New Hampshire Bird Records

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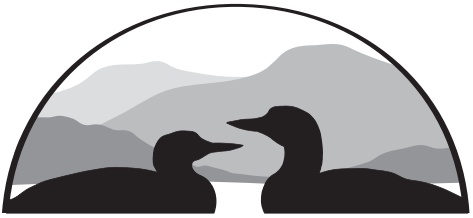

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Volume 29, Number 2

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Cover Photos: American Oystercatchers by Leonard Medlock, Hampton Harbor, 6/12/10.

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Ospreys in the Lakes Region

by Iain MacLeod

Three large Osprey chicks and mom at the big old nest in a heron rookery in Hill, NH. Photo by Iain MacLeod, 7/2/06.

Given the large number of lakes, ponds and other wetlands in the Lakes Region, this author is surprised to find no historical records of Osprey nesting in the region. According to the *Atlas of Breeding Birds in New Hampshire* (Foss, 1994), the only confirmed or probable breeding records during the atlas period (1981-1986) were in Coos County. Historically, they were considered common summer residents only in the Lake Umbagog area (Maynard 1871, Brewster 1925).

Osprey were first officially recorded nesting in the New Hampshire Lakes Region in 1997. I well remember the excitement when New Hampshire Audubon (where I was Communications Director at the time) received the call reporting a pair building a nest on a Public Service of New Hampshire (PSNH) utility pole next to Lake Winnisquam in Belmont. I visited the site on May 28 and was delighted to find the male adding sticks to the embryonic nest on the double cross arms of the large double poled structure. As I watched, he also started bringing sticks to a snag in the nearby wetland as the female watched. He was a busy boy, snapping off branches one after the other and trying to get them to balance in the tree top. This is typical behavior of a young male trying to impress a newly attracted female.

Just a couple of weeks later, Chris Martin, Senior Biologist for NH Audubon (NHA), who is responsible for Osprey monitoring statewide, got another call, this

time from naturalist Ed Morier. Ed was doing bird survey work for the Army Corp of Engineers along the Franklin Falls flood control lands and had followed a stream up to a large beaver pond in the town of Hill where he found several active Great Blue Heron nests. Right in the middle of the rookery was a larger nest and he saw an Osprey perched nearby. I accompanied Ed to the site on a hot sticky late afternoon on June 16 and documented our first confirmed breeding of Osprey in the Lakes Region; in fact the first in the entire Merrimack River watershed. On that visit, I could see two small chicks in the nest. If it weren't for Ed (who has since sadly passed away), we might not have discovered this remote site for years.

The nest was substantial and a second nest in a nearby tree was also obviously Osprey built. Both had originally been heron nests. Osprey use much larger sticks in their nests and it is easy to see the transition from small heron twigs to large Osprey branches. A later visit with Chris and New Hampshire Fish and Game's (NHF&G) John Kanter revealed that there were actually three chicks. The size of the nest and the fact that they fledged three young makes it likely that this pair had nested here in previous years. This nest became one of the most productive nests in the state, fledging 29 chicks in 11 years (Table 1). Osprey use of heron nests in active rookeries was to become a regular occurrence in the growing Lakes Region population.

The Belmont site had a struggle getting established, even with a secure nesting platform that was attached to the pole by PSNH. On April 12, 1998, I watched as the male added sticks to the pole nest. The female was not the same one I had seen here in June 1997, so the male was starting from scratch in his courtship efforts. On April 28, a home owner near the nest found the female dead on the shore of the cove. A necropsy revealed a "blunt trauma" on her chest suggesting a violent impact; perhaps she hit an electric wire or an object in the water. She had eggs formed in her reproductive tract, so was close to laying. In Hill, the same established pair fledged three chicks again.

In 1999, pairs were back at both nests in early April and both nests had eggs. The Hill pair hatched three chicks, but likely only fledged two. The Belmont pair failed late in incubation. In 2000, the Belmont nest was finally successful and hatched and fledged two chicks. Another new pair was found adding sticks to a heron nest in a beaver pond in Meredith (LR03 in Table 1) in late June. On July 1, I visited the pond and witnessed typical early courtship behavior, suggesting either a new pair or a so called "frustration nest," which Osprey often build after they have failed elsewhere.

The summer of 2001 was eventful. The Hill nest was successful once again (Table 1) and the Belmont pair was back but they failed shortly after hatch. The Meredith pond was not occupied, but a new nest was found in a large wetland in Laconia about 4.5 miles from the Meredith nest. I believe this nest was built by the same pair that tried in Meredith in 2000. This nest was successful and one chick was fledged there that year.

On July 9, I made an observation that eventually led to the finding of two new nests. On my way back from Hill, I decided to stop by Webster Lake in Franklin. As soon as I arrived, I located two male Osprey fishing over the lake. Both made repeated dives after fish over the next hour without resting. This sort of concerted effort is typical of males that have hungry broods to feed. Non-breeding birds will often perch and show less urgency in their efforts. I hoped to get a flight line after a

successful catch but neither bird obliged – that day! On July 31, I returned and after a couple hours of watching, a male Osprey caught a fish, circled up high over the lake and headed south with the fish held "torpedo fashion" and vanished over the far hills. He was obviously heading for a previously undiscovered nest. I scoured the maps and plotted his course towards a wetland three miles away in Salisbury. The next day, I bushwhacked my way to the wetland and to my delight there was a huge nest on a tall snag in the middle of the beaver meadow. A female Osprey perched on the nest with three large young close to fledging.

Like the large Hill nest, I'm sure this nest had been in use in previous years. These sites tucked away in remote beaver ponds could go undetected for years. This Salisbury nest has been occupied every year since but no one has ever reported "finding it." In 2002, the nest in Meredith had toppled by early April and when I checked the Laconia site on April 6, the nest they used the previous year was occupied by an incubating Great Blue Heron. I scanned the maps and noticed a suitable marsh about 1.5 miles to the east (also in Laconia). On April 21, I checked the marsh and found a pair of Osprey building a new nest on a twenty-foot stump. I was delighted to "refind" this pair, but when I visited on May 5, only the male was present, perched nearby and there was no activity in the new nest. A check back at the Meredith pond revealed a heron building in the old tree.

Ever since seeing those two males hunting on Webster Lake in July, 2001, I was sure there was yet another nest nearby. I scanned online aerial photos and noticed a perfect looking wetland in Franklin to the north of Webster Lake. In the photos, I could see that there were standing dead trees in the pond. On June 9, I bushwhacked my way to the pond and was delighted to hear that tell-tale whistle of an alarmed Osprey. As expected, there was a rookery of herons with one nest occupied by an incubating female Osprey – the region's seventh nest. By July 17, the nest had failed and was empty.

No new nests were found in 2003 but four pairs raised 11 chicks. A pair was back in Franklin but failed during incubation. In 2004, two new nests were found; one in a very strange place. Workers at the PSNH Ayres Island Dam in New Hampton were surprised to find a pair of Osprey building a new nest on a metal structure that held a pulley on the dam. After consultation with NHA and NHF&G officials, PSNH installed a platform on a pole on the south side of the river about fifty yards from the original nest structure. They moved the sticks to that platform and altered the pulley tower to make it less attractive. The pair happily moved to their new nest.

The second new nest was reported to NHA in June near Hermit Lake in Sanbornton. I checked this nest on July 6 when I observed a very small chick being fed by the female. This nest was more typical; built on a dead snag on top of an old heron nest in a beaver pond. On July 29, the chick was still in the nest, still well shy of fledging but by August 11 the nest was empty and had failed (likely the chick was preyed upon by a raccoon).

In 2005, the tree in Sanbornton toppled during the winter but a new nest was found by fellow volunteer Hal Busch about four miles away in Meredith and this may have been built by the same pair. The pair built up a nice nest through the summer but did not lay eggs. Two additional nests were found, both in old heron nests in beaver

ponds. One in Webster was found by Betsy Janeway and one in Gilmanton by Brenda Sens. Neither new pairs laid eggs.

In 2006, eight pairs reared 17 chicks – a new high for the region. On April 13, I followed up on a report of Osprey at another beaver pond in Salisbury (about 2.7 miles from the other Salisbury site). I found a pair busy building up a good-sized nest in the middle of a heron rookery. I later learned from the couple who own a home overlooking the pond that this pair had raised at least one chick here in 2005. I returned here on June 5 to find that the tree had snapped off and the nest was lost and the pair was building a new nest on a different tree in the swamp.

In 2007, Hal Busch found a new nest in another beaver pond in Gilmanton. This pair laid eggs that failed to hatch. On May 19, I followed up on a third-hand report of a large stick nest on a cell phone tower in Moultonborough. I have to say, I was sure it was going to be a Common Raven nest, but . . . it was an Osprey; our first cell tower Osprey nest in New Hampshire. This pair successfully raised one chick. Evidently a pair of Osprey had nested on a dead snag in a pond less than two miles from the cell tower nest and had raised at least one chick in 2006. The nest had toppled during the winter and likely that pair moved to the cell tower in 2007. The owner of a home on the edge of the pond, who had seen the nest in 2006, installed a nice platform on a tree in the same pond in the hope of attracting another pair. So far that platform has remained empty.

I found another new pair on May 24 while on one of the Lake Cruises run by the Squam Lakes Natural Science Center. This pair was bringing sticks to a utility pole on the north shore of Squam Lake in Holderness less than 1.5 miles from my office. The live electric wires were running power to some cottages on a nearby point; a very dangerous situation. Before the birds could harm themselves, Chris Martin and I met with engineers from New Hampshire Electric Coop (NHEC) and we agreed it was best to discourage the pair from nesting here. NHEC offered to install a new nesting pole at the Science Center that winter in hopes of keeping the pair on Squam. The male Osprey had other ideas and moved five miles west over to the Pemigewasset River and started building a nest on an identical NHEC pole in Bridgewater. By the end of the summer, he had the beginnings of a solid nest. This time the wires were not live and were removed. The new pole was installed by NHEC at the Science Center that winter, but so far it has not been occupied.

There was a sad start to 2008. My early April check at the Hill nest revealed that the new 2007 nest tree had also toppled. Only the female (same bird each year since 1997) was present, perched on the shore of the beaver pond waiting for her male to arrive. I found the fresh remains of a second adult Osprey near the base of a large hemlock tree close to my normal observation point on the pond shore. The feathers showed signs of chewing by a mammalian predator and whitewash on the ground indicated that the Osprey was alive while on the ground. I suspect that this was the missing male. There had been some major April snows that year and I suspect that the old male had arrived back too early and starved to death waiting out the snows. Perhaps he took shelter close to the ground and was grabbed by a hunting red fox or fisher. Without the male to start a new nest (only a couple of usable trees remained in the swamp), it was the end of this nest site. This nest was not occupied in 2009 or 2010.

Osprey chick and mom at cell tower nest in Laconia, NH. Photo by Iain MacLeod, 7/18/10.

Elsewhere, 10 pairs reared a Lake Region record of 19 chicks. Two new nests were found; both on cell towers. The first, on an enormous tower in Tilton, was reported to Chris Martin in May. I checked it on May 5 and found a female incubating in a small (new) nest. This pair hatched at least one chick but the pair failed shortly after hatch likely because of a severe storm and was building a frustration nest in late July on a nearby utility pole.

I found our third cell tower nest in early June on a low structure near Opechee Bay in Laconia. A quick scoping revealed an incubating female. This new nest failed during or just after hatch. Another new nest was found by Hal Busch and Everett McLaughlin on July 21 in a road-side beaver swamp in Alton. The nest contained two large chicks which successfully fledged.

2009 started off well but the near continuous rains in June adversely affected chick productivity at several sites. Five pairs failed, including one that incubated for more than 60 days and one that lost three large chicks when their nest blew out in a storm. In 2010, eight pairs reared 17 chicks. One pair lost three chicks (likely eaten by a raccoon); another nest was tipped or preyed upon during incubation. Two other pairs failed; one started building a frustration nest on a nearby high voltage transmission tower. At the beaver swamp in Alton, a pair returned to the same tree in late May, built a new nest but did not lay. One new nest, in a swamp in Meredith, was found by Pam Hunt and Jane Rice in late July. This small nest was likely built by a new young pair.

Summary

Between 1997 and 2010, 106 nesting attempts have been documented in the Lakes Region with 67 being successful, producing at least 140 chicks to fledging age. The most successful single year was 2008 when we recorded 15 nesting pairs of which 10

successfully fledged 19 chicks. Overall, the average number of chicks fledged per successful nest is 2.1 per year. See Table 1.

Nests have been built on dead trees, poles (either utility poles or nesting platforms on poles), cell towers and on one occasion, on a metal structure on a dam. See Table 2 for details. In general, dead tree nests in beaver ponds are prone to predation and collapse. The pair at LR07 in a beaver pond in Franklin is on its fourth tree in nine years! Because of this, they have only managed to fledge nine chicks (well below the region-wide average annual productivity). Poles provide a solid structure that lasts for many years and productivity is higher. Cell towers it seems are also providing viable sites and I suspect that a greater proportion of nests will be on these towers in the future.

Overall, 66% of nesting attempts have been in trees but only 59% of tree nests have been successful. Only 24% have been on poles, but 76% of them have been successful; 9% have been on cell towers with 70% success. Having said all that, if a pair finds a good tree that stands for many years and has a predator guard, they can be very suc-

Table 1. Osprey Breeding Data in New Hampshire's Lakes Region, 1997-2010. Shading indicates occupation by pair. A? indicates the nest was reported as occupied, but not verified. (Data source: I. MacLeod personal records.)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL
LR22 -- Meredith														0	**0**
LR21 -- Alton												2	0	0	**2**
LR20 -- Laconia												0	2	2	**4**
LR19 -- Tilton												0	0	2	**2**
LR18 -- Bridgewater											0	1	1	2	**4**
LR17 -- Moultonborough										?					**?**
LR16 -- Holderness											0				**0**
LR15 -- Moultonborough											1	2	2	3	**8**
LR14 -- Gilmanton											0	3	0	2	**5**
LR13 -- Salisbury									?	0	0	0	0	0	**0**
LR12 -- Gilmanton									0	3	2	2	2	0	**9**
LR11 -- Webster									0	1	1	0	1		**3**
LR10 -- Meredith									0	0	0	0			**0**
LR09 -- Sanbornton								0							**0**
LR08 -- New Hampton								0	2	2	3	2	3	1	**13**
LR07 -- Franklin						0	0	1	0	2	2	3	0	0	**8**
LR06 -- Laconia						0									**0**
LR05 -- Salisbury					3	0	3	3	2	3	2	2	1	2	**21**
LR04 -- Laconia					1		2	2	1	1	0	1	1	0	**9**
LR03 -- Meredith				0											**0**
LR02 -- Belmont	0	0	0	2	0	3	3	2	3	2	1	1	3	3	**23**
LR01 -- Hill	3	3	2	3	2	3	3	3	2	3	2				**29**
Chicks Fledged	**3**	**3**	**2**	**5**	**6**	**6**	**11**	**11**	**10**	**17**	**14**	**19**	**16**	**17**	**140**
Nests with Pairs	2	2	2	3	4	5	5	7	9	10	14	15	14	14	**106**
Nests fledging young	1	1	1	2	3	2	4	5	5	8	8	10	9	8	**67**
Chicks fledged/successful nest	3.0	3.0	2.0	2.5	2.0	3.0	2.8	2.2	2.0	2.1	1.8	1.9	1.8	2.1	**2.1**
Broods of 3	1	1		1	1	2	3	2	1	3	1	2	2	2	**22**
Broods of 2			1	1	1		1	2	3	3	4	5	3	5	**29**
Broods of 1					1			1	1	2	3	3	4	1	**16**
Failed after hatch			1		1	2	1	1	1	2	4	5	5	4	**27**
Pair present but did not lay	1	1		1		1		1	3		2			2	**12**
Single bird only												1	1		**2**
Reported, outcome unverified									1	1					**2**

Table 2. Nest site preference of New Hampshire's Lakes Region Osprey, 1997-2010. (Data source: I. MacLeod personal records.)

	Trees	Poles	Cell Towers	Other	Total
Nesting attempts	70	25	10	1	**106**
% of all nesting attempts by type	66%	24%	9%	0.9%	
Nests fledging young	41	19	7	0	**67**
% of nesting attempts successful	59%	76%	70%	0%	**63%**
Chicks fledged	86	40	14	0	**140**
Chicks fledged per nesting attempt	1.2	1.6	1.4	0.0	**1.3**
Chicks fledged per successful nest	2.1	2.1	2.0	0.0	**2.1**

cessful. The Hill site produced 27 chicks using the same nest tree for ten years. The first Salisbury site has produced 21 chicks over ten years on the same tree. Whenever possible, Chris Martin coordinates the installation of sheet metal predator guards around trees and poles to thwart mammalian predators (raccoons, fishers and black bears). This work is done primarily in the winter when frozen ponds allow access to the trees. We have documented eight instances when we suspected mammalian predators caused failures. In all cases, these were nests in unguarded trees.

The future seems bright for Osprey in the Lakes Region. Our fieldwork has identified many wetlands with suitable dead trees that have not yet attracted Osprey. At least a dozen seemingly suitable cell towers have been identified and there are countless utility poles close to water which would seem attractive. High voltage electric transmission towers might be the next nest du jour for Lakes Region Osprey.

As a top of the food chain indicator species it is important to monitor their breeding success over extended periods of time so that trends can be identified. Over the coming years I am curious to record how increased overlap with the growing Bald Eagle population will impact Osprey. In 2011, we propose to use satellite transmitters on a few Lakes Region youngsters and adult males to learn more about fledgling survival rates and migration paths, and understand foraging habits of males; what lakes and sections of rivers are most important to these feeding males. Much more fun lies ahead.

Acknowledgements

I first want to thank Chris Martin, NHA, and NHF&G's Nongame and Endangered Wildlife Program for the statewide coordination and oversight of Osprey monitoring… and for allowing me to continue to play with Osprey. Thanks also to my fellow Lakes Region Osprey monitoring volunteers Hal Busch and Everett McLaughlin for all their great work. I'm grateful to John and Mary Calurusso and Rachel and Denis Cotnoir for allowing me access to their properties to watch "their" backyard nests. Thanks also to Public Service of New Hampshire, New Hampshire Electric Cooperative and Bridgewater Power Company for their support of Osprey management.

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Iain is Executive Director of the Squam Lakes Natural Science Center in Holderness, NH and recent past Chairman of the Board of the Hawk Migration Association of North America. Iain has birded in NH for more than 20 years and is a member of the New Hampshire Bird Records *Editorial Team. He lives in Ashland.*

Abbreviations Used

BBC	Brookline Bird Club	R.	River
BBS	Breeding Bird Survey	Rd.	Road
CA	Conservation Area	Rt.	Route
CC	Country Club	SF	State Forest
CFT	NH Audubon Chapter Field Trip	SP	State Park
		SPNHF	Society for the Protection of NH Forests, Concord
FT	Field Trip		
IBA	Important Bird Area	T&M	Thompson & Meserves (Purchase)
L.	Lake		
LPC	Loon Preservation Committee	TNC	The Nature Conservancy
NA	Natural Area	WMA	Wildlife Management Area
NHA	New Hampshire Audubon	WMNF	White Mountain National Forest
NHBR	New Hampshire Bird Records		
NHRBC	NH Rare Birds Committee	WS	NHA Wildlife Sanctuary
NWR	National Wildlife Refuge	~	approximately
PO	Post Office	WTP	Wastewater Treatment Plant

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A rare color trait...

The adult Northern Rough-winged Swallow on the far left of this photo is a very rare example of melanism. It was seen feeding young and was photographed by Andrea Robbins on July 3, 2010 in Pittsfield.

Color abnormalities in birds are very rare and most often take the form of whitish feathers which can cover either a portion, or all of a bird's plumage. This inherited abnormality is known as "leucism" and is caused by a partial or total lack of pigment in feathers. Much more rare is a genetic abnormality which produces an excessive amount of melanin in feathers. This is known as "melanism" and produces a darkened appearance which can range from brown to black in birds. Although rarely encountered, the melanistic trait is a dominant characteristic, which can be passed down. It is believe that some species which exhibit dark morphs, or variants, have evolved in this way.

— Stephen R. Mirick

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