2	
8/18/06	13395		9R11L	15	27.2	31.7	28.4	15.7	7.2	
8/7/06	13241	13242	1R9R11L	16	27.9	31.5	26.5	16.5	8.3	
8/7/06	13245	13279	1R9R11L	16	27.1	31.1	29.0	15.0	8.4	
8/7/06	13248		1R9R11L	16	27.0	30.5	27.8	15.7	8.1	
8/7/06	13250	13252	1R9R11L	16	27.5	31.0	27.5	16.3	8.1	
8/7/06	13251		1R9R11L	16	26.9	31.4	27.9	15.6	8.3	
8/7/06	13253		1R9R11L	16	28.1	31.7	27.5	15.8	8.2	
8/7/06	13255	13257	1R9R11L	16	27.7	31.6	28.1	15.8	8.5	
8/7/06	13256		1R9R11L	16	28.0	31.2	27.3	15.4	8.4	
8/7/06	13258	13244	9R11R	16	28.1	32.4	28.9	16.0	8.7	
8/7/06	13243		9R11L	16	27.3	31.6	28.3	15.0	8.6	
8/7/06	13260	13262	9R11L	16	28.2	31.4	27.6	16.0	8.5	
8/7/06	13261		9R11L	16	28.0	31.6	27.7	16.0	8.2	
8/7/06	13263		9R11L	16	28.1	31.5	28.0	15.5	8.2	
8/22/06	13519		9R11L	17	23.1	27.3	25.0	15.2	5.5	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/22/06	13520	13521	9R11L	17	23.8	27.4	23.7	15.5	5.2	
3/29/07	14502		9R11L	18	29.7	33.1	29.1	16.2	8.3	
3/29/07	14504		9R11L	18	30.0	32.7	29.3	16.5	8.0	
8/17/06	13351		9R11L	23	28.9	31.9	28.7	17.7	8.0	
8/17/06	13352	13353	9R11L	23	29.4	32.5	28.7	17.2	8.6	
8/17/06	13354	13355	9R11L	23	28.3	32.1	28.2	16.8	8.0	
8/17/06	13356		9R11L	23	28.7	31.7	27.6	16.1	7.5	
8/17/06	13357	13358	9R11L	23	28.2	31.4	28.1	17.0	7.9	5th vertebral scute irregular
8/17/06	13359		9R11L	23	27.7	31.7	28.0	17.2	7.9	
8/18/06	13361		9R11L	23	26.6	31.7	28.2	16.3	7.6	
8/18/06	13362	13363	9R11L	23	27.1	32.3	28.7	16.9	7.8	
8/18/06	13364		9R11L	23	27.9	32.7	28.7	16.8	8.2	
8/18/06	13365	13365	9R11L	23	27.8	31.7	28.2	16.6	8.0	
8/18/06	13367	13368	9R11L	23	29.2	33.1	28.4	16.7	7.8	
8/18/06	13369		9R11L	23	27.4	31.2	28.1	17.1	7.8	
8/18/06	13370	13371	9R11L	23	28.8	32.3	27.8	17.0	7.9	4th and 5th vertebral side by side, 6th vertebral irregular
8/19/06	13400	133402	9R11L	23	27.7	31.4	28.1	16.7	8.1	5th and 6th vertebral irregular
8/19/06	13401	13404	9R11L	23	27.8	31.4	27.7	17.0	8.1	
8/19/06	13403	13407	9R11L	23	28.1	31.7	28.3	16.8	8.7	
9/7/06	13751		9R11L	25	29.4	34.4	29.6	16.0	9.1	
9/7/06	13752	13753	9R11L	25	29.6	33.3	28.1	16.3	8.9	
9/7/06	13754		9R11L	25	29.7	34.0	30.0	16.7	9.1	
9/7/06	13756		9R11L	25	28.1	33.2	28.4	16.2	7.8	
9/7/06	13757	13758	9R11L	25	30.5	35.2	30.4	16.8	9.5	
9/7/06	13759		9R11L	25	29.5	33.5	29.1	16.3	7.8	
9/7/06	13761		9R11L	25	29.1	33.2	28.5	16.4	8.4	
9/9/06	13775	13776	9R11L	25	29.9	35.4	29.6	17.7	9.5	
9/5/06	13736	13737	9R11L	27	30.1	34.0	30.4	16.5	8.8	
9/5/06	13738		9R11L	27	28.0	31.2	27.9	15.6	7.0	
9/5/06	13739	13740	9R11L	27	27.9	31.1	27.9	16.0	7.4	
9/5/06	13741		9R11L	27	25.0	29.8	26.7	15.3	6.4	
9/5/06	13743		9R11L	27	27.7	31.6	28.2	16.0	7.2	
9/5/06	13744	13745	9R11L	27	27.2	31.0	28.1	15.2	7.1	
9/5/06	13746		9R11L	27	29.0	33.5	29.3	16.1	8.0	
9/5/06	13748		9R11L	27	28.0	32.7	29.1	16.7	7.8	
9/5/06	13749	13750	9R11L	27	28.9	33.2	28.9	16.2	7.2	
9/7/06	13779		9R11L	27	30.4	34.1	29.9	17.0	8.7	
9/18/06	13824	13825	9R11L	27	26.5	31.3	28.2	15.7	6.7	
8/7/06	13235		9R11L	30	25.1	29.1	23.6	14.1	5.3	
8/7/06	13237		9R11L	30	25.5	30.0	26.2	14.8	6.4	
8/7/06	13238	13239	9R11L	30	25.5	29.1	25.1	14.4	5.8	
8/7/06	13240		1R9R11L	30	28.7	31.6	26.7	16.1	8.3	
8/24/06	13550		9R11L	30	27.1	31.6	28.0	15.3	7.3	
8/24/06	13551	13552	9R11L	30	25.8	30.4	26.9	15.4	6.9	
8/24/06	13553		9R11L	30	26.0	30.4	27.0	15.8	6.9	
8/24/06	13555		9R11L	30	26.8	31.3	27.3	14.9	7.2	
8/24/06	13556	13557	9R11L	30	26.7	30.2	26.8	15.2	7.1	
8/24/06	13558		9R11L	30	26.4	31.7	27.7	15.3	7.1	
8/24/06	13559	13560	9R11L	30	27.1	30.5	26.8	14.9	6.8	
8/24/06	13561	13562	9R11L	30	26.3	31.0	27.4	14.7	6.9	
8/9/06	13287	13288	9R11L	31	27.1	31.4	27.6	15.0	7.4	
8/9/06	13289		9R11L	31	27.1	29.3	27.6	14.7	6.8	
8/9/06	13291		9R11L	31	27.6	31.8	27.5	15.0	7.6	
8/9/06	13292	13293	9R11L	31	28.2	31.0	28.0	15.2	7.7	
8/9/06	13294		9R11L	31	27.8	31.1	27.8	15.3	7.3	
8/9/06	13297	13298	9R11L	31	27.7	31.3	27.7	16.8	7.9	
8/9/06	13296		9R11L	31	28.9	31.7	27.2	15.6	7.6	
8/9/06	13300	13301	9R11L	31	27.9	31.5	28.0	15.0	7.4	
8/9/06	13302		9R11L	31	27.0	29.9	26.1	14.8	6.6	
8/9/06	13304		9R11L	31	28.1	30.4	27.7	14.5	7.4	
8/9/06	13305	13306	9R11L	31	29.1	31.8	27.5	16.0	7.4	
8/9/06	13307		9R11L	31	27.9	31.8	28.0	16.2	8.0	
10/4/06	13914		9R11L	32	24.1	29.2	25.1	16.0	6.2	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
9/11/06	13777		9R11L	34	25.3	29.8	27.4	16.3	7.5	
9/28/06	13852		9R11L	34	29.9	33.4	28.9	16.1	8.5	nature center
9/28/06	13853	13854	9R11L	34	29.7	32.8	29.0	16.8	8.8	nature center
9/28/06	13855		9R11L	34	29.0	31.8	26.5	15.8	7.1	
8/26/06	13628	13629	9R11L	39	27.0	30.9	27.8	16.2	7.6	
8/26/06	13630		9R11R11L	39	27.5	31.9	28.2	16.8	8.6	
8/26/06	13632		9R11R11L	39	29.1	32.2	29.2	15.8	8.5	
8/26/06	13633	13634	9R11R11L	39	27.8	31.5	27.0	16.5	8.0	
8/26/06	3635		9R11R11L	39	28.0	32.6	29.0	16.2	8.2	
8/26/06	13637		9R11R11L	39	26.8	31.4	29.0	16.1	8.3	
8/26/06	13638	13639	9R11R11L	39	27.0	31.5	28.3	16.9	8.1	
8/26/06	13640		9R11R11L	39	27.6	31.6	28.4	16.3	7.8	
8/26/06	13641	13642	9R11R11L	39	27.8	32.1	29.2	16.4	8.3	
8/26/06	13643	13644	9R11R11L	39	28.2	31.7	29.0	16.2	8.0	
8/26/06	13645		9R11R11L	39	28.7	33.0	29.6	16.2	8.5	
8/26/06	13646	13647	9R11L	39	28.8	32.1	29.8	16.6	8.6	
8/26/06	13648		9R11L	39	27.6	31.6	29.4	16.1	8.1	
8/26/06	13650		9R11L	39	28.1	31.4	28.4	16.6	8.1	
8/26/06	13651	13652	9R11L	39	28.1	32.1	30.1	16.7	8.4	
8/26/06	13653		9R11L	39	28.7	32.4	28.1	16.6	8.2	
3/29/07	14317		9R11L	42	29.1	31.1	27.7	16.6	7.6	26 Marginals
3/29/07	14319		9R11L	42	27.3	30.5	27.3	17.1	7.1	
3/29/07	14321		9R11L	42	29.7	33.1	29.0	17.2	8.1	
3/29/07	14322		9R11L	42	26.3	29.3	27.2	16.6	6.5	26 Marginals
3/29/07	14324		9R11L	42	27.4	31.4	27.8	17.0	7.0	26 Marginals
3/29/07	14325	14326	9R11L	42	25.1	28.7	26.0	15.1	5.4	
3/29/07	14327		9R11L	42	27.6	31.6	27.3	16.9	7.2	anamolous 5th vertebral
3/29/07	14329		9R11L	42	26.6	29.7	27.4	16.1	6.3	
3/29/07	14330	14331	9R11L	42	28.7	31.2	27.9	18.3	7.8	
3/29/07	14332		9R11L	42	28.6	31.0	27.7	16.6	6.9	
3/29/07	14339		9R11L	42	30.1	32.9	29.0	17.7	8.7	
3/29/07	14335	14336	9R11L	42	29.1	27.5	27.7	16.7	7.5	
3/29/07	14281		9R11L	43	23.9	27.6	25.2	14.5	5.4	
3/29/07	14283		9R11L	43	23.9	26.2	24.2	15.1	5.0	
3/29/07	14285		9R11L	43	22.5	26.7	25.2	15.3	5.3	anamolous V2 - 5 + 13 Marg. On Right
3/29/07	14286		9R11L	43	23.4	27.1	25.2	15.4	5.1	
3/29/07	14288		9R11L	43	24.5	26.1	24.5	15.4	5.1	
3/29/07	14289	14290	9R11L	43	24.0	26.7	24.4	14.6	4.7	
3/29/07	14291		9R11L	43	23.8	27.4	25.1	15.4	5.3	
3/29/07	14293		9R11L	43	24.1	26.8	24.3	15.4	5.3	
3/29/07	14294	142295	9R11L	43	24.6	27.6	25.1	15.7	5.9	
3/29/07	14296		9R11L	43	23.8	27.6	24.8	14.8	5.3	
3/29/07	14273		9R11L	43	24.7	27.6	25.8	15.4	5.4	
3/29/07	14275		9R11L	43	24.3	27.4	25.8	15.6	5.8	
3/29/07	14276	14277	9R11L	43	23.8	27.6	25.5	15.4	5.5	
3/29/07	14278		9R11L	43	24.8	27.3	24.5	14.9	5.0	
3/29/07	14280		9R11L	43	27.0	27.3	23.6	14.8	4.9	
8/28/06	13676		9R11L	44	25.9	28.0	24.6	14.4	5.6	
8/28/06	13677	13678	9R11L	44	26.9	30.1	25.8	15.0	6.4	
8/28/06	13679	13680	9R11L	44	27.1	30.4	26.1	14.9	6.4	
8/28/06	13681		9R11L	44	27.2	31.0	26.8	16.0	7.0	
8/28/06	13682	13683	9R11L	44	26.5	31.6	26.0	14.9	6.4	
8/28/06	13684		9R11L	44	26.8	29.6	25.6	15.0	6.0	
8/28/06	13685	13686	9R11L	44	26.7	29.7	24.6	14.9	6.2	
8/28/06	13687	13688	9R11L	44	27.1	30.2	27.9	15.5	6.5	
8/28/06	13689		9R11L	44	24.3	27.7	24.4	14.7	5.7	
11/27/06	14157		9R11L	45	27.0	30.4	27.4	16.4	7.0	
11/27/06	14158	14159	9R11L	45	27.7	31.6	28.0	16.0	7.1	13L marginals
11/27/06	14160		9R11L	45	27.7	33.2	28.6	16.5	8.0	
11/27/06	14162		9R11L	45	27.8	32.5	28.1	17.4	7.8	
11/27/06	14163	14164	9R11L	45	28.1	3.4	27.9	17.2	7.5	11 R marginals/extra L costal
11/27/06	14165		9R11L	45	28.5	32.7	27.7	16.4	7.2	
11/27/06	14166	14167	9R11L	45	29.0	32.3	27.8	17.0	8.3	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
11/27/06	14168		9R11L	45	28.3	31.9	27.8	17.0	7.4	
11/27/06	14170		9R11L	45	27.8	32.5	28.3	16.7	7.4	
11/27/06	14171	14172	9R11L	45	27.7	32.5	28.0	16.6	7.8	
8/24/06	13564	13565	9R11L	46	28.9	31.4	26.9	16.8	7.7	
8/24/06	13566		9R11L	46	28.1	31.4	27.7	16.6	7.4	
8/24/06	13568		9R11L	46	27.1	29.4	25.5	16.2	6.8	
8/24/06	13569	13570	9R11L	46	27.8	31.1	28.6	16.3	7.6	
8/24/06	13571		9R11L	46	28.1	31.0	28.1	168.0	7.6	
8/24/06	13573		9R11L	46	27.2	31.8	28.1	16.8	7.4	
8/24/06	13574	13575	9R11L	46	27.1	29.7	25.6	158.0	6.7	
8/24/06	13576		9R11L	46	24.8	26.8	23.7	17.0	7.1	shell is very small
8/24/06	13577	13578	9R11L	46	27.4	30.6	26.1	16.9	6.6	4-5th vertebrae irregular
10/8/06	13915	13916	9R11L	46	25.8	28.4	25.2	15.5	6.6	
10/19/06	14046		9R11L	46	25.1	29.1	25.4	15.4	6.0	L marginals bent down
8/23/06	13545		9R11L	48	26.7	32.2	27.6	15.9	7.4	
8/23/06	13546	13547	9R11L	48	27.3	32.0	27.7	16.6	7.6	
9/3/06	13717		9R11L	53	27.7	30.3	27.4	15.9	7.4	
9/3/06	13718	13719	9R11L	53	27.3	31.2	27.8	15.7	8.3	
9/3/06	13720		9R11L	53	26.5	30.5	26.7	15.7	7.4	
9/3/06	13721	13722	9R11L	53	27.1	30.6	26.8	15.2	7.7	
9/3/06	13723	13724	9R11L	53	26.0	29.9	27.0	16.0	7.2	
10/1/06	13897	13898	9R8L11L	54	29.7	33.1	28.8	16.1	8.2	
10/1/06	13899		9R8L11L	54	27.5	32.0	27.1	16.3	7.7	
10/1/06	13901		9R8L11L	54	28.8	30.7	28.2	15.7	7.5	
10/1/06	13902	138903	9R8L11L	54	276.0	31.8	28.1	15.4	7.6	
10/1/06	13904		9R8L11L	54	29.7	32.8	27.4	16.6	8.1	
10/1/06	13906		9R8L11L	54	26.8	29.6	25.9	15.6	6.3	
10/2/06	13907	13908	9R8L11L	54	272.0	29.5	26.3	15.8	7.2	
10/2/06	13909		9R8L11L	54	29.6	32.3	28.1	16.0	8.0	
10/2/06	13912	13913	9R8L11L	54	29.6	32.5	28.0	16.5	8.3	
9/15/06	13818		9R11L	55	25.0	26.3	24.2	14.8	5.7	vertebrae slight curve to L
9/15/06	13819	13820	9R11L	55	26.2	29.4	25.1	15.3	6.5	
3/29/07	14476		9R11L	55	27.1	29.9	25.7	17.0	6.8	
8/24/06	13579	13580	9R11L	56	27.1	30.5	27.0	15.2	7.6	11R marginals
8/24/06	13581		9R11L	56	26.8	32.1	27.7	16.1	8.0	
8/29/06	13582	13583	9R11L	56	27.2	31.6	28.1	16.4	8.1	
8/24/06	13584		9R11L	56	26.8	30.0	27.6	17.0	7.3	
8/24/06	13586		9R11L	56	29.0	33.7	29.4	16.1	9.0	
8/24/06	13587	13588	9R11L	56	26.4	31.7	28.4	16.6	7.8	
8/24/06	13589		9R11L	56	28.9	32.0	27.7	16.1	8.0	
8/24/06	13591		9R11L	56	28.4	32.6	28.9	16.5	8.3	
8/24/06	13592	13593	9R11L	56	27.9	31.7	28.5	16.2	8.1	
8/24/06	13594		9R11L	56	27.1	31.1	28.3	16.2	7.7	
8/24/06	13595	13596	9R11L	56	8.0	31.7	28.2	17.2	8.1	
8/24/06	13597	13598	9R11L	56	28.0	31.1	27.4	15.9	7.6	
8/24/06	13599		9R11L	56	29.1	31.8	27.8	17.2	8.1	
8/24/06	13600	13601	9R11L	56	27.1	31.7	27.7	15.4	7.6	
8/24/06	13602	13603	9R11L	56	27.7	32.2	28.4	16.9	8.4	
8/24/06	13604		9R11L	56	21.1	23.9	20.5	14.8	5.0	shell is too small for body
8/25/06	13618	13619	9R11L	56	28.0	32.1	28.4	16.5	8.0	
8/18/06	13397	13399	9R11L	57	25.3	27.9	24.4	16.2	6.7	
8/20/06	13410		9R11L	57	27.1	29.9	25.4	16.2	7.1	
8/20/06	13411	13412	9R11L	57	25.1	29.1	25.2	16.3	6.6	
8/21/06	13467		9R11L	57	26.3	29.8	25.7	16.4	7.4	
9/15/06	13821		9R11L	57	26.2	29.5	24.7	15.1	6.8	13R and L marginals0
9/18/06	13822	13823	9R11L	57	26.5	29.2	24.6	14.8	6.6	
8/22/06	13522		9R11L	60	29.1	33.4	29.1	16.7	8.8	
8/22/06	13524		9R11L	60	31.1	33.9	29.1	16.7	9.4	
8/22/06	13525	13526	9R11L	60	29.5	33.1	28.2	16.6	9.2	
8/22/06	13527		9R11L	60	29.2	32.9	29.1	17.5	8.7	
8/22/06	13529		9R11L	60	30.1	34.0	28.9	16.9	9.6	
8/22/06	13530	13531	9R11L	60	29.6	33.4	29.6	17.0	9.3	
8/22/06	13532		9R11L	60	29.2	33.0	29.4	17.3	9.4	
8/22/06	13533	13534	9R11L	60	28.2	33.2	29.2	16.8	8.8	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/22/06	13535		9R11L	60	29.3	33.9	28.6	16.6	9.2	
8/22/06	13537		9R11L	60	29.4	33.6	30.3	17.1	9.3	
8/22/06	13538	13539	9R11L	60	29.2	34.2	30.1	16.8	9.5	
8/22/06	13540		9R11L	60	29.5	34.3	29.0	16.2	8.9	4-6 vertebrae deformed
8/22/06	13542		9R11L	60	28.7	32.9	29.2	17.4	8.7	
8/22/06	13543	13544	9R11L	60	29.4	33.2	28.6	17.5	9.5	
3/29/07	14577		9R11L	63	26.0	30.5	27.4	16.0	6.7	
3/29/07	14579		9R11L	63	27.7	30.3	26.8	14.9	6.3	
3/29/07	14580		9R11L	63	26.1	29.1	24.6	17.3	6.1	
3/29/07	14582		9R11L	63	28.4	31.5	25.7	15.5	6.7	anam. V5
3/29/07	14583	14584	9R11L	63	27.5	31.8	26.6	15.8	6.8	
3/29/07	14585		9R11L	63	27.6	32.0	27.2	16.7	6.7	
3/29/07	14587		9R11L	63	26.9	30.2	26.4	15.8	6.4	
3/29/07	14588	14589	9R11L	63	26.6	31.1	26.5	16.1	6.5	
3/29/07	14590		9R11L	63	27.8	30.7	27.0	15.4	6.7	
3/29/07	14592		9R11L	63	26.1	29.8	26.3	15.1	6.2	
3/29/07	14593		9R11L	63	26.5	29.8	25.6	15.6	5.9	
3/29/07	14595		9R11L	63	27.0	31.0	26.3	15.7	6.5	
3/29/07	14597		9R11L	63	26.4	30.1	26.5	15.4	6.5	
3/29/07	14598		9R11L	63	27.2	30.8	36.5	15.4	6.2	
3/29/07	14600		9R11L	63	26.2	30.1	26.5	15.4	6.4	
8/15/06	13310	13311	9R11L	64	27.4	30.7	26.7	15.8	7.3	
8/15/06	13312		9R11L	64	26.9	30.1	26.3	15.4	6.7	
8/15/06	13315	13316	9R11L	64	26.6	30.2	26.3	15.9	6.8	
8/15/06	13317		9R11L	64	25.0	29.1	25.5	15.6	6.4	
8/15/06	13318	13319	9R11L	64	24.9	28.8	25.6	15.8	6.3	
8/15/06	13320		9R11L	64	27.5	30.1	26.7	16.7	7.6	22 marginals
8/15/06	13321	13322	9R11L	64	23.9	28.1	25.1	15.2	5.6	
8/15/06	13323	13324	9R11L	64	26.9	30.5	26.7	17.4	8.0	
8/15/06	13325		9R11L	64	26.2	29.4	25.8	16.2	6.6	
8/20/06	13406	13407	9R11L	64	29.2	30.4	25.7	16.3	7.1	
8/20/06	13408		9R11L	64	25.2	29.9	25.6	15.9	6.1	
8/17/06	13349	13350	9R11L	65	26.1	29.8	26.7	15.8	6.6	
8/20/06	13424	13425	9R11L	65	26.4	30.2	26.8	16.0	7.1	
8/20/06	13426		9R11L	65	26.6	30.4	27.2	16.1	7.3	
8/20/06	13429	13430	9R11L	65	26.1	30.5	26.6	15.4	6.6	
8/20/06	13431		9R11L	65	26.9	30.6	27.0	16.4	7.4	
8/20/06	13433		9R11L	65	26.4	29.8	26.0	16.2	6.8	
8/20/06	13434	13435	9R11L	65	26.8	31.5	28.1	16.6	8.1	
8/20/06	13436		9R11L	65	26.5	31.3	27.4	16.1	7.5	
8/20/06	13437	13438	9R11L	65	27.2	31.1	27.4	16.6	7.9	4th vertebral irregular
8/20/06	13439	13440	9R11L	65	26.5	30.5	27.2	16.0	7.2	
8/20/06	13441		9R11L	65	25.8	29.2	25.9	15.2	6.6	
8/15/06	13326	13327	9R11L	66	26.4	29.2	26.8	17.1	7.3	12 R marginals, 11L marginals
8/15/06	13328	13329	9R11L	66	25.1	28.1	26.5	17.2	7.5	
8/15/06	13330		9R11L	66	25.1	29.6	26.8	16.5	7.3	
8/15/06	13331	13332	9R11L	66	26.5	31.4	27.7	16.6	7.7	5th vertebral scute irregular
8/15/06	13333		9R11L	66	26.2	29.3	27.1	16.5	7.4	
8/15/06	13335		9R11L	66	25.9	30.2	26.6	17.0	7.5	
8/15/06	13336	13337	9R11L	66	27.8	30.6	27.4	16.9	7.9	
8/15/06	13338		9R11L	66	26.1	29.3	26.7	16.8	7.1	
8/15/06	13339	13340	9R11L	66	26.0	30.4	27.2	16.7	7.2	
10/12/06	13977	13978	9R11L	67	25.9	29.7	26.1	15.8	7.1	
8/21/06	13498		9R10R11L	68	27.1	29.8	27.3	16.0	7.5	11R marginals
8/21/06	13499	13500	9R10R11L	68	27.9	30.9	27.2	15.9	7.6	11L marginals
8/21/06	13501		9R10R11L	68	26.9	32.2	27.5	16.2	8.0	
8/21/06	13503		9R10R11L	68	27.4	31.7	27.2	15.9	7.9	12L very small
8/21/06	13504	13505	9R10R11L	68	26.4	29.8	26.3	15.3	6.6	
8/21/06	13506		9R10R11L	68	27.6	32.4	27.2	16.3	7.7	
8/21/06	13507	13508	9R10R11L	68	27.6	32.4	27.4	16.3	8.1	
8/21/06	13509	13510	9R10R11L	68	28.1	32.0	27.4	16.2	8.1	
8/21/06	13511		9R10R11L	68	26.8	30.6	26.7	15.8	7.1	
8/22/06	13512	13513	9R10R11L	68	27.4	31.4	26.2	16.1	7.3	
8/22/06	13514		9R10R11L	68	27.6	31.8	27.3	16.0	8.0	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/22/06	13516		9R10R11L	68	28.1	31.5	27.8	16.1	7.9	
8/22/06	13517	13518	9R11L	68	27.7	31.7	26.8	15.5	7.3	11R AND L marginals
8/25/06	13617		9R11L	68	26.7	31.4	27.7	16.5	7.7	11R marginals
3/29/07	14487	14488	9R11L	69	26.5	30.5	25.0	15.6	6.0	
3/29/07	14489		9R11L	69	27.4	30.8	26.3	15.8	7.0	
3/29/07	14491		9R11L	69	26.8	30.7	26.7	16.0	6.4	
3/29/07	14492		9R11L	69	28.1	30.0	26.9	15.9	6.8	
3/29/07	14478		9R11L	69	27.7	31.5	28.1	16.0	7.2	
3/29/07	14479		9R11L	69	27.5	31.0	27.5	16.0	6.8	
3/29/07	14481		9R11L	69	27.6	30.8	27.2	16.0	6.6	
3/29/07	14482	14483	9R11L	69	29.0	32.1	27.8	15.8	7.5	
3/29/07	14484		9R11L	69	26.4	31.1	27.2	15.9	7.0	11 Marginal on left side
3/29/07	14486		9R11L	69	27.4	31.8	27.5	15.4	6.8	
8/16/06	13341	13342	9R11L	70	27.1	30.1	26.9	15.6	7.4	
8/16/06	13343		9R11L	70	27.5	30.6	27.3	16.3	8.3	
8/16/06	13344	13345	9R11L	70	26.5	28.9	25.6	159.0	7.5	
8/16/06	13346		9R11L	70	26.8	30.6	27.8	16.6	8.1	
8/17/06	13348		9R11L	70	26.6	30.4	272.0	16.4	7.7	
8/20/06	13442	13443	9R11L	71	27.6	31.5	27.9	16.4	8.0	
8/20/06	13444		9R11L	71	28.0	32.4	28.1	16.7	8.4	
8/20/06	13446		9R11L	71	27.7	32.3	28.5	16.1	8.1	
8/20/06	13447		8R9R11L	71	28.1	31.6	27.4	16.4	8.1	
8/20/06	13449		8R9R11L	71	26.6	31.3	26.7	16.8	7.7	
8/20/06	13451		8R9R11L	71	26.8	31.4	26.8	16.5	7.1	
8/20/06	13452	13453	8R9R11L	71	27.3	31.8	27.0	16.5	8.2	
8/20/06	13454		8R9R11L	71	25.2	29.4	25.8	15.4	6.5	
8/20/06	13455	13456	8R9R11L	71	28.0	32.0	27.0	17.0	7.6	
8/20/06	13457		8R9R11L	71	27.7	32.1	27.5	16.9	7.8	
8/20/06	13459		8R9R11L	71	27.6	31.7	27.4	17.7	8.2	
8/20/06	13460	13461	8R9R11L	71	27.7	2.1	7.7	17.2	8.2	
8/20/06	13462		8R9R11L	71	27.3	31.8	26.6	16.6	7.7	
8/20/06	13464		8R9R11L	71	28.2	32.9	27.8	17.1	8.2	
10/18/06	14028		9R11L12L	72	27.9	32.8	27.4	16.0	7.5	
10/18/06	14029	14030	1R2R9R11L	72	27.7	31.8	27.5	15.4	7.1	
10/18/06	14031	14032	1R2R9R11L	72	27.8	31.6	27.9	16.1	7.3	
10/18/06	14033		1R2R9R11L	72	27.1	32.2	27.6	15.6	7.3	
10/18/06	14034	14035	1R2R9R11L	72	25.8	25.8	27.1	14.3	6.6	
10/18/06	14041		1R2R9R11L	72	26.6	30.9	26.7	15.1	6.4	
10/18/06	14036		1R2R9R11L	72	27.7	32.3	26.7	15.8	7.7	
10/18/06	14038		1R2R9R11L	72	27.1	31.0	27.9	15.8	7.3	
10/18/06	14039	14040	1R2R9R11L	72	27.7	31.6	27.1	14.9	6.8	
10/18/06	14042	14043	1R2R9R11L	72	26.8	30.4	26.7	15.3	6.5	
10/18/06	14044	14045	1R2R9R11L	72	27.1	30.8	26.5	15.7	6.9	
3/29/07	14442		9R11L	74	27.9	31.1	27.4	16.3	7.5	
3/29/07	14443	14444	9R11L	74	28.7	31.9	27.5	15.6	7.3	
3/29/07	14445		9R11L	74	27.6	32.1	27.6	16.2	7.2	
3/29/07	14447		9R11L	74	27.7	32.3	28.3	16.2	7.8	
3/29/07	14449		9R11L	74	28.6	32.1	27.6	16.2	7.2	
3/29/07	14450		9R11L	74	27.4	31.9	26.7	15.7	6.4	
3/29/07	14451	14452	9R11L	74	28.9	32.5	28.1	16.5	7.4	
3/29/07	14434		9R11L	74	27.3	30.7	28.2	16.2	7.1	
3/29/07	14435		9R11L	74	27.4	30.3	26.2	15.0	6.1	
3/29/07	14437		9R11L	74	28.2	32.5	28.3	16.5	7.3	
3/29/07	14439		9R11L	74	27.9	31.7	26.7	16.3	6.8	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
3/29/07	14440		9R11L	74	27.7	31.3	27.7	16.7	7.2	
8/26/06	13620	13621	9R11L	75	29.6	31.9	28.7	17.1	9.6	
10/8/06	13917		9R11L	78	26.1	29.5	26.2	15.7	7.3	
10/8/06	13919		9R11L	78	25.9	30.9	27.5	16.6	7.9	
10/8/06	13920	13921	9R11L	78	25.6	30.3	27.5	16.0	7.6	
10/8/06	13922		9R11L	78	27.8	30.6	25.8	15.4	6.8	
10/8/06	13923	13924	9R11L	78	27.4	31.0	27.5	15.2	7.0	
10/8/06	13925	13926	9R11L	78	26.3	31.1	26.7	14.8	6.9	
8/24/06	13605	13605	9R11L	79	25.0	29.5	25.8	15.6	6.6	
8/24/06	13607		9R11L	79	25.2	29.2	28.7	15.4	6.9	
8/24/06	13509		9R11L	79	25.4	29.6	26.6	15.6	7.1	11R marginals
8/24/06	13610	13611	9R11L	79	26.6	29.7	26.7	15.7	6.9	
8/24/06	13612		9R11L	79	25.5	28.8	25.6	15.2	6.4	
8/24/06	13614		9R11L	79	25.6	29.2	25.5	16.0	6.6	
8/24/06	13615	13616	9R11L	79	25.3	29.4	25.9	15.6	6.8	
11/28/06	14113		9R11L	80	28.2	30.5	30.5	16.7	7.8	anomolous 5th vertebral and 13 marginals
11/28/06	14114		9R11L	80	29.1	32.9	27.9	17.6	8.3	
11/28/06			9R11L	80	28.4	31.8	29.1	16.1	7.6	unsure of tag#
11/28/06	14116		9R11L	80	28.5	31.6	28.4	16.4	7.8	
11/28/06	14117	14118	9R11L	80	29.0	31.0	29.0	16.6	5.2	
11/28/06	14119		9R11L	80	29.0	33.1	28.5	16.2	8.1	
11/28/06	14121		9R11L	80	28.4	32.4	29.1	16.0	7.7	
11/28/06	14122	14123	9R11L	80	27.7	32.2	29.3	15.9	7.9	
11/28/06	14124		9R11L	80	27.8	32.0	29.0	15.3	7.5	
11/28/06	14126		9R11L	80	28.6	32.9	29.2	16.1	7.9	
11/28/06	14127	14128	9R11L	80	28.1	32.8	28.3	16.1	7.7	
3/29/07	14505		9R11L	81	27.1	31.8	27.6	16.2	7.2	
3/29/07	14507		9R11L	81	27.4	30.9	27.5	16.0	6.7	
3/29/07	14376		9R11L	83	29.2	32.1	29.3	16.5	7.9	
3/29/07	14309		9R11L	84	28.1	32.4	28.4	16.1	7.7	anamolous 5th vertebral
3/29/07	14311		9R11L	84	28.5	31.6	29.0	16.6	7.9	
3/29/07	14312	14313	9R11L	84	26.9	30.3	29.5	15.7	7.4	
3/29/07	14314		9R11L	84	27.8	30.7	29.0	16.9	7.7	
3/29/07	14316		9R11L	84	27.6	31.9	29.0	16.2	7.3	
3/29/07	14307	14308	9R11L	84	27.9	30.3	27.7	16.1	7.2	26 Marginals anam. V-5
3/29/07	14306		9R11L	84	27.7	30.6	27.6	16.1	6.8	
8/26/06	13623	13624	9R11L	86	27.8	32.3	29.5	16.6	8.6	
3/29/07	14209		9R11L	87	25.0	29.0	25.4	14.9	5.9	
3/29/07	14211		9R11L	87	25.8	31.0	27.4	16.7	6.5	
3/29/07	14212	14213	9R11L	87	26.6	30.6	27.2	16.3	6.5	
3/29/07	14230	14231	9R11L	91	30.2	33.0	29.8	16.5	8.1	
3/29/07	14232		9R11L	91	28.9	30.8	27.9	15.9	7.1	
3/29/07	14234		9R11L	91	29.8	32.1	29.0	16.5	7.6	
3/29/07	14235	14236	9R11L	91	29.1	31.7	27.7	16.0	7.1	16 Marginals
3/29/07	14237		9R11L	91	30.0	32.7	29.5	16.5	8.1	
3/29/07	14239		9R11L	91	29.0	31.9	28.7	16.1	7.6	
3/29/07	14240		9R11L	91	28.8	31.7	28.4	15.7	7.4	
3/29/07	14242		9R11L	91	24.3	27.8	23.6	14.3	4.7	
3/29/07	14243	14244	9R11L	91	26.2	30.9	28.9	16.4	7.3	
3/29/07	14245		9R11L	91	29.0	33.5	30.6	15.7	8.1	
3/29/07	14247	14248 - 49	9R11L	91	30.2	33.0	28.3	15.1	7.4	two tags
3/29/07	14250		9R11L	91	28.5	32.3	29.1	16.3	7.6	
3/29/07	14252		9R11L	91	28.0	31.4	27.5	15.9	6.8	
8/29/06	13690	13691	9R12R11L	93	27.0	31.8	27.4	15.2	7.2	
8/29/06	13692		9R12R11L	93	27.0	31.5	28.0	16.1	7.7	
8/29/06	13694		9R12R11L	93	27.4	31.5	28.1	16.2	8.0	
8/29/06	13695	13696	9R12R11L	93	29.3	31.9	27.2	15.4	7.7	
8/29/06	13697		9R12R11L	93	27.1	30.2	26.8	16.0	7.2	
8/29/06	13699		9R12R11L	93	27.0	30.3	27.2	15.3	7.1	
8/29/06	13702		9R12R11L	93	26.9	31.2	28.2	16.1	7.2	
8/29/06	13703	13704	9R12R11L	93	27.1	30.6	26.5	15.9	7.5	
8/29/06	13705	13706	9R12R11L	93	27.4	30.7	27.9	15.4	7.3	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/29/06	13707		9R12R11L	93	26.2	29.6	26.7	16.1	6.9	13R and L Marginals
8/29/06	13708	13709	9R11L	93	26.3	30.2	27.1	15.8	7.5	13R and L marginals
8/29/06	13710		9R11L	93	29.2	30.8	27.6	16.2	7.9	13R and L marginals
8/29/06	13712		9R11L	93	27.0	30.7	28.0	15.3	7.8	13R marginals
8/29/06	13713	13714	9R11L	93	28.1	31.7	28.2	16.3	7.8	2 extra scutes on plastron
8/27/06	13655		9R11L	95	27.6	32.8	27.4	15.9	7.9	4th and 6th Marginals on L and R curl
9/12/06	13780	13781	9R1L11L	96	27.2	32.0	29.8	14.8	7.6	
9/12/06	13782		9R1L11L	96	26.7	31.6	29.3	16.1	7.9	
9/12/06	13783	13784	9R1L11L	96	27.6	31.1	27.6	16.1	7.4	
9/12/06	13785	13786	9R1L11L	96	28.0	31.1	28.0	16.3	7.7	
9/12/06	13787		9R1L11L	96	28.2	31.9	28.5	15.8	6.5	
9/12/06	13788	13789	9R1L11L	96	27.4	31.1	28.8	16.3	7.8	
9/12/06	13790		9R1L11L	96	26.8	30.4	27.8	15.8	6.9	
9/12/06	13792		9R1L11L	96	27.9	31.4	28.8	16.3	7.9	
9/12/06	13793	13794	9R1L11L	96	26.7	31.0	27.9	16.3	7.6	
9/12/06	13795		9R1L11L	96	27.0	30.7	28.3	16.2	7.5	
9/12/06	13797		9R1L11L	96	28.0	32.1	29.1	15.7	7.8	
9/12/06	13798	1799	9R11L	96	27.0	31.6	28.9	16.0	7.7	
9/12/06	13800		9R11L	96	26.7	28.8	27.6	15.9	7.0	11R marginals, vertebrals curl to L
9/29/06	13870		9R11L	97	26.8	32.6	29.0	16.5	7.9	
9/29/06	13871	13872	9R11L	97	28.9	32.9	28.9	16.4	8.2	
9/29/06	13873		9R11L	97	31.0	34.0	29.0	16.8	9.3	
9/29/06	13875		9R11L	97	29.2	32.4	27.6	16.5	8.3	
9/29/06	13576	13877	9R11L	97	27.0	29.7	26.9	15.8	7.4	R side carapace deformed
9/29/06	13878		9R11L	97	29.5	33.8	28.9	17.3	9.3	
9/29/06	13879	13880	9R11L	97	28.1	31.1	26.9	16.2	7.3	
9/29/06	13881	13882	9R11L	97	29.4	32.2	28.3	16.7	8.4	13R and L marginals
9/7/06	13762	13763	9R11L	98	27.6	31.9	29.1	16.2	8.3	
9/7/06	13766		9R11L	98	28.1	32.0	29.8	15.6	8.0	
9/7/06	13767	13768	9R11L	98	27.0	31.0	26.6	15.7	7.3	13L marginals
9/7/06	13769		9R11L	98	27.1	30.8	27.0	15.5	6.9	
9/7/06	13770	13771	9R11L	98	28.4	31.8	28.7	15.6	8.1	
9/7/06	13772	13773	9R11L	98	28.3	31.5	27.9	15.9	8.3	
9/7/06	13774		9R11L	98	27.9	31.6	28.0	15.6	8.0	
9/28/06	13857		9R11L	98	27.9	32.1	28.5	15.5	7.6	DNR
9/28/06	13858	13859	9R11L	98	28.8	31.4	27.8	16.0	7.1	DNR 13 R marginals
3/29/07	14528		9R11L	99	30.0	33.0	29.0	16.4	8.1	
3/29/07	14529	14930	9R11L	99	29.3	32.4	29.0	16.1	7.6	
3/29/07	14531		9R11L	99	29.5	32.6	29.6	16.4	8.5	
3/29/07	14532		9R11L	99	29.1	33.3	28.7	16.4	7.9	
3/29/07	14533	14534	9R11L	99	26.9	30.9	26.9	16.1	7.0	
3/29/07	14536		9R11L	99	26.7	30.5	26.4	15.4	6.2	anomolous 5th vertebral
3/29/07	14538		9R11L	99	27.2	32.0	27.6	15.0	6.5	
3/29/07	14539		9R11L	99	29.1	32.9	28.2	16.5	7.5	
3/29/07	14541		9R11L	99	28.5	32.9	29.5	17.1	8.3	
3/29/07	14543		9R11L	99	27.8	30.7	28.5	15.6	7.1	
3/29/07	14544		9R11L	99	30.0	33.3	28.5	16.5	8.1	
3/29/07	14398		9R11L	100	27.0	29.1	27.1	16.0	6.5	
3/29/07	14399		9R11L	100	28.0	31.5	28.1	16.1	7.5	
3/29/07	14401		9R11L	100	30.0	33.6	28.9	17.5	8.6	
3/29/07	14402	14403	9R11L	100	29.3	32.0	29.3	16.7	8.1	
3/29/07	14404		9R11L	100	29.1	32.5	30.0	16.8	8.4	
3/29/07	14406		9R11L	100	26.0	29.3	27.6	16.9	6.6	
3/29/07	14407		9R11L	100	28.9	31.6	29.5	16.4	8.0	
3/29/07	14411		9R11L	100	29.3	33.3	29.5	16.6	8.4	
3/29/07	14412	14413	9R11L	100	29.5	32.3	30.0	17.0	8.6	
3/29/07	14414		9R11L	100	28.9	32.4	30.2	16.7	8.6	
3/29/07	14416		9R11L	100	28.2	30.6	27.2	15.9	5.0	
3/29/07	14634		9R11L	101	27.0	32.0	28.3	16.9	7.3	
11/27/06	14091	14092	9R11L	102	27.7	32.9	29.1	16.9	7.5	
11/27/06	14093		9R11L	102	28.2	31.8	27.3	16.6	7.1	
11/27/06	14095		9R11L	102	28.0	30.9	20.7	16.3	7.0	anomolous 5th vertebral
11/27/06	14096	14097	9R11L	102	27.8	31.2	28.0	17.0	7.7	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
11/27/06	14098		9R11L	102	28.0	31.3	28.2	16.9	7.5	
11/27/06	14099		9R11L	102	28.9	32.6	28.1	17.6	7.8	
11/27/06	14101	14102	9R11L	102	28.2	31.9	28.2	16.3	7.5	
11/27/06	14103		9R11L	102	29.4	31.9	29.0	15.7	7.7	
11/27/06	14104	14105	9R11L	102	28.2	31.9	27.8	16.1	7.3	
11/27/06	14106		9R11L	102	29.1	32.3	28.2	15.8	7.6	
11/27/06	14108		9R11L	102	29.1	32.5	27.9	16.1	7.5	
11/27/06	14109	14110	9R11L	102	29.0	32.2	28.1	15.9	7.4	
11/27/06	14111		9R11L	102	28.1	31.6	28.0	16.5	7.6	
11/27/06	14173		9R11L	103	28.3	29.2	26.4	15.6	6.3	anomolous 5th vertebral
11/27/06	14174	14175	9R11L	103	26.2	29.1	25.9	16.1	6.1	
11/27/06	14176	14177	9R11L	103	25.8	30.2	26.3	16.3	6.8	anomolous 5th vertebral
11/27/06	14178		9R11L	103	27.2	30.3	26.4	16.3	6.8	anomolous 5th vertebral
11/27/06	14179	14180	9R11L	103	27.2	31.0	27.3	16.6	6.8	anomolous 5th vertebral
11/27/06	14181	14182	9R11L	103	26.5	29.4	26.0	16.4	6.5	
11/27/06	14183		9R11L	103	26.6	30.2	27.5	15.9	6.5	anomolous 5th vertebral
11/27/06	14184	14185	9R11L	103	26.2	29.6	28.3	16.0	6.8	anomolous 5th vertebral
11/27/06	14186		9R11L	103	28.0	31.2	27.8	16.8	7.5	
11/27/06	14188		9R11L	103	24.7	29.5	26.1	15.8	6.0	
11/27/06	14189	14190	9R11L	103	27.0	31.6	28.4	17.5	8.4	
11/27/06	14191		9R11L	103	25.9	30.0	27.3	15.8	6.5	
11/27/06	14192	14193	9R11L	103	25.2	28.9	26.3	15.8	6.1	anomolous 5th vertebral
8/27/06	13656	13657	9R11L	104	28.1	32.2	28.2	16.3	8.3	13R and L marginals
8/27/06	13658		9R11L	104	29.0	32.3	27.9	16.8	9.0	
8/27/06	13659	13660	9R11L	104	29.1	32.2	28.0	16.8	8.6	
8/27/06	13661	13662	9R11L	104	28.8	32.2	27.4	16.9	9.1	5th and 6th vertebral irregular
8/27/06	13663		9R11L	104	29.2	32.1	27.7	17.7	9.0	
8/27/06	13664	13665	9R11L	104	29.4	32.7	28.1	16.8	9.1	
8/27/06	13666		9R11L	104	29.7	32.6	28.2	17.4	9.4	
8/27/06	13668		9R11L	104	29.0	31.3	27.6	17.1	8.6	
8/27/06	13669	13670	9R11L	104	29.2	32.1	29.0	17.1	9.1	
8/27/06	13671		9R11L	104	29.0	317.0	28.1	17.4	9.0	13R and L marginals
8/27/06	13672	13673	9R11L	104	27.4	31.5	27.5	16.5	8.1	
8/27/06	13674	13675	9R11L	104	30.1	33.2	29.6	16.9	9.6	13R marginals
3/29/07	14253	14254	9R11L	105	28.8	30.6	28.6	16.3	7.6	
3/29/07	14255		9R11L	105	29.2	31.3	28.3	16.5	7.8	
3/29/07	14257		9R11L	105	27.9	30.6	27.0	16.1	7.1	
3/29/07	14258	14259	9R11L	105	28.6	31.6	27.4	15.9	7.3	
3/29/07	14260		9R11L	105	28.3	30.4	28.6	16.0	7.5	11 Marginal on left side
3/29/07	14262		9R11L	105	30.0	32.1	28.6	16.3	8.3	
3/29/07	14263		9R11L	105	28.3	31.0	28.2	15.7	7.6	
3/29/07	14265		9R11L	105	30.0	32.1	28.7	16.5	8.2	
3/29/07	14266	14267	9R11L	105	29.0	31.6	29.3	16.4	7.9	
3/29/07	14268		9R11L	105	28.0	31.9	28.4	15.3	7.5	
3/29/07	14270		9R11L	105	30.7	33.0	29.9	15.7	8.5	
3/29/07	14271	14272	9R11L	105	28.3	31.7	29.2	15.6	7.7	
3/29/07	14453		9R11L	108	27.5	32.1	28.8	16.1	7.3	
3/29/07	14455		9R11L	108	27.4	32.2	28.0	16.8	7.3	
3/29/07	14456	14457	9R11L	108	25.2	30.2	25.6	14.8	6.6	
3/29/07	14458		9R11L	108	25.3	33.3	29.3	17.2	8.4	
3/29/07	14460		9R11L	108	26.9	32.0	28.8	16.4	7.5	
3/29/07	14461	14462	9R11L	108	28.9	32.1	28.9	16.4	8.0	
3/29/07	14463		9R11L	108	28.1	32.7	28.8	17.6	8.1	
3/29/07	14560	14561	9R11L	109	29.8	32.0	29.0	16.7	8.7	
3/29/07	14562		9R11L	109	28.1	32.3	30.0	16.7	8.0	anam. V5
3/29/07	14564		9R11L	109	29.7	33.8	29.9	17.0	8.4	
3/29/07	14565	14566	9R11L	109	29.7	33.5	29.2	16.7	8.2	
3/29/07	14567		9R11L	109	27.3	31.3	27.4	16.0	6.5	anam. V5
3/29/07	14569		9R11L	109	28.1	32.1	29.6	16.5	8.2	
3/29/07	14570	14571	9R11L	109	27.9	32.0	30.3	16.6	7.7	
3/29/07	14572		9R11L	109	27.0	32.2	29.1	16.2	7.7	anam. V5
3/29/07	14573	14574	9R11L	109	26.9	31.3	28.8	16.9	7.3	
3/29/07	14575		9R11L	109	27.5	31.5	29.5	16.4	7.4	anam. V5
3/29/07	14639		9R11L	111	28.8	32.5	29.4	16.6	7.6	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
3/29/07	14641		9R11L	111	29.1	32.2	28.6	16.5	7.7	anamalous 5th vertebral
3/29/07	14494		9R11L	112	26.6	29.1	26.1	17.0	6.6	
3/29/07	14496		9R11L	112	27.7	31.1	26.8	17.3	7.0	
3/29/07	14497		9R11L	112	27.3	31.3	27.9	16.2	7.2	
3/29/07	14499		9R11L	112	24.7	26.5	26.2	16.6	6.1	kyophotic
3/29/07	14500	14501	9R11L	112	29.0	31.8	27.7	16.8	7.4	
8/19/06	13398		9R11L	117	27.7	32.2	28.0	16.8	7.8	
9/19/06	13826		9R11L	119	27.4	31.9	27.9	16.5	7.8	
9/23/06	13827	13828	9R11L	119	26.6	31.1	27.3	16.7	7.6	
9/23/06	13829		9R11L	119	27.2	31.7	27.8	16.7	8.3	
9/23/06	13831		9R11L	119	25.1	28.9	24.6	15.2	6.1	
9/28/06	13850	13851	9R11L	119	27.7	32.3	27.9	17.2	8.0	
3/29/07	14298		9R11L	120	24.8	28.9	25.7	16.2	6.2	anam. RC + LC + V3-5
3/29/07	14299		9R11L	120	22.0	25.9	23.7	14.4	4.4	
3/29/07	14300		9R11L	120	22.3	25.5	24.4	15.8	5.2	
10/23/06	14081	14082	9R11L	121	28.3	29.5	28.3	16.2	7.5	
10/23/06	14083	14084	9R11L	121	28.7	29.8	25.9	16.9	6.9	
10/23/06	14085		9R11L	121	29.1	29.8	26.7	17.1	7.7	
10/23/06	14086	14087	9R11L	121	26.5	28.0	25.0	16.2	6.6	
10/23/06	14088	14089	9R11L	121	28.0	29.4	27.1	16.8	7.3	
10/23/06	14090		9R11L	121	27.5	29.4	26.9	16.5	7.0	
3/29/07	14378		9R11L	122	29.9	33.4	29.9	17.2	8.4	
3/29/07	14380		9R11L	122	25.5	29.1	27.3	16.0	6.2	
3/29/07	14381		9R11L	122	26.4	30.1	27.1	16.1	6.8	
3/29/07	14383		9R11L	122	29.2	33.9	30.4	17.3	6.9	
3/29/07	14385		9R11L	122	27.1	31.1	28.6	16.3	7.4	
3/29/07	14386		9R11L	122	29.4	33.5	29.9	16.3	8.3	
3/29/07	14388		9R11L	122	25.2	29.2	26.0	14.9	5.6	
3/29/07	14389	14390	9R11L	122	25.3	26.5	26.2	15.1	5.8	
3/29/07	14391		9R11L	122	21.6	31.2	27.8	16.4	5.8	
3/29/07	14393		9R11L	122	24.9	28.2	26.4	15.5	6.1	
3/29/07	14394	14395	9R11L	122	29.6	32.3	29.1	16.4	7.6	
3/29/07	14396		9R11L	122	23.7	26.7	24.3	14.0	4.6	
9/3/06	13725		9R11L	124	28.8	31.6	27.7	16.5	8.1	
9/3/06	13726	13727	9R11L	124	27.6	325.0	27.7	16.5	8.3	
9/3/06	13728		9R11L	124	28.0	33.1	28.0	16.5	8.2	
9/3/06	13730		9R11L	124	26.9	32.3	28.1	16.3	8.1	
9/3/06	13731	13732	9R11L	124	277.0	30.1	25.2	15.7	6.9	
9/3/06	13733		9R11L	124	29.5	33.7	29.1	17.3	9.5	
9/3/06	13734	13735	9R11L	124	26.2	30.7	25.6	15.6	6.8	
9/29/06	13863	13864	9R11L	124	27.5	31.2	27.7	16.1	7.8	
9/29/06	13865		9R11L	124	26.8	31.4	27.5	16.5	7.5	
9/29/06	13866	13867	9R11L	124	28.8	33.7	29.5	17.0	9.3	
9/29/06	13868		9R11L	124	27.7	32.2	28.0	16.2	8.1	
3/29/07	14466		9R11L	126	27.3	31.1	29.0	15.2	7.1	
3/29/07	14468		9R11L	126	27.4	31.7	29.0	15.8	7.1	
3/29/07	14469	14470	9R11L	126	27.9	32.3	28.1	15.4	7.4	
3/29/07	14471		9R11L	126	27.3	29.1	29.4	15.5	7.6	
3/29/07	14473		9R11L	126	28.3	30.9	27.7	14.8	6.9	
3/29/07	14474	14475	9R11L	126	28.0	31.8	28.5	15.5	7.5	
10/19/06	14060	14061	1R2R9R11L	127	29.6	33.2	29.2	16.7	8.8	ID wrong for that nest released
10/19/06	14062		1R2R9R11L	127	28.6	32.5	28.8	16.5	8.1	
10/19/06	14064		1R2R9R11L	127	29.2	32.8	29.7	15.8	8.4	
10/19/06	14065	14066	1R2R9R11L	127	29.2	32.8	28.2	16.4	8.0	
10/19/06	14067		1R2R9R11L	127	26.4	29.9	26.9	15.8	6.8	
10/19/06	14068	14069	1R2R9R11L	127	27.7	32.0	29.0	15.7	7.6	
10/19/06	14070	14071	1R2R9R11L	127	28.7	32.6	27.9	17.3	8.6	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
10/19/06	14072		1R3R9R11L 	127	26.7	31.0	27.3	15.5	6.9	
10/19/06	14073	14074	1R3R9R11L 	127	29.4	3.0	29.1	16.9	8.8	
10/19/06	14075	14076	1R3R9R11L 	127	26.8	30.5	27.1	151.0	6.7	
10/19/06	14077		1R3R9R11L 	127	26.3	30.4	27.4	16.2	6.9	
8/26/06	13627		9R11L	128	26.3	30.3	26.2	15.7	0.2	
3/29/07	14337		9R11L	130	30.3	33.7	30.1	16.6	8.6	
3/29/07	14338	14339	9R11L	130	30.2	33.1	28.5	17.5	8.5	
3/29/07	14340		9R11L	130	28.0	31.5	27.4	17.2	7.5	
3/29/07	14342		9R11L	130	29.2	33.5	29.1	17.5	8.6	
3/29/07	14344		9R11L	130	30.2	33.0	30.6	16.5	8.7	
3/29/07	14345		9R11L	130	29.4	34.4	30.7	16.8	8.6	anam V5 & RC
3/29/07	14347		9R11L	130	29.1	33.1	29.3	17.6	8.2	
3/29/07	14349		9R11L	130	28.6	32.2	28.8	16.4	7.8	
3/29/07	14350		9R11L	130	28.6	31.8	28.3	16.3	7.4	
3/29/07	14352		9R11L	130	29.3	33.4	29.2	17.2	8.9	
3/29/07	14353		9R11L	130	30.0	33.1	30.0	16.8	8.4	
3/29/07	14355		9R11L	130	30.2	34.1	30.6	17.3	9.1	
9/29/06	13883		9R8L11L	131	26.3	28.4	25.7	15.1	6.3	
9/29/06	13884	13885	9R8L11L	131	25.6	28.1	24.9	15.6	6.0	
9/29/06	13886		9R8L11L	131	26.5	29.3	25.9	15.4	6.5	
9/29/06	13888		9R8L11L	131	25.9	27.4	24.6	14.4	5.7	
9/29/06	13889	13890	9R8L11L	131	27.9	30.2	26.4	16.0	7.2	
9/29/06	13891		9R8L11L	131	25.9	28.1	25.3	14.6	6.1	
9/29/06	13892	13893	9R8L11L	131	26.5	28.2	27.2	15.8	7.1	11R marginals/double vertebrals
9/29/06	13894	13895	9R8L11L	131	26.6	28.1	25.7	15.4	6.3	11R AND L marginals
9/29/06	13896		9R8L11L	131	26.8	28.4	25.7	14.8	6.0	
8/26/06	13625	13626	9R11L	134	26.7	1.5	28.4	16.7	8.0	
10/19/06	14047	14048	9R11L	134	28.4	32.6	29.1	16.6	9.0	
10/19/06	14049		9R11L	134	28.1	31.8	27.9	16.5	7.9	
10/19/06	14051		9R11L	134	29.0	33.3	28.7	17.2	8.9	
10/19/06	14052	14053	9R11L	134	27.6	31.9	28.0	16.5	8.3	
10/19/06	14054		9R11L	134	26.4	30.3	27.1	16.0	7.2	
10/19/06	14055	14056	9R11L	134	21.4	25.9	23.7	13.6	4.5	
10/19/06	14057	14058	9R11L	134	28.7	33.6	29.6	16.8	9.2	
10/19/06	14059		9R11L	134	28.8	33.1	29.4	16.8	9.1	
8/19/06	13405		9R11L	136	27.8	32.6	28.8	17.3	9.5	
8/20/06	13465	13466	9R11L	136	27.1	30.0	26.6	15.8	7.3	
10/18/06	14010		9R11L12L	136	27.8	31.4	29.6	15.8	8.1	
10/18/06	14012		9R11L12L	136	29.6	32.6	28.5	16.9	9.0	
10/18/06	14013	14014	9R11L12L	136	28.8	32.8	29.5	16.4	8.7	
10/18/06	14015		9R11L12L	136	29.9	33.6	29.2	16.5	9.0	
10/18/06	14016	14017	9R11L12L	136	29.2	33.9	30.1	16.5	9.2	
10/18/06	14018	14019	9R11L12L	136	28.9	33.6	29.2	16.7	9.0	
10/18/06	14020	14022	9R11L12L	136	29.1	32.5	28.2	16.5	8.6	
10/18/06	14021		9R11L12L	136	30.0	32.9	28.3	16.5	8.8	
10/18/06	14023		9R11L12L	136	29.0	32.8	29.5	16.9	9.0	
10/18/06	14025		9R11L12L	136	29.6	33.2	29.8	16.6	8.8	
10/18/06	14026	14027	9R11L12L	136	28.1	32.0	27.7	16.4	8.0	
8/21/06	13477		9R11L	137	24.6	29.6	27.1	15.1	7.0	
8/21/06	13478	13479	9R11L	137	27.3	31.2	26.2	16.3	7.3	
8/21/06	13480		9R11L	137	27.4	31.0	27.2	15.9	8.1	
8/21/06	13481	13482	9R11L	137	25.2	29.8	25.2	16.0	6.6	4th-7th vertebrals irregular, 13R and L marginal
8/21/06	13483	13484	9R11L	137	25.2	28.1	24.9	15.4	6.2	
8/21/06	13485		9R11L	137	25.8	30.5	26.9	15.5	7.2	13R and L marginals, plastron extra 4 scutes
8/21/06	13486	13487	9R11L	137	25.3	30.3	26.5	15.2	6.8	
8/21/06	13488		9R11L	137	25.9	29.8	25.1	15.7	6.7	
8/21/06	13490		9R11L	137	25.5	30.5	26.3	15.9	7.0	13R and L marginals, 5th and 7th vertebrals deformed

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
8/21/06	13491	13492	9R11L	137	26.8	30.3	26.3	15.8	7.1	
8/21/06	13493		9R11L	137	24.8	29.0	25.7	15.1	6.1	
8/21/06	13495		9R11L	137	26.7	29.6	26.4	16.0	7.2	
8/21/06	13496		9R11L	137	26.2	29.7	26.4	15.7	7.0	
10/10/06	13945		9R11L	138	27.9	30.9	27.4	16.3	7.6	
10/10/06	13946	13947	9R10L11L	138	26.1	30.4	27.8	15.5	7.2	
10/10/06	13948	13949	9R10L11L	138	23.2	27.3	24.8	14.1	5.1	
10/10/06	13950		9R10L11L	138	25.0	28.0	25.3	14.2	5.5	
10/10/06	13953		9R10L11L	138	25.6	29.1	26.3	15.6	6.7	
10/10/06	13955		9R10L11L	138	23.1	26.1	23.3	13.7	4.7	
10/10/06	13956	13957	9R10L11L	138	22.5	26.3	24.5	13.5	4.6	13R and L marginals
10/10/06	13958		9R10L11L	138	22.7	26.1	23.1	13.1	4.3	
10/10/06	13959	13960	9R10L11L	138	26.9	31.5	27.4	16.0	7.4	
10/10/06	13961	13962	9R10L11L	138	27.8	31.7	28.1	15.7	7.8	
10/10/06	13963		9R10L11L	138	26.6	30.2	25.7	15.3	6.6	
10/10/06	13964	13965	9R10L11L	138	22.6	25.7	23.6	12.8	4.3	13R and L marginals
10/23/06	14078	14079	9R11L	140	28.7	33.3	29.8	17.0	8.7	
10/23/06	14080		9R11L	140	26.8	29.8	26.2	15.1	6.8	
3/29/07	14465		9R11L	141	27.8	30.8	27.6	15.7	6.7	
11/27/06	14129		9R11L	143	28.0	30.8	27.8	16.5	7.7	no nucalanomolous 5 vertebral
11/27/06	14131		9R11L	143	26.9	31.0	28.1	16.1	7.8	anomolous 5th vertebral
11/27/06	14132	14133	9R11L	143	26.2	29.5	26.1	16.7	6.6	anomolous 4th vertebral
11/27/06	14134		9R11L	143	27.1	30.4	26.4	16.2	6.9	
11/27/06	14135	14136	9R11L	143	27.0	30.6	26.7	16.7	7.5	
11/27/06	14137	14138	9R11L	143	24.1	27.9	25.8	16.2	6.0	
11/27/06	14139		9R11L	143	27.1	31.8	28.0	17.1	8.1	extra left costal
11/27/06	14140	14141	9R11L	143	26.0	29.1	25.9	15.0	6.3	13 right marginals
11/27/06	14142		9R11L	143	26.5	30.4	26.2	17.2	7.3	
11/27/06	14144		9R11L	143	26.3	30.3	26.5	16.3	6.5	
11/27/06	14145	14146	9R11L	143	28.6	31.2	27.1	16.8	7.7	no nucal
11/27/06	14147		9R11L	143	29.0	32.0	27.7	16.8	7.9	anomolous 5th vertebral
11/27/06	14148	14149	9R11L	143	28.2	30.8	27.3	17.6	8.2	
11/27/06	14150	14151	9R11L	143	27.4	31.2	27.6	16.1	7.2	
11/27/06	14152		9R11L	143	27.6	31.2	27.5	17.0	7.9	anomolous 5th vertebral
11/27/06	14153	14154	9R11L	143	26.6	30.6	27.4	17.0	7.9	
11/27/06	14155		9R11L	143	27.8	31.1	27.9	17.0	7.7	
10/8/06	13927		9R11L	146	28.3	30.4	28.9	16.2	7.5	missing R eye
10/8/06	13928	13929	9R11L	146	28.2	30.1	27.0	15.3	7.2	
10/8/06	13930	13931	9R11L	146	29.6	32.0	28.4	16.7	8.1	
10/8/06	13932		9R11L	146	29.1	30.9	28.1	16.2	7.7	
10/8/06	13933	13934	9R11L	146	26.1	28.3	25.8	15.0	6.3	
10/8/06	13935		9R11L	146	27.2	30.1	27.8	14.7	6.6	
10/8/06	13937		9R11L	146	30.2	30.4	29.5	16.7	8.5	
10/8/06	13938	13939	9R11L	146	24.3	26.8	24.9	14.1	5.0	
10/8/06	13940		9R11L	146	26.6	29.7	26.9	15.6	5.9	
10/9/06	13941	13942	9R11L	146	25.1	28.0	25.4	14.7	5.2	
3/29/07	14546		9R11L	148	27.5	30.8	26.8	16.7	6.8	
3/29/07	14547	14548	9R11L	148	27.1	29.8	26.2	15.8	6.3	
3/29/07	14549		9R11L	148	27.8	31.7	27.6	16.2	7.1	
3/29/07	14551		9R11L	148	23.0	23.0	24.0	15.1	6.6	kyphotic
3/29/07	14552	14553	9R11L	148	26.0	30.0	25.3	15.9	6.2	13 M on Right
3/29/07	14554		9R11L	148	26.6	29.0	26.1	15.9	5.9	
3/29/07	14556		9R11L	148	26.3	29.0	24.6	16.2	6.0	
3/29/07	14557		9R11L	148	26.1	27.0	27.8	17.4	7.2	
3/29/07	14558		9R11L	148	28.7	31.5	27.2	16.3	7.6	
9/28/06	13860		9R11L	152	26.8	29.2	26.0	15.4	6.3	
9/28/06	13862		9R11L	152	25.5	28.0	25.3	14.6	5.6	
10/17/06	14000	14001	9R11L	155	27.0	31.2	27.7	14.5	7.2	
10/17/06	14002		9R11L	155	26.2	30.4	26.8	15.0	6.9	
10/17/06	14003	14004	9R11L	155	28.1	31.1	27.8	15.7	7.9	
10/17/06	14005		9R11L	155	24.6	28.3	26.3	15.2	6.3	
10/17/06	14007		9R11L	155	25.9	30.4	26.7	14.9	6.6	
10/17/06	14008	14009	9R11L	155	23.9	26.9	24.3	13.1	4.9	
10/11/06	13966		9R11L	158	29.5	31.7	29.2	16.7	8.5	11R marginals/irregular vertebrals

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
10/11/06	13968		9R11L	158	28.8	32.6	29.0	16.8	8.7	
10/11/06	13969	13970	9R11L	158	27.6	31.9	27.6	16.4	8.0	
10/11/06	13971		9R11L	158	28.7	32.6	29.5	16.3	8.0	
10/11/06	13972	13973	9R11L	158	27.8	32.3	28.2	16.6	8.5	
10/11/06	13974	13975	9R11L	158	24.8	28.1	24.9	14.6	5.8	
10/11/06	13976		9R11L	158	27.0	31.1	27.4	15.8	7.0	
10/16/06	13979		9R11L	160	27.9	30.8	28.3	16.0	7.7	University of Maryland
10/16/06	13981		9R11L	160	29.4	33.3	30.8	16.2	8.9	University of Maryland
10/16/06	13982	13983	9R11L	160	27.6	31.1	28.4	15.6	7.5	University of Maryland
10/16/06	13984		9R11L	160	29.3	32.3	30.3	16.3	8.9	University of Maryland
10/16/06	13986		9R11L	160	28.8	31.8	29.2	16.3	8.2	University of Maryland
10/16/06	13987	13988	9R11L	160	26.4	29.8	26.3	14.9	6.5	University of Maryland
10/16/06	13989		9R11L	160	29.6	31.9	28.2	16.3	8.2	University of Maryland
10/16/06	13990	13991	9R11L	160	25.4	28.4	25.9	14.3	5.7	University of Maryland
10/16/06	13992		9R11L	160	26.9	29.5	26.7	14.7	6.3	University of Maryland
10/16/06	13994		9R11L	160	24.9	28.7	25.8	15.4	6.1	University of Maryland
10/16/06	13995	13996	9R11L	160	25.9	29.8	27.4	16.8	6.8	
10/16/06	13997		9R11L	160	26.5	30.5	28.0	15.8	7.2	
10/16/06	13999		9R11L	160	29.1	30.7	29.2	16.1	8.5	
9/12/06	13801	13802	9R2L11L	161	28.3	31.4	27.2	16.7	8.6	13L marginals vertebrals slight curve to L
9/12/06	13803		9R2L11L	161	27.3	29.8	26.8	16.7	8.0	
9/12/06	13805		9R2L11L	161	26.5	30.6	27.0	16.4	8.5	
9/12/06	13806	13807	9R2L11L	161	26.8	30.6	26.6	16.1	8.4	
9/12/06	13808		9R2L11L	161	25.2	30.1	26.1	16.3	7.7	
9/12/06	13810		9R2L11L	161	26.6	30.3	27.2	16.8	8.7	
9/12/06	13811	13812	9R2L11L	161	26.6	30.2	27.1	16.7	8.4	
9/12/06	13813		9R2L11L	161	24.2	28.0	25.3	16.3	7.3	
9/12/06	13814	13815	9R2L11L	161	25.8	29.6	26.8	16.2	7.8	
9/12/06	13816		9R2L11L	161	24.1	28.0	24.4	15.8	6.4	
3/29/07	14521	14522	9R11L	162	25.8	30.2	25.5	16.1	6.4	
3/29/07	14523		9R11L	162	27.7	30.0	28.7	16.1	7.5	14M right, 13M left, anomalous on all vertebral
3/29/07	14525		9R11L	162	28.7	32.2	29.7	16.7	8.6	
3/29/07	14526		9R11L	162	26.2	30.6	26.5	16.7	6.9	
3/29/07	14509		9R11L	162	26.0	30.2	27.2	16.7	7.2	
3/29/07	14510		9R11L	162	25.6	29.1	27.3	15.2	6.6	
3/29/07	14512		9R11L	162	26.7	29.5	27.1	16.7	6.8	
3/29/07	14513	14514	9R11L	162	26.2	28.5	27.3	15.4	6.4	
3/29/07	14515		9R11L	162	29.5	32.7	29.5	17.8	9.3	
3/29/07	14517		9R11L	162	29.6	32.6	29.5	16.4	8.7	
3/29/07	14518		9R11L	162	26.3	29.0	26.2	15.7	6.4	
3/29/07	14520		9R11L	162	28.3	31.6	29.5	16.3	8.2	
3/29/07	14621		9R11L	163	28.4	31.1	28.1	15.6	7.2	
3/29/07	14623		9R11L	163	26.7	29.0	25.6	14.3	5.6	
3/29/07	14601	14602	9R11L	163	30.7	33.1	28.8	17.3	8.3	
3/29/07	14603		9R11L	163	25.4	28.2	24.5	15.0	5.3	
3/29/07	14605		9R11L	163	27.7	30.2	26.8	25.6	6.8	
3/29/07	14606	14607	9R11L	163	25.7	28.4	25.8	15.4	5.9	anam. V5
3/29/07	14608		9R11L	163	26.1	28.9	26.0	14.6	5.7	
3/29/07	14610		9R11L	163	24.5	27.6	25.2	14.0	5.3	
3/29/07	14611	14612	9R11L	163	28.9	31.2	29.1	15.1	7.8	
3/29/07	14613		9R11L	163	29.6	33.2	29.2	16.5	8.3	anam. V5
3/29/07	14614	14615	9R11L	163	28.0	30.5	28.1	16.5	7.2	
3/29/07	14616		9R11L	163	26.9	29.6	27.6	15.4	6.4	
3/29/07	14618		9R11L	163	25.0	28.0	25.4	14.6	5.1	
3/29/07	14619	14620	9R11L	163	26.0	28.2	25.1	15.0	5.6	
9/24/06	13832	13833	9R3L11L	165	24.3	28.1	24.2	15.3	5.9	
9/24/06	13834		9R3L11L	165	27.5	31.6	26.9	16.5	8.0	
9/24/06	13835	13836	9R3L11L	165	25.7	29.2	25.4	15.6	6.5	
9/24/06	13837	13838	9R3L11L	165	26.0	29.8	26.0	16.0	7.4	
9/24/06	13839		9R3L11L	165	26.8	30.2	26.7	15.9	7.2	
9/24/06	13840	13841	9R3L11L	165	23.5	27.3	24.1	15.0	5.5	
9/24/06	13842		9R3L11L	165	26.7	31.5	26.4	16.4	7.7	
9/24/06	13844		9R3L11L	165	26.4	29.8	26.3	16.1	7.1	

Date	ID1	ID2	Notch ID	Nest Number	Plastron Length	Carapace Length	Width	Height	Mass	Comments
9/25/06	13845	13846	9R3L11L	165	26.8	30.4	26.2	16.0	7.5	
9/26/06	13847		9R3L11L	165	26.8	31.0	27.5	16.3	7.8	
9/26/08	13849		9R3L11L	165	24.1	26.9	23.8	14.8	5.6	
3/29/07	14227		9R11L	167	26.7	29.2	26.1	16.8	6.5	anam V5
3/29/07	14229		9R11L	167	27.3	28.6	28.0	16.0	7.1	
3/29/07	14373		9R11L	172	23.3	27.4	25.2	15.1	5.1	
3/29/07	14375		9R11L	172	29.5	32.4	28.9	17.2	8.3	
3/29/07	14357		9R11L	172	25.8	29.1	26.6	15.0	6.0	anam. V5
3/29/07	14358		9R11L	172	26.7	30.5	27.2	17.0	7.4	
3/29/07	14360		9R11L	172	27.9	30.9	27.9	16.5	7.8	anam V5 LC & V5
3/29/07	14362		9R11L	172	26.3	29.4	27.2	15.3	6.6	
3/29/07	14363		9R11L	172	23.6	26.8	23.2	14.7	5.0	anam. V5
3/29/07	14365		9R11L	172	24.5	28.2	26.2	14.6	5.9	anam. RC + LC + V5
3/29/07	14367		9R11L	172	25.0	28.0	26.4	14.9	5.7	
3/29/07	14368		9R11L	172	27.7	31.2	27.8	16.3	7.6	
3/29/07	14370		9R11L	172	29.0	32.0	28.1	17.0	8.5	
3/29/07	14371	14372	9R11L	172	23.9	26.8	24.0	14.3	4.8	anam V5
8/21/06	16468	13469	9R11L	182	28.1	32.5	28.1	16.7	8.1	
8/21/06	13470	13471	9R11L	182	22.8	25.6	23.8	13.4	4.9	11R marginals
8/29/06	13715		9R11L	184	27.6	32.2	28.1	15.7	7.9	11R & L marginals
3/29/07	14301	14303	9R11L	6/7	28.1	31.9	28.3	16.0	7.2	
3/29/07	14304		9R11L	6/7	27.1	31.4	27.3	16.1	6.8	
11/27/06	14194		9R11L	164?	27.2	30.5	28.6	15.9	7.5	
11/27/06	14196		9R11L	164?	25.5	28.0	26.0	15.1	5.9	
11/27/06	14197	14198	9R11L	164?	28.0	30.3	27.2	16.1	7.2	
11/27/06	14199		9R11L	164?	25.7	29.1	26.3	15.9	6.6	
11/27/06	14201		9R11L	164?	28.8	31.3	28.3	16.4	83.0	
11/27/06	14202	14203	9R11L	164?	26.3	28.2	25.8	16.0	6.2	
11/27/06	14204		9R11L	164?	26.6	30.3	27.8	16.7	7.3	
11/27/06	14206		9R11L	164?	23.6	26.6	24.4	14.6	5.0	
11/27/06	14207	14208	9R11L	164?	27.5	30.1	26.7	16.0	6.4	
3/29/07	14417		9R11L	40/158	25.2	29.1	26.9	16.4	6.0	
3/29/07	14419		9R11L	40/158	27.5	31.7	26.8	16.7	7.0	
3/29/07	14421		9R11L	40/158	27.2	30.9	27.2	17.1	6.4	
3/29/07	14422		9R11L	40/158	26.8	31.2	26.9	16.0	6.6	
3/29/07	14424		9R11L	40/158	27.1	31.2	26.8	16.7	6.7	
3/29/07	14426		9R11L	40/158	26.3	29.8	27.5	15.6	6.8	
3/29/07	14427		9R11L	40/158	27.1	31.2	27.2	16.4	6.8	
3/29/07	14429		9R11L	40/158	26.3	31.5	28.1	16.6	6.9	
3/29/07	14430	14431	9R11L	40/158	27.8	31.0	26.7	16.4	7.1	
3/29/07	14432		9R11L	40/158	26.9	30.5	26.8	15.3	6.4	
3/29/07	14636		9R11L	90/94	26.6	29.5	27.0	16.0	6.6	anamolous 5th vertebral
3/29/07	14637	14638	9R11L	90/94	29.4	29.8	28.9	17.5	9.1	anamolous 5th vertebral
3/29/07	14624	14625	9R11L	New	27.6	30.7	26.4	16.0	6.4	anamolous 5th vertebral
3/29/07	14626		9R11L	New	28.8	31.4	27.3	16.5	6.8	
3/29/07	14627	14628	9R11L	New	28.1	31.6	28.0	16.0	7.4	
3/29/07	14629		9R11L	New	28.8	31.1	28.0	15.8	7.1	anamolous 5th vertebral
3/29/07	14631		9R11L	New	27.7	31.2	27.8	16.3	7.0	
3/29/07	14633		9R11L	New	27.8	31.6	27.5	16.8	7.3	
8/14/06	13309		9R11L	SEF C	26.2	31.0	28.0	16.2	8.3	38.44.983/76.22.060
3/29/07	14642	14643	9R11L	unknown	29.0	32.9	28.5	17.2	9.2	
3/29/07	14644		9R11L	unknown	26.6	29.5	27.2	15.6	6.8	
3/29/07	14645	14646	9R11L	unknown	27.5	30.9	28.9	15.8	7.2	
8/24/06	13563		9R11L		30.1	33.9	29.5	16.7	8.7	28 24.151/ 76 22.811

Date	ID Number	Time	Sex	Plastron Length	Carapace Length	Width	Height	Mass	Right Pectoral	Year of Birth	RC	Mode of Capture	Location	Comments
30-May-06	45176C335D	1100	F	192.0	217	170	95.0	1796.0	24.0		Y	Hand	30-4C Road	P10022
5-Jun-06	Unmarked	1100	F											Could Squashed -Juvenile hand, Killed on road
6-Jun-06	8R10L	1230	J	63.0	74	61	33.0		10.0	2004		Hand	40X	Found dead, Puncture in carapace suggesting killed by bird
7-Jun-06	451F014770 005	1500	F	196	228	171	91	168.0	30.0		Y	Nest 25	38 45.165, 76 22.439	PI00023
16-Jun-06	451F712A6F 006	845	F	182	202	164	84	1354.0	29.0			Hand	38 45.066, 76 22.439	P1001
20-Jun-06	4519170432	745	F	174.0	202	144	89.0	1386.0	21.0		N	Hand	38 45.577, 76 22.737	PI0010
20-Jun-06	451E672A0C 007	1145	F	195.0	211	162	93.0	1636.0	24.0		N	Hand	1C	10R10L NOTCHES PI0024
23-Jun-06	451E6f7A	830	F	192.0	205.0	166.0	91	1661.0	32.0		Y	Nest Hand	38 45.083, 76 22.497	9th marginal tag is missing but hole still there- must drill again, barnacles on plastron and carapace , barnacles on plastron and carapace, PI-0025
23-Jun-06	451F76755 010	825	F	193.0	211	169	95.0	1729.0	25.0		N	NEST HAND	38 45.100, 76 22.478	
26-Jun-06	474C225315 10R11L	1000	J	62.0	70	63	33.0	76.0	11.0			LAND HAND		HEAD START ANIMAL
26-Jun-06	4517760F20	900	F	199.0	222	179.0	94.0	1907.0	24.0		N	LAND		DI-0027
29-Jun-06	451E766336F	1045	F	214.0	233.0	171	97.0	1980.0	34.0		Y	Hand	38 45.420, 76 22.810 4DX	13 MARGINAL SCUTES, PI-0028
30-Jun-06	451F60776F	845	F	210.0	226	183	100.0	2025.0	23.0		Y	Hand		barnacles on plastron and carapace, PI-0029
13-Jul-06	451949222E	100	M	102.0	105	53	53.0	293.0	20.0		N	MACHINE HAND	FOUND IN DREDGE, ID- IN THE CELL	PI-0030
24-Jul-06	4519161042	1145	F	185.0	208	172	92.0	1610.0	20.0		Y	Hand	3C	PI-0031
7-Aug-06		1330	F	168.0	186.0	153	83.0					LAND	5	ANA V5 FOUND DEAD AT CELL 5
21-Aug-06	451F683575	900	F	133.0	150	120	59.0	454.0	20.0		N	Hand	3B	PI-0032, MISSING 4TH CLAW ON r BACK LEG
29-Mar-07	4519394159	1300	J	73.4	84.6	70.1	37.0	98.1						

Day	Month	Year	Notch ID	PIT Tag ID	Sex	Plastron Length	Carapace Length	Width	Height	Mass	RP	DOB	Comments
1	May	2007	9R10L11L	4749044A4A	1	79.9	91.6	76.4	36.5	136	15.4	2006	ANA-RCV 4 and 5, 26 marginals
1	May	2007	9R11R11L	47524F666F	1	70.4	79.2	64.5	34.4	101	11.1	2006	
1	May	2007	3R9R11L	474D321DOC	1	73.4	83.8	65.9	34.9	96	12.1	2006	
1	May	2007	9R9L11L	474C484B6B	1	62	69.6	55.7	28.8	64	9.6	2006	
1	May	2007	1R3R9R11L	474F097215	1	59.9	66.9	56.2	28.5	59	8.9	2006	
1	May	2007	9R11L12L	474D033F54	1	63.5	70.9	59.8	30.2	67	10.7	2006	
1	May	2007	9R1L11L	4750085957	1	74.7	86.3	68.5	36.2	117	12.1	2006	Unsure of sex
2	May	2007	1R2R9R11L	474D74262A	1	57.9	67	55.6	28.8	59	9.2	2006	
2	May	2007	9R10L11L	4752403B3F	1	60.2	69.8	57.9	31.1	68	10.4	2006	Unsure of sex
2	May	2007	9R3L11L	474E780576	1	74.6	86.6	69.4	37.2	110	11.6	2006	
2	May	2007	2R9R11L	4750015638	1	58.9	70.3	57	29.7	62	8.4	2006	
2	May	2007	2R9R11L	475372362F	1	95.1	114.5	87.6	44.9	263	12.7	2006	
3	May	2007	8R9R11L	474F46152B	1	65.4	77.4	60.3	32.8	86	11.3	2006	
3	May	2007	9R1L11L	47500B426C	1	75.4	87.3	71.9	35.8	111	13.2	2006	
3	May	2007	1R9R11L	475321563C	1	69.1	80.42	64.1	34.1	89	9.8	2006	
3	May	2007	1R2R9L11L	474F79011C	1	73.3	84.3	67.3	36.8	98	9.8	2006	
3	May	2007	9R11L12L	4753460406	1	70.5	82.9	68.5	35.2	99	12.0	2006	
3	May	2007	9R1L11L	47535A456B	1	77.16	82.86	68.4	36.71	104	12.7	2006	
3	May	2007	2R9R11L	474E781A43	1	77.7	90.3	72.03	39.11	121	9.8	2006	
3	May	2007	1R2R9R11L	47491D6A66	1	63.26	74.95	59.8	33.18	71	7.9	2006	
3	May	2007	1R9R11L	474B791710	1	80.47	90.28	73.46	37.28	134	8.9	2006	
3	May	2007	9R11L12L	474C223775	1	61.71	72.74	56.8	33.26	65	10.9	2006	
3	May	2007	9R10L11L	474F2E4D4B	1	47.9	54.46	43.5	27.03	33	6.7	2006	
22	May	2007	9R10R11L	474C296756	1	70.1	79.2	70.9	38.2	112	10.9	2006	Unsure of sex
22	May	2007	1R9R11L	475408212E	1	66.5	76.8	64.1	33.8	92	8.5	2006	
24	May	2007	no notches	474C223656	1	100.8	113.1	100.5	44.7	248	14.9	2006	
24	May	2007	3R9R11L	47531F775B	1	84	99.4	78.5	42.4	153	12.5	2006	
24	May	2007	no notches	47490D4B2A	1	97.1	113.1	92.9	49.6	265	13.8	2006	
24	May	2007	9R2L11L	474913110F	1	102.3	116.4	98	48.2	279	15.5	2006	
24	May	2007	no notches	4752531A00	1	101.4	118.4	97.1	42.3	269	11.9	2006	
24	May	2007	no notches	474C4B3055	1	84.4	102.5	90.1	43.1	201	10.8	2006	
24	May	2007	no notches	474D37606F	1	96.9	117.5	96.2	45.2	254	13.2	2006	
24	May	2007	no notches	47500D0F07	1	104.5	128.2	98.3	49.5	358	15.2	2006	
24	May	2007	no notches	47491A3476	1	92.9	111.4	93.9	44.6	226	11.5	2006	
1	May	2007	8R9R11L	4750147D1E	2	69.8	83.7	65.6	36.7	97	11.1	2006	
1	May	2007	9R11R11L	4753224C2F	2	75.5	89.5	75.4	40	142	10.9	2006	
1	May	2007	2R9R11L	474F6C3D49	2	82.4	95.6	76.7	39.5	139	13.3	2006	
1	May	2007	1R9R11L	47523B6679	2	81	91.7	74.1	38.4	131	13.7	2006	
1	May	2007	9R12R11L	4749024F18	2	69	77.5	62.6	32.7	84	10.2	2006	
1	May	2007	3R9R11L	4750751A0B	2	71.3	71	65.5	34.4	95	11.7	2006	

Day	Month	Year	Notch ID	PIT Tag ID	Sex	Plastron Length	Carapace Length	Width	Height	Mass	RP	DOB	Comments
1	May	2007	9R2L11L	47500C6024	2	72.3	79.7	67.1	35.3	107	14.8	2006	
1	May	2007	1R3R9R11L	4753165135	2	54	61.4	49.7	27.2	46	8.7	2006	Unsure of sex
1	May	2007	9R2L11L	4752266DOB	2	76	84.8	70.8	36.5	120	13.0	2006	
1	May	2007	9R10R11L	474F6C2666	2	62.4	72.1	58	32.9	69	10.4	2006	
1	May	2007	9R10R11L	4748746F0E	2	70.9	81.4	65.8	34.7	94	12.0	2006	
1	May	2007	9R11R11L	474F7C1754	2	70	81.4	65.2	35.6	102	10.3	2006	
1	May	2007	7R3R9R11L	4753446A73	2	54.8	63.6	53.6	29.2	53	9.2	2006	
1	May	2007	3R9R11L	474D2C5A28	2	106.9	119.6	99.9	52.3	295	16.1	2006	
1	May	2007	8R9R11L	474E78661B	2	96	111.7	85.8	47.9	233	15.6	2006	
1	May	2007	9R11R11L	4750130400	2	79.4	90	72.8	37.8	139	12.8	2006	
1	May	2007	9R12R11L	474F563918	2	85.7	93.1	40.7	77.1	153	13.0	2006	
1	May	2007	1R2R9R11L	4752176522	2	55.9	64.2	54.3	28.7	50	8.6	2006	
1	May	2007	9R1L11L	474F5B580E	2	74.6	83.9	72.8	37.5	119	12.6	2006	
1	May	2007	9R1L11L	474F741414	2	83.2	94	78.5	38.9	154	13.6	2006	
1	May	2007	8R9R11L	47524C4508	2	88.5	104.6	81.5	42.7	180	16.1	2006	
1	May	2007	1R2R9R11L	474F1E7111	2	56.7	64.4	54.7	29.1	57	9.8	2006	Unsure of sex
1	May	2007	9R11L12L	474D5C5F08	2	59.9	69.8	55.8	29.4	64	11.9	2006	
1	May	2007	9R11L12L		2	60.1	68.7	55.5	29.1	61	12.1	2006	Problem with typing in pit tag
1	May	2007	1R3R9R11L	474E6C4678	2	51.4	57.6	47.6	25.2	39	7.7	2006	Unsure of sex
1	May	2007	1R3R9R11L	4753241635	2	53	60.9	51.5	28.1	48	9.7	2006	
1	May	2007	1R2R9R11L	474C5C1A2F	2	60.7	70.9	57.7	29.6	65	8.5	2006	
1	May	2007	1R2R9R11L	474F3D433C	2	56.6	68.1	54.1	29.7	58	9.2	2006	
1	May	2007	1R2R9R11L	474F1C410B	2	53.6	61.3	50.6	26.6	49	7.5	2006	
1	May	2007	9R10L11L	474F337149	2	74.7	84.3	69	34.1	107	10.9	2006	Unsure of sex
1	May	2007	9R11L12L	4753324364	2	65.6	75.7	59.7	31.2	79	12.0	2006	
1	May	2007	1R3R9R11L	474F27177D	2	52.1	60.5	51.2	22.5	42	8.0	2006	
1	May	2007	9R11L12L	474F11655D	2	61.2	72.9	58.2	28.8	72	11.0	2006	
1	May	2007	9R11L12L	4752523823	2	62.5	73.4	58.3	30.4	74	9.6	2006	
1	May	2007	1R9R11L	474D74E6B	2	107.5	120.9	88.6	46.6	288	14.5	2006	
1	May	2007	9R9L11L	474C64075	2	71.7	83.1	65.8	35.1	95	10.6	2006	
1	May	2007	9R10L11L	47486D183B	2	64.2	73.3	58.8	31.9	76	10.2	2006	
2	May	2007	9R3L11L	474F604473	2	75	83.2	70	37.3	107	12.0	2006	
2	May	2007	9R3L11L	47531C5E4E	2	64.9	75.1	59	33.3	78	11.6	2006	
2	May	2007	9R3L11L	47534F0348	2	71	81	65.2	36.2	90	11.0	2006	
2	May	2007	9R11L12L	47535C495C	2	62.8	73.4	59	31.6	72	11.1	2006	
2	May	2007	9R10L11L	4752442D1C	2	51.1	59.8	51.4	26.7	47	11.2	2006	
2	May	2007	1R3R9L11L	4752203B49	2	67.6	77.4	63.9	33.8	83	12.1	2006	
2	May	2007	9R8L11L	474E76396B	2	57.3	64.4	51.9	30	57	9.3	2006	
2	May	2007	9R12R11L	474C6F2725	2	65.6	74.3	59.2	32.4	77	9.8	2006	
2	May	2007	9R10R11L	474B696F15	2	103.9	114.7	91	45.6	266	15.6	2006	

Appendix 4 - PIERP 2006 Arlington Echo Headstart Terrapins

Day	Month	Year	Notch ID	PIT Tag ID	Sex	Plastron Length	Carapace Length	Width	Height	Mass	RP	DOB	Comments
2	May	2007	9R10L11L	47531B160E	2	70.6	79.4	65.3	34.6	92	12.5	2006	
2	May	2007	9R10L11L	474B7B7D7F	2	76.5	64.1	53.2	31.6	56	10.1	2006	
2	May	2007	8R9R11L	474E037B24	2	53.6	64	49.5	28.5	48	9.8	2006	
2	May	2007	9R10L11L	474F4E0A49	2	75.7	89.1	73.7	37.1	122	11.1	2006	
2	May	2007	9R10L11L	474E7B3924	2	70.1	79.4	64.2	33.9	90	12.4	2006	
2	May	2007	9R12R11L	474D7F3444	2	90.8	102.5	80.5	41.3	170	14.0	2006	Unsure of sex
2	May	2007	1R9R11L	474D3E0341	2	58.5	66.9	54.3	27.9	53	8.7	2006	
3	May	2007	9R9L11L	475243685C	2	66.3	74.4	61	33.7	83	8.7	2006	
3	May	2007	9R8L11L	4750106D6C	2	72.2	79.6	67.7	35.4	101	12.6	2006	
3	May	2007	9R2L11L	474E7A667C	2	72.1	84.3	71.2	38.2	122	13.8	2006	
3	May	2007	9R3L11L	47491F4A02	2	71.5	82.7	69.4	36.7	98	11.5	2006	
3	May	2007	9R9L11L	474D636D11	2	52.2	61.1	47.9	26.9	41	7.9	2006	
3	May	2007	9R2L11L	47532A4D37	2	70.44	78.08	65.09	36.81	90	14.1	2006	
3	May	2007	9R12R11L	474F0B432C	2	79.22	92.1	74.64	38.57	135	11.7	2006	
3	May	2007	3R9R11L	474C243304	2	63.52	74.89	57.98	33	69	8.6	2006	
3	May	2007	8R9R11L	474F4E0D44	2	78.91	92.94	72.93	40.78	137	12.5	2006	
3	May	2007	9R8L11L	474F1F5A57	2	51.97	59.72	47.57	31.08	45	8.0	2006	
3	May	2007	9R3L11L	474871117A	2	48.75	55.09	44.85	29.48	34	7.6	2006	
3	May	2007	9R9L11L	474F3A4177	2	47.97	55.09	40.59	25.26	29	6.8	2006	
3	May	2007	2R9R11L	474D6D3176	2	52.67	62.13	48	29.1	44	8.0	2006	
3	May	2007	9R11R11L	474F486513	2	92.38	103.49	84.2	46.58	207	15.0	2006	
3	May	2007	9R10R11L	474F416550	2	76.53	89.85	71.74	39.65	130	11.1	2006	
3	May	2007	8R9R11L	474F2C0D55	2	84.38	98.54	79	43.87	162	14.7	2006	
22	May	2007	2R9R11L	4753375E7D	2	54.9	65.9	50.8	20.3	105	9.3	2006	
22	May	2007	1R2R9R11R	475407493A	2	61.6	69.6	59.4	30.4	67	9.5	2006	
22	May	2007	9R12R11L	474D464C3E	2	58.6	67.8	57.2	30.4	60	9.3	2006	
22	May	2007	1R9R11L	474D434C26	2	59.6	68.9	58.1	27.5	62	7.3	2006	
22	May	2007	9R1L11L	4750704820	2	66.6	73.7	61.5	32.1	75	10.1	2006	
22	May	2007	9R11R11L	474F285D5E	2	61.1	70	57.6	32.1	74	9.8	2006	
22	May	2007	9R11R11L	474F493118	2	73.6	86.1	74.1	38.7	123	12.6	2006	
22	May	2007	8R9R11L	475317553B	2	76	89.9	71.8	38.4	124	12.2	2006	Unsure of sex
22	May	2007	9R2R11L	474C097111	2	60.5	69.4	57.1	31.8	65	11.3	2006	
24	May	2007	9R11L	47533B173A	2	93.6	105.7	91	41.8	212	12.1	2006	
24	May	2007	2R9R11L	474F4E2D47	2	72.6	83.9	65.6	35.3	100	11.2	2006	
24	May	2007	9R11R11L	474F697174	2	68.2	76.6	65.7	33.1	88	13.1	2006	
24	May	2007	9R11L12L	475232363D	2	57.6	66	52.3	28.5	56	9.4	2006	
24	May	2007	9R11L11L	474D075069	2	65	74.4	67	33.6	82	10.7	2006	
24	May	2007	9R11L11L	474F540B36	2	87.5	100.1	87.2	45.8	194	16.5	2006	
24	May	2007	9R8L11L	474F203A7E	2	72.9	81.2	70	36.5	117	11.9	2006	
24	May	2007	9R2L11L	475250215F	2	44.5	50.9	42.9	23.7	29	8.1	2006	

Day	Month	Year	Notch ID	PIT Tag ID	Sex	Plastron Length	Carapace Length	Width	Height	Mass	RP	DOB	Comments
24	May	2007	9R2L11L	47505E5324	2	83	95.6	81.6	41.5	174	15.5	2006	
24	May	2007	9R3L11L	4750101D68	2	96.7	108	89.7	46.8	229	14.5	2006	
24	May	2007	3R9R11L	4753427B45	2	46	53.7	43.4	24	31	6.2	2006	
24	May	2007	9R11R11L	474F305717	2	43	50.8	41.2	22.8	26	6.6	2006	
24	May	2007	9R9L11L	474D1B675D	2	62	73.4	57.9	31.2	69	10.3	2006	
24	May	2007	9R10L11L	474D6B2F0B	2	76.8	87.2	75	39.8	144	11.5	2006	
24	May	2007	9R11R11L	474E154536	2	73.6	86.5	71.2	36.8	119	12.0	2006	
24	May	2007	9R3L11L	474E77613E	2	63.9	73	62.5	33.4	77	11.8	2006	
24	May	2007	9R3L11L	47534D5732	2	57.4	64.2	55.3	31.1	56	9.9	2006	
24	May	2007	no notches	474F341F24	2	112.8	130.2	111.2	55	392	15.2	2006	
24	May	2007	9R11L11L	475000253F	2	85	96.8	79.8	40.3	162	15.4	2006	
24	May	2007	8R9R11L	4750095162	2	85.2	96.8	81.1	40.4	170	13.5	2006	
24	May	2007	8R9R11L	474F3E7332	2	76.8	92.4	75.2	37.2		13.7	2006	
24	May	2007	9R11R11L	A74D661C2E	2	80.4	92.4	79.5	40.3	155	10.5	2006	
1	May	2007	1R9R11L	474DOC4A41	J	76.4	86.5	73.1	37.2	122	12.2	2006	ANA- RCV 4 and 5
1	May	2007	9R10R11L	4752267533	J	66.4	75.7	58	29.7	74	10.2	2006	
1	May	2007	9R10L11L	474B776F6E	J	54.7	63.2	50.9	28.5	50	8.8	2006	
1	May	2007	9R10L11L	474E0A0325	J	52.2	61.3	51.1	28	47	9.3	2006	
1	May	2007	9R11L12L	47524D4E4D	J	58.4	66.1	54.3	27.8	57	8.7	2006	
1	May	2007	9R9L11L		J	71.9	81.9	61.8	36.1	101	10.8	2006	
3	May	2007	3R9R11L	47500D7C12	J	84.6	96.6	79.5	41.4	148	11.4	2006	
22	May	2007	3R9R11L	474B76080D	J	74.8	88.2	72.6	37.2	122	11.3	2006	
22	May	2007	3R9R11L	47531E7458	J	84.3	95.8	81.3	39.9	148	12.0	2006	
22	May	2007	1R9R11L	47491A4551	J	77.5	87.7	73.1	40.2	126	9.1	2006	
24	May	2007	2R9R11L	474C761F31	J	65.4	76.7	51	33.6	84	9.6	2006	
24	May	2007	9R10L11L	4754126C74	J	70.1	80.1	66.7	33.7	100	10.6	2006	
24	May	2007	9R10R11L		J	86.9	99.1	79.8	42	170	12.5	2006	
24	May	2007	3R9R11L	47A9214F7C	J	67.1	77.4	63.4	36.2	85	10.5	2006	