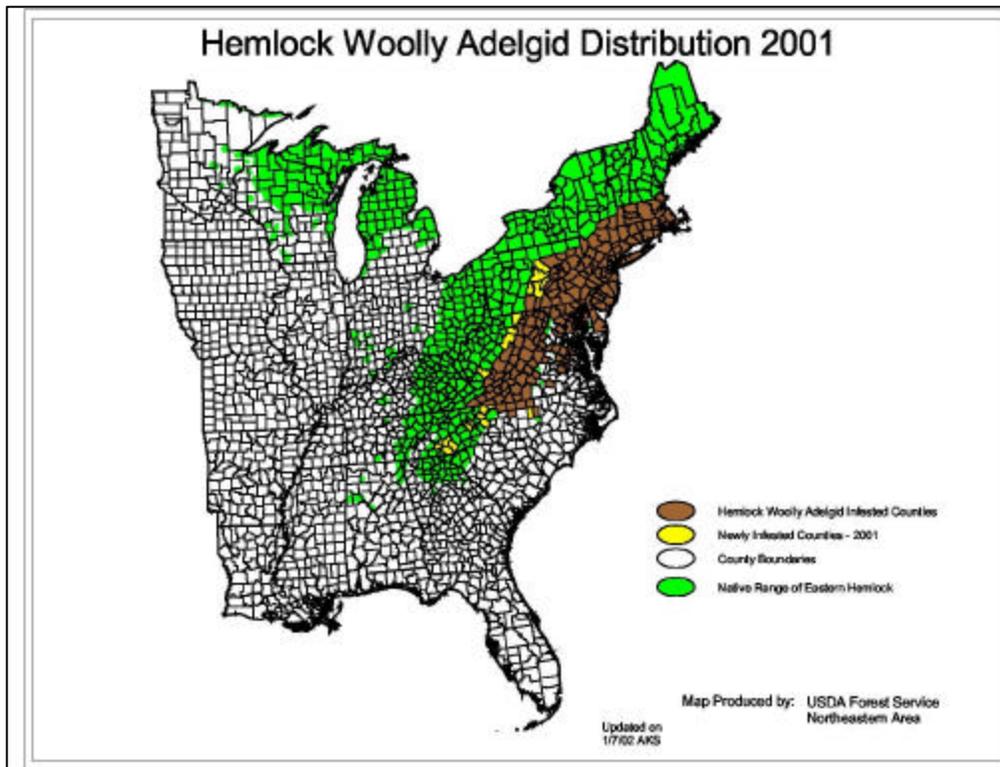


Hemlock Woolly Adelgid – A Race in Time

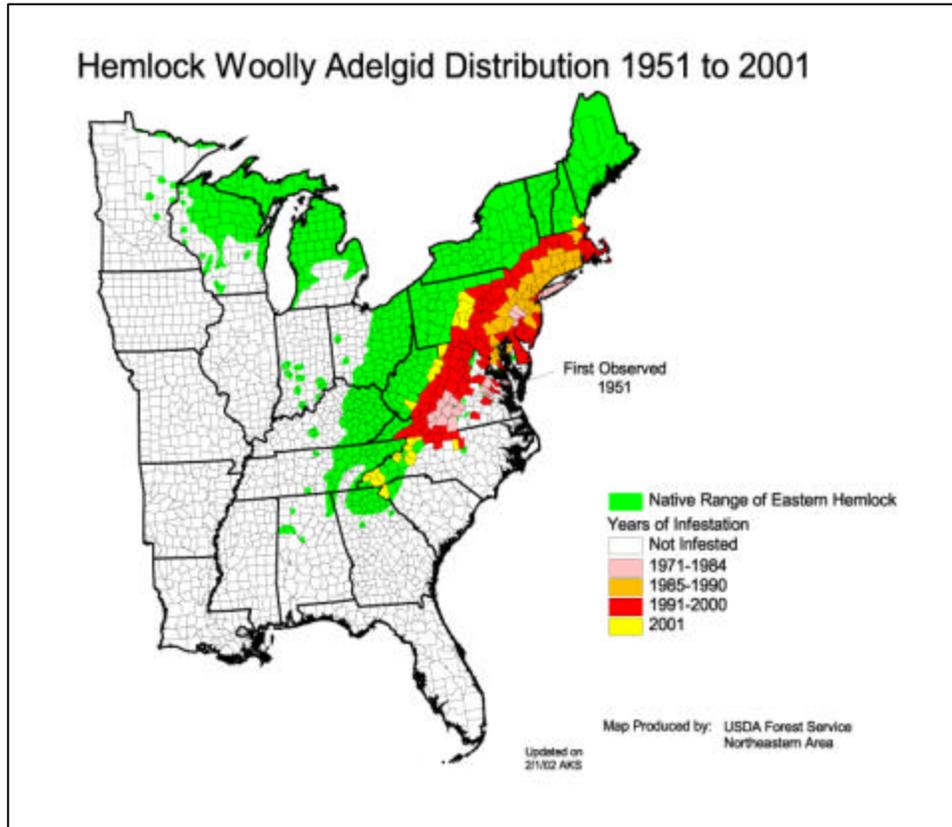
Bradley P. Onken
USDA Forest Service
Forest Health Protection
Morgantown, WV



This map depicts the “generally infested” area at the county level. Isolated infestations have been discovered in Maine and Michigan, where eradication efforts are underway.



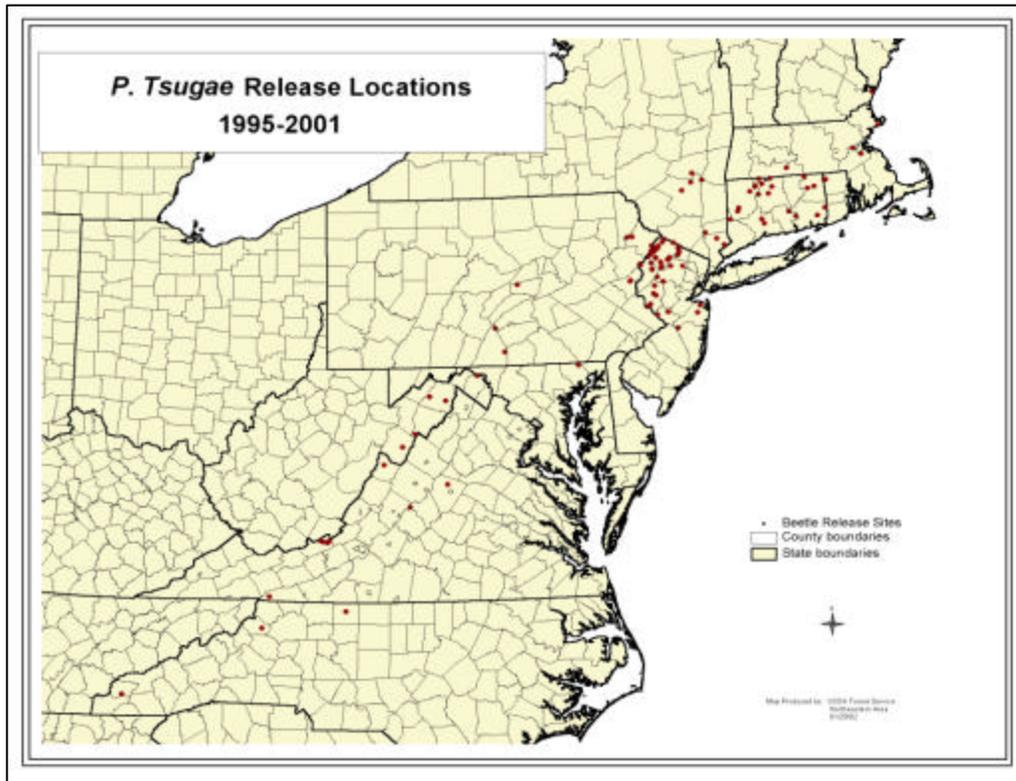
Hemlock Woolly Adelgid – A Race In Time – cont'd



The historical detection and distribution of hemlock woolly adelgid at the county level indicates an accelerated rate of spread since the mid-1980s.



Hemlock Woolly Adelgid – A Race In Time – cont'd



Efforts to introduce, establish, and evaluate natural enemies of the hemlock woolly adelgid has thus far focused on the ladybird beetle from Japan, *Psuedoscymnus tsugae*. To date, more than half a million of these tiny beetles have been released in 11 states. Several species of another coccinellid predator beetle (*Scymnus spp.*) from China and a derodontid beetle (*Laricobius nigrinus*) will soon join *P. tsugae* in the struggle to control this exotic hemlock pest.



Hemlock Woolly Adelgid – A Race In Time – cont'd

STATE	COUNTY	# OF SITES	# OF BEETLES RELEASED
CT	Fairfield	1	2,100
CT	Hartford	5	43,630
CT	Litchfield	6	61,420
CT	Middlesex	2	12,586
CT	New Haven	2	3,700
CT	New London	1	3,000
CT	Tolland	1	10,000
CT	Windham	3	10,584
			Total = 147,020
MA	Essex	1	7,500
MA	Hampden	1	5,000
MA	Middlesex	1	10,000
MA	Norfolk	1	5,000
			Total = 27,500
MD	Harford	1	10,000
			Total = 10,000
NC	Graham	1	5,000
NC	Stokes	1	10,000
NC	Watauga	1	5,000
			Total = 20,000
NH	Rockingham	1	2,950
			Total = 2,950
NJ	Hunterdon	5	18,500
NJ	Mercer	2	3,000
NJ	Monmouth	3	5,000
NJ	Morris	4	16,000
NJ	Passaic	3	12,000
NJ	Sussex	27	117,000
NJ	Warren	5	18,000
			Total = 189,500

STATE	COUNTY	# OF SITES	# OF BEETLES RELEASED
NY	Columbia	1	2,500
NY	Greene	1	2,500
NY	Putnam	1	5,000
NY	Ulster	2	5,000
NY	Westchester	2	5,000
			Total = 20,000
PA	Franklin	1	10,000
PA	Northampton	2	6,500
PA	Perry	1	2,500
PA	Pike	2	17,500
PA	Snyder	1	2,500
PA	Wayne	1	5,000
			Total = 39,000
RI	Providence	2	15,000
			Total = 15,000
VA	Albemarle	1	10,000
VA	Giles	5	12,500
VA	Grayson	1	500
VA	Highland	1	500
VA	Nelson	1	2,500
			Total = 26,000
WV	Berkeley	1	5,000
WV	Hampshire	2	15,000
WV	Hardy	1	2,500
WV	Pendleton	1	2,500
			Total = 25,000

