

First nesting of American White Pelican on Lake Superior, Ontario, Canada

Status of the American White Pelican in the Great Lakes Region

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American White Pelican egg compared to a Ring-billed Gull egg. Photo: C. Hodder.

Introduction

The American White Pelican (*Pelecanus erythrorhynchos*) is one of two species of pelicans nesting in North America. Its breeding distribution ranges from the

Pacific Ocean to northern Lake Michigan (Ratcliff 2005). In Ontario, the breeding distribution has been confined to the western region of the province (Peck 2007). The oldest colony is located in Lake of the Woods, where breeding was first documented in 1938 (Baillie 1939). The second location where breeding was documented is in Lake Nipigon, where nests were first discovered in 1991 (Bryan 1991).

In this paper we report on the discovery of a new nesting site of American White Pelican in Ontario, discovered in 2007. The nests were found on Granite Island (Black Bay), Lake Superior, on 24 June 2007. This represents the first known nesting of American White Pelican in the Canadian Great Lakes.

In addition, we report on sightings of adults in western Lake Superior from 1999-2008 and discuss the status of the species in the Great Lakes region.

Methods

Granite Island was accessed by boat on two occasions in 2007; once on 23 May and once on 24 June. During each visit, researchers disembarked and counted the nests of colonial waterbirds, and noted the nesting of other species opportunistically. Each colonial waterbird nest was counted individually, nests were marked with a small spot of fluorescent paint as they were tallied, to ensure that they would not be double-counted.

On 23 May, the nests of Ring-billed Gull (*Larus delawarensis*), Herring Gull (*Larus argentatus*) and Double-crested

Cormorant (*Phalacrocorax auritus*) were counted; on June 24, nests of American White Pelican and Double-crested Cormorant were counted.

In 2000, six comprehensive shoreline surveys were conducted in Nipigon Bay between 31 May and 19 July. The entire shoreline was surveyed by boat and the presence and number of any waterbirds was recorded.

During 2000-2008, the presence of adult American White Pelicans was recorded by Canadian Wildlife Service field crews operating on Lake Superior while boating and/or engaged in other work. These sightings should be considered opportunistic since they were not part of coordinated surveys in any given area.

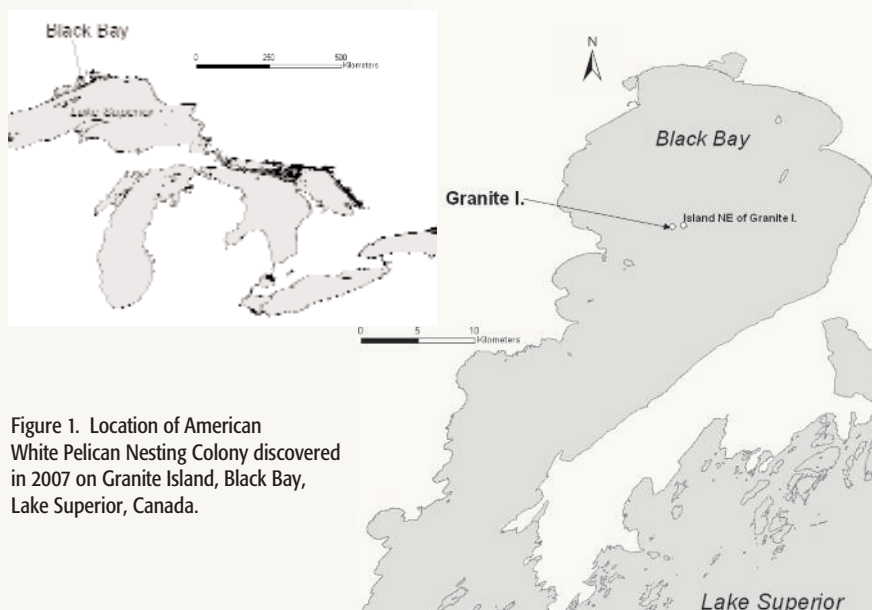


Figure 1. Location of American White Pelican Nesting Colony discovered in 2007 on Granite Island, Black Bay, Lake Superior, Canada.

Results

On 23 May 2007, the following colonial waterbird nests were counted at Granite Island: Ring-billed Gull nests: 2156, Herring Gull nests: 138, Double-crested Cormorant nests: 264. No American White Pelicans were observed on the island.

The events of 24 June are recounted here: Upon approaching Granite Island one American White Pelican was observed sitting along a ridge on the north-east side of the island. As we continued to approach, the number of pelicans we could see increased. Upon our final approach, we observed approximately 37 adult pelicans that flushed from Granite Island and settled on an adjacent small low-lying island approximately 500m NE of Granite Island. Once on Granite Island, we discovered a total of 20 pelican nests. The nests were configured in two groups that were approximately 75 m apart. One group of 17 nests was located on the east side of the island along a high ridge. The nest contents included six nests with no eggs, six nests with one egg and five nests containing two eggs. A smaller group of three nests was located to the west

and at a lower elevation than the larger group. Within this group, all three nests were empty, however, three eggs were observed nearby. The eggs appeared to have been predated by gulls.

In addition to the pelicans, the following colonial waterbird nests were counted: Double-crested Cormorant nests: 286, Caspian Tern (*Hydroprogne caspia*) nests: 2.

A Bald Eagle (*Haliaeetus leucocephalus*) nest was observed at the south end of the island. The nest was not checked for contents. However, it was assumed to be occupied, as one adult was observed departing from the nest.

Upon leaving Granite Island, we visited the small low-lying island where the adult pelicans had settled during the time we were on Granite Island; no pelican nests were observed at that site. The adult pelicans departed from this island and returned to Granite Island where we observed them returning to the top mound, where the larger group of 17 nests was located. We did not observe pelicans



Figure 2. Nipigon Bay (Lake Superior, Canada) showing locations of sightings of adult American White Pelicans, 1999-2008 (See Table 1 for details on the sightings).

Table 1. Sightings of adult American White Pelican observed by Canadian Wildlife Service field crews, 1999–2008 (see Figure 2 for locations in Nipigon Bay).

Location – # (Figure 2)	Location – name	Dates	Numbers of American White Pelican
1	Nipigon Bay (Mouth of Nipigon River)	18 July, 2000	18
		19 July, 2000	85
2	Nipigon Bay (West Shore)	1 July, 2000	4
3	Nipigon Bay (West of Condon Island)	26 June, 1999	24
		26 June, 2007	4
4	Nipigon Bay (East of Cook Point)	31 May, 2000	1
		1 July, 2000	39
		2 July, 2000	9
		18 July, 2000	1
	Black Bay Island (North-east of Granite Island)	26 June, 2005	31
	The Welcome Islands (South-east of Thunder Bay)	22 June, 2007	14

returning to the smaller group of three nests. The location of Granite Island and the small island to the north-east are shown in Figure 1.

Adult American White Pelicans were observed in Nipigon Bay once in 1999, on seven occasions in 2000, once in 2005 and once in 2007 (Table 1, Figure 2). The maximum number of birds seen was 85, observed at the mouth of the Nipigon River, on 19 July 2000 (Table 1). Prior to 2007, pelicans were observed only once in Black Bay, when 31 individuals were sighted on the island adjacent to Granite Island on 26 June 2005 (Table 1).

Discussion

The colony found on Granite Island represents the first known nesting of this species on the Canadian Great Lakes.

American White Pelicans have been nesting in Wisconsin waters of Lake Michigan since 1995 when 6 nests were reported on Cat Island (T. Erdman, pers. comm.); the growth of that colony occurred rapidly as there were 107 nests reported there in 1997 (Cuthbert *et al.* 2001). In 1999, another colony with 16 nests was discovered at Little Gull Island in Michigan waters of Lake Michigan. The total number of nests on Lake Michigan (and the Great Lakes) in 1999 was 168 (152 nests at Cat Island and 16 at Little Gull Island). In 2007, American White Pelicans were nesting at four sites on Lake Michigan: 397 nests on Cat Island, 421 nests on Lone Tree Island (T. Erdman, pers. comm.), 40 nests on Hat Island and 17 nests were estimated at Little Gull Island (based on the presence of 35 adults) (L. Wires, pers. comm.).

In addition, there was nesting recorded in 2007 in Wisconsin, at inland lakes south-west of Lake Michigan. There were six sites with a total of 501 nests at Horicon National Wildlife Refuge, three sites with a total of 386 nests on Lake Butte des Morts, one site with 25 nests on Lake Winnebago, and one site with 17 nests on Lake Puckaway (S. Matteson, pers. comm.). The year 2007 marked the tenth consecutive year that American White Pelican had nested at Horicon National Wildlife Refuge and the third year they had nested on Lake Butte des Morts; 2007 was the first year they had nested on Lake Winnebago and Lake Puckaway (S. Matteson, pers. comm.).

The breeding range of the American White Pelican in Canada appears to be progressing eastward. Supporting nesting records include: nesting at Lake of the Woods (first documented in 1938), followed by nesting in Lake Nipigon (beginning in 1991), Lake Michigan (beginning in 1995), an island in the Akimiski Strait, Nunavut, where approximately 40 adults and two eggs were observed in 2006 (K. Abraham, pers. comm., Peck 2007), the establishment of colonies at inland lakes south-west of Lake Michigan since the late 1990s (S. Matteson, pers. comm.) and the nesting reported here for Lake Superior in 2007.

American White Pelican breeds mainly on isolated islands in freshwater lakes, and they tend to forage in shallow waters, which may be up to 100 km from nesting sites (Knopf and Evans 2004). The areas where we observed American White

Pelicans were shallow areas; the birds were either nesting at other locations and foraging in Lake Superior, or they may have represented birds that were scouting for new nesting sites. The discovery of the nesting colony at Granite Island was unexpected as pelicans had not been observed in Black Bay as often as they had been in Nipigon Bay. However, the birds seen in Nipigon Bay may have been birds nesting on Lake Nipigon that had flown to Nipigon Bay to forage.

The North American population of American White Pelican appears to be stable or increasing (King and Anderson 2005, Ratcliff 2005). King and Anderson (2005) compared the number of nests between two time periods (1979-81) and (1998-2001) at twenty colonies and found that the number of nests had more than doubled. In Ontario, the number of nests at Lake of the Woods increased consistently from 1938 (4 pairs) to a high of 7885 pairs in 1990; recent data indicate a stable population (7432 pairs in 2004) (Ratcliff 2005). Similarly, the colonies on Lake Nipigon increased from 3 nests at one site in 1991 to approximately 638 nests at five sites in 2004 (Ratcliff 2005).

A large proportion of the continental population of American White Pelican is found in Canada. It is estimated that approximately 50% of the North American population nests in Saskatchewan and Manitoba. The colonies in Lake of the Woods contain approximately 10% of the Canadian population and approximately 8.8 % of the global population (Ratcliff 2005, IBA 2007).



C. Pekarik in the American White Pelican colony, Granite Island, with the Ring-billed Gull colony in the background. *Photo: C. Hodder.*

American White Pelican is listed as Endangered in Ontario (Ratcliff 2005). The primary method of protection for this species is afforded under the provincial Endangered Species Act (1996). Although the Ontario population appears to be increasing, it is still at risk due to fact that breeding populations are concentrated in a few areas. This makes the population susceptible to disturbances, such as human disturbance, disease outbreaks and storm events (Murphy 2005).

In Ontario, nesting colonies are located on Crown Land and some have been designated as Important Bird Areas

(IBAs). In Lake of the Woods, The Three Sisters Islands have been designated as IBAs due to the large proportion of the continental population of American White Pelican found there. In addition, American White Pelican is recognized as part of the avifauna at the Sand Spit Archipelago (IBA 2007). On Lake Nipigon, the islands used by American White Pelican are owned by the Crown and are part of the Lake Nipigon Conservation Reserve; boating, fishing, camping or viewing is not permitted within 500 metres of pelican nests from 15 April to 15 August (OMNR 2004).

Conclusion

The population of the American White Pelican in and around the Great Lakes appears to be expanding, however, coordinated continental surveys are required in order to be certain of population changes. Geographically, the species appears to be expanding its range eastward, at a relatively slow pace. Continued monitoring and recording of new nesting colonies will determine if this trend continues. The Ontario population represents a significant portion of the continental population, and although nesting colonies are protected, they are vulnerable to catastrophic events due to the aggregation of many birds at those sites during the nesting season.

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