



# Flora of North America

MAZACEAE Reveal  
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## MAZACEAE Reveal \* Mazus Family

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**Herbs**, annual or perennial, not succulent, autotrophic. **Stems** horizontal to ascending or erect, 4-angled. **Leaves** usually cauline and basal, [basal only], simple; stipules absent; petiole present or absent; blade <not fleshy or leathery>, margins entire, serrate, crenate, or pinnatifid. **Inflorescences** scapose or terminal racemes. **Flowers** bisexual, perianth and androecium hypogynous; sepals 5, connate proximally, calyx radially symmetric; petals 5, connate proximally, corolla bilaterally symmetric, bilabiate; stamens 4, didynamous, staminode 0; pistil 1, 2-carpellate, ovary superior, 2-locular, placentation axile; ovules anatropous, unitegmic, tenuinucellate; style 1; stigma capitate and slightly 2-lobed. **Fruits** capsules, dehiscence loculicidal [fleshy, berrylike (*Lancea*)]. **Seeds** 20--40, yellowish brown, ellipsoid; embryo straight, endosperm sparse, cellular.

Genera 2, species 32 (1 genus, 2 species in the flora): introduced; e Asia, Australia; introduced also in Central America, South America, Europe, Africa.

Mazaceae, which includes *Lancea* Hooker f. & Thomson and *Mazus*, was traditionally allied with *Mimulus* in the Scrophulariaceae; a study by P. M. Beardsley and R. G. Olmstead (2002) suggested that the three genera belonged in a more broadly circumscribed Phrymaceae. Two subfamilies were proposed, but not published, to accommodate the alignment of *Lancea* and *Mazus* in a clade sister to the rest of the Phrymaceae. D. C. Albach et al. (2009) suggested that, on the basis of monophyly, *Lancea* and *Mazus* could not be included in the Phrymaceae or any other then-circumscribed family. J. L. Reveal's (2011) publication of the family name solves this problem.

1. MAZUS Loureiro, Fl. Cochinch. 2: 385. 1790 \* [Greek *mazos*, breast, alluding to two ridges on abaxial lip of corolla or to nipplelike tubercles at inner throat of corolla in *M. pumilus*] I

Brian R. Keener

*Hornemannia* Willdenow

**Herbs:** stolons absent or present. **Stems** glabrous or hairy. **Leaves:** blade margins usually entire, serrate, or crenate, rarely pinnatifid. **Racemes:** bracts absent. **Pedicels** present; bracteoles present. **Flowers:** calyx campanulate to funnelform, lobes lanceolate to slightly ovate; corolla purplish to violet and white or white with throats usually spotted yellow, tubular, abaxial lobes 3, forming a prominent, projecting lip, adaxial lobes 2; abaxial throat lined with clavate trichomes; stamens adnate to corolla throat, filaments glabrous, anthers often loosely connate in pairs. **Capsules** symmetric, <obovoid>. **Seeds:** wings absent.  $x = 20$ .

Species 35 (2 in the flora): introduced; e Asia; introduced also in Central America, South America, Europe, Africa, Australia.

1. Stolons absent; corollas 7--9 mm..... 1. *Mazus pumilus*  
1. Stolons present; corollas 13--22 mm ..... 2. *Mazus miquelii*

1. **Mazus pumilus** (Burman f.) Steenis, Nova Guinea n.s., 9: 31. 1958 \* Japanese mazus F I W

*Lobelia pumila* Burman f., Fl. Indica, 186, plate 60, fig. 3. 1768; *Lindernia japonica* Thunberg; *Mazus japonicus* (Thunberg) Kuntze; *M. rugosus* Loureiro

**Annuals**, 2--20 cm; stolons absent. **Stems** erect, ascending, or prostrate, sometimes branched near base, hairy. **Leaves:** basal leaves petiolate, petiole 2--13 mm, blade ovate to oblanceolate, 5--30 x 2--15 mm, faces glabrous; cauline leaves sessile or petiolate, petiole 0--8 mm, ciliate or glabrous, blade obovate to spatulate, 8--30 x 3--20 mm, base long-cuneate, <usually ciliate near base>, faces glabrous or abaxially hairy along veins, adaxially hairy proximally. **Racemes** scapose or terminating erect stems, 0.5--12 cm. **Pedicels** 2--10 mm, hairy or glabrous; bracteoles narrowly triangular, 1--1.5 mm, glabrous. **Flowers:** calyx 5--7 mm, sparsely hairy, tube 2--3 mm, lobes 3--4 mm; corolla 7--9 mm, tube 4--5 mm, abaxial lobes 3--4 mm, adaxial lobes 2--3 mm. **Capsules** 2--3 x 1.8--2.2 mm. **Seeds** 0.4--0.6 x 0.3--0.4 mm.  $2n = 40$  (Asia).

Flowering spring--fall. Lawns, roadsides, stream banks, lakeshores, shady, moist areas; 0--700 m; introduced; Ala., Ark., Del., D.C., Fla., Ga., Ill., La., Mass., Miss., Mo., N.Y., N.C., Ohio, Okla., Oreg., Pa., S.C., Tenn., Tex., Va., Wash., W.Va., Wis.; e Asia; introduced also in Central America, South America, Europe, Africa, Australia.

Burman's description and illustration of the type do not seem to match this species. Steenis examined specimens used by Burman and determined that they are indeed referable to *Mazus pumilus*; his combination has priority over *M. japonicus* (Thunberg) Kuntze.

2. **Mazus miquelii** Makino, Bot. Mag. (Tokyo) 16: 162. 1902 \* Creeping or Miquel's mazus I

*Vandellia japonica* Miquel, Ann. Mus. Bot. Lugduno-Batavi 2: 118. 1865, not *Mazus japonicus* (Thunberg) Kuntze 1891; *M. reptans* N. E. Brown

**Perennials**, 5--35 cm; stolons present. **Stems** prostrate, <rooting adventitiously>, branched near base, glabrous. **Leaves:** basal leaves sessile, blade oblanceolate, 10--40 x 3--15 mm, faces glabrous; cauline leaves sessile, blade obovate to spatulate, 8--30 x 4--12 mm, base long-cuneate, faces glabrous. **Racemes** scapose

or terminating stolons, 5--15 cm. **Pedicels** 2--10 mm, glabrous; bracteoles narrowly triangular, 1.5--2 mm, glabrous. **Flowers:** calyx 4.5--7 mm, glabrous, tube 2.5--4 mm, lobes 2.5--4 mm; corolla 13--22 mm, tube 6--7.5 mm, abaxial lobes 7--13 mm, adaxial lobes 6--8 mm. **Capsules** 3.5--5 x 3--3.5 mm. **Seeds** 0.4--0.6 x 0.3--0.4 mm.  $2n = 20$  (Asia).

Flowering spring--late summer. Lawns, shady, moist areas; 10-500 m; introduced; Del., La, Md., Mich., N.J., N.Y., N.C., Pa., S.C., Tenn., Va., W.Va.; e Asia; introduced also in Europe, Australia.

*Mazus miquelii* is often sold as *M. reptans* in the horticulture trade. Corollas of cultivated forms are sometimes solid white except for yellow spots in the throat; these may escape in the flora area.