

# KEYS TO THE SPECIES OF MALPIGHIACEAE FOUND IN THE USA

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## KEY FOR SPECIMENS BEARING FLOWERS

1. Flowers cleistogamous, minute (up to 1.5 mm in diameter), without visible petals, stamens, or styles.
  2. Plants often decumbent with branches ascending; larger leaves 8–23 mm wide, 1.3–2.5 times as long as wide. *Aspicarpa hirtella* Rich.
  2. Plants erect or nearly so; larger leaves 2–8 mm wide, (3–) 3.3–7 (–8.3) times as long as wide. *Aspicarpa hyssopifolia* A. Gray
1. Flowers chasmogamous, large (at least 6 mm in diameter), showy with visible petals, stamens, and style(s).
  3. Styles 1 in each flower.
    4. Petals abaxially densely sericeous, 4 pinkish white, the fifth distally pinkish white and proximally lemon-yellow; stamens 10, all fertile; exotic locally naturalized in southern Florida. *Hiptage benghalensis* (L.) Kurz
    4. Petals glabrous, yellow, sometimes with red claws or blotches or turning orange or red in age; stamens 2–5, 2 or 3 fertile, the others, if present, reduced to staminodes without anthers; native in sw US.
  5. Petals lemon-yellow; slender wiry twining vines. *Cottisia gracilis* (A. Gray) W. R. Anderson & C. Davis
  5. Petals carrot-yellow; erect subshrubs or perennial herbs or decumbent, non-twining perennial herbs.
    6. Chasmogamous flowers borne in umbels of 4 terminating leafy shoots; plants often decumbent with branches ascending; larger leaves 8–23 mm wide, 1.3–2.5 times as long as wide. *Aspicarpa hirtella* Rich.
    6. Chasmogamous flowers borne singly in axils of full-sized leaves; plants erect or nearly so; larger leaves 2–8 mm wide, (3–) 3.3–7 (–8.3) times as long as wide. *Aspicarpa hyssopifolia* A. Gray

2. Styles 3 in each flower.

7. Petals lemon-yellow, sometimes suffused with red or turning orange or red in age.

8. Petals glabrous; sepals all without abaxial glands; styles slender and subulate with minute stigmas; suffrutescent herbs or small shrubs.

*Galphimia angustifolia* Benth.

8. Petals abaxially white-sericeous or -tomentose; sepals (4 of the 5) bearing pairs of large multicellular glands on abaxial surface; styles uniformly stout their whole length, with a large stigma on the internal angle; woody vines or shrubs with scandent or trailing branches. *Callaeum septentrionale* (Adr. Juss.) D. M. Johnson

7. Petals pink or pink and white, lavender-pink, white, or red.

9. Habit a woody vine, climbing high in trees; exotic locally naturalized in southern Florida.

*Heteropterys brachiata* (L.) DC.

9. Habit an erect shrub or subshrub; species native in southern Florida and southern Texas.

10. Inflorescences terminal, racemose; pedicels sessile; stipules intrapetiolar; leaves eglandular; styles slender and subulate with minute stigmas; Florida.

*Byrsonima lucida* (Mill.) DC.

10. Inflorescences axillary, umbels or corymbs; pedicels raised on well-developed peduncles; stipules interpetiolar; leaves usually bearing 2--4 glands embedded in abaxial surface of blade; styles stout, cylindrical, truncate at apex with large stigmas; Texas.

*Malpighia glabra* L.

KEY FOR SPECIMENS BEARING FRUITS

1. Fruits fleshy, indehiscent.

2. Inflorescences terminal, racemose; pedicels sessile; stipules intrapetiolar; leaves eglandular; Florida.

*Byrsonima lucida* (Mill.) DC.

2. Inflorescences axillary, umbels or corymbs; pedicels raised on well-developed peduncles; stipules interpetiolar; leaves usually bearing 2--4 glands embedded in abaxial surface of lamina; Texas.

*Malpighia glabra* L.

1. Fruits dry at maturity, breaking apart into samaras or unwinged nutlets or cocci.

3. Mericarps unwinged, smooth or bearing at most a very short dorsal crest and/or lateral ribs.

4. Mericarps smooth, with thin brittle walls; sepals all without abaxial glands.

*Galphimia angustifolia* Benth.

4. Mericarps with a dorsal crest and often lateral ribs, the walls thick and tough; chasmogamous flowers bearing 8 abaxial glands on 4 of the 5 sepals, the tiny cleistogamous flowers with all sepals eglandular.

5. Chasmogamous flowers borne in umbels of 4 terminating leafy shoots; plants often decumbent with branches ascending; larger leaves 8–23 mm wide, 1.3–2.5 times as long as wide.

*Aspicarpa hirtella* Rich.

5. Chasmogamous flowers borne singly in axils of full-sized leaves; plants erect or nearly so; larger leaves 2–8 mm wide, (3–) 3.3–7 (–8.3) times as long as wide.

*Aspicarpa hyssopifolia* A. Gray

3. Mericarps developing into samaras bearing obvious wings.

6. Each samara bearing 1 elongated dorsal wing, the sides of the nut smooth or bearing at most short winglets or crests.

7. Wing of samara with the adaxial edge thickened, the veins bending from it toward the thinner abaxial edge; slender wiry vine in desert shrubs; native in sw US.

*Cottisia gracilis* (A. Gray) W. R. Anderson & C. Davis

7. Wing of samara with the abaxial edge thickened, the veins bending from it toward the thinner adaxial edge; woody vine climbing in trees; exotic species locally naturalized in Florida.

*Heteropterys brachiata* (L.) DC.

6. Each samara bearing 2 or 3 large lateral wings, the dorsal wing none or, if present, notably smaller than the lateral wings.

8. Lateral wings of samara 2, semicircular; dorsal wing well developed, like lateral wings but smaller; native in Texas.

*Callaeum septentrionale* (Adr. Juss.) D. M. Johnson

8. Lateral wings of samara 3, elongated, much longer than broad; dorsal wing mostly lacking or at most a low rib, rarely 1 elongated winglet much smaller than lateral wings; exotic species locally naturalized in Florida.

*Hiptage benghalensis* (L.) Kurz