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Werner et al.

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(54) **BUDDLEJA PLANT NAMED ‘LILAC CHIP’**

(50) Latin Name: *Buddleja hybrid*
Varietal Denomination: **Lilac Chip**

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

(52) **U.S. Cl.**
USPC **Plt./242**

(58) **Field of Classification Search**
USPC **Plt./242**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP19,950 P3 4/2009 Werner et al.
PP19,991 P3 5/2009 Werner et al.
PP22,143 P2 9/2011 Podaras
2013/0055478 P1 2/2013 Werner et al.

OTHER PUBLICATIONS

United States Patent Office Action for U.S. Appl. No. 13/373,181
dated Mar. 20, 2013 (6 pages).

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(57) **ABSTRACT**

Buddleja ‘Lilac Chip’ is a new and distinct variety of butterfly
bush. ‘Lilac Chip’ is distinguished from other related known
cultivars based on the unique combination of traits including
at least one of very dwarf growth, spreading habit, purple pink
flowers, male sterility, and very low female fertility.

3 Drawing Sheets

1

Latin name of the genus and species: Genus: *Buddleja*.
Species: hybrid.

Variety denomination: The inventive cultivar of *Buddleja*
disclosed herein has been given the variety denomination
‘Lilac Chip’.

This application claims the benefit of Canadian Applica-
tion Serial No. 11-7363 filed Aug. 29, 2011.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct variety
of *Buddleja* (butterfly bush) grown as an ornamental shrub for
home and commercial landscapes. Butterfly bush is typically
grown for its attractive, fragrant flowers that are borne
throughout the growing season.

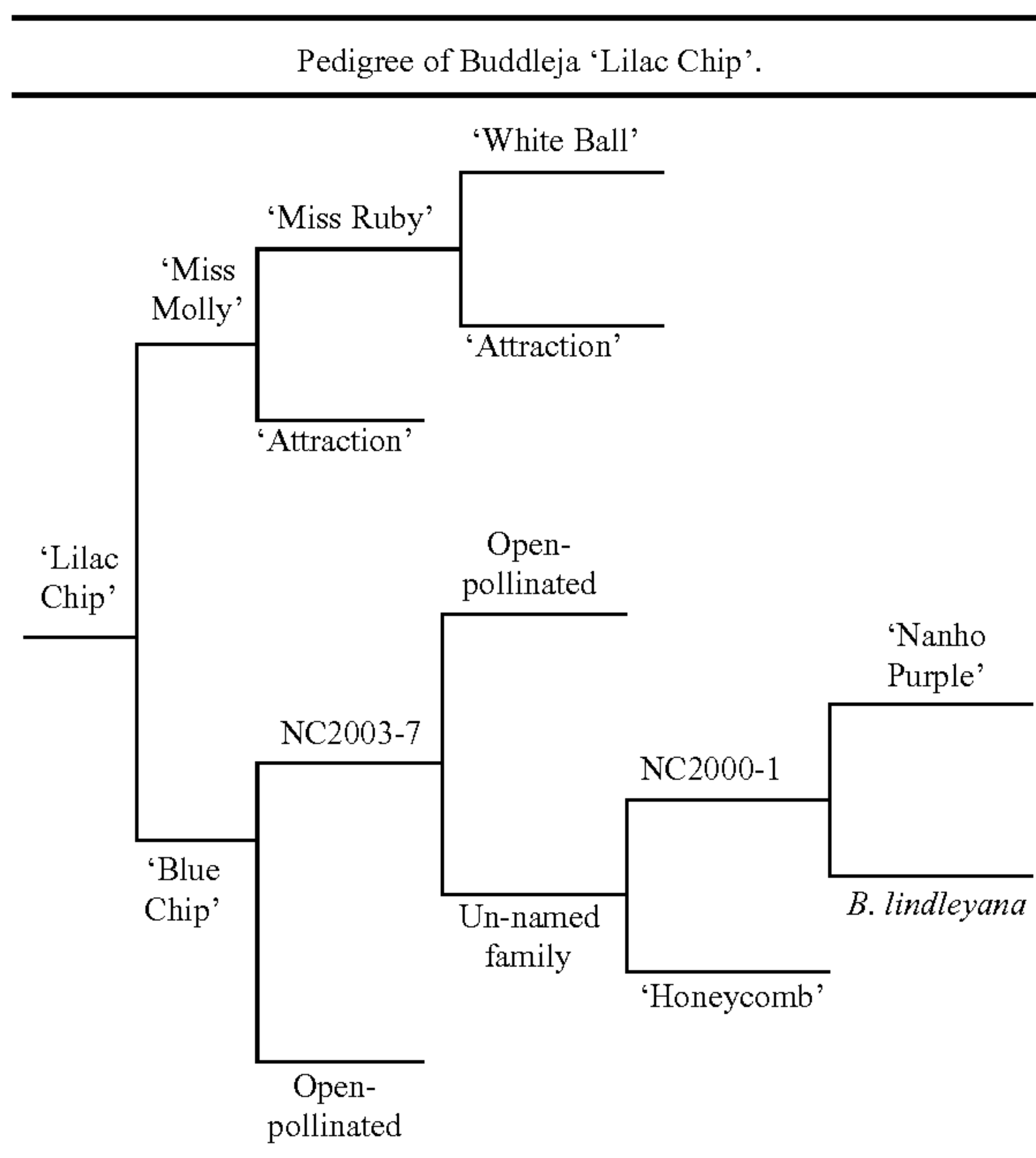
The new and distinct variety of butterfly bush resulted from
a formal breeding program established by the inventors in
Raleigh, N.C., United States. One of the objectives of the
breeding program was to develop a very dwarf, spreading
Buddleja with purple-pink (lilac color) flowers. ‘Lilac Chip’
was selected at a research station in Jackson Springs, N.C. in
2006 from a population of 343 seedling progeny derived from
a hand pollinated cross of ‘Blue Chip’ (female parent; NCSU
variety tested as NC2004-9, U.S. Plant Pat. No. 19,991×‘Miss
Molly’ (male parent; NCSU variety tested as NC2005-8, U.S.
Plant Pat. No. 23,425) made in 2005 in Raleigh, N.C. ‘Blue
Chip’ is a complex hybrid containing 3 different species and
one botanical variety of *Buddleja* (*B. davidii*, *B. davidii* var.

2

nanhoensis, *B. lindleyana*, and *B. globosa*). ‘Miss Molly’, the
other parent of ‘Lilac Chip’, is a hybrid of ‘Miss Ruby’ (U.S.
Plant Pat. No. 19,950)×‘Attraction’. ‘Miss Ruby’ was derived
from hybridization of ‘White Ball’×‘Attraction’. ‘Attraction’
was derived as an open-pollinated seedling of ‘Honeycomb’,
which is a hybrid of *B. globosa*×*B. davidii*. ‘Nanho Purple’ is
a variety derived from *Buddleja davidii* var. *nanhoensis*.
‘White Ball’ is a complex hybrid, presumably containing *B.*
davidii and *B. fallowiana*. The pedigree of ‘Lilac Chip’ is
shown in Table 1. Of all the parents used in the development
of ‘Lilac Chip’, the varieties ‘Blue Chip’, ‘Miss Molly’,
‘Miss Ruby’, ‘Attraction’, ‘White Ball’, ‘Nanho Purple’, and
‘Honeycomb’, and the species *Buddleja lindleyana* are avail-
able in commerce.

The seeds resulting from the 2005 controlled hybridization
process were harvested in fall of 2005 and germinated in a
greenhouse in Raleigh, N.C. in the winter of 2006. The result-
ing 351 seedlings were planted in field trials in spring of 2006
at a research station in Jackson Springs, N.C. These plants
flowered in summer 2006, and one plant, designated
NC2006-6, was selected for its very dwarf plant size, spread-
ing habit, attractive lilac-colored flowers, and lack of seed set
(very low female fertility). This original plant demonstrated
characteristics identical to those subsequently expressed on
other plants when propagated from stem cuttings. This single
plant is the subject of the present invention *Buddleja* ‘Lilac
Chip’.

TABLE 1



The distinguishing traits of 'Lilac Chip' are very dwarf plant size, spreading growth habit, gray-green leaf color, attractive lilac-colored flowers, male sterility, and very low female fertility. Ideal cultural conditions for 'Lilac Chip' include well-drained soil, full sun, and moderate moisture. 'Lilac Chip' exhibits no serious pest or disease problems known to the inventors, except for occasional spider mite infestation during periods of hot, dry weather.

The closest comparison known to the inventors are the varieties 'Blue Chip' (U.S. Plant Pat. No. 19,991), and 'White Ball' (non-patented). Plants and flowers of this new variety differ from 'Blue Chip'. In direct comparisons of 'Lilac Chip' and 'Blue Chip' in the inventor's experimental trials, plants of 'Lilac Chip' are more compact, and have purplish-pink flowers, compared to the blue flowers of 'Blue Chip'. In replicated trials of 10 plants of both varieties, two-year-old unpruned plants of 'Lilac Chip' attained a height and spread of 40.5 and 74.6 cm, respectively (height/width ratio=0.54), after two years of growth. Plants of 'Blue Chip' attained a height and spread of 79.8 cm and 126.3 cm (height/width ratio=0.64), respectively. 'Lilac Chip' is distinctly different from 'White Ball'. In direct comparisons of 'Lilac Chip' and 'White Ball' in the inventor's experimental trials, plants of 'Lilac Chip' are consistently more spreading as compared to the globose architecture of 'White Ball'. 'Lilac Chip' is shorter in height and has purplish/pink flowers as compared to the white flowers of 'White Ball'.

The inventors conducted the first asexual propagation of 'Lilac Chip' in fall 2006 in Raleigh, N.C., and 'Lilac Chip' has subsequently been propagated in the same location in years 2008, and 2009. In all cases, the original plant selection was propagated asexually by softwood to semi-hardwood stem cuttings. Such cuttings root readily under mist in about 14 to 21 days, and resume normal growth. Ten plants derived from stem cuttings of the variety were established in experimental test plots in Jackson Springs, N.C. in 2007. During all asexual propagation, the characteristics of the original plant have been maintained. Plants derived from stem cuttings exhibit

characteristics identical to those of the original plant, and no aberrant phenotypes have appeared.

Test plantings and performance evaluation over six years at a research station in Jackson Springs, N.C. demonstrate this variety to be relatively consistent in its characteristics even under the different growing conditions associated with yearly climatic variation.

Plants of the new variety are very dwarf after establishment in the field, being less vigorous and more dwarf than most cultivars of butterfly bush in commerce. Young plants have averaged about 20.2 cm of height growth per year. Plants are spreading in growth habit. Flowering occurs in the first year of growth on newly formed wood. The inflorescence is a panicle, and shows a purplish-pink flower color. Flowering usually begins in early June in Jackson Springs, N.C., and continues throughout the growing season until the first freeze event in October or November. An individual inflorescence flowers for about 7-10 days, depending on temperature, but new flowers are made during the entire growing season. Female fertility of flowers is very low, and the new cultivar sets limited seed in a field or landscape setting, an asset in landscape plantings.

'Lilac Chip' is distinguished from other related known cultivars based on the unique combination of traits including very dwarf growth, spreading habit, purple pink flowers, male sterility, and very low female fertility.

The new variety has been named the 'LILAC CHIP' cultivar. First public offer for sale of 'Lilac Chip' was made in Grand Haven, Mich., U.S.A. on Aug. 1, 2011.

SUMMARY OF THE INVENTION

'Lilac Chip' is a new and distinct variety of butterfly bush that has the following unique combination of desirable features outstanding in a new variety. In combination these traits set 'Lilac Chip' apart from all other existing varieties of butterfly bush known to the inventors.

1. 'LILAC CHIP' has low vigor resulting in very dwarf growth.
2. 'LILAC CHIP' demonstrates a dense, spreading growth habit.
3. 'LILAC CHIP' exhibits male sterility and very low female fertility and reduced seed set, resulting in less opportunity for seedlings to originate in the landscape setting.
4. 'LILAC CHIP' has purplish-pink flower color.

BRIEF DESCRIPTION OF THE DRAWINGS

The photographs in the drawings were made using digital photography techniques, and show the colors as true as reasonably possible by digital photography. 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 *Buddleja* variety 'Lilac Chip'. Photographs were taken from two to four-year-old plants growing in Jackson Springs, N.C.

FIG. 1 shows a typical plant of 'LILAC CHIP', showing the dwarf growth, spreading growth habit, dense foliage, and purplish-pink flowers.

FIG. 2 shows the entire inflorescence of 'LILAC CHIP'.

FIG. 3 shows the typical coloration and form of leaves of 'LILAC CHIP'. This figure shows the upper (top) and lower (bottom) leaf surface.

DETAILED BOTANICAL DESCRIPTION OF THE VARIETY

The following is a detailed description of the botanical and ornamental characteristics of the subject butterfly bush 'LILAC CHIP'. Color data are based on *The Royal Horticultural Society Colour Chart*, The Royal Horticultural Society, London, 2007 edition. Where dimensions, sizes, colors and other characteristics are given, it is to be understood that such characteristics are approximations of averages set forth as accurately as practicable.

The descriptions reported herein are from four-year-old specimens grown in field research trials in Jackson Springs, N.C.

Genus: *Buddleja*.

Species: Complex hybrid, including *davidii*, *globosa*, and *lindleyana*.

Denomination: 'LILAC CHIP'.

Commercial classification: Shrub, deciduous.

Common name: Butterfly bush.

Type: Ornamental.

Uses: Patio container plant, herbaceous perennial border, or shrub border for residential and commercial landscapes.

Cultural requirements: Full sun exposure, well-drained soil, and moderate moisture.

Parentage: 'LILAC CHIP' is a sixth-generation hybrid that resulted from the most recent cross pollination of 'Blue Chip' x 'Miss Molly'. See Table 1 in "Background" for entire pedigree.

Plant description:

Blooming period.—June through October.

Blooming habit.—Paniculate.

Vigor.—Low vigor.

Plant habit.—Dwarf, spreading habit.

Height and spread.—0.40 m (height) and 0.75 m (width) on two-year-old unpruned plants.

Hardiness.—To date, hardy to minus 8 degrees Centigrade. Not tested below this temperature. Anticipated adapted from USDA hardiness zones 5-9.

Propagation.—Softwood to semi-hardwood cuttings under intermittent mist. Roots typically form in 2-3 weeks.

Root system.—Fibrous, spreading.

Seasonal interest.—Purplish-pink flowers in spring, summer, and fall on a very dwarf shrub with spreading growth habit.

Disease and pest susceptibility and resistance.—No particular susceptibility or resistance, except occasionally susceptible to spider mites under very hot and dry conditions.

Special growing requirements.—Moderate yearly pruning in late winter or early spring prior to bud break is recommended to encourage more profuse flowering.

Stems:

Shape.—Stem cross section is quadrangular.

Length.—Average 21.0 cm. in one year of growth.

Color.—Yellow-green (RHS 146C) on recently formed shoots.

Diameter.—3.0 mm at base of new growth.

Stem surface.—Pubescent.

Pubescence.—Sparse.

Internode length.—3.1 cm in the middle of new growth.

Foliage:

Type.—Deciduous.

Leaf arrangement.—Opposite, decussate.

Leaf division.—Simple.

Leaf shape.—Elliptic.

Leaf base.—Attenuate.

Leaf apex.—Acuminate.

Leaf venation.—Pinnate.

Leaf surface (abaxial).—Glaucous.

Leaf margin.—Serrulate.

Leaf attachment.—Petiolate.

Petiole dimensions.—5.8 mm length. 1.0 mm width.

Petiole shape.—Sulcate and pubescent.

Petiole color.—Yellow-green (RHS 146C).

Leaf color.—Adaxial side=green (RHS 146A). Abaxial side=grayed-green (RHS 191C).

Leaf length.—Average length (5 leaves)=6.8 cm.

Leaf width.—Average width (5 leaves)=2.2 cm.

Foliar fragrance.—None detectable.

Flowers:

Inflorescence.—Loose panicle.

Flower shape.—Salverform.

Petals.—4 in number.

Fused or unfused.—Fused at base.

Petal margin.—Entire.

Petal apex.—Rounded lobes, serrulate.

Petal base.—Truncate.

Petal surfaces.—Glaucous.

Petal shape.—Rotund.

Petal dimensions.—7.6 mm total length. 7.2 mm width at apex. 1.0 mm at base.

Petal color.—Adaxial and abaxial surface (open flower)=Violet (RHS 84C). Closed flower prior to opening=Purple (N 78C).

Corolla tube color.—Outside of corolla=Violet (RHS 84B).

Corolla throat color.—Inside of corolla=Orange (RHS N25A).

Corolla tube surfaces (inner and outer surfaces).—Pubescent.

Corolla tube shape.—Tubular.

Color of peduncle.—Green (RHS 142B).

Peduncle surface.—Glaucous.

Peduncle length.—6.2 cm.

Peduncle shape.—Flattened oval in cross section.

Pedicel dimensions.—2.4 mm in length and less than 1 mm in diameter.

Pedicel color.—Green (RHS 142B).

Pedicel shape.—Flattened oval in cross section.

Pedicel surface.—Glaucous.

Flowers persistent or self-cleaning.—Flowers are persistent.

Lastingness of the overall inflorescence.—7-10 days.

Lastingness of an individual flower.—3-5 days.

Dimensions of inflorescence.—6.2 cm length. 2.0 cm width at base, tapering to 1 mm at tip.

Quantity of flowers.—87.4 flowers per panicle (average of 5 panicles).

Bud apex.—Rounded lobes, serrulate.

Bud surface.—Glaucous.

Bud shape.—Elongated, linear balloon.

Calyx shape.—Tubular.

Calyx dimensions.—2.0 mm in width and 2.8 mm in length.

Sepals.—Four in number.
Sepal shape.—Lanceolate.
Sepal apex.—Acute.
Sepal margin.—Entire.
Sepal surface.—Glabrous.
Sepal color.—Green (RHS 142B).
Flower fragrance.—Distinct sweet fragrance.
Reproductive organs:
Stamens.—Absent.
Anther shape.—Absent.
Filament size.—Absent.
Pollen amount.—Absent.
Pistil.—One in number.
Pistil dimensions.—3 mm in length, and less than 1 mm
in diameter.
Stigma color.—Yellow-green (RHS 143C).
Ovary.—Present.
Ovary position.—Superior.

Ovary shape.—Oval.
Fertility.—Low seed set in a field setting.
Fruit:
Type.—Swollen capsule.
5 *Dimensions*.—2.8 mm length (variable) and 1.0 mm
diameter (variable).
Color.—Yellow-green (RHS 144C) when immature.
Herbarium voucher: A voucher of ‘Lilac Chip’ will be depos-
ited into the Herbarium of North Carolina State University
10 (NCSU) in Raleigh, N.C., USA upon patenting.
What is claimed is:
1. A new and distinct variety of butterfly bush plant
(*Buddleja*) substantially as illustrated and described, charac-
15 terized by at least one of its dwarf growth, dense and spread-
ing growth habit, white flower color, male sterility and very
low female fertility.

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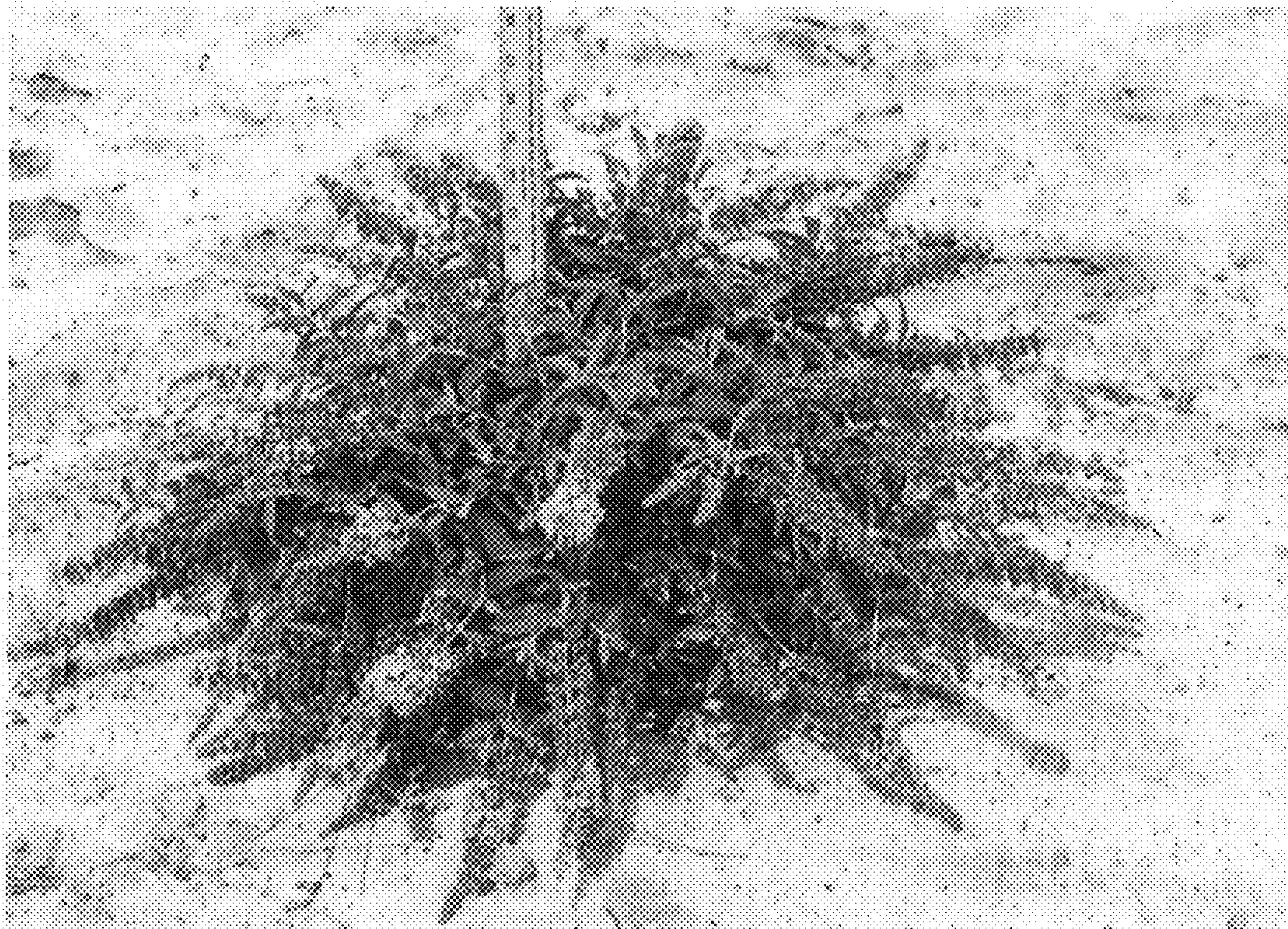


Figure 1



Figure 2

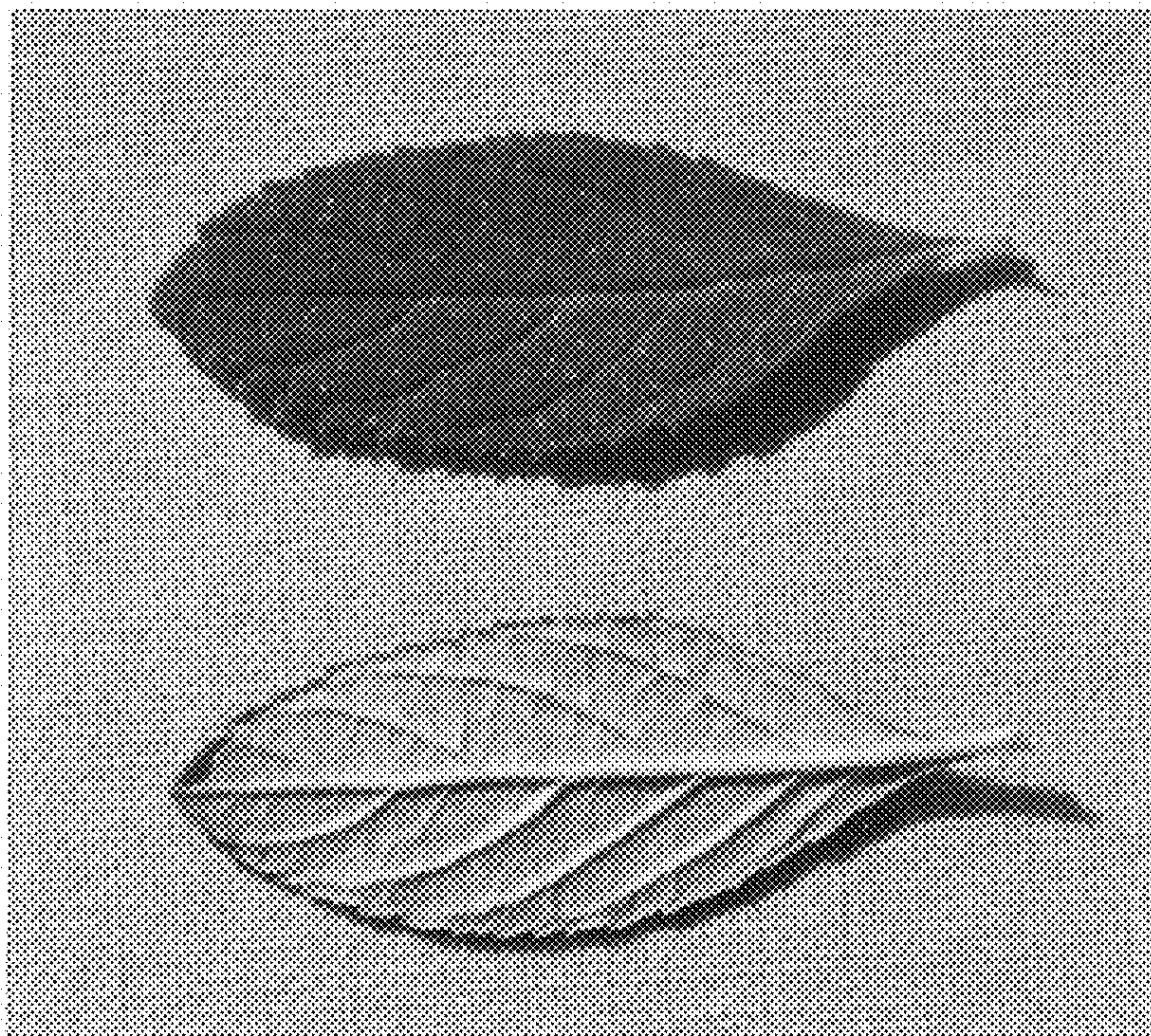


Figure 3