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Hooijman

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(54) ***GYPSOPHILA* PLANT NAMED 'ESM GRIAL'**

(50) Latin Name: ***Gypsophila hybrida***
Varietal Denomination: **Esm Grial**

(75) Inventor: **Aloysius A. J. Hooijman**, Aalsmeer (NL)

(73) Assignee: **Esmeralda Breeding B.V.**, Aalsmeer (NL)

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See application file for complete search history.

Primary Examiner—Annette H Para
(74) *Attorney, Agent, or Firm*—C. A. Whealy

(57) **ABSTRACT**

A new and distinct cultivar of *Gypsophila* plant named 'Esm Grial', characterized by its erect and strong flowering stems; early, uniform and freely flowering habit; small luminous white-colored flowers; and good postproduction longevity.

2 Drawing Sheets

Botanical designaton: *Gypsophila hybrida.*
Cultivar denomination: 'ESM GRIAL'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of *Gypsophila* plant, botanically known as *Gypsophila hybrida,* grown commercially as a cut flower, and hereinafter referred to by the name 'Esm Grial'.

The new *Gypsophila* is a product of a planned breeding program conducted by the Inventor in El Quinche, Pichincha, Ecuador. The objective of the breeding program is to create new freely flowering *Gypsophila* cultivars with many petals per flower and straight stems.

The new *Gypsophila* originated from a cross-pollination made by the Inventor in El Quinche, Pichincha, Ecuador in August, 2002 of a proprietary selection of *Gypsophila hybrida* identified as Line 33, not patented, as the female, or seed, parent with a proprietary selection of *Gypsophila hybrida* identified as Line 19, not patented, as the male, or pollen, parent. The cultivar Esm Grial was discovered and selected by the Inventor as a flowering plant from within the progeny of the stated cross-pollination in a controlled environment in El Quinche, Pichincha, Ecuador.

Asexual reproduction of the new *Gypsophila* by cuttings in a controlled environment in El Quinche, Pichincha, Ecuador since August, 2003, has shown that the unique features of this new *Gypsophila* are stable and reproduced true to type in successive generations.

SUMMARY OF THE INVENTION

The cultivar Esm Grial has not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as temperature, daylength and light intensity, without, however, any variance in genotype.

The following traits have been repeatedly observed and are determined to be the unique characteristics of 'Esm Grial'. These characteristics in combination distinguish 'Esm Grial' as a new and distinct cultivar of *Gypsophila:*

1. Erect and strong flowering stems.
2. Early, uniform and freely flowering habit.

3. Small luminous white-colored flowers.
4. Good postproduction longevity.

In side-by-side comparisons conducted in El Quinche, Pichincha, Ecuador, plants of the new *Gypsophila* differed from plants of the female parent selection in the following characteristics:

1. Plants of the new *Gypsophila* were taller than plants of the female parent selection.
2. Plants of the new *Gypsophila* were not as freely flowering as plants of the female parent selection.

In side-by-side comparisons conducted in El Quinche, Pichincha, Ecuador, plants of the new *Gypsophila* differed from plants of the male parent selection in the following characteristics:

1. Plants of the new *Gypsophila* were more upright than plants of the male parent selection.
2. Plants of the new *Gypsophila* were more freely flowering than plants of the male parent selection.

Plants of the new *Gypsophila* can also be compared to plants of the *Gypsophila* cultivar Dangypmini, disclosed in U.S. Plant Pat. No. 10,964. In side-by-side comparisons conducted in El Quinche, Pichincha, Ecuador, plants of the new *Gypsophila* differed from plants of the cultivar Dangypmini in the following characteristics:

1. Plants of the new *Gypsophila* were taller and more narrow than plants of the cultivar Dangypmini.
2. Plants of the new *Gypsophila* had longer internodes than plants of the cultivar Dangypmini.
3. Plants of the new *Gypsophila* were more freely branching than plants of the cultivar Dangypmini.
4. Flowers of plants of the new *Gypsophila* had fewer petals than flowers of plants of the cultivar Dangypmini.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new *Gypsophila.* These photographs show the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description which accurately describe the colors of the new *Gypsophila.*

The photograph on the first sheet comprises a side perspective view of a typical flowering stem of 'Esm Grial'.

The photograph on the second sheet is a close-up view of typical flowers of 'Esm Grial'.

DETAILED BOTANICAL DESCRIPTION

In the following description, color references are made to The Royal Horticultural Society Colour Chart, 2001 Edition, except where general terms of ordinary dictionary significance are used. The following observations and measurements describe plants grown in El Quinche, Pichincha, Ecuador during the winter in ground beds in an outdoor nursery and under conditions and practices which approximate those generally used in commercial cut *Gypsophila* production. During the production of the plants, day temperatures ranged from 12° C. to 30° C. and night temperatures ranged from 7° C. to 11° C. Plants were pinched one time about five weeks after planting and were grown under long day/short day conditions. Measurements and numerical values represent averages for typical 17-week old flowering plants.

Botanical classification: *Gypsophila hybrida* cultivar Esm Grial.

Commercial classification: Cut flower *Gypsophila*.

Parentage:

Female, or seed, parent.—Proprietary selection of *Gypsophila hybrida* identified as Line 33, not patented.

Male, or pollen, parent.—Proprietary selection of *Gypsophila hybrida* identified as Line 19, not patented.

Propagation:

Type.—By cuttings.

Time to initiate roots.—About 16 to 21 days at 17° C. to 25° C.

Time to produce a rooted cutting.—About five to six weeks at 17° C. to 25° C.

Root description.—Medium in thickness; 161A in color.

Rooting habit.—Freely branching.

Plant description:

Appearance.—Perennial cut flower. Erect and strong flowering stems; inverted triangle form. Freely flowering; small luminous white-colored flowers arranged in symmetrical and moderately dense compound cymes. Vigorous growth habit.

Branching habit.—After pinching, about 28 flowering stems develop per year.

Plant height.—About 125 cm.

Plant diameter or spread.—About 54 cm.

Flowering stems.—Length: About 120 cm. Diameter: About 5 mm. Internode length: About 5.7 cm. Strength: Strong. Texture: Glabrescent. Color: 144A.

Foliage description:

Arrangement.—Opposite, decussate, simple; sessile.

Length.—About 5.5 cm.

Width.—About 1.6 cm.

Shape.—Lanceolate.

Apex.—Acute.

Base.—Cuneate.

Margin.—Entire.

Texture, upper and lower surfaces.—Smooth, glabrous; waxy.

Venation pattern.—Parallel.

Color.—Developing foliage, upper surface: 139A. Developing foliage, lower surface: Between 139A and 147A. Fully expended foliage, upper surface: 147A; venation, 147A. Fully expanded foliage, lower surface: 137A; venation, 146B.

Flower description:

Flower arrangement and habit.—Symmetrical compound cymes with numerous small luminous white-colored flowers, flowers rotate. Very freely flowering, about 3,200 flowers per inflorescence. Flowers face mostly upright.

Flowering response.—In Ecuador, plants flower year round. Plants begin flowering about 13 weeks after planting.

Post-production longevity.—As a cut flower, flowers last for about eleven days. Flowers persistent.

Fragrance.—Slightly fragrant; pleasant.

Inflorescence height.—About 120 cm.

Inflorescence diameter.—About 52 cm.

Flower diameter.—About 6.3 mm.

Flower depth (height).—About 5 mm.

Flower buds.—Length: About 2 mm. Diameter: About 2 mm. Shape: Nearly globose. Color: 147B; towards the apex, N189A.

Petals/petaloids.—Quantity per flower: About 20 arranged in clusters. Length: About 4 mm. Width: About 2 mm. Shape: Oval to spatulate. Apex: Truncate, emarginate or obtuse. Margin: Entire. Texture, upper and lower surfaces: Smooth, glabrous; waxy. Color: When opening and fully opening, upper surface: Close to N155D; towards the base, close to 144A; color becoming closer to 155A with development. When opening and fully opening, lower surface: Close to N155D.

Sepals.—Quantity per flower: About five fused to form a cup-shapedcalyx. Length: About 2.2 mm. Width: About 1.1 mm. Shape: Roughly linear. Apex: Acute. Margin: Entire. Texture, upper and lower surfaces: Smooth, glabrous. Color: When developing, upper and lower surfaces: 147A. Fully developed, upper surface: 137A. Fully developed, lower surface: 147A.

Peduncles.—Length: About 5 cm. Diameter: About 5 mm. Strength: Strong. Angle: About 37° from vertical. Texture: Smooth, glabrous. Color: 144A.

Pedicels.—Length: About 4 mm. Diameter: About 0.4 mm. Strength: Strong. Angle: About 41° from vertical. Texture: Smooth, glabrous. Color: 146A.

Reproductive organs.—Stamens: Quantity per flower: Eleven. Anther shape: Reniform to globose. Anther length: Less than 1 mm. Anther color: 163A. Pollen amount: Moderate. Pollen color: Close to 163A. Pistils: Quantity per flower: One. Pistil length: About 4.8 mm. Style length: About 3.4 mm. Style color: Close to N155D. Stigma shape: Curved apiculate. Stigma color: Close to N155D. Ovary color: 144B. Seed/fruit: Seed and fruit production has not been observed.

Disease/pest resistance: Plants of the new *Gypsophila* have not been shown to be resistant to pathogens and pests common to *Gypsophila*.

Temperature tolerance: Plants of the new *Gypsophila* have been observed to tolerate temperatures ranging from about 7° C. to about 30° C.

It is claimed:

1. A new and distinct *Gypsophila* plant named 'Esm Grial' as illustrated and described.

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