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Bradford

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(54) **PEACH TREE NAMED ‘POLAR PRINCESS’**

(50) Latin Name: *Prunus persica*
Varietal Denomination: **Polar Princess**

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(US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 69 days.

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(52) **U.S. Cl.**
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(58) **Field of Classification Search**
USPC Plt./196, 194, 195, 197
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS
PP12,570 P2 4/2002 Bradford

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(57) **ABSTRACT**

The present invention relates to a new and distinct variety of peach tree, *Prunus persica*, broadly characterized by a medium size, moderately vigorous, hardy, self-fertile, very productive and regular bearing tree. The variety blooms during the early to mid season and requires about 500 chilling hours. The fruit matures under the ecological conditions described in the later part of July, with first picking on Jul. 21, 2011. The fruit is uniform, very large in size, sub-acidic in flavor, globose in shape, freestone in type, firm and melting in texture, white in flesh color, mostly red in skin color, and good in flavor.

1 Drawing Sheet

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Botanical classification: *Prunus persica*.
Variety denomination: ‘POLAR PRINCESS’.

BACKGROUND OF THE VARIETY

In a continuing effort to improve the quality of shipping fruits, I, the inventor, typically hybridize a large number of peach, nectarine, plum, apricot, and cherry seedlings each year. I also grow a lesser number of open pollinated seeds of each of these fruits, usually to capture recessive traits. The present invention relates to a new and distinct variety of peach tree, which has been denominated varietally as ‘Polar Princess’.

The present variety was hybridized by me in 2000 as a first generation cross using an unnamed white flesh freestone nectarine designated by code number ‘5P495’ (unpatented) as the selected seed parent and ‘Snow Princess’ (U.S. Plant Pat. No. 12,570) peach as the selected pollen parent. The fruit of this cross was gathered that summer, and the seeds were removed, cracked, stratified, germinated, and grown as seedlings on their own root in my greenhouse. Upon reaching dormancy the seedlings were transplanted as a group to a cultivated area of my experimental orchard located near Le Grand, Calif., in Merced County (San Joaquin Valley). During the fruit evaluation season of 2005 I selected the present variety as a single tree from the group of seedlings described above. Subsequent to origination of the present variety of peach tree, I 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 plant 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 ‘5P495’ nectarine (unpatented) by producing fruit that is white in flesh

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color, freestone in type, firm in texture, mostly red in skin color, but is quite distinguished therefrom by being a peach instead of nectarine, and by producing fruit that matures about fourteen days later.

5 The present variety is most similar to its pollen parent ‘Snow Princess’ peach (U.S. Plant Pat. No. 12,570) by producing peaches that are white in flesh color, mostly red in skin color, firm in texture, large in size, freestone in type, and sub-acidic in taste, but is distinguished therefrom by blooming about five days later and by producing fruit that matures about two weeks earlier. It is to be noted that the claimed ripening time for ‘Snow Princess’ peach in U.S. Plant Pat. No. 12,570 was Jul. 20, 2000. It has been determined during 15 subsequent years that the ripening time for ‘Snow Princess’ peach is usually between August 1st and August 5th, with the actually date of first pick recorded this year as Aug. 5, 2011.

SUMMARY OF VARIETY

20 In summary, the present variety is characterized by a medium size, moderately vigorous, hardy, self-fertile, very productive and regular bearing tree. The variety blooms during the early to mid season and requires about 500 chilling hours. The fruit matures under the ecological conditions described in the later part of July, with first picking on Jul. 21, 2011. The fruit is uniform, very large in size, sub-acidic in 25 flavor, globose in shape, freestone in type, firm and melting in texture, white in flesh color, and mostly red in skin color.

DRAWING

35 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, two insets to reveal buds and blossoms, and typical leaves.

POMOLOGICAL CHARACTERISTICS

Referring now more specifically to the pomological characteristics of this new and distinct variety of peach tree, the following has been observed under the ecological conditions prevailing near Le Grand, Merced County (San Joaquin Valley), Calif., and was developed at the state of firm ripe on Jul. 28, 2011, on the original tree during its eleventh growing season. The blossom and flower descriptions were made 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: '5P495' (unpatented) nectarine.
Pollen parent: 'Snow Princess' (U.S. Plant Pat. No. 12,570) peach.

TREE

Size: Medium, reaching and maintaining a height of 8' [2.44 m.] and a spread of 7' [2.13 m.] after eleven growing seasons utilizing typical dormant pruning.

Vigor: Medium vigor, responding typically to irrigation and fertilization. The variety grows about 3' [0.91 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: Vase type.

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 necessary.

Fertility: Self-fertile.

Bearing: Regular bearer with no alternate bearing yet observed.

Approximate chilling requirement: 500 hours.

Trunk:

Size.—Medium, reaching a maximum diameter of 4½" [114.3 mm.] after the eleventh growing season.

Texture.—Medium shaggy.

Bark color.—A Brownish gray [64. brGy] and Dark brown [59. d.Br] variegation with Moderate orange yellow [71. m.OY] crevices present.

Lenticels.—Approximate Number Per Square Inch: 12. Color: Moderate orange yellow [71. m.OY]. Size: ⅛" [3.2 mm.] to ⅜" [9.5 mm.]. Shape: Eye-shaped, elongated.

Branches:

Size.—Diameter of main scaffold is 3¼" [82.6 mm.] measured 12" above the crotch, diameter of limb is 2" [50.8 mm.] measured 12" above the first fork.

Texture.—Smooth 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: Strong yellowish brown [74. s.yBr].

Lenticels.—Number Per Square Inch: About 80 on second year wood. Color: Light yellowish brown [76. l.yBr]. Size: ¼" [0.4 mm.] to ⅛" [1.6 mm.] on second year wood. Shape: Eye-shaped, elongated.

Leaves:

Size.—Large. Average Length: 6" [152.4 mm.]. Average Width: 1⅝" [41.3 mm.].

Arrangement.—Alternate.

Thickness.—Medium.

Form.—Elliptical.

Apex.—Acuminate.

Base.—Acute, with an average base angle of 75 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.

Vein color.—Brilliant yellow green [116. brill.YG].

Petiole.—Average Length: ⅜" [9.5 mm.]. Average Thickness: ¼" [1.6 mm.]. Color: Brilliant yellow green [116. brill.YG].

Stipules.—Number: Usually 2 per leaf, up to 6 per growing tip. Average Length: ⅝" [7.9 mm.]. Color: Light yellow green [119. l.YG] becoming Moderate reddish brown [43. m.rBr] with maturity.

Glands.—Number: 2 to 4 per leaf. Position: Both opposite and alternately positioned on petiole and base of blade. Size: Small. Form: Reniform. Color: Brilliant yellow green [116. brill.YG] becoming Dark brown [59. d.Br] with age.

Leaf buds.—Pointed, medium in size.

Flower buds:

Hardiness.—Hardy, with respect to central California winters.

Diameter.—Typically ⅜" [9.5 mm.] 1 week before bloom.

Length.—Typically 1⅛" [17.5 mm.] 1 week before bloom.

Form.—Not appressed.

Surface.—Pubescent.

Tip color.—Light purplish pink [249. l.pPk].

Flowers: Perfect, complete, perigynous, usually a single pistil, typically thirty or more stamens, five sepal and petal locations alternately positioned.

Type.—Showy, large.

Average flower diameter.—2⅛" [54.0 mm.].

Number of petals.—Five, extra petal fragments are occasionally observed.

Petal shape.—Circular to oval.

Petal margin.—Entire, wavy.

Average petal diameter.—1⅜" [20.6 mm.].

Average petal length.—7⁄8" [22.2 mm.].

Petal apex.—Rounded.

Petal base.—Rounded to somewhat truncate.

Petal color.—Pale pink [7. p.Pk] toward the apex, Light purplish pink [249. l.pPk] toward the base on both sides.

Anther color.—Moderate red [15. m.R] over a Light yellow [86. l.Y] center at bloom onset.

Stigma color.—Light greenish yellow [101. l.gY].

Sepal color.—Dark purplish red [259. d.pR] on the outer surface.

Sepal length.— $\frac{1}{4}$ " [6.4 mm.].

Sepal width.— $\frac{7}{32}$ " [5.6 mm.].

Sepal apex.—Rounded to elliptical to match the sepal length and width.

Sepal margin.—Fairly smooth.

Average pistil length.— $1\frac{1}{32}$ " [17.5 mm.].

Average stamen length.— $\frac{9}{16}$ " [14.3 mm.].

Fragrance.—Moderate.

Blooming period.—Early to medium, five days after 'Snow Princess' (U.S. Plant Pat. No. 12,570) peach.

Onset of bloom.—One percent on Feb. 20, 2011.

Date of full bloom.—Mar. 1, 2011.

Duration of bloom.—One to two weeks, dependent on ambient temperature.

Number per cluster.—1 to 3 with single flowers most common.

FRUIT

Maturity when described: Firm ripe, Jul. 28, 2011.

Date of first picking: Jul. 21, 2011.

Date of last picking: Aug. 4, 2011.

Size: Uniform, very large.

Average diameter axially.— $3\frac{1}{2}$ " [88.9 mm.].

Average diameter across suture plane.— $3\frac{1}{2}$ " [88.9 mm.].

Average diameter across cheek plane.— $3\frac{3}{8}$ " [85.7 mm.].

Typical weight.—13.4 ounces [380 grams].

Form: Uniform, globose, symmetrical with respect to the suture plane.

Longitudinal section form.—Circular to elliptical.

Axial view.—Circular with a suture bulge.

Suture: Extends from the base, along the side, to slightly beyond the pistil point.

Near the base.—A shallow, sharp groove.

Along the side.—A shallow trough.

Near the apex.—A shallow groove.

Ventral surface: Humped along the suture, lightly lipped toward the apex.

Lips: Slightly unequal.

Cavity: Flaring, elongated in the suture plane, suture showing on both sides, Pale greenish yellow [104. p.gY] stem markings typical.

Depth.— $\frac{3}{4}$ " [19.1 mm.].

Breadth.— $1\frac{1}{2}$ " [38.1 mm.].

Base: Truncate.

Apex: Rounded to slightly truncate.

Pistil point: Apical, very short in length, usually depressed within the suture.

Stem: Medium.

Average length.— $\frac{3}{8}$ " [9.5 mm.].

Average width.— $\frac{3}{16}$ " [4.8 mm.].

Skin:

Thickness.—Medium.

Surface.—Smooth.

Tenacity.—Tenacious to flesh.

Astringency.—Non-astringent.

Tendency to crack.—Very slight.

Color.—Deep red [13. deep R] smoothly blending into Deep pink [3. deep Pk] with an occasional Yellowish white [92. yWhite] area where sun protected.

Down.—Moderate, does not roll up when rubbed.

Flesh:

Color.—Pinkish white [9. pkWhite] acquiring some Moderate red [15. m.R] streaking toward stone and Moderate red [15. m.R] freckling toward the skin with maturity.

Surface of pit cavity.—Covered with Deep red [13. deep R] fibers.

Amygdalin.—Scarce.

Juice.—Moderate, rich.

Texture.—Firm, tough, melting.

Fibers.—Abundant, fine, tender.

Ripens.—Fairly even, slightly earlier toward the apex.

Flavor.—Sub-acid, typically 15 brix.

Aroma.—Slight.

Eating quality.—Good.

STONE

Type: Freestone.

Form: Oval.

Hilum: Narrow, oblong.

Base: Rounded.

Apex: Obtuse with a $\frac{1}{8}$ " [3.2 mm.] sharp tip, average angle of 60 degrees.

Sides: Equal.

Surface: Irregularly furrowed toward the apex, pitted toward the base.

Ridges: Jagged toward the apex.

External color: Dark brown [59. d.Br] when first removed.

Pit wall color when cracked: Moderate brown [58. m.Br].

Cavity surface color: Strong brown [55. s.Br].

Average pit wall thickness: $\frac{1}{4}$ " [6.4 mm.].

Average width: 1" [25.4 mm.].

Average length: $1\frac{7}{16}$ " [36.5 mm.].

Average breadth: $\frac{3}{4}$ " [19.1 mm.].

Tendency to split: Very slight.

Kernel:

Form.—Oval.

Skin color.—Pale yellow [89. p.Y] when first removed.

Pellicle color.—Dark grayish yellow [91. d.gy.Y].

Vein color.—Light yellowish brown [76. l.yBr].

Taste.—Bitter.

Viable.—Yes.

Average width.— $\frac{1}{2}$ " [12.7 mm.].

Average length.— $1\frac{3}{16}$ " [20.6 mm.].

Amygdalin.—Moderate.

USE

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Market: Fresh market and long distance shipping.

Keeping quality: Good, fruit quality observed to remain in good condition after 17 days in standard cold room at 36° Fahrenheit [2° Celsius].

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Shipping quality: Good.

Resistance to insects: No unusual susceptibilities noted.

Resistance to diseases: No unusual susceptibilities noted.

OTHER NOTES

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Although the new variety of peach 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.

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I claim:

1. A new and distinct variety of peach tree, substantially as illustrated and described, that is most similar to its pollen parent 'Snow Princess' peach (U.S. Plant Pat. No. 12,570) by producing peaches that are white in flesh color, mostly red in

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skin color, firm in texture, large in size, freestone in type, and sub-acidic in taste, but is distinguished therefrom by blooming about five days later and by producing fruit that matures about two weeks earlier.

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