As we reported last issue, the roof over our animal care facility began to collapse mid-December. Structural analysis indicated the building was no longer sound, so we were forced to close our hospital. In preparation for constructing a new marine animal rehabilitation hospital we had to demolish the old building, a former Grossman’s lumber warehouse.

Demolition began in May when the crew from R&H Construction removed the two rear building segments in a matter of days. Next workers systematically demolished the interior of the main warehouse, first removing all of the combustible materials, the fire sprinkler system, and the piping. The roof was next to come down, followed by the remaining walls. The last wall was torn down June 26th.

Contrary to the “implosion” or “wrecking ball” methods one often thinks about, our warehouse demolition was slower and more methodical so as to recycle as many of the materials as possible. The steel was shipped to Midcity Steel, where it was shredded and melted down to make new products. The concrete brick walls were processed into ABC (asphalt, brick and cement) material that will be blended and used as a sub-base for driveways, walkways, and patios. The large wooden beams that supported the roof will be shipped to Vermont to help construct guides for a new bridge. Even as we are thrilled at the prospect of a new building, we are happy that materials from our old one are being recycled.

With demolition and construction, this is a very exciting time for NMLC. Now that the old warehouse is gone, we are well on our way to having a new hospital building by spring, just in time for seal pup stranding season.
Message From the President
By Kathryn A. Zagzebski

When I first came to the National Marine Life Center, I saw a facility with tremendous potential. Even as we continued to plan and raise funds for a new, state-of-the-art marine wildlife hospital, we would not have to wait to implement our mission. Thanks to funding from generous supporters and because of the hard work of the board and previous staff members Sallie Riggs and Christine Duren, we had the life support system and habitat already in place to begin caring for stranded sea turtles and seals. With support from then-Board Chair Townsend Hornor and the rest of the Board of Trustees, I took steps to begin implementing our mission on a larger scale. We hired professional animal care staff, obtained the necessary permits and authorizations, and in December 2005, admitted our first three critically-endangered Kemp’s ridley sea turtle patients. Our rehabilitation program was underway!

Working in the old warehouse in which our animal care clinic was located was a mixed bag. On the one hand, we developed a skilled staff and volunteer corps accomplishing small miracles every day as they rehabilitated some very sick sea turtles. On the other hand, we were working in a facility with severe limitations. There was no heat or air conditioning. We constantly fought mold growth. The roof leaked badly. When it rained, the downpour inside rivaled the showers outside. Rust pieces from the steel crossbeams regularly dropped to the floor. Fortunately, our animal care clinic was sheltered under a greenhouse structure built within the larger warehouse to protect our patients. Within this modest clinic, we cared for eighteen endangered Kemp’s ridley sea turtles and one harp seal between December 2005 and December 2007, and were prepared last fall to accept new sea turtle patients. Sadly, that was not to be the case.

While visiting family in North Carolina last December, I received an emergency call from Brian Moore to report a major problem with our facilities. A crossbeam in the warehouse roof had rusted through and the roof was in danger of collapsing. It was no longer safe for staff, volunteers, and patients to spend time in the building. We shored up the roof, transferred sea turtle patient Lavender to our partners at the NOAA Woods Hole Science Aquarium, and proceeded to assess the damage.

At first, this seemed like a major setback. Despite a wonderful animal care staff and volunteer corps, despite brand new diagnostic equipment donated by the Bilezikian Family Foundation, we could not accept new patients. As it turned out, however, this cloud had a silver lining.

After evaluating our options, we realized we needed to replace the crumbling walls and roof of the old warehouse with a new building. By using a preengineered building, we could build a structure that would be sound, that would be heated and cooled adequately, that would conform to new flood requirements and new building codes, and that would be less expensive than the renovation previously planned. We could build a hospital that will enable us to provide the best possible care for marine animals now and in the future. Thanks to a generous bequest from our co-founder Townsend Hornor, who believed in the need to provide rehabilitative care closest to where animals strand, we are beginning to realize his - and our - dream.

(Continued on next page.)
Life Support Building Nears Completion!

By Brian Moore, Animal Care & Facilities Coordinator

Construction is nearly complete on NMLC’s new Life Support System (LSS) building. In the months since our last newsletter, a new building has risen out of the old parking lot behind NMLC. Representing the first phase of our new hospital project, the LSS building will make it possible to access clean, life-sustaining sea water for our rehabilitation pools.

The project began with horizontal drilling and installation of pipes to the Cape Cod Canal. Next, the building to house the pumps and other life support equipment began to take shape. The crew from Barbato Construction poured concrete footings and a foundation slab strongly reinforced by metal rebar, erected the walls and roof, and finished the interior and exterior of the building.

Currently, crews are installing the pumps, pipes, treatment systems, and water storage tanks for which the building was designed.

The pace of construction is steady and substantial progress is made daily. Stop by and check out our progress!

Above: Horizontal drilling was completed in March to draw in clean salt-water from the Cape Cod Canal.
Below: The LSS building at the end of July.

Message from the President continued...

As we proceed, phasing is necessary. Phase 1, our new Life Support System Building is 100% funded and nearly complete. Phase 2, demolishing our old warehouse and building a new hospital into which we will reestablish our sea turtle and seal rehabilitation program, is being funded by Townie Horner’s bequest and additional donations. To donate or inquire about naming opportunities, please call me. Future building phases will require additional fundraising to add increased capacity for sea turtles and seals, to add tanks large enough to rehabilitate dolphins, porpoises, and small whales, to rebuild our Marine Animal Discovery Center into a year-round science education and exhibit facility, to add classroom and laboratory space, and to add staff and volunteer offices. This phased construction will allow us to regain our rehabilitation program as soon as possible while still maintaining sight of our long range goals.

This is only possible because of your support. Thank you.

Hospital Design Underway

By Brian Moore

A new hospital is just around the corner! NMLC staff and board members have been working diligently with our architects, cosestdui, and our general contractor, Bill Reich, to finalize the hospital design.

NMLC’s new marine animal hospital will have a sea turtle ward with enough room to accommodate up to 30 sea turtles at a time, depending on size. There will be a seal quarantine area with holding pens for pups and larger animals. There will also be two larger seal pools for animals that have passed quarantine. Finally, there will be two large pools capable of housing dolphins, porpoises, and even animals as large as pilot whales. Pools will have individual life support systems and temperature controls, allowing flexibility of use.

We have planned a large clinic and examination room, an x-ray room, a kitchen in which to prepare animals’ food, locker rooms with showers, and a second floor mezzanine with enough room to accommodate our growing needs in science and education.

The building will be a large, preengineered steel structure with an opaque, visually-appealing Main Street facade that will allow natural light to enter thus promoting animals’ healing and also saving on lighting costs. High R-value insulation in the walls and ceiling and “Solotube” amplifying skylights will also help us save energy and operational costs.

Stay tuned!....
Under the Microscope

By Dr. Sea Rogers Williams, V.M.D, Science Director & Associate Veterinarian

A remarkable achievement for the Science Department is the recent purchase of a research grade microscope and digital microscopy measuring equipment, all made possible by a generous grant from ENTERGY Corporation. This will allow the next installment of “Under the Microscope” to feature actual images taken under a microscope. I have already received for analysis marine mammal parasite samples from the Cape Cod Stranding Network, a project of the International Fund for Animal Welfare, and from the Cooperative Laboratory of the Maryland Department of Natural Resources.

I continue to work closely with our partners at the Woods Hole Oceanographic Institute investigating ear disease in phocids, parasites of marine animals, and analyzing cause of death of seals. Two cases of external ear disease in seals provide an interesting inclusion of our study which to date has focused on the more serious and sometimes life threatening condition of middle ear disease or otitis media.

I have also been working with the NOAA Fisheries’ by-catch/observer program and its personnel to assist in case analysis and with interesting pathology of marine mammals and sea turtles. As NMLC representatives, Dr. Bridget Dunnigan and I assisted the necropsy lab with a Kemp’s ridley and a loggerhead turtle during the venerated veterinary AquaVet® Program, a section led by Dr. Craig Harms, a noted sea turtle veterinary specialist.

Work on the NOAA contract for a Northeast Veterinary Stranding Handbook continues with near completion of the sea turtle section. In gathering information, I traveled south to meet with the animal health departments of the National Aquarium in Baltimore, the Marine Mammal Stranding Center in New Jersey, and others. These visits were followed by a very productive meeting with the veterinarians at the New England Aquarium. The contract with the Marine Biological Laboratory’s Lilly Library, afforded with this project, has proven to be an invaluable asset and I am compiling a substantial literature resource for NMLC.

Final revisions and input from authors continues on the case reports of Smarty and Claw, and we will hopefully have manuscripts to the publishers soon.

Lastly, as the new hospital takes shape I am researching facility standards for rehabilitating seals, cetaceans, and sea turtles. NOAA rehabilitation standards, the Department of Commerce’s Animal Plant and Health Inspection Service regulations, and the Florida Fish and Wildlife Conservation Commission’s Sea Turtle Conservation guidelines are all piled on my desk with highlights and dog-ears to reference as we juggle the limits of space and budget with the medical and husbandry requirements of this specialized design. It’s an exciting time!

A Generous Day

By Julie Seligmann, Development Officer

National Marine Life Center staff are thrilled to be the recipients of a Entergy Environmental Stewardship Grant. On June 24th, Jay Scheffer, Environmental Protection Supervisor, and Dave Tarantino, Corporate Relations Specialist, presented Kathy Zagzebski and Dr. Roger Williams with a $10,000 check to purchase a new high-tech microscope. Please see Dr. Williams’ article above for details on how this generous donation will advance NMLC’s diagnostic capacities as well as our scientific knowledge of marine animals.
Lavender Returns Home!

By Dr. Michele A. Sims, D.V.M., Associate Veterinarian

At last report, Lavender, a cold-stunned juvenile Kemp’s ridley sea turtle who stranded on Sandy Neck Beach in November, 2006, was awaiting her final CT scan to determine if her pneumonia had healed. Scan results indicated that, after nearly two years of treatment, Lavender could be released!

In preparation for release, we fitted Lavender with two metal ICONEL tags, one on each of her rear flippers. Each metal tag has a unique identifying number that is registered in a national database so if anyone spots Lavender in the future we will know who she is. We also placed a PIT tag or microchip in Lavender’s shoulder muscle. This is the same system used on pets and provides an additional means of identification. Finally, we affixed a satellite tag to Lavender’s carapace to allow us to track her movements post-release. Made possible by the generous donations of Mermaid Ball 2007 “fund-a-cause” donors, the satellite tag will provide location data for one to twelve months and will eventually fall off as Lavender grows.

Lavender and five sea turtles rehabilitated at the University of New England in Biddeford, Maine’s Marine Animal Rehab Center were released at Dowse’s Beach in Osterville on July 30. Sea turtlestranding and rehabilitation partners MassAudubon Wellfleet Bay Wildlife Sanctuary, the New England Aquarium, and the NOAA Woods Hole Science Aquarium participated in the release. Over 500 people were there to cheer the turtles on! Lavender took off immediately and was the first turtle to enter the water.

Current satellite tag results show Lavender remains in Nantucket Sound, probably taking advantage of great foraging opportunities. We expect her to head south by late September. You can follow Lavender’s journey by visiting www.nmlc.org and clicking on “track Lavender.” You can also adopt her by clicking on “adopt Lavender.”

Red Belly Release!

By Kerry L. McNally, Animal Care Technician

On June 2, six red-bellied cooters that were head started at the National Marine Life Center were released into Great Quittacas Pond in Middleboro. The Headstart program was initiated by the Massachusetts Division of Fisheries and Wildlife as a recovery effort for the Massachusetts population of red-bellied cooters. The six turtles arrived at NMLC on September 28, 2007, each weighing an average of 8 grams. Upon release, each weighed an average of 240 grams, which is a size that will allow them to have a better chance of survival. Along with over 130 other red-bellied cooters headstarted at other facilities, the turtles were introduced to their new home.

Thank you to all the wonderful volunteers who helped take care of the red-bellied cooters and made it possible to release them. We could not have done it without you... Caitlin Anderson, Juan Bacigalupi, Katelyn Berkeley, Len Boutin, Paula Boutin, Sean Briggeman, Laura Doucette, Matt Doucette, Kathy Frucci, Shawnee Gresh, Terra Holovacs, Michaela Kachadoorian, Steve Kramer, Malcolm McDougal, Erin Walsh, and Jo-Anne Yereniuk.

Purple Turtle Films NMLC

By Julie Seligmann

A special thanks to Gregg Siebert and the crew at Purple Turtle Productions for their amazing video highlighting the work of the National Marine Life Center!! For almost two long years, Gregg and his crew dedicated themselves to perfecting this piece. We are grateful for their efforts and we enjoy every opportunity to share this video with our friends and donors. For all the filming, editing, script re-writes and your commitment to making this piece perfect – thank you!!
A Turtle Hospital Again

By Kerry L. McNally, Animal Care Technician

The National Marine Life Center may be closed to sea turtles and seals for now, but we are still playing a part in turtle care - freshwater and brackish water turtles, that is! We have opened our doors to sick and injured red-bellied cooters and diamondback terrapins. Several patients were admitted over the spring and summer, and we are pleased to be a turtle hospital again.

On March 17, we received our first diamondback terrapin and dubbed him “Little Dude.” Little Dude hatched in Assonet Bay in early Fall. The runt of his clutch at only two grams, he was provided a head start by being kept in warm aquarium water through the winter. When NMLC made it known that we were interested in helping to care for these threatened brackish water turtles, he came to us for a new temporary home. At arrival he weighed less than eight grams. After eating squid, shrimp, and clams he more than quadrupled in size. Little Dude was released August 9.

In April, a six year old female diamondback terrapin arrived at NMLC and was named “Princess Gaia” - Gaia because she was admitted the day after Earth Day and Princess because, well, she acted like a princess! In Fall, 2007 this turtle had stranded on a beach in Brewster with a severe injury to her left hind leg that caused bone to be exposed. Compression scars on her left front leg suggested the injury was possibly due to an entanglement. Veterinarians at the Tufts School of Veterinary Medicine amputated the leg and began the rehabilitation process. Princess Gaia came to NMLC for continued support including reintroduction to a wild food diet of clams, shrimp, and snails. On July 18, she was released back into the wild. You can see a video of Princess Gaia’s release by visiting the National Marine Life Center on YouTube or Facebook.

Two ill red-bellied cooters from the state’s head start program also came to us in April. They had a bacterial infection that caused shell abscesses and a soft carapace. The turtles were treated with antibiotics and topical scrubs for four weeks. Their attitude improved and their appetite increased as they healed. After a thirty day “wash-out” period to ensure there were no residual medications in their system, they were released July 7.

When the red-bellied cooters from various facilities were turned in to the Division of Fisheries & Wildlife Service headquarters on May 30, NMLC veterinarian Dr. Michele Sims was asked to be present to examine the turtles. Out of 140 turtles, she deemed three non-releasable at that time, and brought them to NMLC for rehabilitative care. The turtles suffered from shell deformities and improper bone calcification most likely caused by malnutrition. At NMLC, they received a proper diet, environment, and vitamins. Sadly, one of these turtles died in treatment and one had to be euthanized. The third was rehabilitated and released July 7.

High Schools Students Helping NMLC

By Kerry McNally, Animal Care Technician

This spring, several high school students volunteered their time at the National Marine Life Center for their senior project. Terra Holovacs from Hingham High School, Caitlin Anderson and Michaela Kachadoorian from Cape Cod Academy, and Trevor Poole from Tabor Academy provided invaluable assistance by helping with animal care, developing new education displays and activities, assisting during education programs and festivals, helping with administrative activities, mailings, and more. Thank you, to all our senior project volunteers for your hard work!

Thanks also to Nate Bigley, Ben Houston, and Jon Huehmer, ninth graders at Hudson High School for putting together our critter tank as their community service project. Stop by our Marine Animal Discovery Center some weekend to see their creation!
Thank You!

January 1, 2008 - June 30, 2008

The following supported the National Marine Life Center’s marine animal rehabilitation, science, and education programs with a gift of $50 or more during the 1st and 2nd quarters of 2008. On behalf of the trustees, staff, volunteers, visitors, pupils, and marine animal patients of NMLC, thank you for your generosity!

Individuals:
Mr. & Mrs. Dana S. Briggs
Mr. & Mrs. Richard Castle-Walsh
Mr. & Mrs. Kenneth C. Collinson, Jr.
Ms. Joellyn Crowley
Mr. & Mrs. Thomas E. Dewitt
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Falmouth Stop & Shop Produce Dept.
Kathy Frucci
Purple Turtle Productions
The Selfish Club
Laura Taylor

Matching Gift Programs:
FM Global Foundations
NSTAR Foundation
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Wish List
To donate, contact Julie at (508) 743-9888 x303 or jseligmann@nmlc.org. Thank you!

We urgently need for construction:
~ several hundred yards clean, structural fill
~ new or gently used six-foot chain link fencing

We can always use:
~ Latex and latex substitute exam gloves
~ Medical supplies (unused, in-date)
~ Stethoscopes (new or gently used)
~ Laundry detergent and bleach (unopened)
~ Trash bags (all sizes, with recycled plastic)
~ Copy machine paper (with recycled content)
~ Office supplies
~ Arts and crafts supplies

To equip our new hospital, we’d like:
~ Autoclave to sterilize surgical tools
~ Portable ultrasound machine
~ Digital x-ray processor
~ Gas anesthesia machine
~ A low-temperature “minus 80” freezer
~ Flat screen, flat panel TVs to monitor patients

A Special Thanks

By Julie Seligmann & Kerry McNally

Squishy and Bubbles, endangered northern red-bellied cooters, were unable to be released earlier this summer due to health concerns. They were transferred to the National Marine Life Center for full evaluation and care. Upon their arrival, Dr. Michele Sims began evaluating their health by assessing their physical condition, drawing blood, and taking abdominal cultures.

After observing their eating patterns, Dr. Sims determined that they were unable to eat and their carapaces were not developing properly. Their carapace deformities were limiting their limb mobility. Blood work results revealed a low protein level and could explain why subcutaneous fluid buildups were not improving. The fecal samples were examined under a microscope and revealed parasites.

The most important diagnosis came after an x-ray to determine why their carapaces were soft and pliable and to help better determine their inability to eat. Radiographs revealed that both turtles were lacking in proper bone mineralization. This deficiency restricts the turtles’ range of motion and limits strength in their jaws for eating. As a result of this diagnosis a new form of treatment was prescribed involving tube feeding, medications to treat parasites, and supplements to promote bone calcification.

Prompt diagnosis and treatment ensures a better chance for an animal’s survival. With the help of our x-ray equipment, we are able to put together the best course of treatment for these patients and all the patients to come.

The animals, staff, and volunteers at the National Marine Life Center thank the Bilezikian Family Foundation for its support to purchase essential equipment for our Diagnostic Suite!
Volunteer Spotlight On....
Kathy Frucci

By Joanne Nicholson, Executive Assistant and Outreach Coordinator

Kathy Frucci started volunteering in 2001 by helping to start the Fins & Flipper storytime and Arts & Crafts time as a part of our summer educational program offerings. Kathy is our arts and craft genius! She has dreamed up amazing crafts like sock puppet seals, milk jug whales, paper mache dolphins, and many more. The kids in our education programs and afterschool programs love Kathy, who is dedicated to making education fun for children. You can also find Kathy staffing NMLC’s table at festivals and making marine animal jewelry or paper sea turtles!

In addition to helping with education, Kathy takes a shift in animal care every week. She has helped care for each of our Kemp’s ridley sea turtle patients, our harp seal, our red-bellied cooters, and our diamondback terrapins.

Kathy is a great leader with our other volunteers, training them to work in animal care and to help with educational programs.

Thank you, Kathy, for all of your hard work and dedication to NMLC’s mission of rehabilitation, science, and education!

Education & Outreach Programs

Are you looking for a fun and educational program for your classroom, home-school group, club, community organization, Girl Scout or Boy Scout troop, or camp? NMLC offers a variety of programs tailored to your group’s age and number of participants. Some fees apply and scholarships may be available. For questions or to schedule a program, contact Joanne Nicholson at (508) 743-9888 x302 or jnicholson@nmlc.org.