



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 7, 2009

Rounds Notes 7: 19-21 (2009)

Headlines News: Tag and Release

After passing a health assessment last week with a physical exam and blood work, Fletcher was cleared for release and tagged.

Arrangements with the stranding program at the Marine Science Center, Virginia Aquarium have been made, and Fletch will be transported tomorrow. The turtle will stabilize for a day or so in Virginia and then be transported to North Carolina where a NOAA Fisheries' boat will carry Fletcher out to the Gulf Stream for release.



The release criteria involve a medical and behavioral assessment. Fletch's blood work shows stability and all values are within ranges consistent with good health. Some of the remarkable achievements with Fletch are the reduction of the CK enzymes, which are a non-specific measure of muscle and tissue damage, from 181,407 to 2,644 (I'd like to see a number between 1,614 and 3,291 or even lower). Currently, the calcium to phosphorus ratio (Ca:P) is greater than 1 which is good for a sea turtle in rehabilitation (2 is ideal but anything over 1 is acceptable). Fletch was admitted to the critical care department at the New England Aquarium with severe acidosis (pH=7.1) a problem that has been resolved for many months. Fletch currently eats crabs and cut fish and recently has really started to put on some weight. Behaviors are normal for a captive wild loggerhead and I feel Fletch is likely to survive and thrive back in the wild.



We tag sea turtles by several methods. First is standardized photo identification, this is more than a simple mug-shot. Next are two metal Inconel tags placed in the hind flippers, this is done in the trailing skin that is usually hidden under the carapace. We apply two tags incase one is pulled out. Next a PIT tag is placed under sterile conditions around the right shoulder. These are the same tags many of our pets have, and can be

read unobtrusively while female turtles are nesting and laying eggs, or if the animal is ever picked up by researchers. We are fortunate to have another satellite tag, and Brian programmed and attached the tag today. With the Wildlife Computer's SPOT 5 tag we will be trying to accomplish two things. First, we want to determine if the rehabilitation was successful and we are looking for normal movement patterns immediately after release. For this we have programmed the tag to transmit daily for the first few months. The second parameter is the ability to record a depth temperature. We will record a mid-day temperature at depth that will be transmitted every third day for the remainder of the tag's battery life, which we hope is 6-8 months. If Fletcher does travel north again this year we may be able to observe the temperatures that influence the turtles movements in close to real time.



Summarize that Stranding

In the first of a series let me present . . . Fletcher.

NMLC CC 08-019

RRF = TTR946

SPOT5

MH 08-177 CC

LRF = TTR947

PTT 94783

ST 08-109

PIT = 4722340F42

LUT 10024/242

Fletcher stranded on 11/29/08 on Fisher Beach in Turo, Cape Cod, during a mass sea turtle stranding cold-stun event. The turtle was found upside down and severely hypothermic. The turtle was transported on 11/29/08 to the New England Aquarium where the animal was found to be acidotic and was slowly warmed and treated. Once a stable body temperature was obtained, ceftazadime was started as a prophylaxis antibiotic due to the immunosuppression associated with cold stun events.

Once stable the turtle was transferred to the National Marine Life Center for continued rehabilitation. Dr. Bridget Dunnigan perform an admission physical on 12/4/08, the turtle weighted 23.7 kg and was in good condition. A blood culture was taken and antibiotics continued until the results were obtained. Sucralfate [1g PO SID] was given for several days due to some dark and tarry stools, which resolved.



Antibiotics

were discontinued on 12/29/09 after a negative blood culture, which was confirmed two weeks later. Routine blood work and radiographs found elevated tissue enzymes which were attributed to the cold stun event. We observed a small number of trematode eggs in the stool, but these infections are common in wild animals and the need to treat the infection was not observed. These infestations are not immediately contiguous as the parasites have a

complex life cycle and require an intermediate host.

The only real complication to Fletcher's rehabilitation started the night of 2/2/09 when the turtle knocked over some PCV pipes that held a temperature probe attached to the pipes with two rubber attachments, each about 2cm in diameter. When the two pieces of rubber could not be found in the tank the next morning we were concerned that Fletch could have eaten the pieces. Survey radiographs were inconclusive so Fletch was transported to WHOI CSI for a CT exam, which found both pieces already in the intestines! While there was always possibility that the rubber pieces would travel through the intestines without incident, if they caused an



obstruction, it could require surgery and can be life threatening. External signs of intestinal obstruction in a sea turtle are likely to be subtle, so we started a daily program of sifting through Fletcher's poo and weighing the amount so we could monitor both appetite (in's) and fecal production (out's). We added some Lataxone® (light mineral oil) to the fish to help with the progress of the foreign material. Additional CT exams were performed on 2/5/09 and 2/19/09 as we monitored the progress of the pieces. Finally the pieces were passed on day 23 and day 27 after ingestion. While some mild dilation of the bowl was noted, no lasting adverse effects were observed.



Fletcher has had eight blood profiles, two CT exams, survey radiographs, numerous physical exams and he's eaten a lot of fish. The historic reasons for the standing, namely the cold stun have completely resolved. The animal has had normal developmental, behavioral, and medical evaluations and has been cleared for release. If not for the dedicated assistance and beach walkers from the Wellfleet Bay Sanctuary of the Massachusetts Audubon, the entire staff and volunteers of the Rescue Department of the New England Aquarium, and staff and volunteers and generous supporters of the National Marine Life Center, Fletcher could have died as a result of this cold stun event. Further we acknowledge the Virginia Aquarium and NOAA Fisheries for their help and assistance.

Good Luck Fletch, we wish you well, and tune into the National Marine Life Center's web page and SeaTurtle.org to hopefully follow Fletch back to the wild.

Sea Turtles at Large

The occasional "blip" is still herd from Lavender but nothing strong enough to plot, so while the tag's battery life is surely near it's end, we still believe Lavender is off the coast of North Carolina, and we hope doing well.

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