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977	Title Wild Turkey Population Indices - Spring, 2009.	5/11/09

Abstract: The mean number of wild turkeys heard along 10 roadside counts during March 30 through 17 April 2009 was 0.79 gobblers heard per stop, a 5% increase compared to the gobbling index of 0.75 in 2008. The long-term trends show an increase since 1987 except for the slightly depressed trend since the 2006 peak. The 5% increase in the gobbling index in 2009 was not significantly different ($P > 0.05$) from the previous 5-yr mean (2004-2008).

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Gobbler counts are conducted annually during late March to April to determine the relative population trends of wild turkeys in the areas surveyed. In 2009, 10 traditional areas were surveyed in portions of 14 counties. Roadside gobbler trend routes were conducted in conjunction with roadside trend routes for ruffed grouse. Each route has 15 predetermined listening stops along 10-20 miles of rural roadways. The average number of gobblers heard on 10 roadside trend routes ranged from 0.20 to 2.13 gobblers heard per stop (**Table 1**). Overall, an average of 0.79 gobblers were heard per stop in 2009 which was 5% more than the number heard in 2008.

While roadside routes are not accurate indicators of annual trends in wild turkey populations, they provide some long-term (≥ 5 yrs) trends and provide information to compare areas relative to each other (**Table 2**). Weather conditions during the survey period can contribute to the variability of annual trends. Annual variations may also reflect the proportion of 2-year-old gobblers in the population rather than actual population trends over the long term. The substantial increase in the 2006 gobbling index is a prime example of where the record high summer brood production in 2004 (Backs 2006) became quite evident with a large cohort of very vocal 2-yr-old gobblers (**Figure 1**). The slight depression in the gobbling indices since the 2006 peak probably reflects the low summer brood production of 2005-2008. The 5% increase in the gobbling index in 2009 was not significantly different ($P > 0.05$) from the previous 5-yr mean (2004-2008) of 0.98 gobblers heard/stop.

The 23 survey years represent a period of time when most turkey populations were undergoing steady growth but are now reaching population maintenance levels. Gobbling count indices will now begin to fluctuating above/below a lower, long-term mean unless habitat conditions or harvest strategies change the impact of environmental influences.

Literature Cited

Backs, S. E. 2006. Wild turkey brood production – Summer 2005. Wildlife Management and Research Note #910. Indiana Division of Fish and Wildlife, Indianapolis. 5pp.

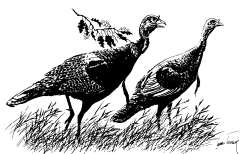


Table 1. Wild turkeys heard on roadside counts in Indiana between 30 March to 17 April 2009.

County/Area	No. of Routes/ Stops	No. of Repetitions (for/rev)	Total Turkeys Heard	Total Seen	Highest Number Heard/Rt.	Turkeys Heard ^{1/} Per Stop	
						2009	2008
Jackson, Brown, Monroe (Hickory Ridge, USFS)	1/15	2	49	1	32	2.13	2.33
Owen-Putnam	1/15	2	8	13	5	0.33	0.33
Perry Co. (Oriole-St.Croix-USFS)	1/15	2	17	0	9	0.60	0.67
Washington State Forest	1/15	2	7	2	4	0.27	0.40
Lawrence & Orange (Lost River - E, USFS)	1/15	2	15	0	8	0.53	0.53
Martin & Orange (Lost River - W, USFS)	1/15	2	34	1	18	1.20	0.67
Morgan-Monroe State Forest	1/15	2	22	2	12	0.80	0.67
Greene	1/15	2	3	0	3	0.20	0.07
Orange (Little Fork, USFS)	1/15	2	27	4	18	1.20	0.67
Jefferson	1/15	2	17	1	9	0.60	1.20
Means						0.79	0.75

^{1/} Indices calculated using route with highest count.

Table 2. Wild turkey roadside gobbling counts during April in Indiana from 1987 to 2009.

Year	Gobblers Heard Per Stop *										YEAR MEAN	SE
	HICKORY	OWPUT	PERRY	WASH	LR-EAST	LR-WEST	MORGAN	GREENE	LICKCR	JEFFERSON		
1987	1.10	0.07	0.00	0.20	0.53	NR	0.27	0.00	0.00	1.00	0.35	0.144
1988	0.73	0.13	0.13	0.00	0.47	NR	0.20	0.07	0.00	1.13	0.32	0.129
1989	1.13	0.00	0.21	0.00	0.87	NR	0.20	0.00	0.47	0.73	0.40	0.141
1990	0.80	0.13	0.20	0.00	1.00	1.27	0.27	0.07	0.73	0.53	0.50	0.137
1991	0.33	0.20	0.40	0.00	0.87	0.53	0.33	0.07	0.87	1.07	0.47	0.115
1992	0.73	0.07	0.20	0.00	0.80	1.87	0.00	0.07	0.67	0.53	0.49	0.183
1993	0.47	0.00	0.47	0.00	0.27	0.53	0.07	0.20	0.47	1.20	0.37	0.113
1994	0.53	0.13	0.47	0.00	0.73	0.27	0.13	0.27	0.80	0.80	0.41	0.094
1995	0.67	0.00	0.80	0.00	0.93	0.73	0.00	0.13	0.80	1.53	0.56	0.162
1996	1.13	0.33	0.80	0.07	0.60	1.47	0.27	0.13	0.53	0.80	0.61	0.142
1997	0.67	0.20	0.87	0.07	0.73	0.47	0.47	0.00	0.60	0.93	0.50	0.102
1998	1.40	0.27	0.47	0.40	0.60	0.53	0.33	0.67	0.27	0.80	0.57	0.107
1999	0.80	0.60	0.47	0.27	1.27	0.53	0.67	0.40	0.87	1.20	0.71	0.104
2000	0.60	0.20	0.53	0.67	1.27	0.47	0.27	0.67	1.20	1.33	0.72	0.129
2001	0.73	0.53	0.60	0.60	0.67	0.73	0.33	0.33	0.93	1.73	0.72	0.126
2002	0.33	0.60	0.53	0.80	1.27	0.93	0.53	0.20	1.13	1.33	0.77	0.124
2003	0.53	0.20	0.60	1.47	1.07	0.67	0.80	0.60	1.00	2.13	0.91	0.175
2004	0.80	0.20	1.07	1.33	0.87	0.73	1.33	0.60	1.00	1.87	0.98	0.145
2005	0.93	0.27	0.87	1.20	1.07	1.47	0.33	0.60	0.80	1.47	0.90	0.133
2006	2.67	0.60	0.93	0.73	1.60	2.27	0.53	1.53	1.47	2.20	1.45	0.238
2007	1.07	0.20	1.00	0.80	0.60	1.07	0.73	0.27	0.73	1.53	0.80	0.125
2008	2.33	0.33	0.67	0.40	0.53	0.67	0.67	0.07	0.67	1.20	0.75	0.199
<i>Cumm. Mean</i>	<i>0.93</i>	<i>0.24</i>	<i>0.56</i>	<i>0.41</i>	<i>0.85</i>	<i>0.91</i>	<i>0.40</i>	<i>0.32</i>	<i>0.73</i>	<i>1.23</i>	0.65	0.102
<i>5 Yr Mean</i>	<i>1.56</i>	<i>0.32</i>	<i>0.91</i>	<i>0.89</i>	<i>0.93</i>	<i>1.24</i>	<i>0.72</i>	<i>0.61</i>	<i>0.93</i>	<i>1.65</i>	0.98	0.130
2009	2.13	0.33	0.60	0.27	0.53	1.20	0.80	0.20	1.20	0.60	0.79	0.186

*

= Indices calculated using route with highest count.

HICKORY = Hickory Ridge (USFS), Lawrence and Jackson Counties
OWPUT = General area of Owen-Putnam St. Forest
PERRY = northern portion of Perry Co.(USFS)
WASH = general area of Jackson-Washington St. Forest in Washington County
LR-EAST = Lost River Unit - East, USFS, Lawrence and Orange Counties.
YEAR MEAN = Arithmetic average value for all routes for a respective year (row).
SE = standard error of annual (row) mean
Cumm. Mean = *Cumulative mean for a particular route.*
5 Yr Mean = *mean for 5 years previous to survey year.*

MORGMON = general area of Morgan-Monore St. Forest in Morgan county.
GREENE = eastern Greene County
LICKCR = Lick Creek Area, USFS, in Orange County.
JEFFERSON = Jefferson County
LR-WEST = Lost River Unit - West, USFS, Orange and Martin Counties.

Figure 1. Roadside Gobbling Indices

