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THE WATERS AROUND US: WHALES AND OTHER MARINE ANIMALS

It had been quiet on the boat since the last whale surfaced several minutes before, bringing with it the usual assortment of “oohs” and “ahs.” Abruptly, about fifty feet off the starboard side, a minke whale appeared. It was “spyhopping”—raising its head out of the water to take a look around. People rushed to the corner of the boat to get a better look at the accommodating cetacean, before it slipped back into its watery realm.

Such is the experience of a whale watcher off the Long Island coast. Depending on the time of year, one may see several whale and dolphin species, perhaps a sea turtle or a huge basking shark, and occasionally the ungainly, yet wonderful looking ocean sunfish, also known as the mola-mola. Pelagic birds provide additional enjoyment, with as many as a dozen species slipping in and out of view as they effortlessly negotiate the peaks and troughs of Atlantic Ocean waves.

But whales are the main attraction here. The most common is the fin or finback whale which is named for its large dorsal fin. This large whale can reach up to eighty feet in length and weigh close to fifty tons (although most are somewhat smaller). The species is identified by the distinctive chevron mark behind the blowhole, and individuals are recognizable by differences in the shape and outline of their chevron. Interestingly, finbacks are asymmetrically colored, with the jaw being white on the right side of the animal’s head and black on the left. Scientists are not sure why the species is so uniquely patterned.

A resident population of several hundred finback whales is strongly suspected of breeding in New York waters. Researchers are growing increasingly convinced of this breeding phenomenon off the east end of Long Island primarily due to the regular sighting of calves, who are unable to swim long distances after birth and, therefore, are unlikely emigrants from other places.

The minke whale (pronounced *mink-ee*) is a smaller cousin of the finback. In fact, it looks somewhat like a baby finback, reaching a maximum length of 35 feet and weight of 10–12 tons. It is among the smallest of the baleen whales, animals that feed by straining small

marine organisms through baleen, a sievelike material. Some minkees carry the chevron pattern typical of finbacks.

Humpback whales are occasionally seen off Long Island's coast and are very reliable further out near the continental shelf where several dozen can be seen on most trips. Humpbacks are well-known for their eerily beautiful underwater songs which can carry for great distances, and for their huge pectoral fins, or flippers, that can reach sixteen feet in length.

They are most well-known, however, for their habit of tail- and flipper-slapping and breaching where the whale, most improbably, hurls its 30–40 ton body out of the water only to return to it moments later in a resounding splash. These behaviors were always an abstraction to me until I went on a whale watching trip sponsored by CRESLI (Coastal Research and Education Society of Long Island) several years ago. After traveling through the night we had reached our destination about 100 miles southeast of Montauk Point above a canyon that formed a crinkle in the edge of the continental shelf. Because of the canyon, this was an area of significant upwelling (water coming to the surface) which brought nutrients that fueled a food chain beginning with phytoplankton and ending with whales.

The ocean was remarkably calm as dawn broke and it felt like we were in a bathtub that knew no bounds. We began to see marine life around us—shearwaters, some gulls and terns, and then some feeding whales. Then one of the spotters noticed several hundred yards to the starboard side a humpback (it turned out to be a young male the researcher knew) playfully flipper-slapping with its left flipper. As we headed over and drew a bit closer the whale began tail-lobbing—forcefully and repeatedly smacking its fluke against the ocean surface. Little did we know that at the time he was just warming up. He next moved on to side rolls, sliding and rolling his arched body through the surface and then on to partial breaches, where his body broke the surface. Then the climax—full breaching. Over the next hour the whale entertained the boatload of spectators by breaching more than 70 times. A typical breach involved the whale shooting from the water on his side or back with flippers fully extended with only the fluke dragging in the water and then crashing back to the ocean on his back.

Scientists are not sure why whales do this: perhaps it is an effort to dislodge parasites, or a form of communication or, the most proba-



24-1. Common dolphins are often seen on whale-watching trips off of Long Island.

ble, because it's just plain fun. What I do know is seeing a humpback breach is a sight not soon to be forgotten.

We also enjoyed close-up views of humpbacks feeding. Humpbacks often feed cooperatively: they submerge below a school fish (most often sand lance) encircling them with a ring or net of bubbles. This serves to entrain and concentrate the fish. The whales synchronously lunge upward to the surface, capturing sections of the panicking school, in their distended mouths. (They can expand their mouths due to the accordion-like pleats or grooves situated on their throats.) Pressing their tongue upward they strain out the excess water,

Other baleen whale species that are only seldom seen include the blue whale, the largest whale in the world, and the right whale, one of the most endangered. The sperm whale of *Moby Dick* fame, a toothed whale, is also rarely seen.

Several species of dolphins and porpoises play in the waters off Long Island. These include the beautifully patterned common, bottle-nosed, spotted, white-sided, and striped dolphins and the harbor porpoises.

In addition to marine mammals, a number of sea turtle species can be seen, including the largest and most ocean-going of all turtle species: the leatherback. Looking like a large piece of black, rubbery armor, this species may reach lengths of nine feet and weigh up to three-quarters of a ton. As its name suggests, the leatherback lacks a hard, bony top shell. Rather, it is covered by thick leathery skin with seven long ridges which give the animal a beautifully streamlined appearance. Many large white to pink-colored spots cover the shell



24-2. A Wilson's storm-petrel skips across the water.

and prominent front flippers. The turtle feeds exclusively on jellyfish, and several dozen die each year after mistaking plastic bags or balloons for their dinner, one reason why many marine biologists would like to see lighter-than-air balloon launches halted.

Underscoring its ocean-going nature, the leatherback has evolved without the ability to turn while in water. In its natural open ocean habitat it has no reason to. Captive individuals, however, have been known to die from infected abrasions caused by rubbing against a tank wall in a futile effort to move forward.

As one sets out on the first leg of a whale-watching trip, when the boat is but a few miles off the coast, typical water birds such as gulls and terns are still common. As the boat moves further out into the Atlantic Ocean though, these species drop away and you begin to see birds unknown to the landlubber.

The Wilson's storm-petrel, a swallow-sized bird, is the first to pass near the boat. With its white rump patch appearing in marked contrast to the generally sooty-colored body, and its diagnostic flight behavior of dipping and puttering over the water, there is no mistaking its identification.

Out beyond the storm-petrel your eye may focus on two larger birds: the greater and Cory's shearwaters. Gull-size birds with narrow wings, the shearwaters skirt over the wave tops in a stiff-winged flight, looking as if they might shear the water at any moment. The Cory's is rather nondescript (which ironically assists in its identification), while

the greater has an attractive black cap and tail with a distinctive white tail band.

Shearwaters and storm-petrels often congregate near feeding fin-backs, drawn to their prey which often includes small fish such as sand lance (also known as sand eels). On the same trip described above, I watched as flocks of gulls and shearwaters took full advantage of feeding whales to snatch up fish that were frantically trying to escape from the whale's mouth. Some scientists believe that one of the reasons why most shearwater species are still so abundant is their ability to maintain optimum fitness on wintering grounds by easily feeding on fish made possible by whales. For relatively little energy expenditure (merely flying from one feeding whale to another) the birds are able to gain access to abundant food high in protein and fat.

Other birds to be seen include the northern gannet, northern fulmar, phalaropes, skua, several species of jaegers, and other species of storm-petrels and shearwaters.

Where: You may see some of the above-mentioned species on any ocean-going fishing boat. However, to increase your chances you are strongly urged to go out on one of the scheduled daily whale-watching trips sponsored by the Coastal Research and Education Society (www.cresli.org) that leave from Montauk Harbor. These trips run in July and August.



Miles from Island point,
leviathan surfaces,
birds flock and fish leap.