

Double-crested Cormorant

Phalacrocorax auritus



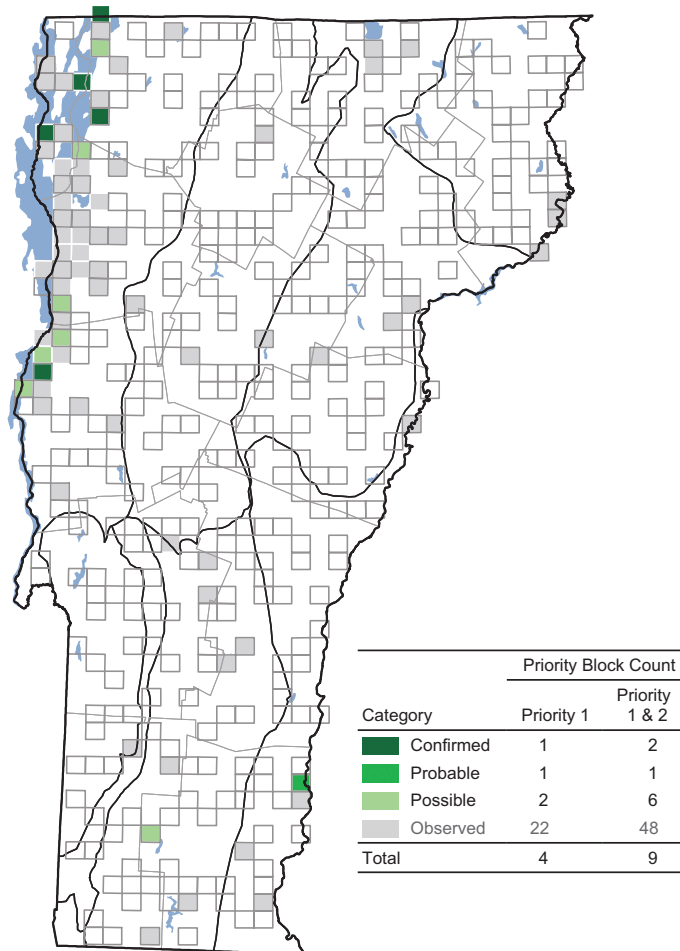
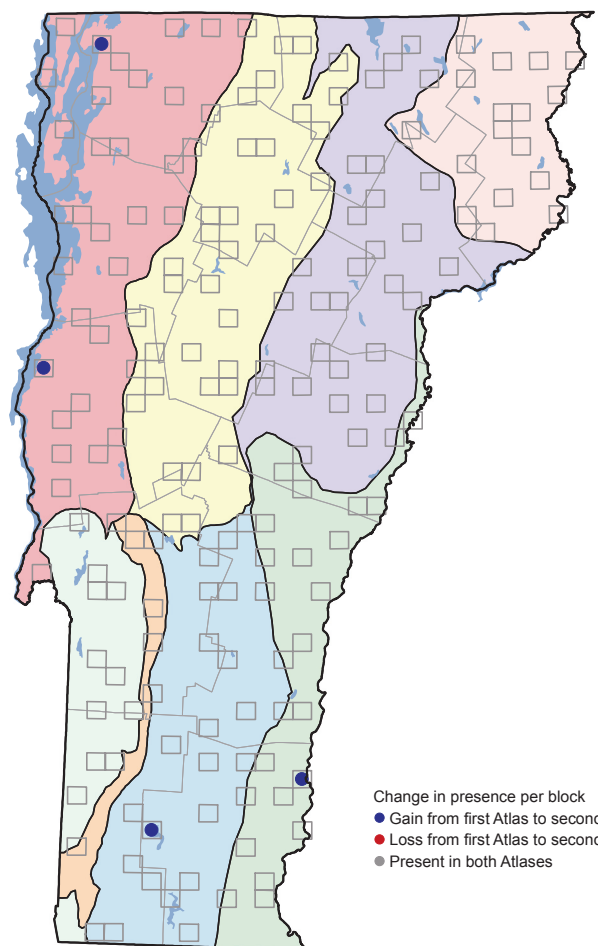
The Double-crested Cormorant, a rare bird during Vermont's first atlas, had become so numerous by the second atlas that measures were underway to control populations. One of six cormorant species in North America, the double-crested breeds along the Pacific coast from Alaska to Mexico; in the prairie regions of Canada and the United States, throughout the Great Lakes and eastward to Newfoundland, and down the Atlantic coast to the western Caribbean (Hatch and Weseloh 1999). Populations have fluctuated widely during the past century due to persecution by humans, exposure to DDT, and changing prey populations. The largest populations now occur in the Great Lakes and along the Atlantic coast (Wires and Cuthbert 2006).

Double-crested Cormorants most often nest on islands where mammalian predators are absent and abundant populations of fish, their sole source of food, are nearby. Yellow perch, smelt, and alewives are favorite food items in the Great Lakes region and in Lake Champlain (DeBruyne et al. 2011). Nest initiation may begin as early as mid-April and continue until mid-June, with the peak of egg-laying in early May (D. E. Capen unpubl. data). Cormorants often pioneer islands where other colonial birds nest. In Lake Champlain, this has occurred where Ring-billed Gulls and Great Blue Herons nest in large numbers. Cormorants prefer to build nests in trees, but will readily nest on the ground in the absence of trees. Persistent nesting will cause trees to die, in part because cormorants break off new twig growth to present to their mates and add to the nest. As sticks accumulate, nests often exceed 0.3 meters (1 foot) in height (D. E. Capen pers. obs.). Accumulation of feces also contributes to nest-tree mortality. Young Island (town and county of Grand Isle) provided a graphic example during the 1990s, when nearly all of its standing trees were lost to a growing population of cormorants (Fowle et al. 1999).

During the first atlas, observers noted small flocks of cormorants with subadult plumage that increased in number each year. Nest building was observed on Young Island in 1981 (D. E. Capen pers. obs.). During the next

season, a single nest in the same location was successful (Kibbe and Laughlin 1985), giving rise to a breeding population that grew to more than 4000 nesting pairs on Lake Champlain by the time the second atlas began. In 1999, prompted by concern over the negative impact of cormorants on other species, the Vermont Fish and Wildlife Department received a permit to apply corn oil to cormorant eggs, a control technique that prevents eggs from hatching. Aided in 2004 by authority to shoot nesting cormorants, the department had eliminated successful nesting by this species on Young Island by 2007. Unfortunately, the shootings caused cormorants to disperse to other islands, such as Four Brothers Islands, where they now compete for nesting habitat with other colonial bird species (Duerr et al. 2007). By 2009, cormorants nested successfully only on Shad and Metcalf islands in Missisquoi National Wildlife Refuge, and on Four Brothers Islands on the New York side of Lake Champlain. Nesting attempts on several other Vermont islands, both state-owned and private, have been thwarted by state and federal biologists.

Ontario and New York atlas projects reported substantial range expansions and increases in numbers of Double-crested Cormorants (Weseloh 2007, Coleman 2008). Kushlan et al. (2002) estimated the North American population of Double-crested Cormorants to be more than 740,000 breeding birds and classified the species as not currently at risk. The species was labeled as overabundant in Bird Conservation Region 13, which includes the Champlain Valley (Hartley 2007). In a 2007–8 survey of 1200 people with a vested interest in Lake Champlain, more than 80 percent supported ongoing management to reduce the cormorant population (Kuentzel et al. 2010). It is likely that egg oiling on Four Brothers Islands and shooting birds that attempt to nest



CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	0	2	+ 2	+ 200
Northeastern Highlands	0	0	+ 0	+ 0
Northern Green Mountains	0	0	+ 0	+ 0
Northern Vermont Piedmont	0	0	+ 0	+ 0
Southern Green Mountains	0	1	+ 1	+ 100
Southern Vermont Piedmont	0	1	+ 1	+ 100
Taconic Mountains	0	0	+ 0	+ 0
Vermont Valley	0	0	+ 0	+ 0
Totals	0	4	+ 4	+ 400

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	9	78
Northeastern Highlands	0	0
Northern Green Mountains	0	0
Northern Vermont Piedmont	0	0
Southern Green Mountains	1	11
Southern Vermont Piedmont	2	11
Taconic Mountains	0	0
Vermont Valley	0	0

in most other locations will continue until a more acceptable number of cormorants results, allowing habitat for other species to be restored where cormorants have altered plant communities.

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