

THE MALLOWES OF OHIO.

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MALVACEAE Mallow Family.

Mucilaginous, innocent herbs or shrubs with alternate, palmately-veined leaves and small deciduous stipules. Flowers hypogynous, regular, often large and showy, usually bisporangiate; calyx usually of 5 sepals more or less united, often with bracts at the base; corolla of 5 petals, convolute; andrecium of numerous stamens, the filaments united into a tube around the gynecium and also united with the base of the petals; ovulary with several cavities, styles united below, distinct above; stigmas usually as many as the cavities of the ovulary. Fruit a capsule with several cavities; the carpels falling away entire or else loculicidally dehiscent.

Synopsis of Genera.

- I. Stamen-column anther-bearing at the tip; carpels 5-20 in a ring around a prominent central axis from which they separate when ripe.
 - A. Carpels 1-seeded.
 1. Flowers bisporangiate.
 - (1) Stigmas linear, on the inner face of the styles.
 - a. Involucre of 1-3 bracts.
 - (a) Carpels beakless; petals obcordate. *Malva*.
 - (b) Carpels beaked; petals truncate. *Callirrhoe*.
 - b. Involucre of 6-9 bracts. *Althaea*.
 - (2) Stigmas terminal, capitate. *Sida*.
 2. Flowers monosporangiate, diecious. *Napaea*.
 - B. Carpels 2-several seeded. *Abutilon*.
- II. Stamen-column naked at the 5-toothed tip; carpels forming a loculicidal capsule.
 - A. Involucre of many bracts. *Hibiscus*.

Key.

1. Flowers without an involucre. 2.
1. Flowers with involucre below the calyx. 4.
2. Leaves not lobed; flowers bisporangiate. 3.
2. Leaves deeply lobed; flowers diecious. *Napaea*.
3. Leaves broadly cordate, abruptly acuminate. *Abutilon*.
3. Leaves ovate-lanceolate, acute. *Sida*.
4. Stamen-column anther-bearing below the entire or 5-toothed summit; involucre of numerous linear bracts. *Hibiscus*.
4. Stamen-column anther-bearing at the summit. 5.
5. Involucre of 6-9 bracts united at the base. *Althaea*.
5. Involucre usually of 3 free bracts. 6.
6. Carpels beakless; petals obcordate; leaves divided or only slightly lobed. *Malva*.
6. Carpels beaked; petals truncate; leaves parted or divided. *Callirrhoe*.

Malva L.

Pubescent or glabrate herbs with dentate, lobed, or dissected leaves, and axillary or terminal, solitary or clustered flowers. Carpels beakless, arranged in a circle, indehiscent; cavities of ovulary several or numerous, 1-ovuled; seed ascending.

1. Leaves with shallow rounded lobes; flowers clustered in the axils. 2.
1. Leaves deeply 5-7 lobed or pinnatifid; flowers only in the upper axils. 4.
2. Stems procumbent; root perennial; petals 1-2 times the length of the calyx. *M. rotundifolia*.
2. Stems erect, annual or biennial. 3.
3. Leaf margins not much crisped; biennial; petals 2-4 times the length of the calyx. *M. sylvestris*.
3. Leaf margins very much crisped; annual; petals 1-2 times the length of the calyx. *M. crispa*.
4. Stem leaves 5-parted; the divisions pinnatifid into linear lobes, carpels downy, cleft, the divisions broad. *M. moschata*.
4. Stem leaves deeply 5-lobed, carpels smooth. *M. alcea*.

1. *Malva sylvestris* L. High Mallow.

Biennial, erect or ascending, pubescent with spreading hairs; leaves obicular and reniform, truncate or cordate at the base; flowers reddish purple, carpels about 10. In waste places and along roadsides. Auglaize, Cuyahoga Co.

2. *Malva rotundifolia* L. Roundleaf Mallow.

Annual or biennial, procumbent and spreading; leaves orbicular reniform; blades 2 inches wide, petioles about 6 inches long; flowers clustered in the axils, petals pinkish white with 3 reddish nerves, carpels about 15. In fields and waste places. General.

3. *Malva crispa* L. Curled Mallow.

Annual, glabrous, or nearly so; leaves nearly orbicular with shallow, angular, crenate lobes with wrinkled crisped margins; blades 5 inches wide; petioles 5 inches long; flowers $\frac{1}{2}$ inch long, $\frac{1}{2}$ inch in diameter. In waste places. No specimens.

4. *Malva alcea* L. European Mallow.

Perennial, procumbent, pubescent. Stem leaves only once 5-7 parted or cleft, the lobes dentate or incised, blades 3 inches long, $4\frac{1}{2}$ inches wide, petioles $1\frac{1}{2}$ to $4\frac{1}{2}$ inches long; flowers $1\frac{3}{4}$ inches in diameter. In waste places. Escaped in Cuyahoga Co.

5. *Malva moschata* L. Musk Mallow.

Perennial, pubescent with long hairs. Basal leaves orbicular with broad, rounded, dentate lobes; stem leaves deeply divided into linear or crenate, pinnatifid or cleft segments; stem leaf blades 2 inches long, 2 inches wide, petioles $1\frac{1}{2}$ inches long. Flowers $1\frac{1}{2}$ to 2 inches in diameter. In waste places. Northern part of the State as far south as Muskingum Co.

CALLIRHOE Nutt.

Herbs with lobed or divided leaves and showy flowers. Bracts of the involucre 1-3, separate, or none. Petals cuneate, often toothed or fimbriate. Carpels beaked, 10-20, forming an ovulary with equal number of cavities. Cavities 1-ovuled and 1-seeded.

1. **Callirrhoe involucrata** (T. & G.) A. Gray. Purple Poppy-mallow.

Perennial, procumbent, ascending herbs, 1-2 feet long, pubescent with long hispid hairs; taproot fleshy sometimes reaching to depth of 10 or more feet. Leaves cordate-orbicular, the lobes dentate or incised, blades 3 inches wide, $2\frac{1}{2}$ inches long; petioles 3-5 inches long. Flowers bright red purple, $1\frac{1}{2}$ inches wide. A waif in Franklin Co.

ALTHAEA L.

Pubescent herbs with lobed or divided leaves and solitary or racemose flowers. Involucre of 6-9 united bracts; carpels and cavities of the ovulary numerous, separating at maturity into 1-seeded fruits.

1. Leaves more or less 3-lobed, very velvety, the lobes acute.

1. Leaves with 5-7 rounded lobes, with hairy pubescence. *A. officinalis.*
A. rosea.

1. **Althaea officinalis** L. Marsh-mallow.

Perennial plants; leaves ovate, dentate, and generally 3-lobed, blades $2\frac{1}{2}$ inches broad and $2\frac{3}{4}$ inches long. Waif in Scioto Co.

2. **Althaea rosea** Cav. Hollyhock.

Perennial plants 10 feet or less tall; leaves cordate, dentate, blades 3-6 inches broad, $3\frac{3}{4}$ to $4\frac{1}{2}$ inches long, petioles 3-7 inches long; flowers 4 inches in diameter. Lucas, Erie, Madison, Montgomery, Brown, and Scioto Co.

SIDA L.

Herbs with serrate, crenate, or lobed leaves and bisporangiate flowers. Involucre none, cavities of the ovulary 1-ovuled, indehiscent, or two-valved at apex.

1. Leaves not lobed, ovate, or oblong-lanceolate. *S. spinosa.*

1. Leaves palmately lobed or palmately veined, glabrous or nearly so, tall. *S. hermaphrodita.*

1. **Sida spinosa** L. Prickly Sida.

Annual ascending, finely pubescent; leaves ovate, blades 1 inch wide, 2 inches long, petiole 1 inch long. Rather general.

2. **Sida hermaphrodita** (L.) Rusby. Tall Sida.

Perennial; leaves ovate, orbicular, deeply 3-7 lobed, the lobes lanceolate or ovate, incised, dentate, acute or acuminate, blades 4 inches wide, $5\frac{1}{2}$ inches long; flowers white and numerous. No specimens.

NAPAEA L.

Erect, perennial herbs, with palmately-lobed leaves and small, white diecious flowers in corymbose panicles; involucre none, carpels 8-10, separating at maturity into 1-seeded fruits.

Napaea dioica L. Glade-mallow.

Stems and leaves glabrous, or nearly so, leaves 5-9 lobed, lobes incisely cut and acute, leaf blades 8-20 inches wide, 4-10 inches long; flowers white, diecious. Defiance, Clark, Madison, Franklin, Fairfield and Highland Co.

ABUTILON Gaertn.

Ours annual herbs, soft pubescent with cordate leaves; involucre none; carpels usually 10-15 united, each cavity 3-9 ovuled, dehiscent at maturity.

Abutilon abutilon (L.) Rusby. Velvet-leaf.

Annual, stout, 6 feet high, densely velvety pubescent; leaves long petioled, cordate, orbicular, dentate or nearly entire; blades 3-9 inches wide, 3-9 inches long. General and abundant.

HIBISCUS L.

Herbs or shrubs with dentate or lobed leaves and showy campanulate flowers. Bracts of the involucre numerous and narrow; gynecium of 5 united carpels, ovulary 5-locular with 3 or more ovules in each cavity, capsule 5-valved.

1. Leaves lobed. 2.
1. Leaves deeply divided. *H. trionum*.
2. Leaves ovate, not prominently lobed, obtuse at the base; stem and lower surface of leaves pubescent. *H. moscheutos*.
2. Leaves commonly halberd-form; three-lobed, truncate at the base; stem and leaves glabrous. *H. militaris*.

Hibiscus moscheutos L. Swamp Rose-mallow.

Erect, leaves ovate or ovate-lanceolate, cordate or obtuse at the base, acute or acuminate at the apex, sometimes lobed at the middle, palmately veined, dentate or crenate, leaf blades $3\frac{1}{2}$ -4 inches wide, $4-5\frac{1}{2}$ inches long, petiole $2-2\frac{1}{2}$ inches long; flowers 6 inches in diameter. Ashtabula, Cuyahoga, Erie, Wayne, Licking, and Perry Co.

Hibiscus militaris Cav. Halberd-leaf Rose-mallow.

Erect, nearly glabrous, leaves ovate in outline, acute or acuminate, cordate or truncate at the base, margins dentate-crenate, the lower or all of them hastately lobed, leaf blades $3\frac{1}{2}$ inches wide at the base, $3\frac{1}{2}$ -4 inches long, petioles $2\frac{1}{2}$ -3 inches long; flowers $2\frac{1}{2}$ inches in diameter; reddish pink in color. Lucas, Defiance, Paulding, Auglaize, Shelby, and Franklin Co.

Hibiscus trionum L. Bladder Ketmia.

Annual, pubescent; leaves ovate or orbicular in outline, 3-7 lobed or divided, lobes obtuse, dentate-crenate or cleft, leaf blades $1\frac{1}{2}$ inches wide, 1-2 inches long; fruiting calyx inflated, membranous, 5-winged. General.