

# **Cavity Nesting Waterfowl Habitat Program**

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Funding for this years project was supplied by two agencies, Ducks Unlimited Canada and Alberta Conservation Association. Lesley Peterson of Ducks Unlimited Canada provided expertise in the logistics of the PowerPoint presentations.

Windsor Plywood is acknowledged for donating materials (plywood) for the construction of the fifty nest boxes in 2007-08.



Thanks to Steve Potter of Delburne for donating his time and saw to cut fifty boxes and provide stucco wire for new nest box sites. I thank Darwin Chambers for allowing me to include his photos in my report and Velma Hudson for reviewing this report and providing editorial suggestions.





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## EXECUTIVE SUMMARY

The original Buffalo Lake Duck Box Project (1989) was initiated to increase the population of cavity nesting ducks in the Buffalo Lake Moraine (BLM) and to obtain additional data on cavity nesting species. Data collected over the first 15 years of the project was then used to enhance the long-term goal of conserving habitat. The project has expanded in to the Pine Lake Moraine and the name has been changed to the Cavity Nesting Waterfowl Habitat Program.

A brochure was produced (Conserving Habitat) in 2004 and 3000 copies were printed. This pamphlet focuses on habitat conservation for cavity nesting species with information on preserving old growth forest habitat. Brochures are distributed to various groups and individuals as well as electronically through e-mails.

In the 2007-08 year, 274 boxes were monitored and 38 new boxes were placed. This brings the total number of boxes in the project to 1274. PowerPoint presentations were made to 56 landowners involved in the nest box program and their guests, for a total of 176 participants. We delivered seven presentations to various groups, three of which included constructing pre-cut nest boxes at the seminars, from April 2007 to March 2008. Forty four boxes were donated to various groups and individuals. Two field trips were undertaken; one in April toured nesting Saw-whet Owls in the Pine Lake Moraine, and one in June also observing nesting Saw-whet Owls. One hundred and fifty five people attended presentations bringing the approximate number attending nest box seminars since 1989 to 1259 adults and 1093 youth.

Future work includes continued updating of information on participating landowners, GPS locations of all boxes and monitoring existing boxes in five-year cycles. A "Fact Sheet" in the form of a booklet is in production and should be available in 2008-09. Presentations to landowners, various youth groups and conservation organizations will be delivered on an ongoing basis.





## **STUDY RATIONALE AND OBJECTIVES**

### **1.1 Study Rationale**

The absence of secure nesting habitat is a limiting factor, which negatively influences productivity of Common Goldeneye and Bufflehead ducks in the Central Parkland ecoregion. The region has sufficient deep-water ponds for brood rearing but lacks mature aspen needed for nest cavities (Potter 1989). Nest boxes are used as a public education tool to create awareness of the importance of preserving old growth woodlands and to promote land stewardship with co-operators and their neighbors.

### **1.2 Objectives of this Report**

This progress report is an update on the educational component, media events and fieldwork of the Cavity Nesting Waterfowl Habitat Program (CNWHP).

## **STUDY AREA**

The majority of the work with duck boxes has been located in the Pine Lake & Buffalo Lake Moraines. The educational component of the program includes the Province of Alberta with nest box plans, inquiries and fact sheets sent to the Yukon, Quebec, Saskatchewan and British Columbia.

## **EDUCATIONAL COMPONENT**

### **3.1 Habitat Stewardship Pilot Project**

Ducks Unlimited Canada (DUC) contracted an individual to follow up on landowner contacts created through the Nest Box Program. This person worked closely with Alberta Conservation Association (ACA) from January 2007 to March 2008 (14 months). The program to Recognize, Reward and Reinforce landowner participation included gifts, air photos and promoted voluntary stewardship agreements.

- 16 agreements were signed (1225 acres).
- 152 landowners contacted
- 145 sets of DU drinking glasses, 16 DU gate closures given out
- Referrals -7 landowners were referred to other programs with DUC
- Habitat Stewardship Pilot Program report is available from DUC, Red Deer.

### **3.2 PowerPoint presentation developed**

The presentation includes 54 slides on the various cavity nesting species, video clips and a sound clip of the Northern Saw-whet Owl. Our goal is to present the presentation to any interested landowners participating in the CNWHP.

- 56 participating landowners and their guests were shown the presentation (total of 176 people).

### **3.3 The Alberta Guide**

“The Alberta Guide” will be produced in 2008/09 by DUC and cost shared with ACA. This booklet will contain information and pictures of waterfowl species that use nest boxes, eggs (including mixed clutches & dump nests), other occupants such as squirrels, owls, and other possible users like perching birds, bees, etc. Information on nest box site selection, box construction, installation, and maintenance is provided as well as short articles on predation and conserving habitat.

### **3.4 Public education events**

- Field Trips
  - 19 April 2007, Kerry Wood Nature Centre, 10 adults observing Northern Saw-whet Owls in nesting boxes.
  - 1 June 2007, Landowner + guests (8 adults, 5 youth), observing nesting Northern Saw-whet Owls
- Presentations and workshops
  - Junior Forest Wardens - 29 Nov. 2007.
    - 18 adults & 28 youth attended the seminar and built 12 nest boxes.
  - Buffalo Lake Naturalists - 17 Jan 2008.
    - Nest box presentation to 19 adults at the regular meeting of the Buffalo Lake Naturalists.
  - Little Beaver Lake Society – Ferintosh.
    - Attended by 12 adults interested in placing boxes and saving habitat around Beaver Lake.

- ACA Tree Planters
  - Volunteers belonging to the Stettler Scouts, Olds Pathfinders, Leduc Fish & Game and Shell Canada Employees (50 people) planted trees on the Link property (Buffalo Lake Conservation Area). The nest box presentation was shown to the various groups involved.

## **MEDIA EVENTS**

The CNWHP was featured in two print media in 2007-08.

- The ACA's quarterly magazine, "Conservation", promoted the CNWHP in an article entitled "Conservation in Action" (Appendix I) in the Fall/Winter 2007 edition. The magazine has a mailing list of 50,000 readers.
- An article outlining the program was published in the Stettler Independent 6 Feb 2008 entitled "Guests speak of Duck Nest Boxes" (Appendix II).

## **FIELD WORK**

### **5.1 Nest box construction and installation**

Windsor Plywood donated material for 50 nest boxes in 2007-08, including  $\frac{3}{4}$  inch plywood cut in strips lengthwise, stain and the hardware for construction.

- Thirty-eight new boxes were placed, 19 of these with new cooperators.
- The locations, landowner information and box type are listed in Appendix III.

### **5.2 Nest box monitoring**

Two hundred and seventy four nest boxes were monitored for use, GPS locations were taken, and nest results recorded. A paper file on each box location with landowner information is located in the Red Deer ACA office for future reference. This file is updated as conditions change and also contains a map for each box showing the access points and approximate location marked on a section. Locations are also recorded on a topographical 1:50,000 map sheet.

- 23 boxes were down and 4 were missing.
- Fifteen boxes were replaced, 11 of which were old boxes in need of repair, 2 were destroyed due to construction and 1 was missing due to beaver activity.

- Boxes replaced and/or relocated in 2007-08 are listed in Appendix IV.
- Ducks and owls utilized 72% (197) of the boxes
- Fifteen of the smaller Bufflehead boxes were used by other small birds such as swallows, wrens and bluebirds.
- Bees used 4% (same as last year), 8% had starling activity and squirrels used 58 (21%) boxes.

## **EXPENSES**

Program costs for 2007-08 are summarized in Appendix V. Donations came to approximately \$525.00, DUC provided \$9,000.00 in partnership funding and ACA provided \$13,040.13 for a total cost of \$22,040.13.

## **FUTURE PLANS**

We will continue to provide presentations to groups requesting information on cavity nesting species and the CNWHP. This may include seminars consisting of building and/or placing nest boxes in the field.

Landowners of nest boxes scheduled for monitoring in 2008-09 will be shown the PowerPoint presentation and provided with an air photo of their property showing nest box locations and highlighting preferred habitat for the target species.

The Alberta Guide will be available in 2008-09 for landowners interested in participating in the CNWHP.

## **ADDITIONAL INFORMATION**

A list of available reports on the nest box program is contained in Appendix V. These reports can be obtained through the Alberta Conservation Association office, Red Deer.



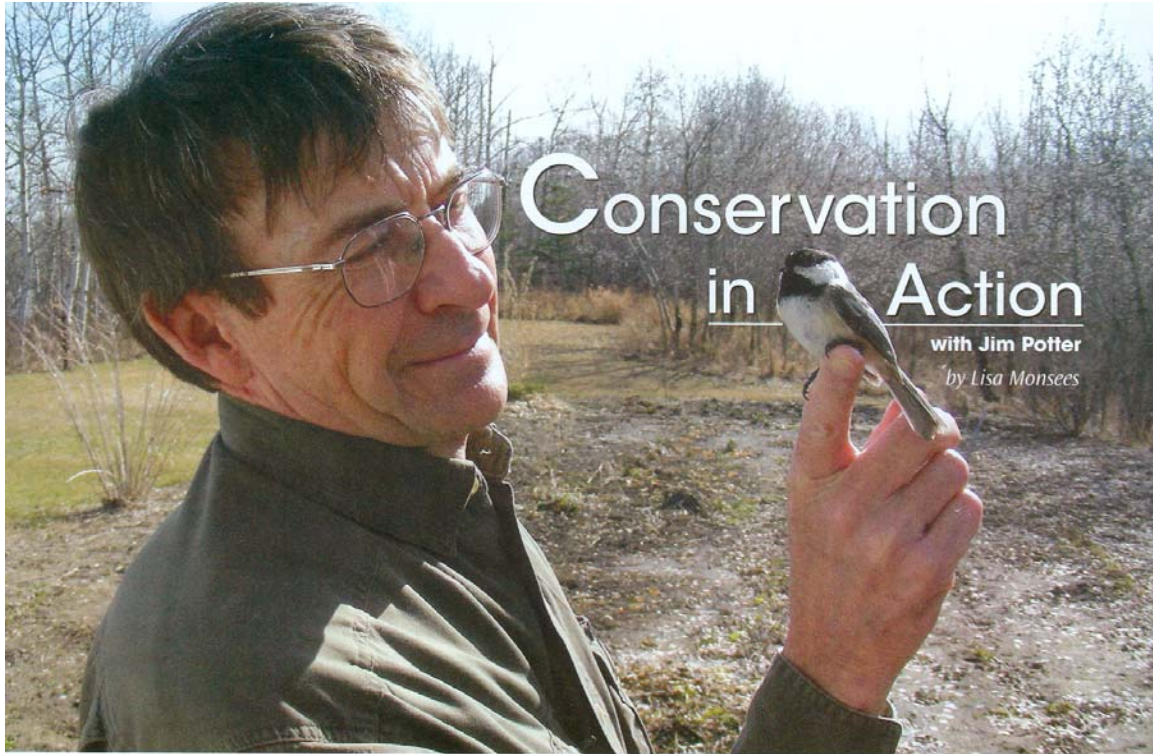
Common Goldeneye (hatching)

## LITERATURE CITED

- Peterson, L. 2008. Habitat Stewardship Pilot Program. Unpublished report, Ducks Unlimited Canada, Red Deer, Alberta
- Potter, J., P. Young. 1989. Buffalo Lake Duck Box Project. Unpublished report, Alberta Sustainable Resource Development, Fish and Wildlife Division., Red Deer, Alberta. 23 pp.

## APPENDICES

### Appendix 1. Conservation magazine article Fall/Winter 2007.



If it's possible to be born a conservationist, then Jim Potter was. A dedicated conservationist from within, his natural curiosity was encouraged by his greatest mentor, his mother, and by the environment in which he was raised. His early childhood years were spent on a small farm on the Pine Lake Moraine where trapping, hunting, fishing, and the wild country were a way of life. It is here, at 10 years of age, that he constructed the first of more than 3,000 nest boxes.

Even at a young age when he was wandering around putting up blue bird boxes and later nest boxes, Jim understood the value and necessity of what he was doing. It became his goal and commitment to make a difference. Realizing education and knowledge were the key to conserving habitat, Jim informed interested land managers about the habitat requirements of some of the lesser known species of flora and fauna. With this in mind, he initiated the Cavity Nesting Species project and now, with the support of the ACA, DUC, and various other partners such as Windsor Plywood, Jim delivers presentations to various youth groups, Fish and Game

organizations, and other interested parties throughout Alberta.

Jim credits his fortune—doing what he loves as a career—to another great mentor, Jim Allen of Fish and Wildlife. Jim began working with Mr. Allen as a Wildlife Technician in



1987 and was the coordinator for the Crop Damage Control program of which he continues to be part of, now with ACA.

He has served on the board of directors of the Federation of Alberta Naturalists, Red Deer River Naturalists, and the Red Deer Fish and Game Association, and was a Bighorn

Award recipient in 2005. Currently, he is a director with the Alberta Donkey and Mule Club and enjoys yearly pack trips to the hinterlands of the Alberta Rockies. Jim attributes ACA, its mission and its employees for strengthening and inspiring his desire to make a difference.

Recently, he placed a conservation easement on a quarter-section of his land that's situated on a portion of Chapman Lake. He considers this his greatest achievement because it can be passed on to future generations of Albertans and the enjoyment of wildlife.

Jim believes that if you give a child or an adult the ability to Wander, Observe, and Wonder (WOW!) in native habitat, their natural curiosity will take over. His never-ending devotion to engaging young people in the value of their natural surroundings will surely make a difference in the future management of our provinces natural resources.

"Work with nature, you can't improve on it." Jim Potter, ACA Resource Technician. ■

Wednesday, Feb 6, 2008 THE STETTLER INDEPENDENT

# Naturalists elect executive

## □ Guest speaks of duck nest boxes

**CLAUDIA CAMERON**  
Buffalo Lake Naturalists

The Buffalo Lake Naturalists held their annual general meeting on Jan. 17. Eighteen members were present as well as three guests: Lesley Peterson, and Jim and Bonnie Potter.

Lesley led the guest speaker portion of the evening with a very interesting presentation about the success of the duck nest boxes that Jim has installed and monitored in central Alberta since 1989. These are the relatively large, man-made wooden boxes you see near deep ponds with adjacent woodlands.

The species targeted are diving ducks, the Buffleheads and Common Goldeneyes, as their nests require old growth trees that have been hollowed out by Pileated Woodpeckers and Northern Flickers. The woodpeckers and flickers usually make a new nest hole each year, freeing up their previous one for the tree nesting ducks and other cavity nesters.

The ducks themselves will return to the same nest for a number of years. Some competition over the boxes has been witnessed. On occasion two different kinds of eggs may end up in the same box, are incubated by the 'super Mom' and the offspring successfully adopted. The Common Merganser will also use a tree nest box, though they prefer placement near a river.

Goldeneye and Bufflehead populations suffer due to the loss of old stands of trees, so the duck nest boxes fill the need by supplying a home attached to a younger tree. You can help

nature out by allowing young trees to mature, leaving dead trees standing, not grazing wetland margins and by preserving trees and ponds where natural nests and nest boxes are in place.

The duck nesting box project has proven that with suitable habitat, population declines can be rectified.

With the PowerPoint presentation, Lesley showed us close-ups of the ducks, their nests and eggs, and the young one's leap of faith from the eight feet-high box, just 36 hours after hatching.

A video showed us the little ducks' micro wings are beating furiously and they have a bit of a bounce on landing.

Jim added tales of his experiences such as how best to position the nest boxes, why boxes are sometimes paired and box design successes and failings. There were pictures and stories of other creatures found in the boxes too, such as starlings, Northern Saw-whet Owls, American Kestrels and flying squirrels.

Our club appreciates when people in the field are willing to share their knowledge and adventures, as there is always

more to learn about the natural world. Thank you Lesley, Jim and Bonnie for being with us.

Following Lesley's talk, we visited over a light luncheon, then assembled for our annual general meeting. A new executive was installed as follows: President: Claudia Cameron; vice-president: Barb Shepherd; secretary: Andrew Paul; treasurer: Richard Gaffney; assistant treasurer: Wilma Zurfluh, Director to the Federation of Alberta Naturalists: Wayne Kinsella. Thank you to all who help make our club function by supplying lunch, being on the phone committee, organizing outings and doing write-ups.

The general public is always welcome to join the Buffalo Lake Naturalists as we bring in guest speakers or go on outings such as owl surveys and species counts. Call Nora at 742-0327 for more information.

Our next meeting is Thursday, Feb. 21 at 7 p.m. at St. George's Anglican Church (lower hall). We will hold a 35th anniversary celebration where we will reminisce about past activities. Anyone interested in knowing who the Buffalo Lake Naturalists were and are, is cordially invited to attend.

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Appendix 3. New nest boxes installed in 2007-08.

Box #	Land location				Landowner	Type <sup>1</sup>
1228	SW	32	45	22	4 GREENWALL (crown)	NG
1232	NW	16	34	27	4 STAUFFER, M (Heather)	NG
1233	NW	16	34	27	4 STAUFFER, M (Heather)	NG
1234	NW	36	37	25	4 JACKSON, George (Ann)	NG
1235	NW	16	34	27	4 STAUFFER, Murray (Heather)	B
1236	SE	2	38	25	4 MYTTON, Steve (Kim)	M
1237	NW	28	35	24	4 RETI, Walter (Mary)	LG
1238	NW	16	34	27	4 STAUFFER, Murray (Heather)	LG
1239	SW	27	35	24	4 SMITH, Stan	LG
1240	SW	34	35	24	4 SMITH, Frank,Steven	LG
1241	SW	34	35	24	4 SMITH, Frank,Steven	LG
1248	SE	15	36	22	4 BOULTON, James	NG
1249	SE	15	36	22	4 BOULTON, James	LG
1250	NW	33	35	24	4 NEUFELD, Amos	LG
1251	SE	3	38	25	4 ETHIER, Bill (Donna)	LM
1252	SE	25	36	24	4 LAWRENCE, Byron (Vina)	NG
1253	SE	25	36	24	4 LAWRENCE, Byron (Vina)	NG
1254	SW	10	37	24	4 D U (Nicholson)	NG
1255	NW	34	37	8	5 STEWART, Lawrence (Ramona)	NG
1256	SE	4	37	24	4 MUIR, D (Marge)	NG
1257	N	24	42	21	4 DU (Pileated)	B
1258	NW	31	40	19	4 RUTHERFORD,	NG
1259	SW	3	42	20	4 WILLIAMS, Magdelina	NG
1260	SW	21	40	19	4 MCMILLAN,	NG
1261	NE	22	40	19	4 ALDER, E & C	NG
1262	SW	17	42	20	4 WYNECHUK, John	NG
1263	NE	13	42	21	4 BOURDAGES, T & Karen	LG
1264	SW	3	40	20	4 RIDER, Oris (Nelly)	NG
1265	NW	6	36	24	4 Pine Lake	NG
1266	NE	32	35	24	4 CAMPBELL, Doug	NG
1267	NE	32	35	24	4 CAMPBELL, Doug	B
1268	SW	26	37	25	4 WEIERS, Dale	LG
1269	NE	3	41	19	4 SAYSELL, JOE	NG
1270	NE	3	41	19	4 ERICKSON, Ben	NG
1271	SE	1	42	20	4 SPILLER, Bill	NG
1272	SE	17	37	20	4 RACHER, Daryl (Lori)	LG
1273	NW	34	37	8	5 STEWART, Lawrence (Ramona)	NG
1274	NW	34	37	8	5 STEWART, Lawrence (Ramona)	NG

<sup>1</sup>NG = new goldeneye, B = bufflehead M = merganser, LG = large goldeneye, LM = large merganser.



Appendix 4. Thirty-three nest boxes replaced or relocated in 2007-08.

Box #	Beaver	Disrepair	Down	Tree Gr	Dead tree	Missing	Replaced
981	X		X				
998	X		X				
938			X	X			
935			X		X		
996			X		X		
953	X		X			X	X
662			X		X		
552		moved			X		
827		X	X				X
717	X		X				
718	X	X	X				X
720	X		X				
436			X	X			
715		X	X		X		X
741		X					X
657		X					X
731		X					X
604			X	X			
605		X					X
1014		moved			X		
1071						X	X
339						X	X
328	X	X	X				X
207			X		X		
243			X		X		
249			X		X		
218			X		X		
1110			X	X			
732		X					X
733						X	X
724		X	X				X
495		X	X		X		X
496			X		X		
<b>Total</b>	<b>7</b>	<b>11</b>	<b>23</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>15</b>

Appendix 5. 2008-09 Cavity Nesting Waterfowl Habitat Program expenditures.

<b>Partner and In Kind</b>		<b>\$</b>
Partner funding		
	Ducks Unlimited Canada	9000.00
In-kind donations		
	Steve Potter	
	Stucco wire	10.00
	Saw and cutting labour	200.00
	Windsor Plywood	
	Plywood, materials	315.00
<b>Expenditures</b>		<b>\$</b>
	Vehicle fuel	692.80
	Vehicle chargeback and maintenance	4,500.00
	Phone	400.00
	Equipment	147.61
	Miscellaneous	18.44
	Wages	16,281.28
	<b>Total Expenditures</b>	<b>22,040.13</b>



Appendix 6. List of available reports.

<b>Report Title</b>	<b>Year</b>
Multiple nesting in (same box, same year)	1990
Nest box placement/monitoring	1993
Mixed clutches, dump nesting, clutch size	1994
Seven - year summary of boxes – BLM	1995
Nest box designs, twinning	2003
Starling – population dynamics	2004
Goldeneye – population expansion in Big Valley	2004
Winter nest checks versus summer	2005
American Kestrel Nest Box Results	2005
Northern Saw-whet Owl Nest Box Results	2005

