

2017 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 that 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 seventh year of our internet-based turkey brood survey, which covers May 15 – August 31, 2017. For the past seven years there has been a similar internet-based wild turkey flock survey during the winter months.

Weather/Hatching Conditions Summer 2017

Three periods of rain/cool temperatures during May 2017, and four periods during June 2017, had the potential to negatively impact on hatching success. Normally for the southern half of New Hampshire, the majority of the turkey hatch occurs during the 4th week of May and the 1st week of June.

Unfortunately, this was an extended period of rain and poor hatching weather during 2017. There was also an unusual late snowfall on May 14th.

Relatively few turkey broods were observed during May and early June. A contributing factor may have been late mowing of hayfields due to wet ground. Many turkey broods are seen in fields after mowing greatly increases their visibility.

From the size poults from a random sample of 18 broods from southwestern New Hampshire, indicated that 16 of these broods hatched out in late May, and only 2 broods in early June. The number of poults per brood was not bad with an average of 5.1. There were only two broods of 1 hen + 1 poult. More brood sightings from the second half of July and early August indicate some decent number of poults per hen, and shows a significant number of broods from re-nesting.

Number of Broods Reported

There were 1,784 brood observation reports from this year’s 2017 Public Internet Survey, compared to 1,926 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 1,164 (65.3%), of the state total, were from the Southeast Region, primarily because this region has the highest human density to see and report turkey broods. The next highest of 222 (12.4%), was from the Southwest Region.

Of the states 18 wildlife management units, those with the most brood sighting reports were: unit M 628 (35.2%), unit L 279(15.6%), unit K 257 (14.4%), and unit J2 203 (11.4%).

Number of Poults per Hen

The six regions of the state were compared from 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 4.11, although the sample size is small. The next highest were the East Central with 3.89, and the Connecticut River with 3.87.

For the state as a whole, the average was 3.32 poults per hen, as compared to 2.97 the previous year. The highest has been year 2011 with 4.38 poults per hen.

Estimated Hatching periods

The most hatching (back calculating from the size of the young) occurred during the following 2-week period: May 26-June 8th 2,188 poults (17.8%), June 9-June 22nd 3,600 poults (29.2%) and June 23-July 6th 3,243 poults (26.3%). The six week period accounted for 73.3% of the statewide turkey hatch. A significant number of these reports may have been of poults from second nest attempts, but this would be difficult to determine from the reporting data. The earliest of regional hatching dates is the Southeast Region (June 19), which could be expected because it is coastal and southern. The latest average hatching date is from the North Region (June 30), which would be expected because of its northern latitude. The other four regions were in the middle with average hatching dates of (June 25 or June 26). The statewide average hatching date from 1,537 brood observation reports was June 21st.

Towns with the Most Brood Observations

Table 8. records the towns with 20 or more brood reports. The most recorded were from: Merrimack 60, Derry 53, Londonderry 47, Auburn 44, Dover 38, Bedford 35. Each of these towns is from the Southeast Region, and are highly developed. A major reason for the numerous brood reports is probably because travelers are reporting the same brood flocks. Table 9. records the towns with the most total turkeys tallied. The most turkeys (hens + poults) added up were: Derry 593, Auburn 557, Merrimack 514, Dover 495, Londonderry 432.

Public attitude questionnaire

A total of 1,575 respondents gave their opinion on feeling about wild turkeys. The results were: 9 people (0.57%) strongly dislike turkeys, 12 people (0.76%) dislike turkeys, 92 people (5.84%) neither like or dislike turkeys, 401 people (25.5%) like turkeys, and 1,061 people (67.4%) strongly like turkeys.

The overwhelming percentage of respondents (92.9%) continue to like or strongly like wild turkeys.

Symptoms of avian pox and LPDV virus

There were 4 towns or sites with a turkey brood having a pox virus, compared to 6 towns the previous year. It appears that none of the young turkeys in a brood showed clinical symptoms, and only one hen in each of these multiple hen broods had the obvious lesions in the head/eye area.

The four towns reporting a hen in a brood with the pox lesions were Bedford, Derry, Effingham and New London.

Conclusions:

During summer 2017 the public reported 1,784 turkey brood observations, compared to 1,926 reports the previous year. As expected, the most brood sighting reports 1,164 (65.3%) of the state total, were from the Southeast Region.

For the state as a whole, the average number of poults per hen during the month of August was 3.32, compared to 2.97 the previous year.

The earliest hatching date was from the Southeast Region (June 19), and the latest was from the North Region (June 30). The other regions were (June 25 and June 26).

Towns with the most recorded brood observations were: Merrimack 60, Derry 53, Londonderry 47, Auburn 44, Dover 38, Bedford 35, all from the highly developed Southeast Region.

An overwhelming percentage of 1,575 respondents (92.9%) continue to like or strongly like wild turkeys.

There were only four towns or sites reporting a hen turkey in a brood flock that had head/eye lesions indicative of the avian pox virus.

Table 1. Number and Percent of Brood Observations by Region (Summer 2017)

Region	# brood reports	% of total	WMU's covered
North	22	1.23%	E,F
White Mtn.	34	1.91%	A,B,C1.C2
Conn. River	81	4.54%	D1,D2,G
E. Central	261	14.63%	J1,J2
Southwest	222	12.44%	H1,H2,I1,I2
Southeast	1,164	65.25%	K,L,M,
	1,784		

Table 2. Number and percent of brood observations by WMU's (Summer 2017)

Wildlife Mgt. Unit	Number of brood observation	% of total		Wildlife Mgt. Unit	Number of brood observation	%of total
A	11	0.62%		H1	28	1.57%
B	2	0.11%		H2	83	4.65%
C1	3	0.17%		I1	71	3.98%
C2	6	0.34%		I2	40	2.24%
D1	7	0.39%		J1	58	3.25%
D2	19	1.07%		J2	203	11.38%
E	13	0.73%		K	257	14.41%
F	21	1.18%		L	279	15.64%
G	55	3.08%		M	628	35.20%
Total = 1,784 reports						

Table 3. Number and Percentage of Brood Reports by 2-week Period (Summer 2017)

And poults per hen averages

Sample Period	Number of observations	% of Total	Total hens	Total poults	Poults per hen average
May 1 – May 11	0	--	0	0	--
May 12 – May 25	0	--	0	0	--
May 26 – June 8	57	3.20%	78	456	5.85
June 9 – June 22	85	4.76%	168	781	4.65
June 23 – July 6	162	9.08%	315	1,406	4.46
July 7 – July 20	253	14.18%	618	2,563	4.15
July 21 – August 3	706	39.57%	1,733	6,261	3.61
August 4 – August 17	289	16.20%	702	2,549	3.63
August 18 – August 31	232	13.00%	657	1,933	2.94
	Total = 1,784				

Table 4. Regional and Statewide poult per hen average for (August 2017)

Region	Number of Hens	Number of Poults	Poults per Hen Avg.
North	18	74	4.11
White Mtn.	24	61	2.54
Conn. River	69	267	3.87
E. Central	266	1,035	3.89
Southwest	231	776	3.36
Southeast	1,072	3,364	3.14
(Statewide)	1,680	5,577	3.32

Table 5. Percent of poults by size category by 2-week periods (Summer 2017)

Time period	Number of poults	Sparrow size	Robin size	Quail size	Pigeon size	Grouse size	Pheasant size
May 12 – May 25	0	--	--	--	--	--	--
May 26 – June 8	456	37.5%	50.2%	10.3%	0.22%	--	1.75%
June 9 – June 22	781	10.6%	32.9%	34.6%	15.2%	6.4%	0.26%
June 23 – July 6	1,406	6.9%	17.3%	32.5%	22.4%	19.6%	1.35%
July 7 – July 20	2,563	6.1%	9.2%	18.8%	18.5%	39.9%	7.7%
July 21 – August 3	6,261	3.3%	5.7%	11.6%	20.4%	38.0%	21.1%
August 4 – August 17	2,549	4.7%	4.5%	8.1%	12.4%	34.8%	35.6%
August 18 – August 31	1,933	2.2%	1.8%	1.4%	6.0%	28.1%	60.5%

Table 6. Estimated percentage of hatching dates by 2-week periods (Summer 2017)

Time Period	Total number of poults	% of total
May 1 – May 11	58	0.47%
May 12 – May 25	806	6.54%
May 26 – June 8	2,188	17.76%
June 9 – June 22	3,600	29.22%
June 23 – July 6	3,243	26.32%
July 7 – July 20	1,822	14.79%
July 21 – August 3	477	3.87%
August 4 – August 17	92	0.75%
August 18 – August 31	35	0.28%
Total =	12,321	

Table 7. **Regional and statewide average hatching dates (Summer 2017)**

Region	Number of Brood Observations	Average hatching date
North	21	June 30
White Mtn.	23	June 25
Conn. River	79	June 26
E. Central	219	June 25
Southwest	177	June 25
Southeast	1,018	June 19
(Statewide)	1,537	June 21

Table 8. **Most brood observations per town, Summer 2017 (20 or more observations per town)**

Town	# of Observations		Town	# of Observations
Auburn	44		Hollis	28
Barrington	28		Hooksett	33
Bedford	35		Lee	26
Bow	27		Londonderry	47
Brentwood	20		Manchester	21
Brookline	31		Merrimack	60
Concord	21		Milford	20
Deerfield	20		Nottingham	20
Derry	53		Pelham	28
Dover	38		Rochester	20
Goffstown	21		Weare	24
Hamstead	20		Windham	23

Table 9. Most total turkeys (hens + poults) per town Summer 2017 (200 or more turkeys per town)

Town	Total Turkeys		Town	Total Turkeys
Auburn	557		Hollis	313
Barnstead	274		Hooksett	282
Barrington	272		Hudson	234
Bedford	337		Lee	387
Bow	336		Londonderry	432
Brentwood	344		Madbury	215
Brookline	335		Merrimack	514
Concord	251		Milford	237
Deerfield	205		Milton	211
Derry	593		Pelham	386
Dover	495		Rochester	230
Gilford	224		Sandown	208
Goffstown	305		Weare	300
Greenland	214		Windham	296
Hamstead	276			