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2041	Title: Spring Wild Turkey Gobbling Counts, 2019	4/23/2019

Abstract: The number of male wild turkeys heard gobbling along 14 roadside routes from 2-20 April 2019 was 0.68 gobblers per stop (GI), 11% less than the 0.74 heard in 2018. The 5-year moving average showed a general increase from 1987 to 2006, followed by a general decrease since the 2006 peak. The 2019 statewide gobbling index of 0.68 was within the confidence interval (CI = 0.56-0.86; $P < 0.05$) of the 5-year mean GI of 0.71.

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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 2012, 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 2018 ranged from 0.20 to 1.93 (Table 1). The statewide GI of 0.68 gobblers heard per stop was 11% less than the 0.74 GI in 2018.

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 2018) 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. The 2019 gobbling index of 0.68 was within the confidence interval (CI = 0.56-0.86; $P < 0.05$) of the 5-year mean GI of 0.71.

Literature Cited

Backs, S. E. 2018. Wild turkey brood production – Summer 2018. Wildlife Management and Research Note No. 1987. Indiana Division of Fish and Wildlife, Indianapolis. 7pp.

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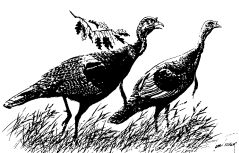


Table 1. Wild turkey males heard gobbling on roadside counts in Indiana, 2-20 April 2019.

County/Area	No. of Routes/ Stops	No. of Repititions (for/rev)	Total Turkeys Heard	Total Seen	Highest Number Heard/Rt.	Turkeys Heard ^{1/} Per Stop	
						2019	2018
Jackson, Brown, Monroe (Hickory Ridge, USFS-HNF)	1/15	2	22	1	16	1.07	0.80
Owen-Putnam	1/15	2	7	7	6	0.40	0.53
Perry (Oriole-St.Croix-USFS-HNF)	1/15	2	11	3	7	0.47	0.33
Washington (Jackson-Washington SF)	1/15	2	14	3	8	0.53	1.00
Lawrence & Orange (Lost River - E, USFS-HNF)	1/15	3	9	10	5	0.33	0.20
Martin & Orange (Lost River - W, USFS)	1/15	2	16	0	10	0.67	1.20
Morgan-Monroe (M-M SF)	1/15	2	16	6	9	0.60	0.60
Greene	1/15	2	10	2	7	0.47	0.47
Orange (Lick Fork, USFS HNF)	1/15	2	41	11	29	1.93	0.67
Jefferson	1/15	2	14	0	10	0.67	0.93
Marshall-Starke	1/15	2	15	1	8	0.53	0.80
Parke	1/15	1	6	21	3	0.20	0.53
Lagrange/Steuben Co (Pigeon River FWA)	1/15	2	27	1	19	1.27	2.13
Brown (Yellowwood SF)	1/15	2	6	1	6	0.40	0.20
Average						0.68	0.74

^{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, 1987-2019.

Year	Gobblers Heard Per Stop *															
	HICKORY	OWPUT	PERRY	WASH	LR-EAST	LR-WEST	MORGAN	GREENE	LICKFK	JEFFERSON	MARSTRK	PARKE	LAGSTEU	BROWN	ROW MEAN	SE
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
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
2018	0.80	0.53	0.33	1.00	0.20	1.20	0.60	0.47	0.67	0.93	0.80	0.53	2.13	0.20	0.74	0.128
Previous 5 Yr Mean	0.69	0.53	0.51	0.80	0.47	1.11	0.61	0.53	0.71	0.95	0.99	0.64	1.05	0.40	0.71	0.059
2019	1.07	0.40	0.47	0.53	0.33	0.67	0.60	0.47	1.93	0.67	0.53	0.20	1.27	0.40	0.68	0.118

* = Gobbling Index (mean gobblers heard per stop) 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.
MORGMON = general area of Morgan-Monore St. Forest in Morgan county.
GREENE = eastern Greene County
YEAR MEAN = Arithmetic average value for all routes for a respective year (row).
SE = standard error of annual (row) mean

LICKFK = Lick Fork Creek Area, USFS, in Orange County.
JEFFERSON = Jefferson County
LR-WEST = Lost River Unit - West, USFS, Orange and Martin Counties.
MARSTRK = Marshall-Starke counties.
PARKE = Parke County.
LAGSTEU = Lagrange-Steuben counties (Pigeon River Fish & Wildlife Area).
BROWN = Yellowood State Forest in Brown County.

Figure 1. Roadside Gobbling Indices

