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Bradford et al.

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(54) **PLUM TREE NAMED ‘PLUMRED XIV’**

CPC A01H 5/0862
See application file for complete search history.

(50) Latin Name: *Prunus salicina*
Varietal Denomination: **PLUMRED XIV**

(56) **References Cited**

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U.S. PATENT DOCUMENTS

PP19,591 P2 12/2008 Bradford
PP23,688 P2 6/2013 Bradford
PP26,055 P3 11/2015 Bradford et al.

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

The present invention relates to a plum tree, *Prunus salicina*,
and more particularly to a new and distinct variety broadly
characterized by a large size, vigorous, hardy, and produc-
tive tree. Being self-unfruitful, the present variety requires
cross pollination from an apricot, interspecific, or plum that
blooms during the mid season, such as ‘Plumsweet XVI’
interspecific tree (U.S. Plant Pat. No. 26,055). The present
variety produces a heavy density of flowers that produce a
moderate amount of pollen to entice good bee activity to
facilitate pollination. The fruit matures under the ecological
conditions described during early August, with first picking
on Aug. 5, 2020. The fruit is uniformly large in size, very
deep purplish red in skin color, full dark red flesh color,
clingstone in type, globose to oblate in shape, firm in texture,
juicy, very sweet, and excellent in flavor.

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(52) **U.S. Cl.**
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(58) **Field of Classification Search**
USPC Plt./184

1 Drawing Sheet

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Botanical classification: *Prunus salicina*.
Varietal denomination: ‘PLUMRED XIV’.

BACKGROUND OF THE VARIETY

In a continuing effort to improve the quality of shipping
fruits, we, the inventors, typically hybridize a large number
of peach, nectarine, plum, apricot, and cherry seedlings each
year. We also grow a lesser number of open pollinated seeds
of each of these fruits. The present invention relates to a new
and distinct variety of plum tree which has been denomi-
nated varietally as ‘PLUMRED XIV’.

During a typical blooming season we isolate as seed
parents both individual and groups of different plum and
interspecific trees by covering them with screen houses. A
hive of bees is placed inside each such house, and bouquets
to provide pollen from different plum, apricot, and interspe-
cific hybrid trees are placed in buckets near the trees
approximately every two days for the duration of the bloom.
During 2008 one such house containing ‘Plumred X’ inter-
specific tree (U.S. Plant Pat. No. 19,591) was crossed by us
in this manner. To pollinate this interspecific tree, we
selected bouquets from several sources of plum trees with-
out keeping specific written details. Upon reaching maturity
the fruit from this interspecific tree was harvested, and the
seeds were removed, cracked, stratified and germinated as a
group with the label “H8”. They were grown as seedlings on
their own root in our greenhouse and upon reaching dor-
mancy transplanted to a cultivated area of our experimental
orchard located near Le Grand, Calif. in Merced County

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(San Joaquin Valley). During the summer of 2012 the
claimed variety was selected by us as a single plant from the
group of seedlings described above. Subsequent to origina-
tion of the present variety of plum tree, we asexually
reproduced it by budding and grafting in the experimental
orchard described above, and such reproduction of plant and
fruit characteristics were true to the original tree in all
respects. The reproduction of the variety included the use of
‘Nemaguard’ (unpatented) rootstock upon which the present
variety was compatible and true to type.

The present variety is similar to its seed parent, ‘Plumred
X’ interspecific tree (U.S. Plant Pat. No. 19,591), by being
self-unfruitful and by producing fruit that is full red in flesh
color, large, firm and very sweet, but is quite distinguished
therefrom by producing fruit that is a smooth dark purplish
red in skin color, instead of red with green mottling, and that
ripens about three weeks earlier.

The present variety is most similar to ‘Plumred VII’
interspecific tree (U.S. Plant Pat. No. 23,688), by being
self-unfruitful and by producing fruit that is fairly globose in
shape, dark red in its primary skin color, completely red in
flesh color, firm in texture, juicy, very sweet, excellent in
flavor, and clingstone in type, but is distinguished therefrom
by producing fruit that is somewhat larger in size, that has
only a moderate amount of very fine freckling instead of a
heavy amount of greenish yellow colored freckling in the
skin appearance, and that matures about three weeks later.

SUMMARY OF VARIETY

The present plum variety is characterized by a large size,
vigorous, hardy, and productive tree. Being self-unfruitful,

the present variety requires cross pollination from an apricot, interspecific, or plum that blooms during the mid season, such as 'Plumsweet XVI' interspecific tree (U.S. Plant Pat. No. 26,055). The present variety produces a heavy density of flowers that produce a moderate amount of pollen to entice good bee activity to facilitate pollination. The fruit matures under the ecological conditions described during early August, with first picking on Aug. 5, 2020. The fruit is uniformly large in size, very deep purplish red in skin color, full dark red flesh color, clingstone in type, globose to oblate in shape, firm in texture, juicy, very sweet, and excellent in flavor.

DRAWING

The accompanying photograph consists of four whole fruits positioned to display the characteristics of the skin color and form, one divided fruit to reveal the flesh and stone, typical leaves, and two insets depicting the flower buds and blossoms as they appeared on the tree during the blooming season.

POMOLOGICAL CHARACTERISTICS

Referring now more specifically to the pomological characteristics of this new and distinct variety of plum tree, the following has been observed under the ecological conditions prevailing near Le Grand, Merced County (San Joaquin Valley), Calif. The fruit description was developed at the state of full ripe on Aug. 27, 2020, on the original tree during its twelfth growing season. The flower and bud descriptions were developed during the previous blooming season. All major color code designations are by reference to the Inter-Society Color Council, National Bureau of Standards. Common color names are also used occasionally.

PARENTAGE

Seed parent: 'Plumred X' (U.S. Plant Pat. No. 19,591) interspecific tree.
Pollen parent: Unknown plum.

TREE

Size: Large, reaching and maintaining a height of 15' [4.57 m.] and a spread of 8' [2.44 m.] after twelve growing seasons utilizing typical dormant pruning.

Vigor: Vigorous, responding typically to irrigation and fertilization. The variety grows about 4' [1.22 m.] of surplus top-growth during the spring and summer. The plant should be grown on a standard commercial rootstock for production purposes.

Growth: Upright and dense.

Form: Pruned to a vase form.

Hardiness: Hardy with respect to central California winters.

Heat tolerance: Observed to perform adequately in typical central California climatic conditions, which typically include extended periods of heat.

Drought tolerance: Variety is developed for commercial orchards and requires regular irrigation.

Production: Very productive, thinning usually necessary.

Fertility: Self-unfruitful, requiring cross pollination by a suitable mid to late seasonal blooming interspecific or plum, such as 'Plumsweet XVI' interspecific tree (U.S. Plant Pat. No. 26,055).

Bearing: Regular bearer, weather dependent, no crop failures observed as of yet.

Trunk:

Size.—Medium, reaching a maximum diameter of 5" [127.0 mm.] after the twelfth growing season.

Texture.—Medium to shaggy.

Bark color.—A Moderate brown [58. m.Br] and Grayish brown [61. gy.Br] variegation with Light brown [57. l.Br] crevices present.

Lenticels.—Approximate Number Per Square Inch: 10. Color: Strong brown [55. s.Br]. Average Size: ¼" [6.4 mm.] in length. The width is typically one fourth as much as the length. Shape: Elongated.

Branches:

Size.—Medium, scaffold diameter is 2¼" [57.2 mm.] measured 12" above the crotch, limb diameter is 1" [25.4 mm.] measured 12" above the first fork.

Texture.—Medium on first and second year wood, increasing roughness with age.

Color.—1st Year Wood Topside: Grayish red [19. gy.R]. 1st Year Wood Underside: Brilliant yellow green [116. brill.YG]. Older Wood: A Deep brown [56. deep Br] and Strong brown [55. s.Br] variegation with Deep yellowish brown [75. deep yBr] crevices present.

Lenticels.—Number Per Square Inch: About 22 on second year wood. Color: Strong yellowish brown [74. s.yBr]. Average Size: Small, ½" [0.8 mm.] in length. The width is typically one fourth as much as the length. Shape: Elongated.

Leaves:

Size.—Medium. Average Length: 3½" [93.7 mm.]. Average Width: 1⅝" [41.3 mm.].

Arrangement.—Alternate.

Thickness.—Medium.

Form.—Elliptical.

Apex.—Acuminate.

Base.—Acute with an average base angle of 70 degrees.

Surface.—Smooth.

Color.—Dorsal Surface: Moderate olive green [125. m.OIG]. Ventral Surface: Moderate yellow green [120. m.YG].

Margin.—Finely serrate.

Venation.—Pinnately net veined.

Petiole.—Average Length: ⅞" [14.3 mm.]. Average Thickness: ¼" [1.6 mm.]. Color: Pale greenish yellow [104. p.gY] with some Grayish red [19. gy.R] areas where exposed toward the sun.

Stipules.—Number: Mostly 2 per leaf, up to 6 per growing tip. Average Length: ¼" [6.4 mm.]. Color: Pale greenish yellow [104. p.gY] becoming Moderate olive brown [95. m.OlBr] with age.

Glands.—Number: Mostly 2 per leaf. Position: Alternate, positioned at the intersection of the petiole and base of leaf blade. Form: Globose. Size: Medium, ½" [0.8 mm.] in diameter. Color: Moderate greenish yellow [102. m.gY] becoming Dark reddish brown [44. d.rBr] in the center with age. Leaf buds: Pointed.

Flower buds:

Hardiness.—Hardy, with respect to central California blooming season.

Diameter.—Typically ⅜" [4.8 mm.] 1 week before bloom.

Length.—Typically $\frac{3}{8}$ " [9.5 mm.] 1 week before bloom.
Form.—Free, not touching.
Surface.—Slightly pubescent.
Tip color.—White [263. White].
 Flowers: Perfect, complete, perigynous, usually a single pistil, about thirty stamens, five sepals and petal locations alternately positioned.
Average flower diameter.— $1\frac{1}{16}$ " [27.0 mm.].
Average flower depth.— $\frac{3}{8}$ " [9.5 mm.] when fully open.
Number of petals.—Five, no double blossoms observed.
Petal shape.—Oval.
Petal margin.—Entire, somewhat wavy.
Petal arrangement.—Overlapping.
Average petal diameter.— $\frac{9}{16}$ " [14.3 mm.].
Average petal length.— $\frac{5}{8}$ " [15.9 mm.].
Petal apex.—Rounded.
Petal base.—Obtuse.
Petal color.—White [263. White] on both sides.
Anther color.—Brilliant yellow [83. brill.Y].
Stigma color.—Brilliant greenish yellow [98. brill.gY].
Stigma position.—Located slightly above the average anther position.
Stamen position.—Typically located about $\frac{1}{32}$ " [0.8 mm] below the petals.
Sepal color.—Brilliant yellow green [116. brill.YG] on the outside, Light yellow green [119. l.YG] on the inside.
Sepal outer surface.—Slightly pubescent.
Sepal length.— $\frac{3}{16}$ " [4.8 mm.].
Sepal width.— $\frac{1}{8}$ " [3.2 mm.].
Sepal apex.—Rounded to elliptical to match the width and length.
Sepal margin.—Fairly smooth.
Average pistil length.— $\frac{3}{4}$ " [19.1 mm.].
Average stamen length.— $\frac{5}{8}$ " [15.9 mm.].
Ovary.—Smooth.
Fragrance.—Moderate.
Pollen production.—Moderate, bee enticing.
Bloom density.—Heavy.
Number per cluster.—2 to 10, average 5.
Blooming period.—Medium, about two days before 'Santa Rosa' plum (unpatented).
Onset of bloom.—One percent on Feb. 20, 2020.
Date of full bloom.—Mar. 1, 2020.
Duration of bloom.—One to two weeks, dependent on ambient temperature.

FRUIT

Maturity when described: Full ripe, Aug. 27, 2020.
 Date of first picking: Aug. 5, 2020.
 Date of last picking: Aug. 23, 2020.
 Size: Uniform, large.
Average diameter axially.— $2\frac{7}{16}$ " [61.9 mm.].
Average diameter across cheek plane.— $2\frac{7}{8}$ " [73.0 mm.].
Average diameter across suture plane.— $2\frac{7}{8}$ " [73.0 mm.].
Typical weight.—7.6 ounces [215 grams].
 Form: Uniform, globose to oblate, symmetrical.
Longitudinal section form.—Round to oblate.
Axial view form.—Round.

Suture: A distinct very shallow trough extending from the base to the apex with a marked depression just beyond the pistil point.
 Ventral surface: Rounded, lipped on both sides.
 5 Lips: Mostly equal.
 Cavity: Flaring.
Depth.— $\frac{5}{8}$ " [15.9 mm.].
Breadth.— $\frac{7}{8}$ " [22.2 mm.].
 Base: Truncate, cordate if viewed parallel to the suture.
 10 Apex: Rounded.
 Pistil point: An inconspicuous Moderate yellow [87. m.Y] dot depressed within the suture.
 Stem: Medium.
 15 *Average length.*— $\frac{1}{2}$ " [12.7 mm.].
Average width.— $\frac{3}{32}$ " [2.4 mm.].
 Skin:
Thickness.—Medium.
Surface.—Smooth.
 20 *Tenacity.*—Tenacious to the flesh.
Astringency.—Slight.
Tendency to crack.—None observed.
Color.—A Very dark purplish red [260. v.d.pR] smoothly blending to Dark purplish red [259. d.pR] with a moderate amount of very small Light reddish brown [42. l.rBr] freckling throughout.
 25 Flesh:
Color.—Very deep red [14. v.deep R] close to the skin smoothly blending to Moderate red [15. m.R] toward the stone with Pale yellowish pink [31. p.yPk] fibers throughout.
 30 *Surface of pit cavity.*—Covered with Very deep purplish red [257. v.deep pR] fibers when twisted from the stone.
 35 *Amygdalin.*—Moderate to scarce.
Juice.—Abundant, rich.
Texture.—Firm, crisp.
Fibers.—Abundant, fine, tender.
Ripens.—Fairly even.
 40 *Flavor.*—A very tasty blend of acid and sugar, typically 18 to 22 brix.
Aroma.—Very slight.
Eating quality.—Excellent.

STONE

Type: Clingstone.
 Form: Oval.
 Hilum: Narrow.
 50 Base: Slightly rounded to oblate.
 Apex: Acute.
 Tip: Sharp, about $\frac{1}{16}$ " [1.6 mm.] in length.
 Sides: Mostly equal.
 Surface: Fairly smooth with rounded ridges toward the base.
 55 External color of stone: Light yellowish brown [76. l.yBr].
 Pit wall color when cracked: Light yellowish brown [76. l.yBr].
 Cavity surface color: Strong yellowish brown [74. s.yBr].
 Average pit wall thickness: $\frac{1}{16}$ " [1.6 mm.].
 60 Average length: $\frac{7}{8}$ " [22.2 mm.].
 Average width: $\frac{5}{8}$ " [15.9 mm.].
 Average breadth: $\frac{3}{8}$ " [9.5 mm.].
 Tendency to split: None observed.
 Kernel:
 65 *Form.*—Oval.
Skin color.—Pale yellow [89. p.Y].

Pellicle color.—Dark yellowish brown [78. d.yBr].
Vein color.—Deep yellowish brown [75. deep yBr].
Taste.—Bitter.
Viable.—Yes.
Average length.— $\frac{9}{16}$ " [14.3 mm.].
Average width.— $\frac{3}{8}$ " [9.5 mm.].
Amygdalin.—Moderate.

USE

Market: Fresh market and long distance shipping.
 Keeping quality: Good, fruit quality observed to remain in good condition after 21 days in standard cold room at 36° Fahrenheit [2° Celsius].
 Shipping quality: Good.
 Resistance to insects: No unusual susceptibilities noted.
 Resistance to diseases: No unusual susceptibilities noted.

OTHER NOTES

Although the new variety of plum tree possesses the described characteristics under the ecological conditions at

Le Grand, Calif., in the central part of the San Joaquin Valley, it is to be expected that variations in these characteristics may occur when farmed in areas with different climatic conditions, different soil types, and/or varying cultural practices.

We claim:

1. A new and distinct variety of plum tree, *Prunus salicina*, substantially as illustrated and described, that is most similar to 'Plumred VII' interspecific tree (U.S. Plant Pat. No. 23,600), by being self-unfruitful and by producing fruit that is fairly globose in shape, dark red in its primary skin color, completely red in flesh color, firm in texture, juicy, very sweet, excellent in flavor, and clingstone in type, but is distinguished therefrom by producing fruit that is somewhat larger in size, that has only a moderate amount of very fine freckling instead of a heavy amount of greenish yellow colored freckling in the skin appearance, and that matures about 22 days earlier.

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