On an early afternoon last June, we motored through the Mystic River and out into the far eastern edge of Long Island Sound. We paused along the way to notice the birds that perched on pilings like statues and popped up from underwater like seals. These were cormorants. Our mission that day was to visit their home on Gates Island, a little clump of rocks just beyond the mouth of the river. As Gates came into clear view we caught the slightly fishy, sulfuric scent of cormorant guano, the acidic white excrement the birds deposit all over their nesting grounds.

We anchored our boat about fifteen meters away from the island itself. With binoculars we watched the slender black birds and a smaller number of white and grey gulls. We saw only one species of cormorant, the Double-crested (*Phalacrocorax auritus*), which is to be expected at this location at this time of year. Of the six species of cormorants native to North America, the Double-crested is the most widespread, and the most common in New England and the Mid-Atlantic. Here in southeastern Connecticut we see Great Cormorants (*Phalacrocorax carbo*), too, but only during the winter. Both species of cormorants seem to be native to Long Island Sound. Historical records indicate cormorant sightings here and throughout coastal New England as early as 1604. Explorers throughout the 1600s witnessed Native Americans raiding cormorant roosts and eating the birds. A 1776 map of what is today Newport County, Rhode Island, features an outcrop named “Cormorant Rocks.” An 1847 chart shows within twenty miles...
Island another “Cormorant Rock,” as well as “Cormorant Reef” and “Cormorant Cove.” (See map on page 14).

We counted the adult cormorants we could see with binoculars, then motored around to the other side of the island to count again from a different vantage point. We counted a total of about 60 individual cormorants on Gates that day. Official bird counts usually refer to “breeding pairs,” which means the number of active-looking nests in a breeding colony, but it was too difficult to see all the nests on the island from where we had dropped anchor.

Had we brought the boat closer or stepped on the island, the entire colony would have flown away, leaving cormorant chicks vulnerable to predation from the gulls. Such a scene plays out almost every time humans get too close to a cormorant breeding colony: all the cormorants fly away, but the cohabitating gulls, less afraid of people, stay and seize the opportunity to gobble up cormorant eggs, newborns, and chicks that have yet to fledge. For this reason, it’s best to stay clear of bird colonies during their nesting season from February through July.

Few people consider cormorants, even baby ones, to be loveable birds. Some have always viewed the cormorant with disdain, considering it an unsightly annoyance, like a crow, or associating its long snake-like neck and black feathers with something sinister. In 1667 John Milton famously used the cormorant as a symbol for the devil in *Paradise Lost*. Two and a half centuries later, people are still invoking fiery language to discuss the birds: local writer Charley Soares recently penned a column about cormorants titled “Black Death – The Birds from Hell” in the New England edition of *On the Water*, a magazine devoted to sport fishing. The birds’ fishing and swimming abilities go unappreciated by most casual observers and are decidedly not appreciated by the many recreational fishermen, as exemplified by Soares and also by Charlie Walsh, of Stratford, CT, who complain that the birds steal their catch. A few years ago Walsh wrote for the *CT Post*, “To Long Island Sound’s recreational fishermen, cormorants are, to put it as gently as possible, evil baby-fish killers.”

Looking through our binoculars that day off the island’s shore, we watched adult cormorants feed their chicks amidst the squawks of gulls and the constant arrivals and departures of other cormorants. Individuals were flying off the island, circling back and landing in the water to fish just a short distance away from the rocks.

Cormorants start their dives from...
the surface with a simple duck of the head and kick of the feet, keeping the wings tucked in to the side of the body and elongating the neck to search for prey on the way down, the webbed feet providing propulsion. They grab all sorts of fish and invertebrates in their thin beaks and swallow them whole, one at a time, often taking the prey to the surface to toss it around and re-orient it for easier swallowing.

The cormorant’s strangest trait is one it displays out of the water: the statue-like posture of standing still with its wings spread. The traditional explanation for this has revolved around the drying of the wings after swimming. Cormorant feathers are structurally different from those of other seabirds; they get wetter faster, which helps them dive deeper, like a weight belt. The tradeoff is that cormorants then need to hold up their wings to dry before efficiently taking flight again. Anyone who has ever seen a cormorant holding out its wings while standing in the rain, however, will understand why many ornithologists feel there might be other behaviors connected to this notorious posture.

The Double-crested Cormorant is found all over the continental United States, by the sea and on lakes and rivers. It is the only cormorant in North America found appreciably inland. The Atlantic population migrates up and down the entire east coast throughout the year. The cormorants in this population spend the better half of each year up north, on the New England and Canadian coasts, and can be found anywhere from the Chesapeake to the Gulf of Mexico and Yucatan Peninsula from late fall to early spring.

Cormorants were entirely extirpated in New England for a period in the 1800s but recovered slightly by the early 1900s. Populations all over the country took a hit once again in the 1940s and 1950s due to continued harassment from humans, habitat loss, and the widespread use of pesticides such as DDT. Since then the species’ numbers have rebounded thanks to reduced pesticide use and improvements in water quality, along with enhanced federal protection for cormorants through a 1972 revision of the Migratory Bird Treaty Act.

As cormorant populations have grown around the country, often around artificially stocked fish ponds, lakes, and rivers, so have conflicts with humans. Cormorant guano, in addition to smelling foul, can kill trees and shrubs. The U.S. Fish and Wildlife Service has enacted management plans around the Great Lakes and the southern states to permit the cull of cormorant populations or the destruction of eggs where the birds appear to threaten fish stocks, critical natural habitat, or aquaculture facilities. Here in southeastern Connecticut, recreational fishermen have taken notice of the big black birds that swoop into the water to feed on small fish such as flounder and cusk, and have wondered if similar population control measures might be appropriate in the future. At this point, it is hard to know exactly what type of impact cormorants have on local fish stocks. The impact is simply assumed to be relevant but it is not well understood. Consider, for example, that while cormorants eat commercially valuable fish, they also may advance a given fish population by

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thin their slower individuals and by eating other fish species that would be their predators.

Over the past eleven years, our undergraduate students and faculty at The Maritime Studies Program of Williams College and Mystic Seaport (Williams-Mystic) have conducted small research projects on cormorant diets in the Mystic River and Long Island Sound, often dissecting cormorant pellets and regurgitants collected at Gates Island and at other locations. Students have been identifying the bones of fish that show up in these samples. Cormorants everywhere are opportunistic feeders, which makes sense, given their expansive range. Because their diets are so diverse, we cannot assume that one population’s feeding patterns will be indicative of another population’s diets. A study of all the cormorant pellets Williams-Mystic students collected between 2002 and 2009 identified over twenty species of fish. Of those twenty identified species -- bearing in mind that the samples also contained many unidentifiable fish bones -- it appears that benthic species such as American sand lance, sculpin, cusk, and tautog are the most common components of cormorant diets in this area. However, these species are the most common only by slim margins. Diet composition surely changes throughout the seasons and seems to also vary from year to year. For example, a Williams-Mystic study in 2002 found cusk and fourspot flounder to occur most frequently in cormorant diets, yet a largely identical study in 2008 identified more scup, summer flounder, and mailed sculpin than any other species.

We returned to Gates Island in August for the opportunity to step ashore and get a closer look at the cormorant nests. Nesting season was over so there were no chicks that would be endangered by our presence. We collected as many pellets as we could find for continuing research on the bird’s diet. We counted about 75 intact cormorant nests, which suggests that Gates hosts a colony of at least 150 birds. This is a smaller colony than has inhabited the island in previous years; in 2001 there were over 200 nests on Gates, indicating a colony three times as large as this year’s.

Harrison Flint Lewis, who worked for the Canadian Fish and Wildlife Service and wrote the authoritative Natural History of the Double-crested Cormorant in 1929, concluded his work by saying that the bird, “though unfortunate in some respects, is by no means as unpleasant as it has often been painted, but is actually a reputable avian citizen, not without intelligence, amiability, and interest.” Cormorant colonies like the one on Gates Island are not so threatening to the local landscape or other species that we need to be hostile toward them. It is true that cormorants are capable of consuming plenty of fish, with their adept diving skills and a wide variety of species upon which they are willing to feed. Yet, doesn’t it make more sense to admire these creatures for their adaptive survival skills, which include not just underwater fishing but migrating long distances and inhabiting both freshwater and saltwater environments, than to resent them for any potential, unknown detriment to sport or commercial fish stocks? Cormorants have been part of this region’s ecology for centuries, if not millennia. In the natural spaces on and off the New England coast, there is no reason to fear the talented cormorant.