



US00PP33068P2

(12) **United States Plant Patent**
Sills et al.

(10) **Patent No.:** **US PP33,068 P2**
(45) **Date of Patent:** **May 18, 2021**

- (54) **BLACKBERRY PLANT VARIETY NAMED ‘DRISBLACKTWENTYTWO’**
- (50) Latin Name: *Rubus L. subgenus Rubus*
Varietal Denomination: **DrisBlackTwentyTwo**
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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 0 days.

- PP22,002 P2 7/2011 Sills et al.
- PP22,449 P3 1/2012 Clark
- PP23,497 P3 3/2013 Clark et al.
- PP23,725 P3 7/2013 Sills et al.
- PP24,249 P3 2/2014 Clark
- PP24,609 P3 7/2014 Sills et al.
- PP24,701 P3 7/2014 Sills et al.
- PP24,878 P2 9/2014 Sills et al.
- PP25,502 P3 5/2015 Sills et al.
- PP26,501 P3 3/2016 Sills et al.
- PP26,611 P3 4/2016 Sills et al.
- PP26,774 P3 5/2016 Sills et al.
- PP27,129 P2 9/2016 Sills et al.
- PP27,130 P2 9/2016 Sills et al.
- PP27,146 P2 9/2016 Sills et al.
- PP27,681 P3 2/2017 Sills et al.
- PP27,746 P3 3/2017 Sills et al.
- PP28,548 P2 10/2017 Sills et al.
- PP31,110 P2 11/2019 Sills et al.
- PP31,291 P2 12/2019 Sills et al.
- 2016/0249505 P1 8/2016 Sills et al.

- (21) Appl. No.: **16/602,976**
- (22) Filed: **Jan. 8, 2020**
- (51) **Int. Cl.**
A01H 5/08 (2018.01)
A01H 6/74 (2018.01)
- (52) **U.S. Cl.**
USPC **Plt./203**
- (58) **Field of Classification Search**
USPC Plt./203
CPC ... A01H 5/08; A01H 5/00; A01H 6/74; A01H 6/7499
See application file for complete search history.

- (56) **References Cited**
U.S. PATENT DOCUMENTS
PP6,679 P 3/1989 Moore
PP6,782 P 5/1989 Jennings
PP13,525 P3 1/2003 Fear
PP13,758 P3 5/2003 Fear
PP13,759 P3 5/2003 Fear
PP14,682 P3 4/2004 Fear
PP14,765 P2 5/2004 Fear et al.
PP14,780 P2 5/2004 Fear et al.
PP15,058 P2 8/2004 Fear et al.
PP17,162 P3 10/2006 Clark et al.
PP17,983 P2 9/2007 Cabrera Avalos

OTHER PUBLICATIONS

Sills et al., Unpublished U.S. Appl. No. 16/602,974, filed Jan. 8, 2020, titled “Blackberry Plant Variety Named ‘DrisBlackTwentyFour’”.

Sills et al., “Unpublished U.S. Appl. No. 16/602,975, filed Jan. 8, 2020, titled Blackberry Plant Variety Named DrisBlackTwentyThree”.

Sills et al., Unpublished U.S. Appl. No. 16/501,447, filed Apr. 17, 2019, titled “Blackberry Plant Variety Named ‘DrisBlackTwenty’”.

Sills et al., Unpublished U.S. Appl. No. 16/501,448, filed Apr. 17, 2019, titled “Blackberry Plant Variety Named ‘DrisBlackNineteen’”.

Sills et al., Unpublished U.S. Appl. No. 16/501,772, filed Jun. 5, 2019, titled “Blackberry Plant Variety Named ‘DrisBlackTwentyOne’”.

Voss, Donald H. “The Royal Horticultural Society Colour Chart 2001”, Journal American Rhododendron Society, vol. 56, No. 1, 2002, 3 pages.

Williams et al., “DNA Polymorphisms Amplified by Arbitrary Primers are useful as Genetic Markers”, Nucleic Acids Research, vol. 18, No. 22, 1990, pp. 6531-6535.

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(57) **ABSTRACT**
A new and distinct variety of blackberry plant named ‘DrisBlackTwentyTwo’, selected for being a spinelessness variety with good plant health, as well as for the flavor, size, and firmness of fruit, is disclosed.

5 Drawing Sheets

Latin name:
Botanical classification: *Rubus L. subgenus Rubus*.
Varietal denomination: The varietal denomination of the claimed variety of blackberry plant is ‘DrisBlackTwentyTwo’.

BACKGROUND OF THE INVENTION

Blackberry is the common name for a multitude of plant species bearing dark purple to black aggregate fruit in the genus *Rubus* of the family Rosaceae. Most blackberries are within the subgenus *Rubus*.

Native chiefly to the northern temperate regions, blackberries are now being cultivated as a valuable fruit crop in many areas of the world, particularly in Europe, North America and Central America. Recognized for their high contents of antioxidants, dietary fiber, vitamin C, and vitamin K. Blackberry fruit are typically consumed as fresh fruit, individually quick frozen fruit, or in prepared foods, such as purées, juices, jellies, jams, grocery items, baked goods, and snack foods.

Globally, Mexico is the leading producer of blackberries, with nearly the entire crop being produced for export into the off-season fresh markets in North America and Europe. The

Mexican market is almost entirely from the cultivar ‘Tupi’ (also spelled as ‘Tupy’). In the United States, Oregon is the leading commercial blackberry producer, followed by the state of California.

Blackberries are perennial plants that typically bear biennial stems (known as “canes”) from a perennial root system. The two cane types are primocanes, or first-year canes, which are usually vegetative, and floricanes, which are the same canes and produce fruit in the next growing season. In its first year, a new cane, the primocane, grows vigorously to its full length of three to six meters in a growth habit of erecting, arching, or trailing along the ground and bearing large compound leaves with 3, 5, or 7 leaflets; it does not produce any flowers. In its second year, the cane becomes a florican and stops elongating, but the lateral buds break to produce flowering laterals that bear fruit.

Recently, primocane-fruiting blackberry varieties have been developed that are capable of flowering and fruiting on first-year canes. Primocane-fruiting blackberry varieties have several advantages, including potential of two crops on the same plant in the same year, reduction in pruning costs by mowing of canes, avoidance of winter injury, and production of fruit in an extended geographic area. However, primocane-fruiting blackberry varieties are also subject to a number of challenges, such as poor heat tolerance, lesser fruit quality, and low yield.

Blackberry is an important and valuable commercial fruit crop. Accordingly, there is a need for new varieties of blackberry plant. In particular, there is a need for improved varieties of blackberry plant that are stable, high yielding, and agronomically sound.

SUMMARY OF THE INVENTION

In order to meet these needs, the present invention is directed to an improved variety of blackberry plant. In particular, the invention relates to a new and distinct variety of blackberry plant (*Rubus* L. subgenus *Rubus*), which has been denominated as ‘DrisBlackTwentyTwo’.

Blackberry plant variety ‘DrisBlackTwentyTwo’ was discovered in Santa Cruz, Calif. in July of 2012 and originated from a cross between the female parent blackberry plant ‘DrisBlackSix’ (U.S. Plant Pat. No. 25,502) and the male parent blackberry plant ‘BN809.2’ (unpatented). The original seedling of the new variety was first asexually propagated via root cuttings in Santa Cruz, Calif. in October of 2012.

‘DrisBlackTwentyTwo’ was subsequently asexually propagated via root cuttings, and underwent testing in Santa Cruz, Calif. from 2014 to 2019 (five years). The present variety has been found to be stable and reproduce true to type through successive asexual propagations via root cuttings.

‘DrisBlackTwentyTwo’ exhibits the following distinguishing characteristics over other similar varieties when grown under normal horticultural practices in Santa Cruz, Calif.:

1. Upright growth habit;
2. Medium anthocyanin coloration during rapid growth on young shoot;
3. Elliptic fruit shape in longitudinal section; and
4. Fruiting on current year’s cane.

‘DrisBlackTwentyTwo’ was selected for being a spineless variety with good plant health, as well as for the flavor, size, and firmness of fruit.

BRIEF DESCRIPTION OF THE DRAWINGS

This new blackberry plant is illustrated by the accompanying photographs. The colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs are of plants that are two to five years old.

FIG. 1 illustrates fruit of variety ‘DrisBlackTwentyTwo’ at various stages of development.

FIG. 2 illustrates flowers of variety ‘DrisBlackTwentyTwo’ at various stages of development.

FIG. 3 illustrates leaves of variety ‘DrisBlackTwentyTwo’, with the lower side of a leaf shown on the left, and the upper side of a leaf shown on the right.

FIG. 4 illustrates a section of a cane of variety ‘DrisBlackTwentyTwo’.

FIG. 5 illustrates plants of variety ‘DrisBlackTwentyTwo’.

DETAILED BOTANICAL DESCRIPTION

The following descriptions set forth the distinctive characteristics of ‘DrisBlackTwentyTwo’. The data that define these characteristics are based on observations taken in Santa Cruz, Calif. from 2014 to 2019. This description is in accordance with UPOV terminology. Color designations, color descriptions, and other phenotypical descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions. ‘DrisBlackTwentyTwo’ has not been observed under all possible environmental conditions. The botanical description of ‘DrisBlackTwentyTwo’ was taken from plants that were two to five years old. The indicated values represent averages calculated from measurements of several plants. Color references are primarily to The R.H.S. Colour Chart of The Royal Horticultural Society of London (R.H.S.) (2015 edition). Descriptive terminology follows the *Plant Identification Terminology, An Illustrated Glossary*, 2nd edition by James G. Harris and Melinda Woolf Harris, unless where otherwise defined.

Classification:

Family.—Rosaceae.

Botanical.—*Rubus* L. subgenus *Rubus*.

Common name.—Blackberry.

Variety name.—‘DrisBlackTwentyTwo’.

Parentage:

Female parent.—‘DrisBlackSix’ (U.S. Plant Pat. No. 25,502).

Male parent.—‘BN809.2’ (unpatented).

Plant:

Propagation.—Root cuttings.

Growth habit.—Upright.

Canes:

Fruiting lateral length (4th lateral from tip).—54.4 cm.

Number of fruits per fruiting lateral.—13.7.

Internodal distance.—6.8 cm.

Dormant cane.—Anthocyanin color: RHS 185A (Deep reddish purple). Predominant distribution of branches: Only on upper half. Cross-section: Angular. Presence of spines: Absent.

Young shoots:

Anthocyanin color (during rapid growth).—RHS 184B (Moderate red).

Intensity of green color.—RHS 139D (Moderate yellow-green).

Number of glandular hairs.—Medium.

Leaves:

Time of leaf bud burst.—Medium.

Terminal leaflet.—Length: 117.7 mm. Width: 98.4 mm.

Length/width ratio: 1.19. Lobing: Absent. Shape in cross-section: U-shaped. Undulation of margin: Absent or very weak.

Lateral leaflets (basal pair).—Length: 104.3 mm. Width: 71.4 mm. Length/width ratio: 1.46.

Rachis length between terminal leaflet and adjacent lateral leaflets.—62.3 mm.

Rachis color.—RHS 173A (Dark reddish orange).

Petiole.—Length: 104.8 mm. Diameter: 3.4 mm. Color: RHS 173A (Dark reddish orange).

Leaflet.—Type of incision of margin: Bi-serrate. Depth of margin incisions: Medium. Apex shape: Truncate. Base shape: Obtuse.

Leaf.—Predominant number of leaflets: 5. Type: Palmate. Glossiness of upper side: Weak. Intensity of green color of upper side: RHS 139A (Dark yellowish green). Color of lower side: RHS 141C (Strong yellowish green).

Flowers:

Diameter.—46.7 mm.

Petal.—Length: 24 mm. Width: 10.6 mm. Length/width ratio: 2.26. Color: RHS NN155C (White). Number of petals per flower: 5. Petal shape (overall): Oval. Apex shape: Rounded. Base shape: Attenuate.

Sepal.—Length: 9.5 mm. Width: 4 mm. Shape: Elliptic. Color of upper side: RHS 144B (Strong yellowish green). Color of lower side: RHS 141C (Strong yellowish green).

Number of flowers observed at 3rd node from tip of lateral.—3.3.

Pedicel.—Length: 16.6 mm. Diameter: 1 mm. Color: RHS 141C (Strong yellowish green).

Stigma.—Color: RHS 144D (Light yellowish green).

Style.—Color: RHS 144D (Light yellowish green).

Filament.—Color: RHS 157C (Pale yellowish green).

Anther.—Color: RHS 152D (Dark greenish yellow).

Pollen.—Color: RHS 152D (Dark greenish yellow).

Time of beginning of flowering on previous year's cane.—Medium.

Time of beginning of flowering on current year's cane.—Medium.

Fruit:

Length of mature fruit.—30.9 mm.

Diameter of mature fruit.—25.5 mm.

Ratio of length to width.—1.21.

Number of drupelets per fruit.—Medium.

Size of drupelets.—Medium.

Fruit shape in longitudinal section.—Elliptic.

Fruit color.—RHS 203A (Black).

Fruiting on current year's cane.—Present.

Harvest interval on current year's cane.—June-August.

Yield.—22,000 to 33,000 pounds per acre of fruit per season from 24- to 36-month-old plants when grown in Watsonville, Calif.

Market use of fruit.—Fresh market.

Resistance to pests and diseases:

Redberry mite (acalitus essigi).—Moderately resistant.

Fusarium wilt (fusarium oxysporum).—Resistant.

Verticillium wilt (verticillium spp.).—Moderately resistant.

COMPARISONS TO PARENTAL AND COMMERCIAL BLACKBERRY VARIETIES

'DrisBlackTwentyTwo' differs from the female parent 'DrisBlackSix' (U.S. Plant Pat. No. 25,502) in that 'DrisBlackTwentyTwo' has an upright growth habit, medium anthocyanin coloration during rapid growth on young shoot, an elliptic fruit shape in longitudinal section, and fruiting on current year's cane, whereas 'DrisBlackSix' has a semi-upright growth habit, strong anthocyanin coloration during rapid growth on young shoot, a narrow ovate fruit shape in longitudinal section, and no fruiting on current year's cane.

'DrisBlackTwentyTwo' differs from the male parent 'BN809.2' (unpatented) in that 'DrisBlackTwentyTwo' has higher vigor than 'BN809.2'.

'DrisBlackTwentyTwo' differs from commercial blackberry variety 'DrisBlackThree' (U.S. Plant Pat. No. 23,725) in that 'DrisBlackTwentyTwo' has an upright plant growth habit, spines absent on dormant cane, predominantly five leaflets per leaf, and an elliptic fruit shape in longitudinal section, whereas 'DrisBlackThree' has an upright to semi-upright plant growth habit, spines present on dormant cane, predominantly three leaflets per leaf, and an oblong fruit shape in longitudinal section.

'DrisBlackTwentyTwo' differs from commercial blackberry variety 'DrisBlackTwo' (U.S. Plant Pat. No. 22,002) in that 'DrisBlackTwentyTwo' has an upright plant growth habit, a medium length of fruiting lateral, an angular cross-section of dormant cane, and an elliptic fruit shape in longitudinal section, whereas 'DrisBlackTwo' has a semi-upright plant growth habit, a long to very long length of fruiting lateral, a rounded to angular cross-section of dormant cane, and an ovate fruit shape in longitudinal section.

What is claimed is:

1. A new and distinct variety of blackberry plant designated 'DrisBlackTwentyTwo' as shown and described herein.

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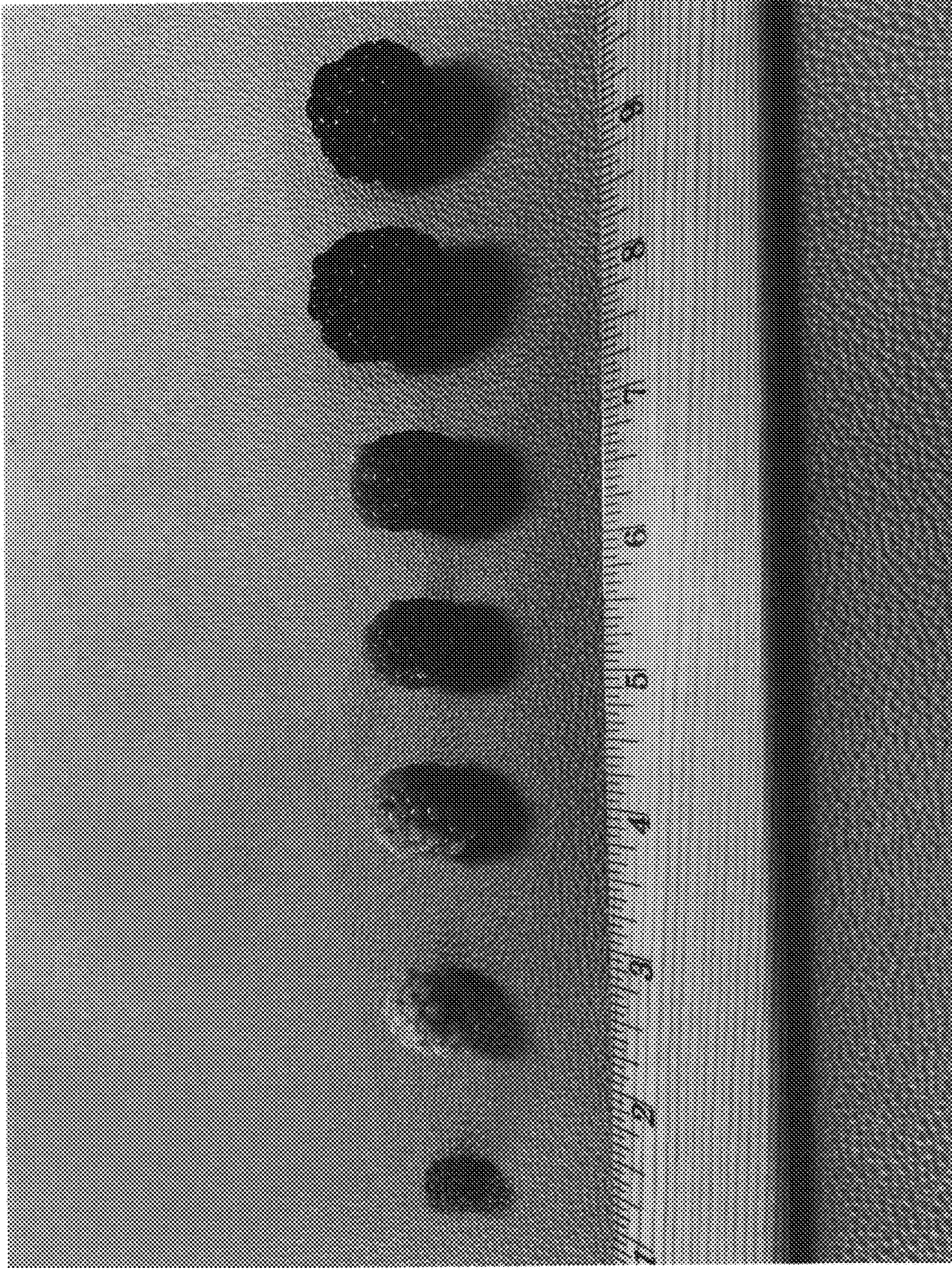


FIG. 1

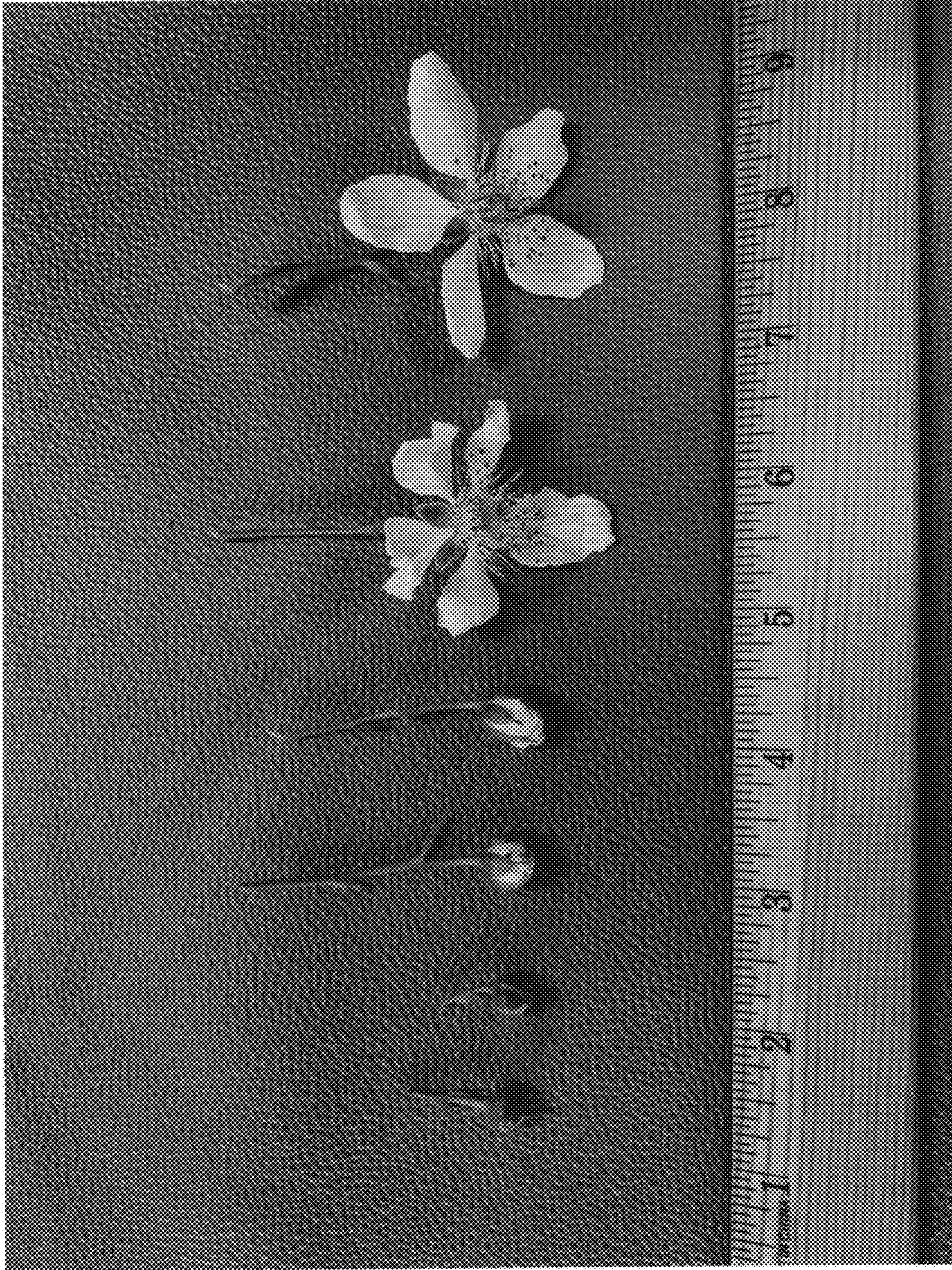


FIG. 2

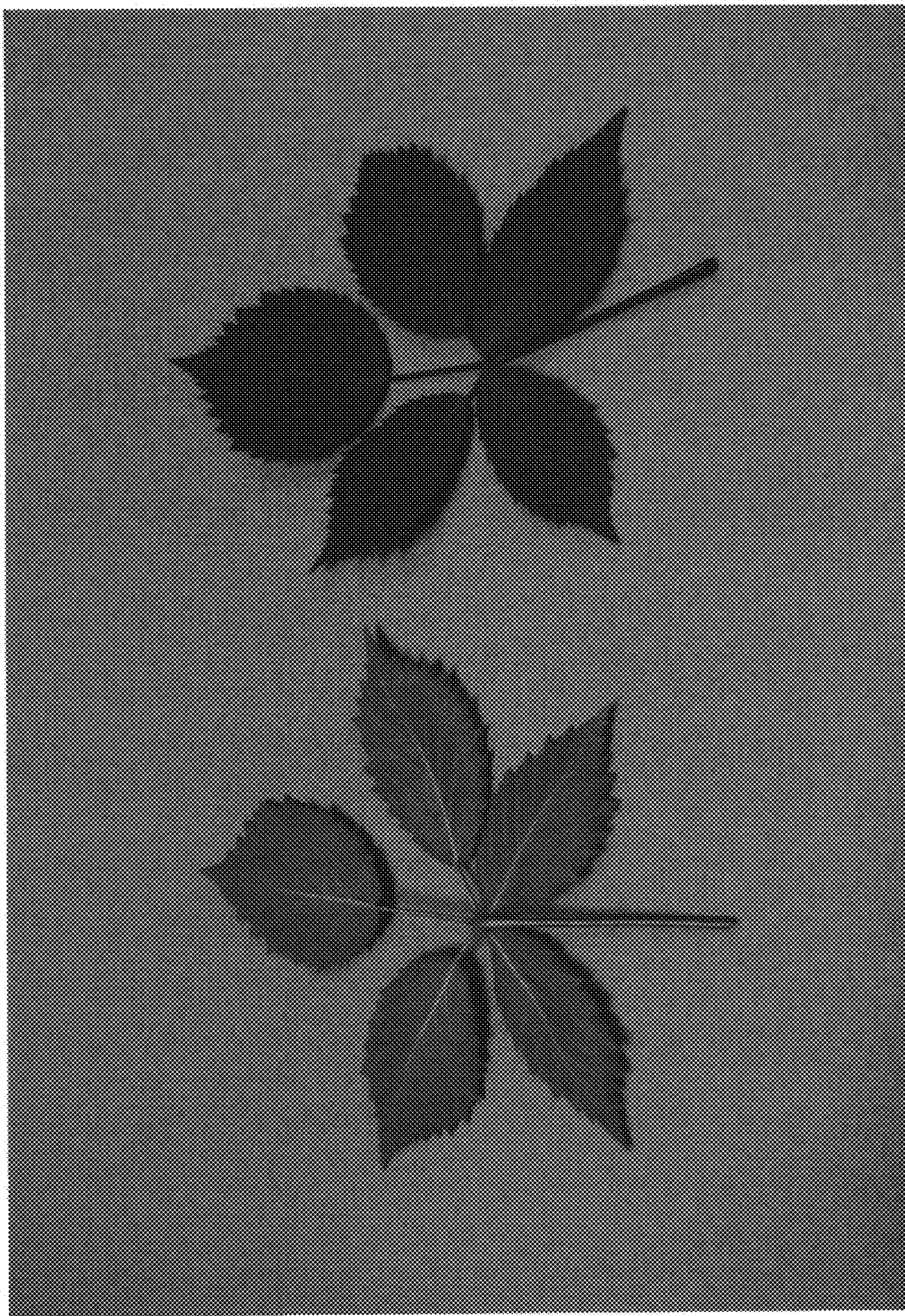


FIG. 3

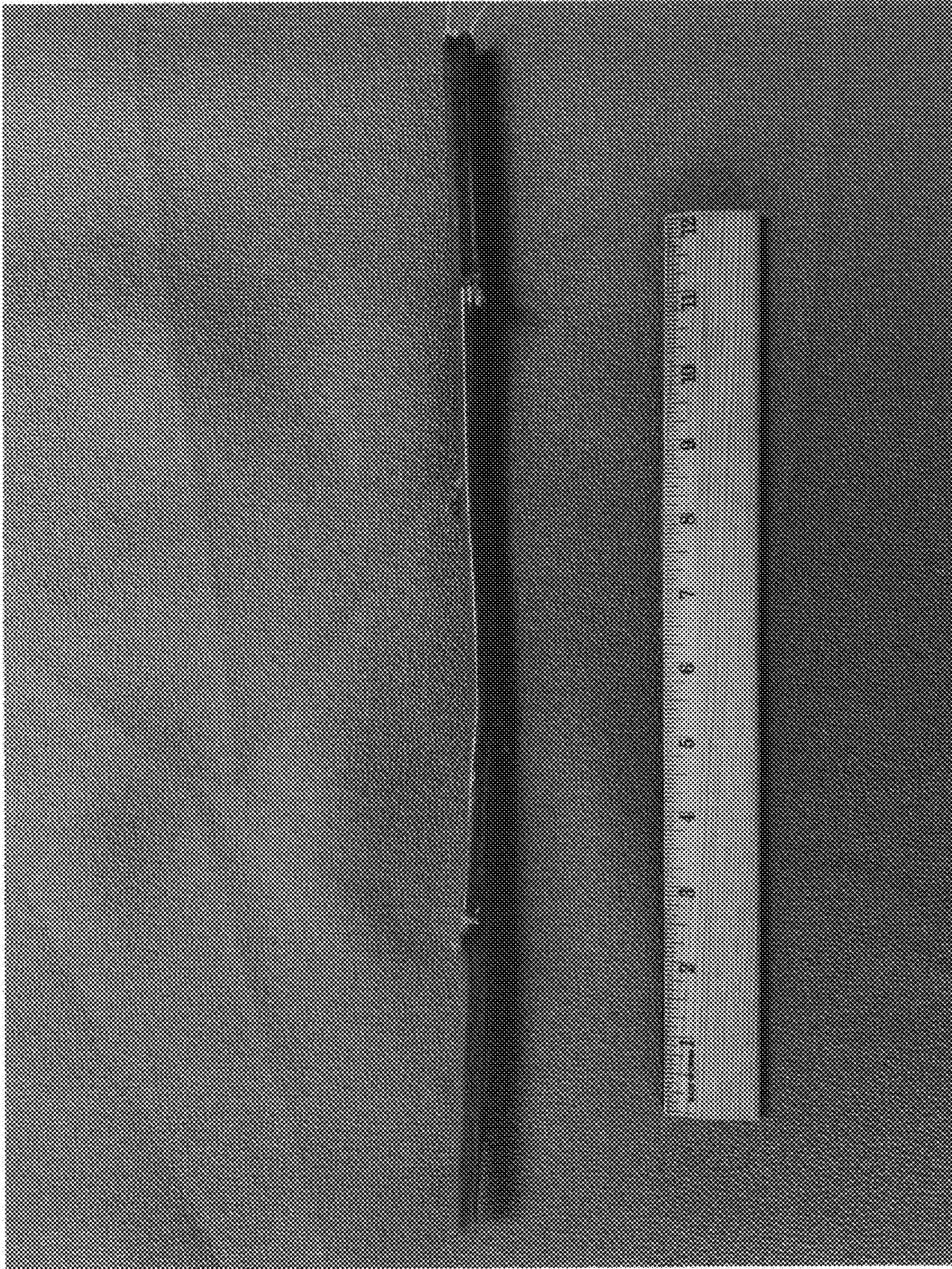


FIG. 4



FIG. 5