

**(12) United States Plant Patent**
Chaparro et al.**(10) Patent No.: US PP20,174 P2****(45) Date of Patent: Jul. 7, 2009****(54) PEACH TREE NAMED 'GULFCRIMSON'****(50)** Latin Name: *Prunus persica*
Varietal Denomination: **Gulfcrimson****(76)** Inventors: **Jose X. Chaparro**, University of Florida,
P.O. Box 110690, Gainesville, FL (US)
32611-0690; **Gerard W. Krewer**, P.O.
Box 748, Tifton, GA (US) 31793;
Thomas G. Beckman, 21 Dunbar Rd.,
Byron, GA (US) 31008**(*)** Notice: Subject to any disclaimer, the term of this
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U.S.C. 154(b) by 0 days.**(21)** Appl. No.: **12/150,993****(22)** Filed: **May 2, 2008****(51)** **Int. Cl.**
A01H 5/00 (2006.01)**(52)** **U.S. Cl.** **Plt./197****(58)** **Field of Classification Search** Plt./197
See application file for complete search history.

Primary Examiner—Annette H Para

(57) **ABSTRACT**

A new and distinct variety of nectarine tree, denominated 'Gulfcrimson', has a winter chilling requirement estimated at 400 chill units (cu). The tree is medium size, moderately vigorous, and semi-spreading in growth habit. It bears non-showy, pink flowers, and leaves with reniform glands. Trees of 'Gulfcrimson' are self-fertile and regularly bear heavy annual crops of early season fruit that are large for its ripening season. Fruit are uniformly firm and yellow with non-melting flesh. Fruit are nearly round, and uniform with substantially symmetrical shape, and have an attractive 80 to 100% red skin. The fruit of 'Gulfcrimson' usually ripen with 'June Gold' peach in the last half of May at Attapulugus, Ga.

1 Drawing Sheet**1**Botanical classification: *Prunus persica*.—'Gulfcrimson'.**BACKGROUND OF THE NEW VARIETY**

The present invention relates to a new and distinct variety of peach [*Prunus persica* (L.) Batsch] tree adapted to a sub-tropical (moderate chill) winter climate. This new tree, named 'Gulfcrimson', produces highly colored, good eating quality, cling-stone and non-melting flesh fruit for fresh market in mid-June at Attapulugus, Ga. Contrast is made to 'June Gold' peach (U.S. Plant Pat. No. 1,884), a standard variety, for reliable description. 'Gulfcrimson' is a promising candidate for commercial success in that it has large, attractive red skin, sweet fruit that ripen evenly.

ORIGIN OF THE VARIETY

'Gulfcrimson' peach tree (genotype) originated in a cultivated area of the fruit breeding program located at Attapulugus, Ga. where it was tested. The seed parent was AP96-8 (unpatented) and the pollen parent was AP98-5 (unpatented), both of complex origin. 'Gulfcrimson' was selected in 2001 because it exhibited yellow, non-melting flesh, in a large fruit with a bright red skin. It was designated and tested as AP01-7. It was asexually propagated at the University of Georgia, located at Attapulugus, Ga., by budding onto 'Flordaguard' (unpatented) seedling rootstock (for root-knot nematode control) and determined to have unique tree and fruit characteristics making it worthy for commercial fresh fruit production. There are no known effects of this standard rootstock on this scion cultivar. Asexually propagated plants remained true to the original tree and all characteristics of the tree and the fruit have transmitted for 2 generations.

SUMMARY OF THE VARIETY

The new and distinct variety of peach tree bears fruit that ripen in late June at Attapulugus, and has a moderately low

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chilling dormancy requirement. 'Gulfcrimson' blooms 7 to 10 days before 'June Gold' peach in early February at Attapulugus. The estimated chilling requirement is 400 chill units, based on bloom time. 'Gulfcrimson' tree has fruit that are clingstone and of good flavor and eating quality. The trees are vigorous, productive and without alternate bearing. Trees attain in two years, a height of two meters and a spread of one and a half meters at Attapulugus. Terminal growth of up to a half meter annually is common on mature 5-year-old trees with normal pruning to a vase shape.

The first fruit ripen the week following mid-May at Attapulugus or in about 95 days from full bloom, which is near the time of 'June Gold' ripening. The fruit are uniformly large, about the same weight as 'June Gold', averaging 135 g when properly thinned to a full crop. However, 'Gulfcrimson' fruit are more round and slightly larger diameter than 'June Gold' which has longer fruit. Ripe fruit have averaged 80% red skin, there is no red pigment in the flesh at the pit. The flower anthers are red, and leaf glands are reniform, common characteristics of many standard peach varieties. No buttons (parthenocarpic fruit) have been observed as noted some years in 'June Gold'.

DESCRIPTION OF THE DRAWINGS

The accompanying drawing is a color photograph which shows a typical specimen of the fruit, leaf, and stem of the new variety as nearly true as it is reasonably possible to make in a color illustration of this type. The photograph shows an attractive shape and exterior coloration of 6 specimens of fruit above a ruler in side view, stem end view, a blossom end view, a side view showing the suture and a fruit cut longitudinally to show with and without the pit.

DETAILED BOTANICAL DESCRIPTION

The tree, flowers, and fruit may vary in slight detail due to variations in soil type, cultural practices, and climatic condi-

tion. The potential for commercial production of fresh fruit by 'Gulfrimson' is high, due to its attractive red skin over a bright yellow ground color, large fruit of good flavor, and good firmness with even ripening throughout the fruit. The present botanical description is that of the variety grown on 5-year-old trees on 'Flordaguard' rootstock under the ecological conditions at Attapulcus, Ga. Colors (except those in common terms) are described from "The Pantone Book of Color", published by H. N. Abrams, Inc., N.Y. 1990.

Tree:

Ploidy.—Diploid.

Size.—Trees are medium stature when trained to an open vase form.

Vigor.—Moderately vigorous, and must be summer and winter pruned when grown to a vase shape to keep the tree open to get strong fruiting wood in the lower center. Trees respond typically to irrigation and fertilization. Tree growth of 4 to 6 feet in height and 3 to 5 feet in width occurs the first growing season in the field.

Density.—Light to medium in branching habit. Pruning is required to open the tree center to promote sunlight entrance for enhancing fruit color and sugar.

Form.—Semi-spreading, but easily pruned to vase shape.

Hardiness.—Hardy with respect to typical south Georgia winters.

Bearer.—Very productive annually without alternate bearing observed. Trees are self fertile and must be fruit thinned to avoid limb breakage and obtain large fruit size. Trees annually set several times the number of fruit for a desired crop load.

Chilling requirement.—Estimated endodormancy chilling requirement is 400 chill units based on time of bloom and leafing in relation to standard varieties.

Trunk:

Size.—Medium trunk diameter attaining 8 cm diameter at a height of 30 cm at the end of 3 years growth at Attapulcus.

Texture.—Medium smooth, but changes to medium shaggy as tree ages.

Bark color.—Older bark gray, Chinchilla (Pantone 17-1109).

Lenticels.—Moderately high number (16 to 24 per 4 square inches of surface area of trunk) and medium (4 to 7 mm length perpendicular to the trunk), grey, Sponge (Pantone 16-1118) with the center being yellowish brown, Dusty Orange (Pantone 16-1344).

Branches:

Size.—Strong growth of scaffold branches. Fruiting branches are mostly large diameter (4 to 6 mm) and not overly twiggy, resulting in strong fruiting wood. Thus, the tree growth and structure permits easier and faster winter pruning.

Texture.—Relatively smooth, numerous lenticels attaining size found on trunk and old scaffolds. Roughness increases with age.

Color.—New wood is light green, Lettuce (Pantone 13-0324); Old wood is more brown, Cameo Brown (Pantone 15-1516).

Crotch angles.—Angles are selected at 45 to near 90 degrees in first year of tree training. Natural angles are within the normal range of standard varieties for a semi-spreading tree and similar to those of 'June Gold'.

Leaves:

Size.—Medium; 15 to 17 cm length, including the petiole; 37 to 39 mm width. Measurements were made on vigorous upright shoots of summer growth.

Thickness.—Regular and average for commercial nectarine varieties. Not noticeably unusual.

Form.—Lanceolate.

Apex.—Acute.

Margin.—Serrulate, slightly undulate.

Base.—Cuneate.

Surface.—Upper, glabrous; Lower, medium large veins that are pinnately netted.

Color.—Lower surface is green, Peridot (Pantone 17-0336); Upper surface is slightly darker green, Artichoke Green (Pantone 18-0125).

Glands.—Usually 2, small reniform glands mostly on lower leaf blade, but occasionally on petiole. Leaf glands on young leaves are light green, Leek Green (Pantone 15-0628). Size averages about 1 mm in length and 0.3 mm in width.

Petiole.—About 1 cm (0.8 to 1.1 cm) length; 1.3 mm diameter. Light green, Cedar (Pantone 16-0526) on older leaves of summer. Grooved longitudinally.

Stipules.—Medium (equal to most commercial peach varieties), usually 2 per bud, and abscising just before leaf becomes full size in summer growth. Color at full size is green, but tinged with anthocyanin before abscising.

Arrangement.—Alternate.

Flower buds:

Hardiness.—Hardy with respect to south Georgia winters (16F minimum observed).

Abundance.—Very high due to shorter than average internode length. Most buds set fruit in absence of spring frosts and show little evidence of bud drop.

Size.—Medium, average 4.5 mm length in mid winter.

Form.—Plump, conic and free.

Surface.—Pubescent scales.

Color.—Brown, Stucco (Pantone 16-1412) in late summer.

Flowers:

Blossom period.—Blooms 7 to 10 days before 'June Gold' peach — average 50% bloom February 10 to 15 most years at Attapulcus, but occurring over a 7–10 day period. Time and length of bloom are dependant on ambient temperature.

Aroma.—Not detectable.

Flower density.—Abundant, varying 1 to 3 per node, but usually 2.

Type.—Showy, location and seasonally variable within the range of commercial showy varieties. Average flower diameter — 4 cm. Average petal length, 17 mm; width, 13 mm. Texture smooth. Margins are undulate and smooth.

Color.—Orchid Pink (Pantone 13-2010) at flower opening, and within the pink range of standard varieties.

Flower parts.—Stamens and pistil size, shape and color are within the range of standard commercial varieties. There are 5 sepals and petals. Sepals average 5 mm length and 4 mm wide at attachment to calyx cup and rounded at the distal end. Sepals are green, Grasshopper (Pantone 18-0332) on the interior and red, Garnet (Pantone 19-1655) on the exterior with a smooth pubescent margin. Sepals are pubescent and petals are glabrous. Pistils are usually 1 per flower

and straight (without curls or curves) just prior to flower opening. Pistil length (from tip of stigma to base of ovary) averages 11 mm. Pistils are light green, Pale Star (Pantone 12-0626). Flower pedicel is 1 to 2 mm length.

Calyx cup.—Medium small in the size range of commercial varieties. Calyx cup diameter is 5 mm at the top, at the time of flower opening. Calyx cup exterior is red, Garnet (Pantone 19-1655) and interior of the cup base is orange, Persimmon Orange (Pantone 16-1356).

Stamen.—Anthers are deep red, Paprika (Pantone 17-1553), at flower opening. Number of anthers varies from 27 to 36 and filament length is 9–12 mm. Filaments are light green, Pale Star (Pantone 12-0626) at flower opening.

Pollen.—Abundant and bright yellow, Snapdragon (Pantone 13-0840).

Fertility.—Fully self fertile, and no cross pollination is required. Fruit set is abundant.

Fruit:

Maturity when described.—Tree ripe, May 18, 2006 at Attapulugus, Ga.

Date of picking.—First, May 18, 2006; Last, — May 28, 2006 at Attapulugus, Ga.

Size.—Uniform, medium large (large size for early mid-season maturity at 130 to 150 g). Varies with fruit number per tree, soil type, climatic conditions and cultural practices.

Average equatorial diameter.—2⁵/₈ inches (66 mm).

Average polar length (stem to distal end).—2⁵/₈ inches (65 mm).

Peduncle size and color.—Length averages 4 mm; Width is approximately 3 mm. Color is green, Cedar (Pantone 16-0526).

Longitudinal section form.—Strongly oval.

Transverse section through diameter.—Round.

Suture.—Shallow and inconspicuous except for a crease on the stem end of the fruit.

Ventral surface.—Usually rounded.

Base.—Slightly cordate.

Apex.—Usually rounded to slightly obtuse.

Crater at stem attachment.—Flaring circular with slight suture crease at the stem end. Depth is 9 to 10 mm; breadth is 15 mm at top and 6 mm at pedicel attachment.

Skin:

Thickness.—Medium in comparison to commercial peach varieties.

Texture.—Medium in comparison to standard varieties.

Tenacity.—Tenacious to flesh.

Color.—Red, Aurora Red (Pantone 18-1550), over 80 to 1000% of skin. Ground color is yellow, Golden Glow (Pantone 15-1050). Fruit exposed to sunlight have a higher degree of enhanced red skin.

Tendency to crack.—None observed.

Taste.—No astringency observed.

Epidermis.—Pubescent, but slightly shorter than ‘June Gold’.

Flesh:

Ripens.—Evenly within each fruit.

Texture.—Firm, juicy, melting when fully ripe.

Fibers.—Very fine, small, tender, and abundant.

Aroma.—Moderate and in the middle range of commercial peach varieties.

Eating quality.—Good, moderately sweet, slightly acid. Soluble solids vary from 9 to 14 brix at 3.3 to 2.1 kg penetrometer firmness with a standard ⁵/₁₆ inch tip.

Juice.—Abundant.

Color.—Bright yellow, Banana (Pantone 13-0947), with no red in the flesh near the fruit tip, especially on stressed trees under dry, hot conditions. There is no red at the pit, but small flecks of red occur in the outer flesh in some years on the sunny side of the fruit.

Browning by oxidation.—Not detectable on tree ripe fruit beginning to soften.

Amygdalin.—Undetected.

Texture.—Smooth in comparison to the coarse texture in ‘June Gold’.

Stone:

Type.—Clingstone.

Size.—Medium small: average length is 31 mm; average width is 27 mm; average thickness is 18 mm; average wall thickness is 6 mm.

Color.—Light Brown, Buckskin (Pantone 16-1342) when flesh is freshly cut.

Form.—Oblong.

Base.—Straight.

Apex.—Acute.

Sides.—Near equal.

Surface.—Irregularly furrowed toward the ventral edge, pitted from base to apex.

Ridges.—Jagged toward the base.

Tendency to split.—None observed.

Seed.—Bitter (amygdalin is abundant) kernel. Viable if stratified upon removal from fruit at harvest, and without drying. Kernel is brown, Pale Banana (Pantone 12-0824) when first removed from ripe fruit. Seed is 16 mm length, 9 mm wide and 4 mm thick. Shape is acute tip with obtuse base and overall ovate shape.

Use.—Fresh; dessert.

Resistance to disease.—High resistance to bacterial spot incited by *Xanthomonas campestris* pv. *pruni* (Pers.) Diet. Resistance to other fruit and tree diseases are within the range for commercial peach cultivars in Georgia. No unusual resistance or susceptibility to insects and diseases noted.

Keeping quality.—Excellent after 10 days at 2C and with minimal bruises or scarring appear on skin.

Shipping quality.—Degree of firmness at harvest and firmness retained in refrigeration for 10 days at 2C, with no internal breakdown of flesh or appreciable loss of eating quality, indicates fruit should be highly acceptable for shipping.

We claim:

1. A new and distinct peach tree as illustrated and described, characterized by a moderate chilling requirement, and bearing fruit having firm, yellow and non-melting, clingstone, and smooth textured flesh of high eating quality and an attractive, high percentage red skin with fruit ripening the last half of May, usually with ‘June Gold’, at Attapulugus, Ga.

