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2036	Title Spring Wild Turkey Gobbling Counts, 2017	7/11/2017

Abstract: The number of male wild turkeys heard gobbling along 14 roadside routes from 29 March to 19 April, 2017 was 0.86 gobblers per stop (GI), 51% more than the 0.57 heard in 2016. The 5-year moving average showed a general increase from 1987 to 2006, followed by a general decrease since the 2006 peak. The 2017 statewide gobbling index of 0.86 was greater than the 5-year mean of 0.7, but within the 5-year confidence limit interval (CI = 0.55-0.88; $P < 0.05$).

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Gobbler counts are conducted annually from late March to April to determine relative abundance of wild turkey populations in the areas surveyed. In 2017, 14 roadside routes were surveyed in portions of 19 counties; these surveys were also conducted in conjunction with roadside counts of drumming male ruffed grouse. Each route has 15 predetermined listening stops along 10-20 miles of rural roadways. Routes are driven at least twice, in opposite directions, and the highest gobbler count per stop is used to determine the Gobbling Index (GI). The average number of gobblers heard per stop on the 14 routes in 2017 ranged from 0.33 to 1.73 (Table 1). The statewide GI of 0.86 gobblers heard per stop was 51% more than the 0.57 GI in 2016.

Although roadside gobbling counts are not accurate indicators of annual trends in wild turkey populations, they do provide long-term (*i.e.*, ≥ 5 years) trends and information to compare areas relative to one other (Table 2). Local weather conditions during the survey period can contribute to the annual variability of survey results. Annual variations may also reflect the proportion of vocal 2-year-old gobblers in the population rather than actual population trends in the immediate area. 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 vocal 2-yr-old gobblers (Figure 1). The long-term trend, based on a 5-year moving average, shows a general increase from 1987 to 2006, followed by a general decrease, likely reflecting a similar general long term downswing in the summer brood production (Backs, 2017). The 2017 gobbling index of 0.86 was greater than the 5-year mean of 0.71 but within the 5-year confidence limit interval (CI = 0.55-0.88; $P < 0.05$).

Literature Cited

- Backs, S. E. 2006. Wild turkey brood production – Summer 2005. Wildlife Management and Research Note No. 910. Indiana Division of Fish and Wildlife, Indianapolis. 5pp.
- Backs, S. E. 2017. Wild turkey brood production – Summer 2016. Wildlife Management and Research Note No. 2026. Indiana Division of Fish and Wildlife, Indianapolis. 7pp.

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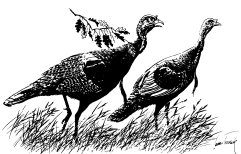


Table 1. Wild turkey males heard gobbling on roadside counts in Indiana, 29 March-19 April 2017.

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	
						2017	2016
Jackson, Brown, Monroe (Hickory Ridge, USFS-HNF)	1/15	2	40	1	26	1.73	0.20
Owen-Putnam	1/15	2	20	0	13	0.87	0.47
Perry (Oriole-St.Croix-USFS-HNF)	1/15	1	10	0	10	0.67	0.47
Washington (Jackson-Washington SF)	1/15	2	26	0	16	1.07	0.40
Lawrence & Orange (Lost River - E, USFS-HNF)	1/15	2	17	0	10	0.67	0.40
Martin & Orange (Lost River - W, USFS)	1/15	2	37	0	19	1.27	1.00
Morgan-Monroe (M-M SF)	1/15	2	17	3	13	0.87	0.47
Greene	1/15	2	21	2	11	0.73	0.60
Orange (Lick Fork, USFS HNF)	1/15	2	23	3	12	0.80	0.87
Jefferson	1/15	2	30	10	16	1.07	0.40
Marshall-Starke	1/15	2	25	0	13	0.87	0.67
Parke	1/15	2	10	2	8	0.53	0.53
Lagrange/Steuben Co (Pigeon River FWA)	1/15	2	16	1	9	0.60	0.80
Brown (Yellowwood SF)	1/15	2	7	1	5	0.33	0.27
Average						0.86	0.57

^{1/} Gobbling Index (gobblers heard per stop) calculated using route with highest count.

Table 2. Wild turkey roadside gobbling counts during late March-April in Indiana, 1987-2017.

Year	Gobblers Heard Per Stop *														ROW MEAN	SE
	HICKORY	OWPUT	PERRY	WASH	LR-EAST	LR-WEST	MORGAN	GREENE	LICKFK	JEFFERSON	MARSTRK	PARKE	LAGSTEU	BROWN		
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
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
2010	0.80	0.67	0.53	0.47	0.40	0.93	0.73	0.20	1.27	1.07	-	-	-	-	0.71	0.125
2011	1.20	0.33	0.53	0.67	0.53	1.33	0.80	0.07	0.87	1.07	-	-	-	-	0.74	0.125
2012	1.60	0.47	0.60	0.60	0.93	0.67	0.93	0.60	0.87	1.33	0.73	1.27	1.40	0.60	0.90	0.093
2013	0.40	0.47	0.73	0.53	0.47	1.00	0.53	0.60	0.67	1.47	0.67	1.13	0.93	0.67	0.73	0.077
2014	0.47	0.53	0.67	0.87	0.53	1.07	0.73	0.27	0.40	1.33	1.53	1.07	0.73	0.47	0.76	0.095
2015	0.27	0.27	0.4	0.67	0.53	1.00	0.40	0.60	0.80	1.00	1.07	0.53	1.00	0.73	0.66	0.072
2016	0.20	0.47	0.47	0.40	0.40	1.00	0.47	0.60	0.87	0.40	0.67	0.53	0.80	0.27	0.54	0.058
Previous 5 Yr Mean	0.59	0.44	0.57	0.61	0.57	0.95	0.61	0.53	0.72	1.11	0.93	0.91	0.97	0.55	0.72	0.054
2017	1.73	0.87	0.67	1.07	0.67	1.27	0.87	0.73	0.80	1.07	0.87	0.53	0.60	0.33	0.86	0.089

* = Gobbling Index (mean gobblers heard per stop) calculated using route with highest count.
HICKORY = Hickory Ridge (USFS), Lawrence and Jackson Counties LICKFK = Lick Fork Creek Area, USFS, in Orange County.
OWPUT = General area of Owen-Putnam St. Forest JEFFERSON = Jefferson County
PERRY = northern portion of Perry Co.(USFS) LR-WEST = Lost River Unit - West, USFS, Orange and Martin Counties.
WASH = general area of Jackson-Washington St. Forest in WashiMARSTRK = Marshall-Starke counties.
LR-EAST = Lost River Unit - East, USFS, Lawrence and Orange CoPARKE = Parke County.
MORGAN = general area of Morgan-Monore St. Forest in Morgan coLAGSTEU = Lagrange-Steuben counties (Pigeon River Fish & Wildlife Area.
GREENE = eastern Greene County BROWN = Yellowood State Forest in Brown County.
YEAR MEAN = Arithmetic average value for all routes for a respective year (row).
SE = standard error of annual (row) mean

Figure 1. Gobblers Roadside Indices

