

second, but warned planters against using it for exposed positions. Menzies Spruce and Redwood he also considered well adapted for coppice wood. *Abies brachyphylla*, from Japan, was also spoken of as a promising tree. At Kew this is, perhaps, the quickest grower and most satisfactory of all Firs. Dr. Masters called special attention to the merits of *Cupressus macrocarpa* as a tree for situations near the sea, where it thrives amazingly.

London.

W. Watson.

New or Little-known Plants.

A Yellow-flowered Cosmos.

THE announcement in a recent number of GARDEN AND FOREST (page 426) that *Cosmos sulphureus** would probably be on the market next season will be welcome news to those who are at all familiar with it. I have had the plant in cultivation in my own garden and in the greenhouses of the Department of Agriculture since 1892. It promises to be a most desirable acquisition to our list of late-flowering annuals. This plant was described and figured by Cavanilles and Jacquin about the same time, one describing it as *C. sulphureus*, the other as *Coreopsis artemisiæfolia*. The former found the plant in cultivation in the Royal Gardens at Madrid. The plant has been collected from time to time by Mexican collectors, including Coulter, Leibmann, Andrieux, Galleotti and Pringle, but it seems not to have got into cultivation. The plant has been very rare in herbaria. The National Herbarium did not possess a specimen until it was brought from the state of Jalisco in 1886 by the veteran collector, Dr. Edward Palmer. Since then Dr. Palmer has repeatedly sent us specimens from Colima, Tepic and Culiacan, in western Mexico. Mr. E. W. Nelson has also sent specimens from various places in the state of Oaxaca. Our plants in Washington have always attracted much attention when in bloom, and if grown in beds would make a most gorgeous display. Our chief objection to the plant in this latitude has been its very late time of flowering, none of our plants having ever bloomed before the first of November. Several hundred fine specimens growing in the Department grounds were killed by frost the latter part of October. This species will not stand as much cold as the common cultivated species. It is stated in the article referred to above that the plants begin to flower in midsummer, but I doubt if this is the case with seed sown out-of-doors. If the seed is started in cold frames or in the greenhouse early-flowering specimens may be obtained. Plants when placed under glass late in the fall soon begin to bloom and continue to send out flowers for several months. The plant itself is not at all attractive, but resembles a rank weed, not unlike the common Ragweed, *Ambrosia artemisiæfolia*. It grows from four to seven feet in height, often much branched, especially at the top. The leaves are large, often a foot or more long and two to three times pinnate. The flowers, which are produced in great abundance, are borne on long naked peduncles seven to ten inches in length, are generally of a dark orange color, and are from two to three inches in diameter. The plant is easily cultivated. In the wild state it is found along creek-bottoms, and would naturally require a rich soil. Introducers of this species must be careful to obtain pure seed. Attention has already been called in GARDEN AND FOREST to *Bidens ferulæfolia* being sold for *Cosmos sulphureus*. I have recently seen

specimens from London of a *Bidens*, presumably the above, which were grown for this yellow *Cosmos*. There ought not to be any confusion with regard to these plants, as they can easily be distinguished by their seeds. The *Bidens* has a small seed, two lines long, somewhat flattened, with two short awns. The *Cosmos* has a long slender seed nearly an inch long, including the slender beak, with two slender awns.

An illustration of this species, drawn from living specimens by Mr. C. E. Faxon, appears on page 485. Since the above was written I have received specimens for Mr. H. L. T. Wolcott, from New Orleans, where the plant grows abundantly and luxuriantly.

Washington, D. C.

J. N. Rose.

Plant Notes.

CERCIS CANADENSIS.—The American Red Bud is not a specially noteworthy tree for the autumn colors of its foliage, although the leaves turn rather early in the season to a clear bright yellow. It is, however, one of our many small trees which are first-rate for ornamental planting. It is common throughout the region south of the Delaware River valley, in New Jersey, in the east, and in Missouri in the west, and on swamp borders and bottom-lands, especially in regions west of the Alleghanies, and it is abundant in all our forests. The flowers, which appear in early spring with deep red calyxes and rose-pink petals, cover the branches in crowded clusters just as the leaves begin to appear, so that in places where the tree is abundant the landscape is fairly illuminated by them. The abundant legumes attain their full size in this section before midsummer, and are then of pink color and somewhat ornamental, and the broad ovate leaves are light and cheerful. When allowed to develop, the tree becomes a broad flat-topped specimen, which is interesting and beautiful at all seasons of the year. It is perfectly hardy considerably to the north of the region where it is found in a wild state. The so-called Japanese Red Bud, which is really of Chinese origin, is here a large shrub, which produces more richly colored flowers than either of the American species or the European Judas-tree, and when in flower in early spring it is an attractive shrub, while its glossy leaves make it an interesting plant all summer long. It is not reliably hardy much farther north than this city. We have already described and figured this plant in vol. v., page 476.

VIBURNUM LANTANA.—The European Wayfaring-tree must be commended for its habit of carrying its leaves late into the autumn. Two weeks ago, in the neighborhood of Boston, after the hard freeze of Wednesday night, it was covered with leaves, many of them almost as fresh as in midsummer, while the upper surface of others, especially near the top of stems, had assumed a rich dark purple color, which formed a delightful contrast with the green of their lower surface. The Wayfaring-tree has often been recommended in the columns of this journal to American planters. It is one of the hardiest and most vigorous of the European shrubs that have been planted in this country; its habit is excellent; the foliage is ample, dark-colored and luxuriant; its large flat clusters of pale yellow flowers are produced in profusion, and these are followed by berries which in ripening turn irregularly from green to scarlet and then to blue-black, and often do not fall until the beginning of winter.

VACCINIUM CORYMBOSUM.—The season ought not to pass without some mention of the striking autumn colors of the High Blueberry. It is not often cultivated in this country, although in Europe it is grown to a considerable extent. It ought to be more generally planted, for it is beautiful at all seasons and it is not difficult to transplant, either from its native swamps or hillsides, and it will grow in almost any good garden soil. In rich swamp borders it is a shrub from six to eight feet high, with stems two or three inches in diameter. In open fields and by the wayside it does not grow more than from two to four feet high, but wher-

* *Cosmos sulphureus*, Cavanilles, *Ik.*, i., 56, t. 79 (1791); Gray, *Proc. Am. Acad.*, xxii., 429; Rose, *Contrib. Nat. Herb.*, i., 336.

Coreopsis artemisiæfolia, Jacquin, *Ik. Rar.*, 595; *Col. Supl.*, 155 (1796). Annual, four to seven feet high, much branched, pubescent; leaves bi- to tri-pinnatifid, often twelve inches or more long, with rachis and midrib hispid; pinnæ alternate, entire or two to three toothed; peduncles seven to ten inches long, naked; outer involucre bracts eight, linear, acuminate, green, two lines long; inner bracts eight, oblong, obtuse, scarious, five lines long; flowers two to three inches broad, from a light to dark orange color; rays eight, broadly obovate, three-toothed at apex, strongly ribbed beneath, standing at right angles to the axis; disk-flower in a compact erect cylinder, four to five lines long; proper tube one line long; throat funnel-form, three lines long; lobes pubescent along the margins; anthers exserted, black, with orange tips; filament pubescent; style branched with long slender tips; akenes linear, ten to twelve lines long, including the slender beak; pappus of two awns two and a half lines long, slightly retrorsely hispid.

Fig. 66.—*Cosmos sulphureus*.—See page 484.

1. Upper portion of a plant with a lower leaf, natural size. 2. An involucre, enlarged. 3. A ray flower, enlarged. 4. A disk flower, enlarged. 5. Two stamens, enlarged.

ever it is seen in late October its leaves are a brilliant scarlet, and they remain highly colored for a month. In late spring and early summer its large white bell-shaped

flowers are very ornamental, while its abundant fruit is not only beautiful, but pleasant and wholesome. It is very variable in the size and quality of its berries, which are