

STATUS OF GREAT BLUE HERON COLONIES IN KING COUNTY, WASHINGTON

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The Great Blue Heron (*Ardea herodias*) has been common in western Washington throughout recorded history (Jewett et al. 1953). Shipe and Scott (1981) surveyed Great Blue Heron colonies in King County for the Washington Department of Wildlife. In 1983 the Department resurveyed three of the colonies noted by Shipe and Scott. In this paper I update information on Great Blue Heron colonies in this area.

Since 1981, four of the six colonies reported by Shipe and Scott have been abandoned, but six new ones have been reported and confirmed (Table 1). Most heron colonies in King County are now threatened by proposed commercial developments. The Great Blue Heron is considered a species with special concerns on the national level (Tate and Tate 1982), and the state of Washington has designated the Great Blue Heron a species of special concern and has established guidelines for management of colonies.

Many of the herons' feeding grounds are threatened also. The largest lakes in King County are Lake Washington and Lake Sammamish. Around the former only six wetlands remain, and some of these are threatened by development. The two wetlands on Lake Sammamish are both within parks. According to the Puget Sound Water Quality Authority (1987), approximately 14,000 acres of wetland around Puget Sound have been converted to other uses by diking and filling. Fifty percent of the wetlands along streams have been converted to pastures. Along the floodplains of six major rivers more than 150,000 acres have yielded to flood control diking, agriculture, and other development.

Known since 1955, the Black Diamond colony suffered from shooting up to 1981. Since then the surrounding area has been developed extensively. I saw no herons during my two visits to the site in 1986 and 1987.

The eight-nest Black River rookery in Renton is on an island within ponds created by the Soil Conservation Service for flood control. Developers proposed an office park for the site but failed to note the presence of the colony in their proposal. On 18 February 1987, at a time of pre-nesting and territorial activity of the herons, they cut a riparian forest just north of the colony in an area designated by the city of Renton as a conservancy zone. The U. S. Fish and Wildlife Service, Washington Department of Ecology, and Washington Department of Wildlife ordered the work stopped until a hearing examiner could review the project's effects on the herons and other wildlife. The herons returned to the area on 20 February, occupied seven nests, and fledged an average of two young per nest between 10 and 20 June, later than at the Sammamish and Yarrow Bay colonies.

I could not locate the Crystal Lake colony in May and June 1986 and presume it to be abandoned. On 11 June a highway was being cut through the forest and a housing development was in progress.

Park biologists discovered two heron nests in Discovery Park, Seattle, in 1986. This colony may grow because it is well protected within the park and trees are abundant. Perhaps herons from the recently abandoned Pigeon Point rookery about 2 km southwest will attempt to nest here.

Although development surrounds the Dumas Bay colony on three sides, the colony lies partly within Dumas Bay County Park, within which it is protected by fencing. The dense undergrowth beneath the colony and the vigilance of local residents also protect it.

The colony discovered in 1984 at Jensen's Cove, Lake Sammamish State Park, is still growing but faces problems. A public boat launch lies within 100 m of the rookery, and use of the launch has tripled since 1985. Water skiing and fast boats create waves that erode the shoreline and steepen the banks on which fledgling herons forage. In

Table 1 Great Blue Heron Colonies, King County, Washington

Location	Times site visited during this study	Number of nests							Supporting trees
		1981 ^a	1983 ^b	1984	1985	1986	1987		
Black Diamond, Grass Lake	2 (1986)	8	—	—	—	0	0	Red Alder (<i>Alnus rubra</i>)	
Black River, Renton	27 (1986-87)	—	—	—	—	8	8 ^c	Black Cottonwood (<i>Populus trichocarpa</i>)	
Crystal Lake, Woodinville	2 (1986)	22	0	—	—	0	—	Douglas Fir (<i>Pseudotsuga menziesii</i>)	
Discovery Park, Seattle	1 (1987)	—	—	—	—	2	2	Douglas Fir	
Dumas Bay, Federal Way	3 (1986-87)	24	30	46 ^d	—	29	29	Red Alder	
Lake Sammamish State Park, Issaquah	19 (1984-87)	—	—	7	14	21	29	Black Cottonwood	
Mauzy Island	—	—	0	—	—	—	—	Unknown	
Peasley Canyon, Auburn	3 (1986-87)	15	10	14 ^d	—	11	11	Red Alder	
Phantom Lake, Bellevue	4 (1986-87)	—	—	—	5	3	0	Douglas Fir	
Pigeon Point, Seattle	1 (1986)	—	—	16 ^d	—	16	0	Black Cottonwood	
Seahurst County Park, Burien	1 (1986)	4	—	—	—	0	—	Black Cottonwood	
Weowna County Park, Bellevue	2 (1986)	4	—	—	—	0	—	Douglas Fir	
Yarrow Bay, Kirkland	17 (1986-87)	—	—	—	2 ^e	6	6	Black Cottonwood	

^a Data from Shipe and Scott (1981).

^b Data from aerial survey conducted by Washington Department of Wildlife.

^c Only seven nests actually occupied.

^d Data from National Oceanic and Atmospheric Administration.

^e Data from Harold Ritland (pers. comm.)

NOTES

nearby Issaquah approximately 405 ha of wetlands and open fields are now shopping centers and freeway. Destruction of riparian growth along Issaquah Creek, within 10 m of the colony, restricts foraging habitat near the colony to the state park.

I made no attempt to observe the colony at Maury Island, accessible only by boat. The island was logged extensively in 1981, and no nests were observed there during the aerial survey of 1983.

The Peasley Canyon colony lies on a ridge, owned partly by a developer, above a receding marsh at the junctions of state highways 18 and 167. A shopping center that would cover a portion of the fields and wetlands adjacent to the colony has been proposed.

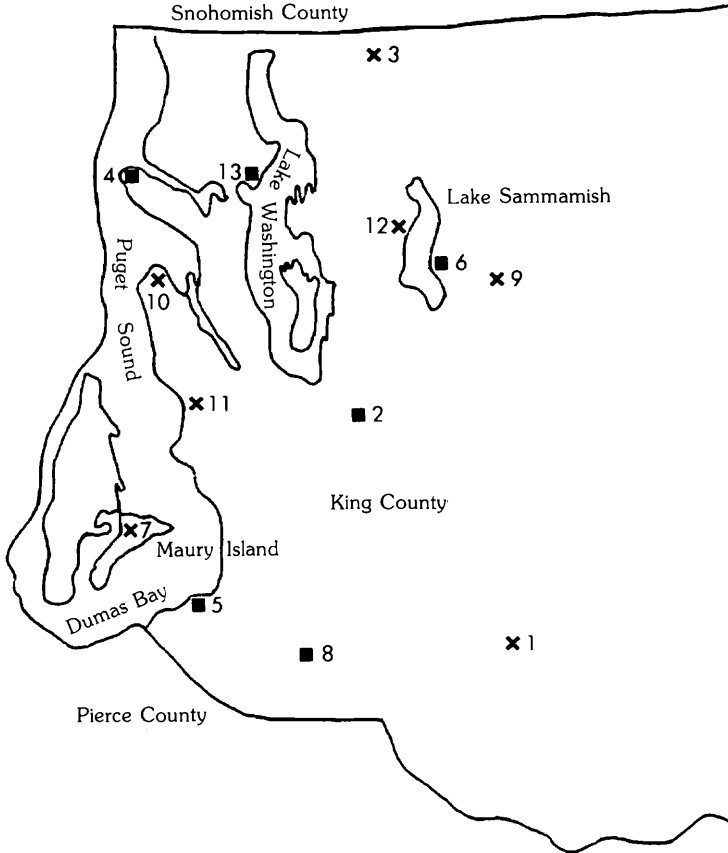


Figure 1. Locations of Great Blue Heron colonies in King County, Washington. 1, Black Diamond; 2, Black River; 3, Crystal Lake; 4, Discovery Park; 5, Dumas Bay County Park; 6, Lake Sammamish County Park; 7, Maury Island; 8, Peasley Canyon; 9, Phantom Lake; 10, Pigeon Point; 11, Seahurst County Park; 12, Weowna County Park; 13, Yarrow Bay. Squares, active colonies; crosses, abandoned colonies.

NOTES

At Phantom Lake, herons originally nested near a boat-launching area, according to long-time lake residents. In 1985 they moved to an approximately 2-ha stand of Douglas fir, where they nested again in 1986. Cutting of cattails in the herons' feeding area, harassment by crows, and high winds are probable causes of abandonment in 1987.

Located high on a bluff above the industrialized Duwamish Waterway, the Pigeon Point colony encompassed 16 nests in 1986 but was deserted in 1987 (Stephen Penland pers. comm.), possibly as a result of bulldozing too near the colony or frequent blasting for a tunnel within 1 km of it. Seventy-six residences and improved access roads are being built within 100 m of the rookery, in contravention of the Washington Department of Wildlife's recommendation of a minimum buffer of 200 m between development and heron colonies.

I saw no evidence of a heron colony when I investigated the site at Seahurst County Park on 1 March 1986. Bluffs once well vegetated with Douglas firs and cottonwoods were bare, and new homes had been placed nearby. The parking lot has been enlarged since 1981, increasing human use of the beach.

I noted no heron nests at Weowna County Park in May 1986. A large new housing development had been placed at the southeastern border of the park. In 1987 cutting of trails through the park resulted in the loss of many trees, further diminishing the possibility of the herons' return. Since this colony is only about 1 km from the Lake Sammamish colony the herons at Weowna County Park may have moved to Lake Sammamish.

The Yarrow Bay rookery consists of six nests in a single Black Cottonwood in an approximately 25-ha wetland owned by the city of Kirkland. A condominium lies only 50 m east of the colony.

In King County Great Blue Herons fledge between 15 and 30 June. All appear to winter locally, though they disperse from the colonies between late August and October. Some may go to Padilla Bay, Skagit County, where I counted 270 at low tide on 16 August 1986. Some of these undoubtedly came from the two large colonies in Skagit County, on the Swinomish Channel, south of March Point and east of Anacortes (80 nests in 1987), and on Samish Island, northeast of Anacortes (340 nests in 1987, Toby Michelena pers. comm.).

Clearly, further monitoring of Great Blue Heron colonies in Washington state is in order. At present, species of "special concern" receive a minimum of attention during the process of environmental impact review. Extirpation of the heron from King County becomes more probable with continued rapid development not only of King County but of the entire Puget Sound region.

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