

AMERICAN BERRIES OF HILL, DALE, AND WAYSIDE

In the accompanying illustrations the NATIONAL GEOGRAPHIC MAGAZINE reproduces in natural colors a beautiful series of paintings of 29 species of American berries and their blossoms by the gifted artist-naturalist, Miss Mary E. Eaton. This is the fourth of THE GEOGRAPHIC'S series of matchless color pictures of American Wild Flowers. The first series was published in May, 1915, followed by those of June, 1916, and Our State Flowers in June, 1917. The series comprise 64 pages in full color, depicting 105 species, each accompanied by a concise and interesting description of the plant's habitat and its habits.

SPICEBUSH

Benzoin æstivale (L.) Nees [Plate I]

Dwelling in deep, damp woods from Maine and Ontario to Kansas and Carolina, the spicebush, with its dainty yellow flowers and its seductive odor, is a real harbinger of spring. Flowering from March to May, its blossoms arrive even before the pussy-willow wakes up, and vie with the shadbush in the promptness of their advent. When they first appear, the flowers nestle close to the bare branches.

One species of the spicebush is found in abundance in eastern Asia. On account of the toughness of the wood and its aromatic fragrance, natives prize it for toothpicks. A new perfume, called Kuromoji, made from the essential oil of this plant, is now much in demand.

This shrub has several aliases—"Benjamin-bush," "wild allspice," and "fever-bush."

The sassafras is closely related to the spicebush, both playing host to the caterpillar of the swallow-tail butterfly.

The spicebush played its rôle in the Revolutionary War. Allspice was kept out of the American market, and the women of the times used the powdered berries of this plant as a substitute. During the Civil War its leaves were used in making a brew that took the place of tea.

BLACK ALDER

Ilex verticillata (L.) A. Gray [Plate I]

Flowering in June and July, from Nova Scotia to Florida and westward to Missouri, the black alder, a member of the holly family, so gladdens the months of snow and ice with its bright fruit that it is often known as the "winter-berry." Long after the frost has turned the leaves black and sent them away to enrich the soil for another summer's coming, its abundant red berries, clinging to leafless branches, dissipate the desolation of many a winter scene.

The black alder is a handsome shrub, growing from 5 to 10 feet high, with dull, warm gray bark and nearly vertical stems and branches. It flourishes especially in low, swampy ground, in Virginia sometimes reaching a height of 25 feet.

This species has qualities that have won for it a place in materia medica. The bark is dark, cloudy gray in color, bitter to the taste, and astringent in its action. An infusion made from it, or even from the leaves, has been found to possess tonic and alterative properties. The berries are purgative in their action and serve as a vermifuge, forming one of the pleasantest adjuvants in children's remedies.

During the Civil War the Southern people were hard pressed for medicines. A survey of the herbal resources of Dixie was made, and the berries and bark of the black alder were especially commended. They were used in the treatment of intermittent fevers and diseases which developed as a result of debilitated constitutions, especially gangrene and mortification, and as astringents for ulcers and chronic cutaneous diseases.

Just now the black alder is making a strong bid for favor as a cultivated plant. Showing a great mass of color, holding its berries longer than almost any other species, possessing attractive foliage that never grows shabby, it is ideal for decorative purposes.

AMERICAN MOUNTAIN ASH

Sorbus americana Marsh [Plate I]

The outstanding fact about the mountain ash is that it is really not an ash at all, but belongs to the rose family. That family is not less famous for its fruits than for its flowers; for blackberries, strawberries, and raspberries are as delightful to the palate as roses, or cinquefoils, meadow-sweets, hardhacks, avens, or silver-weeds can be to the eye. Goatsbeard and ipecacs are likewise members of the same versatile family, as are also queen-of-the-prairie and the agrimony.

There are about thirty species of ash of the *Sorbus* group. Flourishing from Labrador to Manitoba, and reaching south of the latitude of New York and the Great Lakes only where it can find mountains, the tree grows on rocky bluffs with wild plums and straggling beeches, attaining a height of from 20 to 40 feet.

The flowers appear in May and June in great masses or panicles of white. The leaf turns a bright, clear yellow in the fall. The berries, to which many a bird has flown for salvation in a snowy spell, remain on the trees

all winter. They are sometimes used in making astringent home remedies and occasionally are eaten raw, though said to be harsh in flavor, with a nauseous undertaste, which very few people relish. Infused with water, they furnish a pleasant subacid beverage, and by distillation a powerful spirit.

The aliases of the mountain ash are as numerous as those of a yeggman and as suggestive as those of a hobo. "Dogberry," "fowler's service," "Indian mozemize," "round wood," "witchwood," "quickbeam," "Rowan tree," "wichen," "whistle-wood," and "wild ash" are a few of the names assigned to it in the vernacular.

The fruit of the mountain ash is not, strictly speaking, a berry. Rather it is a pome, or apple-like fruit.

SMOOTH SUMAC

Rhus glabra (L.) [Plate I]

Belonging to the cashew family, which includes such diverse denizens of flowerland as the vinegar tree and the smoke bush, the poison ivy and the cadju tree, the smooth sumac is one of about 120 species widely distributed throughout the warm and temperate regions of the earth. Some authorities claim that it has a geographic range wider than that of any other tree or shrub. Of all the sections of the United States, the California floral region alone seems closed to it.

Environment works such changes in it, however, that a description which would fit in one section would not necessarily apply elsewhere.

The smooth sumac often grows 10 feet high, usually in colonies, seldom singly. Frequently confounded with the larger stag-horn sumac, sometimes called the vinegar tree, it thrives in almost any kind of soil and multiplies by stems that travel—like Hamlet's ghost—underground. One of the most inoffensive of plants, so many people have had such sorrowful experiences at the hands of its cousin, the poison sumac, that the innocent *Glabra* has suffered from the evil reputation of the wicked *Venenata*.

In early summer the sumac is a symphony of greens. Its large, fern-shaped leaves suggest some rank, tropical growth, and dense panicles of greenish white flowers thrust themselves above the foliage. Long before the other trees and shrubs of forest and field begin to dress up for the final color carnival of the year, the sumac attires itself for the splendid pageant. Deep in the shady recess of some jungle of brier or fern, suddenly a blood-red dagger appears—one solitary leaflet, perhaps—but suggestive of the glory that is to be. Soon entire leaves are stained with the scarlet dye that Jack Frost concocts in the leaf laboratory, and before long Nature, impatient at the slower processes, upsets her paint-pot, leaving streaks and splashes over wood and dale and field.

The berries cluster on large, rigid stems, making them veritable torches of cardinal-colored fruit.

The berries have a sour, astringent taste,

and are said to make a cooling drink when infused in water. Such an infusion yields a black dye particularly adapted to the coloring of wool. The leaves are rich in tannic acid, and are sometimes used as a substitute for oak bark in tanning leather. The bark is used often as a mordant for red dyes—a mordant being a preparation that will cause a fiber to absorb and hold fast a given color.

BLUE COHOSH

Caulophyllum thalictroides (L.) Michx.
[Plate II]

Strange in structure as in habit, shunning the roadside and the haunts of man with all of the timorous traits of a hermit thrush or the fearsome nature of a wild deer, the blue cohosh hides in the deepest recesses of thick forests. Its structural cells contain substances that have not yet yielded their secrets to the test tube of the chemist.

The habitat of the blue cohosh is extensive. It occurs throughout southern Canada and far down in Dixie. Only where the leaf mold is thick does it reside, being a rich liver. A native of America, it is variously known in the provincial tongue as "pappoose root," "squaw root," "ginseng," "blueberry root," "yellow ginseng," etc. It is an inconspicuous herb in spring, but in the fall attracts attention by its graceful aspect and brilliant coloring. When young the whole plant is covered with bloom.

The flowering time of the blue cohosh is April and May. Its blossoms are purplish, or yellowish green, and scentless. The berry, literally a seed, as large as a pea, resembles a pitted fruit. When roasted the seeds make a fair substitute for coffee.

The family relationships of the blue cohosh are numerous and versatile. It belongs to the barberry family, which includes the barrenwort, the Oregon grape, the May apple, and the twinleaf.

ROUNDEAF GREENBRIER

Smilax rotundifolia (L.) [Plate II]

The common names of this brier are as numerous and as varied in their etymology as its relatives are numerous and varied in their attributes. "Bamboo," "bread - and - butter," "rough-bindweed," "wait-a-bit," "dogbrier," "biscuit-leaf," and "Devil's hopvine" are some of its pseudonyms. It is a member of the lily family, and is so widely known that it figures in the geography of the eastern section of the United States, lending its name to mountains, rivers, counties, and summer resorts. Although a cousin of such diverse species as the wild garlic and the Indian poke, it bears no relation to the florist's staple vine, called "smilax," which belongs to an entirely different family and originated in South Africa.

The roundleaf greenbrier is a great climber, its tough tendrils laying hold upon any object in their path. It possesses all the attributes of

a barbed-wire fence, and woe betide the trespasser within its precincts. Its prickles are so sharp and so hard to break away from that most of the creatures which disturb birds' nests give them a wide berth.

The leaves of the greenbrier are usually heart-shaped, or nearly round, with a puckered appearance. About the last in the thicket to fall, the mottled foliage of the frost-painted greenbrier still flutters in the breeze long after the woods are brown and bare. The flowers come from April to June, but they are insignificant little blossoms which invite countless flies to their board rather than gaudy-winged butterflies and long-tongued bees.

BLACK GUM

Nyssa silvatica Marsh [Plate II]

The black-gum tree occurs between Maine and Michigan on the north and Florida and Texas on the south, preferring a rich, inclined-to-be-swampy soil. Its highest development is reached on the slopes of the southern Appalachians, where it sometimes attains a height of a hundred feet and a stump diameter of five feet. It usually is found in association with the white oak, the tulip tree, the sugar maple, the cucumber tree, the wild cherry, the ash, and the buckeye.

The shape of the tree is variable. Some are tall and graceful; others are broad and squat. When it grows in the forest, the trunk is usually straight and free from defects of any sort. But out in the open the branches are often broken by storms, causing the heart of the tree to decay, thus making it hollow.

Wide of distribution, the black gum is also a tree with a variety of local names, such as "sour gum," "tupelo," "hornbeam," "old-man's beard," "upland yellow gum," etc. The South calls it the "sour gum," the West the "peppertree," and New England the "tupelo."

The bark is thick, light brown, often tinged with red. In the fall every leaf assumes a rich scarlet hue, making the blazing crown of a hardy tree a notable element in the landscape it graces.

The flowering season of the black gum is April and May. The blossoms are inconspicuous, the petals forming no prominent corolla. The berries of the black gum are drupes, with a pit inside, and are meaty like a cherry. They are rather bitter until frosts have set in, after which the birds are very fond of them.

The black gum has been called the King Lear of the forest—an apt designation to any one who has observed a fine tree overtaken by the decay of age. Preyed upon by more than fifty species of fungi, it usually begins to die at the top, which gives it a melancholy aspect as death creeps down toward its lower branches.

WILD BLACK CHERRY

Prunus serotina Ehrh. [Plate III]

Beautiful alike in the texture of its wood and in its appearance both in flowering and fruiting time, the black wild cherry occurs from

Nova Scotia west to the Rocky Mountains and as far south as Peru. It thrives either in rich, moist soils or on rocky cliffs; and while nowhere abundant, in favorable localities numerous groups are found.

The tree grows from 50 to 100 feet high, with reddish brown bark marked with horizontal lines and rough excrescences. In old trees the bark becomes blackish brown; in saplings it is either purplish brown or tinged with green. Of rapid growth, it dies young, but serves well as a nurse tree in forest plantations where luxuriant foliage is desired. The leaves are from two to five inches long, usually turning pale yellow or orange in the fall, although younger growths frequently take on a garnet hue.

The flowering season of this tree is April to June. The pure white blossoms convert the whole crown into a snowy, fragrant cloud. The bark and leaves are aromatic but bitter, owing to the presence of hydrocyanic acid. The same property occurs in the flowers, which on wilting give off a cyanogenetic odor that is quite objectionable to many people, causing severe headache. Cattle have been killed by eating the wilted leaves, and children made ill by eating too many of the cherries.

Few trees figure more in the pharmacopœia than this one. Chemical analysis of the bark reveals starch, resin, tannin, gallic acid, fatty matter, lignin, red coloring matter, salts of calcium, potassium and iron, a volatile oil, and prussic acid. The bark is widely used in preparations employed in the treatment of hectic fevers, scrofula, and tuberculosis.

The fruit ripens in August and September. The cherries, which are dark purple or black, have a thick skin, dark flesh, and abundant and slightly astringent juice. They are a much-prized food in birdland. The fruit is used extensively in making jellies and as a flavoring for alcoholic liquors; hence its popular names: "whiskey cherry," "rum cherry," etc. Cherry brandy, cherry bounce, cherry cordial—these are but a few of the nectars manufactured from wild black cherries.

SWEET CHERRY

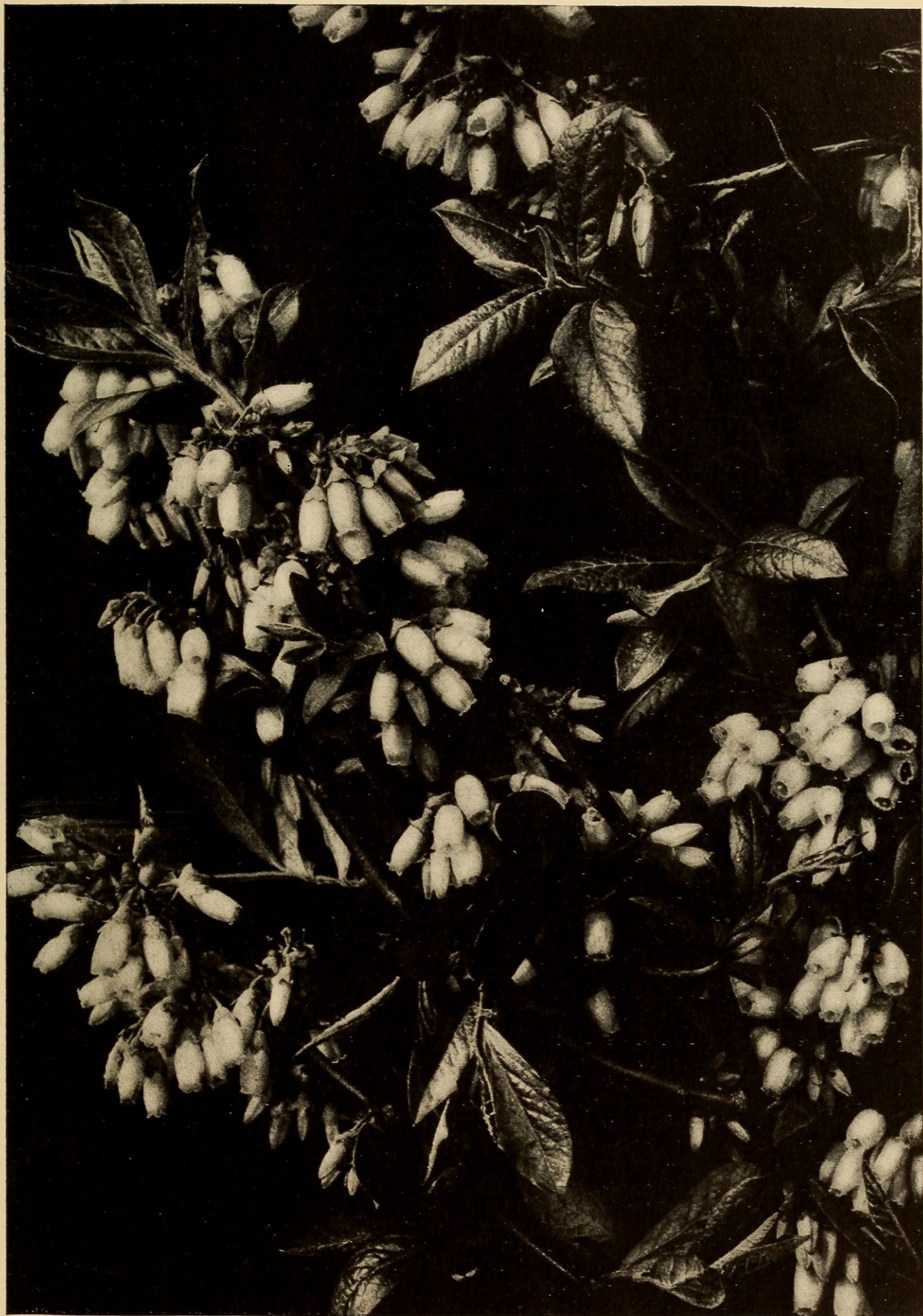
Prunus avium L. [Plate III]

The sweet cherry is an immigrant from the region of the Caspian Sea and Euphrates River. Just when the sweet cherry landed in America is not recorded. Its naturalization papers have never been located. But it has been thoroughly Americanized.

The tree has a long list of local names—among them, "bird cherry," "brandy mazzard," attaining a height of 75 feet, it has a fine, rounded, pyramidal crown when young, but as it grows older it acquires more portliness, spreading out like a field oak.

Itself a wild growth, it has a distinguished progeny that acknowledge and enjoy domestication—the delicious blackheart, the splendid honeyheart, the fine wax, and the acid sour cherry, all tracing their lineage to the wild sweet cherry or its cousin, the wild sour cherry.

The flowering time of the sweet cherry is



Photograph by Edwin Hale Lincoln

A Highbush Blueberry Loaded with Blossoms

Crossed with the lowbush blueberry, this plant in cultivation produces a hybrid which yields blueberries as big as Concord grapes. A single bush has been known to yield half a gallon of berries (see "The Wild Blueberry Tamed," by F. V. Coville, NATIONAL GEOGRAPHIC MAGAZINE, June, 1916).

April and May. With their reddish white and pink petals in rich and fragrant profusion, the blossoms have a world of insect visitors who dance and feast away the day amid the abundance of nectar and pollen.

Japan is par excellence the cherry country. It has a hundred or more varieties, with white, yellow, pink, and rose-colored blossoms. They grow throughout the length and breadth of the empire and are planted in vast numbers everywhere—in temples, castle grounds, parks, gardens, along streets and highways, and by ponds and rivers. A three-mile avenue of cherries planted nearly two hundred years ago by the Shogun Yoshimune, in the vicinity of Kogenal, some ten miles from Tokyo, forms a sight never to be forgotten by the visitor. Some of the trees are 70 feet tall, with crowns having a spread equal to their height, and with girths of trunk up to 12 feet.

When William Howard Taft visited the Orient on his tour of the world before becoming President, the Japanese gave Mrs. Taft a wonderful collection of flowering cherry trees. These have been planted along the Speedway in Washington, and a century hence that wonderful driveway will rival the great Shogun avenue at Kogenal.

HIGHBUSH BLUEBERRY

Vaccinium corymbosum L. [Plate III]

Who that has eaten a real blueberry roll or partaken of a piece of genuine, unadulterated, well-baked blueberry pie can doubt that Frederick V. Coville was right when he declared that the blueberry had the cranberry beaten, because "you can't use cranberries without buying a turkey to eat with them!" This eminent authority has written about the blueberry in previous issues of THE GEOGRAPHIC (see the NATIONAL GEOGRAPHIC MAGAZINE for February, 1911, May, 1915, and June, 1916).

THE EARLY Highbush BLUEBERRY

Vaccinium atrococcum (A. Gray) Heller
[Plate III]

The early highbush blueberry has practically the same range as its cousin mentioned above. It flourishes from Maine and Ontario to North Carolina and westward. The shrub has shreddy bark and its green branches are covered with minute warty excrescences. The young twigs are downy, as are also the under surfaces of the leaves. The foliage does not develop until after flowering time. The blossoms are yellowish or greenish white, tinged with red; they are small and appear about ten days earlier than those of *Vaccinium corymbosum*. The fruit likewise ripens earlier. The berries are black and shine like beads, but are without the waxy bloom that serves as a natural mackintosh for so many plants.

AMERICAN BITTERSWEET

Celastrus scandens L. [Plate IV]

Member of the staff-tree family, the American bittersweet is less a tree and more a vine,

with numerous common names, including "climbing orange root." The fruit, which is a capsule and not a berry, bursts in the frosty days of fall, and, crinkling back, thrusts forward the bright scarlet arils inclosing the seeds.

Not content to twine itself around other vegetation, this vine often outdoes the kitten that plays with its own tail, twisting its own stems together, frequently into a rope of great strength. It does not cling like the friendly ivy, but, with the constricting power of the python, it winds and twines about a sapling with such persistent strength that the young tree is often killed.

The range of the American bittersweet is from eastern Canada to South Dakota and from North Carolina to New Mexico, the shrub being especially abundant in the Middle West. The flowers put in their appearance in June. They are creamy white, small, inconspicuous, and scentless. The berry-like capsules reach their full development in September. They remain on the stems all winter, unless eaten by the birds. If gathered and dried on the branches before frost, they become hard and durable and will retain the bright freshness of their coloring for several years.

If one may judge from the use made of this plant by the primitive Indians, it has a right to be called the staff tree. When their little patches of maize and other crops failed and famine threatened, the red man resorted to the use of the American bittersweet.

SILKY CORNEL

Cornus amomum Mill [Plate IV]

The dogwood family, to which the silky cornel belongs, is one of ancient lineage and distinguished associations. Virgil refers to the javelins made of myrtle and cornel wood which pierced the body of Polydore. Pausanias mentions a festival celebrated in honor of Apollo at Lacedæmonia, which was instituted by the Greeks to appease the wrath of the god at their having cut down the cornel trees on Mt. Ida. Romulus, wishing to enlarge the boundaries of Rome, hurled his spear to mark the extension permitted by the gods. It stuck into the ground on Palatine Hill, and from the handle, made of cornel wood, grew a fine tree—an event held to foreshadow the greatness and strength of the Roman State.

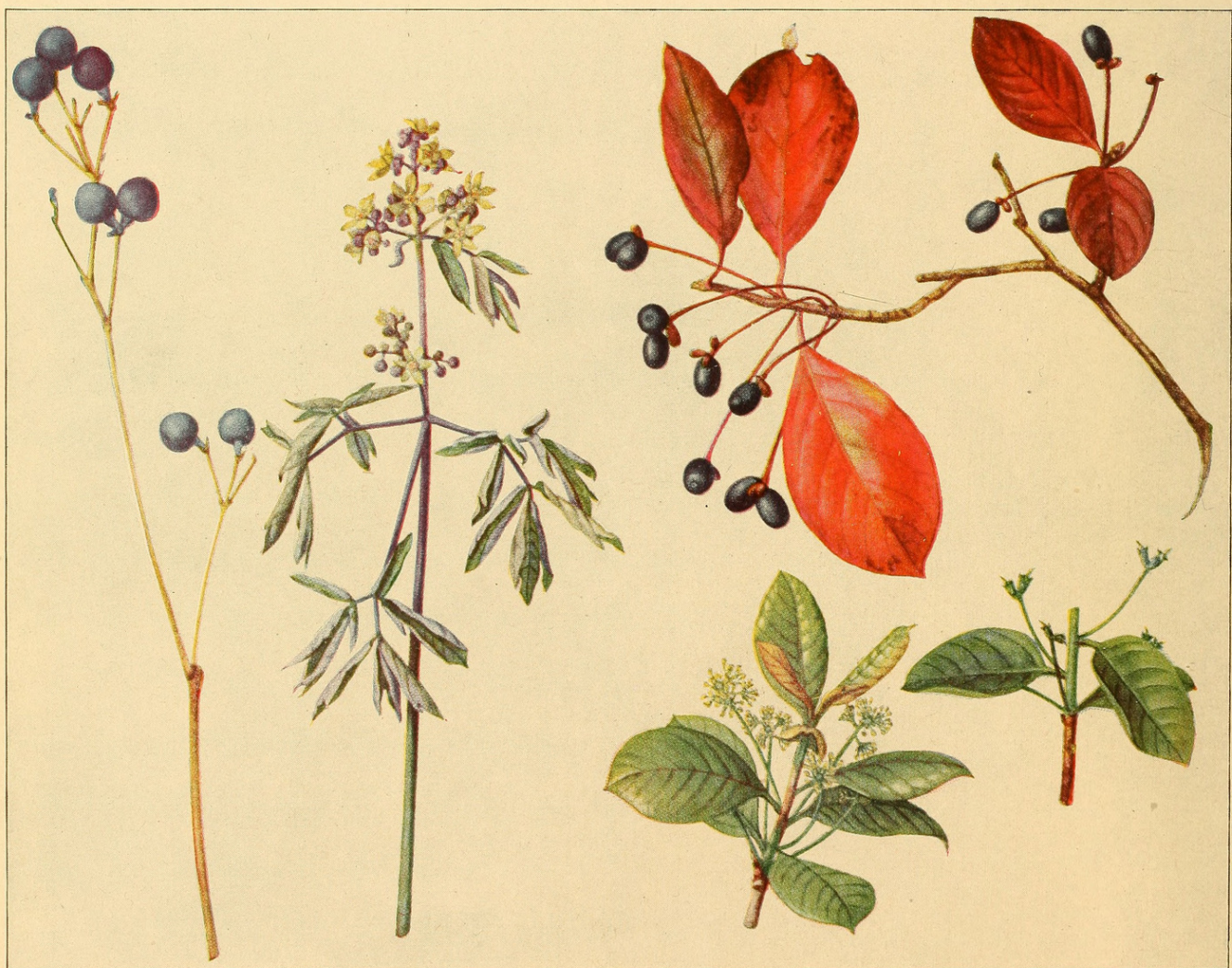
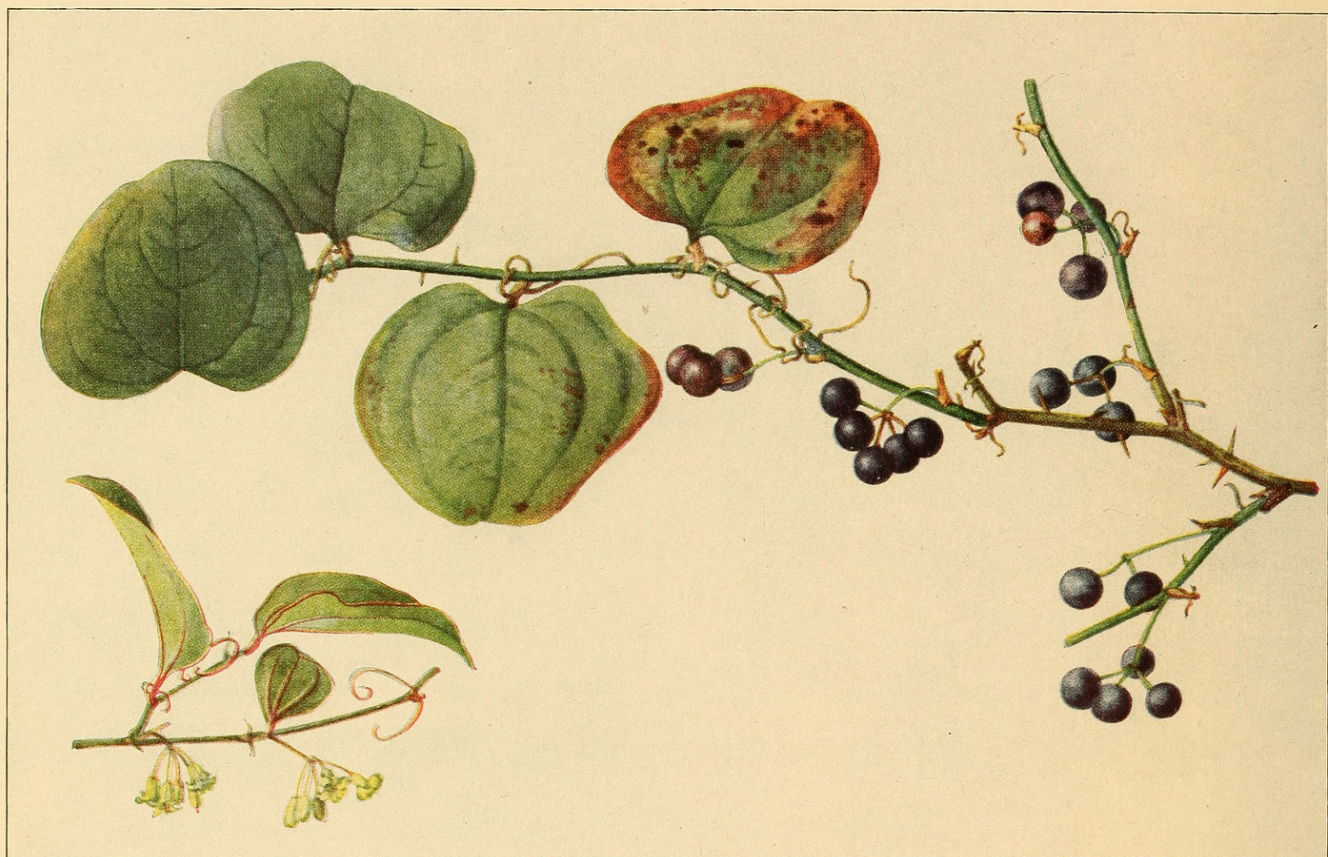
The silky cornel is one of the aristocrats of the family. It prefers swamps and low, damp ground, and grows almost exclusively amid such surroundings. In territorial limits it is a little less restricted; for it is found from New Brunswick to Florida and wanders as far west as Nebraska. Indigenous to North America, it is usually found in company with the true arrowwood. In the North a shrub that seldom grows over 10 feet tall, in the South it becomes a fair-sized tree. It flowers in June and develops fruit before frost time. The berries are a beautiful pale blue with a silvery sheen.

Among the common names by which the silky cornel is known are "blue-berried dog-



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 AMERICAN MOUNTAIN ASH
Sorbus americana Marsh.

BLACK ALDER
Ilex verticillata (L.) A. Gray
 SMOOTH SUMAC
Rhus glabra L.



ROUNDLEAF GREENBRIER
Smilax rotundifolia L.

BLUE COHOSH
Caulophyllum thalictroides (L.) Michx.

BLACK GUM
Nyssa sylvatica Marsh.



WILD BLACK CHERRY
Prunus serotina Ehrh.
 Highbush BLUEBERRY
Vaccinium corymbosum L.

SWEET CHERRY
Prunus avium L.
 EARLY Highbush BLUEBERRY
Vaccinium atrococcum (A. Gray) Heller



AMERICAN BITTERSWEET
Celastrus scandens L.

SILKY CORNEL
Cornus amomum Mill.
BAYBERRY
Myrica carolinensis Mill.

MAPLELEAF ARROWWOOD
Viburnum acerifolium L.



AMERICAN CRANBERRY
Oxycoccus macrocarpus (Ait.) Pursh

SWEET ELDER
Sambucus canadensis L.

SHADBUSH
Amelanchier canadensis (L.) Medic.



WINTERGREEN
Gaultheria procumbens L.

BLUELEAF GREENBRIER
Smilax glauca Walt.
CORAL BERRY
Symphoricarpus orbiculatus Moench

BUNCHBERRY
Cornus canadensis L.



SNOWBERRY
Symphoricarpus albus (L.) Blake
 LONGSPINE THORN
Crataegus succulenta Schrader

AMERICAN HOLLY
Ilex opaca Ait.
 Highbush Cranberry
Viburnum americanum Mill.



RED CHOKEBERRY
Aronia arbutifolia (L.) Ell.



BLACK CHOKEBERRY
Aronia melanocarpa (Michx.) Britton
PURPLE CHOKEBERRY
Aronia atropurpurea Britton

wood," "red brush," "kinnikinnik," "squaw-bush," "swamp dogwood," etc.

This species has often served as a substitute for quinine, decoctions being made from the bark and tender twigs. The fresh bark is chopped, pounded, mixed with alcohol, and filtered. The resulting tincture is of a beautiful madder color and possesses an odor like that of the sugar cane when its juices are slightly soured. The Indians scrape the inner bark and smoke it in their pipes when tobacco is scarce.

BAYBERRY

Myrica carolinensis Mill [Plate IV]

Belonging to the Myricaceæ family, the bayberry is a cousin of the sweet fern and the sweet gale. It is known also as "bay myrtle" and "tallow shrub." Its favorite place of abode is sandy soil, and its habitat extends from Alaska and Nova Scotia to Florida. It owes its names "waxberry" and "tallow shrub" to the service which it rendered to the colonists in America. Animal fats were not overplentiful in those days; but the farmer had a large family of children, and he believed that they could gather berries for making candles with more edification than they could play—according to the stern Puritan views of the times.

Candles made from bayberry wax are more brittle and less greasy than those made from tallow. They are a curious, almost transparent green, and when the flame is put out the resulting odor is as sweet and pungent as incense.

The bark and roots of the bayberry possess medicinal properties. The roots, when boiled, yield a tea reputed to be a specific for headache; to the bark are attributed properties valuable in the treatment of jaundice and in making soothing poultices for sores and ulcers. The Scotch Highlanders use the leaves, which are bitter and aromatic, as a substitute for hops in the brewing of beer, it being alleged that they increase the intoxicating effect of that beverage.

The Highland clan Campbell wears the sweet gale, the Scotch edition of the bayberry, as its family badge.

MAPLELEAF ARROWWOOD

Viburnum acerifolium (L.) [Plate IV]

The mapleleaf arrowwood is a member of the honeysuckle family, having as cousins the elders, the hobble-bushes, the sweet viburnums, the black haws, the bush-honeysuckles, the coral-berries, the snowberries, and the horse gentians. It is a shrub, from three to five feet high, and, except for its flowers and fruit, would pass almost anywhere as a young maple shoot.

With dense, spreading foliage, the bush has a preference for the shade of woodland thickets. Ranging from New Brunswick and Minnesota to the north to Kentucky and Georgia on the south, it prefers rocky, broken ground rather than damp soils. The heights back of

the Palisades of the Hudson are favorite haunts of the viburnum.

The bayberry grows in almost sterile soil.

A close relative of the snowball tree, this species bears profuse clusters of small, white, scentless blossoms. The fruit is a dark, purplish berry the size of a pea.

AMERICAN CRANBERRY

Oxycoccus macrocarpus (Ait.) Pursh.
[Plate V]

Together with blueberries, huckleberries, snowberries, trailing arbutus, and wintergreen, the cranberry belongs to the heath family, which also embraces the azaleas, the lilacs, the laurels, the rhododendrons, the heathers, and some of the rosebays and rosemaries.

The plant is a trailing evergreen, with a rather stout stem, growing from one to four feet long. It is very tough, in spite of its delicate proportions, and is found in open bogs and swamps from Newfoundland to western Wisconsin, with scattered colonies as far south as the Carolinas and Arkansas. Its favorite haunts, however, are in Massachusetts, New Jersey, northern Michigan, and Wisconsin. June time is blossom time in cranberry land, and its flowers are as pink and pretty as its berries are round and red. The former are tube-shaped and pendant from slender, swaying stems.

First domesticated about 1810, not until some four decades later did its merits become widely known and its berries find their way into the homes of the people of the nation. Today the estimated production is around fifty million quarts a year—a pint for every human being in the United States.

SWEET ELDER

Sambucus canadensis (L.) [Plate V]

Ranging from Nova Scotia to Manitoba and from Florida to Texas, with colonies in the West Indies, the sweet elder climbs mountains and gladdens valleys alike.

The brittle twigs and young sprouts are full of pith, while the older stalks are nearly solid. The hardy leaves are often seen unchanged in hue, frozen stiff on the stems, in December. So repugnant to insects is the odor of the sweet elder that an eighteenth century gardener recommends that cabbages, turnips, etc., be whipped with young elder twigs to preserve them from insect ravages. An infusion of elder leaves is often used today to keep bugs from vines.

The clustered flowers of the elder remind one of mellow old lace. They give off a heavy, sweetish, and to many people a rather sickening odor. The flowers appear from June to August. Elder flower water is much used by the confectioner. A perfume made with the flowers, distilled water, and rectified spirits serves to flavor wines and jellies. The young buds are sometimes pickled like capers. The dried flowers contain a volatile oil, resin, wax,

tannin, etc., and possess stimulating medicinal properties.

The juice of the elderberry was used by the Romans to paint the statues of Jupiter red on festive occasions, and in convivial history has been rather widely used as an adulterant of grape juice.

Its specific name is supposed to be derived from *sambuke*, an ancient musical reed instrument—the prototype of the crude hollow-stem elder whistle of the bare-foot country boy.

These same hollow stalks of the elder play an important rôle in every maple-sugar camp. Cut into appropriate lengths and inserted in the incisions of the tapped trees, they serve to conduct the rising sap into the waiting pail or sugar trough.

No shrub is more generous with its fruit than the elder. Other crops may fail, but this plant always produces a full harvest, never yielding to the caprices of the season, be it wet or dry, hot or cold.

SHADBUSH

Amelanchier canadensis (L.) Medic.
[Plate V]

The shadbush belongs to the rose family and is a cousin of the chokeberry, the apple, and the hawthorn. With green, toothed leaves, gray and sepia brown twigs, and red and pink fruit, it is a beauty in the fall, just as it is in the spring, when the white, pink-trimmed blossoms appear. Among its local names are "boxwood," "Canadian medlar," "Juneberry," "sand cherry," "service-berry," "sugar-berry," "sugar pear," "bilberry," "shadblow," "snowy mespilus," and "May cherry."

This species is a shrub or small tree varying from 8 to 25 feet in height, usually attaining its maximum growth in swamps and along river courses. Its habitat extends from Newfoundland to the Gulf of Mexico and throughout the Middle West. The fruit forms in June and July, the berries varying in size from that of a currant to that of a morello cherry. When they are in season, boys, robins, and bears alike feast upon them. The color of the fruit varies from crimson, through magenta to purple or black.

The wood of the shadbush is known as "lance-wood," and many a fishing pole and umbrella handle has been fashioned from it. The Indians often made bows and arrows from it, and it is in considerable demand for tool handles.

In some communities the shadbush is cultivated, being propagated from seeds as readily as apples. It has been found a satisfactory stock upon which to graft the pear and the quince, both of these fruits maturing earlier when so grafted and the resulting trees enduring the winter more easily.

The pemmican of the Indians was composed of deer or buffalo meat dried and pounded to a powder, to which was added dried Juneberries or blueberries, the mixture being then stirred into boiling fat. When cooled, the mass was molded into cakes. When the Lewis and

Clark expeditions made the first overland journey to the Pacific Ocean, their provisions ran short while in the region of the upper Missouri River, and it was one of the *Amelanchier* species, *alnifolia*, that came to their rescue with a bountiful supply of luscious berries.

WINTERGREEN

Gaultheria procumbens L. [Plate VI]

The wintergreen, with its warm-hued berries, has many names: "checker-berry," "boxberry," "deerberry," "groundberry," "ivy-berry," "ginger-berry," "grouseberry," and "spiceberry," "mountain tea," "Jersey tea," "Canadian tea," and "waxy plum." Its tender leaves are known as "little Johnnies," "pippins," "drunkards," and by other names of like import, though they have naught whatever about them to suggest stage entrances, or gaiety, or inebriety.

The wintergreen is a woody vine with an underground creeping stem, from which spring erect flowering branches from three to five inches high. These branches bear at their tops crowded groups of aromatic leaves.

The habitat of the wintergreen is the quiet solitude of damp woods, extending as far north as Newfoundland and Manitoba. Its real headquarters are the Andes Mountains, on whose slopes it appears in nearly a hundred different species. A few species are found in Asia, but wherever it grows it will usually be found under the shade of the pines. Blossoms appear any time between early spring and late fall, and the bright-red berries seem to have all seasons for their own. They are so plentiful in southeastern Massachusetts that they are sometimes seen on the fruit stands in the Boston markets.

The spicy aromatic flavor of the wintergreen appears equally in leaf and flower and fruit. It is the active element in oil of wintergreen, used widely as a scent for soap, a flavor for chewing gum, candy, etc., and as a camouflage for bad-tasting medicines.

One of the strange tricks of nature appears strikingly in the analysis of the oil of wintergreen. How a little creeping plant can take substances from the soil and air and manufacture them into a compound that is exactly like another preparation compounded in the laboratory of a big, deep-rooted tree, is passing strange. Yet the only difference between the oil of the wintergreen and that of the sweet birch is a slight variation of their boiling points. Well may Newhall ask, "By what alchemy can the little checker-berry vine and a tree—the unrelated black birch—both elaborate from the elements around them the same most pleasant scent and flavor?"

BLUELEAF GREENBRIER

Smilax glauca Walt. [Plate VI]

Cousin alike of the evil-odored carrion flower and the fragrant lily-of-the-valley; sharing its family relationship impartially with the graceful Solomon's seal, the handsome wake robin,

the charming painted trillium, and the dashing tiger lily, the blueleaf greenbrier is a rustic member of the aristocratic lily family, which has its full share of worthy scions as well as its quota of black sheep. It is commonly known by such names as "saw brier," "false sarsaparilla," and "bull bay." Sometimes it is confused with the "cat brier."

The blueleaf greenbrier may be found from Maine to Florida and as far West as Texas. Gregarious in its tastes, it grows in thickets, where it adds much to the impenetrability of the brushy mass. The plant is a persistent climber, with many irregular branchlets, and with tendrils of astonishing strength.

The vine is woody, but usually is armed with slender prickles that make up in sharpness what they lack in sturdiness. In the summer, the leaves are a bluish green with a powdery bloom on their under surfaces. They are beautifully crimsoned by the cold of the late fall. The berries are black, each having two or three seeds.

CORAL BERRY

Symphoricarpus orbiculatus Moench
[Plate VI]

The coral berry is another member of the series pictured here that belongs to the honeysuckle family, in which are included the elder, the viburnums, the snowberry, etc. It is variously known as "Indian currant," "low woodbine," "buck bush," "turkey berry," and "snapberry," and is an erect shrub, growing from two to five feet high, with purple or madder-brown branches, slightly hairy in their younger days.

The region gladdened by the presence of this shrub is bounded by New York and North Dakota on the north and by Georgia and Texas on the south. It is a native of the Mississippi Valley.

With a preference for a normal loam or clayey soil, the coral berry thrives best in some grove-like wood where the rivalries of the undergrowths do not make life too hard a struggle. In the summer the delicate short-stemmed leaves are a soft, neutral gray green. In the fall the bush is transformed; each branchlet, bending beneath its weight of fruit, becomes a wand of delicate red. And as each branch has many spray-like twigs, the whole forms a complex profusion of color, making it deservedly one of America's favorite decorative shrubs.

The Ojibwa Indians call the coral berry "gus-sigwaka-mesh" and use a decoction of it as a remedy for sore eyes.

BUNCHBERRY

Cornus canadensis (L.) [Plate VI]

This species is the smallest member of the dogwood family, attaining a height of less than a foot. It is an immigrant, a native of Eastern Asia that came as a stowaway to America, where it has spread over a considerable area.

Never flaunting itself in profligate profusion in the haunts of men, it is timid as a wild turkey, seeking the cool quiet of damp, deep woods, where it lives a modest life in company with the partridge vine, the golden thread, the fern, and the twin-flower, forming a carpet that matches in color and design the rarest rugs of Kermanshah or Bokhara. The bunchberry is equally at home in Labrador and Alaska, and in New Jersey and California, which broadly mark the four corners of its irregular range.

The leaves appear reasonably early, but its delicate little greenish white flowers, with their four surrounding bracts of white that pass for petals, do not come until May. They usually remain until July, after which the plant, tired of debutante days, settles down to the duty of rearing a family of berries. These begin to appear in August, in compact clusters, dressed in as vivid a scarlet as can be imagined. They are as insipid to taste as they are glorious to sight, so far as man is concerned, but for the birds the berries seem to be "done to a turn" in the kitchen of Nature.

SNOWBERRY

Symphoricarpus albus (L.) Blake
[Plate VII]

The snowberry is a member of the honeysuckle family and is variously known as "snow-drop," "waxberry," "egg-plant," etc.

The snowberry seeks dry limestone ridges and rocky banks. It is a native of North America, but finds a home almost anywhere, spreading across the continent from Quebec to Alaska and from central Pennsylvania to California. The green, short-stemmed, elliptic-oblong leaves are downy underneath. The bell-shaped flowers, which come in May and June, are pink, but so small as to be inconspicuous.

The berries, which are inedible, form in clusters along the slender branches from late June until after early frosts. Their size ranges from that of a pea to that of a marble, as a substitute for which children often use them.

This species is easy to cultivate. It spreads rapidly from suckers. Often it is planted with its cousin, the coral berry, and a fine green dooryard studded with snowberry pearls and coral-berry beads is a sight fair to behold.

LONGSPINE THORN

Crataegus succulenta Schrader
[Plate VII]

This plant, growing as a low shrub in some localities and as a small tree in other regions, has a range extending from Nova Scotia through Quebec and Ontario to Minnesota, and thence southeastward to the mountains of Virginia. It has a preference for rich uplands and limestone soil.

The weapons that give the longspine thorn its name are numerous and grow from 1½ to 3½ inches long. They are slender, shining chestnut-brown spines, almost as sharp as nee-



Eaton, Mary E. 1919. "American Berries of Hill, Dale, and Wayside." *The National geographic magazine* 35(2), 168–183.

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