

Table 1. A Phenological Sequence Including Degree Days (DD50) for Wooster, Ohio, in 1997-1999. (Insect names are indicated in bold type. A space has been included for the current year's date so that this table may be copied as a data sheet for personal use.)

Species	Phenological Event	1997		1998		1999		Average		Current Year's Date
		Date	DD50	Date	DD50	Date	DD50	Date	DD50	
Silver Maple	first bloom	Mar 7	48	Feb 25	24	Mar 3	32	Mar 2	35	_____
Corneliancherry Dogwood	first bloom	Mar 15	49	Mar 10	32	Mar 19	40	Mar 15	40	_____
Japanese andromeda	first bloom	NA	NA	Mar 25	37	Mar 30	52	Mar 27	45	_____
Red Maple	first bloom	Mar 25	59	Mar 23	36	Mar 29	40	Mar 26	45	_____
Silver Maple	full bloom	Mar 25	59	Mar 15	32	Mar 28	44	Mar 22	45	_____
Forsythia x 'Northern Lights'	first bloom	Mar 30	80	Mar 25	37	April 1	67	Mar 29	61	_____
Red Maple	full bloom	Apr 4	97	Mar 28	80	April 1	67	April 1	81	_____
Border Forsythia	first bloom	Mar 30	80	Mar 28	80	April 3	89	Mar 30	83	_____
Star Magnolia	first bloom	Apr 4	97	Mar 28	80	April 2	77	April 1	85	_____
Manchu Cherry	first bloom	Apr 2	83	Mar 28	80	April 4	98	April 1	87	_____
Corneliancherry Dogwood	full bloom	Apr 4	97	Mar 28	80	April 4	98	April 1	92	_____
Eastern tent caterpillar	egg hatch	Apr 4	97	Mar 28	80	April 4	98	April 1	92	_____
Forsythia x 'Northern Lights'	full bloom	Apr 4	97	Mar 29	94	April 7	121	April 3	104	_____
Norway Maple	first bloom	Apr 6	119	Mar 30	114	April 7	121	April 4	118	_____
Border Forsythia	full bloom	Apr 4	97	Mar 30	114	April 10	146	April 4	119	_____
Japanese andromeda	full bloom	NA	NA	Mar 29	94	April 11	150	April 4	122	_____
Chanticleer Callery Pear	first bloom	Apr 7	124	Mar 30	114	April 8	134	April 4	124	_____
Sargent Cherry	first bloom	Apr 5	111	Mar 31	132	April 11	150	April 5	131	_____
Saucer Magnolia	first bloom	NA	NA	April 8	163	April 5	104	April 6	134	_____
Larch casebearer	egg hatch	Apr 15	129	April 6	152	April 8	134	April 9	138	_____
Common Floweringquince	first bloom	Apr 23	142	April 1	144	April 8	134	April 10	140	_____
Rhododendron 'PJM'	first bloom	Apr 21	141	April 1	144	April 10	146	April 11	144	_____
European pine sawfly	egg hatch	Apr 15	129	April 6	152	April 11	150	April 10	144	_____
Bradford Callery Pear	first bloom	April 21	138	April 1	144	April 11	150	April 11	144	_____
Weeping Higan Cherry	first bloom	April 20	135	April 1	144	April 13	155	April 11	145	_____
Norway Maple	full bloom	frost	NA	Mar 31	132	April 14	158	April 7	145	_____
Chanticleer Callery Pear	full bloom	Apr 20	135	April 1	144	April 18	162	April 13	147	_____
Inkberry leafminer	adult emergence	Apr 15	129	April 10	171	April 13	155	April 12	152	_____
Allegheny Serviceberry	first bloom	Apr 23	142	April 7	155	April 19	163	April 16	153	_____
Spring Snow Crabapple	first bloom	Apr 22	141	April 6	152	April 21	169	April 16	154	_____
Sargent Cherry	full bloom	frost	NA	April 1	144	April 20	165	April 10	155	_____
Manchu Cherry	full bloom	frost	NA	April 2	149	April 15	161	April 8	155	_____
Apple Serviceberry	first bloom	Apr 22	141	April 8	163	April 20	165	April 16	156	_____
Bradford Callery Pear	full bloom	frost	NA	April 7	155	April 19	163	April 13	159	_____
<i>Spiraea x arguta</i> 'Compacta'	first bloom	Apr 27	154	April 8	163	April 20	165	April 18	161	_____
Andromeda lace bug	egg hatch	NA	NA	NA	NA	April 20	165	April 20	165	_____
Rhododendron 'PJM'	full bloom	May 1	178	April 8	169	April 19	163	April 19	170	_____
Allegheny Serviceberry	full bloom	Apr 29	161	April 9	169	April 24	191	April 20	174	_____
Weeping Higan Cherry	full bloom	Apr 29	161	April 11	172	April 24	191	April 21	175	_____
Apple Serviceberry	full bloom	Apr 29	161	April 11	172	April 25	193	April 22	175	_____
Boxwood psyllid	egg hatch	NA	NA	April 15	198	April 19	163	April 17	181	_____
Koreanspice Viburnum	first bloom	Apr 26	150	April 13	183	April 28	214	April 22	182	_____
Amelanchier 'Regent'	first bloom	May 1	178	April 13	183	April 26	199	April 23	187	_____
Spruce spider mite	egg hatch	NA	NA	April 20	219	April 16	161	April 18	190	_____
Japanese Flowering Crab	first bloom	May 5	193	April 14	192	April 23	188	April 24	191	_____
Koreanspice Viburnum	full bloom	May 7	201	April 17	214	April 17	161	April 23	192	_____
Eastern Redbud	first bloom	May 7	201	April 14	192	April 26	199	April 26	197	_____
Prunus virginiana	first bloom	NA	NA	April 16	208	April 25	193	April 20	201	_____
Donald Wyman Crabapple	first bloom	May 4	189	April 16	208	April 27	206	April 26	201	_____
Spring Snow Crabapple	full bloom	May 3	186	April 17	214	April 27	206	April 25	202	_____
Gypsy moth	egg hatch	May 7	201	April 16	208	April 26	199	April 26	203	_____
Snowdrift Crabapple	first bloom	May 2	182	April 17	214	April 28	214	April 26	203	_____
<i>Spiraea x arguta</i> 'Compacta'	full bloom	May 6	198	April 16	208	April 27	206	April 26	204	_____

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Species	Phenological Event	<u>1997</u>		<u>1998</u>		<u>1999</u>		<u>Average</u>		Current Year's Date
		Date	DD50	Date	DD50	Date	DD50	Date	DD50	
Birch leafminer	adult emergence	May 5	193	April 22	231	April 26	199	April 27	208	_____
Honeylocust spider mite	egg hatch	NA	NA	NA	NA	April 28	214	April 28	214	_____
Carolina Silverbell	first bloom	NA	NA	April 18	216	April 28	214	April 23	215	_____
Elm leafminer	adult emergence	NA	NA	April 22	231	April 26	199	April 24	215	_____
Coral Burst Crabapple	first bloom	May 11	209	April 18	216	April 29	222	April 29	216	_____
Common Flowering quince	full bloom	May 22	272	April 13	183	April 25	193	April 30	216	_____
Amelanchier 'Regent'	full bloom	May 7	201	April 21	224	April 30	229	April 29	218	_____
Alder leafminer	adult emergence	NA	NA	April 25	251	April 26	199	April 25	225	_____
Honeylocust plant bug	egg hatch	May 16	230	April 22	231	April 28	214	May 2	225	_____
Wayfaringtree Viburnum	first bloom	May 10	206	April 22	231	May 2	247	May 1	228	_____
Prunus virginiana	full bloom	NA	NA	April 21	224	May 1	237	April 26	231	_____
Sargent Crabapple	first bloom	May 10	206	April 24	244	May 2	247	May 2	232	_____
Tatarian Honeysuckle	first bloom	May 12	215	April 23	238	May 2	247	May 2	233	_____
Common Lilac	first bloom	May 15	229	April 23	238	May 1	237	May 3	235	_____
Persian Lilac	first bloom	NA	NA	April 23	238	May 2	247	April 27	243	_____
Ohio Buckeye	first bloom	May 14	226	April 26	256	May 2	247	May 4	243	_____
Hawthorn Lace Bug	adult emergence	NA	NA	April 25	231	May 3	258	April 29	245	_____
Snowdrift Crabapple	full bloom	May 15	229	April 24	244	May 4	271	May 4	248	_____
Donald Wyman Crabapple	full bloom	May 16	230	April 26	256	May 3	258	May 5	248	_____
Common Horsechestnut	first bloom	NA	NA	April 27	257	May 2	247	April 29	252	_____
Eastern Redbud	full bloom	May 19	261	April 27	257	May 2	247	May 6	255	_____
Coral Burst Crabapple	full bloom	May 18	245	April 29	264	May 3	258	May 6	256	_____
Imported willow leaf beetle	adult emergence	May 18	245	April 24	244	May 5	284	May 5	258	_____
Flowering Dogwood	first bloom	NA	NA	April 26	255	May 4	271	April 30	263	_____
Red Buckeye	first bloom	May 18	245	April 30	274	May 4	271	May 7	263	_____
Blackhaw Viburnum	first bloom	May 19	261	April 29	264	May 4	271	May 8	265	_____
Carolina Silverbell	full bloom	NA	NA	April 30	274	May 3	258	May 1	266	_____
Red Chokeberry	first bloom	May 19	261	April 29	264	May 6	301	May 8	275	_____
Wayfaringtree Viburnum	full bloom	May 20	268	May 1	284	May 6	301	May 9	284	_____
Red Horsechestnut	first bloom	May 19	261	May 2	292	May 6	301	May 9	285	_____
Sargent Crabapple	full bloom	May 19	261	May 2	292	May 6	301	May 9	285	_____
Pine needle scale	egg hatch - 1st generation	May 22	273	May 3	301	May 5	284	May 10	286	_____
Eastern spruce gall adelgid	egg hatch	May 22	273	May 3	301	May 6	301	May 10	292	_____
Pink Princess Weigela	first bloom	May 20	268	May 1	284	May 9	336	May 10	296	_____
Blackhaw Viburnum	full bloom	May 22	272	May 4	312	May 9	336	May 12	307	_____
Umbrella Magnolia	first bloom	May 26	308	May 4	312	May 6	301	May 12	307	_____
Common Lilac	full bloom	May 26	308	May 3	301	May 7	315	May 12	308	_____
Vanhoutte Spirea	first bloom	May 25	301	May 4	312	May 7	315	May 12	309	_____
Persian Lilac	full bloom	NA	NA	May 4	312	May 7	315	May 5	314	_____
Redosier Dogwood	first bloom	May 27	315	May 5	322	May 8	327	May 13	321	_____
Winter King Hawthorn	first bloom	May 26	308	May 6	333	May 10	344	May 14	328	_____
Common Horsechestnut	full bloom	NA	NA	May 5	322	May 10	344	May 7	333	_____
Slender gracilis	first bloom	May 29	332	May 6	333	May 9	336	May 15	334	_____
Lilac borer	adult emergence	May 30	343	May 5	322	May 10	344	May 15	336	_____
Red Chokeberry	full bloom	May 26	308	May 8	362	May 11	357	May 15	342	_____
Red Java Weigela	first bloom	NA	NA	May 6	333	May 11	357	May 8	345	_____
Doublefile Viburnum	first bloom	May 27	314	May 7	348	May 12	374	May 15	345	_____
Pagoda Dogwood	first bloom	May 30	343	May 7	347	May 11	357	May 16	349	_____
Holly leafminer	adult emergence	May 29	332	May 9	376	May 11	357	May 16	355	_____
Black Cherry	first bloom	May 28	322	May 9	376	May 12	374	May 16	357	_____
Lesser peach trer borer	adult emergence	Jun 4	398	May 6	333	May 10	344	May 17	358	_____
Ohio Buckeye	full bloom	May 31	353	May 8	362	May 12	374	May 17	363	_____
Tiger Swallowtail	first adult	NA	NA	May 17	502	May 1	237	May 9	370	_____
'Ohio Pioneer' Hawthorn	first bloom	May 26	308	May 6	333	May 20	471	May 17	371	_____

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Species	Phenological Event	1997		1998		1999		Average		Current Year's Date
		Date	DD50	Date	DD50	Date	DD50	Date	DD50	
Tatarian Honeysuckle	full bloom	May 28	322	May 12	407	May 17	430	May 19	386	_____
Catawba rhododendron	first bloom	NA	NA	May 9	376	May 15	398	May 12	387	_____
Winter King Hawthorn	full bloom	June 5	409	May 11	397	May 14	390	May 20	399	_____
Vanhoutte Spirea	full bloom	June 1	363	May 12	407	May 17	430	May 20	400	_____
Euonymus scale	egg hatch —									_____
	1st generation	May 30	343	May 15	463	May 15	398	May 20	401	_____
Black Cherry	full bloom	June 3	391	May 13	420	May 15	398	May 21	403	_____
Red Horsechestnut	full bloom	June 2	380	May 13	420	May 16	411	May 21	404	_____
Beautybush	first bloom	June 3	391	May 11	397	May 17	430	May 21	406	_____
Scarlet Firethorn	first bloom	June 1	364	May 10	387	May 23	513	May 23	421	_____
Doublefile Viburnum	full bloom	June 1	364	May 15	463	May 18	450	May 22	426	_____
Syringa 'Miss Kim'	first bloom	NA	NA	May 12	407	May 19	462	May 15	435	_____
White Fringetree	first bloom	June 9	458	May 14	439	May 16	411	May 23	436	_____
Pink Princess Weigela	full bloom	June 2	381	May 16	486	May 19	462	May 22	443	_____
Redosier Dogwood	full bloom	June 5	409	May 15	463	May 19	462	May 23	445	_____
Bush Cinquefoil	first bloom	June 8	446	May 14	439	May 18	450	May 23	445	_____
'Ohio Pioneer' Hawthorn	full bloom	June 5	409	May 11	397	May 26	530	May 24	445	_____
Red Prince Weigela	first bloom	June 3	391	May 15	463	May 21	484	May 23	446	_____
Snowmound Nippon										_____
Spirea	first bloom	NA	NA	May 16	486	May 16	411	May 16	449	_____
Red Buckeye	full bloom	June 7	434	May 17	503	May 18	450	May 24	462	_____
Black Locust	first bloom	June 9	458	May 17	503	May 18	450	May 25	470	_____
Common Ninebark	first bloom	June 9	458	May 16	486	May 21	484	May 25	476	_____
Sweet Mockorange	first bloom	June 8	446	May 17	503	May 22	500	May 26	483	_____
Pagoda Dogwood	full bloom	June 9	458	May 15	463	May 26	530	May 27	484	_____
Catawba rhododendron	full bloom	NA	NA	May 15	463	May 26	530	May 20	497	_____
Syringa 'Miss Kim'	full bloom	NA	NA	May 15	463	May 26	530	May 20	497	_____
Oystershell scale	egg hatch	June 9	458	May 17	502	May 27	537	May 28	499	_____
Umbrella Magnolia	full bloom	June 9	458	May 18	519	May 24	521	May 27	499	_____
Red Spotted Purple	first adult	NA	NA	May 17	502	NA	NA	May 17	502	_____
Monarch Butterfly	first adult	NA	NA	May 27	648	May 11	357	May 19	503	_____
Smokebush	first bloom	June 12	516	May 19	519	May 22	500	May 28	512	_____
White Fringetree	full bloom	June 13	535	May 17	503	May 23	513	May 28	517	_____
Arrowwood Viburnum	first bloom	June 12	516	May 18	519	May 27	537	May 29	524	_____
17-Year Cicada	adult emergence	NA	NA	NA	NA	May 26	530	May 26	530	_____
Scarlet Firethorn	full bloom	June 8	446	May 18	519	June 1	633	May 30	533	_____
Multiflora Rose	first bloom	NA	NA	May 18	519	May 28	549	May 23	534	_____
American Holly	first bloom	June 13	535	May 20	565	May 26	530	May 30	543	_____
Mountain-laurel	first bloom	June 12	516	May 20	565	May 28	549	May 30	543	_____
bronze birch borer	adult emergence	June 12	475	May 18	519	June 2	654	May 31	549	_____
Black Locust	full bloom	June 14	549	May 21	579	May 27	537	May 31	555	_____
American Yellowwood	first bloom	NA	NA	May 23	599	May 23	513	May 23	556	_____
Potato leafhopper	adult arrival	June 16	580	May 22	588	May 27	537	June 1	568	_____
Beautybush	full bloom	June 17	599	May 19	539	May 31	610	June 1	583	_____
Red Java Weigela	full bloom	NA	NA	May 17	503	June 3	667	May 25	585	_____
American Yellowwood	full bloom	NA	NA	May 26	634	May 27	537	May 26	586	_____
Juniper scale	egg hatch	June 14	550	May 21	579	June 1	633	June 1	587	_____
Snowmound Nippon										_____
Spirea	full bloom	June 14	549	May 20	565	June 2	654	June 2	589	_____
Common Ninebark	full bloom	June 15	560	May 21	579	June 1	633	June 2	591	_____
Chinese Dogwood	first bloom	NA	NA	May 23	599	May 30	588	May 26	594	_____
Sweetbay Magnolia	first bloom	June 22	711	May 23	599	May 20	471	June 1	594	_____
Smokebush	full bloom	June 17	599	May 22	588	June 1	633	June 3	607	_____
Bumald Spirea	first bloom	June 14	549	May 27	648	June 2	654	June 4	617	_____
Arrowwood Viburnum	full bloom	June 17	599	May 24	610	June 2	654	June 4	621	_____
Japanese Tree Lilac	first bloom	June 21	686	May 23	599	May 31	610	June 4	632	_____
Multiflora Rose	full bloom	NA	NA	May 24	610	June 2	654	May 28	632	_____
American Holly	full bloom	June 19	631	May 26	634	June 2	654	June 5	640	_____
Washington Hawthorn	first bloom	June 20	657	May 26	634	June 2	654	June 6	648	_____

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Species	Phenological Event	<u>1997</u>		<u>1998</u>		<u>1999</u>		<u>Average</u>		Current Year's Date
		Date	DD50	Date	DD50	Date	DD50	Date	DD50	
Northern Catalpa	first bloom	June 22	711	May 28	665	June 2	654	June 7	677	_____
American Elder	first bloom	June 22	711	May 28	665	June 7	752	June 9	709	_____
Red Prince Weigela	full bloom	June 20	657	May 25	622	June 13	923	June 9	734	_____
Sweet Mockorange	full bloom	June 24	763	May 29	690	June 7	752	June 9	735	_____
Callico Scale	egg hatch	NA	NA	May 30	713	June 8	781	June 3	747	_____
Dogwood Borer	adult emergence	NA	NA	May 31	734	June 8	781	June 4	758	_____
Washington Hawthorn	full bloom	June 24	763	May 31	734	June 8	781	June 10	759	_____
European fruit lecanium scale	egg hatch	NA	NA	June 1	749	June 8	781	June 4	765	_____
Black vine weevil	adult emergence	NA	NA	May 31	734	June 10	837	June 5	786	_____
Rhododendron borer	adult emergence	NA	NA	June 6	792	June 8	781	June 7	787	_____
Deutzia scabra	first bloom	NA	NA	June 7	796	June 8	781	June 7	789	_____
Northern Catalpa	full bloom	June 25	793	June 6	792	June 9	807	June 13	797	_____
Winterberry Holly	first bloom	NA	NA	June 3	777	June 10	837	June 6	807	_____
Striped Pine Scale	egg hatch	NA	NA	June 4	784	June 10	837	June 7	811	_____
Lightning Bug	first flash	NA	NA	May 31	734	June 12	899	June 6	817	_____
Japanese Tree Lilac	full bloom	June 28	856	June 4	784	June 10	837	Oct 13	826	_____
Mountain-laurel	full bloom	June 25	792	June 8	802	June 12	899	June 15	831	_____
Oakleaf Hydrangea	first bloom	NA	NA	June 9	811	June 11	869	June 10	840	_____
Mimosa webworm	egg hatch - 1st generation	NA	NA	June 12	860	June 10	837	June 11	849	_____
Peach tree borer	adult emergence	July 8	1064	June 12	860	June 2	654	June 7	859	_____
Fall Webworm	egg hatch	June 24	764	June 12	860	June 19	989	June 18	871	_____
'Greenspire' Littleleaf Linden	first bloom	June 30	906	June 12	860	June 11	869	June 18	878	_____
Spruce budscale	egg hatch	June 30	906	June 12	860	June 12	899	June 12	888	_____
Winged Euonymus scale	egg hatch	NA	NA	June 12	860	June 13	923	June 12	892	_____
American Elder	full bloom	June 28	856	June 12	860	June 17	971	June 19	896	_____
Cottony Maple Scale	egg hatch	NA	NA	June 14	897	June 12	899	June 13	898	_____
Winterberry Holly	full bloom	NA	NA	June 13	880	June 13	923	June 13	902	_____
Southern catalpa	first bloom	NA	NA	June 14	897	June 13	923	June 13	910	_____
Deutzia scabra	full bloom	NA	NA	June 13	880	June 16	962	June 14	921	_____
Bumald Spirea	full bloom	July 2	955	June 19	1003	June 11	869	June 20	942	_____
Panicled Goldenraintree	first bloom	July 7	1041	June 15	915	June 12	899	June 21	952	_____
Japanese beetle	adult emergence	July 2	955	June 17	955	June 19	989	June 22	966	_____
Azalea bark scale	egg hatch	NA	NA	June 17	955	June 19	989	June 18	972	_____
'Greenspire' Littleleaf Linden	full bloom	July 6	1023	June 23	1105	June 16	962	June 25	1030	_____
Rosebay Rhododendron	first bloom	July 7	1042	June 17	955	June 26	1130	June 26	1042	_____
Southern catalpa	full bloom	NA	NA	June 23	1105	June 21	1019	June 22	1062	_____
Bottlebrush Buckeye	first bloom	NA	NA	June 23	1105	June 27	1162	June 25	1134	_____
Panicled Goldenraintree	full bloom	July 28	1511	June 23	1105	June 27	1162	July 6	1259	_____
Pine needle scale	egg hatch - 2nd generation	NA	NA	June 30	1292	July 5	1366	July 2	1329	_____
Euonymus scale	egg hatch - 2nd generation	NA	NA	June 30	1939	July 23	1808	July 11	1874	_____
Magnolia scale	egg hatch	Aug 3	1627	Aug 7	2120	Aug 2	2090	Aug 4	1946	_____
Banded Ash Clearwing	adult emergence	NA	NA	NA	NA	Aug 13	2302	Aug 13	2302	_____