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Rockwood

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(54) **EUCALYPTUS TREE NAMED 'G5'**

(50) Latin Name: *Eucalyptus grandis*
Varietal Denomination: **G5**

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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 54 days.

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(51) **Int. Cl.**
A01H 5/00 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./216**

(58) **Field of Classification Search**
USPC Plt./216
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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(57) **ABSTRACT**

A new *Eucalyptus grandis* tree particularly distinguished by having a fast growth rate, average frost tolerance, and good coppicing properties, is disclosed.

7 Drawing Sheets

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ACKNOWLEDGEMENT OF FEDERAL RESEARCH SUPPORT

This invention was supported in part by funds from the U.S. Government pursuant to Grant No. FLA-FOR-04168 from USDA CSREES. The U.S. Government therefore has certain rights in the invention.

Latin name of the genus and species of the plant claimed: *Eucalyptus grandis*.

Variety denomination: 'G5'.

BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct variety of *Eucalyptus*, botanically known as *Eucalyptus grandis*, and hereinafter referred to by the variety name 'G5'. It is characterized by having a fast growth rate, average frost tolerance, and good coppicing properties when grown under normal forestry practices in southern Florida.

SUMMARY OF THE INVENTION

'G5' originated from over 1,600 seedlings of *Eucalyptus grandis*. 'G5' is the result of open-pollination in a fourth-generation seedling seed orchard at Palmdale, Fla. The female (seed) parent of 'G5' is the proprietary *Eucalyptus grandis* seedling selection with the identification number '3242', not patented, characterized by its fast growth and average frost tolerance. The male (pollen) parent of 'G5' is unknown. The maternal parent ('3242') originated from open-pollination. The female (seed) parent of '3242' is the proprietary *Eucalyptus grandis* seedling selection with the identification number '1065', not patented, characterized by its good growth and acceptable frost tolerance. The male (pollen) parent of '3242' is unknown. 'G5' was selected as a single tree from the progeny of the above stated open-pollination during March 2004.

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'G5' was first propagated in June of 2008 in Apopka, Fla. through cuttings and in vitro propagation. Asexually propagated trees of 'G5' have remained true to the original selected tree, and all characteristics of the tree have been transmitted and retained through three successive asexual vegetative generations.

Plant Breeder's Rights for this cultivar have not been applied for. 'G5' has not been made publicly available more than one year prior to the filing of this application.

'G5' differs from the female parent '3242' by having faster growth, better frost tolerance, and good coppicing properties.

Commercial varieties: E.nergy™ series *eucalyptus* cultivars 'G1', 'G2', 'G3', and 'G4' may be compared with *eucalyptus* cultivar 'G5' (see Table 1).

TABLE 1

Comparison of *Eucalyptus grandis* Cultivars 'G1', 'G2', 'G3', 'G4', and 'G5'

	Cultivar		
	G1 ^a	G2 ^a	G3 ^a
Tree:			
Size: Height (m)	12.6	~15	~16
Size: DBH (Diameter in cm at 4.5')			
Size: Spread (m)	~4	~3	~3
Vigor:	Average	Good	Good
Density:	Open	Open	Open
Form (overall shape of tree):	Good	Good	Good
Growth habit (current season):	Evergreen	Evergreen	Evergreen
Trunk and Branches:			
Trunk texture: top	Smooth	Smooth	Smoothen
Trunk texture: base	Rough	Smooth	Smooth

TABLE 1-continued

Comparison of <i>Eucalyptus grandis</i> Cultivars 'G1', 'G2', 'G3', 'G4', and 'G5'			
Trunk upper bark color:	Mottled grey-brown	Mottled grey, brown, green	Mottled grey, brown, green
Trunk lower bark color:	Mottled grey-brown	Mottled grey, brown, green	Mottled grey, brown, green
Branch texture:	Glabrous	Glabrous	Glabrous
Branch color:	Green	Green	Green, Reddish
Leaves:			
Size (lamina average): Length (cm)	10-20	10-20	10-16
Size (lamina average): Width (cm)	1.5-3.0	1.5-2.5	1.5-2.5
Type:	Simple, petiolate,	Simple, peti-	Simple, peti-
	alternate,	olate, alternate,	olate, alternate,
	persistent	persistent	persistent
Shape:	Narrow lanceolate, slightly sickle shaped	Narrow lanceolate, slightly sickle shaped	Narrow lanceolate, slightly sickle shaped
Apex:	Acuminate	Acuminate	Acuminate
Base:	Acute, can be slightly unequilateral	Acute, can be slightly unequilateral	Acute, can be slightly unequilateral
Margin:	Smooth	Smooth, Wavy	Smooth, Wavy
Surface texture:	Glabrous	Glabrous	Glabrous
Upper Surface texture:	Glabrous	Glabrous	Glabrous
Lower Surface texture:	Glabrous	Glabrous	Glabrous
Color: Upper	Dark green (RHS Green group 126C)	Green (RHS Green group 126C)	Green (RHS Green group 136B)
Color: Lower	Light green (RHS Green group 124B)	Green (RHS Green group 127B)	Green (RHS Green group 136C)
Petiole: Shape	Slightly flattened, groove at top	Slightly flattened, groove at top	Slightly flattened, groove at top
Petiole: Length (cm)	1.5-2.5	1.5-2.0	1.5-2.5
Petiole: Width (mm)	1-2	1-2	1-2
Petiole: Upper Color	Pale green (RHS Yellow-Green group 144D)	Pale green (RHS Yellow-Green group 144D)	Pale green (RHS Yellow-Green group 144D)
Petiole: Lower Color	Pale green (RHS Yellow-Green group 144D)	Pale green (RHS Yellow-Green group 144D)	Pale green (RHS Yellow-Green group 144D)
Petiole: Texture	Smooth	Smooth	Smooth
Flowers:			
Age at First Flowering: (years)	2+	2+	2+
Flower Fragrance:	Mild	Mild	Mild
Flower Type:	Clustered	Clustered	Clustered
Flower	7	7	7
Buds/Cluster:			
Stamen: Number	Many	Many	Many
Anther Filament: Length (cm)	<1	~1	~1
Anther: Color	White	White	White
Pistil: Number	1	1	1
Pistil: Length (cm)	<1	<1	<1
Bloom Season	mid-July-October	late July-mid-September	mid-August-late-October
Reproductive Organs:			
Fruit/seed (if produced):			
Capsules/Cluster	3-7	3-7	3-7
Capsule: Size (mm)	5-7 x 5-6	5-7 x 5-6	5-7 x 5-6
Capsule: Shape	Pyriiform	Pyriiform	Pyriiform

TABLE 1-continued

Comparison of <i>Eucalyptus grandis</i> Cultivars 'G1', 'G2', 'G3', 'G4', and 'G5'			
5	Capsule: Texture	Smooth Woody	Smooth Woody
	Capsule: Color	Green-brown	Green-brown
	Capsule Stalk: Length	Short	Short
10	Resistance/tolerance to Diseases/pests:		
	Blue Gum Chalcid	No	Yes
	Coppice:		Yes
15	Ability Stems/Stool	High 3-5	High 1-2
			High 3-5
		Cultivar	
		G4 ^a	G5 ^b
20	Tree:		
	Size: Height (m)	~16	~15.4
	Size: DBH (Diameter in cm at 4.5')		18.3
	Size: Spread (m)	~3	~3
25	Vigor:	Good	Good
	Density:	Open	Open
	Form (overall shape of tree):	Good	Straight Stem, Slightly Drooping Branches
	Growth habit (current season):	Evergreen	Evergreen
30	Trunk and Branches:		
	Trunk texture: top	Smoother	Smooth
	Trunk texture: base	Smooth	rough
	Trunk upper bark color:	Mottled grey, pink	Moderate yellow (RHS 161A) to Pale green (RHS 160C)
35	Trunk lower bark color:	Mottled grey, pink	Grayish reddish orange (RHS 176D to RHS 177D)
	Branch texture:	Glabrous	Glabrous
	Branch color:	Grey, Reddish	Moderate yellow (RHS 160A)
40	Leaves:		
	Size (lamina average): Length (cm)	10-15	13-13.5
	Size (lamina average): Width (cm)	2	4.2-5.0
45	Type:	Simple, petiolate, alternate, persistent	Simple, petiolate, alternate, persistent
	Shape:	Narrow lanceolate, slightly sickle shaped	Lanceolate, slightly sickle shaped, slightly offcenter midrib
	Apex:	Acuminate	Acuminate
50	Base:	Typically acute, can be slightly unequilateral, slightly offcenter midrib	Acute, can be slightly unequilateral
	Margin:	Smooth, Wavy	Smooth
	Surface texture: Upper	Glabrous	glabrous
	Surface texture: Lower	Glabrous	glabrous
55	Color: Upper	Green	Strong yellow green (RHS 143A)
	Color: Lower	Pale Green	Strong yellow green (RHS 143C)
	Petiole: Shape	Slightly flattened groove at top	Slightly flattened
60	Petiole: Length (cm)	1-2	1.5-2.5
	Petiole: Width (mm)	1-2	1-2
	Petiole: Upper Color	Light green-Pink	Deep orangish yellow (RHS 163A)
	Petiole: Lower Color	Light green-Pink	Deep orangish yellow (RHS 163C)
65			

TABLE 1-continued

Comparison of <i>Eucalyptus grandis</i> Cultivars 'G1', 'G2', 'G3', 'G4', and 'G5'		
Petiole: Texture	Smooth	Smooth
Flowers:		Not Observed
Age at First Flowering: (years)	2+	4+
Flower Fragrance:	Mild	Not Observed
Flower Type:	Clustered	Not Observed
Flower Buds/Cluster:	7	Not Observed
Stamen: Number	Many	Not Observed
Anther Filament: Length (cm)	~1	Not Observed
Anther: Color	White	Not Observed
Pistil: Number	1	Not Observed
Pistil: Length (cm)	<1	Not Observed
Bloom Season	mid-September-late-October	Not Observed
Reproductive Organs:		Not Observed
Fruit/seed (if produced):		Not Observed
Capsules/Cluster	3-7	Not Observed
Capsule: Size (mm)	5-7 x 5-8	Not Observed
Capsule: Shape	Pyriform	Not Observed
Capsule: Texture	Smooth Woody	Not Observed
Capsule: Color	Green-brown	Not Observed
Capsule Stalk: Length	Short	Not Observed
Resistance/tolerance to Diseases/pests:		
Blue Gum Chalcid Coppice:	Yes	Yes
Ability	High	Not Observed
Stems/Stool	3-5	Not Observed

^a13-year-old trees near Ft Meade, FL, and 2-year-old trees near Winter Garden, FL.
^b4.2-year-old trees near Winter Garden, FL.

BRIEF DESCRIPTION OF THE DRAWINGS

This new *eucalyptus* tree is illustrated by the accompanying photographs which show the tree's form and foliage. The colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs are of trees approximately 2 to 3.5-years old.

FIG. 1. Shows overall plant habit including foliage of a 3.5-year-old tree.

FIG. 2. Shows overall plant habit including foliage of 2-year-old trees.

FIG. 3. Shows a close-up of the bark of a 3.5-year-old tree.

FIG. 4. Shows a close-up of the bark of a 2-year-old tree.

FIG. 5. Shows upper branches of a 3.5-year-old tree.

FIG. 6. Shows mature leaves of a 2-year-old tree.

FIG. 7. Shows a close-up of mature leaves of a 2-year-old tree.

DETAILED BOTANICAL DESCRIPTION

The following detailed description sets forth the distinctive characteristics of 'G5'. The present botanical description is

that of 2-year-old trees growing near Winter Garden, Fla. The colors (except those in common terms) are described from R.H.S. Colour Chart published by The Royal Horticultural Society in London (second edition), in association with the Flower Council of Holland.

Phenotypic Description of *Eucalyptus grandis* var. 'G5'

Classification:

Botanical.—*Eucalyptus grandis* var. 'G5'.

Common name.—*Eucalyptus*.

Parentage:

Female parent.—'3242', not patented.

Male parent.—Unknown.

Tree:

Size.—Height — ~10 m, Spread — ~3 m.

Vigor.—Average.

Density.—Open.

Form (overall shape of tree).—Straight stem with slightly drooping branches.

Growth habit (current season).—Evergreen.

Trunk and branches:

Trunk diameter.—18.3 cm at 4.5 feet above the ground.

Trunk texture.—Smooth at top, rough at base.

25

Trunk upper bark color.—Moderate yellow (RHS 161A) to Pale green (RHS 160C).

Trunk lower bark color.—Grayish reddish orange (RHS 176D to RHS 177D).

Branch texture.—Glabrous.

30

Branch color.—Moderate yellow (RHS 160A).

Leaves:

Size (lamina average).—Length — 10-14 cm, Width 2.0-3.5 cm.

Type.—Simple, petiolate, alternate, persistent.

35

Shape.—Lanceolate, slightly sickle shaped, slightly off-center midrib.

Apex.—Acuminate.

Base.—Acute, can be slightly unequalateral.

Margin.—Smooth.

40

Surface texture.—Upper — glabrous, Lower — glabrous.

Color.—Upper — RHS 132B (Strong green), Lower — RHS 124B (Light green).

Petiole.—Shape: Slightly flattened. Length: 1.5-2.5 cm. Width: 1-2 mm. Color: RHS 11D (Pale yellow). Texture: Smooth.

45

Flowers: No flowering has been observed.

Reproductive organs: No organs observed.

Fruit/seed (if produced): No fruit/seed observed.

50

Resistance/tolerance to diseases/pests: No unusual susceptibilities noted.

What is claimed is:

1. A new and distinct variety of *Eucalyptus grandis* tree as shown and described herein.

* * * * *



FIG. 1



FIG. 2



FIG. 3



FIG. 4

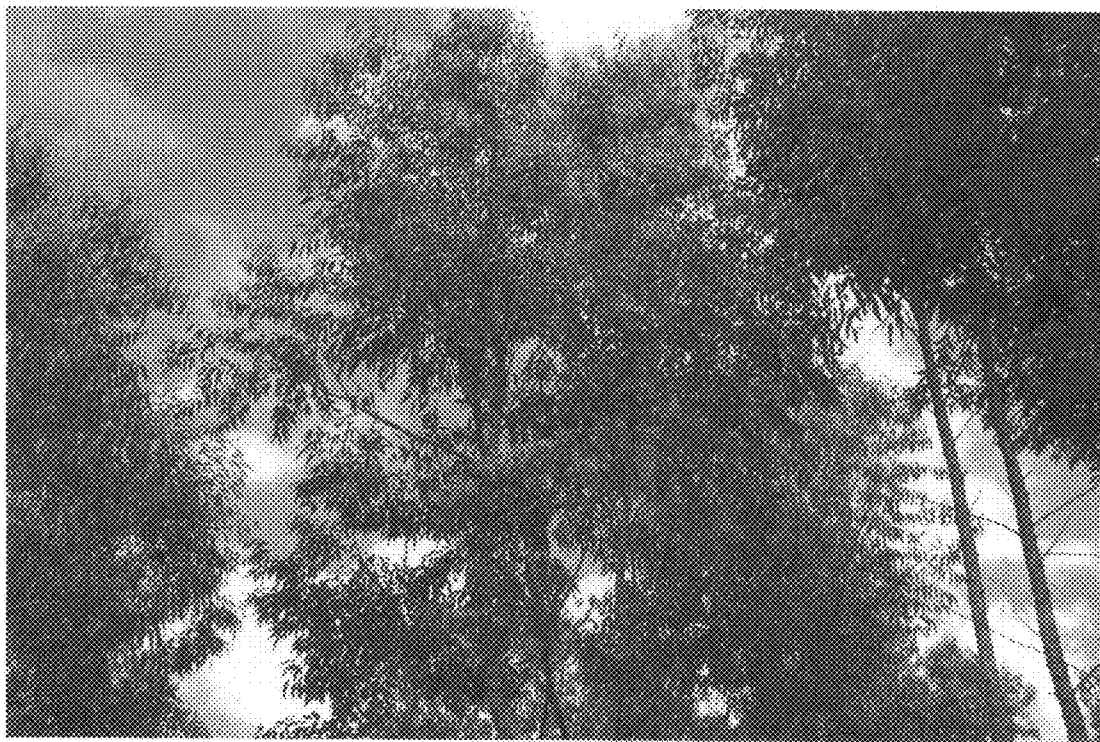


FIG. 5



FIG. 6

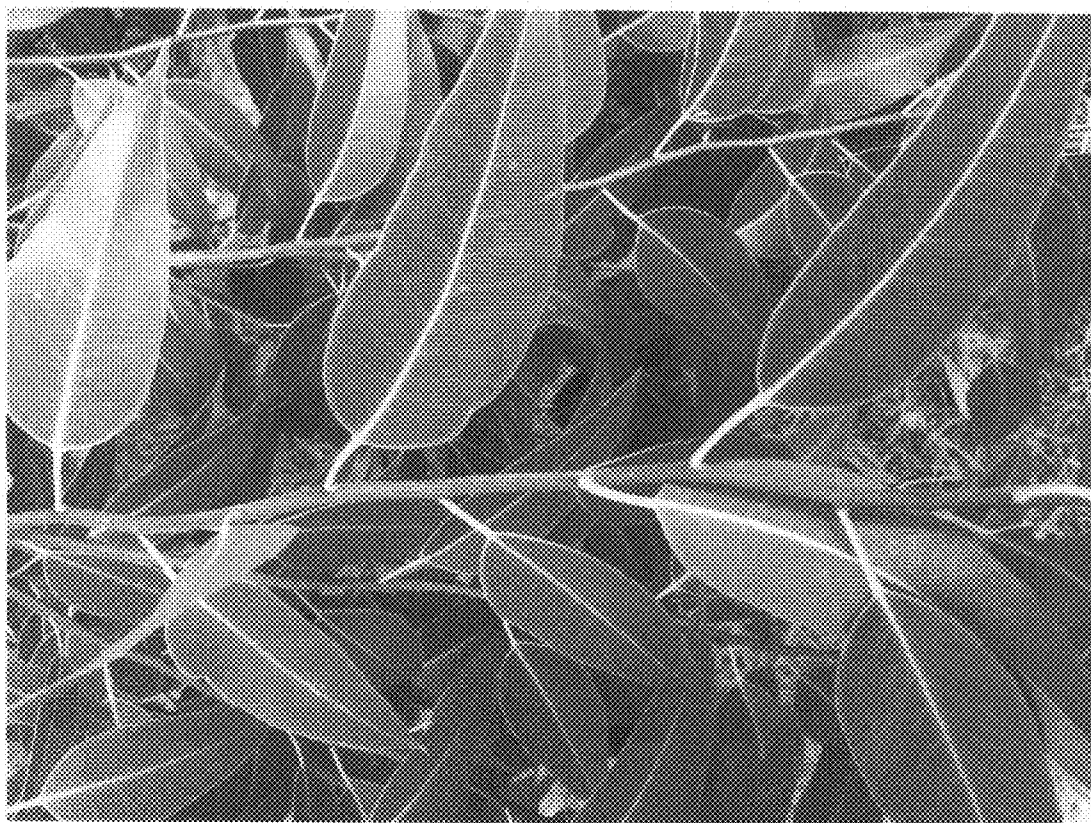


FIG. 7