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Yencho et al.

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(54) **SWEETPOTATO PLANT NAMED**
‘NCORNSP-015SCPI’

(50) Latin Name: ***Ipomoea batatas* (L.) Lam**
Varietal Denomination: **NCORNSP-015SCPI**

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

(52) **U.S. Cl.**
USPC **Plt./258**

(58) **Field of Classification Search** **Plt./258**
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

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U.S. Appl. No. 13/065,468 dated Sep. 10, 2012 (10 pages).

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U.S. Appl. No. 13/065,464 dated Sep. 10, 2012 (9 pages).

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(57) **ABSTRACT**

‘NCORNSP-015SCPI’ is new and distinct variety of orna-
mental sweetpotato. ‘NCORNSP-015SCPI’ is a compact,
semi-upright; mounding, cultivar producing many short
shoots. This ornamental sweetpotato variety is distinguish-
able from other cultivars by its dark purple leaves that have
3-5 moderate lobes, a more compact habit, and semi-erect
mounding plant architecture. The leaves of ‘NCORNSP-
015SCPI’ are slightly upright resulting in a more attractive
appearance, and it has a very good plant vigor and is very well
branched, making it very suitable for production as a land-
scape or containerized plant.

3 Drawing Sheets

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Latin name of the genus and species: *Ipomoea batatas* (L.)
Lam.

Variety denomination: ‘NCORNSP-015SCPI’.

BACKGROUND

Ipomoea batatas is a member of the morning glory family
Convolvulaceae. This species is grown worldwide and exhib-
its a wide range of plant forms and colors. The cultivated
members of *Ipomoea batatas* that are grown by farmers are
commonly produced for consumption of their enlarged stor-
age roots. Such plants typically produce a fast growing green
vine that has a wide variety of leaf shapes ranging from
palmate and deeply lobed, to cordate or triangular shaped
leaves with no lobes.

Ornamental sweetpotato plants, like their edible forms, are
a heat-loving, drought tolerant, perennial vine, typically
grown as an annual. However, ornamental sweetpotato plants
are distinguished from the edible cultivated forms in that they
possess unique foliage colors, leaf shapes, and growth habits,
which have significant value in the ornamental marketplace.

Ornamental sweetpotatoes are desirable in the landscape
and ornamental industries because their foliage comes in a
wide variety of colors (e.g. pale yellow to dark purple with
some exhibiting temporal and individual leaf color variega-
tion patterns) and plant shapes (e.g. mounded and very com-
pact to prostrate and highly spreading). They can be grown in
a potted plant and/or mixed planting format, and they have the
ability to cover a large space or hang over walls and decora-

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tive pots creating brightly colored and textured backdrops in
gardens and patios. Most ornamental sweetpotatoes grow and
last the entire growing season and they require little mainte-
nance. Moreover, these plants have few insect or disease
problems.

Applicants desire to produce new cultivars of ornamental
sweetpotato with new or improved foliage colors, variegation
patterns, leaf shapes, and plant architectures. In addition,
applicants believe it would be advantageous to develop cul-
tivars of ornamental sweetpotato exhibiting a more compact
growth that do not out-compete other species in mixed con-
tainers.

‘NCORNSP-015SCPI’ addresses at least one of the above-
mentioned needs.

Lineage. ‘NCORNSP-015SCPI’ (breeding designation
NC4626-002ORN) originated from open pollinated seed har-
vested from the proprietary *Ipomoea batatas* breeding line
NC1926-001ORN (the female parent; not patented). Botani-
cal seed was harvested from this and other ornamental sweet-
potato lines planted in our winter greenhouse crossing block
between September of 2005 and April of 2006 in Raleigh,
N.C. NC1926-001ORN resulted from open pollinated seed
harvested from the proprietary *Ipomoea batatas* breeding line
‘NCN36-001ORN’ (the female parent; not patented). Botani-
cal seed from this half-sib family were planted in the green-
houses in Spring 2006. The first cycle of selection on the
population was exercised in the seedling trays and survivors
were transferred to a single 6-inch pot, which was then main-
tained in the greenhouse. Cuttings (2 each) were taken from

the plants in May and planted in the field as 2-plant unrepliated plots during early July 2006. The single, individual plant now known as 'NCORNSP-015SCPI' was selected Sep. 26, 2006 because of its combination of exceptional features, and has been propagated asexually in Raleigh, N.C. since that time.

Asexual Reproduction. Since its selection, *Ipomoea batatas* 'NCORNSP-015SCPI' has been asexually reproduced in Raleigh, N.C. predominantly by vegetative propagation of vine cuttings. Successively, there have been five cycles of vegetative propagation, one cycle of tissue culture micropropagation, and multiple vegetative propagation cycles to increase the plant population. Asexual reproduction of 'NCORNSP-015SCPI' by cuttings has shown that the unique features of the new cultivar are stable and the plant reproduces true-to-type in successive generations.

REFERENCE TO PLANT BREEDERS RIGHTS

Plant Breeders Rights for 'NCORNSP-015SCPI' have not been applied for. 'NCORNSP-015SCPI' has not been made publicly available or sold more than one year prior to the date of this application.

SUMMARY OF THE INVENTION

'NCORNSP-015SCPI' is a compact, semi-upright; mounding, spreading variety producing many short shoots. It is distinguishable from other cultivars by its dark purple leaves that have 3-5 moderate lobes, a compact habit and semi-erect mounding plant architecture. The extremely dark purple feature of the color of this plant and the plant architecture makes 'NCORNSP-015SCPI' unique amongst the current ornamental sweetpotatoes in the marketplace. 'NCORNSP-015SCPI' also exhibits very good vigor and is very well branched. In greenhouse and field trials conducted during 2006 to present by the breeding program and industry collaborators 'NCORNSP-015SCPI' has been shown to be much less vigorous than *Ipomoea batatas* 'Margarita' and 'Blackie' and is suitable for use as a landscape or containerized plant. The production of flowers by 'NCORNSP-015SCPI' is moderate under short day conditions.

BRIEF DESCRIPTION OF THE DRAWINGS

The photographs in the drawings were made using conventional techniques and show the colors as true as reasonably possible by conventional 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 *Ipomoea batatas*.

FIG. 1 is a color photograph of a typical specimen of greenhouse grown *Ipomoea batatas* 'NCORNSP-015SCPI' in a 6-inch pot from the side and top, 62 days after planting.

FIG. 2 is a color photograph of a typical specimen of *Ipomoea batatas* 'NCORNSP-015SCPI' from the top in the field, 53 days after planting.

FIG. 3 is a color photograph showing the variety of leaves produced by *Ipomoea batatas* 'NCORNSP-015SCPI' and the lower surface of the leaf (bottom row).

DETAILED BOTANICAL DESCRIPTION OF THE NEW VARIETY

The following is a detailed description of the botanical characteristics of a new and distinct cultivar of *Ipomoea bata-*

tas plant known by the cultivar name *Ipomoea batatas* 'NCORNSP-015SCPI'. All colors cited herein refer to *The Royal Horticultural Society Colour Chart* designations (The Royal Horticultural Society, London, 2007, 5th ed. except where general terms of ordinary dictionary significance are used. Plant descriptions are based on the standardized international sweetpotato descriptors established jointly by the International Potato Center (CIP), Lima, Peru; The Asian Vegetable Research and Development Center (AVRDC), Taipei, Taiwan; and the International Board for Plant Genetic Resources (IBPGR), Rome, Italy (CIP, AVRDC, IBPGR, 1991. Descriptors for Sweet Potato. Huaman, Z., editor. International Board for Plant Genetic Resources, Rome, Italy, 134pp.). Where dimensions, sizes, colors, and other characteristics are given, it is to be understood that such characteristics are approximations or averages set forth as accurately as practicable.

The descriptions reported herein are from 62-day-old specimens grown individually in six-inch azalea pots. The plants were grown in Raleigh, N.C., under commercial practice in a glass-covered greenhouse, where, during the fall, day and night temperatures range between 18-30° C. and 15-21° C., respectively. Plant ratings were taken during the last week of November 2010. 'NCORNSP-015SCPI' has not been observed under all possible environmental conditions; therefore, the phenotype may vary with variations in the environment such as season, temperature, light intensity, day length, cultural conditions, and the like.

Classification:

Botanical name.—*Ipomoea batatas* (L.) Lam.

Common name.—Ornamental Sweetpotato.

Variety name.—'NCORNSP-015SCPI'.

Growth conditions: *Ipomoea batatas* 'NCORNSP-015SCPI' has excellent vigor, a moderate growth rate, and is very adaptable to container culture. In locales with mild winter conditions, *Ipomoea batatas* 'NCORNSP-015SCPI' will grow perennially; otherwise it is an annual plant. Similar to cultivated sweetpotatoes, wind or rain rarely causes much damage to 'NCORNSP-015SCPI', but if damage does occur, the plant drops the damaged leaves and grows new shoots at nodes where the leaves were lost. Under low light levels in a greenhouse, 'NCORNSP-015SCPI' can develop intumescence, which will remain on the affected foliage, but will be outgrown with new foliage.

Aboveground structure and coloration: FIGS. 1 and 2 show the shape and coloration of a typical specimen of *Ipomoea batatas* 'NCORNSP-015SCPI'. Color will vary somewhat due to temperature and nutrient stress, which affect the anthocyanin pigments that produce the dark purple color. Overall, this cultivar is a compact, semi-upright, mounded, spreading herbaceous plant that has an average height of 20.8 cm and an average area of spread of 45.0 cm. The growth habit of this plant is to grow upright with shoots growing outward.

Branches:

Branching habitat.—Freely-branching with ~3 lateral branches coming off the stem. Very dense foliage and no pinching is required to stimulate branching.

Vegetative lateral branches.—Length: ~20.2 cm. Diameter: ~0.6 cm. Internodes are short with an average length of ~1.5 cm. Many lateral branches are formed and each axil has latent shoots.

Stem.—Round with an outward and upward bending aspect and very strong, slightly flexible, non-brittle strength. Texture: Glabrous. Color: Dark Purple (RHS N79A, N92A).

Petiole.—Length: ~8.2 cm. Diameter: ~0.3 cm. Texture: Glabrous. Color: Dark Purple (RHS 187B).

Foliage: Leaves are alternate and tend to spiral around the stem. They are simple and moderately divided into 3-5 lobes. Leaf shape is somewhat variable as is size (see FIG. 2).

Quantity.—Heavily foliated, with ~17 leaves per lateral branch.

Mature leaf length.—~13.3 cm.

Mature leaf width.—~13.2 cm.

Leaf margin.—Entire.

Central lobe width.—~4.0 cm.

Central lobe length.—~9.8 cm.

Mid-vein lobe length.—~5.4 cm.

Mid-vein lobe width.—~2.3 cm.

Central lobe shape.—Semi-elliptic.

Two axillary lobes.—Palmate, both irregular lanceolate.

Leaf apex.—Acute to Acuminate.

Leaf base.—Cordate.

Leaf.—Glabrous texture and matte finish on both the upper and lower surface.

Venation.—Palmate at the base with arcuate veins in the center lamina. Texture: glabrous.

Color.—Leaves range from greyed green to burgundy purple as they mature. See also Table 1.

TABLE 1

Leaf Structure	Upper Surface	Lower Surface
Young Leaf	Greyed green, N199B	Greyed green, 148A with Purple blush, N77A
Mature Leaf	Dark purple, N186A	Dark purple, 187A
Vein- mature leaf	N186B	187A
Vein- young leaf	146C	N77B at base fading to 146D at tip

Flowers: Flowers occur under short day conditions, but the precise photoperiod for flower induction is currently unknown. Solitary, regular funnel-form flowers arising from leaf axils on secondary lateral branches are formed. Peduncles are burgundy purple (RHS N77A) with a smooth texture. Peduncle length: ~7.4 cm, peduncle width: ~0.3 cm. Flower buds are pale green-yellow fading to purple at the tip and elliptic (RHS 145C fading to 70B at tip). Flower bud length: ~2.1 cm, flower bud width: ~0.5 cm. Corolla width: ~3.8 cm, corolla length: ~4.8 cm. Limb color: Light lavender, 76C with white eye-zone, N155B. The inner throat color gets lighter from base to limb going from purple, 84A at the base to lavender, 84B near the limb. The limb is rounded. The two outer sepals are shorter than the inner sepals. Average sepal length: 1.0 cm, average sepal width: 0.4 cm. The sepals are obovate with an obtuse apex and burgundy purple (RHS N77A-N77B) in color. Sepal texture is glabrous on both the upper and lower surface. A single pistil consists of one style and one stigma ~2.2 cm in length. Stigma and style are both white (RHS 155C). The stigma is exerted relative to the stamens. The flower averages five cream-light pink stamens. Each sta-

men consists of a single cream-light pink filament averaging 0.9 cm in length topped with a single cream anther averaging 0.4 cm in length. Filament color: cream-pink (RHS N155B). Anther color: cream (RHS NN155A). Pollen color: cream (RHS NN155A). The flowers of ‘NCORNSP-015SCPI’ occasionally produce purple-colored seed capsules (i.e. fruit) but they are rarely observed under greenhouse conditions.

Storage root coloration: Plants form no, to very small, underground storage roots that are highly malformed and do not meet USDA Sweetpotato Storage Root Grade Standards. Storage roots that do form typically possess cream colored skin (161B) with hints of rose (60A). Flesh color is cream (161A).

Comparison with other *Ipomoea batatas* cultivars: ‘NCORNSP-015SCPI’ is very distinct based on leaf color, leaf shape, and plant architecture. Of the common cultivars of ornamental sweetpotato, ‘NCORNSP-015SCPI’ is best compared with the ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912 cultivar (Table 2). Like ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912, ‘NCORNSP-015SCPI’ has purple leaves. However, the leaves of ‘NCORNSP-015SCPI’ are darker purple and have 3-5 lobes compared to those of ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912, which have 5-7.

‘NCORNSP-015SCPI’ has a compact, semi-upright, mounding plant habit compared with the moderately compact habit of ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912. Furthermore, ‘NCORNSP-015SCPI’ holds its leaves upright compared with the slightly curled leaves of ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912 resulting in a more upright appearance. As compared with ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912, ‘NCORNSP-015SCPI’ has a more upright, mounding, and fuller appearance, making it more suitable for containerized propagation. Unlike ‘Sweet Caroline Purple’ of U.S. Pat. No. 14,912, which rarely produces flowers, ‘NCORNSP-015SCPI’ will produce flowers under short day conditions.

TABLE 2

Characteristic	‘NCORNSP-015SCPI’	Female Parent ‘NC1926-001ORN’	‘Sweet Caroline Purple’ (U.S. Plant Pat. No. 14,912)
Plant Habit	Compact, Semi-Upright	N/A	Moderately Compact
Foliage Color	Dark purple (RHS N186A-187A)	N/A	Purple with green base (RHS N77A, 147A)
Leaf Size	Moderate	N/A	Moderate-Large
Leaf Shape	Moderately Lobed, 3-5 lobes	N/A	Moderately Lobed, 5-7 lobes

Disease or pest resistance: ‘NCORNSP-015SCPI’ is susceptible to Sweetpotato Feathery Mottle Virus and damage by Japanese beetles. Its resistance or susceptibility to other known insects and pathogens of sweetpotato is unknown. We claim:

1. A new and distinct cultivar of *Ipomoea batatas* plant named ‘NCORNSP-015SCPI’, substantially as illustrated and described herein.

* * * * *

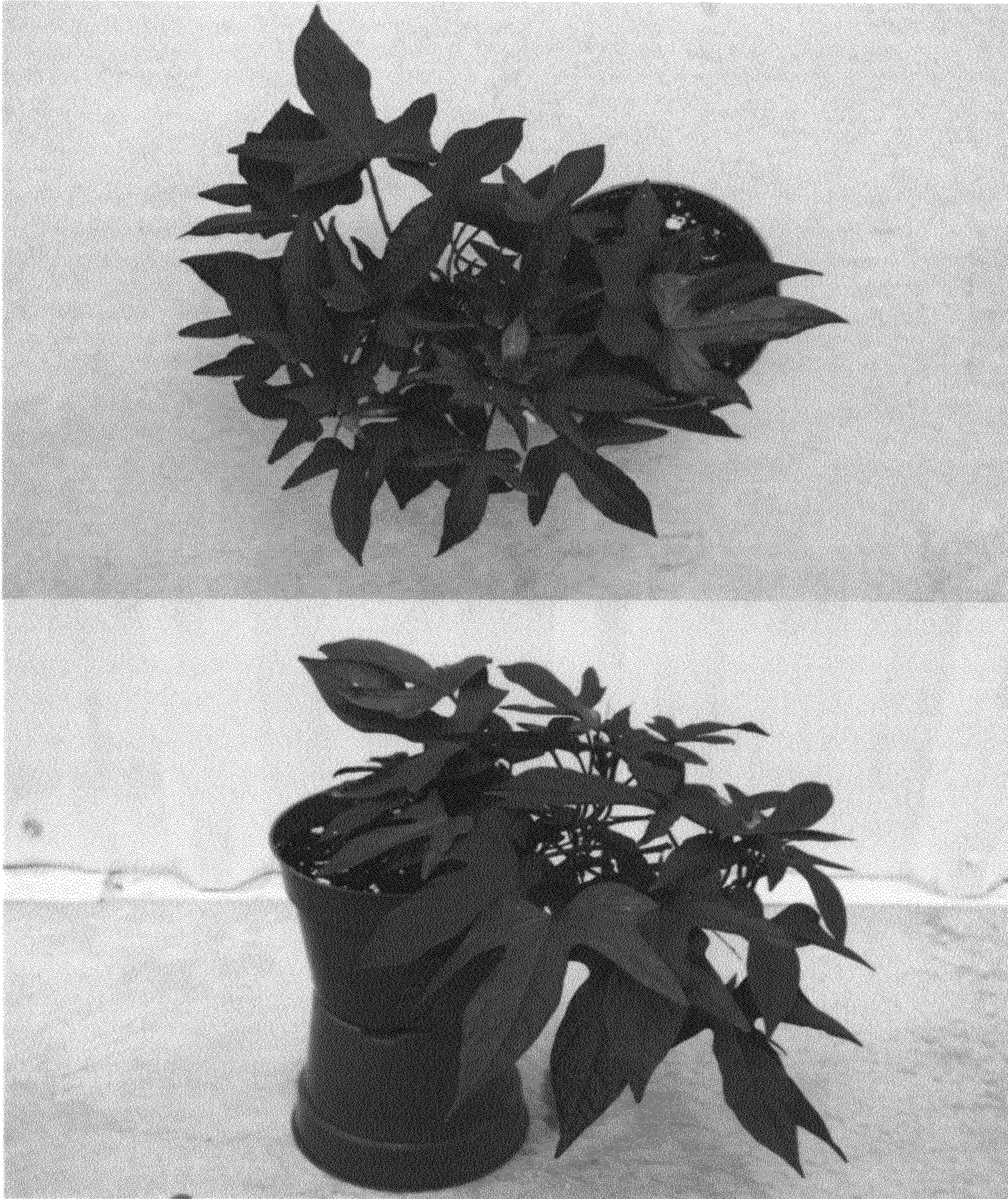


FIG. 1

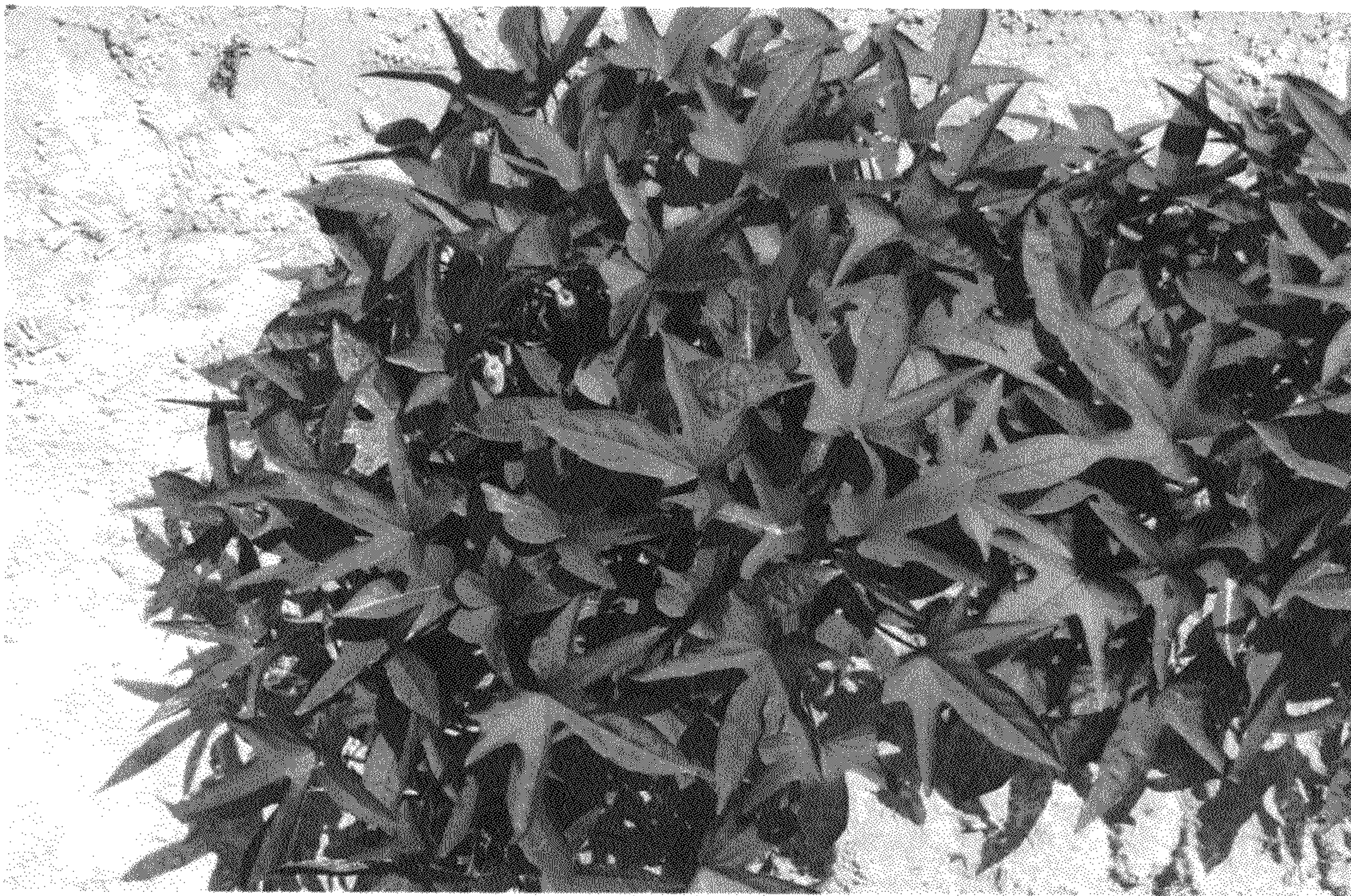


FIG. 2

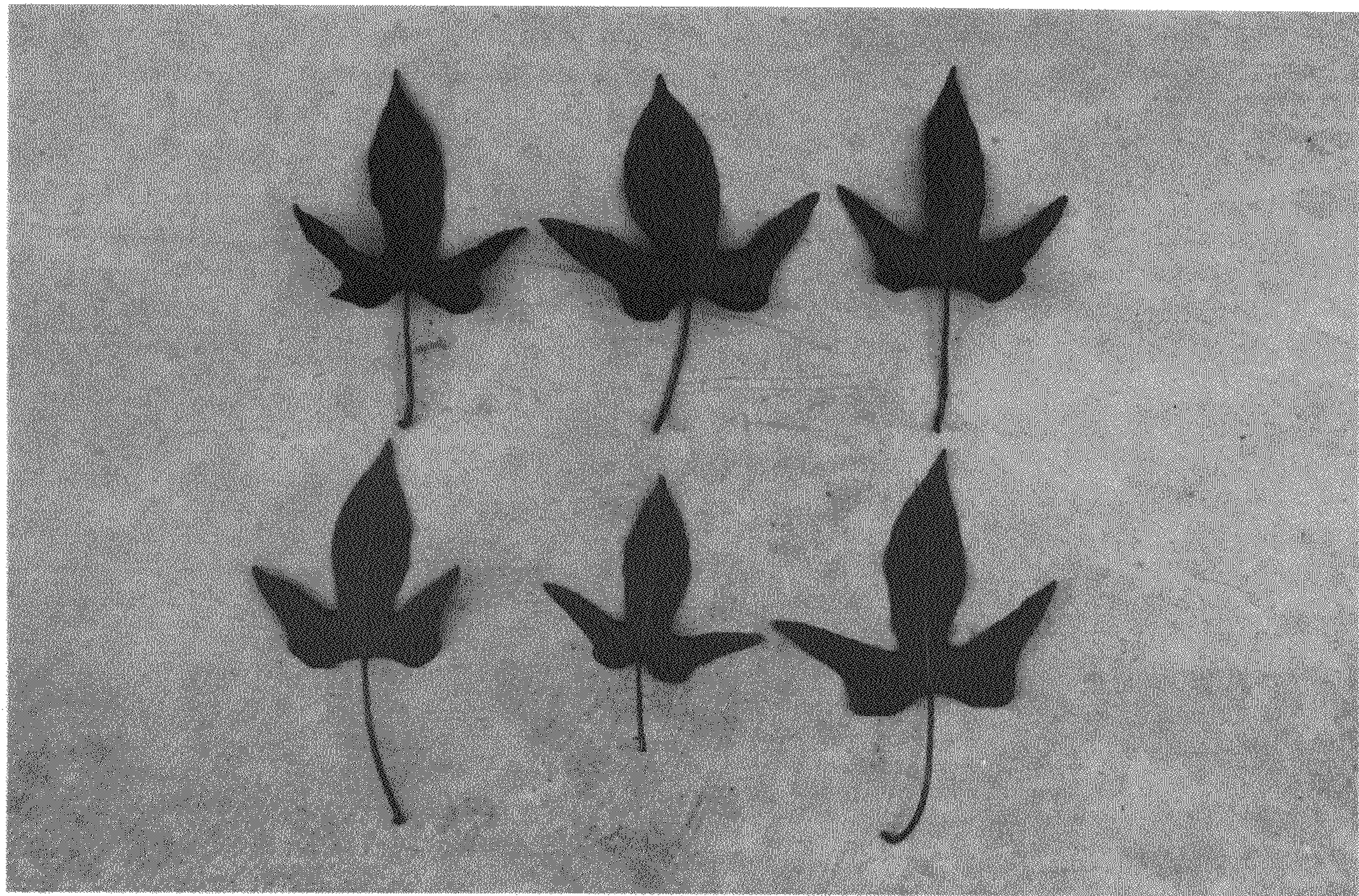


FIG. 3