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(12) United States Plant Patent
Watanabe et al.**(10) Patent No.: US PP13,727 P3****(45) Date of Patent: Apr. 15, 2003****(54) VERBENA PLANT NAMED 'SUNVIVABUPA'****(75) Inventors: Yuki Watanabe, Kashiwa (JP); Ryuichi Tachibana, Kawasaki (JP)****(73) Assignee: Suntory Limited, Osaka (JP)****(*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.: 09/987,938****(22) Filed: Nov. 16, 2001****(65) Prior Publication Data**

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Related U.S. Application Data**(63)** Continuation of application No. 09/375,445, filed on Aug. 17, 1999, now abandoned.**(51) Int. Cl.⁷ A01H 5/00****(52) U.S. Cl. Plt./308****(58) Field of Search Plt./308****(56) References Cited****U.S. PATENT DOCUMENTS**PP8,995 P 11/1994 Tachibana et al. Plt./308
PP9,014 P 12/1994 Tachibana et al. Plt./308
PP9,059 P 2/1995 Tachibana et al. Plt./308PP9,085 P 3/1995 Tachibana et al. Plt./308
PP9,121 P 4/1995 Tachibana et al. Plt./308
PP9,411 P 12/1995 Tachibana et al. Plt./308
PP10,311 P 3/1998 Tachibana et al. Plt./308
PP10,705 P 11/1998 Tachibana et al. Plt./308
PP10,743 P 1/1999 Nagase Plt./308
PP10,755 P 1/1999 Nagase Plt./308
PP10,801 P 2/1999 Nagase Plt./308
PP11,037 P 8/1999 Yomo et al. Plt./308**OTHER PUBLICATIONS**

GTITM UPOVROM Citation for 'Sunvivabupa' as per JP PBR 8241; Oct. 30, 1995.*

* cited by examiner

Primary Examiner—Kent Bell**(74) Attorney, Agent, or Firm**—Burns, Doane, Swecker & Mathis, L.L.P.**(57) ABSTRACT**

Disclosed herein is a Verbena plant which has an erect growth habit and good plant height. The plant abundantly forms flowers in a spike with a great profusion of blooms. The blooming period is late April to November and the flowering duration is long. The whole plant remains in bloom for a considerable period of time. The flower size is large and the petal color is vivid violet with a light eye. The plant is highly tolerant to heat and cold, and has a high resistance to pests and diseases, particularly powdery mildew, and high resistance to rain.

2 Drawing Sheets**1**

This application is a continuation of U.S. patent application Ser. No. 09/375,445, filed on Aug. 17, 1999.

BOTANICAL/COMMERCIAL CLASSIFICATION*Verbena hybrida*×*peruviana*/Verbena Plant**VARIETAL DENOMINATION**

cv. 'Sunvivabupa'

BACKGROUND OF THE VARIETY

Verbena is a very popular plant and is used for flower bedding and potting in the summer season. There are only a few varieties of Verbena plants which have abundant branching, many flowers in a spike, a long flowering duration and which have a high resistance to rain, heat, cold, and disease. Accordingly, this invention was aimed at obtaining a new variety having an erect growth habit, strong branching, many flowers in a spike, large diameter flowers, a high tolerance to heat and cold, and resistances to diseases and pests, and also having petals that are vivid violet.

The new variety of Verbena plant according to this invention originated from crossing a *Verbena hybrida* 'Ministar' (♀) (non-patented in the United States) and a wild type of verbena plant *Verbena peruviana* 'VBE' (♂) (non-patented in the United States) native to Brazil.First of all, 40 seedlings were obtained in the autumn of 1992, from crossing 'Ministar' as female parent and a wild type of verbena plant 'VBE' (*Verbena peruviana* f. *rosea*) as**2**

pollen parent in the May of 1992. From this crossing, 12 seedlings were selected in view of erect growth habit and petal color, propagated by the use of cuttings, and then grown as a trial by in flower beds and planters from the spring of 1993 to the autumn of 1994. The botanical characteristics of the 12 seedlings were examined and finally one seedling was selected, using parent varieties 'Ministar' and 'VBE', and similar varieties for comparison. As a result, it was concluded that this Verbena is distinguishable from any other variety whose existence is known to us, and is uniform and stable in its characteristics. This new variety of Verbena plant was named 'Sunvivabupa'.

In the following description, the color-coding is in accordance with The Horticultural Colour Chart of The Royal Horticultural Society, London, England (R.H.S. Colour Chart), and the Inter-Society Color Council-National Bureau of Standards Color Name (I.S.C.C.-N.B.S. Color Name). A color chart based on The Japan Color Standard for Horticultural Plant (J.H.S. Color Chart) is also added for reference.

'Ministar', used as female parent in obtaining this new variety 'Sunvivabupa', is commercially available. The main botanical characteristics of 'Ministar' are as follows:

Plant:

Growth habit.—Erect.*Plant extension*.—Narrow.*Plant height*.—Medium.

Stem:

Diameter.—Medium. (3–4 mm).
Anthocyanin pigmentation.—Absent.
Pubescence.—Present.
Prickle.—Absent.
Branching.—Medium.
Subterranean stem.—Absent.
Length of internode.—Medium. (2–3 cm).

Leaf:

Phyllotaxis.—Opposite.
Shape of blade.—Hastate.
Blade incision.—Present.
Depth of blade incision.—Shallow.
Shape of leaf margin.—Serrated.
Length.—Medium. (4–5 cm).
Width.—Medium. (2–3 cm).
Color.—Dark yellow green (R.H.S. Colour Chart No. 146A, J.H.S. Color Chart No.3508).
Pubescence.—Present.
Petiole.—Absent.

Flower:

Shape of cluster.—Obconical.
Spike length.—Medium. (3–4 cm).
Spike diameter.—Medium.
Facing direction.—Upward.
Outward curvature of petal.—Curved.
Diameter.—Large. (20 mm).
Height.—Medium.
Color of petal.—Deep purple. (R.H.S. Colour Chart No.86A, J.H.S. Color Chart No.8307).
Eye color.—Present.
Size of eye color.—Medium.
Variegation.—Absent.
Color presentation.—Substantially even.
Overlapping of petals.—Separate.
Incision of petal.—Present.
Number of petals.—Medium.
Calyx incision.—Present.
Calyx length.—Long. (10–15 mm).
Anthocyanin pigmentation of calyx limb.—Present.
Pistil shape.—Two lobes.
Stamen number.—Medium.
Anther color.—Yellowish green.
Peduncle diameter.—Thin.
Peduncle length.—Medium.
Number of flowers.—Many.
Flower fragrance.—Present.
Flowering time.—Medium.
Flowering duration.—Medium.

Physiological and ecological characteristics:

Tolerance to cold.—Low.
Tolerance to heat.—Low.
Resistance to diseases.—Low.
Resistance to pests.—Low.

The pollen parent used in obtaining this new variety 'Sunvivabupa' was a wild type of verbena *Verbena peruviana*. The main botanical characteristics of this pollen parent 'VBE' are as follows:

Plant:

Growth habit.—Erect.
Plant extension.—Medium.
Plant height.—High.

Stem:

Diameter.—Medium.
Anthocyanin pigmentation.—Present.
Pubescence.—Dense.
Prickle.—Absent.

Branching.—Abundant.
Subterranean stem.—Absent.
Length of internode.—Medium.

Leaf:

Phyllotaxis.—Opposite.
Shape of blade.—Hastate.
Blade incision.—Present.
Depth of blade incision.—Shallow.
Shape of leaf margin.—Crenated.
Length.—Medium.
Width.—Medium.
Color.—Dark yellow green (R.H.S. Colour Chart No. 146A, J.H.S. Color Chart No.3508).
Pubescence.—Dense.
Petiole.—Absent.

Flower:

Shape of cluster.—Turbinate.
Spike length.—Medium.
Spike diameter.—Medium.
Facing direction.—Upward.
Outward curvature of petal.—Curved.
Diameter.—Medium.
Height.—Medium.
Color of petal.—Brilliant purple (R.H.S. Colour Chart No. 86D, J.H.S. Color Chart No.8305).
Eye color.—Present.
Size of eye color.—Medium.
Variegation.—Absent.
Color presentation.—Substantially even.
Overlapping of petals.—Separate.
Incision of petal.—Present.
Number of petals.—Medium.
Calyx incision.—Present.
Calyx length.—Long.
Anthocyanin pigmentation of calyx limb.—Present.
Pistil shape.—Two lobes.
Stamen number.—Medium.
Anther color.—Yellowish green.
Peduncle diameter.—Thin.
Peduncle length.—Short.
Number of flowers.—Few.
Flower fragrance.—Absent.
Flowering time.—Very late.
Flowering duration.—Long.

Physiological and ecological characteristics:

Tolerance to cold.—High.
Tolerance to heat.—High.
Resistance to diseases.—High.
Resistance to pests.—High.

The new variety of Verbena plant 'Sunvivabupa' was asexually reproduced by the use of cuttings at the aforementioned Hakushu Nursery Center of SUNTORY Ltd., residing at 2913-1 Torihara, Hakushu-cho, Kitakoma-gun, Yamanashi-ken, Japan, and the homogeneity and stability thereof were confirmed. The instant plant retains its distinctive characteristics and reproduces true to type in successive generations.

SUMMARY OF THE VARIETY

This new variety of Verbena plant has an erect growth habit with long stems and a good plant height. The plant has many branches and forms flowers abundantly in a spike with a great profusion of blooms. The blooming period is late April to November and the flowering duration is long. The whole plant remains in bloom for a considerable period of time. The flower size is large and the petal color is vivid violet with a light eye. The plant is highly tolerant to heat and cold, and has a high resistance to pests and diseases,

particularly powdery mildew, as well as a high resistance to rain.

The plants described herein were observed during August while growing in pots. Such plants were being grown at Shimamoto-cho, Mishima-gun, Oosaka-fu, Japan. Approximately ten weeks are required to produce a finished flowering plant following the rooting of cuttings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a typical plant of the new verbena variety while growing in a pot.

FIG. 2 illustrates a close view of typical foliage and a blossom of the new Verbena variety.

DESCRIPTION OF THE VARIETY

The botanical characteristics of the new and distinct variety of verbena plant, 'Sunvivabupa' are as follows:

Plant:

Growth habit.—Erect.

Plant width.—Approximately 35 cm.

Plant height.—High. (30–40 cm).

Stem:

Diameter.—Medium. (2–3 mm).

Length.—Approximately 30 cm.

Pubescence.—Dense.

Branching.—Abundant.

Subterranean stem.—Absent.

Length of internode.—Medium. (3–4 cm).

Leaf:

Phyllotaxis.—Opposite.

Shape of blade.—Hastate.

Blade incision.—Pinatilobed.

Depth of blade incision.—Shallow.

Shape of leaf margin.—Dentate to crenate.

Length.—Medium. (4–5 cm).

Width.—Broad. (3–4 cm).

Base.—Wedge-shaped.

Apex.—Acute.

Venation pattern.—Pinnate.

Color.—Dark yellow green, R.H.S. Colour Chart No.146A, J.H.S. Color Chart No.3509) on the upper surface, and R.H.S. Colour Chart No. 146C on the under surface.

Pubescence.—Moderate in quantity and typical of verbena.

Petiole.—Present.

Petiole diameter.—Approximately 2.5 mm.

Petiole length.—Approximately 3 mm.

Petiole color.—R.H.S. Colour Chart No. 144A.

Buds:

Shape.—Club-shaped.

Length.—Approximately 1 cm.

Diameter.—Approximately 2 mm.

Color.—R.H.S. Colour Chart No. 144A.

Flower:

Shape of cluster.—Turbinate.

Spike length.—Medium. (3–4 cm).

Spike diameter.—Medium. (5–6 cm).

Facing direction.—Upward.

Outward curvature of petal.—Curved.

Diameter.—Large. (15–20 mm).

Floral tube.—Approximately 15 mm in length.

Color of petal.—Vivid violet, (R.H.S. Colour Chart No.89C, J.H.S. Color Chart No.8311) on the upper surface, and R.H.S. Colour Chart No. 83D on the under surface. The petal coloration tends to fade some with maturation as illustrated in FIG. 2.

Eye color.—Near R.H.S. Colour Chart No. 76D as illustrated in FIG. 2.

Variegation.—Absent.

Color presentation.—Substantially even.

Petal.—There is one petal having five lobes per flower.

Thus the tubular-shaped flower branches into the five lobes. The apex of each lobe is emarginated, and the texture of the lobes is matt.

Calyx.—The tubular-shaped calyx divides into five sepals. The sepal apex is acuminate and the sepal surfaces and margins are smooth. The upper and lower surfaces of the sepals are R.H.S. Colour Chart No. 144A in coloration. The margin commonly is 143C in coloration and may bear a line having a coloration of R.H.S. Colour Chart No. 61A. The calyx length commonly is approximately 12 mm.

Anthocyanin pigmentation of calyx limb.—Present.

Pistil number.—One.

Pistil length.—Approximately 1.5 cm.

Stigma.—Possesses two lobes.

Style color.—R.H.S. Colour Chart No. 144C.

Stamen number.—Commonly four.

Anther color.—Yellowish green.

Peduncle diameter.—Approximately 1.5 mm.

Peduncle length.—Approximately 4.5 cm.

Peduncle color.—R.H.S. Colour Chart No. 144A.

Number of flowers.—Commonly approximately 17 per spike.

Flower fragrance.—Absent.

Flowering time.—Late.

Flowering duration.—Long, with an individual bloom commonly lasting approximately 7 to 9 days.

Pollen.—Formed in a sparse quantity and R.H.S. Colour Chart No. 4B in coloration.

Fertility.—The plant has been sterile during observations to date and has not formed fruit and seeds.

Physiological and ecological characteristics:

Tolerance to cold.—High with the plant having withstood a temperature of -5° C.

Tolerance to heat.—High.

Resistance to diseases.—High particularly with respect to Powdery Mildew.

Resistance to pests.—High particularly with respect to aphids.

This new variety of Verbena plant is most suitable for flower bedding and potting, particularly in planters, and is further excellent for use as a ground cover.

What is claimed is:

1. A new and distinct variety of Verbena plant, substantially as herein illustrated and described, characterized particularly as to novelty by (A) an erect growth habit, (B) a plentiful amount of flowers in a spike with a great profusion of blooms, (C) a long flowering duration, (D) a large flower size and a vivid violet petal color with a light eye, and (E) high resistance to rain, heat, drought, cold, diseases and pests.

* * * * *

Fig. 1



Fig. 2

