NORTH CAROLINA FOREST SERVICE N C

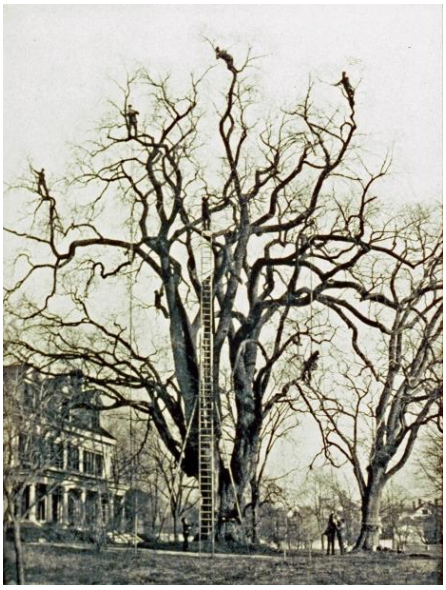
Forest Health Notes

VOLUME **201804-GM** **December 2018**

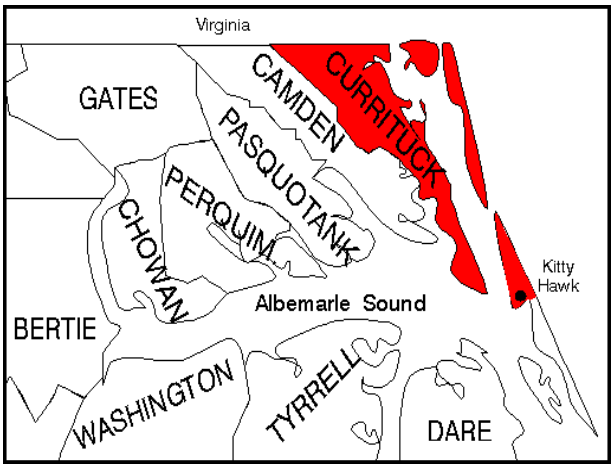
2018-2019 Gypsy Moth Trapping

BACKGROUND

The Gypsy Moth Program. The gypsy moth program in N.C. is under the jurisdiction of the NCDA&CS – Plant Industry Division and we thank them for providing these results. North Carolina is on the leading edge of the expanding gypsy moth front. To prevent further establishment of gypsy moth in our state, traps are set annually for male gypsy moths using pheromone-baited traps (the lure mimics the sex pheromone produced by female gypsy moths). Through the **Slow the Spread (STS)** program, contractors trap the northern portion of N.C., while numerous cooperators trap the remainder of the state, including some overlap with STS counties. Trapping provides information about gypsy moth populations and enables decision making with regards to efficient treatments.



Before modern management options were available, workers climbed trees to search for gypsy moth egg masses. Image: USDA Forest Service, Bugwood.org.



Quarantined Area. All of Currituck County and part of Dare County are under a quarantine for gypsy moth (quarantine established in 1988). Regulated articles (e.g., logs, nursery plants, outdoor household articles) can only leave the quarantined area if they are inspected or treated (must also have a compliance agreement with NCDA&CS – Plant Industry Division).

Determining Treatments. Because traps only indicate how many male moths are in an area, trap capture data cannot be used alone as a basis for treatment decisions. Determining where to treat and what treatment method to use is based on several factors: the previous year's trap counts, historical trap data in the area, and results from winter egg/pupal case surveys. When these data are combined, they reveal with more confidence whether a location is infested with a reproducing gypsy moth population (both males and females are present) or if the male moths were blown in during a weather event or some other phenomenon.

Does 'Slow the Spread' really work?

The STS program is undeniably a success story.

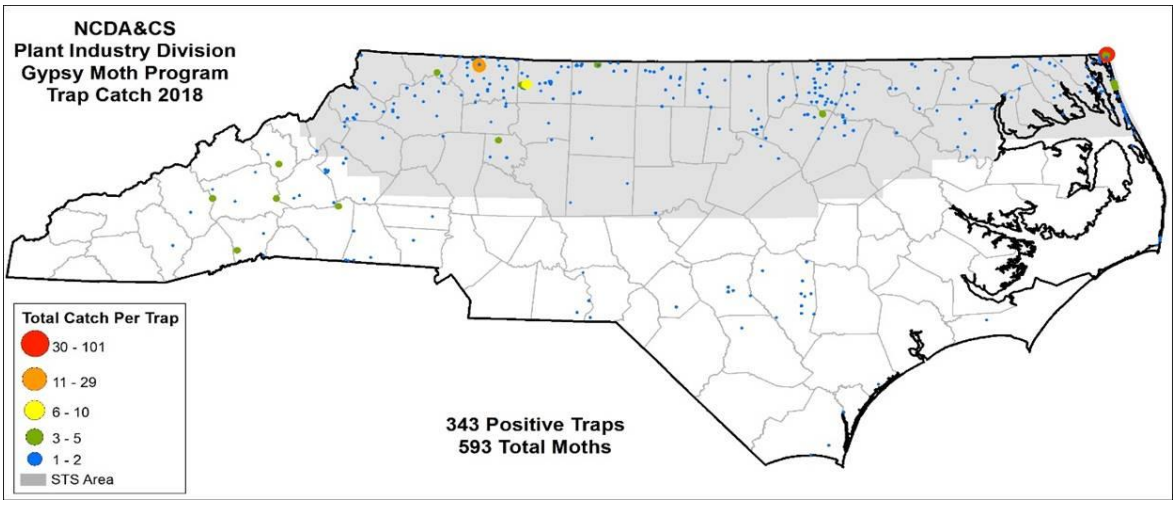
- STS has reduced the spread of gypsy moth by 60% from the historical average of 21 km/yr.
- Without STS, gypsy moth would likely be established on 140 million additional acres.
- N.C. has not suffered defoliation events from gypsy moths that other states within the range of gypsy moth have.

RESULTS

2018 Trapping Results. The 2018 trapping season produced less positive trap captures than in 2017 (see table & map of trap capture locations below). For a list of trap catches by county, reference the table at the end of this publication.

Gypsy moth trap data from 2013-2018.

	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Total moths captured	594	1,613	7,235	2,021	757	431
Number positive traps	343	868	3,172	915	348	247
Total traps placed	18,786	19,869	17,897	12,939	13,631	10,380
Number of sites treated	4 (proposed)	11	6	11	3	3
Total acreage of treatments	3,081 (proposed)	118,169	27,865	35,019	21,250	2,495



2018 Gypsy moth trap catches. *Map created by C. Buddenbaum, NCDA&CS.*

Proposed 2018 Treatments. Based on the 2018 trap captures and winter surveys, four areas were selected to receive treatments in 2019. An interactive map of the treatment areas can be viewed at: http://www.ncagr.gov/plantindustry/Plant/entomology/ProposedGypsyMothTreatments.htm

BLOCK NAME	COUNTY	ACRES	TREATMENT TYPE	NO. OF APPLICATIONS
NW Eden	Rockingham	377	MD	1
Lambsburg	Surry	1231	MD	1
Centerville	Franklin	513	MD	1
Knotts Island	Currituck	960	MD	1

Treatment type: MD – Mating disruption (pheromone flakes).

2018 Gypsy moth trap catches by county.

County	Traps Set	Positive Traps	Moths Caught
Alamance	177	1	1
Alexander	78	1	1
Alleghany	216	4	6
Anson	148	2	2
Ashe	279	2	2
Avery	74	2	2
Beaufort	236	0	0
Bertie	308	8	8
Bladen	266	1	1
Brunswick	275	2	2
Buncombe	170	3	4
Burke	249	8	11
Cabarrus	105	0	0
Caldwell	142	2	3
Camden	151	4	5
Carteret	126	1	1
Caswell	388	12	12
Catawba	122	0	0
Chatham	198	1	1
Cherokee	63	0	0
Chowan	81	2	2
Clay	25	0	0
Cleveland	134	5	8
Columbus	278	0	0
Craven	168	0	0
Cumberland	190	4	4

County	Traps Set	Positive Traps	Moths Caught
Currituck	205	31	184
Dare	501	16	19
Davidson	171	1	1
Davie	116	3	5
Duplin	241	0	0
Durham	120	1	1
Edgecombe	149	0	0
Forsyth	271	1	1
Franklin	237	11	17
Gaston	135	1	1
Gates	270	3	3
Graham	8	0	0
Granville	326	7	7
Greene	77	0	0
Guilford	350	1	1
Halifax	449	7	8
Harnett	174	0	0
Haywood	102	2	6
Henderson	99	3	5
Hertford	224	3	3
Hoke	111	1	1
Hyde	159	0	0
Iredell	205	0	0
Jackson	79	1	2
Johnston	234	0	0
Jones	127	0	0

County	Traps Set	Positive Traps	Moths Caught
Lee	74	0	0
Lenoir	113	0	0
Lincoln	87	1	2
Macon	49	0	0
Madison	88	0	0
Martin	137	0	0
McDowell	89	4	7
Mecklenburg	171	0	0
Mitchell	50	0	0
Montgomery	90	0	0
Moore	208	0	0
Nash	237	8	9
New Hanover	67	1	1
Northampton	357	7	7
Onslow	174	0	0
Orange	178	1	1
Pamlico	97	0	0
Pasquotank	148	5	5
Pender	301	1	1
Perquimans	142	1	1
Person	255	6	6
Pitt	190	0	0
Polk	67	0	0
Randolph	225	2	2

County	Traps Set	Positive Traps	Moths Caught
Richmond	133	2	2
Robeson	277	0	0
Rockingham	586	15	22
Rowan	150	0	0
Rutherford	163	2	4
Sampson	279	10	11
Scotland	93	0	0
Stanly	117	0	0
Stokes	444	24	33
Surry	579	35	70
Swain	25	0	0
Transylvania	62	0	0
Tyrrell	86	0	0
Union	183	0	0
Vance	268	6	6
Wake	250	2	4
Warren	355	25	27
Washington	106	0	0
Watauga	196	10	12
Wayne	168	0	0
Wilkes	443	11	12
Wilson	117	0	0
Yadkin	260	4	4
Yancey	65	2	4
TOTAL	**18786**	**343**	**594**

For updates on gypsy moth treatments, visit the Gypsy Moth Program website at http://www.ncagr.gov/plantindustry/Plant/entomology/GM.htm