



Rounds Notes is a monthly report from Sea Rogers Williams VMD, the views expressed are not necessarily that of the National Marine Life Center. Information in Rounds Notes should be considered confidential and used solely to benefit the health of aquatic animals everywhere.

April 30, 2009 with Updates

Rounds Notes 8: 21-23 (2009)

## Headlines News: Turtle traumatizes shell in close encounters with the gull-kind.

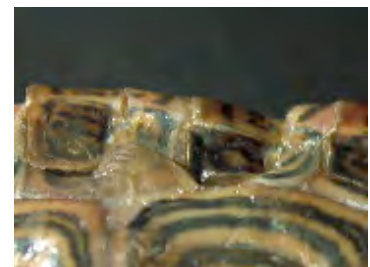


A new patient was brought to the center by Don Lewis, a one-year old Diamond back terrapin - *Malaclemys terrapin*, who suffered some potentially critical trauma at the hands (or should I say beak) of a gull. The turtle was found by a good Samaritan in Wellfleet who notified Don. This is apparently the time

that burmation (reptile winter dormancy) ends and turtles surface to begin their actives in the spring, something not without its dangers. One theory holds that a gull picked up the turtle and dropped it, sending the turtle tumbling down to a hard surface in an attempt to crack the shell open to get to the tasty insides, and was only partially successful. Assuming the gull was not of the Roseate tern variety - who are not known for this feeding method, one that is commonly observed in the abundant Herring gulls feeding on clams and crabs - the intended pray is way too protected to support this type of feeding behavior. The little injured turtle was fortunately scooped up in a heroic rescue and brought to the center. The plastron to carapace ratio is suggestive of a female, while not a biological certainty we have acknowledged her high-flying adventures and named her 'Amelia'.



At the veterinary clinic in the National Marine Life Center, several minor injuries were observed with the aid of our microscope; ulcers on the plastron, right foot, neck, and left hind leg, but the trauma to the left marginal scutes is the most serious. A triangular fracture held in place by only soft tissue involves left marginal scutes 6 & 7 measuring 4 x 8mm, but it is not the size of the wound that matters. Sterile wound exploration indicates that the injury communicates with coleum or body cavity. This creates a pathway for a serious and potentially life threatening infection. Since the actual trauma was not observed we will treat this wound as contaminated, and as such it can't be closed or repaired in a primary fashion immediately. The first order is to preserve the soft tissue attachments which bring a much needed blood supply to the bone, clean and debride bacteria and contamination from the wound site, and support the animal.



The wound is being flushed with sterile saline daily with a sterile 18g needle attached to a large syringe. Care is used not to flush material into the body cavity but to clean the wound and keep the underling tissues moist and free of infection. Topical antibiotics are troubling as they are not intended to be introduced into the coelom, and many contain aminoglycosides that given the small size of the patient could result in systemic absorption and serious consequences. After seven days of daily wound care we will reexamine the wound, the healing that has occurred, the animal's condition and any evidence of infection to determine a course of action. Treatment options include surgical fragment stabilization, systemic antibiotics, continued wound care and observation, and debridment of the fragment and primary or secondary closure of the wound. The possibility of internal injuries, the extent of which we may not be fully aware, are also possible and we'll be keeping a close eye on the little one.

All of us naturalists-types have seen turtles in the wild who have survived injuries that are much greater than those that we are aware to have occurred to Amelia, but there is a bias to this observation. That turtles can survive this type of an injury in the wild does not assure their return to health, and those turtles that die of secondary infection do not typically wander around in the years that follow. I feel the prognosis is still good for Amelia, and we will attempt a less aggressive treatment course initially with close observation to see if we can "fast-track" this recovery (even fast-tracked for a turtle requires several weeks) but we are ready to intervene if we feel the condition is not progressing in a satisfactory manner.

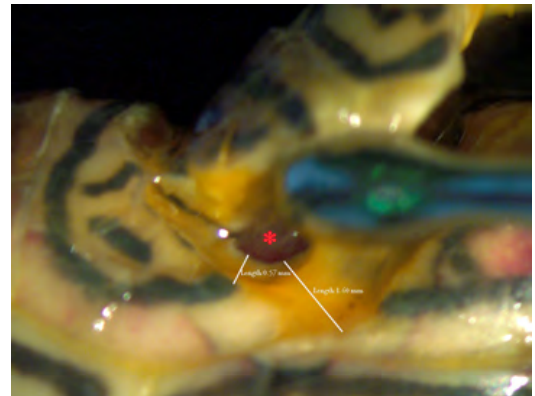
### Clinical Update:

At Rounds this morning (5/5/09) Drs. Ryer, Voorhis, and myself examined little Amelia. Her progress was noted on several fronts. The smaller wounds are largely healed up, and she is more active and now at temperature with the other Diamond-backs (81°F). She is still not eating and the fragment is not stabilized and appears to be held on by a non-viable thread of tissue. The bone has become avascular (without blood supply) and thus can not heal. This is not terrible news for Amelia as she has started to lay down some

granulation tissue and heal from beneath the small bone fragment. Once the body cavity is adequately protected, she can be released, and the marginal scutes will be lost with nothing more than a scar. As the flushing seems to be doing an adequate job we'll continue with current therapy.

We discussed cultures and antibiotic therapy but decided on judicious use of a non-steroidal anti-inflammatory along with fluid therapy as needed. [meloxicam, diluted to 1:100 @0.05 mg/ml, 0.1 mg/kg PO q 24 hrs PRN; 21.6g yields a dose of 0.002 mg or 0.04cc which could be delivered as 4IU U-100 PO, along with 0.1 cc LRS or Reptile Ringer's SQ]. All medications are given with great care, but the risk of a misdose to such a little critter could be disastrous, so we will carefully prepare the dilution and monitor Amelia for discomfort that might be improved with therapy.

We will continue with weekly medical evaluations.



The fragment can be easily distracted and the yellow tissue measured, the red dot may represent the colemic lining. So as not to disrupt this layer the fragment will be left in place for now.

## Cooters

“The Heat is On”: The large sand-filter was left on last weekend, which provided for some exceptionally clean water but also warmer than the established temperature limits we have for the system. The pump that runs the filters and the friction of the water running thru the filter adds heat and in a small system such as the Cooter tank this can heat things up pretty quickly. The water temperature was close to 100°F which is warm but for short periods not dangerous. The turtles also had access to a floating haul-out but I guess they did not sense the need. Turtles bask in the sun and can tolerate quite warm environments but should always be offered the ability to choose a local environment that suits them. So, while no harm was done, and the Cooters are doing fine this week, it is important to recognize the consequences the operation for each system and that settings are carefully chosen and protocols need to be followed.

## Sea Turtles at Large

A ‘blip’ made it thru from Lavender, these single points are a little suspect and I’d like to see a tract of several days to be sure we’re getting good data but Lavender may still be off the Carolina’s.

Fletch is still socked in at Virginia, eating tons, and awaiting a ship willing to brave the questionable waters off the coast. The forecast is not encouraging but we hope to hear of Fletch’s release soon, and we’ll keep you posted.



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