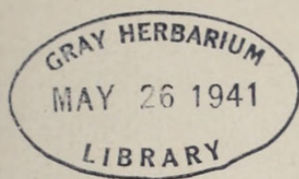


# ARNOLDIA



A continuation of the  
BULLETIN OF POPULAR INFORMATION  
of the Arnold Arboretum, Harvard University

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## WINTER INJURY AND SERIOUS PESTS TO BE FOUGHT NOW

**I**N the last issue of *Arnoldia*, (Vol. 1, No. 6, April 29, 1941), mention was made of the severe damage done to rhododendrons and a few other evergreens during the past winter, especially during the latter half of March of this year. Since that bulletin was written, considerable damage has appeared among deciduous plants, both trees and shrubs, including species which normally are not subject to winter injury. A careful examination of hundreds of plants affected at the Arnold Arboretum shows a very confusing picture. Shrubs in certain areas may be killed to the ground, whereas the same species in another part of the Arboretum in apparently just as exposed or just as protected situations, may be completely unharmed.

As a result of these confusing data, it seems advisable at this time to base the winter damage on the vagaries of the weather as explained in that bulletin. This does not explain why twenty-five and thirty-foot tall varieties of *Carpinus betulus* are injured for the first time in many years, nor does it explain why *Kerria japonica* is uninjured at one place and severely injured at another. Nor does it explain why the species of *Exochorda*, normally somewhat tender, escaped injury in all parts of the Arboretum, nor why *Abelia grandiflora* is badly injured while *Viburnum macrocephalum sterile*, growing next to it, is in perfect condition.

Believing that some readers of *Arnoldia* would be interested in a partial list of plants which have shown more or less severe winter injury up to the present time, such a list is given below. While some of these are subject to slight injuries every winter, these have been included as a matter of record. If the list does nothing else, it may help to console gardeners by recording the fact that winter injury has hurt gardens besides their own.



### A Few of the Woody Plants Injured Last Year

<i>Abelia grandiflora</i>	<i>Lonicera korolkovi</i>
<i>Amorpha fruticosa</i>	myrtillus
<i>Berberis vulgaris atropurpurea</i>	orientalis longifolia
<i>Buddleia alternifolia</i>	standishi lancifolia
<i>Callicarpa</i> sp.	tatarica angustifolia
<i>Calycanthus fertilis ferax</i>	latifolia
<i>Carpinus betulus carpinizza</i>	lutea
globosa	thibetica
horizontalis	<i>Philadelphus</i> —most sp. and vars.
quercifolia	<i>Physocarpus capitatus</i>
<i>Cornus florida</i> —50% of the	intermedius parvifolius
flower buds	<i>Prunus maritima</i>
rubra—branches killed	subhirtella
<i>Coronilla emerus</i>	pendula “A. J. Ives se- lection”
<i>Corylopsis pauciflora</i>	<i>Ptelea trifoliata mollis</i>
<i>Cotoneaster microphylla</i>	<i>Rhododendrons</i> —many hybrids and species
<i>Cydonia oblonga</i>	<i>Ribes gordonianum</i>
<i>Cytisus</i> “Burbank hybrids”	holosericeum
elongatus	nigrum apiifolium
sessilifolius	petraeum
scoparius	<i>Rosa rugosa</i>
andreanus	spinosissima “Plato”
<i>Deutzia hypoleuca</i>	“Pythagoras”
lemoinei	watsoniana
rosea	<i>Sophora viciifolia</i>
<i>Gordonia alataamaha</i>	<i>Spiraea</i> sp.—most of them in- jured
<i>Hydrangea arborescens</i>	<i>Staphylea colchica</i>
cinerea	pinnata
<i>Ilex crenata convexa</i>	<i>Stephanandra tanakae</i>
helleri	<i>Symphoricarpos chenaulti</i>
<i>Kalmia latifolia</i>	<i>Viburnum dentatum</i>
<i>Kerria japonica</i>	venosum canbyi
<i>Leucothoe racemosa</i>	<i>Weigela</i> “Congo”—others very little
<i>Ligustrum acuminatum macro- carpum</i>	
<i>Lonicera fragrantissima</i>	
involucrata serotina	

### A Few of the Woody Plants Killed to the Ground

<i>Amorpha brachycarpa</i>	<i>Cytisus ratisbonensis</i>
canescens	<i>Genista pilosa</i>
<i>Calycanthus fertilis</i>	<i>Helwingia japonica</i>
floridus ovatus	<i>Ligustrum obtusifolium</i>
<i>Carpinus betulus compacta</i>	<i>Lonicera quinquelocularis</i>
<i>Ceanothus americanus</i>	<i>Neillia sinensis</i>
pallidus roseus	ueki
<i>Cephalanthus occidentalis</i>	<i>Pachistima myrsinites</i>
<i>Colutea arborescens</i>	<i>Prunus bokhariensis</i>
media	<i>Ribes bethmonti</i>
<i>Cytisus albus</i>	nigrum



## The Elm Leaf Beetle

More growing pains for interested home owners everywhere in the northeast this year will be caused by the elm leaf beetles, which undoubtedly will be present in large numbers. Mature beetles have been appearing in many houses during the early spring, and by May 15 had made their appearance on some of the elm trees in the Arnold Arboretum.

Last year there was a particularly bad infestation of these beetles in New England. Though many American elms were badly infested, some of the European elms were practically defoliated. As is usually the case in such circumstances, many home owners did not think of spraying until the damage was done, i.e. after the trees were practically defoliated. As a result the larvae ate voraciously and were allowed to mature into beetles. Many of these beetles wintered over in protected nooks and crannies and have already started eating holes in elm foliage this year. Just now, these mature beetles are busily engaged laying their light yellowish orange colored eggs on the under side of elm leaves. One female may deposit as many as six hundred eggs! These eggs will soon hatch and the young larvae will commence eating on the **under** surface of the elm leaves, completing their growth in fifteen or twenty days. The remedy is **immediate** spraying with lead arsenate about 3 pounds to 50 gallons of water using some good "sticker." This should control the pest if the spray be aimed particularly at the under side of the leaves, and may even kill some of the mature beetles before they lay their eggs.

Because the insect is appearing unusually early this year, it may be necessary to spray a second time in order effectively to control the larvae when they appear. The important thing to remember is that if the same trees are allowed to be completely defoliated again this year as were defoliated last year, it will seriously weaken them and one more defoliation next year may be the cause of their death. Our New England elms are worth keeping, and with the Dutch elm disease practically at our door step, it is imperative that we keep these elms in a vigorous and healthy condition.

## Willow leaf Beetle and Canker worms

The willow leaf beetle, a small steel-blue beetle, is now actively devouring the foliage of willow trees while the canker worms are eating the foliage of many ornamental trees, including oaks, lindens, elms and crabapples. Both these insects can be controlled by using the same spray as is recommended for the elm leaf beetle.

## Garden Cut Worms

Though these are troublesome pests mostly to herbaceous garden plants, they have shown themselves to be present in such large numbers around Boston that they should not be overlooked. Gardeners



will be troubled with them from now until the middle of June. The species which are particularly numerous around Boston this year are the dingy cut-worms. They eat succulent young plants either at or near the surface of the soil. Their numbers are governed from year to year chiefly by the amount of rainfall the previous year, much rain forcing them to the surface where birds and predatory insects eat them or else the excess moisture preventing the females from laying eggs in satisfactory places. From their numbers this year, apparently conditions were ideal for them during May and June last year. About the only method of controlling them now is to sprinkle a poison bran bait over the soil in the early evening, since these cut worms feed chiefly at night. The bait might be made in the following proportions:

1½ lbs. bran  
1½ oz. sodium arsenate  
¼ pint black molasses  
sufficient water to make a mash

These are a few of our plant troubles this year. Now is the time to control them, while they are actively eating the foliage of trees, shrubs and plants. Do not delay spraying until the damage is done.

#### Notes

The Oberly Memorial Fund Committee of the American Library Association has awarded the Oberly Memorial Prize for 1940-41 to Dr. E. D. Merrill, Arnold Arboretum, and Dr. E. H. Walker, Smithsonian Institution for their "Bibliography of Eastern Asiatic Botany" published by the Arnold Arboretum. This selection was made in competition, the objective of the committee being to select the most outstanding bibliography in the fields of agriculture and the natural sciences. The Eunice Rockwood Oberly Memorial Fund was established in 1924 and awards are made at two year intervals.

At the annual meeting of the National Academy of Sciences in Washington on April 30, Dr. Karl Sax of the Arboretum staff was honored by election to membership. It is worthy of note that three of the present staff members of the Arboretum are included among the twenty-five making up the section of botany of the Academy. Elections are limited to fifteen in the whole field of science in any one year and Dr. Sax was the only botanist elected this year.

Apparently this season will break all records of visitors to the Arboretum with approximately 43,000 visitors on Lilac Sunday, May 18. Because of the continued cool weather the lilacs and hundreds of other trees and shrubs are still retaining their flowers, making the Arboretum well worth a visit this week end.

DONALD WYMAN



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