Mahonia Aquifolium. The season of flowers on tree and shrub is now fast approaching its end, and brightly colored fruits are beginning to display themselves. The Tartarian Honeysuckle (Lonicera tatarica) and its many varieties and hybrids are now laden with scarlet fruits, and here and there an orange-colored form is conspicuous. Particularly handsome in the Shrub Garden is the Oregon Grape, as Mahonia Aquifolium is commonly called. Unfortunately, this plant is none too hardy in the Arboretum, but last winter it suffered little damage and in the spring bore in great profusion panicled masses of rich yellow flowers. It is now laden with bloomy blue-black clustered berries suggesting bunches of small grapes, showing how appropriate is its common name. Native of western North America, where it is found from British Columbia to Oregon, this Mahonia has long been a favorite garden shrub. Its polished, pinnate foliage, dark green above and gray on the under surface, is handsome at all seasons of the year and during the winter months it is richly tinted crimson and purple. Where it can be grown there is no more handsome evergreen shrub of moderate height so suitable for making low masses under trees. More hardy is the dwarf M. repens, but its gray-green foliage is less attractive.

Hypericums are now in blossom in the Shrub Garden and in the border to the right of the Lindens entering from the path near the Administration Building. The half-dozen species that can be successfully grown in this climate are all shrubs of very moderate size, and by pruning can be kept as dense, rounded masses from 2 to 5 feet high. The stems and branches are clothed with thin, scaly red-brown bark and the flowers, freely produced at the ends of the shoot, are rich yellow in color with a brush-like mass of stamens the dominant feature. One of the most handsome is H. prolificum, found wild from New Jersey to Georgia and west to Iowa. Perhaps the most vigorous of the hardy species, it is characterized by its short-petioled, narrow-oblong leaves, each from ½ to 3 inches long, dark green and shining above. H. aureum is similar but smaller with larger flowers and bluish green leaves. Another species is H. lobocarpum with narrower leaves and smaller flowers in dense cymes forming terminal panicled clusters. These are less handsome than the large flowered Eurasian H. calycinum and
the hybrid *H. Moserianum*, so much planted in European gardens, but, unfortunately, not hardy in Massachusetts. This is much to be regretted, for no plants are better suited for forming ground-covers under trees than these St. Johns-worts. The Japanese *H. patulum* has not proved a success in the Arboretum, neither has its Chinese variety *Henryi* fulfilled expectations. Less hardy than at first supposed, it merely exists, which is unfortunate, for with its rich, butter-yellow blossoms, each 2 inches across, it is one of the handsomest of the whole tribe.

**Calluna vulgaris.** Heather is now opening its flowers and the different varieties will give a continuity of bloom until the end of August. There are white, pink, and crimson-purple forms, and many different habit types of Heather but all belong to one species. In many parts of the British Isles, and various districts of continental Europe, on open moor and hillside, Heather covers mile upon mile and in August forms one of the great floral displays of the year. The Scotchman's love of Heather is well known but he is not alone in his admiration of this lovely little plant. Heather is much more hardy than is generally supposed and may be grown successfully over the greater part of New England and other regions enjoying a similar climate, always supposing that lime be absent from the soil. It loves full exposure to sun and winds and must not be coddled. Clipping low in the spring results in a wealth of cheery, bright green, erect shoots which as August approaches are transformed into spikes of white, pink and red-purple blossoms. It is an excellent ground-cover but like other plants of this type does not transplant readily from the open ground. Propagated by cuttings or by seeds and carried along in small pots, it may be planted with success from spring until high summer. The secret of its successful culture is full exposure and an annual spring clipping. In districts where a decent snowfall prevails no winter protection is necessary, but where the snowfall is sparse a few Pine boughs should be thrown across the plants to break the direct rays of the sun in late February and March. Heather should be planted much more abundantly in New England, not only for its beauty, but as a ground-cover and mulch among Azaleas and other choice surface-rooting shrubs.

**Buddleia Davidii,** more widely known as *B. variabilis*, is one of the best late-flowering shrubs China has given to our gardens. It is not perfectly hardy in the Arboretum and the precaution is taken of rooting cuttings each autumn and placing out fresh plants in the spring. Severe pruning, a rich loamy soil, full sunshine and abundant water are the essentials for the success of this plant. The flowers are produced in tail-like masses which terminate each shoot, and when well grown, these may be anywhere from 18 to 30 inches in length. The color varies from pale to rich violet-purple. Of the varieties, *magnifica* with crinkled, slightly recurved petals and dark purple blossoms, and *superba* with a very dense inflorescence, are perhaps the best. A popular and very good form is that known as *Veitchiana*.

**Aesculus parviflora** is the last of the Buckeyes to blossom. Usually this happens about mid-July but this year it will be the first week of August before the flowers are fully expanded. Native of the south-
Last of the Buckeyes to blossom, *Aesculus parviflora*
eastern states, this is a broad, round-topped, much branched shrub some 6 to 10 feet high. Every branch terminates in a long, narrow, erect spike of small, white flowers in which the out-thrust stamens with pink anthers are conspicuous. This is an old plant worthy of greater attention than is now bestowed upon it. It requires a good soil and a moist situation, and is splendidly suited for massing on the edge of woods. It suckers freely and established clumps generally blossom in two tiers. A good example of this American plant may be seen on the edge of the Oak woods flanking the Buckeye collection on the right of Meadow Road.

Clethra alnifolia, the Pepperbush, is one of the most common as well as the most sweetly scented of native shrubs. Abundant in swamps, woodlands, and moist places from Maine to Florida, its blossoms fill the air with fragrance in late July and August. Unfortunately the leaves are too often disfigured by attacks of red spider, but this year the bushes in the Arboretum are clean and healthy. A second species, known as C. tomentosa, blooms later. Hailing from North Carolina and Florida this is quite hardy in the Arboretum and may be distinguished from the common Pepperbush by a covering of white hairs on the lower surface of the leaves. Another American species is C. acuminata, native of the southern Appalachian Mountains. This is not so attractive in blossom as the species already mentioned, but its polished cinnamon-brown stems make it singularly attractive in the winter season. The only other species grown in the Arboretum is the Japanese C. barbinervis. This has spreading inflorescences of pure white nodding flowers and is the first of the Pepperbushes to blossom. Widespread in Japan, in the Nikko region and elsewhere, it is often a bushy tree 30 feet tall. It is the handsomest of the Clethras hardy in New England.

Acanthopanax ricinifolius is one of the noblest trees of the cool, temperate regions. It occurs wild, scattered through moist forests from the extreme south to the limits of northern Japan, but is most abundant in Hokkaido, where it grows to a large size and specimens 80 feet tall with a trunk from 15 to 20 feet in girth are not rare. In Korea and central and western China it is also a valuable timber tree. In old trees the bark is gray and deeply furrowed, the branches thick and spreading to form a flattened or rounded crown. In young trees the branches are erect-spreading and both they and the trunk are armed with short, scattered, stout spines. The dark green leaves on long stalks are very like those of the Castor-oil plant (Ricinus), hence the specific name. Each branchlet terminates in a broad, flat compound cluster of white flowers which are rapidly followed by small, jet-black fruits. The large and handsome palmate leaves give this tree a tropical appearance, yet it is perfectly hardy and quick-growing and thrives in ordinary garden soil but prefers a moist situation. So far as is known it is not attacked by any insect or disease. A fine specimen about to burst into blossom may be seen by the pond near the Forsythias.

These Bulletins will now be discontinued until October.