

AZALEAS

At Highland Park, Rochester, N. Y.

1912.

The azaleas are rapidly coming into bloom, and the numerous species and varieties, about one hundred and ten in all, will keep up a succession of flowers until the end of June. There are no other hardy shrubs in the north temperate zone that present so gorgeous an array of colors as the azaleas.

It has been said of the azaleas by an enthusiastic writer that "they present a charm seen in no other flowers. The soft tints of buff, sulphur and primrose; the dazzling shades of apricot, salmon, orange and vermilion, are always a fresh revelation of color. They have no parallel among flowers, and exist only in opals, sunset skies and the dush of autumn woods. The Ghent nurserymen who have developed their hues should receive a medal of rubies, topazes and zircons executed by a Cellini."

The cultivation of hardy azaleas for the adornment of gardens has received much attention in Europe for at least 150 years. Five of the American species were introduced into Europe from America in the middle of the seventeenth century and in the early years of the eighteenth century.

Work of Ghent Nurserymen.

From 1820 to 1830 some Belgian nurserymen in Ghent began the crossing of the different American species among themselves and, also, crossing these again with the Pontic azalea from the Caucasus regions; and the hardy Chinese azalea, with its large yellow flowers, which is also found growing in a wild state in Japan and Korea, has been used in cross fertilization with the above species.

These hybrids are generally known under the collective name of Ghent azaleas. As a matter of fact the hybridization and crossing has been carried to such an extent during the past eighty to ninety years, and so many hundred hybrids and varieties have received names, that it is extremely difficult to trace the parentage. An expert, however, who is acquainted with the specific characters of the different species, is usually able to trace the parental features in the progeny. About twenty species of azaleas are known to botanists. Some new species have been lately discovered in Korea, Japan and China, and when these are described that number will be considerably augmented.

Vasey's azalea, from the mountains of North Carolina, is about the first to flower. The blossoms are deep pink to almost white, and are very attractive. They are now fading. The Canadian azalea, known commonly as the Rhodora, with mauve or lilac blossoms, begins to open its flowers closely after

Vasey's. This has the habit of growing gregariously, and can always be seen in its native habitat growing in extensive matted clumps. It is in good bloom at the present time, but will soon fade.

Native of Monroe County.

The native azalea in Monroe county and Western New York, *azalea canescens*, known commonly as swamp pink, is now coming into bloom. The clear pink blossoms, which vary considerably in intensity of shades, are remarkably showy.

Azalea nudiflora, which in general much resembles the last described and flowers about the same time, ranges much more to the south than *azalea canescens*, which is distributed more to the north. The Pontic azalea, a native of the Orient and Caucasus regions, has remarkably showy clear yellow flowers, and has been much used in hybridization, as the variously rich yellow shades in many varieties are no doubt traceable to the parentage of this species. It is now in bloom.

Azalea calendulacea, which grows in a wild state from Southern Pennsylvania to Georgia, has perhaps the most gorgeous flowers of any known wild species. The flowers are of various shades of deep orange-yellow and red. It will be about two weeks before it is in bloom. There are specimens of it in the collection seven feet in height. It can readily be seen by the close observer

that many of the named varieties have received their intensely deep orange-red shades, in many varying tones, from this species. The variety known as *gloria mundi*, with deep orange-red blossoms is doubtless a child of this species, and this was known in Belgium as far back as 1829.

Beautiful White Species.

The beautiful white-flowered species, *azalea arborescens*, which grows naturally from Pennsylvania southward, does not flower until the middle of June. This species has handsome, smooth, glossy leaves, and the white blossoms surmounting the leaves render it most attractive. It can again be readily seen that many variously tinted white, creamy-white and pinkish-white forms had their parentage in this species.

The last American azalea to bloom is *azalea viscosa*, and it does not flower until the end of June and first of July. The flowers are white, and peculiarly clammy. Loudon in his "Arboretum et Fruticetum Britannicum" says that a number of varieties and hybrids were raised from this species in Europe about 1836. It does not appear that any of the numerous hybrids in the Highland Park collection show its parentage except *viscocephala*, and this single variety may possibly have been raised from it.

Species from Japan.

Azalea kaempferi from Japan, has beautiful salmon-red flowers in the typical forms, but it shows great variability in its seedling progeny. Some botanists regard it as a form of the Indian azalea of the greenhouse, but from a horticultural standpoint it looks very different. This was discovered on the high mountains of Central Japan by Dr. C. S. Sargent in 1892 and seed was collected by him at that time. As a result it has been widely disseminated over North America and Europe. It is a most beautiful garden shrub, and is in full bloom at the present time. It does not appear to have been used thus far in hybridization with other azaleas.

Azaleas, like the great majority of ericaceous plants, are almost never found growing in limestone soil. There is, however, one remarkable instance, and that is the native azalea found growing in the woods of Monroe county in ordinary limestone soil, and quite happy and attractive. No other azalea can be grown successfully, for any considerable period, in soil strongly impregnated with lime. This seems to be due to an exceptional physiological condition, which it is difficult to explain.

Species and Varieties of Azaleas now
growing in Highland Park.

May 1912.

- Azalea amoena.....China; Japan
" amoena obtusa.
arborescens, Smooth Azalea.
.....Allegheny Mts.
Canadensis, Rhodora.
....Newfoundland to Pennsylvania.
canescens.....Eastern North America.
" calendulacea..Eastern North America.
" Indica Kaempferi.....Japan.
ledifolia.....China.
" Narcissiflora.
Kamschatica....Asia; North America.
" nudiflora, Swamp honeysuckle.
.....Eastern North America.
" occidentalis.....California.
rombica.....Japan.
" Pontica.....Orient.
" Schlippenbachi.....Japan.
Sinensis.....China.
" Vaseyi.....North Carolina.
viscosa, Clammy Azalea.
.....Eastern North America.

Azaleas of Hybrid Origin.

- Azalea Admirable.
" Admiral de Ruyter.
Adrienne.
" Albicans.
Alice Baumann.
Altaclarensis.
Arethusa.
Anthony Koster.

Azalea Astreans.

- “ Auguste Mechylinck.
- “ Aurore de Royghem.
- “ Baron Constant d’Rebeque.
- “ Beaute Celeste.
- “ Belle Merveille.
- “ Bijou de Genbrugge.
- “ Bouquet de Flore.
- “ Boquet d’Aurora.
- “ Boquet d’Orange.
- “ Baronesse E. de Rothschild.
- “ Bronze Unique.
- “ Cardinal.
- “ Charles Baumann.
- “ Coccinea speciosa.
- “ Comte de Quincy.
- “ Comte de Kerchove.
- “ Consul Pecher.
- “ Cymodocee.
- “ Daviesii.
- “ Domenico Scassi.
- “ Dr. Streiter.
- “ Duc de Orleans.
- “ Duc de Provence.
- “ Dulcinee.
- “ Edison.
- “ Elizabeth.
- “ Eugenie.
- “ Fama.
- “ Flameola incarnata.
- “ Frere Orban.
- “ Fritz Quilhoui.
- “ Geant de Battailles.
- “ General Brailmont.
- “ General Trauff.
- “ Graf Alfred Von Zipperg.
- “ Grand Duc de Luxembourg.
- “ Grandeur triomphante.

Azalea Grand Monarque.

“ Gloria Mundi.

Guelder roos.

Guillemont.

“ Ignea nova.

Imperator.

“ Isabel Van Houtte.

Klinger.

Josephine Klinger.

Joseph Baumann.

“ Juliana.

“ Julda Schipp.

Lang de Genbrugge.

“ Madame Ardent.

“ Madame Gustave Guilmont.

Madame Joseph Baumann.

“ Madame Moser.

“ Magnifica albicans.

Marie Ardent.

“ Marie Dorothea.

Marie Verschaffelt.

Melaine.

Mierville.

Minerva.

M. Coster.

Mignon.

Nancy Waterer.

Narcissiflora.

Oscar I.

Papadopili.

Papilionacea.

‘ Pallas.

“ Prince Albert.

Prince Henry des Pays Bas.

Princess Adrienne.

Pucella.

Queen Sophia.

“ Queen Victoria.

Azalea Raphael de Smet.
" Reine Louise.
" Rembrant.
" Roi des Belges.
Unique.
Viscocephala.
W. E. Gumbleton.
Wilhelm III.

There are 15 species and 96 hybrids and varieties of Azaleas represented in the collection, making a total of 111 named kinds.

RHODODEN- DRONS

At Highland Park, Rochester, N. Y.

1912

Among the hardy broad-leaved evergreen shrubs with magnificent flowers, rhododendrons occupy the first place in the decoration of parks and gardens. The bold clusters of handsome blossoms in white, pink, scarlet, crimson and purple colors, surmounting the deep green leaves, never fail to attract admiration.

Ten years ago two hundred species of rhododendrons were known to botanists. There are now probably three hundred species. E. H. Wilson, in his four botanical tours in Central China and along the mountains of the Thibetan frontier during the past twelve years, discovered a large number of rhododendron species new to science. The character of these are now being studied and described.

A great majority of rhododendron species occur in the mountains of Asia, particularly on the Himalayas, on the Thibetan frontier and on the mountains of the upper Yangtze valley in China. There are many beautiful species found growing in the Malayan archipelago, and these, of course, can only be grown in greenhouses. Seven species grow wild on the North American continent.

Origin of Hybrids.

The hardy rhododendrons that are grown in the gardens, estates and parks of the Northeastern states are mostly three American species and hybrids in which the blood of rhododendron catawbiense is dominant. The origin of these hybrids seems to be as follows: In England rhododendron ponticum, from Asia Minor, which is not hardy here, was crossed with rhododendron catawbiense, and the progeny resulting from this was again crossed with the lovely rhododendron arborum from the Himalayas, and the introduction of this blood gave an opportunity for a wide range of color. The crossing of this hybrid progeny again probably in the third and fourth generations, with rhododendron catawbiense has rendered the hardy blood dominant and has given hardy hybrids with lovely colors.

The severe winter of 1903 and 1904 killed and severely injured a great many rhododendrons in the Northeastern states. This happens periodically, and rhododendrons have been much injured during the past winter, but not to the same extent as eight years ago. Some varieties have suffered in Highland Park. Madame Carvalho, giganteum, Blandyanum, James Bagley, Hannibal, Anna Parsons and the Queen have been injured but will recover.

Earliest One to Bloom.

The earliest rhododendron to bloom in the collection is dahurica, from Siberia,

Lilac-colored Flowers.

Among the lilac-colored or rosy-lilac hybrids *roseum pictum*, which grows in the center of the bed opposite the large limestone boulder, is perhaps one of the best. It is a strong grower, and the rosy-lilac flowers are remarkably beautiful. The well-known *everestianum* is equally as hardy as the latter and always flowers freely, but the lilac flowers are not as richly tinted.

Among the crimson and scarlet-flowered hybrids *kettledrum* stands out prominently. It is a strong, hardy grower, always flowers freely and the deep crimson blossoms are very showy. Alexander Dancer has crimson flowers tinged with rose and is now in good bloom. Charles Dickens might be described as dark scarlet. This is an old, well-known variety and can always be depended upon to flower freely. It is now coming to bloom. Edward S. Rand is a remarkably deep scarlet-flowering hybrid. It has a compact habit of growth and is very hardy. Guido has deep crimson flowers, which stand out prominently on handsome deep green leaves. Charles S. Sargent has handsome, showy, scarlet flowers, but it seems to have suffered from the intense cold of the past winter and a number of its flower buds have been injured. It will not be as showy as it is in normal seasons.

Shrubs with Pink Flowers.

Among the pink-flowering rhododendrons there are only a few hardy varieties and F. L. Ames is perhaps the best. It is not yet in bloom. The flowers are rosy-pink shading to a light center. Henrietta Sargent has deep pink flowers, a very low compact habit of growth and deep green leaves, and it has a fine hardy constitution. Mrs. C. S. Sargent has deep rosy-pink flowers, and is noticeable because of its slightly curled leaves. It blossoms late, and it is not yet in bloom. Pink pearl is one of the most beautiful of the pink rhododendrons, but it is not hardy. It is always lifted and stored in a cold frame over winter.

Among the purple or deep lavender-flowering hybrids kissena is now in bloom. It is a low compact grower and has deep lavender blossoms. This hybrid was raised at Flushing, Long Island. Purpureum elegans has rich purplish blossoms and is now in flower. Mrs. Harry Ingersoll has purplish-lavender blossoms in short clusters, which are somewhat hidden amongst the leaves. The habit of growth is compact and dense.

There is a small bed on the side of the knoll across the grass walk from the large azalea bed in the hollow, where the three American species are grouped together, namely, punctatum, catawbiense and maximum. Maximum is the last of all the rhododendrons to flower and is in bloom at the end of

June and the first of July. The flowers vary from rosy-white. to almost pure white. A small patch of this species grows wild in a swamp in Penfield, east of Rochester, and it grows abundantly in several swamps beside the village of Belfast, in Allegany county, on the Genesee river. It is enormously abundant in many valleys and on hillsides in Pennsylvania.

Species and Varieties of Rhododendrons now growing in Highland Park,

May 1912.

RHODODENDRONS :

arbutifolium.		
brachycarpum,		Japan.
campanulatum,		Himalayans.
Caucasicum,		Caucasus.
“	album.	
	pictum.	
Catawbiense,	Great Laurel,	Alleghenies southward.
	album.	
	hybrida	Anna Parsons.
	“	album grandiflorum.
	“	album elegans.
“	“	Alexander Dancer.
	“	atrosanguinea.
“	“	Amarantinora.
“	“	Bacchus.
	“	bicolor.
		Blandyanum. (half hardy).
	“	Boule de Neige.
	“	Caractacus.

Catawbiense hybrida	Charles Dickens.
“	“ Charles S. Sargent.
“	“ Charles Sumner.
“	“ Charles Bagley.
“	“ Candidissimum.
“	“ Coerulescens.
“	“ C u n n i n g h a m ’ s White. (tender).
“	“ Daisy Rand. delicatissimum.
“	“ Dr. Torrey.
“	“ Edward S. Rand.
“	“ Everestianum.
“	“ F. D. Godman.
“	“ Flushing.
“	“ F. L. Ames.
“	“ General Grant.
“	“ Glennyanum.
“	“ giganteum.
“	“ Guido.
“	“ Hannibal.
“	“ Henrietta Sargent.
“	“ H. H. Hunnewell.
“	“ H. W. Sargent.
“	“ Henry Probasco.
“	“ Ignatius Sargent.
“	“ James Bateman.
“	“ James Mac’Intosh.
“	“ J. Marshal Brooks.
“	“ John Waterer.
“	“ J. R. Trumpy.
“	“ Kissena.
“	“ Kettledrum.
“	“ Lady Armstrong.
“	“ Lady Grey Egerton.
“	“ macranthum.
“	“ Madame Carvalho.
“	“ Marie Van Houtte.

Catawbiense hybrida	Marchioness of Londonderry.
	Memoir.
	Meteor.
	Miss Mary Ames. (tender).
	Mrs. C. S. Sargent.
"	Mrs. Davies Evans. (tender).
"	Mrs. George Paul. (tender).
	Mrs. Harry Ingersoll.
	Mrs. John Clutton.
"	Mrs. Milner.
"	Mrs. R. G. Shaw.
"	Old Port.
"	Parson's glory.
	Pink Pearl.
	President Lincoln.
	President Roosevelt.
	purpureum elegans.
"	purpureum crispum
	purpureum grandiflorum.
	Ralph Sanders.
	Rosabel.
	roseum elegans.
	roseum luteum.
	S. B. Parsons.
	Scipio.
	Sefton.
	Sherwoodianum.
	The Queen.
concinnum,	China.
Chrysanthum,	Siberia; Kamtschatka.

Dahurica,	Dahuria.
ferrugineum, Alpine Rose,	Central European Mts.
Govenianum.	
gemmiferum (half hardy).	
hirsutum, Alpine Rose,	Central European Mts.
hybridum.	
Metternichi,	China.
maximum, Elk Laurel,	New York to the Carolinas.
album.	
roseum.	
superbum.	
Wellsianum.	
mucronulatum,	China ; Japan.
myrtifolium.	
ovatum.	
Przewalskii,	China.
punctatum,	North Carolina.
Smirnowi,	Caucasus.
sutchuenense,	China.
racemosum,	China.
tenellum.	

There are 107 species and varieties of Rhododendrons in the collection.