New York State Agricultural Experiment Station
Geneva, N. Y.

NEW OR NOTEWORTHY FRUITS, X

G. H. Howe

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NEW OR NOTEWORTHY FRUITS, X*
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INTRODUCTION

One of the major projects in horticulture at this Station is the breeding of new fruits. Were it not for new varieties, fruit growing would be at a standstill. Old varieties never improve and it is only by the introduction of new kinds that progress is made. As a basis for the breeding work, the Station makes an effort to test on its grounds all new varieties of hardy fruits which come from other sources. Not infrequently varieties are brought in which have commercial promise. These are the noteworthy sorts which are recommended for trial. From time to time the new fruits which have originated here or elsewhere, are described in bulletins such as this, which is the tenth of the series.

In the present bulletin, 12 new fruits are discussed. Six of these originated at the Station, while six came from other sources. All but four kinds described are sold by the New York State Fruit Testing Association, Geneva, New York, and these four, Red McIntosh apple, Monitor plum, South Haven peach, and Wyona strawberry, can be procured from nurseries or from the persons who introduced them. No plant, cion, or cutting can be obtained from the Station, and inquiries for these should be sent to the Fruit Testing Association. This Association is an organization, incorporated under the laws of the State of New York, to distribute the Station’s new productions.

A bulletin such as this would be incomplete without some mention of pollination. Some varieties of fruit produce good crops when planted by themselves. Such fruits are said to be self-fruitful or self-fertile. Most commercial grapes and small* fruits are entirely self-fruitful, while most tree fruits fail to set good crops unless cross pollinated. It is advisable to set at least two compatible varieties of apples and pears in an orchard. Some varieties make better pollinators than others. A few peaches and most Japanese plums require cross polli-

*Other numbers of this series still available for distribution include Bulletins Nos. 364, 385, 414, 427, 531, and 551; and Circular No. 83.
nation, as do many European sorts. All sweet cherries must be cross pollinated. A few sorts are inter-incompatible. Sour cherries in general are self-fruitful.

The matter of pollination is a tremendous factor in successful fruit growing. Scientists the world over now are making it a subject of exhaustive study. The results of such investigations at this Station are set forth in separate bulletins which can be had upon request. Fruit growers who contemplate the planting of fruit will do well to consult these bulletins or confer with the Station fruit men before starting the undertaking.

APPLES

CARLTON

Carlton originated at this Station in 1912 as a cross between Montgomery, an attractive red apple, and Red Astrachan. Altho not named until recently, this seedling has been distributed in a small way for several years by the New York State Fruit Testing Association under the temporary designation of Astrachan No. 2391. After repeated fruitings the merit of the variety seemed so secure that it was decided in 1928 to name the seedling Carlton. The fruit is remarkably attractive in size and color. Ripening about one month later than Red Astrachan, it has all of the good characters and few of the faults of its parent. To lovers of sprightly apples, which become milder as they ripen, Carlton will especially appeal with its characteristic Astrachan flavor. For culinary purposes the variety excels because of its tart, juicy flesh, and excellent size. Unlike Red Astrachan, the tree is a vigorous and thrifty grower and a good annual bearer.

Tree large, very vigorous, tall, dense, upright-spreading, round-topped, healthy, productive; trunk and branches stocky, smooth. Flowers midseason, large, white, with a delicate pink veining, clusters dense. Fruit ripens early in September, large, uniform, round-conic, symmetrically shaped tho slightly ribbed; stem short, medium thick; cavity medium in depth, broad, acute, smooth, slightly furrowed, occasionally lipped; calyx large, closed; lobes separate, long, broad, accumulate; basin narrow, shallow, obtuse, furrowed, symmetrical; skin moderately tender, smooth, with considerable bloom and distinct scarfskin around the cavity; color greenish yellow, nearly covered with solid dark red, mingled with broken stripes, splashes, and mottlings of carmine, becoming almost scarlet when well colored; dots numerous, small, conspicuous, gray-russet; flesh white, firm, a little coarse, crisp, tender, juicy, briskly subacid, becoming milder as maturity advances, with an Astrachan-like aroma; quality good. Core large, open, with clasping cores; calyx-tube short, wide, conical; seeds small, medium in width, short, plump, obtuse.
NEWFANE

Newfane is the last of the seedlings of the Delicious type to be introduced by this Station. The variety was selected for trial because of its large-sized fruit and very attractive dark solid red color. The fruit resembles Delicious very closely in shape and form, but attains much larger size and better color. From its handsome appearance Newfane might readily be taken for a red-colored sport of Delicious rather than a seedling of that sort. The flesh is tender and mildly flavored with a pronounced Delicious aroma. This apple ripens about with Delicious but remains in season much longer. Those who are fond of mild apples for baking or dessert will seek Newfane because of its individuality in quality and its unsurpassed attractiveness. Deacon Jones by Delicious is the cross which produced Newfane. The seed germinated in 1912, and the tree fruited for several years before it was named and introduced by the New York State Fruit Testing Association in 1927.

Tree large, vigorous, tall, rather dense, upright-spreading, round-topped, healthy, productive; trunk and branches stocky, nearly smooth. Flowers open late in the season, large, white, tinged with light pink, clusters dense. Fruit ripens about with Delicious, large, uniform, oblong-conic, distinctly ribbed, with five distinct crowns; stem medium in length, thick; cavity deep, broad, accumbent, broadly furrowed, with a tendency to be compressed; calyx large, closed; basin narrow, medium deep, abrupt, deeply corrugated; skin thin, medium tender, slightly roughened by the dots; color greenish yellow, entirely covered with dark solid attractive red, with a slight mottling of lighter red on the shaded side; dots numerous, small, conspicuous, gray-russet, slightly raised; flesh yellow, firm, medium coarse, tender, moderately juicy, mildly flavored approaching sweetness, with high aroma; quality very good. Core large, nearly closed, with clasping core-lines; calyx-tube long, wide, funnel-shaped; seeds medium in size, wide, plump, acute, slightly tufted.

RED McINTOSH

Interest in red sports of apples is becoming so keen that fruit growers are ever on the lookout for new ones. Several red sports which are improvements over the older sorts are already on the market. Two of these, Red Spy and Red Gravenstein, have been described in this series of bulletins. Two red sports of Delicious, Starking and Richared, have been in the trade for several years. Altho of distinct origin, there is little difference between these two fruits. Red strains of Baldwin and Stark also have been found, but the name McIntosh strangely seems to be absent from varieties which have produced sports. Curiously
enough, no selected solid red strain of McIntosh has ever been introduced. True, in almost every McIntosh orchard, trees are found which bear McIntosh apples with varying shades and stripings of red. There are strains of McIntosh which become quite solid red in regions where the fruit attains high color, but on heavy clay soils the same strain will produce apples with less color and much more striping.

Nurserymen and growers have long expressed the desire for a better-colored McIntosh, one which will maintain a good color under all variations of soil and climate. It remained for a man, well on in years, of the Quaker faith, who has long been an experimenter with fruits, to find such a solid dark red strain of McIntosh. This experienced fruit grower, Isaac C. Rogers, of Dansville, New York, several years ago sent to the Station a red strain of McIntosh which he had selected from his orchard. Mr. Rogers claimed that this strain always produced dark solid red fruits. Grafts were obtained and these are now fruiting in the Station orchard. On the heavy clay soil at Geneva, the fruiting branches of this dark red strain bear McIntosh apples uniformly colored with solid dark red. Except in color, the fruits do not differ in any respect from the ordinary McIntosh. These fruits are the most attractive of any in the orchard and the handsome red jackets are comparable to the excellent flesh and flavor which they enclose. Since red sports of other varieties are now available, it is with a feeling of profound satisfaction that at last a red McIntosh can be recommended.

PEAR

EWART

Pear growers are alert for pears of the Bartlett type which lack some of the faults of that valuable sort. Pears have been bred at this Station with this aim in view and three varieties have been named and introduced which cover a long season. Ewart, now offered by the New York Fruit Testing Association, altho a chance seedling of Ohio origin, is the fourth variety to extend the Bartlett season. Ewart has attracted considerable attention because of its large size, pleasing shape and color, and excellent quality. Altho the fruits do not resemble Bartlett closely, they are of the Bartlett type and ripen nearly a month later. The tender buttery flesh which is full of juice, combined with the strikingly delectable flavor, make this one of the choicely good pears of the season. The tree is large, vigorous, and productive, and conspicuously resistant to blight.
The original tree of Ewart grew on a farm in Ohio many years ago, but no attention was paid to the sort until Mortimer Ewart, East Akron, Ohio, sent fruits and gions to this Station about 15 years ago. The variety has so many good qualities that permission was obtained from Mr. Ewart to propagate it and introduce it under his name.

Tree large, vigorous, upright, spreading broadly, round-topped, healthy, productive; trunk stocky, medium smooth; branches moderately thick, smooth. Flowers late, large, well distributed. Fruit ripens from three weeks to a month later than Bartlett, large, obovate-obtuse-pyriform, with unequal sides and a slightly roughened surface; stem long, thick, curved; cavity medium deep, narrow, acute, often lipped, russeted; calyx open, medium in size; lobes separate, short, narrow, accumulate; basin shallow, narrow, abrupt, furrowed; skin medium thick, tender; color greenish yellow becoming deeper yellow, overspread at the apex with solid russet which breaks up into patches and nettings of russet over the surface; dots numerous, small, russet, very conspicuous; flesh white, tinged with yellow, fine, granular at the center and under the skin, tender, melting, buttery, very juicy, sweet, with a slightly piquant aroma; quality very good. Core large, closed, with clashing core-lines; calyx-tube short, broad, conical; seeds numerous, medium in size, long, narrow, plump, acute.

PLUMS
ALBION

Albion is a sister seedling of Hall, described in the seventh of this series (Circular No. 83) on new fruits. It is a Station cross between Golden Drop and Grand Duke and is the latest ripening good plum grown at Geneva. It belongs to the Grand Duke type, but its fruit is larger and much better in quality. The fruit is most characteristic in shape, having an extremely deep suture extending beyond the apex which is bulged on one side. The purplish black color with the delicate thin bloom make the fruits unusually attractive. Ripening late, they develop a pleasantly flavored sweetness mingled with some acidity. The fruit hangs well to the tree late in the season, and the flavor persists even to frost. The variety has two faults, viz., the stone clings tenaciously and the flesh is a little coarse and stringy. The tree is strong, vigorous, and productive, and develops large size. The seed from which Albion came germinated in 1909. The variety first fruited in 1915 and after careful watching was named and is being distributed by the New York State Fruit Testing Association.

Tree very large, vigorous, upright-spreading, healthy, productive; trunk and branches stocky, moderately smooth. Flowers midseason, one inch across, well distributed. Fruit ripens very late, unusually large, oval to ovate, with unequal
halves, and a slightly pebbled surface; cavity deep, abrupt; suture deep, extending beyond the apex which is bulged; stem medium in length, adhering well to the pit; color purplish black, with thin bloom and numerous small, conspicuous, brownish dots; flesh golden yellow, firm, coarse, stringy, juicy, pleasantly flavored; quality good. Stone clinging, large, ovate, necked, with roughened surface.

**MONITOR**

Monitor, one of the several plums sent out from Minnesota, is recommended for the colder regions of the State where many species of plums are not hardy. The trees do well in the nursery and develop large size and symmetrical form in the orchard. The variety has extreme hardiness and is a splendid yielder of fruit which combines qualities which please the eye and tempt the palate. The fruits are handsome in appearance with their rich dark red color mingled with the characteristically conspicuous dots. The flavor is very good because it is sweet with sufficient acidity at the pit to make it refreshing. The chief faults are the clinging stone and the tendency of the fruits to crack in rainy weather at ripening time. Monitor originated at the Minnesota Fruit Breeding Farm, Excelsior, Minnesota. It is supposed to be a seedling of Burbank crossed with a native plum. It first fruited in 1918 and appeared so promising that it was named and introduced in 1920.

Tree large, upright-spreading, very vigorous, hardy, very productive; trunk and branches stocky, moderately smooth. Flowers early. Fruit late midseason, large to very large, roundish ovate; suture a line; cavity of medium size, abrupt; apex slightly pointed; stem medium in length, thick, adhering well to the pit; skin thick, firm, adherent to the pulp, not astringent; color dull, deep bronze red, with conspicuous russet dots and fine, irregular, russet lines, bloom light; flesh yellow, tender, slightly stringy, very juicy, sweet, with a little acidity at the pit; quality very good. Stone clinging, medium to large, broadly ovate, with a pointed apex.

**PEACH**

**SOUTH HAVEN**

Fruit growers who have fruited South Haven are generous in their praise of its merit. There are several reasons that make it a valuable addition to the list of cultivated peaches. It ripens a few days after Rochester and two weeks ahead of Elberta. It attains better size and color than Rochester. The quality of the fruit is good—considerably better than that of the average commercial peach, tho perhaps not quite
as highly flavored as Early Crawford. The trees are vigorous and hardy in bud and bear good crops of fruit. The peaches are not sufficiently firm to permit of distant shipping, but for local markets and the roadside trade the variety is one of the best peaches of recent introduction. South Haven originated with A. G. Spencer, of Kibbie, Michigan, as a supposed seedling of St. John. It was introduced in 1916 by the Greening Nursery Company, of Monroe, Michigan.

Tree large, vigorous, upright-spreading, productive; trunk and branches medium stocky; smooth. Flowers open in midseason, large, well distributed. Fruit matures in midseason, large, roundish oblate, with slightly unequal halves; suture very shallow; cavity medium in depth and width; apex mucronate, depressed; skin thick, tough, free from the pulp; color light yellow, with a red blush or indistinctly striped and finely dotted with red; pubescence medium; flesh yellow, slightly red at the pit, juicy, tender, slightly stringy, sweet, with an aromatic sprightliness; quality good. Stone free, large, obovate. plump, pointed, with pitted surface.

GRAPES
STOUT SEEDLESS

A seedless grape of merit, hardy in the climate of New York, would be a valuable asset for grape growers. For many years this Station has been making crosses between seeded and seedless grapes in an attempt to breed a desirable variety. Not until a cross was made in 1921 between a near-seedless Triumph by Dutchess seedling and the seedless vinifera variety, Sultanina rosea, a seedless grape grown extensively in California, was this object realized. The original vine has been fruiting since 1926. It is productive, extremely vigorous, and, like its European parent, is upright in habit of growth. The new seedling possesses considerable promise as a variety for general culture. The plant resembles its seed parent in hardiness, but the fruit characters came from the vinifera pollen parent.

The vine is fairly hardy, but whether it will withstand severe winters is unknown. The clusters are well filled and strongly shouldered. The berries are of good size for a seedless grape, and the sweet, vinous flavor makes them excellent as a table grape. Occasionally one or two tiny soft fleshy substances are found in the pulp which are of the nature of abortive seeds. The new grape was named in honor of Dr. A. B. Stout, of the New York Botanical Garden, who suggested making this cross.

Vine very vigorous, upright, slightly susceptible to powdery mildew, productive; canes very long, numerous, thick; shoots tinged with red, lightly pubescent; ten-
drills trifurcated, intermittent; leaves large, 3- to 5-lobed or entire. Flowers fertile, with long upright stamens, blooming several days after Concord. Fruit ripens in midseason; clusters large, tapering, medium compact, single shouldered; peduncle short, thin, slightly warty; brush medium in length, greenish, slightly adherent to the pedicel; berries small, oval; skin thin, moderately tough, not adherent to the flesh, without pigment; color attractive greenish yellow with thin bloom; flesh greenish, translucent, firm, tender, juicy, sweet, vinous; quality very good. Seeds none, or occasionally with 1 or 2 very soft, abortive seeds.

WAYNE

The fruit of Wayne shows characteristics of both parents, since it inherited the thick skin and color of Mills and some of the earliness of Ontario. Wayne thus far has shown high annual production, perhaps to a fault. On heavy soils the variety has a tendency to shell, especially in storage, perhaps because of its high productivity. Close pruning checks this defect to a large extent, since it decreases production and thereby provides more moisture for the remaining clusters. Wayne originated at this Station as a cross made in 1909 between Mills and Ontario, the latter being a Winchell by Diamond cross. The variety was introduced by the New York State Fruit Testing Association in 1927.

Vine very vigorous, healthy, hardy, very productive; canes long, numerous, thick; internodes medium in length. Flowers fertile, with upright stamens, blooming with Concord. Fruit ripens in midseason; clusters large, single shouldered, compact; peduncle medium in length and thickness, warty; brush medium long, wine-colored, adherent to the pedicel; berries above medium in size, oval; skin thick, tough, not adhering to the flesh, without pigment; color reddish black, with a heavy bloom; flesh greenish, translucent, firm, slightly tough, juicy, sweet, vinous, with an aroma suggesting Mills; quality very good. Seeds average three in number, medium in size, slightly adherent to the pulp, notched, brownish; raphe obscure; chalaza above the center, oval, distinct.

RASPBERRIES

NEWBURGH

Newburgh is one of the most promising raspberries originated at this Station. The plants are vigorous, hardy, and unusually productive. The stocky canes and good green foliage both indicate vigor and health. So far, the stock of this variety has been free from the dreaded mosaic. Suckers are produced abundantly so that the fruiting row is quickly established. The fruits are very large and very firm and should ship unusually well. The size diminishes very little as the season advances. Few raspberries produce fruit which makes a more attractive appear-
ance in the basket. The flavor is mild and the quality good. The berries cling to the bush rather tenaciously but because of their firmness and dryness, they can be picked without injury to the fruit. In season the variety ripens nearly a week before Cuthbert. Newburgh originated in 1922 as a cross between Newman and Herbert. Plants were first offered for sale by the New York State Fruit Testing Association in 1929.

Plants medium in height, upright, vigorous, hardy, very productive, free from mosaic; propagated by suckers which are numerous; canes numerous, stocky, not glaucous, with eglandular tips; prickles medium in number, slender, of medium length, red; leaves of medium size, medium green, very rugose, slightly pubescent, serrate. Flowers midseason; pedicels and calyx finely pubescent, eglandular. Fruit midseason; berries very large, uniform, regular, roundish conic, with a deep cavity of medium width; drupelets numerous, large, cohering strongly, bright medium red, moderately juicy, very firm, mild; quality good.

VIKING

Viking is another notable red raspberry of recent introduction. The plants sometimes are affected slightly by mosaic but rarely so seriously as to cause noticeable injury. In appearance the fruit of Viking takes conspicuous rank. The berries are large, bright red, and glossy, and ripen just before Cuthbert. Being firm, the fruit holds up well and the size does not diminish greatly as the season continues. In the Niagara fruit district in Canada, where the variety was first planted extensively, it has received the approbation of fruit growers. Its popularity elsewhere seems assured. Viking is a cross between Cuthbert and Marlboro which originated in 1914 at the Horticultural Experiment Station, Vineland, Ontario. It was introduced by that Station in 1923.

Plants tall, vigorous, upright, hardy, very productive, not injured by disease; propagated by suckers which are numerous; canes numerous, stocky, glabrous, glaucous, with eglandular tips; prickles few, short, slender, weak, reddish; leaves medium green, very finely and slightly pubescent, crenate. Flowers late; pedicels nearly glabrous, glaucous, eglandular; calyx pubescent, eglandular. Fruit late midseason; berries large, uniform, regular, roundish conic, with a deep, broad cavity; drupelets numerous, medium in size, cohering strongly, bright glossy red, juicy, firm, nearly sweet; quality good.

STRAWBERRY

WYONA

Wyona ranks among the best very late strawberries which the Station has tested. The fruits are large and handsome, both characters running
very uniform. The flesh is firm and the quality is particularly good for a subacid berry. Sometimes the largest berries are a little coarse in texture. The variety is not much affected by leaf-spot and is one of the best croppers among the late sorts. It is a long keeper and retains its size well to the end of the season. A defect in the variety is that the apex colors slowly so that care must be taken in picking to avoid green tips. Wyona originated prior to 1922 with A. S. Johnson, of Bedford, Virginia, later of Washington, D. C. It is supposed to be a seedling of Gandy. Mr. Johnson introduced the variety about 1923.

Plants very numerous, vigorous, tall, slightly susceptible to leaf-spot, very productive; runners long; leaves large, dark green, rugose, glossy. Flowers perfect, opening late, large, with large petals; stamens numerous; fruit-stems very long, thick, erect; pedicels unusually long, thick; calyx very large, raised, leafy, reflexed; sepals moderately long, broad. Fruit ripens very late, very large, uniform, furrowed, often double, chunky roundish conic to wedge, necked; apex obtuse, indented, green-tipped; color medium red, glossy, attractive; seeds raised; flesh medium red like the surface, moderately juicy, firm, with a hollow center, subacid; quality good to very good.