Rhododendron viscosum and R. arboreum, the last of the Azaleas, are now virtually over for the season but their few remaining flowers still scent the air. Summer flowering Spiraeas like S. japonica, S. bumalda and its brilliantly colored variety Anthony Waterer with flat corymbs of flowers and S. Menziesii, S. Douglasii, S. latifolia and S. salicifolia with their upright panicked masses of flowers are in bloom. So, too, are late flowering Barberries like Berberis aggregata and its variety Prattii and the Prairie Rose (Rosa setigera), last of the Rose species to blossom. Unusually early is the Heather (Calluna vulgaris), of which the forms alba, rubra and tomentosa are in bloom in the Shrub Garden and on the bank on the left of Valley Road. On Bussey Hill different species of Acanthopanax and late flowering Brooms are in flower while Stewartia pseudocamellia and S. koreana are covered with their cupped Camellia-like blossoms. The last of the Dogwoods, the Chinese Cornus paucinervis, is also in full bloom; in warmer climates this species is evergreen or sub-evergreen and owing to the lateness of its blossoming it is well worth growing. On the Administration Building the climbing Schizophragma hydrangeoides is at the height of its beauty. On the right of Meadow Road the honey-scented Lindens fill the air with fragrance, the wealth of blossoms on Tilia japonica and its European relative T. cordata being especially noticeable.

Stewartia koreana, mention of which was made in these Bulletins last year, is flowering much more freely this season: the plants have grown well and increased in size. The behavior this year of this new Stewartia supports the favorable opinion first formed that for the climate of Massachusetts it is the best of its family. The flowers are pure white, saucer-shaped and each 3½ to 4 inches across, the center being aglow with a mass of yellow stamens. When fully opened the petals spread almost at right angles and each is slightly fringed. The larger, much less cupped blossoms are more conspicuous than those of its Japanese relative S. pseudocamellia. The American S. pentagyna
with white filaments and golden-brown anthers and its larger flowered variety (grandiflora) with purple stamens are the only other species of the genus which have proved hardy in the Arboretum.

Yucca flaccida and its varieties patens, glaucescens and variegata together with Y. filamentosa are now blooming freely in the Shrub Garden. These commonplace but handsome evergreens are well worth a place in the garden; they thrive in almost any position except bog land and, moreover, will stand a considerable amount of abuse. Their creamy white blossoms are borne in erect panicked racemes each from 2 1/2 to 6 feet tall and present a very striking picture. They are best seen in bright moonlight when the flowers are fully open welcoming night flying moths by whom pollination is effected. These two species, both native of southeastern United States, are with Y. glauca and its varieties from the Central Plains the only members of the genus that have proved hardy in the Arboretum. Adam’s Needle, the popular name for these plants, is derived from the spiny apex of the leaf which is characteristic of most of the species.

Sumacs in several species are features of the countryside of eastern North America. In the summertime their gross growth may attract but it is in the fall when clothed in intensely colored autumn foliage that they arrest attention on every hand. Possibly on account of their rank growth they do not receive the attention in gardens that their ornamental qualities warrant. Sumacs are members of the genus Rhus, a tribe widespread throughout both hemispheres and one containing such valuable economic trees as the Chinese Varnish Tree (R. verniciflua) and the Japan Wax Tree or Red Lac Sumac (R. succedanea). Unfortunately, a number of the species possess poisonous properties, of which the most familiar example is the Poison Ivy (R. toxicodendron). The Sumacs in general, however, are innocuous members of the tribe.

Three species common in New England and widespread through other parts of the United States are R. typhina, R. glabra and R. copallina, respectively the Staghorn, Smooth and Shining Sumacs. The two first-named are similar in general appearance but well distinguished by their shoots and inflorescences which are hairy in the case of R. typhina and perfectly smooth in that of R. glabra. These produce in early July terminal panicked masses of greenish flowers which are followed by reddish crimson fruits. For the edge of woodlands, the wild garden and for clothing gravelly places both species are useful. The best way to treat them is to cut the old stems to the ground each spring; by this means a vigorous young growth, dense and attractive will be formed. Though usually bushes, both species will under favorable circumstances grow into small trees.

In rocky places and especially in old pastures R. copallina forms a thick growth of stems each from 2 to 5 feet tall clothed with lustrous green, pinnate leaves, the rachis of which is winged. The inconspicuous flowers are greenish yellow and it is in the autumn when the fitness of the specific name is clearly demonstrated. At this season the leaves
Latest of the Azaleas to blossom is *Rhododendron viscosum*. 
look as if they were varnished with the richest tones of orange, scarlet and crimson. Of all the lesser shrubs of the countryside none has more brilliantly tinted autumn foliage than this Sumac.

**Rhus javanica**, better known as *R. Osbeckii* and *R. semialata*, is an Oriental species long cultivated in western gardens. In a wild state it is frequently a tree 25 feet tall with a trunk 2 feet in girth and a widespreading flat-topped crown. The leaves, pinnate with a winged rachis, are each a foot or more long but fall in the autumn without attaining any marked brilliancy. In late July each shoot terminates in a broad pyramidal mass of pure white blossoms and the garden value of this Rhus is evident. Flowering when there is a scarcity of blossoms in the garden, this tree has unusual value. This species is widespread throughout China, Korea and Japan and other parts of eastern Asia and is perfectly hardy in Massachusetts.

**Rhus verniciflua**, better known as *R. vernicifera*, is perhaps the most important member of the genus, furnishing as it does the varnish which as Chinese lacquer is famous the world over. Unfortunately, this varnish possesses poisonous properties and its method of application is not well understood outside of China, Korea and Japan. Its use is, therefore, confined almost entirely to those lands. This species of Rhus is perfectly hardy in the Arboretum, where it has been growing since 1887. In a native state it is a tree from 25 to 60 feet tall with rather sparse, whorled branches, clustered handsome pinnate leaves, each from 1 to 2½ feet long and large, drooping axillary panicles of greenish flowers which are followed by yellowish white fruits rich in fatty oil. It is wild on the mountains and abundantly cultivated along the margins of fields particularly throughout central China. When the tree has attained a diameter of about 6 inches, tapping for varnish commences, and this operation is continued at intervals until the tree is 50 or 60 years of age. If the tapping is too severe, or the tree too young, injury or death ensues. The operation is begun in late June or early July at a time corresponding with the opening of the flowers, and is continued throughout the summer. Oblique incisions from 4 to 12 inches in length, and about 1 inch in width, are made in the bark of the tree down to the wood, and the sap which exudes is collected in shells, bamboo tubes, and similar receptacles. Wooden pegs are driven into the trunk to facilitate climbing, in order to reach the main branches. The tapping is done early in the morning and the sap gathered from the receptacles into which it has flowed from the incisions each evening. In showery weather it dries rapidly, and often has to be scraped away. The sap continues to exude from the wound for about seven days and then a fresh, thin slice of bark is removed, which causes another exudation. This is repeated seven times with an interval of about seven days between each operation. After being tapped, the tree is allowed a period of from five to seven years to recover; the old wounds are then reopened and fresh ones made. A large tree will yield from five to seven pounds of varnish which as it exudes is pure white but quickly oxidizes to grayish white, changing to black.

E. H. W.