Cooperator Ruffed Grouse Hunting Log
Results from the 2005-06 Season

Introduction

During the 2005-06 ruffed grouse hunting season, DEC conducted the second annual Cooperator Ruffed Grouse Hunting Log. This survey asks hunters to record their daily grouse hunting activities including information such as the number of grouse flushed, the number of hours hunted, the number of grouse killed, and if a dog was used to hunt grouse. The primary purpose of the log is to monitor the number of birds flushed per hour. Changes in the flushing rate should illustrate trends in the grouse population when viewed over a long period of time and will provide insight into statewide distributions for this popular game species as habitats change both locally and on a landscape scale.

We extend a sincere thank you to all the hunters that participated in the Cooperator Ruffed Grouse Hunting Log during the 2005-06 season. With only two years of data it is difficult to draw any strong conclusions about grouse distribution and abundance; however, the first two seasons were important steps in monitoring grouse populations. Over time, the efforts of participating hunters will help wildlife managers answer questions about the status and conservation of ruffed grouse in New York State.

Results from the 2005-06 Season

During the 2005-06 season, 284 hunters participated in the Cooperator Ruffed Grouse Hunting Log. Grouse log participants reported data from over 2,800 hunting trips across the state, from the lower Hudson Valley in the south, to the Adirondacks and St. Lawrence Valley in the north, and the Lake Plains and Allegheny Plateau in far western New York. They spent almost 8,000 hours afield and flushed over 8,000 grouse (about 1 flush/hour). Some general findings from the 2005-06 season include:

- Hunters participating in the survey averaged about 31 hours afield during the 2005-06 season. They took about 11 trips afield for the season and spent about 3 hours afield per trip.

- Grouse log participants averaged about 31 grouse flushed per hunter for the 2005-06 season and had to spend about an hour hunting in order to flush one grouse. In addition, hunters averaged almost 3 birds harvested for the season and had to invest about 10.5 hours of hunting effort to harvest one grouse. On average, one out of every 11 grouse flushed was harvested.

- Over 60% of the effort expended by hunters occurred during the first half of the season (September - November; Table 1). In addition, over 70% of the grouse flushed and harvested occurred during this early part of the season. The flushing rate decreased as the season progressed (Table 1).

- Effort expended and the number of ruffed grouse seen were similar on public and private lands (Table 2), but flushing rate was slightly higher on private lands (1.08 vs. 0.98 grouse flushed/hour).

- Overall, there was far more effort expended in the southern grouse season zone (almost 80% of the total), but the flushing rate was much higher in the northern season zone (Table 3).

- Almost half of the hunting effort took place in western New York State (43% Appalachian Hills & Plateau Ecozone, 5% Lake Plains Ecozone). The highest number of grouse were flushed and harvested in the Appalachian Hills & Plateau Ecozone, followed by Catskills-Delaware Hills Ecozone, and the Adirondacks-Tug Hill Ecozone (Table 4; see Figure 1 for regions referred to here).

- The flushing rate was highest in the St. Lawrence Valley Ecozone (1.51 grouse flushed/hour), followed by the Adirondacks-Tug Hill Ecozone (1.41 grouse flushed/hour), and the Champlain Valley Ecozone (1.27 grouse flushed/hour; Table 4, Figure 1). Flushing rates in the Catskill-Delaware Hills and Appalachian Hills and Plateau ecozones were close to the statewide average (1.17 and 0.99 grouse flushed/hour, respectively). The flushing rate was lowest in the Lake Plains and Mohawk Valley-Hudson Valley-Taconic Highlands ecozones (0.71 and 0.61 grouse flushed/hour, respectively).

- Most hunters (about 70%) that participated in the survey used a dog to hunt grouse (Table 5). In general, hunters that used a dog flushed and harvested more grouse and had a higher flushing rate (1.11 grouse flushed/hour) than hunters that did not use a dog (0.86 grouse flushed/hour).

Comparing the 2004-05 and 2005-06 Seasons

- During the 2005-06 season, 284 hunters participated in the Cooperator Ruffed Grouse Hunting Log, compared to 274 in 2004-05. Overall, hunters spent fewer hours afield during 2005-06 (7,939 vs. 8,155 hours), but they flushed and harvested more grouse (8,059 vs. 6,622 flushes and 725 vs. 597 birds harvested, respectively) and had a higher average number of grouse flushed per hunter for the season (31 vs. 25 flushes/hunter/season) than during 2004-05. The flush rate was slightly higher during the 2005-06 season (1.0 vs. 0.8 flushes/hr) and the amount of time spent afield to harvest a grouse decreased from 12.5 hours to 10.5 hours.

- With the exception of slight declines in the Lake Plains and Champlain Valley ecozones, flush rates were up across the State during the 2005-06 season (Figure 2). This is likely a result of increased production during the breeding season due to favorable weather conditions during the spring and early summer. Similar to last year, the number of grouse flushed per hour tended to be higher in northen New York (i.e., St. Lawrence Valley, Adirondacks-Tug Hill, and Champlain Valley Ecozones) than in the western and southern parts of the State (i.e., Appalachian Hills and Plateau, Lake Plains and Mohawk Valley-Hudson Valley-Taconic Highlands Ecozones; Figure 2).

- A substantial increase from last season in the flush rate was noted in the St. Lawrence Valley (Figure 2). Whether this is a function of a higher number of birds in this ecozone or just a result of an increased sample size (thus improving accuracy) needs further investigation.

Table 1. 2005-06 Cooperator Ruffed Grouse Hunting Log data by month.

Month	# of Trips	% of Total	# of Hours	% of Total	# Grouse Flushed	% of Total	# Grouse Harvested	% of Total	Flushing Rate ± SE[a,b] (flushes/hour)
September	81	2.8	199	2.5	279	3.5	23	3.2	1.31 ± 0.15
October	1,098	38.1	3,162	39.8	3,729	46.3	335	46.2	1.19 ± 0.04
November	585	20.3	1,760	22.2	1,793	22.2	190	26.2	1.07 ± 0.05
December	321	11.1	781	9.8	638	7.9	63	8.7	0.92 ± 0.06
January	466	16.2	1,153	14.5	952	11.8	69	9.5	0.87 ± 0.05
February	329	11.4	884	11.1	668	8.3	45	6.2	0.75 ± 0.05

[a] SE = Standard Error

[b] Overall flushing rates are calculated as an average flushing rate for all days hunted, not a simple division of the total number of grouse flushed by the total number of hours hunted.

Table 2. 2005-06 Cooperator Ruffed Grouse Hunting Log data by land (public vs. private).

	Public Land		Private Land	
	#	%	#	%
Number of Trips	1,342	46.9	1,521	53.1
Number of Hours	3,951	50.1	3,937	49.9
# Grouse Flushed	3,944	49.3	4,051	50.7
# Grouse Harvested	331	45.8	391	54.2
Flushing Rate ± SE[a,b] (flushes/hour)	0.98 ± 0.03		1.08 ± 0.03	

[a] SE = Standard Error
[b] Overall flushing rates are calculated as an average flushing rate for all days hunted, not a simple division of the total number of grouse flushed by the total number of hours hunted.

Table 3. 2005-06 Cooperator Ruffed Grouse Hunting Log data by DEC grouse season zone (northern vs. southern).

	Northern Zone		Southern Zone	
	#	%	#	%
Number of Trips	586	20.4	2,285	79.6
Number of Hours	1,699	21.5	6,220	78.5
# Grouse Flushed	2,466	30.7	5,558	69.3
# Grouse Harvested	240	33.1	485	66.9
Flushing Rate ± SE[a,b] (flushes/hour)	1.40 ± 0.06		0.94 ± 0.02	

[a] SE = Standard Error
[b] Overall flushing rates are calculated as an average flushing rate for all days hunted, not a simple division of the total number of grouse flushed by the total number of hours hunted.

Table 4. 2005-06 Cooperator Ruffed Grouse Hunting Log data by ecozone.

Ecozone [a]	# of Trips	% of Total	# of Hours	% of Total	# Grouse Flushed	% of Total	# Grouse Harvested	% of Total	Flushing Rate ± SE[b,c] (flushes/hour)
Adirondacks - Tug Hill	239	8.4	752	9.6	1,103	13.9	114	16.0	1.41 ± 0.10
Appalachian Hills & Plateau	1,241	43.6	3,346	42.7	3,069	38.6	262	36.7	0.99 ± 0.04
Catskills - Delaware Hills	407	14.3	1,245	15.9	1,389	17.5	125	17.5	1.17 ± 0.06
Champlain Valley	127	4.5	333	4.2	416	5.2	38	5.3	1.27 ± 0.12
Lake Plains	187	6.6	395	5.0	292	3.7	14	2.0	0.71 ± 0.07
Mohawk Valley - Hudson Valley - Taconic Highlands	443	15.6	1,204	15.4	782	9.8	74	10.4	0.68 ± 0.04
St. Lawrence Valley	203	7.1	562	7.2	893	11.2	86	12.1	1.51 ± 0.10

[a] Ecozones are an aggregation of Wildlife Management Units. The Costal Lowlands Ecozone (New York City and Long Island) does not have a ruffed grouse season, thus is not listed.

[b] SE = Standard Error

[c] Overall flushing rates are calculated as an average flushing rate for all days hunted, not a simple division of the total number of grouse flushed by the total number of hours hunted.

Table 5. 2005-06 Cooperator Ruffed Grouse Hunting Log data by hunting method (with dog vs. without).

	Hunted ***with*** Dog		Hunted ***without*** Dog	
	#	**%**	**#**	**%**
Number of Trips	2,038	70.9	837	29.1
Number of Hours	5,646	71.3	2,277	28.7
# Grouse Flushed	6,214	77.3	1,830	22.7
# Grouse Harvested	538	74.3	186	25.7
Flushing Rate ± SE[a,b] (flushes/hour)	1.11 ± 0.03		0.86 ± 0.04	

[a] SE = Standard Error

[b] Overall flushing rates are calculated as an average flushing rate for all days hunted, not a simple division of the total number of grouse flushed by the total number of hours hunted.

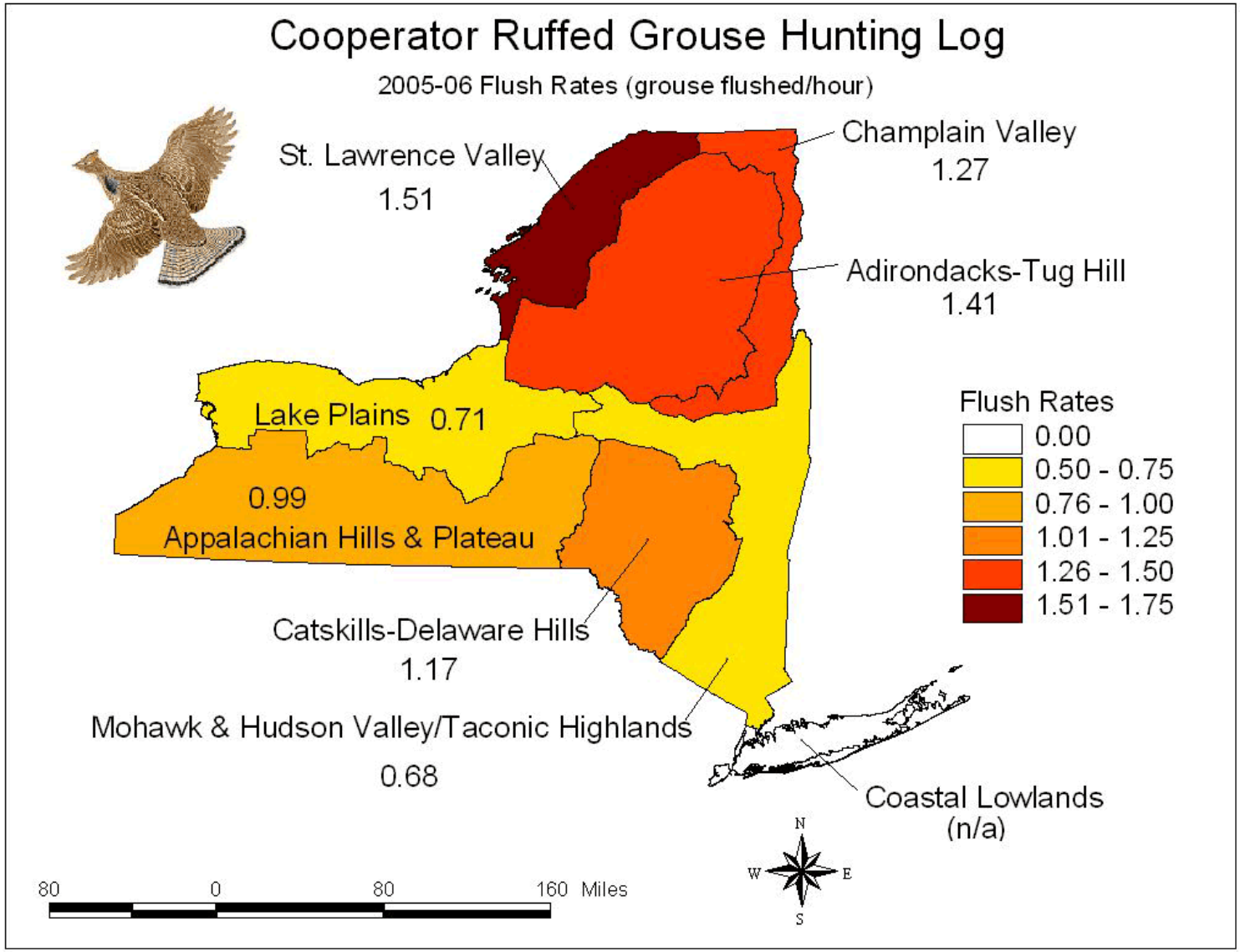

Figure 1. Flushing rate (grouse flushed/hour) by ecozone based on 2005-06 Cooperator Ruffed Grouse Hunting Log data. Ecozones are an aggregation of Wildlife Management Units. The Costal Lowlands Ecozone (New York City and Long Island) does not have a ruffed grouse hunting season.

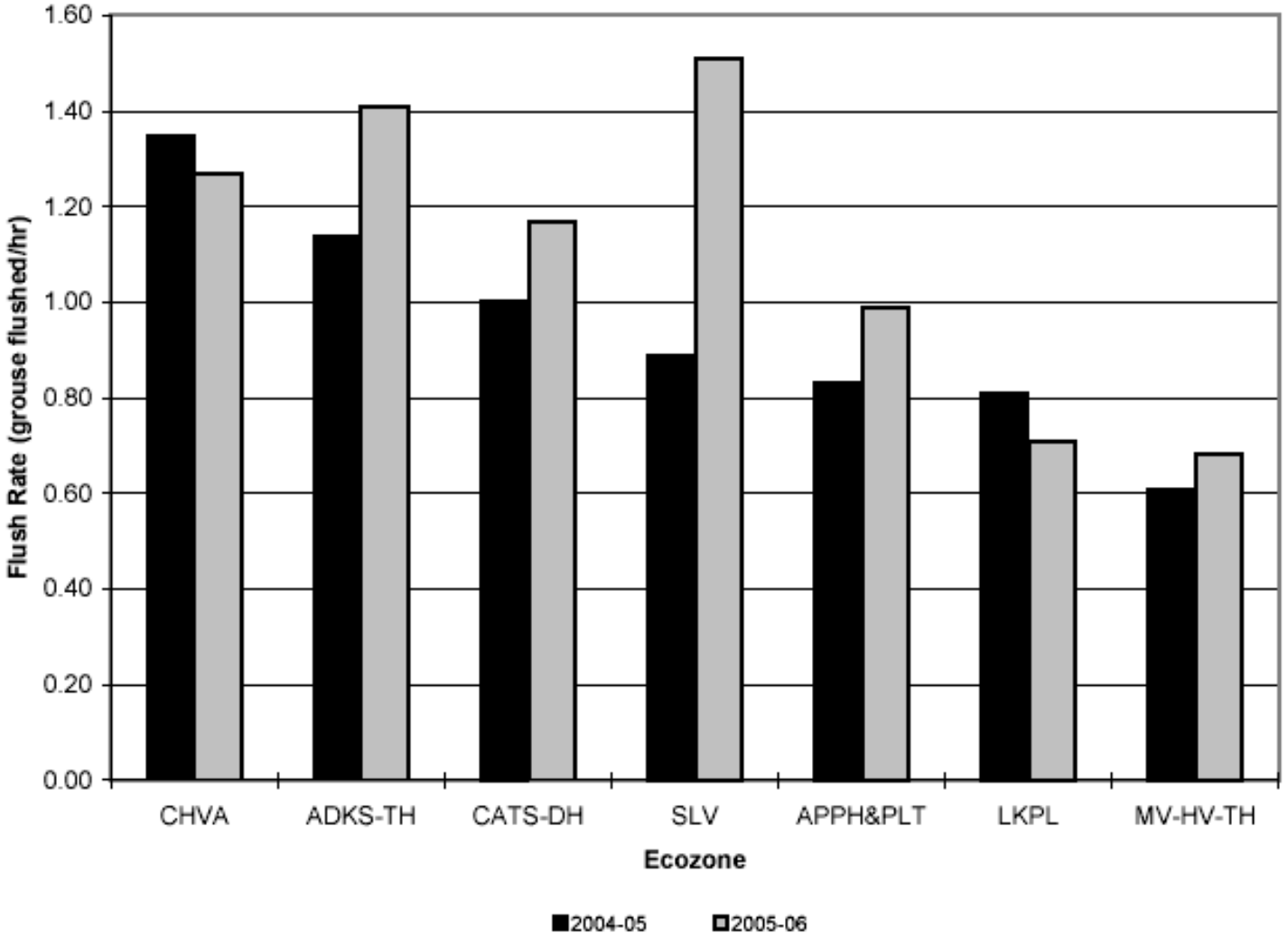

Figure 2. Flushing rate (grouse flushed/hour) by ecozone during the 2004-05 and the 2005-06 hunting seasons. CHVA = Champlain Valley; ADKS-TH = Adirondacks - Tug Hill; CATS-DH = Catskills - Delaware Hills; SLV = St. Lawrence Valley; APPH&PLT = Appalachian Hills & Plateau; LKPL = Lake Plains; MV-HV-TH = Mohawk Valley - Hudson Valley - Taconic Highlands.