

SOLANACEAE – NIGHTSHADE (TOMATO) FAMILY

Plant: herbs, woody vines, shrubs and trees

Stem:

Root:

Leaves: simple (rarely pinnate) and alternate except sometimes on the upper stem opposite; no stipules

Flowers: perfect; often showy; mostly (4)5 sepals, often persistent and partially fused; mostly (4)5 petals, sometimes tubular; stamens usually 5 (rarely 2 or 4) and alternate to corolla lobes; ovary superior, 1 style, stigma usually lobed

Fruit: capsule (2-chambered) or berry, usually many seeds, often oily

Other: large family; some poisonous; others include – peppers, tomato, potato, eggplant, tobacco and many ornamentals such as Petunia;
Dicotyledons Group

Genera: 95+ genera; locally *Datura*, *Solanum* (nightshade)

Flower Morphology in the Solanaceae (Nightshade or Tomato Family)



Bittersweet Nightshade



Clammy Groundcherry



Eastern Black Nightshade



Horse-Nettle



Jimsonweed



Garden Petunia

SOLANACEAE – NIGHTSHADE (TOMATO) FAMILY

Gray Five Eyes [Ground Saracha]; *Chamaesaracha coniodes* (Moric. ex Dunal) Britton
Jimsonweed [Thorn Apple]; *Datura stramonium* L. (Introduced).
Christmas Berry [Carolina Desert-Thorn]; *Lycium carolinianum* Walter var. *carolinianum*
Garden Petunia; *Petunia ×atkinsiana* D. Don ex Loud. [*axillaris* × *integrifolia*] (Introduced)
Cutleaf Groundcherry; *Physalis angulata* L.
Clammy Groundcherry; *Physalis heterophylla* Nees var. *heterophylla*
Longleaf Groundcherry; *Physalis longifolia* Nutt.
Husk Tomato [Downy Groundcherry]; *Physalis pubescens* L.
Chinese Lantern [Plains Purple Ground Cherry]; *Quincula lobata* (Torr.) Raf.
[Carolina] Horse-Nettle; *Solanum carolinense* L. var. *carolinense*
Bittersweet Nightshade; *Solanum dulcamara* L. var. *dulcamara*
Silver-Leaf Nightshade; *Solanum elaeagnifolium* Cav.
Eastern Black Nightshade [West Indian Nightshade]; *Solanum ptycanthum* Dunal
Buffalo Bur [Kansas Thistle] Nightshade; *Solanum rostratum* Dunal
Sticky Nightshade; *Solanum sisymbriifolium* Lam.

Gray Five Eyes [Ground Saracha]



Chamaesaracha coniodes (Moric. ex Dunal) Britton

Solanaceae (Nightshade or Tomato Family)
Quartz Mountain State Park, Greer County,
Oklahoma

Notes: 5-lobed (very shallow) flower, light yellow to greenish white, with purple-black blotches outside, sepals green and very hairy, on hairy pedicel; leaves usually deeply lobed and hairy; stem hairy; fruit a berry; low plant of dry prairies; spring to early fall

[V Max Brown, 2011]



Jimsonweed [Thorn Apple]

Datura stramonium L. (Introduced).

Solanaceae (Nightshade or Tomato Family)

Maumee River Metroparks, Lucas County, Ohio

Notes: flower funnel-shaped, 5-lobbed, white to blue (purple), solitary; leaves ovate, coarsely toothed to lobed, glabrous, pointed; fruit an erect spiny pod or capsule; especially common along edges of cultivated fields; summer to early fall

[V Max Brown, 2005]



Christmas Berry [Carolina Desert-Thorn]



Lycium carolinianum Walter
var. *carolinianum*

Solanaceae (Nightshade or Tomato Family)

Cedar Key, Levy County, Florida

Notes: shrub to vine-like; flower funnel-shaped, 4-lobed, blue-lavender-white; leaves simple, linear, fleshy, without petioles, wider toward tip; woody and somewhat deciduous, may have spines at branch tips; fruit a red drupe (winter); coastal areas (very salt tolerant)

[V Max Brown, 2011]



Garden Petunia

Petunia xatkinsiana D. Don ex Loud.

[*axillaris* x *integrifolia*] (Introduced)

Solanaceae (Nightshade or Tomato Family)

Oak Openings Metropark, Lucas County, Ohio

Notes: flower funnel-shaped, 5-lobed, many colors, solitary in leaf axils, calyx lobed to below middle; leaves ovate; plant densely hairy; commonly cultivated; summer to fall

[V Max Brown, 2006]



Cutleaf Groundcherry

Physalis angulata L.

Solanaceae (Nightshade or
Tomato Family)

HWY 82 access to Sac River, St. Clair County,
Missouri

Notes: 5-lobed (very shallow) flower, yellow,
without purple-black blotches or spots
inside, on long pedicel which is glabrous or
slightly hairy; leaves lanceolate, narrowing to
base, coarsely toothed, slightly hairy above;
stem mostly glabrous, angled; fruit a lantern-
like pod on very long peduncle; wet areas;
summer to early fall

[V Max Brown, 2010]



Clammy Groundcherry

Physalis heterophylla Nees var.
heterophylla

Solanaceae (Nightshade or
Tomato Family)

Maumee River Metroparks, Lucas County, Ohio

Notes: 5-lobed (very shallow) flower, yellow,
with 5 purple-black blotches or spots inside,
filaments flat; leaves cordate to ovate, toothed,
hairy below; stem with dense spreading hairs;

fruit a lantern-like pod; summer to early fall

[V Max Brown, 2006]



Longleaf Groundcherry

Physalis longifolia Nutt.

Solanaceae (Nightshade or Tomato Family)

Adams Lake State Park, Adams County, Ohio

Notes: 5-lobed (very shallow) flower, yellow, with 5 purple-black blotches or spots inside; leaves lanceolate to lanceolate ovate, lowest leaves very ovate, entire to wavy toothed, hairy below especially on veins, some hairs above or not; stem with sparse stiff hairs, pedicels with abundant, upward appressed hairs; fruit pods (calyx or lanterns) with hairs on ribbing veins but not between; summer to early fall

[V Max Brown, 2009]



Husk Tomato [Downy Groundcherry]



Physalis pubescens L.

Solanaceae (Nightshade or Tomato Family)

Alley Springs, Ozark National Scenic Riverways,
Shannon County, Missouri

Notes: 5-lobed flower, yellow, with 5 purple-black blotches or spots inside, peduncle very short; leaves ovate to slightly cordate, entire to slightly toothed in upper half; stem with dense spreading hairs; fruit a lantern-like pod; summer to fall

[V Max Brown, 2010]



Chinese Lantern [Plains Purple Ground Cherry]



Quincula lobata (Torr.) Raf.
Solanaceae (Nightshade or
Tomato Family)

Quartz Mountain State Park, Greer
County, Oklahoma

Notes: 5-lobed (shallow) flower, purple,
sepals green, on peduncle from leaf
axil; leaves alternate, elliptical to
spatulate with wavy or irregular
margins; stem ridged; fruit a capsule
with berries; spring to fall

[V Max Brown, 2011]



[Carolina] Horse-Nettle

Solanum carolinense L. var. *carolinense*
Solanaceae (Nightshade or Tomato Family)

Oak Openings Metropark, Lucas County, Ohio

Notes: 5-lobed flower, white to light violet; leaves green, wide-lanceolate with a few coarse teeth or rounded shallow lobes, often a few prickles on underside midrib; plant prickly; berry poisonous; common; summer to early fall

[V Max Brown, 2004]



Bittersweet [Deadly] Nightshade

Solanum dulcamara L. var. *dulcamara*

Solanaceae (Nightshade or Tomato Family)

Maumee River Metroparks, Lucas County, Ohio

Notes: 5-lobed flower, deep violet or purple (rarely white); leaves long-pointed, ovate, many with basal lobes (variable); fruit a red berry, turns black with age; plant erect but often climbing, no prickles or spines, poisonous; late spring to early fall

[V Max Brown, 2004]



Silver-Leaf Nightshade



Solanum elaeagnifolium Cav.

Solanaceae (Nightshade or
Tomato Family)

Friedrich Wilderness Park, Bexar
County, Texas

Notes: 5-lobed flower, light blue to violet
(sometimes white), very swept back or
reflexed, may be some prickles on
pedicel; leaves lanceolate, mostly entire;
plant is densely covered with silver to
gray-green very small stellate hairs; fruit
a yellowish berry; dry soils; spring to
early fall

[V Max Brown, 2010]



Eastern Black Nightshade [West Indian Nightshade]



Solanum ptycanthum Dunal

Solanaceae (Nightshade or Tomato Family)

University of Toledo Campus, Lucas County, Ohio

Notes: deeply 5-lobbed flower, white, stamens form a yellow cone, pedicels droop, sepals small compared to fruit; leaves simple, ovate, not lobed but sometimes with large teeth; stem with incurved hairs, stem and leaves without prickles; fruit a berry, glossy black; common; summer to fall

[V Max Brown, 2004]



Buffalo Bur [Kansas Thistle] Nightshade



Solanum rostratum Dunal
Solanaceae (Nightshade or
Tomato Family)

Tallgrass Prairie National Preserve, Chase
County, Kansas

Notes: 5-lobed flower, yellow, slightly reflexed;
leaves alternate, elliptical and deeply pinnately
lobed (beyond midpoint), lobes rounded, spiny;
plant branchy with stellate hairs and yellow
spines; fruit a berry enclosed by spiny calyx;
disturbed sites; late spring to early fall

[V Max Brown, 2010]



Sticky Nightshade

Solanum sisymbriifolium Lam.
Solanaceae (Nightshade or
Tomato Family)

Fort Pulaski National Monument, Georgia
Notes: 5-lobed flower, white to violet, very
swept back or reflexed; leaves pinnate,
lobes deep (beyond midpoint); plant very
branchy with hairs and yellow short to long
prickles on all plant parts except corolla;
fruit a red berry; summer

[V Max Brown, 2006]

