

PLANT & PEST ADVISORY

CRANBERRY EDITION \$1.50

JUNE 27, 1997



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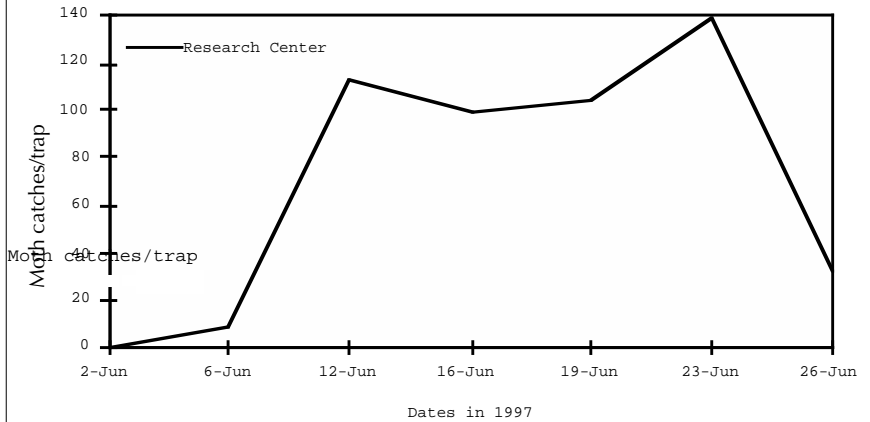
Insect Update

Sridhar Polavarapu, Ph.D., Entomology and IPM

Blackheaded fireworm: Pheromone trap catches peaked during the third week of June around the Chatsworth area. Adult flight will continue for another 5-8 days. Most of the larvae are in the second and third instar stages at this time and are expected to pupate by the second week of July.

Blackheaded fireworm in the second generation web several uprights together and feed on blossoms and berries. They feed on the surface of the berries or sometimes completely hollow them. Damage caused during this generation may also result in reduced crop next year because injured tips may fail to produce terminal buds. If you are observing patches of browning typical of fireworm damage, inspect the infested areas to determine if blackheaded fireworm larvae are present. The only option available at this time to control Blackheaded fireworm is to apply either Pyrenone or B.t. insecticides such as Dipel, Javelin, or Crymax. B.t. insecticides work best on small to medium sized larvae. Pyrenone is very sensitive to sunlight, therefore apply this product during the late evening hours for obtaining the most effective control.

Pheromone trap catches of Blackhead fireworm, near Chatsworth, NJ



Spotted fireworm: Male moth catches in pheromone traps continue to increase. We are very close to peak pheromone trap catches. Egg laying on broadleaf weed species and grasses is continuing. Hatching of egg-masses is just beginning. We expect peak egg hatch around July 4.

See Spotted fireworm on page 2

June is Peak Tick Season

Deborah Smith-Fiola, Ocean County Agricultural Agent

Last summer's mild weather allowed for optimal survival and host finding for the northern deer tick (now known as the black legged tick), the vector of Lyme disease.

Because of the 2-year life cycle of this tick, last year's larvae have overwintered to molt into the nymph stage, which has peak activity in late May and June. The majority of all Lyme disease cases are the result of the bite of a nymph, usually this time of year.

The deer tick nymph is the size of a poppy seed. It has a black head and a black dorsal shield behind its head. The abdomen is creamy white and translucent before it feeds - after a blood meal, the abdomen darkens and swells. It takes 3 to 4 days for a nymph to finish feeding on an animal and completely engorge with blood — whereupon it swells to the size of a sesame seed, and drops off the host. This is how deer tick populations spread: they hitch a ride on an animal host such as a bird, feed for a few days, then drop off wherever that bird may have flown.

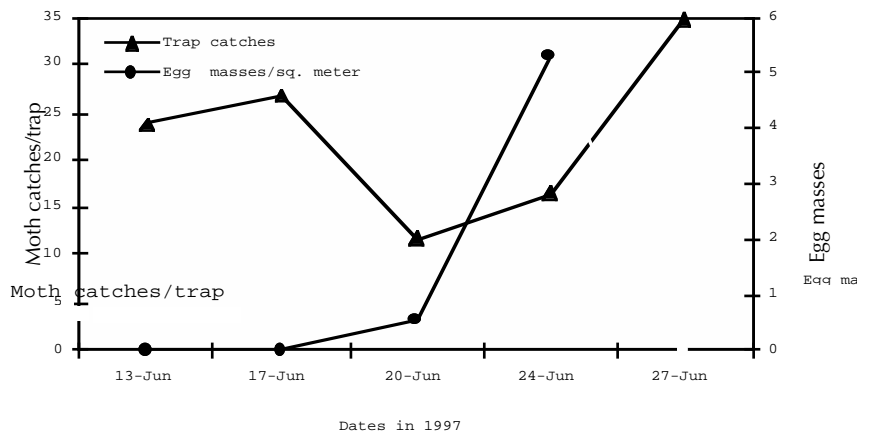
Research shows that 85% or more deer tick nymphs are found in the woods, typically in 4 - 6 inch high vegetation. This location offers the likelihood of finding a small animal to feed upon. Ticks don't fly, jump, or fall from trees. They find a host by crawling up low vegetation and *waiting* for an animal to walk by — then they grasp onto the skin/clothing, and crawl up. Knowing this, beware of walking in tall grass or the shrubby undergrowth in the woods. Widen trails to 6 feet or more to avoid brushing against vegetation. Some homesites will clear cut the shrubby understory layer of the adjacent forest to somewhat reduce the tick potential by mowing or bushhogging - but this has to be repeated annually (or else regrowth occurs along with increased wildlife and increased ticks!)

See Ticks on page 3

Spotted fireworm from page 1

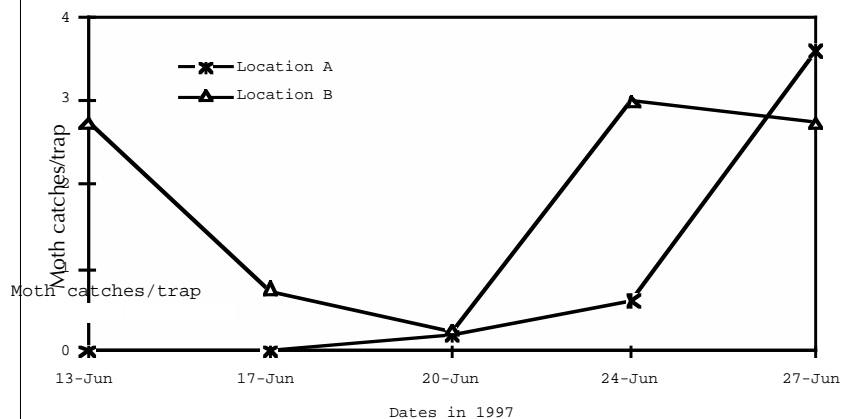
Spotted fireworm larvae can feed on fruit as well as foliage in the second generation. Although we do not have an economic threshold estimated for this insect, populations below an average of 4 medium sized larvae per 25 sweeps may not require insecticide treatments. Most effective control of Spotted fireworm is achieved when larvae are in early stages of development and not tightly enclosed in leaves or entered in berries. If insecticide treatments are required, post-pollination application of one of Diazinon, Guthion or Lorsban will effectively suppress spotted fireworm populations.

Pheromone trap catches and egg laying of spotted fireworm, near Chatsworth, NJ



Sparganothis fruitworm: Trap catches are increasing in several of the monitored areas. Sparganothis populations this year are somewhat smaller than populations in the previous 2-3 years. The first post-pollination spray timed immediately after the removal of honey bees should provide control of newly hatched larvae. Because this insect has a wide window of emergence and egg-laying period, a second spray may be required depending on moth activity and larval numbers.

Pheromone trap catches of sparganothis fruitworm, near Chatsworth, NJ



Cranberry rootworm: Adults are still being seen on several bogs feeding on the foliage. Adults are 1/4 inch long and shiny mahogany brown. Beetle activity is expected to last for another 10-14 days. Two to three applications of Sevin XLR may be required in heavily infested areas to prevent further spread of the infestation. Apply insecticides late in the evening after bees have stopped foraging activities. □

Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged above normal. Extremes were 97 degrees at Toms River and canoe brook on the 22nd and 42 degrees at Hammonton on the 17th. Weekly rainfall averaged 0.88 inches North, 0.50 inches Central, and 0.22 inches South. The heaviest 24 hour total was 1.10 inches at Long Valley on the 18th to 19th. Estimated soil moisture, in percent of field capacity, this past week averaged 69 percent North, 64 percent Central and 38 percent South. Four inch soil temperatures averaged 67 degrees North, 69 degrees Central and 70 degrees South.

Weather Summary for the Week Ending 8 Am Monday 6/23/97										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.76	11.34	-3.01	90	48	70.	1	590	-142	64
CANOE BROOK	.67	12.23	-3.26	97	50	73.	4	748	50	66
CHARLOTTEBURG	.87	14.75	-.85	94	47	70.	4	536	-1	65
FLEMINGTON	.75	13.25	-1.52	92	45	70.	0	588	-138	69
LONG VALLEY	1.10	14.14	-1.69	90	46	69.	2	526	-68	72
NEWTON	1.15	12.11	-1.92	88	45	69.	1	435	-174	74
FREEHOLD	.02	13.65	-.89	96	49	72.	1	697	-116	69
LONG BRANCH	.00	14.12	-.53	94	50	70.	0	682	-65	42
NEW BRUNSWICK	.77	16.05	1.84	93	50	71.	-1	716	-145	78
PEMBERTON	.59	13.76	-.27	96	49	75.	4	874	28	51
TOMS RIVER	.43	13.05	-1.40	97	46	73.	3	703	-38	50
TRENTON	1.18	15.95	2.74	93	50	72.	0	721	-190	85
CAPE MAY COURT HOUSE	.04	12.49	-.33	92	46	72.	1	741	-78	25
DOWNSTOWN	.05	12.43	-.65	93	44	73.	1	759	-173	28
GLASSBORO	.23	15.14	1.01	96	54	75.	3	837	-74	39
HAMMONTON	.06	13.28	-.47	96	42	73.	1	742	-161	21
POMONA	.50	14.26	1.73	94	47	73.	2	750	-75	57
SEABROOK	.00	13.34	.86	94	49	73.	1	828	-110	29
ATLANTIC CITY MARINA	.64	10.29	-1.66	83	61	72.	2	729	-33	52
WOODSTOWN	.10	13.46	NA	96	48	75.	NA	857	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week		207	(Ending 06/16/97)							
This Week		236	(Ending 06/23/97)							

Ticks from page 4

Not every tick carries Lyme disease. In order to transmit the disease as they feed, nymphs need to pick up the disease when they were a larva from an infected animal. The infection rate thus varies annually, typically from 10% to 25-30%. (Note that adult ticks have a higher infection rate [up to 45% in Hunterdon County last year]). Even if infected, research shows that the deer tick still must feed at least 24 hours to transmit the disease bacteria from its body to yours. Translated: this means that approximately one out of four ticks may be infected and able to transmit Lyme disease - if it feeds more than a day. So the trick is to *remove ticks as soon as possible!*

Remove ticks only with tweezers. Bent, 'needle-nose' tweezers are preferred. Other methods, including using your fingers, petroleum jelly, a hot match, etc. may traumatize a tick - and a traumatized tick is likely to regurgitate its gut contents, which may include the Lyme disease bacteria. Grasp the tick under the head, and S-L-O-W-L-Y and firmly pull it out. Disinfect the wound with antiseptic. Save the live tick for identification (put it in a sealed container with a moist cotton ball in a cool

spot). The Rutgers Plant Diagnostic Lab (908-932-9140), many county extension offices, the State Health Dept. and NJ Labs (a private company in New Brunswick) all identify ticks (the latter two for a charge which includes determining if infected).

Lyme disease symptoms include: a migratory rash (2" or more in diameter; appearing on 60% of victims, usually noticed 2-3 days after a bite); fatigue, memory loss, joint pain and inflammation, headache, difficulty concentrating, and flu-like symptoms. Symptoms may progress to mimic other, more severe diseases. See a doctor! Deer ticks and other ticks are now known to transmit other, less common diseases. Ehrlichiosis (HGE), has been identified since 1984, and was diagnosed in 8 people in New Jersey last year, with 2 deaths. Suspect ehrlichiosis if you have Lyme-like symptoms (fever, fatigue, chills, headache, muscle pain) early in the day, but by evening symptoms are severe, to the point of entering the hospital.

For more information, see your doctor and/or call your county agent for the free RCE bulletin, "Prevent Tick Bites, Prevent Lyme Disease." □

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
P.O. Box 231
Cook College
New Brunswick, N.J. 08903-0231

PLANT & PEST ADVISORY

CRANBERRY EDITION CONTRIBUTORS

NJAES Blueberry Cranberry Research & Extension Center

Peter Oudemans, Ph.D., Plant Pathology
Sridhar Polavarapu, Ph.D., Entomology and IPM
Nicholi Vorsa, Ph.D., Breeding, Genetics and Culture

Rutgers Cooperative Extension Agricultural Agent

Raymond J. Samulis, Burlington County

ARS-USDA

Allan Stretch, Ph.D. Research Plant Pathologist

Ocean Spray Cranberries

Joan Davenport, Ph.D. Manager, Agricultural Research
Dan Schiffhauer, Agricultural Specialist

Newsletter Production

Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer

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