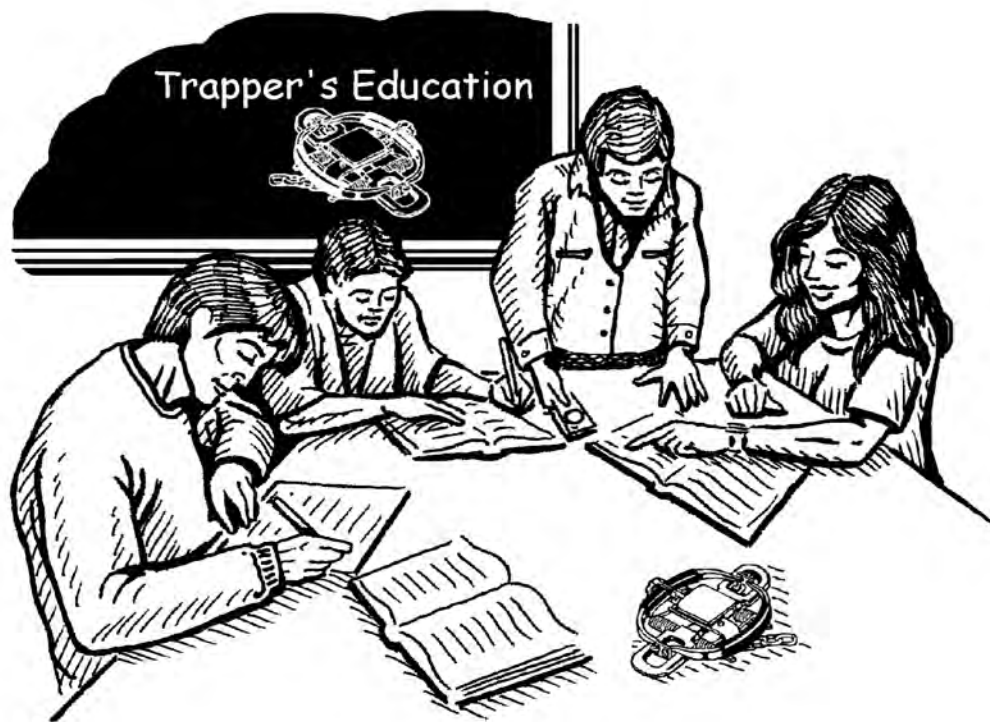


# Nova Scotia TRAPPERS Newsletter

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2003



  
**NOVA SCOTIA**  
Natural Resources

**Collections required this year:** Fisher, otter and incidental catches of marten and lynx. Submission of accidental catches of flying squirrels is voluntary.

**Regulation changes for 2003/2004**

**The major regulation change affecting furharvesters for the 2003/2004 season are:**

1. Furharvesters may now purchase a furharvesting stamp at any Department of Natural Resources District Office and may submit harvest data by internet.

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Anyone seeking further information on furbearer management or wishing to provide input to the Department of Natural Resources should contact their local office, a Regional Biologist, or the Furbearer and Upland Game Section of DNR, Attn.:Mike O'Brien, 136 Exhibition Street Kentville, N.S. - B4N 4E5. By e-mail: [O'Brienms@GOV.NS.CA](mailto:O'Brienms@GOV.NS.CA) Phone: (902) 679-6091 Fax: (902) 679-6176. The Furbearer Section, including Trappers Newsletter, is on the Internet: <http://www.gov.ns.ca/Natr/wildlife/furbers/furbs.htm>

**Accidental catches or sightings of rare species may also be reported by calling 1 (800) 565-2224.**

## **Mandatory Fur Harvester Courses**

Courses take place each year in late September. Since 1986, 74 Fur Harvester courses have been held and there have been a total of 1513 students. Application forms are available at all local DNR offices, the Trappers Association of Nova Scotia, as well as on one of two web sites: [www.trappersassociationofnovascotia.ca](http://www.trappersassociationofnovascotia.ca) and [www.gov.ns.ca/Natr/wildlife/furbears/.htm](http://www.gov.ns.ca/Natr/wildlife/furbears/.htm). Registration and payment must be received by TANS secretary not later than August 15 in order to guarantee a place in a course for the fall. Students registered by August 15 will receive notification of their course date and location in early September; participants are required to confirm their attendance by September 15. Anyone unable to attend must also notify DNR, Wildlife Division in Kentville, otherwise their name will be removed from the course waiting list, and their registration fee forfeited.

## **Furbearer Report**

*By Mike O'Brien and Mike Boudreau*

The number of fur harvester licenses sold in the 2002-03 season increased by 2.32% to 1552. The level of effort by those who did buy a license and catch fur has increased from 61.3% to about 62.2 % in the 2002-03 season.

Average Fur prices decreased in almost every species with the exception of otter and bobcat, raccoon, coyote and fox which sold at higher prices, while bear, muskrat and fisher, moved at slightly lower prices than the previous year. Many trappers did not trap early in the season, mainly because of poor forecast for early unprimed fur and waited to go after fur when it was

prime. This along with a shift in trends for long hair may have had an influence on the rising prices. Otters seem to be the exception to the rule and continue to do well, mainly do to the strong interest from the markets in China.

## **Snowshoe hare**

Snowshoe hares or rabbits as we Nova Scotians call them, are an important prey species for several furbearers. Abundance rankings made by furharvesters show an overall increase in snowshoe hare across the province, with a hand full of counties showing a slight decrease. Upland game harvest survey results showed a very poor return rate for the report cards again this year. The number of snowshoe hares harvested, increased slightly with an estimated harvest of 99,660 overall. The annual pellet plot surveys showed a increasing trend for snowshoe hare as well.

## **Bobcat**

The bobcat harvest was down by 14.42% from the last year, with a total of 1193 animals taken. This decrease probably at least partly reflects a response to the lower numbers of snowshoe hare. Average price has increased by 31% from the previous year. In fact prices have been increasing over the last couple of years and may be contributing to increased effort during the past season. Abundance rankings for the province have begun to show slight downward trend with the exception of Digby, Queens, Yarmouth, and Victoria counties, all of which continue to show a slight increase in rankings. Halifax county is the only county which showed no change in the abundance rankings for cats.

## **Beaver**

The provincial beaver harvest decreased by 28 % to 4166 animals. This decrease in harvest may be explained in part by the low average price. Pelt prices

decreased slightly, for the third year in a row.

Provincial abundance rankings showed a slight decrease province wide. After discussions with Department field staff and trappers, the bag limits have been set at the same levels as last year in all four zones. We recognize the fact that trappers often trap other aquatic furbearers ( such as muskrat, otters, and mink) over a geographic area that extends beyond the boundaries of the beaver zone in which they permanently reside. As a result, regulations were recently changed to allow trappers to retain beaver taken in any zone. This is provided that they do not exceed in total the bag limit for the zone in which they permanently reside, and do not take in any one zone more than the bag limit for that zone. It appears that this change has not resulted in any major harvest management problems, and is providing us with an improved picture of the geographic distribution of our beaver harvest.

### **Otters**

Otter harvests have decreased this year, by 5.4 % to a level of 591 animals. This is still in the middle of the range for harvests in recent years. The average price increased by 15.6 % from the previous year. This represents the highest average price in recent history. Abundance rankings showed no change on the provincial scale, but remain in the low to medium range. In light of the fact that average prices are at an all time high. We are again collecting otter carcasses this year to continue to improve our understanding of what is happening with the otter population. Preliminary results suggest that otter, like other fish-eating species, are being affected at least in some parts of Nova Scotia by environmental mercury contamination. The status of this species will be monitored and collections will continue to ensure the

maintenance of a sustainable population.

### **Muskrat**

Muskrat catches continued to drop again this year, dropping by 18.67 % to 15, 274. This is the lowest level since the 1999 - 00 season. The average price decreased slightly to \$4.02 which is consistent with average prices from the last couple of years. The provincial abundance levels are up slightly.

### **Fisher**

Fisher abundance rankings, provided by licensed furharvesters took a slight increase again this year. Although the abundance ranking continues to increase the ranking remains in the low range. A 4.8 % increase in the harvest, brought the total catch to 145 animals. While the harvest over the past eight seasons continues to be encouraging, we will need to continue close monitoring of this species to ensure continued population recovery and expansion. An updated report on the fisher live capture and translocation and habitat research project can be found elsewhere in this issue.

Following an offer of financial support from the Trappers Association of Nova Scotia(TANS). We plan to continue the project again this year, with additional animals being live-trapped and moved from Cumberland, Colchester and Pictou counties to the south central part of the province. This will hopefully bolster fisher numbers there, and eventually connect the eastern and western fisher populations. To increase the impact of this program and to protect relocated animals, regulations will remain the same as last year: trappers resident in Cumberland, Colchester or Pictou counties will be able to retain one accidentally caught fisher if caught in Cumberland, Colchester or

Pictou counties only. Fisher that are accidentally caught in all other areas of the province must be turned in to DNR, at least for the duration of this project. As with all seasons and bag limits, this regulation will be reviewed annually.

### **Raccoon**

Raccoon harvests have increased by 9.74 % to a level of 3019 animals. These harvest figures are half compared to harvest figures from the mid to late 1990's. Abundance rankings increased slightly from last year, average price for raccoons decreased slightly. With a relatively low average price, trapping effort will likely remain low. With this low harvest pressure and an apparent increasing population, we will undoubtedly continue to see outbreaks of distemper which will in turn result in lower populations in affected areas.

### **Fox**

Fox harvest decreased by 15 % to a level of 677 animals. Provincial abundance rankings climbed with slight changes in a hand full of counties. Prices increased again this year and are at the highest levels in the past tens years.

### **Coyote**

Coyote harvest increased by 12.3 % to 1809 animals. This harvest was the second highest since coyotes made their way into the province. Overall abundance rankings dropped slightly but continue to remain in the moderate range. Like the red fox, average price increased again this year reaching new levels for this furbearer.

### **Other Species**

Squirrel harvest increased significantly by 17.5 % to a level of 5152. Weasels on the

other hand increased by 8.8 % to 1179 animals. Skunk harvest increased by 47.5 % to reach a level of 183. Average price for squirrel dropped by 60 % and the average price for weasel also dropped slightly. Lynx and marten continue to be taken accidentally each year and trappers should make every effort to avoid accidental capture of these species.

### **Accidental Captures**

Furharvesters who accidentally catch protected species or animals in excess of their bag limits should try to release them alive if practical. If not practical, you must report your catch to an office of the Department of Natural Resources before it is removed from the trap site: This may be done by calling any DNR office, or calling 1-800-565-2224, 24 hours a day. Starting in the fall of 2002 trappers were given the option to take possession and transport an animal immediately provided the appropriate form is completed at the trap site. Upon arriving at their place of residence the trapper is obligated to call any DNR office, or 1-800-565-2224, 24 hours a day and report their accidental catch. The office will advise you on how to handle the situation. Anyone found in the position of an animal to which they are not entitled without first notifying the Department or having the appropriate form filled out may be charged. Most animals turned into DNR are used for demonstration and pelt handling training at the TANS annual workshop, which is usually held in early March. These pelts along with other pelts which are turned over to the Department, are then given to the Trappers Association of Nova Scotia. Proceeds from the sale of pelts are used to support trapper education.

**Fur Harvest as Calculated from License Returns  
and Fur Buyer Slips in 2001 - 2002**

<b>County</b>	<b>B'ver</b>	<b>M'krat</b>	<b>Otter</b>	<b>Mink</b>	<b>B'cat</b>	<b>Fox</b>	<b>R'coon</b>	<b>S'knk</b>	<b>S'qrrel</b>	<b>W'sel</b>	<b>C'yote</b>	<b>Fisher</b>
<b>Anna.</b>	257	2019	19	64	74	56	43	2	303	53	69	5
<b>Digby</b>	311	839	17	512	26	28	164	10	1831	65	74	4
<b>Kings</b>	118	2284	10	100	48	40	403	1	301	22	78	5
<b>Lunen.</b>	375	241	59	100	124	70	239	0	214	66	137	1
<b>Queens</b>	170	75	32	40	65	3	60	3	34	32	52	1
<b>Shelb.</b>	165	1056	27	29	102	12	22	0	35	26	48	0
<b>Yar.</b>	275	2270	21	492	81	15	212	0	351	93	80	0
<b>Anti.</b>	257	382	38	17	81	28	183	9	202	42	85	3
<b>Col.</b>	387	1445	19	71	85	86	290	3	55	62	154	28
<b>Cum.</b>	965	5581	32	103	109	148	436	0	75	98	198	49
<b>Guys.</b>	232	143	73	47	69	6	23	0	65	82	52	0
<b>Hfx.</b>	537	853	111	147	138	67	152	1	70	125	108	0
<b>Hants</b>	265	364	20	44	77	40	153	2	75	48	114	0
<b>Pictou</b>	650	545	23	21	126	65	286	65	88	29	67	31
<b>CB</b>	263	219	17	29	65	69	32	0	5	23	52	0
<b>Inv.</b>	296	311	32	29	54	23	15	0	490	138	97	1
<b>Rich.</b>	182	120	57	34	50	32	8	0	29	47	62	0
<b>Vic.</b>	87	32	18	10	20	9	4	0	28	24	60	0
<b>Total</b>	<b>5,792</b>	<b>18,779</b>	<b>625</b>	<b>1,889</b>	<b>1,394</b>	<b>797</b>	<b>2,725</b>	<b>96</b>	<b>4,251</b>	<b>1,075</b>	<b>1,587</b>	<b>128</b>

**Fur Harvest as Calculated from License Returns  
and Fur Buyer Slips in 2002 - 2003**

<b>County</b>	<b>B'ver</b>	<b>M'krat</b>	<b>Otter</b>	<b>Mink</b>	<b>B'cat</b>	<b>Fox</b>	<b>R'coon</b>	<b>S'knk</b>	<b>S'qrrel</b>	<b>W'sel</b>	<b>C'yote</b>	<b>Fisher</b>
<b>Anna.</b>	178	805	24	41	85	40	40	0	284	46	96	2
<b>Digby</b>	255	764	17	679	33	39	187	2	1970	129	98	8
<b>Kings</b>	178	946	9	63	61	19	337	32	204	34	104	3
<b>Lunen.</b>	306	174	53	86	104	77	197	3	383	90	88	2
<b>Queens</b>	117	50	17	47	48	11	36	13	69	28	39	0
<b>Shelb.</b>	118	1099	23	32	38	7	21	0	50	5	23	0
<b>Yar.</b>	183	1720	17	360	59	7	154	0	181	127	54	5
<b>Anti.</b>	224	454	35	17	74	27	201	2	85	56	121	4
<b>Col.</b>	288	1355	27	43	89	70	338	4	361	54	139	24
<b>Cum.</b>	742	5293	26	85	92	88	592	4	207	109	240	49
<b>Guys.</b>	121	155	73	59	72	6	40	0	191	129	88	1
<b>Halifax</b>	381	480	89	145	142	52	244	7	222	120	107	5
<b>Hants</b>	208	289	21	36	64	50	209	5	44	32	116	1
<b>Pictou</b>	359	528	31	18	136	72	354	111	67	22	129	37
<b>CB</b>	227	267	35	32	31	59	38	0	32	19	66	0
<b>Inv.</b>	139	580	35	18	24	23	14	0	638	131	152	0
<b>Rich.</b>	94	229	44	39	24	14	11	0	108	37	67	0
<b>Vic.</b>	48	86	15	11	17	16	6	0	56	11	82	0
<b>Total</b>	<b>4,166</b>	<b>15,274</b>	<b>591</b>	<b>1,811</b>	<b>1,193</b>	<b>677</b>	<b>3,019</b>	<b>183</b>	<b>5,152</b>	<b>1,179</b>	<b>1,809</b>	<b>141</b>

## Average Value of Wild Fur for Nova Scotia (Per Pelt)

Species	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03
<b>Beaver</b>	\$ 32.30	\$27.34	\$32.37	\$43.00	\$34.90	\$25.39	\$ 31.06	\$32.16	\$27.28	\$ 26.46
<b>Muskrat</b>	\$ 2.94	\$ 3.26	\$ 3.82	\$ 7.06	\$ 4.32	\$ 3.17	\$ 4.22	\$4.36	\$5.58	\$ 4.39
<b>Otter</b>	\$106.47	\$88.73	\$63.65	\$72.42	\$72.43	\$53.50	\$ 92.19	\$90.57	\$111.58	\$ 139.34
<b>Mink</b>	\$ 22.60	\$15.16	\$19.54	\$19.09	\$18.84	\$15.70	\$ 17.85	\$14.83	\$17.00	\$ 14.52
<b>Bobcat</b>	\$ 72.35	\$66.84	\$44.32	\$76.96	\$58.95	\$48.92	\$ 54.37	\$61.86	\$128.40	\$204.66
<b>Fox</b>	\$ 24.43	\$25.69	\$24.43	\$25.59	\$23.38	\$16.79	\$ 29.16	\$30.89	\$37.83	\$ 48.06
<b>Raccoon</b>	\$ 15.67	\$14.35	\$14.62	\$23.97	\$21.53	\$12.14	\$ 8.15	\$16.66	\$19.38	\$ 17.91
<b>Weasel</b>	\$ 4.54	\$ 3.05	\$ 3.61	\$ 5.69	\$ 2.88	\$ 2.90	\$ 3.26	\$4.94	\$3.83	\$ 3.53
<b>Squirrel</b>	\$ 1.00	\$ 1.00	\$ 0.77	\$ 2.42	\$ 1.05	\$ 0.74	\$ 0.99	\$1.73	\$1.98	\$ 0.79
<b>Skunk</b>	\$ 4.01	\$ 3.60	\$ 4.29	\$ 4.00	\$ 1.97	\$ 4.37	\$ 1.76	\$8.85	\$8.41	\$ 5.83
<b>Fisher</b>	\$ 27.08	\$19.95	\$29.79	\$46.64	\$39.93	\$28.12	\$ 22.31	\$32.87	\$44.09	\$ 31.42
<b>Bear</b>	\$ 76.64	\$64.59	\$51.12	\$99.21	\$76.47	\$70.57	\$113.21	\$149.43	\$117.28	\$ 112.37
<b>Coyote</b>	\$ 35.32	\$22.36	\$20.00	\$33.14	\$20.25	\$20.53	\$ 25.83	\$25.02	\$31.33	\$ 43.75

### Bag Limit Changes

#### **Bobcat**

- bag limit increased to two province wide in 1990/91
- bag limit reduced to one province wide in 1991/92
- bag limit increased to two province wide in 1993/94
- bag limit reduced to one in Cumberland and Colchester Counties in 1994/95
- bag limit increased to three province wide (except Cumb/Col) in 1995/96
- bag limit increased to four province wide (except Cumb/Col) in 1996/97
- bag limit increased from one to four in Colchester County in 1997/98
- bag limit increased from four to five province wide except for Cumberland County in 1998/99
- bag limit increased to five province wide in 1999/00

#### **Fisher**

- season closed in 1988/89 to 1994/95
- one mistake fisher allowed in 1995/96, 1996/97 and in 1997/98
- one mistake fisher allowed in Cumberland, Colchester and Pictou Counties in 1998/99 to 2003/04.

#### **Marten**

- season closed

#### **Lynx**

- season closed

**FurBearing Animals Taken by Fur Harvesters  
From 1994 - 2003**

<b>Species</b>	<b>94/95</b>	<b>95/96</b>	<b>96/97</b>	<b>97/98</b>	<b>98/99</b>	<b>99/00</b>	<b>00/01</b>	<b>01/02</b>	<b>02/03</b>
<b>Beaver</b>	7,677	6,090	8,642	6,385	5,807	4,126	3,828	5,792	4,166
<b>Muskrat</b>	18,248	22,118	36,834	31,531	26,623	15,859	13,391	18,779	15,274
<b>Otter</b>	1,027	797	765	555	478	440	447	625	591
<b>Mink</b>	1,929	1,829	2,168	1,681	1,724	1,686	1,267	1,889	1,811
<b>Bobcat</b>	809	703	976	1,029	1,103	1,403	1,163	1,394	1,193
<b>Fox</b>	1,741	1,118	1,549	898	841	662	491	797	677
<b>Raccoon</b>	6,676	5,435	6,490	6,165	5,577	2,018	1,409	2,725	3,019
<b>Weasel</b>	1,207	1,375	1,037	602	468	1,156	561	1075	1,179
<b>Squirrel</b>	6,852	8,355	6,890	5,199	6,543	1,486	2,554	4,251	5,152
<b>Skunk</b>	168	131	229	74	151	247	108	96	183
<b>Fisher</b>	16	124	217	184	131	115	84	128	141
<b>Coyote</b>	1,887	1,155	1,311	1,031	1,254	1,388	835	1,587	1,809

**2003 Trappers Workshop & Annual Meeting**

**Kentville, March 7 - 9, 2003**

Sleeping space available - bring your own bedroll.

Contact Paul Tufts, President of the Trappers Association of Nova Scotia for details

Phone: 742-2771      Fax: 742-1277

The 2003 Trappers Workshop was held in Kentville, To date we have held 51 workshops with over 1,514 students.

**See Also**

[www.trappersassociationofnovascotia.ca/convention.html](http://www.trappersassociationofnovascotia.ca/convention.html)

## Fur Harvester License Sales

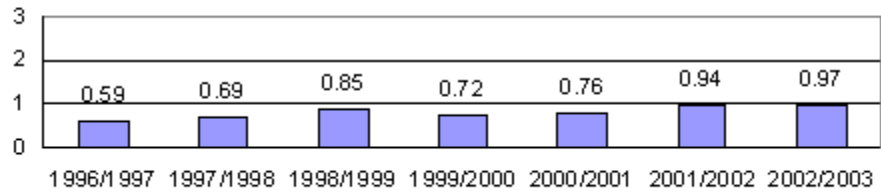
YEAR	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03
<b>Annapolis</b>	105	92	96	102	77	69	66	72	65
<b>Antigonish</b>	72	70	82	75	68	62	67	60	66
<b>Colchester</b>	134	136	137	115	83	127	113	85	118
<b>Cumberland</b>	211	200	216	181	137	163	159	153	158
<b>Digby</b>	111	102	110	86	108	75	88	85	97
<b>Guysborough</b>	106	66	71	77	84	60	56	84	77
<b>Halifax</b>	200	139	190	190	104	119	90	158	152
<b>Hants</b>	106	89	99	107	70	74	79	65	80
<b>Kings</b>	126	110	111	106	97	84	82	80	74
<b>Lunenburg</b>	125	116	117	106	107	84	87	89	94
<b>Pictou</b>	164	157	169	159	140	118	109	144	128
<b>Queens</b>	79	68	76	76	65	44	40	59	48
<b>Shelburne</b>	107	99	100	94	90	74	69	70	69
<b>Yarmouth</b>	137	127	151	145	128	114	117	98	111
<b>Cape Breton</b>	100	94	97	110	83	74	73	69	82
<b>Inverness</b>	92	85	82	80	75	69	71	66	68
<b>Richmond</b>	76	68	76	70	74	58	64	61	55
<b>Victoria</b>	40	32	37	24	20	29	19	18	24
<b>Total</b>	<b>2,091</b>	<b>1,850</b>	<b>2,017</b>	<b>1,903</b>	<b>1,610</b>	<b>1,497</b>	<b>1,449</b>	<b>1,516</b>	<b>1,566</b>



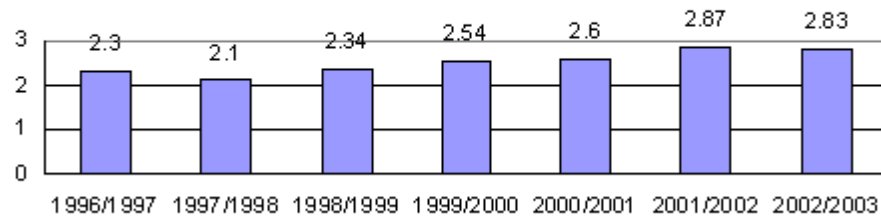
## Fur Harvest Abundance Estimates for 2003

County	B'ver	M'krt	Otter	Mink	B'cat	Fox	R'coon	Skunk	S'qrrel	W'sel	C'yote	Lynx	M'ten	Fisher	Bear	Hare
Anna.	2.37	1.82	1.68	1.66	2.17	1.20	1.63	2.11	3.09	1.67	2.93	0.33	0.43	0.96	2.30	1.88
Digby	2.22	2.25	1.18	2.23	1.49	1.36	1.90	1.07	3.06	1.84	3.02	0.14	0.63	1.26	2.10	2.00
Kings	2.00	1.57	1.52	1.61	1.87	1.45	2.33	2.39	2.71	1.70	2.97	1.33	1.00	1.15	1.95	1.63
Lunen.	2.57	1.82	1.70	1.89	2.04	1.86	1.90	1.94	2.85	1.90	2.49	0.10	0.07	0.42	2.08	1.58
Queens	2.32	1.52	1.76	1.90	2.10	1.22	2.24	1.40	2.85	1.53	2.67	0.13	0.14	0.29	2.38	1.95
Shel.	1.87	1.84	1.63	1.33	1.98	1.20	2.00	0.39	2.70	1.51	2.85	0.06	0.09	0.39	2.20	1.90
Yar.	2.16	2.07	1.46	1.75	2.10	1.34	2.16	0.54	2.95	1.91	2.50	0.13	0.27	1.20	2.09	2.08
<b>Western</b>	<b>2.23</b>	<b>1.90</b>	<b>1.53</b>	<b>1.79</b>	<b>1.94</b>	<b>1.41</b>	<b>2.00</b>	<b>1.44</b>	<b>2.89</b>	<b>1.75</b>	<b>2.77</b>	<b>0.19</b>	<b>0.32</b>	<b>0.81</b>	<b>2.15</b>	<b>1.85</b>
Anti.	2.64	1.96	1.64	1.30	2.00	1.63	2.28	2.16	3.07	2.19	3.36	0.21	0.18	0.83	1.98	1.89
Col.	2.31	1.90	1.51	1.44	2.28	1.67	1.89	2.11	3.05	1.93	2.71	0.50	0.80	1.71	2.39	1.83
Cum.	2.24	1.93	1.23	1.47	1.73	1.74	2.14	2.04	2.77	1.88	2.69	0.33	0.14	1.58	2.62	1.33
Guys.	2.19	1.57	2.02	1.63	1.98	0.90	1.59	1.13	2.89	1.98	2.74	0.19	0.04	0.34	1.48	1.80
Halifax	2.21	1.70	1.71	1.64	2.04	1.23	1.68	1.49	2.77	1.97	2.70	0.04	0.10	0.43	2.18	1.83
Hants	2.19	1.84	1.39	1.72	1.95	1.67	2.04	2.26	2.68	1.85	2.65	0.06	0.03	0.44	1.71	1.57
Pictou	2.42	1.84	1.55	1.33	2.13	1.83	2.10	2.62	2.95	2.00	2.99	0.18	0.24	1.77	2.21	1.96
<b>Eastern</b>	<b>2.31</b>	<b>1.82</b>	<b>1.57</b>	<b>1.50</b>	<b>2.00</b>	<b>1.56</b>	<b>1.98</b>	<b>2.01</b>	<b>2.87</b>	<b>1.97</b>	<b>2.83</b>	<b>0.15</b>	<b>0.15</b>	<b>1.16</b>	<b>2.16</b>	<b>1.73</b>
C.B.	2.30	1.43	1.65	1.72	1.76	1.85	2.03	0.00	2.61	1.77	2.98	1.00	1.00	0.00	1.75	1.33
Inv.	2.00	1.79	1.45	1.43	1.32	1.47	1.14	0.00	3.33	2.09	2.98	1.09	0.15	0.10	1.94	1.25
Rich.	1.73	1.79	1.85	1.73	1.61	1.46	1.39	0.13	2.89	1.93	3.00	0.52	0.05	0.05	0.24	1.10
Vic.	1.57	1.78	1.00	1.71	1.60	1.73	1.00	0.00	3.40	2.22	2.91	1.17	1.00	0.00	1.89	1.10
<b>Cape B</b>	<b>2.03</b>	<b>1.66</b>	<b>1.59</b>	<b>1.62</b>	<b>1.57</b>	<b>1.63</b>	<b>1.50</b>	<b>0.07</b>	<b>2.98</b>	<b>1.96</b>	<b>2.98</b>	<b>0.90</b>	<b>0.18</b>	<b>0.07</b>	<b>1.42</b>	<b>1.23</b>
<b>Province</b>	<b>2.24</b>	<b>1.83</b>	<b>1.56</b>	<b>1.62</b>	<b>1.92</b>	<b>1.52</b>	<b>1.93</b>	<b>1.68</b>	<b>2.90</b>	<b>1.89</b>	<b>2.83</b>	<b>0.29</b>	<b>0.22</b>	<b>0.97</b>	<b>2.08</b>	<b>1.70</b>

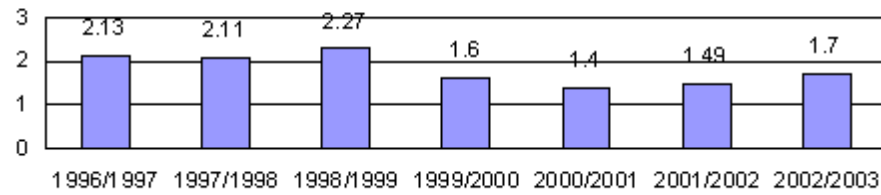
**Fisher**  
**Fur Harvester Abundance Ranking**



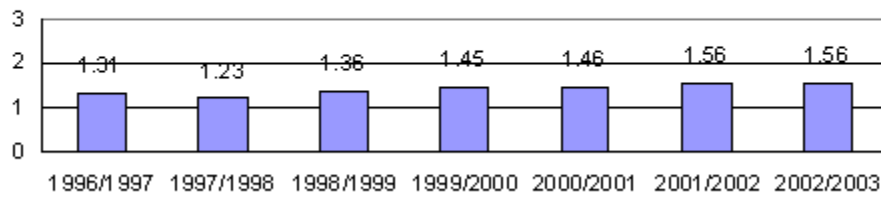
**Coyote**  
**Fur Harvester Abundance Ranking**



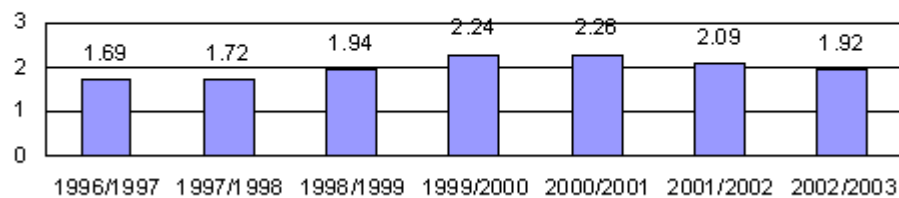
**Snowshoe Hare**  
**Fur Harvester Abundance Ranking**



**Otter**  
**Fur Harvester Abundance Ranking**



**Bobcat**  
**Fur Harvester Abundance Ranking**



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Representative:**

**Mark Marshall**

R.R. #1 Barton  
Digby, Nova Scotia  
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Phone: 902-837-4300

**2003 - 2004 Auction Dates:**

Sale Date: January 11, 2004  
Last Receiving Date: December 8, 2003

Sale Date: February 24, 25, 2004  
Last Receiving Date: January 12, 2004

Sale Date: May 19, 20, 2004  
Last Receiving Date: March 29, 2004

Sale Date: September, 2004  
Last Receiving Date: June 2, 2004

**2003 - 2004 Auction Dates**

Sale Date: December 16, 2003  
Last Receiving Date: December 3, 2003

Sale Date: February 14, 2004  
Last Receiving Date: January 8, 2004

Sale Date: May 12, 2004  
Last Receiving Date: April 10, 2004

Sale Date: June 14, 2004  
Last Receiving Date: May 29, 2004



## Traps Meeting Requirements of Agreement on International Humane Trapping Standards and Certification Status

Updated: August 6, 2003

Species	Traps Tested and Found to Meet the Requirements of the AIHTS	Certified AIHTS*
<b>Beaver</b>	Belisle Super X 330	X
(on land & underwater)	BMI 330	
	Bridger 330	
	LDL C 330	X
	Rudy 330	X
	Sauvageau 2001 - 11	X
	Species-Specific 330 Dislocator Half Magnum	
	Species-Specific 430 Dislocator Half Magnum	
	Woodstream Oneida Victor Conibear 330	X
<b>Beaver</b>	BMI 280	
(underwater)	Belisle Super X 280	X
	LDL C280	X
	Rudy 280	X
	Sauvageau 2001-8	X
	Woodstream Oneida Victor Conibear 280	X
<b>Fisher</b>	Belisle Super X 220	X
	Koro #2	X
	LDL C160 Magnum	X
	Sauvageau 2001-5	X
	Sauvageau 2001-8	X
<b>Lynx</b>	Woodstream Oneida Victor Conibear 330	
<b>Marten</b>	Belisle Super X 120	X
	BMI 126 Magnum	

<b>Species</b>	<b>Traps Tested and Found to Meet the Requirements of the AIHTS</b>	<b>Certified AIHTS*</b>
<b>Marten (cont)</b>	LDL B120 Magnum	X
	Rudy 120 Magnum	X
	Sauvageau C 120 Magnum	X
	Sauvageau 2001-5	X
<b>Muskrat (on land)</b>	Woodstream Oneida Victor Conibear 110	
	Woodstream Oneida Victor Conibear 120	
	Triple M	
<b>Muskrat (underwater)</b>	Woodstream Oneida Victor Conibear 110	
	Jaw-type leghold trap with submersion system	
<b>Raccoon</b>	Belisle Super X 160	X
	Belisle Super X 220	X
	BMI 160	
	BMI 220	
	Bridger 220	X
	LDL C160	X
	LDL C220	X
	Rudy 220	X
	Sauvageau 2001-6	X
	Sauvageau 2001-7	X
	Sauvageau 2001-8	X
	Species - Specific 220 Half Magnum	
	Woodstream Oneida Victor Conibear 160	X
	Woodstream Oneida Victor Conibear 220	X
<b>River Otter (underwater)</b>	Woodstream Oneida Victor Conibear 330	
<b>Weasel</b>	Victor Rat Trap	

\* Traps CERTIFIED to meet the requirements of the AIHTS\*

These traps meet the time to loss of consciousness and sensibility thresholds as set out in the Agreement.

Killing traps similar to those listed above could meet these standards, provided that their mechanical values are shown, through testing, to be adequate.

### **Restraining Traps**

<b>Species</b>	<b>Traps tested &amp; found to meet the requirements of the AIHTS</b>	<b>Traps CERTIFIED to meet the requirements of the AIHTS*</b>
<b>Bobcat</b>	Belisle Foot Snare	X
<b>Coyote</b>	Belisle Foot Snare	X
	Bridger #3 equipped with 5/16-inch offset, double rounded jaw laminations (3/16-inch on topside of jaw and 1/4-inch on underside of jaws), with 4 coil springs and a swivel centre mounted on base plate.	
<b>Lynx</b>	Belisle Foot Snare	X
	Victor #3 Soft Catch (unmodified)	
	Victor #3 Soft Catch equipped with 4 coil springs	
	Victor #3 equipped with 3/16-inch jaw laminations and 4 coil springs and a swivel centre mounted on base plate	

These traps meet the injury thresholds as set out in the Agreement.

The above lists apply to traps meeting specific performance requirements as set out in the Agreement on International Humane Trapping Standards. They are subject to certification by 2007, by the provincial and territorial governments and those Aboriginal agencies sanctioned to regulate trapping methods.

The tables preceding were reproduced from information produced and provided by the Trap Research and Development Committee (TRDC) of the Fur Institute of Canada (FIC). The TRDC of the FIC continues to make significant progress in testing both commonly used and newly developed and modified traps against the Agreement on International Humane Trapping Standards (AIHTS). The measure of this progress is clearly evidenced in the number of traps which have been rated and added to the list of those found to meet the thresholds set out in the AIHTS. The FIC0-TRDC website at [http://www.fur.ca/humane\\_trap/results2.html](http://www.fur.ca/humane_trap/results2.html) provides access to the most up to date published list of traps found to meet the requirements of the AIHTS.

Please check periodically for new traps which may have been added to the list.

## Trap Standards - 2003 Update on the EU Agreement

By Mike O'Brien

In late 1997, the European Union (EU), Canada, and Russia signed the Agreement on International Humane Trapping Standards (AIHTS or the Agreement). The Agreement averted the implementation of European legislation that would have prohibited the importing of 13 species of wild furs into Europe from Canada. The effects of such a ban would have been very serious, directly affecting all our major furbearing species except mink and fox. Likely even the market for these would have been indirectly affected. The industry has been seeking and developing alternate markets (for example Asian countries), but the European market still currently accounts for approximately 70 per cent of the market for Canadian wild fur.

The United States had previously withdrawn from the negotiations which eventually led to the Agreement. However, in late 1997, the US concluded a separate, non-binding 'understanding' with the EU which is similar to the one agreed to by Canada, though a bit more lenient. Consequently, complications and negative effects of having US fur blocked out of EU markets were also averted.

A major event in the implementation of the AIHTS occurred on June 1, 1999 with the ratification of the Agreement by Canada, on a bilateral basis with the EU. The bilateral option had been included to allow for the Agreement to move forward in the event that Russia was unable to ratify within a reasonable time period. After careful consideration of the options available, including the risks and uncertainties of leaving the Agreement unratified in the face of changes in the EU administration, the various Canadian stakeholders asked the federal government to proceed with the

bilateral ratification. Prior to ratification consultations had taken place with our US counterparts on this issue. The US 'understanding' with the EU only went into effect in the event of full ratification of the AIHTS by Canada, Russia, and the EU. However, after Canada's ratification in June, the US decided in August 1999 to also bring their 'understanding' into force as of June 1, 1999. Canada continues to make every effort to encourage and support Russian ratification at the earliest possible opportunity. Last year Russian representatives indicated that we might expect ratification by their government by fall 2003, but this has still not occurred.

The signing of the Agreement with the EU has kept the critical European marketplace open to Canadian wild furs. However, it was reached only at considerable cost to the wild fur producing nations. With the initialing of the original Agreement in 1997, we became obligated to ban the use of conventional steel-jawed leghold restraining traps, *for species listed in the Agreement*, not later than the end of the 2000 - 01 trapping season. This ban was required regardless of whether or not the performance of these traps would meet thresholds set for restraining traps in the Agreement (which is very likely for some species). In 2001 the Canadian provinces and territories made the necessary regulatory changes to ensure that we were in compliance with our commitments in relation to this particular aspect of the Agreement. Please consult the 2003 Nova Scotia Hunting and Furharvesting Licence and Summary of Regulations booklet (also available on the internet at

<http://www.gov.ns.ca/natr/hunt/regulations/default.htm> or contact your local DNR office for information on which restraining traps are currently permitted for various species.

The bilateral ratification of the Agreement on June 1, 1999 by Canada and the EU started the clock ticking on the schedule for testing

of various other restraining and killing trap systems against the standards set out in the AIHTS. Considerable work had already been done prior to that time and significant progress has been made in the past four years, through the Fur Institute of Canada's Trap Research and Development program (see the List of Traps which have been found to meet the AIHTS, pages 14-16 of this issue of Nova Scotia Trappers Newsletter or on the website of the Fur Institute of Canada at <http://www.fur.ca/>. (Watch the FIC website for regular updates as more results become available). Results of trap testing have shown that commonly used traps for several species will meet the AIHTS standards. This is welcome news for furharvesters. Significant effort and expense over a relatively short time frame will continue to be required to test and improve traps and trapping systems, to ensure that trappers will be able to continue to efficiently and humanely harvest wild furbearers.

In late September 1997, a meeting was held in Quebec City between representatives of federal, provincial, and territorial government agencies, aboriginal peoples, and trappers to discuss the implications and requirements of the Agreement. Discussion centered around timetables and options available for complying with the Agreement, along with such issues as direction and funding for required trap testing, research, and certification, and coordination between different jurisdictions. While the federal government coordinated negotiations and signed the Agreement on behalf of Canada, the actual mandate for managing furbearing species rests with the provincial, territorial, and aboriginal land-claim governments. Consequently, only they can implement the requirements of the Agreement, and approaches for doing this might vary between jurisdictions.

Following the meeting in Quebec, discussions

between the various jurisdictions and interest groups on implementation and coordination have continued both nationally and internationally. The Trap Research and Development Committee of the Fur Institute of Canada is leading the trap testing and development work for our country. Its primary goal is to ensure that effective, economical, safe and humane traps are available for Canadian trappers, no matter what the purpose of the trapping activity. The FIC, together with representatives of the provinces and territories, have maintained a close and coordinated cooperation with US and Russian collaborators in trap research and other issues around the implementation of the AIHTS. Following on the success of the FIC research program in developing computer models for rating killing traps against the AIHTS standards, Canada and the US are working on the cooperative development of trap performance models for leghold restraining devices. The results of this project have potential to significantly enhance our ability assess performance of such restraining traps. The Canada-US cooperative approach should allow exploration of this potential more quickly than either party would likely have been able to do independently. The FIC also plays a key role in facilitating communications between players, information dissemination and education, in addition to many other processes and activities necessary for the implementation of the Agreement.

The Canadian Furbearer Management Committee (CFMC - a national committee on furbearer management issues comprised of representatives from each of the provincial and territorial government wildlife agencies, reporting to the Provincial/Territorial Wildlife Directors) has been working on various issues to ensure harmonization and coordination of interpretation and implementation of the Agreement in the various Canadian jurisdictions. The CFMC developed the process for "certification" of traps, as required

in the Agreement. This process has now been put in place for use by the provincial and territorial wildlife agencies and provides the framework for certification of traps, by these 'competent authorities', as complying with the requirements of the AIHTS. In addition to considering performance of traps against the animal welfare requirements of the AIHTS, certification also takes into account safety and efficiency of trapping devices. The requirement for traps used to capture furbearers to be certified as meeting the AIHTS does not actually go into effect until 2007. However, with the certification process now in place, manufacturers have already begun to submit qualifying traps for certification. As a result, manufacturers, trappers, and wildlife management agencies will now have the opportunity to know as soon as possible which devices have been certified as meeting the AIHTS, well in advance of the 2007 deadline. In order to provide information to trappers on which traps have actually been certified, the current list of traps which have been found to meet the animal welfare requirements of the AIHTS (see pages 14-16) now also includes a second column to indicate whether the trap has been certified. The CFMC also advises the Wildlife Directors on other furbearer management related issues, and provides representation for the provincial and territorial jurisdictions at various international meetings pertaining to the implementation of the Agreement.

The Canadian Wildlife Directors have moved ahead with the formation and mandating of the Canadian Advisory Committee for the implementation of the AIHTS. From that group will come direction on the composition of the Canadian delegation to the AIHTS Joint Management Committee, as well as on the actual priorities and direction of that delegation. Canada hosted a provisional meeting of the Joint Management Committee in June of 2000 in Edmonton. After some

delay, a second provisional meeting was hosted by the EU in Brussels, Belgium in October 2002. Attendance at those meetings consisted of representatives of Canada and EU (currently the only signatories who have ratified the Agreement), along with invited representatives of Russia and the USA. Reports tabled at the meetings detailed the status to date of trap testing and research in the respective jurisdictions. Another provisional meeting of the Joint Management Committee of the AIHTS is scheduled for St. Petersburg, Russia in late October 2003. Once again Canada, US and Russia will have considerable progress and success to report at these meetings. Traps also continue to be used in the EU for a variety of purposes, so it will be interesting to receive information on what work has been completed there to comply with EU obligations under the AIHTS.

As a result of the AIHTS, the markets for North American wild furs are still open. We can certainly be proud of the many capable representatives from the various players in the fur industry (including government agencies, aboriginal groups, the Fur Institute of Canada, trapper and fur farmer organizations, fur auctions, etc.) who have made, and continue to make, important contributions toward dealing with this situation. Unfortunately, this is not simply an issue of science, factual information, and technological improvement, but also of animal rights, public relations campaigns, strong emotions, and politics. And though the threat to the EU markets may have been successfully resolved, lobby groups opposed to any use of animals will undoubtedly continue their attacks on the industry in other arenas. Canada's leadership in humane trap standards, trapping system research and development, fur harvester training, furbearer conservation and management, and in implementing this Agreement are strong demonstrations of our commitment to humane, sustainable furbearer

resource utilization.

Trappers and trapper organizations continue to play key roles in various aspects of the efforts surrounding this Agreement, including participation in FIC initiatives and committees, cooperation in trap testing, research and development, delivery and development of furharvester education, representation on international delegations, and direct input to provincial and territorial governments. Anyone wanting more details on the Agreement on International Humane Trapping Standards, and how it will affect trappers here and in other parts of Canada; as well as information on the significant successes of trap testing and research efforts, trap certification, or related topics, should contact the Furbearers and Upland Game Program of the Wildlife Division, Nova

Scotia Department of Natural Resources (contact information can be found inside the front cover of Nova Scotia Trappers Newsletter).

Undoubtedly the sustainable use of wild furbearer resources will continue to face challenges now and in the future. However, sound, science-based furbearer conservation and management programs, together with continued hard work and cooperation between government, fur harvesters, and other players in the industry to identify, promote and maintain use of appropriate, humane harvest tools and practices, should ensure the continued wise use of this natural resource, as well as the survival of a distinctly North American industry and way of life.

### **Bear Harvest Summary 1992 - 2002**

<b>Year</b>	<b>Resident Licenses</b>	<b>Non - Resident Licenses</b>	<b>Hunting Harvest</b>	<b>Hunting Success Rate</b>	<b>Snaring Licences</b>	<b>Snaring Harvest</b>	<b>Snaring Success Rate</b>
<b>1992</b>	239	30	76	29.7%	104	43	42.6%
<b>1993</b>	286	44	111	44.2%	129	60	46.5%
<b>1994</b>	481	37	248	47.9%	181	110	60.7%
<b>1995</b>	708	81	286	36.2%	227	91	40.1%
<b>1996</b>	656	102	247	32.6%	184	67	36.2%
<b>1997</b>	540	116	191	29.2%	162	65	40.3%
<b>1998</b>	505	109	243	39.6%	142	65	45.5%
<b>1999</b>	522	123	208	32.2%	101	33	32.4%
<b>2000</b>	498	153	264	40.6%	127	54	42.9%
<b>2001</b>	544	101	226	35.0%	155	54	34.6%
<b>2002</b>	584	84	284	42.6%	197	96	48.5%

## Lyme Disease - Should Hunters be Concerned?

(As Published in Fall 2003 Issue of Nova Outdoors)

Lyme disease is an illness caused by the bacterium *Borrelia burgdorferi*. The bacteria is most often transmitted to human by the deer tick (*Ixodes scapularis*), a small tick that is relatively uncommon in Nova Scotia.

The first case of Lyme disease contracted in Nova Scotia, was reported in 2002. Apparently the person acquired the infection after being bitten by a tick (or ticks) in a grassy-wooded area of her back yard. To date there have been only two confirmed human cases of Lyme disease contracted in Nova Scotia and both were from the South Shore area. Both persons have been treated and have fully recovered with no long term ill effects.

Department of Natural Resources (DNR) continues to assist the Department of Health in trying to determine where in the province there is a risk of contracting the disease. Ticks are being accepted from the public, and tested to determine if they are carriers of the disease. You can assist by submitting any ticks you may find on yourself, family members or pets, at your local DNR office.

As deer hunting season approaches, hunters may be concerned about the possibility of acquiring Lyme disease when field dressing a deer or eating the meat. Hunters will be pleased to know there is virtually no possibility of getting Lyme disease directly from a deer.

Deer are important in the life cycle of adult ticks because male and female ticks usually “find each other” and mate after female ticks have begun to feed on the host and deer also provide the blood that female ticks require in

order to produce offspring (eggs). Although deer may be exposed to the bacteria that cause Lyme disease when adult ticks feed upon them, the injected bacteria is quickly removed from the blood stream of infested animals. Because deer do not play a role in the transmission of *Borrelia burgdorferi* to ticks they are considered dead-end hosts for the bacterium. As a result, deer cannot infect other animals directly with the Lyme disease bacteria and there is no record of a hunter acquiring the disease from dressing out a deer. Further, there is no evidence that a person can become infected by eating the meat of an infected deer. The bacterium that causes Lyme disease is killed when the meat is cooked.



If a hunter killed deer is infested with ticks, it is unlikely ticks will transfer from the carcass to the hunter. Female ticks which have begun feeding will either remain attached to the deer or drop off and these partially fed females will not likely attempt to feed again. However, female ticks that are not yet feeding and male ticks (which feed and attach for only a short period of time) can move from a freshly killed animal to persons handling or carrying the carcass. Tick transfer is most likely during prolonged contact with the carcass (such as carrying it on your shoulders). There is a very low chance of ticks transferring from the carcass to a hunter during routine field dressing and skinning the deer. If hunters check themselves after hunting or handling a deer, any ticks that may have transferred can be detected and removed.

There is a higher possibility of hunters picking up ticks as they walk through the woods, shrubs and tall grass. However, hunters usually wear heavy clothing which make it difficult for the tick to find and attach to bare skin. Use of an insect repellent containing DEET will also discourage ticks. Other factors which further reduces the risk of becoming infected with the disease are: a relatively low percentage of ticks are carriers of the Lyme bacteria; and an infected tick must have been attached (actually taking a blood meal) to a person for at least 24 hours before the Lyme bacteria is transferred to the person.

Enjoy your hunt this fall. Hunters are at no more risk of contracting Lyme disease than anyone else who goes for a walk in the woods.

Brochures on Lyme disease and how to reduce the risk of acquiring the disease are available through your family physician, veterinarians, at your local public health office and Department of Natural Resources office. As well, more information on Lyme disease can be found at <http://www.gov.ns.ca/health/opmoh/lyme.htm>

By: Tony Nette  
Manager of Wildlife Resources  
Wildlife Division, Kentville, NS.

## **Update on the Nova Scotia Fisher Project**

Highly sensitive to changes in habitat and over-harvesting, fishers were extirpated from many areas of their range in North America. However, the species has experienced population increases in many jurisdictions, due in part to a succession of intensively harvested forest areas and marginal farmland to forest, more rigorous fur harvest limits, and

management efforts involving reintroductions.

In Nova Scotia the history of fishers has followed a similar pattern. The last native wild fisher disappeared from the province sometime in the mid-1930's. Subsequent concern for the welfare of the species along with concerns of woodlot owners over high porcupine numbers, made fisher reintroductions an attractive management option. Consequently twelve ranch raised animals were released in the vicinity of the Tobetic Wildlife Management Area in the winter of 1947-48. Following some evidence of success with that release 80\* more animals were reintroduced to various areas of the province centred in Colchester Cumberland and Pictou counties from 1963-66.

Harvest return data collected from trappers since 1976 indicates that the majority of fishers are taken in the eastern counties (Colchester, Cumberland, Pictou and Antigonish) while western fishers (Queens, Annapolis, Digby, Shelburne) have shown only very slight increases and little range expansion. Although there have been anecdotal reports of fishers occupying areas of Halifax and Hants counties none had been trapped there prior to reintroduction efforts in central Nova Scotia. The result seems to be two fairly distinct fisher populations separated by a zone of little fisher occurrence. The geographical variation in distribution and abundance of the species is the main consideration placing fisher as a 'yellow' species under the General Status of NS Wildlife ranking system (where 'green' is a species of least concern and 'red' of highest).

One goal of the reintroductions continues to be establishing fishers over their former provincial range and so it is important to gain an understanding of the apparent limitations to further population growth particularly in the western population. Because of the small

number involved and the questionable lineage of ranch raised animals there is some doubt as to the genetic viability of the population in the southwestern portion of the province. Alternatively, there may be limitations to the habitat in western NS of which we are currently unaware.

Over the last four years the NSDNR, Trappers Association of Nova Scotia, and Acadia University have cooperated in an effort to restore fishers to central NS while further studying the species' habitat. The objectives of the project are to: 1) gain understanding of fisher habitat in natural landscapes, 2) model fisher habitat preference using GIS data and 3) move animals from eastern Nova Scotia to areas of central Nova Scotia. The latter objective would link the two existing populations thereby bolstering the weaker western population. The project represents an important step by DNR to increase the viability of the species.

### ***Resident fisher***

In order to achieve the first of these goals 12 fishers captured in Colchester and Cumberland counties in 1999 were released back into their original territories. Radio-collars affixed to each of these individuals allowed monitoring of the animals throughout the spring, summer, and fall seasons providing valuable data on the habitat choices made by the animals within their home ranges. In combination with the winter harvest return data provided by trappers across Nova Scotia we now have a better picture of fisher habitat at three scales: landscape or regional, home range (the entire area an animal routinely uses) and site specific (the type of tree used for denning for example).

While the fisher's home ranges have yet to be analyzed with respect to the specific habitat within them we did discover something more

about finer scale habitat choice. While there was no discernible preference as to tree species, den and resting sites were in trees greater than 18" in diameter with hollow cavities. During warm weather fishers were occasionally noted resting in the tops of softwood species, especially those with "witches brooms". On one occasion a male used a ground den located under a pile of brush. These observations are consistent with those in other jurisdictions and those of trappers throughout the province.

Calculations of territory size from the radio locations showed that males had a home range size of about 23 km<sup>2</sup> and females 12 km<sup>2</sup>. Again, this is fairly consistent with findings elsewhere. While based on a sample too small to permit reliable results here, data on territory size are sometimes used to generate estimates of species' density and therefore population.

One interesting side note to the radio-tracking involved the location on three separate occasions of male and female fishers in close proximity to one another well outside of the breeding season. As they are typically thought to be solitary animals when not in breeding condition and are reported to avoid one another at other times this might represent evidence of unusual social interaction.

### ***Habitat Model***

Fisher habitat was further examined by employing models of fisher presence as represented by winter harvest location data. We constructed a statistical model of fisher habitat preference by superimposing the location data over maps of GIS forestry data across Colchester, Cumberland and Pictou counties and testing for similarities between locations. Sampling for the model occurred at a 25 km<sup>2</sup> scale corresponding roughly with the average home range of male fishers.

Similar approaches are often used by wildlife personnel to determine areas of interest for various species because forestry data is readily available and therefore relatively low-cost. However, some uncertainty exists as to how useful timber management data is when attempting to describe wildlife habitat. Repeatedly modelling the system by randomly choosing 90% of the location data as a “base” and then predicting whether the remaining 10% of the locations would be chosen as fisher habitat we found that the model was capable of predicting fisher habitat 68% of the time. This represents a significant capability considering that a random model would be correct in only 50% of attempts. Forestry data is therefore adequate in modelling the habitat of some kinds of wildlife unless a higher degree of predictive power is required. Other habitat models for fisher have been shown to be 80% effective, although in those cases significantly more field work must be done at a correspondingly higher cost. The model, for example, would benefit from knowledge of where fisher are *not* found, something that could be done using broad scale surveys or through estimates of trapper effort. With current harvest location data we only have access to half of the story.

Other key habitat variables implicated as important to fisher were unavailable from the GIS database. Habitat specifics such as forest understorey species and den site information matter little to the economics of forestry and are therefore absent from the database. The amount of snowfall has been shown to affect fisher movement and its inclusion may have aided model outcome. Although widespread precipitation data is collected during summer months for the purposes of forest fire monitoring collection ceases during the winter. Prey availability is another key indicator of carnivore habitat and our assumption that prey was available in all areas is likely false. Some monitoring of snowshoe hare abundance does

occur throughout the province but is not currently widespread enough to accommodate habitat modelling. Prey density estimates for this and other species would add to the predictive power of habitat models for fisher and other carnivores.

### ***Relocations***

Rather than assuming that the model would predict 'good' fisher habitat we used the relocations carried out in aid of population restoration in central Nova Scotia as an experimental test of the model's predictions, something rarely done with habitat models. We used the habitat model described above to predict areas of 'poor' and 'good' habitat in Halifax and Hants counties. In the early spring of 2000, twenty-two radio-collared animals moved from Colchester Cumberland and Pictou counties were released in either 'poor' or 'good' blocks of habitat. The response of the animals to each habitat type, and therefore the model's predictive ability, was tested by comparing a) initial movement of animals post-release, b) the proximity of individuals to their release site, c) the amount of time spent around the release site, and d) movement patterns within the habitat type.

Analysis revealed that none of the above listed parameters were different for either habitat type perhaps indicating that the model is not as capable of predicting fisher habitat as the modeling process itself indicated. However, there are confounding factors that should be considered where relocated animals are involved. Translocated fishers in our study tended to behave like many other relocated animals, they often travel long distances (in our case up to 120 km straight line distance) from their release site. This distance did not vary with the type of habitat in which animals were released indicating that other factors are responsible for movement patterns.

While every effort is made to minimize the impact of capture and handling on the animals, the stress induced during relocation likely affects the immediate response of the animals to their new environment. There may also be a tendency for released fishers to attempt homing as is noted in many birds such as pigeons but which is also documented in mammals (caribou, bears).

It is our intention to study this problem a bit further by analyzing the habitat at each area where relocated fishers are known to have resided for more than 3 days. Comparing the model's predictions at each of these sites will perhaps provide a more definitive test of its power to provide an accurate picture of fisher habitat.

Since 2000 relocations continue but have been scaled back. Radio collared animals in the central release areas are providing data augmenting that already gathered for the habitat modeling portion of the project. In addition these animals will provide data on the survivorship and reproduction of relocated animals, important information in terms of planning future relocation efforts for fishers and other species.

The project was designed to provide a better understanding of both fisher habitat use and the animals' response to relocation. Since one of the major concerns dealt with the limitation to the western fisher population, we are currently extending the model we used for fisher in Colchester, Cumberland and Pictou to cover the remaining portions of the mainland. We plan to model fisher presence in western NS at the initial 25 km<sup>2</sup> scale and compare the habitat in the ranges occupied by both eastern and western populations. In this way, we hope to detect differences between the two areas should any exist and implement a separate habitat association model for the western fisher population should the outcome

warrant it.

In the event that habitat sampling was carried out at an inappropriate scale, we intend to resample the GIS forestry/habitat data for Colchester, Cumberland, Pictou, Halifax and Hants counties at a reduced scale of 1 km<sup>2</sup> and remodel fisher presence. This may help improve the model by helping determine the scale at which fisher relate to their surroundings.

Studying the system has done several things. Specifically, the project added a great deal to our understanding of fishers, their habitat, and their population dynamics. The process of modelling fisher habitat using GIS data showed that it can be used as a tool for predictive purposes in some cases and showed where improvements could be made if necessary. More importantly the entire approach could be modified and applied to other carnivores within the province such as marten and lynx that are currently facing their own challenges.

## **Species at Risk in Nova Scotia**

### **Wildlife species protected under the Nova Scotia Endangered Species Act**

Every fall the Minister of Natural Resources releases the names of new species to be added to the growing list of species protected under the province's Endangered Species Act. Endangered means they could become extinct in Nova Scotia if steps to remove the threats to these species are not taken.

Currently, two fur-bearing species, the Cape Breton populations of marten and lynx, are listed under the Act. Both populations are centered in the highlands of Cape Breton. However, the mainland population of marten is still "red listed" (At Risk, Maybe at Risk).

Red listed species covers those species for which a formal detailed risk assessment has been completed (COSEWIC assessment or a provincial equivalent) and that have been determined to be at risk of extirpation or extinction. Species that maybe at risk of immediate extirpation or extinction and are therefore candidates for interim conservation action and detailed risk assessment by COSEWIC or the Province.

For more information on the status of wildlife in Nova Scotia visit the general status web page  
<http://www.gov.ns.ca/natr/wildlife/genstatus/>

For up-dates on provincially listed species under the Endangered Species Act visit endangered species list web page  
<http://www.gov.ns.ca/natr/wildlife/endnrgd/sp>

[ecieslist.htm](#)

**As a trapper, you can help in several ways:**

- Carefully release any live marten or lynx accidentally captured in a trap.
- Report and submit any lynx or marten accidentally killed in a trap to your local DNR office.
- Keep a written record of where and when you see a lynx or marten, or any sign of these species during the trapping season. Return it along with your Fur Harvester report at the end of the trapping season.

For more information contact your local DNR office or the Wildlife Division office in Kentville at 679-6091.

