

**2004 Breeding Bird Surveys  
of the  
Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia**

**A Supplemental Report**

**prepared for**

**Paul G. Buxton**

**by**

**W. George Alliston, Ph.D.**

**6 December 2004**

## TABLE OF CONTENTS

INTRODUCTION.....	3
SITE DESCRIPTION.....	3
METHODS .....	3
BREEDING BIRDS RECORDED: 2002 and 2004 .....	3
OTHER WILDLIFE OBSERVATIONS: 2004.....	10
ASSESSMENT OF OCCURRENCE AND USE OF THE WHITE'S POINT PROPERTY BY BREEDING BIRD SPECIES AT RISK IN NOVA SCOTIA: 2002 and 2004.....	10
Derivation of the Breeding Bird Species at Risk List.....	10
Breeding Birds Considered at Risk Using the Property.....	11
SUMMARY .....	12
ADDITIONAL SOURCES OF INFORMATION.....	13
APPENDIX 1.....	14

## **INTRODUCTION**

This report assesses the use of the 155 ha White's Point proposed quarry site near Little River, Digby Neck, Digby County, by breeding birds in 2004 and compares these data with similar information gathered in 2002. This report is a supplement to the more extensive work conducted in 2002 and presented in a report entitled "Faunal Analysis of the Proposed White's Point Quarry Site, Digby Neck, Digby County, Nova Scotia".

## **SITE DESCRIPTION**

A general description of the property as it was in the summer of 2002 can be found in my previous report. At White's Point a 4 ha site, where quarrying has been approved and where trees had been felled at the time of our 2002 surveys, has subsequently had all vegetation and overburden removed and a settling pond constructed. The rest of the property remains essentially as it was in the summer of 2002.

## **METHODS**

In 2004, the author and Mr. Bernard Forsythe visited the site on two occasions: during the evening of 21 June (1924h to 2207h, overcast, winds estimated @ 5 - 10 kph) to conduct a census of nocturnal nesting birds and during the morning hours of 22 June (0520h to 1150h, clear, winds calm to an estimated 5 kph) to census diurnal nesting birds. The timing (22 & 23 June in 2002), methods (see previous report), personnel, survey routes (see "BREEDING BIRDS RECORDED: 2002 and 2004" below for minor exceptions) and the sequence in which these routes were surveyed were essentially identical for the two years.

The common names of plants and animals are used in this report. The common and scientific names of those species not included in my previous report are listed alphabetically in Appendix 1.

## **BREEDING BIRDS RECORDED: 2002 and 2004**

**During both the 2002 and 2004 breeding bird surveys only one bird species at risk, the Boreal Chickadee, was found using the property. In both years, immature (non-breeding) Common Loons, a species for which the breeding cohort of the Nova Scotia population is considered at risk, were observed feeding in the coastal marine waters adjacent to the property.**

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia  
A Supplemental Report  
W. George Alliston, Ph.D. – 6 December 2004

The routes taken during the 22 June 2004 diurnal breeding bird survey were the same as those taken in 2002 (see previous report, Figure 2) with the following exceptions:

- a) in 2004 a new transect was added that traversed the 4 ha site at White's Cove that had been prepared for quarrying (see Figure 1);
- b) a short (~ 70m) section at the southern extremity of Section E (the portion that extended beyond the boundaries of the property being studied) was not censused (see previous report, Figure 2).

The route taken during the nocturnal survey on the evening of 21 June 2004 was identical to that taken on 22 June 2002 (see previous report, Figure 2).

Table 1 presents the information collected on bird species and their distribution on the property (also see Figure 2 in previous report) in June of 2002 and 2004.

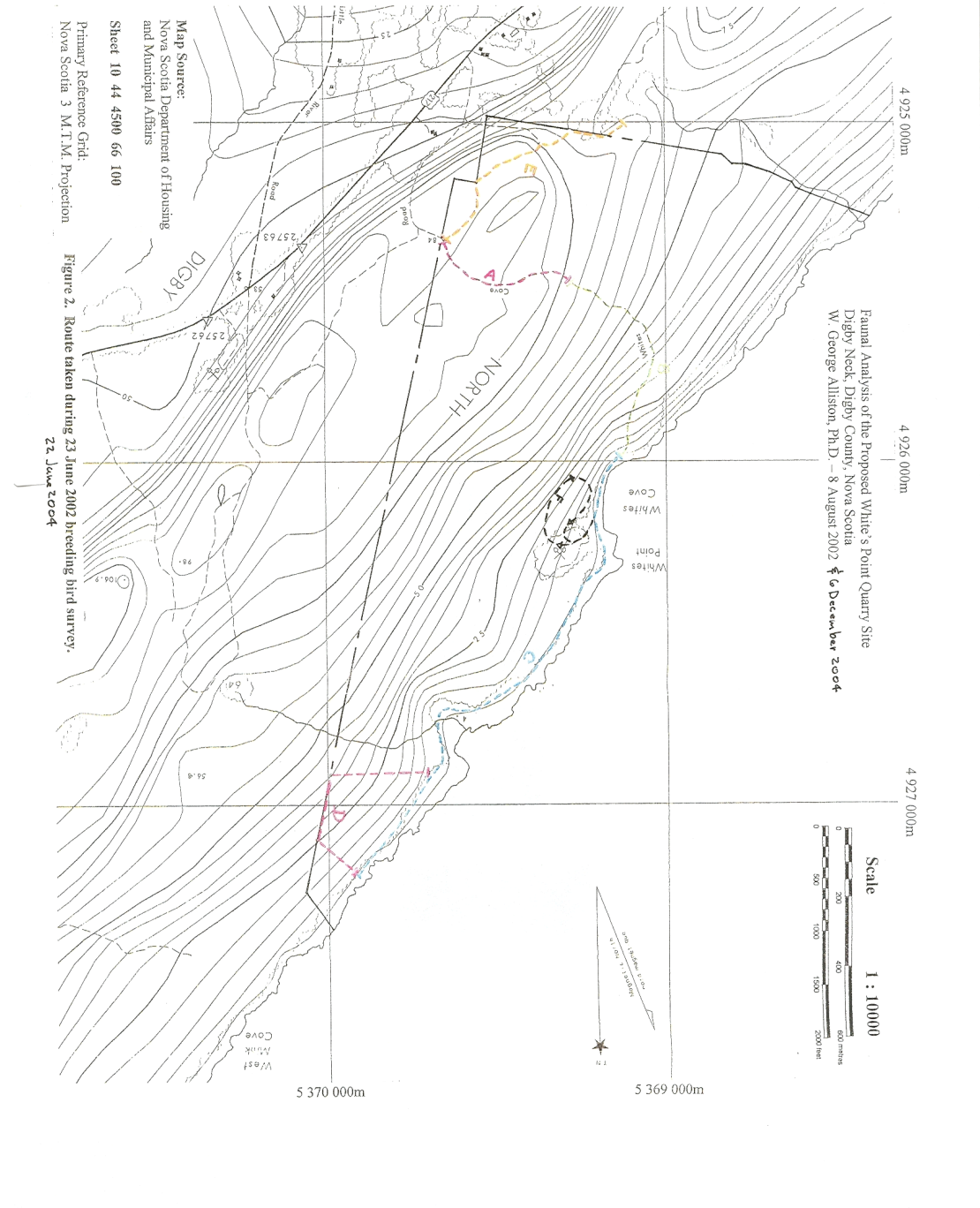
A total of 40 bird species was recorded during our surveys of 21 and 22 June 2004. Of these species, Common Loon, Northern Gannet, Double-crested Cormorant, Common Eider, Northern Harrier, Herring Gull and Great Black-backed Gull were not believed to nest on the property. In my previous report, I have discussed why I believe all of these species, except the Northern Harrier, would not nest on the property.

During our two seasons of study and six visits to the property a (male) Northern Harrier was observed on only one occasion: during our evening survey of 22 June 2004. This bird was observed flying over the area that had been clear-cut in 2002. Northern Harriers nest in relatively large open areas: marshes, wet meadows, coastal heaths, bogs and sometimes upland hayfields and abandoned fields. Duebbert and Lokemoen (1977) found no Northern Harriers nesting in fields smaller than 11 ha. The only potential nesting habitat for Northern Harriers on this property is the small (~ 1.5 ha), boggy marsh adjacent to the cove north of White's Point; however, this habitat is far too small to support a nesting pair. Northern Harriers, particularly males, are known to have large home ranges which average of the order of 7 km<sup>2</sup> but have been recorded up to 90 km<sup>2</sup>.

Therefore, of the 40 bird species observed during our 2004 surveys, 33 species were using terrestrial habitats on the property and may have nested there in 2004. In 2002 we identified 38 bird species that may have been nesting on the property.

During 2002 and 2004 the most common breeding bird species recorded during our surveys remained the same. These were Swainson's Thrush, Magnolia Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, White-throated Sparrow and Dark-eyed Junco.

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
 Digby Neck, Digby County, Nova Scotia  
 A Supplemental Report  
 W. George Alliston, Ph.D. – 6 December 2004



2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
 Digby Neck, Digby County, Nova Scotia  
 A Supplemental Report  
 W. George Alliston, Ph.D. – 6 December 2004

**Table 1**  
**White's Point Breeding Bird Surveys - 22/23 June 2002 (2002) and 21/22 June 2004 (2004)**

Species	Section A		Section B		Section C		Section D		Section E		4 ha Site	Total 2002	Total 2004
	2002	2004	2002	2004	2002	2004	2002	2004	2002	2004	2004		
Common Loon					1	Φ	2	Φ				1	2
Northern Gannet					15	Φ	7	Φ				15	7
Double-crested Cormorant					3		1					3	1
Mallard							1	Ψ				0	1
Common Eider					28		53					28	53
Black Scoter					1	**						1	0
Osprey			1	*								1	0
Northern Harrier		1	Ψ									0	1
Broad-winged Hawk									3			3	0
Red-tailed Hawk					2	*						2	0
American Kestrel									1	**		1	0
Spotted Sandpiper					2		1					2	1
American Woodcock			2	Ø								2	0
Herring Gull					15		5			4	2	15	11
Great Black-backed Gull					18		23	9			1	27	24
Barred Owl					2	Ø						2	0
Ruby-throated Hummingbird									1			1	0
Northern Flicker			1					1	4			6	0
Hairy Woodpecker				3						2		0	5
Eastern Wood-Pewee		1										0	1
Yellow-bellied Flycatcher					1			1	2			2	2
Alder Flycatcher		1			3					1	2	3	4
Least Flycatcher							1	Ψ				0	1
Blue-headed Vireo		1	2	1								2	2
Red-eyed Vireo			1		1				1			3	0
Gray Jay		1						2		4		0	7
American Crow	1	5		8	7	4	1		4			13	17
Common Raven		1	1		1	2	2					4	3
Black-capped Chickadee		3	1			3	1		1			3	6
Boreal Chickadee			2	2								2	2
Brown Creeper			1	1								1	1
Red-breasted Nuthatch		1										0	1
Winter Wren	2	1	2	2				1	2			6	4
Golden-crowned Kinglet			2		1		2		2			7	0
Swainson's Thrush	7	8	8	9	12	3	8	6	3	3	4	38	33
Hermit Thrush		1	1	1				2				1	4
American Robin	4	11	4	3	1	1			1	4		10	19
Cedar Waxwing									4			4	0
Nashville Warbler		1					1					1	1
Northern Parula									1	1		1	1

*continued on next page*

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
 Digby Neck, Digby County, Nova Scotia  
 A Supplemental Report  
 W. George Alliston, Ph.D. – 6 December 2004

Species	Section A		Section B		Section C		Sect- ion D		Section E		4 ha Site	Total 2002	Total 2004
	2002	2004	2002	2004	2002	2004	2002	2004	2002	2004	2004		
<i>cont. from previous page</i>													
Magnolia Warbler	2	4	3	4	7	3	7	3	4	3	1	23	18
Yellow-rumped Warbler	1		2	3	6	5	6	4	4	1	1	19	14
Black-and-white Warbler	1	1	2		2		3	1	1	2	1	9	5
Black-throated Green Warbler	2		9	4	7	3	2	2	4	7	1	24	17
Ovenbird			1		2		2					5	0
Common Yellowthroat		2			2	7	1			1	1	3	11
American Redstart			1	3	3				2		2	6	5
Savannah Sparrow					3							3	0
Song Sparrow					10	13	3				2	13	15
Swamp Sparrow					3							3	0
White-throated Sparrow	8	12	4	4	8	3	6	3	11	9	1	37	32
Dark-eyed Junco	10	14	7	7	12	7	1	4	3	6	2	33	40
Purple Finch		1			2	1			1	1	1	3	4
White-winged Crossbill										4		0	4
American Goldfinch		2		2		5			1		3	1	12
<b>TOTAL # OF SPECIES</b>	<b>10</b>	<b>21</b>	<b>22</b>	<b>16</b>	<b>31</b>	<b>23</b>	<b>18</b>	<b>11</b>	<b>22</b>	<b>16</b>	<b>15</b>	<b>47</b>	<b>40</b>
<b>TOTAL # OF BIRDS</b>	<b>38</b>	<b>73</b>	<b>58</b>	<b>57</b>	<b>181</b>	<b>154</b>	<b>57</b>	<b>30</b>	<b>59</b>	<b>53</b>	<b>25</b>	<b>393</b>	<b>392</b>
Φ immature * recorded on 4 June 2002 ** recorded on 15 June 2002 Ø recorded on 22 June 2002 nocturnal survey Ψ recorded on 21 June 2004 nocturnal survey													

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia  
A Supplemental Report  
W. George Alliston, Ph.D. – 6 December 2004

The number of species observed in each section of the survey route was lower in 2004 with the exception of Section A where the number of species and individual birds recorded were double those recorded in 2002. Section A passes through an area that had been clear-cut in the winter and early spring of 2002 and, when the 2002 surveys were conducted, wood that had been stockpiled on site was in the process of being removed. It would appear that after the disruptions of 2002, species that occupy openings or edge habitats were able to occupy this area or, if already present, increase their numbers (e.g. American Robin, White-throated Sparrow and Dark-eyed Junco; see Table 1).

It is difficult to know why fewer breeding birds species were recorded in other sections of the survey route in 2004. The only habitat modification that had occurred on the property subsequent to 2002 was the removal of overburden and construction of a settling pond on a 4 ha site at White's Point. These activities occurred in 2003 and would have impacted only a very small portion of Section C of the survey route.

A total of 15 bird species, 13 of which probably nested on the property, were recorded on our new transect that covered the 4 ha site at White's Point. All breeding birds recorded on this transect were seen or heard in areas immediately adjacent to the prepared site; no birds were recorded on the prepared quarry site.

Of the 33 bird species identified as possibly nesting on the property in 2004, seven of these were not recorded on the property in 2002, namely: Mallard, Hairy Woodpecker, Eastern Wood-Pewee, Least Flycatcher, Gray Jay, Red-breasted Nuthatch and White-winged Crossbill. These observations bring the total number of bird species that might have nested on the property in 2002 and 2004 to 45.

It should be noted, however, that two of the passerine (perching bird) species recorded for the first time in 2004, the Gray Jay and the White-winged Crossbill, have very different breeding schedules than most passerines and would not have been nesting when our surveys were conducted. The White-winged Crossbill is a species that is well known for its propensity to wander and to nest at any time of the year. Tufts (1986) indicates that in Nova Scotia this species "has two distinct breeding seasons; early January to late April and early July to late September". While the coniferous forests on the property could provide nesting habitat for this species, they were observed at a time they are not normally nesting. The fact that the four adult birds seen were together in a small flock further suggests that these birds were not nesting.

The Gray Jay normally nests in March or April (Tufts, 1986) and by mid- to late June family groups are beginning to break up. Although this species is generally "sedentary in its habits and usually seen in pairs (or family groups particularly during



2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia  
A Supplemental Report  
W. George Alliston, Ph.D. – 6 December 2004

May and June), it does on rare occasions gather in flocks that wander aimlessly about the countryside showing up in places it has not been seen in years" (Tufts, 1986). Tufts (1986) further indicates that this species is "decidedly uncommon along the North Mountain range bordering the Bay of Fundy" although this area, including the property being studied, supports the boreal forests that are the preferred breeding habitat for this species. The seven Gray Jays were recorded as three groups of two, including at least one adult/young duo, and a single adult. It is difficult to believe that this large, tame and sometimes noisy species would not have been recorded during our four visits to the property in 2002 had it been present.

Ten potentially nesting species that were recorded during the breeding bird surveys of 2002 were not recorded during the 2004 surveys. These birds were American Woodcock, Ruby-throated Hummingbird, Barred Owl, Northern Flicker, Red-eyed Vireo, Golden-crowned Kinglet, Cedar Waxwing, Ovenbird, Savannah Sparrow and Swamp Sparrow. While some of these species may indeed have been absent in 2004, others may have been present but escaped detection. Species that escaped detection may have done so because of sampling error (were present on the property but, by chance, not in the area sampled by our surveys) or because environmental conditions were such as to inhibit singing, thereby reducing the detectability of the birds. Weather conditions (e.g. wind, rain) can also affect the observers' ability to detect birds. While we considered weather conditions to be "good" during our 2004 surveys, they were inferior to the near perfect conditions we experienced in 2002; winds up to an estimated 10 kph were experienced during parts of the 2004 surveys.

I can state with some confidence that the Swamp Sparrow and the Savannah Sparrow, which had nesting territories on the property in 2002, were not present on territory when surveys were conducted in 2004. I can make this statement since their preferred habitats (wetlands and coastal barrens, respectively) on this property are limited and our survey routes covered all available habitat thereby eliminating sampling error. Furthermore, the area in which these birds were observed in 2002 (in and adjacent to the small boggy marsh adjacent to the cove north of White's Point) was identified as potentially providing marginal habitat for two breeding bird species at risk: Nelson's Sharp-tailed Sparrow (in the boggy marsh area) and Rusty Blackbird (in the forest immediately adjacent to the boggy marsh). Because of the potential presence of these species at risk, we modified our survey methods when surveying this area in 2004 and resorted to calling (in birder's terms "pishing") in an attempt to get a response from these species. While our calling brought out seven Common Yellowthroats (thereby biasing upward our 2004 count for this species), there was no response from the two species at risk that we speculated might use this area or Swamp Sparrows or Savannah Sparrows, species that were recorded there in 2002.

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia  
A Supplemental Report  
W. George Alliston, Ph.D. – 6 December 2004

For the remaining eight species that were recorded as potentially nesting on the property in 2002 but not recorded in 2004, I cannot be as certain of their actual absence as I am for the Savannah and Swamp Sparrows.

Other species like the Golden-crowned Kinglet are known to show great year-to-year variation in numbers in their breeding habitats. Species like the Ruby-throated Hummingbird (only one observed in 2002) are easily overlooked and birds, like the Barred Owl, with large territories may not have been in the surveyed portion of their territories at the time of the surveys. It is somewhat surprising that neither of two species that were relatively abundant in 2002 and are generally quite vocal, the Northern Flicker and the Ovenbird, was recorded during the 2004 survey.

#### **OTHER WILDLIFE OBSERVATIONS: 2004**

In addition to the reptiles, amphibians and mammals recorded during our more comprehensive surveys of 2002, **three additional mammal and one amphibian species were recorded during our 2004 bird surveys. None of these species is considered to be at risk.**

Two of the three mammal species observed were marine mammals. In the coastal waters near the shoreline of the cove immediately north of White's Point during both our evening (21 June) and morning (22 June) surveys a single Gray Seal, with a rope wrapped around its body and cutting deeply into its flesh, was observed. At the same location and about 250m offshore at about 2100h on 21 June, a Minke Whale was observed traveling in a southerly course parallel to the coast. The one "new" terrestrial mammal observed was the Eastern Chipmunk. Two individuals were observed near the southern extremity of Section E.

On 22 June near the northern extremity of Section D, a Wood Frog was recorded.

#### **ASSESSMENT OF OCCURRENCE AND USE OF THE WHITE'S POINT PROPERTY BY BREEDING BIRD SPECIES AT RISK IN NOVA SCOTIA: 2002 and 2004**

##### **Derivation of Breeding Bird species at Risk List**

The reader is referred to my previous report for the breeding bird species at risk list and its derivation.

### **Breeding Birds Considered at Risk Using the Property**

As in our 2002 breeding bird census, the only terrestrial bird species at risk recorded in our 2004 studies was the Boreal Chickadee (green, S3S4). As in 2002, two birds were recorded on Section B of our survey route. These observations support our contention that Boreal Chickadees probably nest on the property but likely in relatively low numbers. There is no indication that this property would support greater densities of this species than similar adjacent properties (for further discussion, see previous report).

Another bird species at risk, the Common Loon (yellow, S4B) was observed during both our 2002 and 2004 surveys. All three birds observed (two in 2004, one in 2002) were non-breeding sub-adults feeding in the coastal waters adjacent to the site. Non-breeding Common Loons regularly use coastal waters to summer and moult. It is the breeding cohort of the Nova Scotia Common Loon population that is considered at risk. Breeding Common Loons require large freshwater lakes on which to nest. The closest lakes of sufficient size to support breeding Common Loons are Harris Lake and Lake Midway which are 7 km and 9 km, respectively, from the White's Point property.

In my previous report I suggested that there was a small possibility that Nelson's Sharp-tailed Sparrow (yellow, S2S3B) might nest in the small coastal wetland north of White's Point. None was observed in 2002 and a more concerted effort in 2004 when birds were called (see above) also produced no results. I continue to believe that the likelihood of Nelson's Sharp-tailed Sparrows breeding in this wetland is small.

In my previous report I identified two raptor species at risk, the Long-eared Owl (yellow, S1S2B) and the Northern Goshawk (yellow, S3B), for which there was a small possibility that they might use the White's Point property. As in 2002, our nocturnal survey of 2004 was unsuccessful in confirming the presence of the secretive Long-eared Owl on the property. Similarly our diurnal surveys of 2002 and 2004 provided no observations of Northern Goshawks, a species that is normally very aggressive toward any intruders near its nest sites. I explained in my previous report why I believed it unlikely that either of these species would nest on the property. Our lack of observation of these species after a second year of surveys would tend to support that view.

Information from the Atlantic Canada Conservation Data Centre (ACDC) database indicates that two bird species at risk have been recorded nesting within 5 km of the proposed quarry: the Wood Thrush (green, S2B) and the Rusty Blackbird (green, S3S4B).

No Wood Thrushes were recorded on the property in either the 2002 or 2004 surveys. As I have indicated in my previous report, it would seem quite unlikely that this species, which breeds in eastern deciduous forests, would be found in the predominantly coniferous forests that dominate this property.

The forest adjacent to the small coastal wetland on this property could provide potential nesting habitat for Rusty Blackbirds although none was observed during our 2002 and 2004 surveys of this site.

## **SUMMARY**

- 1) Two visits were made to the 155 ha White's Point property in June 2004 to replicate and compare the results with breeding bird surveys conducted in June 2002. In addition, a breeding bird survey was conducted on the 4 ha site that, in 2003, had been prepared for quarrying activity.**
- 2) Although seven additional potential breeding bird species were recorded in 2004, none is considered to be at risk in Nova Scotia. One bird species at risk, the Boreal Chickadee, was recorded using the property in 2002 and 2004. This species is believed to nest in small numbers on the property but is not believed to occur here in greater densities than on similar adjacent properties.**
- 3) After an analysis of habitat use and the known distributions of breeding bird species at risk, it was concluded in my previous report that:
  - a. *“Although the woodlands of this property could provide marginal nesting habitat for one species at risk, the Long-eared Owl, given that better potential nesting habitat exists in adjacent areas, it is unlikely that these owls would be found there.”* Our failure to confirm the presence of this species on the property again in 2004 would tend to support this conclusion.**
  - b. *“A small coastal wetland on the property might provide marginal nesting habitat for Nelson's Sharp-tailed Sparrow and/or Rusty Blackbird although none was recorded at the site (in 2002).”* A more concerted attempt to identify these species in 2004 was also unsuccessful.****

2004 Breeding Bird Surveys of the Proposed White's Point Quarry Site,  
Digby Neck, Digby County, Nova Scotia  
A Supplemental Report  
W. George Alliston, Ph.D. – 6 December 2004

### **ADDITIONAL SOURCES OF INFORMATION**

(see previous report for complete list of sources)

#### **Literature**

Duebbert, H.G. and J.T. Lokemoen. 1977. Upland nesting of American bitterns, marsh hawks and short-eared owls. *Prairie Nat.* 9:33-40.

**APPENDIX 1**  
**COMMON AND SCIENTIFIC NAMES OF ANIMALS**  
**CITED ONLY IN THIS REPORT**  
(not in previous report)

**Amphibians**

<b>Common Name</b>	<b>Scientific Name</b>
Wood Frog	<i>Rana sylvatica</i>

**Birds**

<b>Common Name</b>	<b>Scientific Name</b>
Eastern Wood-Pewee	<i>Contopus virens</i>
Gray Jay	<i>Perisoreus canadensis</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Least Flycatcher	<i>Empidonax minimus</i>
Mallard	<i>Anas platyrhynchos</i>
Northern Harrier	<i>Circus cyaneus</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
White-winged Crossbill	<i>Loxia leucoptera</i>

**Mammals**

<b>Common Name</b>	<b>Scientific Name</b>
Eastern Chipmunk	<i>Tamias striatus</i>
Gray Seal	<i>Halichoerus grypus</i>
Minke Whale	<i>Balaenoptera acutorostrata</i>