



NEWS RELEASE

LABORATORY AT THE NATIONAL MARINE LIFE CENTER LEND NEW INSIGHT INTO STRANDINGS BY ANALYZING MARINE MAMMAL PARASITES

FOR IMMEDIATE RELEASE

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Dr. “Sea” Rogers Williams is passionate about parasites. “You can learn a great deal,” he says, “about the biggest animals in the ocean by studying some of the smallest.” Now, thanks to a \$99,600 grant from the federal John H. Prescott Marine Mammal Rescue Assistance Grant Program, administered by NOAA Fisheries, Williams is establishing a unique laboratory at the National Marine Life Center to identify and analyze parasites from stranded marine mammals.

In the first six months of this two year grant, Dr. Williams analyzed 37 parasite samples from 15 marine mammal species sent by marine mammal stranding organizations throughout the East Coast as well as California and Hawaii. In the process, he discovered two new parasite-host relationships. When asked if parasites and infectious diseases pose a threat to wild marine mammals, Williams answered emphatically “Yes!” But, he added, “a lot more work needs to be done. By funding this research, the Prescott grant program is helping us understand more about strandings.”

Dr. Williams’ interest in studying marine animal parasites grew out of a need he faced frequently in his work with the marine animal stranding network – there was no commercial veterinary diagnostic laboratory that could process the parasite samples he regularly encountered. “Without accurate identification, we cannot begin to sort through which parasite-host interactions are pathogenic with epidemiological significance and which infections are from established, more benign relationships,” he said. So, with the help of experts in the field of parasitology, he decided to start identifying them himself.

Initially, Williams began accepting parasite samples from local strandings and analyzing them on his own time using equipment he had in his laboratory. As submissions increased, however, it became evident he needed to upgrade his equipment and devote more time to the project. Thanks to the Prescott grant, Williams now has the equipment and resources to respond to an increased demand, both locally and nationally. His reports identify each parasite sample from a seal, sea lion, dolphin, porpoise or whale and analyze the incidence, pathology, and treatment of the resulting parasitological infections.

What can studying parasites tell us?

Scientists study animal and human parasites in order to learn more about the health of the host, what the host is eating, and where the host travels. Such studies also provide information on what is impacting whole populations. At the ecosystem level, studying parasites provides information about large scale disruptions. When a species of parasite migrates to a new host, for example, it can signal an impending

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environmental change.

In Williams' case, he expects his project will have both short-term and long-term significance. Findings will lead to improved veterinary care for marine mammals in rehabilitation as well as in captivity. Findings will also lead to a deeper understanding of the complex biological interactions in the ocean. For example, Williams said, "by identifying and analyzing the significance of parasite samples from stranded animals, the National Marine Life Center provides data on the biological pressures from this group of infectious diseases. The resulting information can be used to help preserve and protect endangered species and also address key issues of marine mammal conservation and ecological stewardship."

Do parasites cause strandings?

"I have clearly seen cases where a novel or overwhelming parasitic infection caused a marine mammal to strand or even die," states Dr. Williams. "Most seal and cetacean rehabilitation cases involve parasitic infections, even if they are not the primary cause of stranding." With respect to recent strandings of common dolphins on Cape Cod, Williams said that, while not always the case, parasites have been associated with stranded dolphins in the past. "Identifying and analyzing parasites is just one of the many avenues of study that may help scientists solve the riddle of dolphin mass strandings."

About Dr. Sea Rogers Williams

Over the past eight years, Dr. Williams has assisted the stranding network, aquariums, and NOAA Fisheries with parasite identifications from a variety of fish, sea turtles, and marine mammals, and he has completed hundreds of parasite reports. He is a graduate of the University of Pennsylvania, and he pursued his interest in aquatic animal medicine during an internship at the National Aquarium in Baltimore. After completing his internship, Dr. Williams and his partner Dr. Bridget Dunnigan took over managing the Vineyard Veterinary Clinic on Martha's Vineyard. They also shared a position as Veterinary Medical Officers for NOAA Fisheries at the Woods Hole Science Aquarium for five years. The two continued to be involved in marine animal strandings as volunteer veterinarians for the New England Aquarium's Marine Animal Rescue Program. Dr. Williams currently splits his time between his practice on the Island, the National Marine Life Center, his veterinary consulting work for the Marine Animal Rehabilitation Center at the University of New England in Biddeford, Maine, and various NOAA contracts involving sea turtles.

About the National Marine Life Center

The National Marine Life Center is an independent, not-for-profit marine animal hospital and science and education center. The Center currently has facilities to rehabilitate stranded sea turtles and seals, with future plans to add rehabilitation pools for dolphins, porpoises, and pilot whales. The Center's emphasis is to educate the public about the needs and status of these important animals and their environment, and to gain an understanding of the health needs of marine animals and threats to them, both in captivity and in the wild. Since admitting its first patient in 2004, the Center has rehabilitated and released 98 endangered and protected animals including Kemp's ridley turtles, loggerhead turtles, diamondback terrapins, northern red bellied cooters, and a harp seal. The Center has educated more than 29,000 children and adults, and welcomed over 76,000 visitors to its facility on Main Street, Buzzards Bay. ###