

ported mass stranding of sperm whales in the world. The most recent larger stranding occurred New Year's evening (1979) in the northern Gulf of California. Why these strandings occur is not known; however, there are some theories as to the cause. Sperm whales detect food and navigate with echolocation (sonar). Three theories on the causes of strandings are related to echolocation: (1) parasites may invade that part of the inner ear responsible for "balance," making it hard to keep the blowhole at the surface; this may also disrupt the animal's ability to interpret reflected sound; (2) long-sloping, shallow beaches may "capture" the echolocation signals as they reflect off the bottom so the animals do not detect this danger until it is too late; and, (3) one or more animals in the pod may be ill or disoriented and swim to the beach with the remainder of the pod following. Captain C. M. Scammon, in his book "Marine Mammals of the Northwestern Coast of North America," noted that sperm whales, particularly the females, would remain with an injured (harpooned) animal, thus allowing several in a pod to be killed before they tried to escape.

There is also the question of why these animals, normally found offshore in deeper water, were so close to the beach. One possibility is that this is the time of year when squid are found near shore depositing their egg capsules on hard objects such as rocks and crab traps. Squid were reportedly spawning near the stranding site. Sperm whales were observed just offshore in this area prior to and following the stranding. It is not known whether these whales were from the same pod as those that stranded or if they showed any signs of illness.

The stranding and death of 41 sperm whales was a tragic occurrence. The stranding fortunately coincided with the annual meeting of the American Society of Mammalogists at Corvallis and as a result some of the leading mammalogists of the United States and Mexico were nearby and gave valuable assistance in collecting data. All animals were measured, sexed, and will soon be aged by observing annular laminations of their teeth. In addition, over a dozen animals were dissected. Tissue samples of all major organs were taken for disease, parasite, and pollutant determinations. Three fetuses close to birth were examined and will contribute to our understanding of sperm whale development.

Many people wonder why the animals were only examined for biological purposes and no utilization was made of the carcasses. While it would have been very difficult, if not impossible, to cut the animals up and get them to rendering plants before decomposition began, the greatest problem was concern for public health. Health authorities did not think it wise to "drip" whales (possibly

diseased) to rendering plants because of potential risk to humans, livestock, and terrestrial wildlife. There were also legal questions. The sperm whale is on the U.S. endangered species list. The Endangered Species Act and the Marine Mammal Protection Act specifically prohibit the sale, use, or possession of any marine mammal parts without special permits. Exception to the law for salvage rendering could have been made if the possibility of disease could have been ruled out.—Dale Snow, assistant marine region supervisor, state of Oregon, and Bruce R. Mate, Oregon State University, from Oregon Wildlife.

A Scent's Worth Suffices

A skunk discharges only about a twentieth of a teaspoonful of fluid when it utilizes its well-known, smelly defense mechanism. This fluid is under pressure and it is released in a very fine spray that can carry up to 20 feet.



Asleep in the Deep Freeze

A handful of arctic lupine seeds holds the world's record for living in an inert state, according to the National Wildlife Federation. The seeds began to sprout in a dish of warm water after lying frozen deep in the tundra for 10,000 years.

Hair as Repellent

Wildlife biologists at the New York Botanical Garden's Cary Arboretum have been letting their hair hang down in an experiment to determine if the hair repels deer.

Jay McAninch, staff biologist at the arboretum in Millbrook near Poughkeepsie, NY, explained that bunches of human hair wrapped in nylon nets have been suspended from about 200 trees on the 2,000-acre arboretum. In measuring a hair ball's "sphere of influence" deer consistently would come within only one meter of the hair ball. This year the program, funded by grants from a beauty salon firm, has been expanded to test what types of hair repel deer, how long the hair balls are effective and packaging techniques for different tree species. Tresses from beauty salons and the great unwashed mass of hair from barbershops is being used.

The rationale behind the search for a repellent is that deer browsing in orchards, nurseries, woodlots, farms, and gardens is a big problem—not only in New York but anywhere that agriculturalists and deer share the same territory. The hair ball idea is not exactly new. McAninch said he heard about it from two gardeners who had read about the idea in an organic gardening publication. Results, however, varied from one orchard to the next; McAninch wanted to set up an experiment that would eliminate many of those variables so that more conclusive results could be uncovered. He was also attracted to the method because it is inexpensive, readily available, nontoxic and fully biodegradable.

McAninch theorizes that the hair may be repugnant to the deer because of some human scent associated with it, possibly from hair follicle secretions. Follow-up chemical analyses of the different types of hair are planned to substantiate this theory.

What will the deer eat if the hair balls are too effective, one might ask? Good question, but McAninch has an answer. The number of hair balls is "minuscule" compared to the amount of browse on the arboretum grounds. On the smooth sumac, for example, one of the five preferred browse species, the balls adorn only about one-tenth of one percent of the available twigs and branches. "We wouldn't try to extensively modify the deer food habits," he noted.

—Rose Houk,
National Wildlife Federation.



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