

ARNOLDIA



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

VOLUME 15

MARCH 18, 1955

NUMBER 1

FORCING HARDY WOODY PLANTS IN THE GREENHOUSE FOR EARLY BLOOM

FORCING plants indoors to produce gorgeous bloom for spring flower shows has become a favorite indoor sport for many a commercial grower. The Arnold Arboretum tried valiantly to refrain from this type of activity but has had to succumb. When it came to figuring the time to bring in plants from outdoors so that they would produce the proper amount of flowers at the exact time the judges toured the show, it was woefully clear that there was not much published information which would help rank amateurs at this game. The experienced growers, who had been doing this for years, either kept such facts in their heads or else tucked away in some attic file which was referred to briefly once a year.

Many growers helped the amateurs of the Arboretum with timely suggestions, but we wanted to have something more definite than a "guess" to go by. Consequently, we kept records of when the plants were brought into the greenhouse, how long it took them to come into flower, and at what greenhouse temperatures. The old-timers say, that such information is not of much value, since the number of days for blooming depends on the amount of "cold" (i.e., dormant period) the plant has received previously, the amount of rainfall the previous summer and fall, the temperature of the greenhouse, the number of days with sunshine after the plants have been taken into the greenhouse, etc.

All of which is understandable, nevertheless, we wanted the records on paper to help us with such forcing for future shows.

Consequently, the plant propagator, Mr. Coggeshall, kept a record of the dates the plants were brought into the greenhouse, and the number of days it took to force them into bloom. Included with the plants were two sets of cut branches, cut from the same plants but at different times, to determine the length of time it would take to bring these into bloom also. The greenhouse was kept at about 55°-60° F. night temperature. The idea was to see if time of bloom out of doors

(which is known) could be correlated with the number of days necessary to bring the branches into bloom in the greenhouse, and also to see whether shrubs with a ball of soil about the roots would bloom (when forced) in about as many days as the cut branches.

BRANCHES OF SHRUBS FORCED IN A GREENHOUSE

With Night Temperatures of 55°-60° F.

	<i>No. of days to bloom when cut Jan. 28</i>	<i>No. of days to bloom when cut March 18</i>	<i>Date of normal bloom out of doors</i>
<i>Abeliophyllum distichum</i>	20	6	April 5
<i>Acer rubrum</i>	22	6	April 5
<i>Cercis canadensis</i>	39	13	May 5
<i>Chaenomeles lagenaria</i>	39	—	May 5
<i>Cornus florida</i>	45	22	May 15
<i>Cornus mas</i>	19	0	April 5
<i>Deutzia lemoinei</i>	45	35	May 25
<i>Forsythia ovata</i>	18	8	April 5
<i>Forsythia suspensa</i>	20	6	April 15
<i>Halesia monticola rosea</i>	44	22	May 15
<i>Hamamelis japonica</i>	16	—	March
<i>Kalmia latifolia</i>	79	—	June 15
<i>Kolkwitzia amabilis</i>	—	38	June 5
<i>Leucothoe racemosa</i>	77	35	June 5
<i>Lonicera standishi</i>	16	5	April 15
<i>Magnolia soulangeana superba</i>	38	—	May 5
“ <i>stellata</i>	—	9	April 25
<i>Pieris floribunda</i>	30	12	April 25
“ <i>japonica</i>	24	9	April 15
<i>Prunus sargentii</i>	32	12	April 25
“ <i>tomentosa</i>	26	15	April 25
“ <i>triloba</i>	29	13	April 25
“ <i>yedoensis</i>	30	13	April 25
<i>Rhododendron calendulaceum</i>	77	38	June 5
“ <i>carolinianum</i>	53	31	May 15
“ <i>fortunei</i>	91	—	June 15
“ <i>mucronulatum</i>	21	8	April 15
“ <i>obtusum kaempferi</i>	43	29	May 15
“ <i>schlippenbachi</i>	43	18	May 15
“ <i>yedoense poukhanense</i>	50	31	May 15
<i>Ribes odoratum</i>	26	16	May 15
<i>Spiraea prunifolia</i>	31	9	April 25
“ <i>thunbergii</i>	29	12	May 5
<i>Styrax japonica</i>	65	36	June 5
<i>Viburnum sargentii</i>	—	50	June 5



PLATE I

Pruning exhibit in the new lecture-demonstration hall in the Administration Building of the Arnold Arboretum. This exhibit is open to the public Monday through Friday from 9 A.M. to 5 P.M. from March 1 on for several months. In visiting the Arboretum, stop in to see this very practical exhibit.

PLANTS BROUGHT IN JANUARY 11

	<i>No. of days to bloom</i>	<i>Date of normal bloom out of doors</i>
Iberis sempervirens	25	May 15
Alyssum saxatile compactum	28	May 15
Convallaria majalis	28	May 15

PLANTS BROUGHT IN JANUARY 28

Deutzia scabra	45	June 25
“ gracilis	45	May 25
Rhododendron racemosum	35	May 5
“ obtusum kaempferi	38	May 15
Weigela hortensis	40	May 15

PLANTS BROUGHT IN FEBRUARY 1

Prunus sargentii	28	April 25
“ yedoensis	28	April 25
Malus halliana parkmani	38	May 5
Chaenomeles lagenaria	35	May 5
Rhododendron mucronatum	32	May 5
Vinca minor	20	April 25

PLANTS BROUGHT IN FEBRUARY 8

Forsythia suspensa	20	April 15
Magnolia stellata	34	April 25
Pieris japonica	24	April 15

Only a few plants were forced in our greenhouses last year, but the above results show that plants blooming at the same time out of doors, can be forced into bloom indoors in about the same number of days. The later they bloom out of doors, the longer they take indoors, naturally. Also, plants dug with a ball of soil can be forced in *about* the same length of time as cut branches, under the same conditions. It goes without saying, that with higher greenhouse temperatures at night, the number of days to bloom can be further reduced. In other words, and with wide allowances for many variables, the time for forcing cut branches indoors can be summarized as follows:

CUT BRANCHES

Approximate number of days to bloom in greenhouse with night temperatures of 55°-60° F.

16	March	-
18-22	April 6	6-8
20-31	April 15	5-12
26-32	April 25	9-12
26-39	May 5	13-16
43-50	May 15	18-31
45	May 25	35
65-77	June 5	35-50
79-91	June 15	-

DONALD WYMAN