

barely  $\frac{1}{2}$ ' broad and not so long; the middle lobe broadest and more closely fringed, but not so deeply cleft as the lateral ones.

17. *H. fimbriata*, R. Br. Lower leaves oval or oblong, the upper few, passing into lanceolate bracts; spike or raceme oblong, loosely-flowered; lower sepals ovate, acute; petals oblong, toothed down the sides; divisions of the pendent large lip ( $\frac{1}{2}$ –1' broad) fan-shaped, more fringed. — Wet meadows, N. Scotia to N. J. and N. C., west to Mich. June. — Flowers fewer (lilac-purple), 3 or 4 times larger than those of the preceding.

18. *H. peramcena*, Gray. Lower leaves oblong-ovate, the upper lanceolate; spike oblong or cylindrical, densely flowered; lower sepals round-ovate; petals rounded-obovate, raised on a claw; divisions of the large lip very broadly wedge-shaped, irregularly eroded-toothed at the broadly dilated summit, the lateral ones truncate, the middle one 2-lobed. — Moist meadows and banks, Penn. and N. J. to Ill., and south in the mountains. Aug. — Flowers large and showy (violet-purple); the lip paler and 8–10" long, variably toothed, but not fringed.

17. **CYPRIPIEDUM**, L. LADY'S SLIPPER. MOCCASON-FLOWER.

Sepals spreading; all three distinct, or in most cases two of them united into one under the lip. Petals spreading, resembling the sepals but usually narrower. Lip a large inflated sac. Column declined; on each side a fertile stamen, with its short filament bearing a 2-celled anther; the pollen loose and pulpy or powdery-granular; on the upper side a dilated-triangular, petal-like but thickish body, which answers to the fertile stamen of other Orchids, and covers the summit of the style; stigma terminal, broad, obscurely 3-lobed, moist and roughish (not smooth and viscid as in the rest of the order). Pollen in most of our species, especially in n. 6, exposed by the conversion of the face of the anther into a viscid, varnish-like film, which adheres to whatever touches it, carrying away some of the pollen. — Root of many tufted fibres. Leaves large, many-nerved and plaited, sheathing at the base. Flowers solitary or few, large and showy. (Name composed of *Kύπρις*, *Venus*, and *πόδιον*, a sock or buskin, i. e. *Venus's Slipper*.)

§ 1. The three sepals separate; stem leafy; flower solitary, drooping.

1. *C. arietinum*, R. Br. (RAM'S-HEAD L.) Stem slender (6–10' high); upper sepal ovate-lanceolate, pointed; the 2 lower and the petals linear and nearly alike (greenish-brown), rather longer than the red and whitish veiny lip (6" long), which is somewhat pubescent, especially within, and prolonged at the apex into a short blunt conical point; leaves 3 or 4, elliptical-lanceolate, nearly smooth. — Cold swamps and damp woods, Maine to N. Y., Mich. and Minn., and northward.

§ 2. Two of the sepals united into one under the lip.

\* Stem leafy to the top, 1–3-flowered; lip slipper-shaped or roundish, much inflated, horizontal, and with a rounded open orifice.

+ Sepals and linear wavy-twisted petals brownish, pointed, longer than the lip.

2. *C. candidum*, Muhl. (SMALL WHITE LADY'S SLIPPER.) Slightly pubescent, 1-flowered; leaves lance-oblong, acute; petals and sepals greenish, purple-spotted; sepals ovate-lanceolate; lip (not 1' long) white, striped with

purple inside, flattish laterally, convex above; sterile stamen lanceolate. — Bogs, N. Y. and Penn. to Minn., Mo., and Ky.; rare. May, June.

3. *C. parviflorum*, Salisb. (SMALLER YELLOW L.) Stem 1–2° high leaves oval, pointed; sepals ovate or ovate-lanceolate; lip flattish from above, bright yellow (1' long or less); sterile stamen triangular. — Bogs and low woods, Newf. to Ga., west to Minn. and E. Kan. May, June. — Flowers fragrant; sepals and petals more brown-purple than in the next, into which it seems to pass.

4. *C. pubescens*, Willd. (LARGER YELLOW L.) Stem 2° high, pubescent, as are the broadly oval acute leaves; sepals elongated-lanceolate; lip flattened laterally, very convex and gibbous above,  $1\frac{1}{2}$ –2' long, pale yellow. — Bogs and low woods; same range as the last.

+ + Sepals and petals plane, rounded, white, not longer than the lip.

5. *C. spectabile*, Salisb. (SHOWY L.) Downy, 2° high; leaves ovate, pointed; sepals round-ovate or orbicular, rather longer than the oblong petals; lip much inflated, white, pink-purple in front ( $1\frac{1}{2}$  long); sterile stamen heart-ovate. — Peat-bogs, Maine and W. New Eng. to Minn. and Mo., and south in the mountains to N. C. July. — The most beautiful of the genus.

\* \* Scape naked, 2-leaved at base, 1-flowered; sepals and petals greenish, shorter than the drooping lip, which has a closed fissure down its whole length in front.

6. *C. acule*, Ait. (STEMLESS L.) Downy; leaves oblong; scape 8–12' high, with a green bract at top; sepals oblong-lanceolate, pointed, nearly as long as the linear petals; lip obovoid or oblong, rose-purple (rarely white), nearly 2' long, veiny; sterile stamen rhomboid. — Dry or moist woods; Newf. to N. C., west to N. Ind., Mich., and Minn. May, June.

ORDER 111. **BROMELIACEÆ**. (PINE-APPLE FAMILY.)

Herbs (or scarcely woody plants, nearly all tropical), the greater part epiphytes, with persistent dry or fleshy and channelled crowded leaves, sheathing at the base, usually covered with scurf; 6-androus; the 6-cleft perianth adherent to the ovary in the PINE-APPLE, etc., or free from it in

1. **TILLANDSIA**, L. LONG MOSS.

Perianth plainly double, 6-parted; the 3 outer divisions (sepals) membranaceous; the 3 inner (petals) colored; all connivent below into a tube, spreading above, lanceolate. Stamens 6, hypogynous! or the alternate ones cohering with the base of the petals; anthers introrse. Ovary free; style thread-shaped; stigmas 3. Capsule cartilaginous, 3-celled, loculicidally 3-valved; the valves splitting into an inner and an outer layer. Seeds several or many in each cell, anatropous, club-shaped, pointed, raised on a long hairy-tufted stalk, like a coma. Embryo small, at the base of copious albumen. — Scurfy-leaved epiphytes. (Named for Prof. Tillands of Abo.)

1. *T. usneoides*, L. (COMMON LONG MOSS or BLACK MOSS.) Stems thread-shaped, branching, pendulous; leaves thread-shaped; peduncle short, 1-flowered; flower yellow. — East Shore, Va., south to Fla., and westward; growing on the branches of trees, forming long hanging tufts.



## ORDER 112. HÆMODORACEÆ. (BLOODWORT FAMILY.)

*Herbs, with fibrous roots, usually equitant leaves, and perfect 3-6-androus regular flowers, which are woolly or scurfy outside; the tube of the 6-lobed perianth coherent with the whole surface, or with merely the lower part, of the 3-celled ovary. — Anthers introrse. Style single, sometimes 3-partible; the 3 stigmas alternate with the cells of the ovary. Capsule crowned or enclosed by the persistent perianth, 3-celled, loculicidal, 3-many-seeded. Embryo small, in hard or fleshy albumen. A small family; chiefly of the southern hemisphere.*

\* Ovary wholly adherent to the calyx-tube; style filiform; seeds peltate, amphitropous.

1. *Lachnanthes*. Stamens 3, exserted; anthers versatile. Leaves equitant.

\*\* Ovary free except at the base; style 3-partible; seeds anatropous.

2. *Lophiola*. Stamens 6, on the base of the woolly 6-cleft perianth. Leaves equitant.

3. *Aletris*. Stamens 6, in the throat of the warty-roughened and tubular 6-toothed perianth. Leaves flat, spreading.

## 1. LACHNANTHES, L. RED-ROOT.

Perianth woolly outside, 6-parted down to the adherent ovary. Stamens 3, opposite the 3 larger or inner divisions; filaments long, exserted; anthers linear, fixed by the middle. Style thread-like, exserted, declined. Capsule globular. Seeds few on each fleshy placenta, flat and rounded, fixed by the middle. — Herb, with a red fibrous perennial root, equitant sword-shaped leaves, clustered at the base and scattered on the stem, which is hairy at the top and terminated by a dense compound cyme of dingy yellow and loosely woolly flowers (whence the name, from *λάχνη*, wool, and *ἄνθος*, blossom).

1. *L. tinctoria*, Ell. — Sandy swamps, near the coast, S. E. Mass., R. I., and N. J. to Fla. July–Sept.

## 2. LOPHIOLA, Ker.

Perianth densely woolly, deeply 6-cleft; the divisions nearly equal, spreading, longer than the 6 stamens, which are inserted at their base. Anthers fixed by the base. Capsule ovate, free from the perianth except at the base, pointed with the awl-shaped style, which finally splits into 3 divisions, one terminating each valve. Seeds numerous, oblong, ribbed, anatropous. — A slender perennial herb, with creeping rootstocks and fibrous roots, linear and nearly smooth equitant leaves; the stem leafless and whitened with soft matted wool toward the summit, as also the crowded or paniced cyme. Perianth dingy yellow inside; the lobes naked only toward the tip, each clothed with a woolly tuft near the base (whence the name, from *λοφίον*, a small crest).

1. *L. aurea*, Ker. — Boggy pine-barrens, N. J. to Fla. June–Aug.

## 3. ALETRIS, L. COLIC-ROOT. STAR-GRASS.

Perianth cylindrical, not woolly, but wrinkled and roughened outside by thickly-set points which look like scurfy mealiness, the tube cohering below with the base only of the ovary, 6-cleft at the summit. Stamens 6, inserted at the base of the lobes; filaments and anthers short, included. Style awl-shaped, 3-cleft at the apex; stigmas minutely 2-lobed. Capsule ovate, enclosed in the

roughened perianth; the dehiscence, seeds, etc., nearly as in *Lophiola*. — Perennial and smooth stemless herbs, very bitter, with fibrous roots, and a spreading cluster of thin and flat lanceolate leaves; the small flowers in a wand-like spiked raceme, terminating a naked slender scape (2–3° high). Bracts awl-shaped, minute. (*Ἀλετρίς*, a female slave who grinds corn; the name applied to these plants in allusion to the apparent mealiness dusted over the blossoms.)

1. *A. farinosa*, L. Flowers oblong-tubular, white; lobes lanceolate-oblong. — Grassy or sandy woods, Mass. to Fla., Ill., and Minn. July, Aug.

2. *A. aurea*, Walt. Flowers bell-shaped, yellow (fewer and shorter); lobes short-ovate. — Barrens, N. J. to Fla. July.

## ORDER 113. IRIDACEÆ. (IRIS FAMILY.)

*Herbs, with equitant 2-ranked leaves, and regular or irregular perfect flowers; the divisions of the 6-cleft petal-like perianth convolute in the bud in 2 sets, the tube coherent with the 3-celled ovary, and 3 distinct or monadelphous stamens, alternate with the inner divisions of the perianth, with extrorse anthers. — Flowers from a spathe of 2 or more leaves or bracts, usually showy. Style single, usually 3-cleft; stigmas 3, opposite the cells of the ovary, or 6 by the parting of the style-branches. Capsule 3-celled, loculicidal, many-seeded. Seeds anatropous; embryo straight in fleshy albumen. Rootstocks, tubers, or corms mostly acrid.*

\* Branches of the style (or stigmas) opposite the anthers.

1. *Iris*. Outer divisions of the perianth recurved, the inner erect; stigmas petal-like.

\*\* Branches of the style alternate with the anthers. Perianth regular.

2. *Nemastylis*. Stem from a coated bulb. Filaments united. Style-branches 2-cleft.

3. *Belamcanda*. Stems from a creeping rhizome. Filaments distinct. Stigmas dilated.

4. *Sisyrinchium*. Root fibrous. Filaments united. Stigmas thread-like.

## 1. IRIS, Tourn. FLOWER-DE-LUCE.

Perianth 6-cleft; the tube more or less prolonged beyond the ovary; the 3 outer divisions spreading or reflexed, the 3 inner smaller, erect. Stamens distinct; the oblong or linear anthers sheltered under the overarching petal-like stigmas (or rather branches of the style, bearing the true stigma in the form of a thin lip or plate under the apex); most of the style connate with the tube of the perianth. Capsule 3–6-angled, coriaceous. Seeds depressed-flattened, usually in 2 rows in each cell. — Perennials, with sword-shaped or grassy leaves, and large showy flowers; ours with creeping and more or less tuberous rootstocks. (*Iris*, the rainbow, anciently applied to this genus on account of its bright and varied colors.)

\* Stems leafy and rather tall (1–3° high), from thickened rootstocks, often branching; tube of the perianth shorter than the divisions, which are beardless and crestless, the erect inner ones (petals) much smaller than the outer.

+ Flowers violet-blue, variegated with green, yellow or white, and purple-veined.

1. *I. versicolor*, L. (LARGER BLUE FLAG.) Stem stout, angled on one side; leaves sword-shaped ( $\frac{1}{2}$ ' wide); ovary obtusely triangular with the sides flat; flowers ( $2\frac{1}{2}$ –3' long) short-peduncled, the funnel-form tube shorter



than the ovary; capsule oblong, turgid, with rounded angles. — Wet places. Newf. to Fla., west to Minn. and Ark. May, June.

2. *I. prismatica*, Pursh. (SLENDER BLUE FLAG.) Stem very slender, terete; leaves narrowly linear (2–3" wide); flowers slender-peduncled ( $1\frac{1}{2}$ –2' long), the tube extremely short; ovary 3-angled, each side 2-grooved; capsule sharply triangular. (I. Virginica, Man.; not L.) — Marshes near the coast, Maine to N. C. June.

1. *I. caroliniana*, Watson, resembling n. 1, but with longer laxer and greener leaves, and the very large seeds in one row in each cell, probably occurs in S. Va.

+ + Flowers copper-colored or dull reddish-brown; petals widely spreading.

3. *I. fulva*, Ker. Stem and leaves as n. 1; tube of the perianth cylindrical, as long as the 6-angled ovary; style-branches narrow. (I. cuprea, Pursh.) — Swamps, S. Ill. and Mo. to La. and Ga. May.

\* \* Stems low (3–6' high), from tufted and creeping slender (or here and there tuberous-thickened) rootstocks, 1–3-flowered; tube of the perianth long and slender; the violet-blue divisions nearly equal.

4. *I. verna*, L. (DWARF IRIS.) Leaves linear, grass-like, rather glaucous; the thread-like tube of the perianth about the length of the divisions, which are oblong-obovate and on slender claws, the outer ones slightly hairy down the orange-yellow base, crestless; capsule obtusely triangular. — Wooded hillsides, Lancaster Co., Penn., to S. C., west to Ky. and Ala. April. — Flowers sometimes white with yellowish centre.

5. *I. cristata*, Ait. (CRESTED DWARF IRIS.) Leaves lanceolate (3–5' long when grown); those of the spathe ovate-lanceolate, shorter than the thread-like tube of the perianth, which is 2' long and much longer than the light blue obovate short-clawed divisions, the outer ones crested but beardless; capsule sharply triangular. — In the mountains from Md. to N. C.; Trumbull Co., Ohio (Ingraham); knobs of S. Ind. May. — Flowers fragrant.

6. *I. lacustris*, Nutt. (LAKE DWARF IRIS.) Tube of the perianth rather shorter than the divisions (yellowish,  $\frac{1}{4}$ – $\frac{1}{2}$ ' long), dilated upward, not exceeding the spathe; otherwise as in the last, and too near it. — Gravelly shores of Lakes Huron and Michigan. May.

*I. pseudocorus*, L., the YELLOW IRIS of European marshes, with very long linear leaves and bright yellow beardless flowers, is reported as having become established in Mass. and N. Y.

## 2. NEMASTYLIS, Nutt.

Perianth spreading, the segments similar and nearly equal. Filaments more or less united into a tube. Style short, its slender 2-parted branches alternate with the anthers and exserted between them; stigmas minute, terminal. Capsule oblong or ovate, truncate, dehiscent at the summit. Seeds globose or angled. — Stems terete, from coated bulbs, with few plicate leaves, and few fugacious flowers from 2-bracted spathes. (Name from *νήμα*, a thread, and *στυλίς*, style, for the slender style-branches.)

1. *N. geminiflora*, Nutt. Stem 1–2° high; spathes 2-flowered; perianth pale blue-purple, 1–2' broad, the divisions oblong-obovate; capsule obovate,  $\frac{1}{4}$ ' long. — E. Kan. to Tex.

## 3. BELAMCÁNDA, Adans. BLACKBERRY-LILY.

Perianth 6-parted almost to the ovary; the divisions widely and equally spreading, all nearly alike, oblong with a narrowed base, naked. Stamens monadelphous only at base; anthers oblong. Style club-shaped, 3-cleft, the narrow divisions tipped with a small dilated stigma. Capsule pear-shaped; the valves at length falling away, leaving the central column covered with the globose black and fleshy-coated seeds, imitating a blackberry (whence the popular name). — Perennial, with rootstocks, foliage, etc., of an Iris; the branching stems (3–4° high) loosely many-flowered; the orange-yellow perianth mottled above with crimson-purple spots. (An East Indian name of the species.)

B. *chinensis*, Adans. (Pardanthus Chinensis, Ker.) — Sparingly escaped from gardens, Md. to S. Ind. and Mo. (Adv. from China, etc.)

## 4. SISYRÍNCIUM, L. BLUE-EYED GRASS.

Perianth 6-parted; the divisions alike, spreading. Stamens monadelphous to the top. Stigmas thread-like. Capsule globular, 3-angled. Seeds globular. — Low slender perennials, with fibrous roots, grassy or lanceolate leaves, mostly branching 2-edged or winged stems, and fugacious umbelled-clustered small flowers from a 2-leaved spathe. (A meaningless name, of Greek origin.)

1. *S. angustifolium*, Mill. Scape (4–12' high) winged or wingless, simple, the spathe solitary and terminal, its outer bract more or less elongated; flowers delicate blue, changing to purplish (rarely white), the divisions of the perianth more or less notched, bristle-pointed and ciliate; mature seeds globose, large ( $\frac{1}{2}$ " broad), faintly pitted or nearly smooth. (S. Bermudiana, var. mucronatum, Gray, excl. descr.) — Moist meadows, etc., among grass; common everywhere. June–Aug.

2. *S. anceps*, Cav. Scape (6–18' high) usually branching and bearing 2 or more peduncled spathes; seeds more ovate, much smaller, deeply pitted. (S. Bermudiana, var. anceps, Gray, excl. descr.) — Similar localities; common.

## ORDER 114. AMARYLLIDACEÆ. (AMARYLLIS FAMILY.)

Chiefly bulbous and scape-bearing herbs, not scurfy or woolly, with linear flat root-leaves, and regular (or nearly so) and perfect 6-androus flowers, the tube of the corolline 6-parted perianth coherent with the 3-celled ovary; the lobes imbricated in the bud. — Anthers introrse. Style single. Capsule 3-celled, several – many-seeded. Seeds anatropous or nearly so, with a straight embryo in the axis of fleshy albumen. — An order represented in our gardens by the *Narcissus*, *Daffodil*, *Snowdrop*, etc., but with very few indigenous representatives in this country. Bulbs acrid. Differs from Liliaceæ chiefly in the inferior ovary.

\* Capsule 3-valved, loculicidal; anthers versatile; perianth funnel-shaped; glabrous.

1. *Zephyranthes*. Flower naked in the throat; the tube short or none. Bulbs coated.

2. *Hymenocallis*. Flower with a slender tube and narrow recurved lobes; a cup-shaped crown connecting the stamens. Bulbs coated.

3. *Agave*. Flower equally 6-cleft, persistent, no crown. Fleshy-leaved, not bulbous.

\* \* Capsule indehiscent; anthers sagittate; villous.

4. *Hypoxis*. Perianth 6-parted nearly down to the ovary, persistent. Bulb solid.



## 1. ZEPHYRÁNTHEs, Herb.

Perianth funnel-form, from a tubular base; the 6 divisions petal-like and similar, spreading above; the 6 stamens inserted in its naked throat; anthers versatile. Pod membranaceous, 3-lobed. — Leaves and low scape from a coated bulb. Flowers solitary from a scarious simple bract. (From *ζέφυρος*, a wind, and *άνθος*, flower.)

1. *Z. Atamásco*, Herb. (ATAMASCO LILY.) Leaves bright green and shining, very narrow, channelled, the margins acute; scape 6–12' high; peduncle short; spathe 2-cleft at the apex; perianth white and pink, 3' long; stamens and style declined. — Penn. to Va. and Fla. June.

## 2. HYMENOCÁLLIS, Salisb.

Perianth with a long and slender tube, and an equal 6-parted limb; lobes long and narrow, recurved; the throat bearing a tubular or cup-shaped coroll-like delicate crown, which connects the bases of the 6 exerted stamens. Anthers linear, versatile. Capsule thin, 2–3-lobed; seeds usually 2 in each cell, basal, fleshy, often like bulblets. — Scares and leaves from a coated bulb. Flowers white, fragrant, large and showy, sessile in an umbel-like head or cluster, subtended by 2 or more scarious bracts. (Name composed of *ύμην*, a membrane, and *καλλος*, beauty.)

1. *H. occidentális*, Kunth. Leaves strap-shaped, glaucous, 1–1½' long, 9–18" broad; scape 3–6-flowered; bracts narrow, 2' long; perianth-tube about 2½–4' long, the linear segments scarcely shorter; the crown 12–15" long, tubular below, broadly funnel-form above, the margin deltoid and entire, or 2-toothed and erose, between the white filaments, which are twice longer; anthers yellow; style green. — Marshy banks of streams, S. Ill. to N. Ga. and Ala. — Apparently distinct from *H. lacera*, Salisb. (*Pancratium rotatum*, Ker), of the southern coast.

## 3. AGÁVE, L. AMERICAN ALOE.

Perianth tubular-funnel-form, persistent, 6-parted; the divisions nearly equal, narrow. Stamens 6; anthers linear, versatile. Capsule coriaceous, many-seeded. Seeds flattened. — Leaves thick and fleshy, often with cartilaginous or spiny teeth, clustered at the base of the many-flowered scape, from a thick fibrous-rooted crown. (Name from *άγαθή*, noble, — not inappropriate as applied to *A. AMERICANA*, the CENTURY-PLANT.)

1. *A. Virginica*, L. (FALSE ALOE.) Herbaceous; leaves entire or denticulate; scape 3–6' high; flowers scattered in a loose wand-like spike, greenish-yellow, fragrant, the perianth 9–12" long, its narrow tube twice longer than the erect lobes. — Dry or rocky banks, Md. and Va. to Fla., west to S. Ind., Mo., and Tex.

## ✓ 4. HYPÓXIS, L. STAR-GRASS.

Perianth persistent, 6-parted, spreading; the 3 outer divisions a little herbaceous outside. Stamens 6; anthers sagittate, erect. Capsule crowned with the withered or closed perianth, not opening by valves. Seeds globular, with a crustaceous coat, ascending, imperfectly anatropous, the raphé not adherent

quite down to the micropyle, the persistent seed-stalk thus forming a sort of lateral beak. Radicle inferior! — Stemless small herbs, with grassy and hairy linear leaves and slender few-flowered scapes, from a solid bulb. (An old name for a plant having sourish leaves, from *ύποξος*, sub-acid.)

✓ 1. *H. erécta*, L. Leaves linear, grass-like, longer than the umbellately 1–4-flowered scape; divisions of the perianth hairy and greenish outside, yellow within. — Meadows and open woods, N. Eng. to Fla., west to Minn., E. Kan., and Tex.

## ORDER 115. DIOSCOREACEÆ. (YAM FAMILY.)

Plants with twining stems from large tuberous roots or knotted rootstocks, and ribbed and netted-veined petioled leaves, small dioecious 6-androus and regular flowers, with the 6-cleft calyx-like perianth adherent in the fertile plant to the 3-celled ovary. Styles 3, distinct. — Ovules 1 or 2 in each cell, anatropous. Fruit usually a membranaceous 3-angled or winged capsule. Seeds with a minute embryo in hard albumen.

## 1. DIOSCORÉA, Plumier. YAM.

Flowers very small, in axillary panicles or racemes. Stamens 6, at the base of the divisions of the 6-parted perianth. Capsule 3-celled, 3-winged, loculicidally 3-valved by splitting through the winged angles. Seeds 1 or 2 in each cell, flat, with a membranaceous wing. (Dedicated to the Greek naturalist, *Dioscorides*.)

1. *D. villósa*, L. (WILD YAM-ROOT.) Herbaceous. Stems slender, from knotty and matted rootstocks, twining over bushes; leaves mostly alternate, sometimes nearly opposite or in fours, more or less downy beneath, heart-shaped, conspicuously pointed, 9–11-ribbed; flowers pale greenish-yellow, the sterile in drooping panicles, the fertile in drooping simple racemes; capsules 8–10" long. — Thickets, S. New Eng. to Fla., west to Minn., Kan., and Tex.

## ORDER 116. LILIACEÆ. (LILY FAMILY.)

✓ Herbs, or rarely woody plants, with regular and symmetrical almost always 6-androus flowers; the perianth not glumaceous, free from the chiefly 3-celled ovary; the stamens one before each of its divisions or lobes (i. e. 6, in one instance 4), with 2-celled anthers; fruit a few-many-seeded pod or berry; the small embryo enclosed in copious albumen. Seeds anatropous or amphitropous (orthotropous in *Smilax*). Flowers not from a spathe, except in *Allium*; the outer and inner ranks of the perianth colored alike (or nearly so) and generally similar, except in *Trillium*.

SUBORDER I. *Smilaceæ*. Shrubby or rarely herbaceous, the petiole of the 3–9-nerved netted-veined leaves often tendril-bearing. Flowers (in ours) dioecious, in axillary umbels, small, with regular 6-parted deciduous perianth. Anthers apparently 1-celled. Stigmas 3, sessile. Fruit a 3-celled berry, with 1–2 pendulous orthotropous seeds in each cell. Embryo minute in horny albumen.

1. *Smilax*. Characters as above.