

# Culture and Seabird Conservation Work Together Along the North Shore of the Gulf of St. Lawrence

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This article is a summary of a 22-year project to help restore populations of seabirds that nest along the North Shore of the Gulf of St. Lawrence and winter off the New England coast. The project is a collaborative effort of the Quebec-Labrador Foundation (QLF), the Canadian Wildlife Service (CWS), and residents of a remote section of the North Shore of the Gulf of St. Lawrence who traditionally harvest seabirds. Recent increases in populations of seabirds that were depleted severely during the middle of the twentieth century demonstrate the efficacy of conservation strategies that work within the context of local culture. A longitudinal study tracked changes in local knowledge, attitudes, and hunting behavior concomitant with increases in seabird populations.

## Study Area

The North Shore of the Gulf of St. Lawrence forms the southern boundary of the Quebec-Labrador peninsula in eastern Canada. Although historically referred to as the Canadian or Quebec Labrador, the approximately 720 kilometers of coastline lie entirely within the Province of Quebec. Two important conditions make the region suitable for seabirds nesting in colonies. First, there is an abundance of prey, due to the extremely productive waters produced by the mixing of the cold Labrador current with the fresh water from the St. Lawrence River and Great Lakes. Second, there are several thousand small islands, many of which are free of land-based predators. The current approximate population size for seabird colonies of the North Shore of the Gulf of St. Lawrence is more than 120,400 birds (Chapdelaine 1995).

The Lower North Shore, the eastern section extending 400 kilometers from Kegaska to Blanc-Sablon, comprises 15 villages with a total population of fewer than 6000 people. Residents are predominantly anglophone (about 65 percent English, 21 percent French, 14 percent Montagnais) and few of the villages are linked by roads. The economy was overwhelmingly fishery-dependent until a moratorium on cod fishing was enacted in 1992.

## History

Since the beginning of recorded history, nonnative residents of this isolated coast have been part of a market economy that depended on the exploitation of fish, furs, and seals. People also engaged in semisubsistence activities to supplement their diets; for example, they hunted seabirds and gathered seabird eggs for food. In recent decades, however, neither hunting seabirds nor gathering eggs has been crucial to meeting vital food needs. However, the acquisition, preparation, and consumption of seabirds are still important to the culture, since they are linked to tradition, identity, social norms, recreation, and feelings of self-worth (Blanchard 1984, 1994).

The North Shore seabird colonies are linked historically to commercial and conservation interests from New England. During the seventeenth and eighteenth centuries, parties from New England traveled to the North Shore to collect down feathers from the nests of eider ducks; eiderdown was used in making mattresses, blankets, pillows, and clothing. Intense commercial exploitation of seabirds and their eggs reached its peak during the 1800s, during the time John James Audubon and other naturalists were visiting the coast. Thousands of seabirds were shot or clubbed to death and used for a variety of purposes, including food, bait, and clothing. The eggs of Common Murre and Razorbill were collected by the tens of thousands and sold in markets of Boston and New York for 20-50 cents per dozen. This was the most destructive period in the history of North Shore seabird colonies.

During the early part of the twentieth century, conservationists visiting the coast saw the potential for restoring seabird and eider populations through the implementation of new regulations under the (U.S.-Canada) Migratory Bird Treaty of 1916, and the creation of a network of sanctuaries that would protect the birds during the breeding season. The Treaty made seabird hunting illegal, by classifying the auks, gulls, terns, and loons as nongame birds. Charles W. Townsend from Boston and Ipswich, Massachusetts, was one of the early promoters of the sanctuary movement. By 1925 the government of Canada established ten migratory bird sanctuaries along the North Shore of the Gulf of St. Lawrence and began a population monitoring program that has continued to this day. A census of seabirds nesting on the sanctuaries is conducted every five years. The sanctuaries of the North Shore are the oldest continually monitored seabird sanctuaries in the world.

In the years following 1925, however, it became obvious that regulations and the creation of sanctuaries alone were not enough to restore seabird populations. During several decades of impressive work by federal migratory bird officer Harrison F. Lewis, seabird populations began to recover; following his retirement, they declined again (see reports of censuses published in the journal *Canadian Field Naturalist*). It would take a new, more collaborative management strategy that worked *with* the local culture, and not just by imposing rules upon that culture, to bring about long-term changes in people's behavior that would benefit seabird populations, particularly along the Lower North Shore. This approach, which was being developed in northern Canada among indigenous communities, subsequently helped to broaden the perspectives of natural resource agencies in Canada and elsewhere around the world, toward more collaborative forms of management.

### **The Project**

The collaborative project between QLF, CWS, and local residents began in 1978, following two decades of serious population declines among seabirds nesting on federal migratory bird sanctuaries. Between 1955 and 1978, populations of Razorbill and Atlantic Puffin had dropped from about 18,500 to 3,000 (-84 percent) and 62,000 to 15,000 (-76 percent) individuals, respectively. Population decreases also occurred among Common Eider, Common Murre, and Black Guillemot (Chapdelaine 1980). At

the Bradore Bay Sanctuary near Blanc-Sablon, numbers of nesting puffins had dropped from 55,000 to 7,000 individuals.

Numerous biologists working along the coast had linked the seabird population declines to excessive harvest and colony disturbance by residents. Concern focused on the two important sanctuaries of the Lower North Shore, the St. Mary's Islands and Bradore Bay sanctuaries, where the majority of auks breed. A study conducted by QLF along the Lower North Shore in 1981 provided details on harvest levels and human dimensions that were crucial to understanding root causes of excessive harvest, and to formulating appropriate management strategies. This face-to-face survey showed that 95 percent of households considered the harvest of seabirds for food acceptable. The survey also found that the eggs, young, or adults of many species were being harvested illegally: Red-throated Loon, Common Eider, Ring-billed Gull, Herring Gull, Great Black-backed Gull, Black-legged Kittiwake, Common Tern, Arctic Tern, Common Murre, Thick-billed Murre, Razorbill, Black Guillemot, and Atlantic Puffin (Blanchard 1984).



In 1982, following research and extensive community consultation, the project articulated a new management objective to reflect a common goal of both the residents and the management agency: to restore depleted seabird populations while preserving the integrity of the local culture. The culture included a norm that stated it was wrong to take more birds than needed. This key element formed the basis of a management plan and education strategy for the Lower North Shore. Procedures of the education strategy are described in detail in various papers (Blanchard 1994, Blanchard and Nettleship 1992). Following are some of the highlights.

There were three desired outcomes of the new plan: increased population levels for seabirds breeding in sanctuaries; sustained improvements in local knowledge, attitudes, and behavior toward seabirds; and greater local involvement in the management

process. Over the years, project staff planned, conducted, and evaluated a series of community-based educational strategies that worked with existing group norms, patterns of communication, opinion leaders, and other aspects of the local culture. The Canadian Wildlife Service broadened its enforcement program by hiring and training some local hunters as law enforcement officers. To facilitate greater local participation, QLF created jobs and provided skills training in wildlife research and interpretation. Residents and QLF staff built bird blinds, boardwalks, and interpretive signs. The conservation message was communicated to all relevant audiences through school and informal programs, study tours, poster contests, community events, and documentary television and radio programs. As local leadership realized the potential value of their seabird colonies to community economic development, they set out to build an appropriate infrastructure for ecotourism.

In communities near the Bradore Bay Sanctuary, where at first people were hostile to conservation agents, QLF staff used nonthreatening intervention techniques, such as a community play for children about the biology of seabirds. The actors, who were the sons and daughters of the individuals causing the most damage to the seabird colonies, practiced their lines at home, thus provoking the interest of their parents, who immediately backed off from disturbing the local puffin colony.

The educational strategy cited by the people of the coast as most effective was a children's conservation camp, held at the St. Mary's Islands seabird sanctuary. Over a period of several days, children gained first-hand knowledge of field biology and practical management, which culminated in observing nesting seabirds closeup. Upon returning to their families, these children, filled with pride over their newly acquired knowledge, surprised their parents and siblings by sparking discussions about the need for conservation. The program at the St. Mary's Islands has been running since 1978. Parents are extremely supportive, and their children have become the new generation of conservation-minded citizens.

By 1988, ten years after the program's inception, the management plan had achieved all of its major aims. Since then, its efficacy has improved with increasing cooperation among all parties. Populations of several seabird species increased dramatically; for example, Razorbill increased from 3,600 to 7,000 and Atlantic Puffin from 15,200 to 35,100 individuals. Common Murre increased from 10,200 to 26,000 and Common Eider from 3,000 to 8,500 individuals (Chapdelaine and Brousseau 1991). The 1993 and 1998 censuses showed continued increases for each of these species (Chapdelaine 1995, pers. comm.). Results from a follow-up survey of households in 1988 showed significant changes in consumptive use between 1981 and 1988. For example, the proportion of respondents who believed it should be legal to hunt Razorbill, Common Murre, and Atlantic Puffin fell from 59 percent to 38 percent, 76 percent to 65 percent, and 54 percent to 27 percent, respectively (Blanchard 1994). Further changes in knowledge, attitudes, and behavior were evidenced by another household survey in 1995. For example, the mean number of birds harvested per family each year dropped from 44 in 1981, to 24 in 1988, to 14 in 1995 (Blanchard 1994, Hull and Blanchard in prep.). Various explanations are offered as to why local knowledge, attitudes, and behavior toward seabirds changed significantly (Blanchard

1994, Blanchard and Monroe 1990). Without the educational intervention and a management approach that worked within the cultural context, the management strategies of the 1950s-1970s likely would have failed in the long term. The campaign to change knowledge, attitudes, and behaviors was woven into the web of the local culture, such that the success of the program belongs in large part to the culture itself.



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**Kathleen A. Blanchard** developed QLF's seabird conservation program and is currently writing a book about the project on the North Shore of the Gulf of St. Lawrence. The Quebec-Labrador Foundation is a nonprofit conservation organization, incorporated in the U.S. and Canada, with offices in Ipswich, Massachusetts and Montreal, Quebec.

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