



US00PP26952P3

(12) **United States Plant Patent**
Zaiger et al.

(10) **Patent No.:** **US PP26,952 P3**
(45) **Date of Patent:** **Jul. 19, 2016**

(54) **INTERSPECIFIC TREE NAMED**
'HUNTINGTON'

(50) Latin Name: **Interspecific *Prunus* species**
Varietal Denomination: **Huntington**

(71) Applicants: **Gary Neil Zaiger**, Modesto, CA (US);
Leith Marie Gardner, Modesto, CA
(US); **Grant Gene Zaiger**, Modesto, CA
(US)

(72) Inventors: **Gary Neil Zaiger**, Modesto, CA (US);
Leith Marie Gardner, Modesto, CA
(US); **Grant Gene Zaiger**, Modesto, CA
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 77 days.

(21) Appl. No.: **14/544,226**

(22) Filed: **Dec. 11, 2014**

(65) **Prior Publication Data**

US 2016/0174430 P1 Jun. 16, 2016

(51) **Int. Cl.**
A01H 5/08 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./180**

(58) **Field of Classification Search**
USPC **Plt./180**
See application file for complete search history.

Primary Examiner — Susan McCormick Ewoldt

(57) **ABSTRACT**

A new and distinct variety of interspecific tree. The following features of the tree and its fruit are characterized with the tree budded on 'Nemaguard' Rootstock (non-patented), grown on Handford sandy loam soil with Storie Index rating 95, in USDA Hardiness Zone 9, near Modesto, Calif., with standard commercial fruit growing practices, such as pruning, thinning, spraying, irrigation and fertilization. Its novelty consist of the following combination of desirable features:

1. Tree with a vigorous, upright growth habit.
2. Tree with heavy and regular production of large size fruit.
3. Fruit with good storage and shipping quality.
4. Fruit with good flavor and eating quality.
5. Fruit with an attractive orange skin color.

1 Drawing Sheet

1

Botanical designation: Interspecific *Prunus* species.
Variety denomination: 'Huntington'.

BACKGROUND OF THE VARIETY

Field of the Invention

In the field of plant genetics, we conduct an extensive and continuing plant-breeding program including the organization and asexual reproduction of orchard trees, and of which plums, peaches, nectarines, apricots, cherries, almonds and interspecifics are exemplary. It was against this background of our activities that the present variety of interspecific tree was originated and asexually reproduced by us in our experimental orchard located near Modesto, Stanislaus County, Calif.

PRIOR VARIETIES

Among the existing varieties of interspecific trees, which are known to us, and mentioned herein, 'Escort' Interspecific (U.S. Plant Pat. No. 18,537) and our proprietary non-patented interspecific seedling selections with the field identification numbers '32ZH874', '39ZK329', '177LM433', '13M205' and '13MA480'.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

Not applicable.

ORIGIN OF THE VARIETY

The new variety of interspecific tree, a combination of crosses between *Prunus salicina*, *Prunus persica* and *Prunus*

2

armeniaca was originated by us in our experimental orchard located near Modesto, Calif. as a first generation cross between our proprietary non-patented interspecific seedling selections with the field identification numbers '32ZH874' and '39ZK329.' The seed parent (32ZH874) interspecific (non-patented) originated from a cross between our non-patented interspecific seedlings '177LM433' and '13M205'. The pollen parent (39ZK329) originated from open pollinated seed collected from our non-patented interspecific proprietary seedling selection '13MA480.' A large number of these first generation seedlings were budded onto older established trees of 'Nemaguard' Rootstock (non-patented) to enhance earlier fruit production. Under close and careful observation the present seedling exhibited desirable fruit and tree characteristics and was selected in 2010 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2010 asexual reproduction of the new and distinct variety of interspecific tree was by budding to 'Nemaguard' Rootstock (non-patented), as performed by us in our experimental orchard located near Modesto, Calif., and shows that reproductions run true to the original tree and all characteristics of the tree and its fruit are established and transmitted through succeeding asexual propagations.

SUMMARY OF THE NEW VARIETY

The new and distinct variety of interspecific tree (*Prunus armeniaca* × *Prunus salicina*) × (*Prunus armeniaca* × *Prunus persica*) which has vigorous, upright growth and is a regular

and productive bearer of large size fruit with good flavor and eating quality. The fruit is further characterized by its firm flesh, attractive orange skin color and good storage and shipping quality. In comparison to its proprietary non-patented interspecific seed parent (32ZH874) the fruit of the new variety has a lower winter chilling requirement of 750 hours compared to 1000 hours. In comparison to its proprietary non-patented interspecific pollen parent (39ZK329) the fruit of the new variety has orange flesh compared to yellow and is approximately 25 days later in maturity. In comparison to the commercial variety 'Escort' Interspecific (U.S. Plant Pat. No. 18,537) the fruit of the new variety is larger in size and is approximately 30 days later in maturity.

DESCRIPTION OF THE PHOTOGRAPH

The accompanying color photographic illustration shows typical specimens of the foliage and fruit of the present new interspecific variety.

The illustration shows the upper and lower surface of the leaves, an exterior and sectional view of a single fruit divided in its suture plane to show flesh color, pit cavity and the stone remaining in place. The photographic illustration was taken shortly after being picked (shipping ripe) from a 6 year old tree and the colors are as nearly true as is reasonably possible in a color representation of this type.

DESCRIPTION OF THE VARIETY

The following is a detailed botanical description of the new variety of interspecific tree, its flowers, foliage and fruit, as based on observations of 6 year old specimens grown near Modesto, Calif., with color in accordance with Munsell Book of Color published in 1958.

Tree:

Size.—Large, usually pruned to 3 to 3.5 meters in height and width for economical harvesting of fruit. Varies with different cultural practices.

Vigor.—Vigorous, tree growth of approximately 1.5 to 2 meters the first growing season. Varies with cultural practices, soil type, fertility of soil and climatic conditions.

Form.—Upright, usually pruned to vase shape.

Branching habit.—Upright, crotch angle approximately 35°, increases with heavy crop load.

Productivity.—Productive, thinning and spacing of fruit necessary for desired market size. Fruit set varies with climatic conditions during bloom time.

Bearer.—Regular, adequate fruit set 4 consecutive years. No alternate bearing observed.

Fertility.—Partially self-fertile, limited fruit set under bag, pollinator recommended.

Density.—Medium dense, usually pruned to vase shape to allow more sunlight to center of tree to enhance fruit color and health of fruit spurs.

Hardiness.—Hardy in all stone fruit growing areas of California. Tree grown in USDA Hardiness Zone 9. Winter chilling requirement approximately 750 hours at or below 45° F.

Trunk:

Size.—Medium to large. Average circumference 45.7 cm at 25.4 cm above ground on a 6 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—Varies from 7.5Y 4/2 to 7.5Y 5/2.

Branches:

Size.—Medium. Average circumference 13.5 cm at 1.2 meters above ground. Crotch angle approximately 35°, increases with heavy crop load.

Surface texture.—New growth relatively smooth. Mature growth medium rough, roughness increases with age.

Lenticels.—Average number 28 in a 25.8 sq cm area. Average length 2.8 mm. Average width 1.2 mm. Color varies from 7.5YR 6/6 to 7.5YR 5/6.

Color.—New growth varies from 5GY 4/6 to 5GY 4/8. Mature growth 10Y 2/2, varies with age of growth.

Leaves:

Size.—Large. Average length 95.7 mm. Average width 62.5 mm.

Form.—Ovate.

Apex.—Cuspidate.

Base.—Cuneate.

Margin.—Serrate.

Thickness.—Medium.

Surface texture.—Upper surface relatively smooth, slight indentations over midrib and leaf veins. Lower surface relatively smooth, except for small ridges created by midrib and pinnate venation. Both upper and lower surfaces glabrous.

Petiole.—Large. Average length 32.3 mm. Average width 1.2 mm. Longitudinally grooved. Surface — glabrous. Color varies from 5GY 7/4 to 10R 3/6.

Glands.—Type — globose. Size — small. Average length 0.3 mm. Average diameter 0.2 mm. Average number 2, varies from 1 to 4. Located primarily on the upper portion of petiole and the base of the leaf blade. Color varies from 10R 3/4 to 5GY 6/6.

Stipules.—None present at time of measurement.

Color.—Upper surface varies from 7.5GY 4/4 to 5GY 4/4. Lower surface varies from 7.5GY 5/4 to 5GY 6/4. Midvein color varies from 5GY 7/6 to 5GY 8/6.

Flower buds:

Size.—Large. Average length 16.0 mm. Average diameter 9.4 mm.

Hardiness.—Hardy with respect to California winters.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 3.1 mm. Average width 1.4 mm. Color varies from 2.5GY 7/6 to 2.5GY 8/6. Surface glabrous.

Density.—Medium dense.

Color.—Varies from 7.5RP 8/4 to 10RP 8/4.

Number of buds per spur.—Varies from 8 to 10, average 9. Varies with age of spur.

Flowers:

Blooming period.—Date of First Bloom Feb. 21, 2014. Date of Petal Fall Mar. 2, 2014, varies slightly with climatic conditions.

Size.—Medium to large. Average height 17.6 mm. Average diameter 29.3 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — medium to large. Average length 15.7 mm. Average width 13.5 mm. Shape — obovate. Arrangement — overlapping. Margin — sinuate. Petal apex — rounded. Petal base — rounded to somewhat truncated. Color varies from 5RP 9/2 to 7.5RP 9/2, fades with age of flower. Both upper and lower surfaces glabrous.

- Sepals*.—Normally 5, alternately arranged to petals. Size — large. Average length 8.4 mm. Average width 6.5 mm. Shape — triangular. Margin — entire. Apex — rounded to triangular. Both upper and lower surfaces glabrous. Color — upper surface varies from 5Y 7/2 to 5Y 8/2. Lower surface varies from 5R 3/8 to 2.5R 3/8.
- Stamens*.—Average number per flower 33. Average filament length 13.6 mm. On average the stamens are below the height of the petals. Filament color N 9.5/ (white). Anther color varies from 5Y 7/10 to 2.5Y 7/10.
- Pollen*.—Partially self-fertile, pollinator recommended. Color varies from 5Y 8/10 to 5Y 8/12.
- Pistil*.—Number — normally one. Surface — pubescent. Average length 16.7 mm. Position of stigma an average of 1.2 mm above anthers. Color varies from 2.5GY 8/8 to 10Y 7/8.
- Fragrance*.—Slight.
- Color*.—2.5RP 9/2.
- Pedicel*.—Average length 4.2 mm. Average width 1.1 mm. Color varies from 2.5GY 8/6 to 2.5GY 7/6. Surface glabrous.
- Number flowers per flower bud*.—Average 1, varies from 1 to 2.
- Fruit:**
- Maturity when described*.—Firm ripe and ready for consumption.
- Date of first picking*.—Jul. 12, 2014.
- Date of last picking*.—Jul. 22, 2014, varies slightly with climatic conditions.
- Size*.—Large. Average diameter axially 69.7 mm. Average transversely in suture plane 71.3 mm. Average across suture plane 61.0 mm. Average weight 173.2 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.
- Form*.—Elongated.
- Suture*.—Lipped.
- Ventral surface*.—Lipped.
- Apex*.—Slightly retuse.
- Base*.—Retuse.
- Stem cavity*.—Rounded to slightly elongated in suture plane. Average depth 5.1 mm. Average diameter 7.0 mm.
- Stem:**
- Size*.—Small. Average length 6.5 mm. Average diameter 2.6 mm.
- Color*.—Varies from 2.5GY 4/6 to 2.5GY 5/6.
- Flesh:**
- Ripens*.—Evenly.
- Texture*.—Firm, meaty.
- Fibers*.—Few, small, tender.
- Firmness*.—Firm, having good handling and shipping quality.
- Aroma*.—Moderate.
- Amygdalin*.—Undetected.
- Eating quality*.—Good.
- Flavor*.—Good.
- Juice*.—Moderate amount, enhances flavor.
- Acidity*.—Not available.
- Brix*.—Average Brix 16.9°, varies slightly with amount of fruit per tree and climatic conditions.
- Color*.—Varies from 5YR 7/14 to 7.5YR 7/10.
- Pit cavity*.—Average length 35.2 mm. Average width 30.2 mm. Average depth 8.9 mm. Color varies from 7.5YR 7/12 to 7.5YR 7/10.
- Skin:**
- Thickness*.—Medium.
- Surface*.—Smooth to slightly waffled.
- Pubescence*.—Moderate amount, very short in length.
- Tendency to crack*.—None.
- Color*.—Ground color varies from 7.5YR 7/12 to 7.5YR 7/14. Partially overspread with 5YR 6/12 to 5YR 6/10.
- Tenacity*.—Tenacious to flesh.
- Astringency*.—Undetected.
- Stone:**
- Type*.—Freestone, weak adherence.
- Size*.—Large. Average length 33.2 mm. Average width 28.2 mm. Average thickness 13.8 mm.
- Form*.—Ovoid.
- Base*.—Flat.
- Apex*.—Rounded.
- Surface*.—Very slightly pitted throughout. One shallow groove on each side of suture extending from base to apex.
- Sides*.—Unequal, one side extending further outward from suture plane.
- Ridges*.—Very small and short, extending from base toward apex.
- Tendency to split*.—None.
- Color*.—Varies from 7.5YR 3/4 to 7.5YR 4/6 when dry.
- Kernel:**
- Size*.—Large. Average length 21.5 mm. Average width 14.7 mm. Average depth 7.5 mm.
- Form*.—Ovate.
- Viability*.—Viable, complete embryo development.
- Skin color*.—Varies from 7.5YR 4/8 to 7.5YR 4/6.
- Use:** Dessert. Market — local and long distance.
- Keeping quality:** Good, held firm in cold storage for 3 weeks at 38° to 42° F. without shriveling, internal breakdown of flesh or appreciable loss of eating quality.
- Shipping quality:** Good, showed minimal skin scarring or flesh bruising during picking, packing and shipping trials.
- Plant/fruit disease resistance/susceptibility:** No specific testing for relative plant/fruit disease resistance/susceptibility has been designed. Under close observation during planting, growing and harvesting of fruit, under normal cultural and growing conditions near Modesto, Calif., no particular plant/fruit disease resistance or susceptibility has been observed. Any variety observed during indexing of plant characteristics with abnormal fungus, bacterial, virus or insect susceptibility is destroyed and eliminated from our breeding program. No atypical resistances/susceptibilities have been noted under normal cultural practices. The present new variety of interspecific tree, its flowers foliage and fruit herein described may vary in slight detail due to climate, soil conditions and cultural practices under which the variety may be grown. The present description is that of the variety grown under the ecological conditions prevailing near Modesto, Calif.
- It is claimed:**
1. A new and distinct variety of interspecific tree, substantially as illustrated and described.

