

2. TRIADENUM Raf. Marsh St. John's-wort

Marsh herbs; perennial; glabrous; perianth 5-merous; petals pink; stamens 9, the filaments connate into 3 fascicles of 3, alternating with 3 conspicuous glands.

1. *Triadenum fraseri* (Spach) Gleason

St. John's-wort

Leaves purplish, obtuse, rounded at apex, dotted beneath, sessile, cordate at base; sepals oblong or elliptic, 5 mm long or less, obtuse to rounded at apex; filaments united only at base; styles usually not more than 1 mm long. Syn.: *T. virginicum* (L.) Raf. var. *fraseri* (Spach) Cooperr.

REFERENCES: Riddell 1834:117 (*Hypericum virginicum*, marshes—dense and shady woods); Riddell 1835:15 (*Hypericum virginicum*, Worthington, wet woods); Sullivant 1840:12 (*Elodea virginica* Nutt.); Selby & Craig 1890:8 (*Elodea campanulata* Pursh).

HERBARIUM RECORD: 1840—Cols., Sullivant.

NOTE: Not mapped for Franklin Co. by Cooperrider 1995:124.

TILIACEAE, Linden Family

1. TILIA L. Linden, Basswood

Trees; leaves alternate, simple, stipuled, 2-ranked, blades ovate, oblique at base, serrate or dentate; flowers hypogynous, bisporangiate, fragrant, cream-color, in cymes, the peduncle adnate for part of its length to a large bract; perianth regular; sepals and petals 5; a staminode opposite each petal; stamens many, sometimes united basally in 5 groups; carpels 5, united; ovary 5-loculed, 2 ovules in each locule; style 1; fruit indehiscent, pubescent, 1-2-seeded.

Other species of *Tilia* cultivated on the OSU Campus are Littleleaf Linden (*T. cordata* Mill., Chadwick Arboretum #3), Mongolian Linden (*T. mongolica*, OSU Campus Trees #45), and Silver Linden (*T. tomentosa* Moench, OSU Campus Trees #14).

a Leaf-blades glabrous except for axillary tufts of hairs beneath; bracts glabrous. 1. *T. americana*

a' Leaf-blades pubescent beneath with dense white (or brownish) stellate hairs; bracts pubescent on lower side.

2. *T. heterophylla*

1. *Tilia americana* L.

Basswood, Linden

Forest tree; under surface of leaves glabrous but may be hairy along veins. Syn.: *T. glabra* Vent., incl. †*T. neglecta* Spach

REFERENCES: Riddell 1834:117; Sullivant 1840:13; Craig 1890:71 (on the campus, along the river, and in the woods where there are several specimens; many of the trees planted on the campus a few years ago have been broken down by the wind and several have died and been replaced; where sheltered it grows quite large and makes a fine shade tree; 15 Jul 1882, 24 Jun 1887); Selby & Craig 1890:8; Braun 1961:269 (illus. p. 268); Cooperrider 1995:99 (illus. p. 100).

HERBARIUM RECORDS: [date?—Olentangy R., *W. Green*; Jun 1888—Cols., *Craig*; 6 Jul 1892—Cols., *Werner*, 8 & 16 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), ravine & floodplain, *Brauning 314 & 315*; 18 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park, (Franklin & Delaware Cos.), floodplain, *G. Moore 316*; 1983—Blendon Woods, *Owens*; 1 Jul 1986—Highbanks Metro Park (Delaware Co.), best on dry shale bluffs, *Kasko*; 23 Jun 1991—E bank of Scioto R., James J. Thomas Park, N of Fishinger Rd., Perry Twp., *Lowden 4729*.

2. †*Tilia heterophylla* Vent.

White Basswood

Tree; leaf blades pubescent beneath with dense white stellate hairs.

HERBARIUM RECORD: 1834—Worthington, *Paddock Collection* (ILL).

NOTE: Not mapped for Franklin Co. by Braun 1961:270 or Cooperrider 1995:101 (illus. p. 100).

MALVACEAE, Mallow Family

Herbs or shrubs; often stellate-pubescent; leaves alternate, simple usually palmately veined; flowers hypogynous, bisporangiate or monosporangiate; sepals 5, separate, or united at base, frequently subtended by a circle of bracts; corolla regular; petals 5, separate or nearly so; stamens many, the filaments united in a sheath around the style or

styles, this sheath adnate to the petals at base, filaments separate distally; carpels 5-many, united; styles as many as carpels or styles 1 with apical branches as many as carpels; fruit a capsule or separating into the dehiscent or indehiscent 1-to several-seeded carpels.

Callirhoe involucrata (Torr. & A.Gray) A.Gray, the Poppy-mallow, was reported by Lazenby 1891:301 (*Callirhoe papaver* A.Gray?; plants introduced at Sellsville, near Cols.), Selby 1891a:111a (found at Sellsville, on the circus grounds and appearing by some agency connected therewith), and Selby 1891b:75. Collections of this species from Franklin Co. are unknown. Not mentioned for Franklin Co. by Cooperrider 1995:101.

- a Flowers with circle of bracts below the calyx.
 - b Carpels 5; fruit a 5-loculed capsule. **1. HIBISCUS**
 - b' Carpels more than 5, united in a ring, separating at maturity.
 - c Involucral bracts 6 or more, united at base. **3. ALTHAEA**
 - c' Involucral bracts 3; petals notched or obcordate. **4. MALVA**
- a' Flowers without bracts below the calyx.
 - d Flowers in terminal panicles; petals white; blades palmately lobed, lobes acute. **5. NAPAEA**
 - d' Flowers axillary; petals yellow.
 - e Blades lanceolate, serrate; a small spine below base of petiole. **6. SIDA**
 - e' Blades ovate-cordate, entire or nearly so, velvety-pubescent. **2. ABUTILON**

1. HIBISCUS L. Rose-mallow

Shrubs and herbs; leaves palmately lobed or dentate; flowers showy, 5-15 cm wide; involucral bracts linear; column of stamens bearing anthers at sides; carpels 5; ovary 5-loculed, 3 or more ovules in each locule; styles separate at apex; stigmas capitate; fruit a capsule.

- a Shrubs. **1. *H. syriacus***
- a' Herbs.
 - b Leaves deeply lobed or divided into narrow divisions; calyx conspicuously veined, inflated in fruit; corolla pale yellow with purple eye. **4. *H. trionum***
 - b' Leaves unlobed or with few lobes.
 - c Upper leaf-blades usually hastate; stem, calyx, and lower leaf surface glabrous or nearly so; petals pink with darker base. **2. *H. laevis***
 - c' Leaf-blades not hastate; stem pubescent above, calyx and lower leaf surface stellate-pubescent, upper leaf surface glabrous or glabrate. **3. *H. moscheutos***

1. **Hibiscus syriacus* L.

Rose of Sharon

Adventive (native of E Asia)

Shrub; leaves usually 3-lobed, rounded.

REFERENCE: Cooperrider 1995:110.

HERBARIUM RECORD: 15 Oct 1932—escaped, Cols., *J. H. Schaffner*.

2. *Hibiscus laevis* All.

Halberd-leaved Rose-mallow

Tall coarse herbs; flowers large and showy, corolla pink; calyx subtended by 10-14 bracts; leaves 3-lobed, hastate at base. Syn.: *H. militaris* Cav.

REFERENCES: Sullivant 1840:13; Selby & Craig 1890:8; Selby 1892a:111 (#115 Re-collections, Island, Scioto R., *Wilcox*); Cooperrider 1995:112 (illus. p. 111).

HERBARIUM RECORDS: 1 Aug 1892—Scioto R., near Cols., *E. M. Wilcox*; 23 Aug 1893—Scioto R., near Cols., *E. M. Wilcox*; 23 Aug 1893—Cols., *Bogue* (BGSU); 17 Aug 1898—Scioto R., W of Cols., *J. H. Schaffner*; 11 Aug 1989—E bank Scioto R., Trabue-Murphy Landing, below Fishinger Rd. bridge, Upper Arlington, Perry Twp., *Lowden 4276*; 23 Sep 1991—Scioto R. banks, common, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac 4344*.

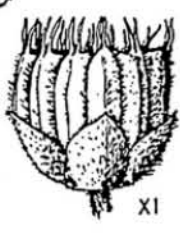
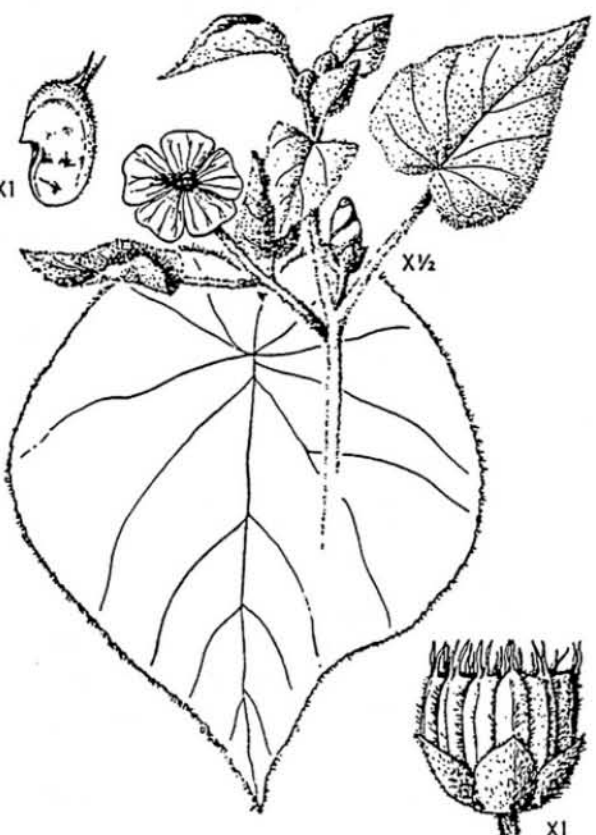
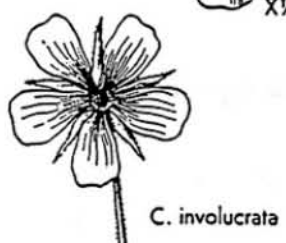
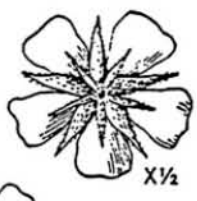
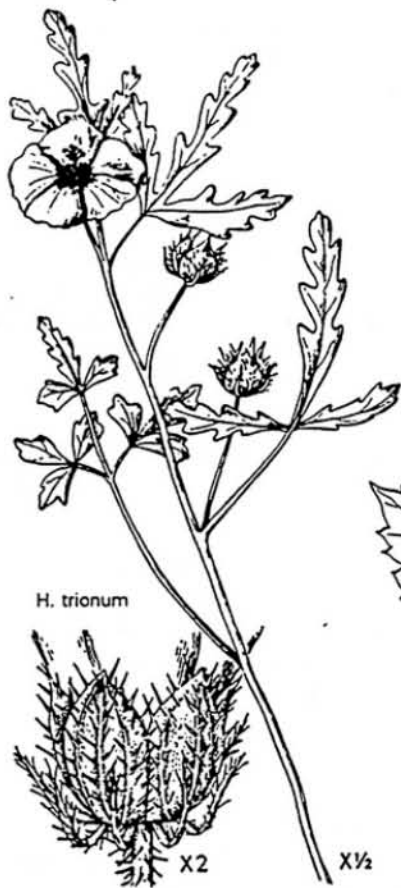
3. *†*Hibiscus moscheutos* L.

Swamp Rose-mallow

Adventive but native in S Ohio

Stem tall; leaves ovate-lanceolate, averaging 2.5 times as long as wide; lower surface of leaf and calyx stellate-pubescent; peduncles articulate near or above the middle, usually fused with a leaf bearing petiole base; style branches

HIBISCUS
CALLIRHOE
ABUTILON



A. theophrasti

sparsely pubescent; corolla cream-color or white, with a darker red or purple center; capsule with an acute or beaked summit.

HERBARIUM RECORDS: 4 Oct 1991—Battelle Darby Creek Metro Park, open woody swamp field along Little Darby Creek, day camp area, *Lowden 4869* (fruiting); 9 & 30 Aug 1992—Battelle Darby Creek Metro Park, woody open swamp field along Little Darby Creek, day camp area, *Lowden 5014* (flower buds) & *5035* (flowering).

NOTE: About 1986, Jack McDowell brought plants from West Virginia and planted them in the park. Not mapped for Franklin Co. by Cooperrider 1995:110 (illus. p. 111).

4. **Hibiscus trionum* L.

Flower of an hour, Bladder Ketmia

Naturalized (native of S Europe)

Herbs; leaves deeply 3-lobed, lobes pinnatifid; corolla cream with purple center; calyx inflated in fruit.

REFERENCES: Selby & Craig 1890:8 (introduced); Kellerman & Werner 1893:228 (in the vineyard and quince orchard; S of station bldg., 2 Aug 1892; noticed also at other places on the farm and campus); Cooperrider 1995:112 (illus. p. 111).

HERBARIUM RECORDS: 10 Aug 1890—Westerville, *E. V. Wilcox*; 4 Sep 1890—Westerville, roadsides, *Selby* (OS, WOOS); 4 Oct 1890—Central College, *E. V. Wilcox*; 4 Nov 1911—Westerville, fields, *Hanawalt*; 5 Aug 1979—S of RR tracks just E of Grandview Ave., N of Rt. 33, Cols., *W. Carr 1851*; 7 Jul 1982—Blendon Woods, main picnic area, *Owens*; 2 Jul 1987—OSU campus, weedy areas around newly constructed parking garage on 12th Ave., just W of Neil Ave., Cols., *T. Lammers 6171*; 15 Jul 1988—Highbanks Metro Park (Delaware Co.), sandbars, along Olentangy R., *Watts 446* (OS, OWU); 8 Aug 1990—jct. of Amity Rd. & Scioto Darby Creek Rd., field along N side of Scioto Darby Creek Rd., Brown Twp., *Lowden 4518*; 10 Sep 1991—sandbar of Big Darby Creek at Rt. 40, Prairie Twp., *Lowden 4818*.

2. ABUTILON Mill.

Branched annual, velvety stellate-pubescent; leaf blades broadly ovate, cordate, acuminate, entire or nearly so; flowers axillary, 1.5-2.5 cm wide; involucre bracts none; calyx 5-cleft; petals yellow; carpels 10-15, pubescent, conspicuously beaked, each containing 3-9 ovules, dehiscent.

1. **Abutilon theophrasti* Medik.

Velvet-leaf, Indian Mallow

Naturalized (native of S Asia)

Velvety-pubescent herbs; calyx without subtending bracts; corolla orange-yellow; leaves ovate-cordate, apex acuminate, carpels hairy, conspicuously beaked. Syn.: *A. avicennae* Gaertn.

REFERENCES: Riddell 1834:117 (*Sida abutilon*; roadsides); Sullivant 1840:13 (naturalized); Craig 1890:53, 71 (#75; sparingly on rich soils and in cultivated grounds; in the clover meadow W of barn and N of road; E half of this field has been plowed up and divided into plots by the Experiment Station, but there will probably be plenty of these weeds remaining in other localities; University Farm Sep & Oct 1887); Selby & Craig 1890:8 (introduced); Cooperrider 1995:109 (illus. p. 111).

HERBARIUM RECORDS: Jul 1888—Cols., *Craig*; 13 Aug 1890—Ag. Ex. Station, Cols., *Hine*; 20 Aug 1911—Westerville, fields, *Hanawalt*; 20 Sep 1982—Blendon Woods, Big Meadow, *Owens*; 8 Sep 1991—S on Rt. 315, Goodale St. exit, Franklin Twp., *Lowden 4805*.

3. ALTHAEA L.

Herbs pubescent, perennial; flowers conspicuous in upper axils, 3-10 cm wide; bractlets of epicalyx 6-9, connate at base; carpels many.

a Plants branched, 5-12 dm tall; flowers pink, 3 cm wide. 1. *A. officinalis*

a' Plant mostly unbranched, more than 1.5 m tall; flowers of various colors, large, commonly 10 cm wide. 2. *A. rosea*

1. **Althaea officinalis* L.

Marsh-mallow

Adventive (native of Europe)

REFERENCE: Riddell 1834:117 (naturalized).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Cooperrider 1995:105 (illus. p. 106).

2. **Althaea rosea* (L.) Cav.

Hollyhock

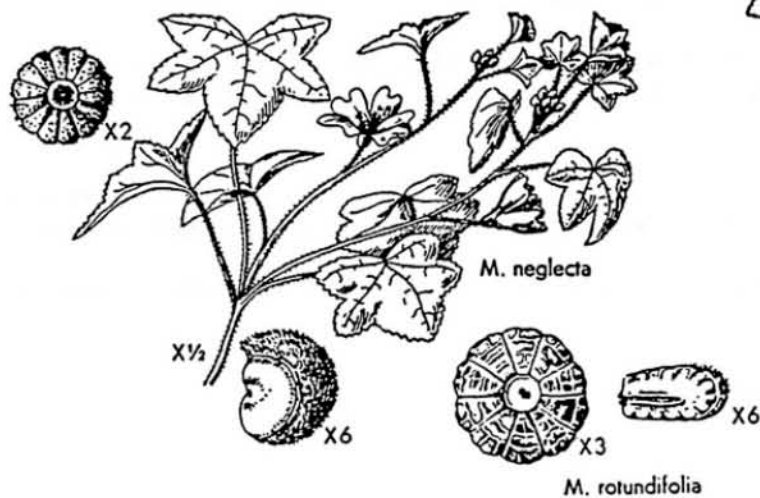
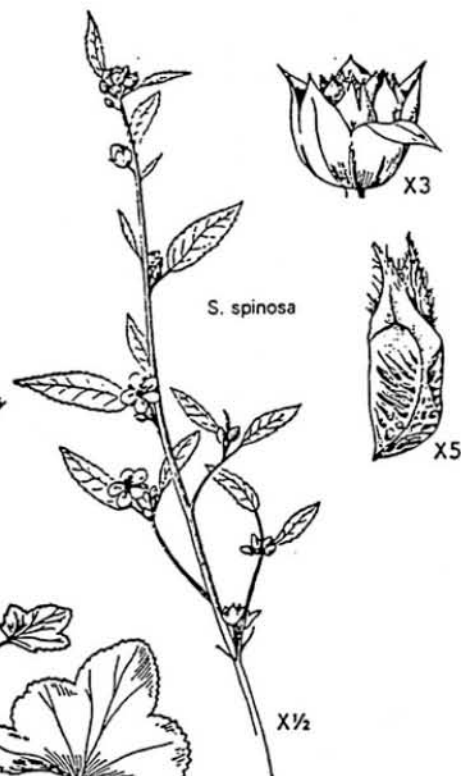
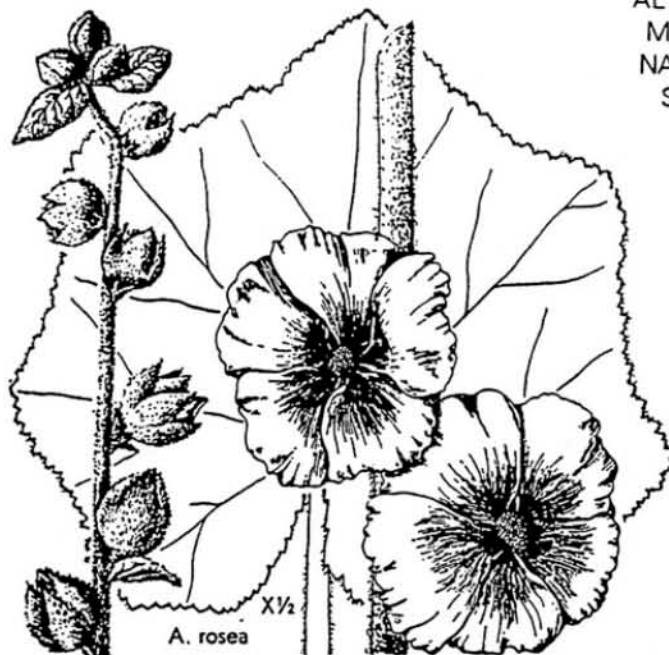
Adventive (Eurasian)

Tall erect stellate-pubescent herb; bractlets broadly triangular; leaves sparsely and harshly pubescent, blades large orbicular, shallowly to deeply lobed, margins toothed; flowers 7-10 cm wide, in a raceme, petals of various colors; carpels many, 1-seeded. Syn.: *Alcea rosea* L.

HERBARIUM RECORD: 6 Jul 1992—Rt. 33 W of College Ave. & Livingston Ave., 1 mi. before getting on Rt. 70 W, Montgomery Twp., Cols., *Lowden 4989*.

NOTE: Plants also seen in alleys around Cols. Not mapped for Franklin Co. by Cooperrider 1995:107 (illus. p. 106).

ALTHAEA
MALVA
NAPAEA
SIDA



4. MALVA L. Mallow

Herbs; flowers with 3 bracts below the calyx; petals obcordate; stamen-column anther-bearing at the summit; fruit a disk of many carpels arranged in a circle, each carpel 1-seeded and indehiscent.

a Petals red-purple, 2-2.5 cm long. 1. *M. sylvestris*

a' Petals white or pink, 1 cm long or less.

b Petals about 1 cm long, twice as long as the sepals; mature carpels rounded and not rugose on back.

2. *M. neglecta*

b' Petals 4-5 mm long, about equal or slightly longer than sepals; outer faces of mature carpels rugose-reticulate.

3. *M. rotundifolia*

1. **Malva sylvestris* L.

High Mallow

Adventive (native of Eurasia)

Leaves unlobed to shallowly round lobed; calyx subtended by 3 bracts, oblong to lanceolate; petals much longer than calyx, red-purple.

REFERENCES: Riddell 1834:117 (naturalized); Cooperrider 1995:103 (illus. p. 104).

HERBARIUM RECORDS: 1836-1837—Worthington, *J. Paddock Collection* (ILL); 1890—yard N of street cor. stables on High St., opposite OSU grounds, *Surface* (CLM); 1891—Hilliard, *Selby*.

2. **Malva neglecta* Wallr.

Common Mallow, Cheeses

Naturalized (native of Eurasia & N Africa)

Herbs, prostrate to ascending; leaves with shallow rounded lobes; flowers about 1 cm long; calyx subtended by 3 bracts; corolla white-pink, or pale blue; mature carpels rounded and not rugose on back. Weed.

REFERENCE: Cooperrider 1995:103 (illus. p. 104).

HERBARIUM RECORDS: 11 Jul 1892—Cols., *Bogue*; 23 May 1896—Worthington, *M. Wright*; 7 Jun 1911—Westerville, gardens, *Hanawalt*; 2 Jun 1921—Westerville, fields, *B. Wood*; 29 May 1922—Westerville, *Horlacher*; 25 May 1980—OSU campus, 10th Ave., Cols., *H. Liu* 2245; 18 May 1986—between Highland and Worthington, alley running parallel to 8th and King, Cols., *Taylor-Lehman* 58; 30 May 1986—between Highland and Worthington running parallel to 8th and King, Cols., *R. Burnes* 47; 18 May 1988—OSU campus, lawn on E side of Kottman Hall, *M. Hoffman* 75; 22 May 1988—corner of Indianola & E. Patterson Ave., alley, Cols., *Kelly* 17; 23 May 1988—OSU, Coffey Rd., Horticulture Greenhouse #3 doorway, *Chinery* 59; 26 May 1988—OSU campus, numerous in disturbed soil, S of Howlett Hall, *Gerberick* 44; 5 Aug 1991—220 W. 12th Ave., sidewalk, OSU campus, *Lowden* 4786; 10 Oct 1991—edge of Whetstone Park tennis courts, Clinton Twp., *Lowden* 4872.

3. **Malva rotundifolia* L.

Low-mallow

Adventive (native of Europe)

Herbs, ascending or erect; leaves round, unlobed to round-lobed at base; calyx subtended by 3 bracts; petals pale lilac, shorter to slightly longer than calyx; outer faces of carpels rugose-reticulate, margins ridged.

REFERENCES: Riddell 1834:117 (roadsides); Sullivant 1840:13; Craig 1890:53, 55-56, 71 (#73; common along roadsides and in the edges of fields, also in gardens and partially cultivated orchards; especially abundant on a waste piece of ground, SE of the botanical bldg.; 4 May 1882; 28 May 1883; 25 May 1884; University Farm 20 May, Sep, Oct, 24 Nov 1887 & 18 May, 12 Nov, 1 Dec 1888); *Selby & Craig* 1890:8 (introduced); Cooperrider 1995:105 (illus. p. 104).

HERBARIUM RECORD: 30 Jun 1968—barn lot on W side of Dublin Rd., 0.2 mi. S of intersection with Rings Rd. near Dublin, *Moser*.

5. NAPAEA L. Glade-mallow

Tall herb; dioecious; blades palmately 5-9-lobed; bracts none; calyx 5-toothed; flowers white, in large terminal panicles, staminate with petals 5-9 mm long, with 15-20 or more stamens, carpellate with smaller petals and some rudimentary stamens; carpels about 10, 1-ovuled.

1. †*Napaea dioica* L.

Glade Mallow

Leaves large, deeply palmately lobed, lobes sharply toothed; flowers numerous, unisexual in terminal-axillary panicles; calyx without subtending bracts.

REFERENCES: Sullivant 1840:13 (*Sida dioica* Cav.); *Selby & Craig* 1890:8; Wilcox 1895:137 (S of Cols., *Osburn*); McCance 1984:A-255; Cooperrider 1995:107 (illus. p. 108).

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

6. SIDA L. Sida

Herbs; involucre bracts lacking; calyx 5-lobed, persistent in fruit; carpels 5-15, 1-ovuled, dehiscent.

1. **Sida spinosa* L.

Prickly Sida, Spiny Sida

Naturalized (pantropical)

Calyx without subtending bracts; leaves lanceolate, unlobed, serrate; petioles with a tiny spine-like process at base; flowers in small axillary clusters; petals yellow, about 5 mm long; carpels 5, each 2-beaked.

REFERENCES: Riddell 1834:117; Sullivant 1840:13 (naturalized); Craig 1890:53, 71 (#74; meadow E of the woods, where it is now becoming abundant; it has been recently introduced and is spreading rapidly from seed; six years ago there was none on the farm; 24 Jul 1887, University Farm Sep & Oct 1887); Selby & Craig 1890:8 (introduced); Cooperrider 1995:109 (illus. p. 106).

HERBARIUM RECORDS: 1837—Cols., Paddock Collection, *I. G. Jones* (ILL); Jul 1888—Cols., *Craig*; 1890—Central College, *Selby*; 15 Aug 1890—Cols., *Werner* (CLM); 22 Aug 1890—Cols. *Werner* (CLM); 16 Aug 1982—Blendon Woods, *Owens*; 2 Jul 1987—OSU campus, weedy areas around newly constructed parking garage on 12th Ave., W of Neil Ave., *T. Lammers* 6172; 12 Oct 1991—just N of Balsam Ave. & Juniper St., NW extreme of Grove City, Jackson Twp., *Lowden* 4875.

SARRACENIACEAE, Pitcher-plant Family

1. SARRACENIA L. Pitcher-plant

Bog herb; leaves basal, pitcher-shaped, spreading or somewhat ascending; flowers solitary on leafless scapes, 5-7 cm wide, purple-red, hypogynous, regular, bisporangiate; sepals and petals 5; stamens many; carpels 5, united; style 1, apex with a 5-rayed expansion, a stigma under each ray; ovary 5-loculed; fruit a many-seeded capsule; placentae central.

1. †*Sarracenia purpurea* L.

Pitcher-plant

Leaves curved-ascending from the base, broadly winged; petals dark purple-red.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

DROSERACEAE, Sundew Family

1. DROSERA L. Sundew

Small bog herbs; leaves basal or, in submersed plants, cauline, bearing reddish glandular hairs from which a viscid secretion exudes; flowers hypogynous, bisporangiate, 4-7 mm wide; perianth regular, sepals, petals, and stamens 4-8, petals separate; carpels united; styles separate, 3-5, each forked; ovary 1-loculed with 3-5 parietal placentae.

1. †*Drosera rotundifolia* L.

Sundew

Leaf-blades expanded, suborbicular, wider than long; petiole distinct, hairy.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: *Sullivant* 1840:11 and *Selby & Craig* 1890:10 reported on plants collected in adjacent counties.

CISTACEAE, Rock-rose Family

Herbs and shrubs; leaves simple, alternate or opposite, entire; flowers hypogynous, bisporangiate; sepals 5, the two of the outer series smaller; corolla regular or none; stamens few to many; carpels 3, united; style often short or lacking; stigmas 1 or 3; ovary 1-loculed with 3 parietal placentae, sometimes 3-loculed as result of growth inward of placentae; fruit a capsule.

1. HELIANTHEMUM Mill. Frostweed

Stellate-pubescent, herbaceous or somewhat shrubby; earlier flowers with 5 yellow petals and with many stamens; later flowers cleistogamous, with smaller petals or none, and with fewer stamens; style short.

1. †*Helianthemum canadense* (L.) Michx.

Canada Frostweed