

2016 PUBLIC INTERNET WILD TURKEY SUMMER BROOD SURVEY SUMMARY REPORT

Many thanks to all the people throughout New Hampshire who submitted sightings of broods of young wild turkeys. The results of the survey summarized here will help Fish & Game Department keep track of the status and reproductive success of the wild turkey population around the state. The turkey project biologist in the southwestern section of the state, with some help from several biologists in other regions of the state, gathers a sample of brood observations throughout the summer in order to get an “index” of the yearly degree of hatching success. However, the number of sightings is not very large, and misses many towns and sections of the 9,000 square miles of the state. Participants in this survey help fill in those gaps, and provide many more brood sightings. This was the sixth year of our internet-based turkey brood survey, which covers May 15 - August 31, 2016. For the past eight years there has been a similar internet-based wild turkey flock survey during the winter months.

Weather/Hatching Conditions Summer 2016

Summer 2016 was good for turkey brood productivity. The semi drought conditions and above average temperatures contributed to good hatching success. An early summer sample of 29 turkey broods observed by Department staff, mostly in southwestern New Hampshire, had an average of 8.48 poults per hen. Because of the early green-up and mild spring conditions the majority of these broods hatched out in late May.

Number of Broods Reported

A record number of 2,926 brood observation reports came from this year’s 2016 public internet survey, compared to 2,202 reports the previous year. The state is divided into six regions in order to detect any differences in habitat carrying capacity and turkey populations. As expected the most brood sighting reports, 1,739 or 59.43% of the state total were from the southeast region (see Table 1), primarily because this region has the highest human density to see and report turkey broods. The next highest of 530 (18.11%) was from the southwest region. Of the state’s 18 wildlife management units (WMUs, see Figure 1), those with the most brood reports were: unit M 897 (30.66%), unit K 465 (15.89%), unit L 377 (12.88%), and unit J2 367 (12.54%) (see Table 2).

Number of Poults per Hen

The six regions of the state (see Figure 1) were compared for the month of August because at this time the poults are larger and more readily counted and most attrition of young turkeys has already occurred. The North region had the highest poults per hen average of 3.33 (see Table 5), however this region also had the smallest sample size of brood reports. The next highest was the southeast region with a 3.17 average. For the state as a whole the average was 2.97 poults per hen, as compared to 3.91 last year. The highest has been year 2011 with 4.38 poults per hen.

Broods Reported per Time Period

Brood reports became increasingly numerous over three 2-week periods spanning May 26 through July 20, totaling 812 reports or 27.75% of the total (see Table 3). The single biggest reporting period was from August 4 through August 17, with 1,112 brood reports (38.00%). The

average poults per hen during 2-week periods during May and June ranged from 4.81 to 5.46 (see Table 4), but then during July and August dropped off due to losses of poults, so that by the last 2-weeks of August the statewide average was 2.83 poults per hen.

Estimated Hatching Dates

The mean hatching dates by region during summer 2016 did not vary much (see Table 6). The latest average date was in the north region with a mean of June 29. The southwest region had a mean of June 18. The mean for the other four regions was June 19 for each. The statewide average was also June 19th.

Public Attitude Questionnaire

A total of 2,585 respondents gave their opinion on feelings about wild turkeys. The results were: strongly dislike turkeys (5 people, 0.2%), dislike turkeys (24 people, 0.9%), neither like or dislike turkeys (197 people, 7.6%), like turkeys (716 people, 27.7%), and strongly like turkeys (1643 people, 63.6%). The overwhelming percentage (91.3%) of the respondents continues to like and appreciate New Hampshire's the wild turkey population.

Symptoms of Avian Pox and LPDV Virus

There were 6 towns or sites with a turkey brood with a hen having pox virus (see Table 9). It appears that none of the young turkeys in a brood showed clinical symptoms. Four of these brood flocks were comprised of 3 to 6 hens. It is not known if more than one hen in a multiple hen brood had virus lesions. The previous year there were 11 towns or sites with hens having the virus lesions.

Towns with the Most Brood Observations

Table 7 records the towns with 30 or more brood reports. The most recorded were from Londonderry (92), Derry (68), and Milford (66). An obvious fact about this list of 26 towns is that virtually all these towns are cities or fast becoming cities. They are highly developed areas. A major reason for the numerous brood reports is probably because numerous individuals are reporting the same brood flocks. Table 8 records the towns with 400 or more total turkeys tallied. The most turkeys added up were from Londonderry (928) and Milford (793), here again, each of these 15 towns is highly developed.

Conclusions

During summer 2016 the public reported 2,926 brood observations, compared to 2,202 reports the previous year 2015. As expected, the most brood reports, 1,739 or 59.43% were from the southeast region primarily because this region has the most people to make reports. The north region (3.33) had the highest poults per hen average followed by the southeast region (3.17). For the state as a whole the average was 2.97 poults per hen during August, compared to a similar average of 2.91 last year. An increasing number of brood reports came from three 2-week periods between early June and Early July (27.75%), and the most were from the first half of August (38.00%). The average hatching date between the six regions did not vary much from the statewide average of June 19th. There were reports from only 6 towns in 3 counties recording hens in broods that had the avian pox lesions, as compared to 11 towns the previous year. Summer 2016 was good for turkey brood productivity. The semi-drought conditions and above average temperatures contributed to good hatching success.

Table 1. Number and Percent of Brood Observations by Region of State, Summer 2016

Region	# of Brood Reports	% of Total	WMU's Covered
North	24	0.82%	E,F
White Mtn.	59	2.02%	A,B,C1,C2
Conn. River	135	4.61%	D1,D2,G
E. Central	439	15.00%	J1,J2
Southwest	530	18.11%	H1,H2,I1,I2
Southeast	1,739	59.43%	K,L,M
Total	2,926		

Table 2. Number and percent of brood observations by WMU's Summer 2016

WMU	# of Brood Reports	% of Total		WMU	# of Brood Reports	% of Total
A	8	0.27%		H1	88	3.01%
B	4	0.14%		H2	138	4.72%
C1	9	0.31%		I1	165	5.64%
C2	3	0.10%		I2	139	4.75%
D1	15	0.51%		J1	72	2.46%
D2	30	1.03%		J2	367	12.54%
E	24	0.82		K	465	15.89%
F	35	1.20%		L	377	12.88%
G	90	3.08%		M	897	30.66%
Total = 2,926 reports						

Table 3. Number and Percentage of Brood Reports per 2-week Period (Summer 2016)

Observation Period	# of Brood Reports	% of Total
May 1 – May 11	3	0.10%
May 12 – May 25	10	0.34%
May 26 – June 8	81	2.77%
June 9 – June 22	268	9.16%
June 23 – July 20	341	11.65%
July 21 – August 3	284	9.71%
August 4 – August 17	1,112	38.00%

August 18 – August 31	364	12.44%
Total	2,926	

Table 4. Turkey Poults per Hen Average, Statewide by Observation Period, Summer 2016

Observation Period	# of Brood Observations	Poults per Hen
May 1 – May 11	3	0.04
May 12 – May 25	10	5.33
May 26 – June 8	81	5.46
June 9 – June 22	268	4.81
June 23 – July 6	463	5.15
July 7 – July 20	341	3.99
July 21 – August 3	284	3.54
August 4 – August 17	1,112	2.96
August 18 – August 31	364	2.83

Table 5. Turkey Poults per Hen Average, Statewide for August 2016 by Region

Region	# of Brood Reports	# of Hens	# of Poults	Poults per Hen
North	15	36	120	3.33
White Mtn.	31	78	209	2.68
Conn. River	73	301	552	1.83
E. Central	240	795	2,100	2.64
Southwest	275	838	2,580	3.08
Southeast	923	2,579	8,181	3.17
Statewide	1,557	4,627	13,742	2.97

Table 6. Mean Hatching Dates by Region, Summer 2016

Region	# of Brood Reports	Mean Date
North	15	June 29
White Mtn.	36	June 19
Conn. River	92	June 19
E. Central	343	June 19
Southwest	401	June 18
Southeast	1,296	June 19
(Statewide)	2,183	June 19

Table 7. Towns with most Reported Brood Observations, Summer 2016

Town	# of Brood Reports		Town	# of Brood Reports
Alton	30		Hollis	31
Amherst	36		Hooksett	37
Auburn	48		Hudson	42
Barrington	42		Litchfield	39
Bedford	75		Londonderry	92
Bow	31		Loudon	43
Candia	37		Manchester	43
Concord	52		Merrimack	53
Deerfield	33		Milford	66
Derry	68		Raymond	35
Gilford	30		Rochester	46
Goffstown	39		Stratham	32
Hillsborough	30		Windham	34

Table 8. Towns with the Most Total Turkeys Reported, Summer 2016

Town	Total Turkeys		Town	Total Turkeys
Auburn	544		Laconia	440
Barrington	485		Litchfield	408
Candia	406		Londonderry	928
Claremont	417		Loudon	429
Concord	488		Merrimack	519
Derry	778		Milford	793
Goffstown	446		Rochester	600
Hudson	416			

Table 9. Towns/Sites (N=6) Showing Symptoms of Pox Viruses from 2,926 Brood Observations, Statewide (Summer 2016)

Town	County	WMU	# of Pox Sites (Broods)
Brentwood	Rockingham	M	1
Derry	Rockingham	M	1
Dalton	Coos	D1	1
Hillsborough	Hillsborough	K	1
Litchfield	Hillsborough	M	1
Wilton	Hillsborough	K	1

