

COMMELINIDS

Arecales

Areaceae (Palmae)

Arborescent, shrubby, or viny; stems usually unbranched, often covered with remains of old leaf sheaths; leaves large, spiril, petioled, often in terminal clusters usually plaited and palmately or pinnately divided into segments; inflorescences usually large and branched, branches raceme-like, subtended by 1-several spathes; plants dioecious or monoecious or with bisexual flowers; flowers regular, usually with 3 sepals, 3 petals, 6 stamens, and 3 simple pistils or a 3-lobed superior ovary; ovules 1; fruit a berry or drupe. 190 genera and about 2,000 species, tropical and subtropical in distribution; very important economically.

- (*Cocos nucifera* L. – coconut)
- (*Phoenix dactylifera* L. – date palm)
- (*P. canariensis* Chabaud – Canary Island palm)
- (*Sabal palmetto* Schultes – cabbage palm)
- (*Washingtonia robusta* Wendland – fan palm)
- (*Trachycarpus fortunei* Wendland – windmill palm)
- (*Jubaea spectabilis* Kunth – coquito)
- (*Mauritia flexuosa* Linnaeus f. – moriche)
- (*Roystonea oleracea* (Martius) O. F. Cook – royal palm)
- (*Calamus* sp. - raphia palm)
- (*Socratea* sp. – heart of palm)

Poales

Typhaceae

Erect, perennial, colonial rhizomatous herbs with long linear leaves sheathing at base; plants monoecious; flowers densely crowded in long, cylindrical, terminal spikes, staminate above pistillate, subtended by hairs; perianth absent; staminate of (1-) 3 (-7) connate stamens; pistillate of a 1- loculed ovary on a short stipe; ovule 1, placentation apical; style short; stigma linear to spatulate; sterile flowers intermingled with pistillate; **fruit an achene**. 1 genus and 8-13 species, temperate and tropical regions.

- Typha latifolia* L. (common cattail)
- T. angustifolia* L. (narrow-leaved cattail)
- (*T. orientalis* C. B. Presl - southern cattail)

Bromeliaceae

Herbs, mostly epiphytic; stem usually reduced, with large spiral water-trapping leaves in a basal rosette; **adventitious roots serving mainly to attach plant to surface of substratum, water being absorbed through leaves; inflorescence apical**, usually a raceme or panicle; **flowers** usually subtended by colored bracts, **regular** or irregular, bisexual; **sepals 3**, green; **petals 3**, usually brightly colored; stamens 6; pistil 3-carpelled, 3-loculed; ovary superior to inferior; ovules fewmany, placentation axile; fruit a berry or septicial capsule; **seeds few-many, usually light and winged**. 57 genera and 1,400 species, tropical and subtropical America.

(*Brocchinia* spp.)

Tillandsia usneoides L. (Spanish moss)

(*T. insularis* Mez)

(*Puya alpestris* (Poeppig & Endlicher) C. Gay - puya)

(*Ananas comosus* (L.) Merrill - pineapple)

Juncaceae

Herbs of grass-like aspect; stems usually cylindrical, solid; leaves 3-ranked, cylindrical or grass-like, or reduced to sheaths; inflorescences usually cymose or paniculate; **flowers small, regular, usually perfect**, green or brown; **perianth segments essentially alike, more or less chaffy or scale-like, in 2 whorls of 3 each**; stamens 6 or 3; pistil 3-carpelled; ovary superior, 1-3-loculed, with 3 parietal to axile placentas; ovules 3-many; styles 1-3; stigmas 3; **fruit a few-many-seeded, loculicidal, 3-valved capsule**. 7 genera and 430 species, in damp cold places in temperate to boreal regions and tropical mountains.

Juncus spp. (rush)

Luzula echinata Small (wood rush)

Cyperaceae

Herbs of grass-like aspect; stems usually triangular, solid; leaves normally 3-ranked, with closed sheath, blade sometimes reduced or absent; **plants usually monoecious; flowers much reduced**, solitary in axil of a bract, **aggregated into spikelets or spikes** that may be solitary or in various kinds of compound inflorescences; **perianth of bristles and/or of scales or absent**; stamens mostly 1-3; pistil 2-3-carpelled; ovary superior, 1-loculed; ovule 1, placentation basal; style 1; stigmas 2-3; **fruit an achene**. 98 genera and about 4,530 species, cosmopolitan in distribution.

Carex spp. (sedge)

Cymophyllus fraseri (Andrzejowski) Mackenzie (Fraser's sedge)

Eleocharis engelmannii Steud. (spike rush)

Eriophorum virginicum L. (cotton grass)

(*Cyperus papyrus* L. - papyrus)

Scirpus americanus Pers. (chair-maker's rush)

(*Cladium mariscus* R. Br. - thatch)

Poaceae (Gramineae)

Fibrous-rooted herbs; stems usually round, hollow; leaves 2-ranked, with sheath usually split, ligule present at junction of sheath and blade; flowers small, usually perfect, solitary or several together in axil of subtending bract; **forming small spikelets** that may be solitary or aggregated into various kinds of compound inflorescences; **perianth absent or reduced to 2-3 minute scales**; stamens (1) 3(-6); pistil 2-3-carpelled; ovary superior, 1-loculed; ovule 1, adnate to ovary wall, placentation basal; styles (1-)2(-3); stigmas usually plumose; **fruit a caryopsis**. 600-650 genera and about 10,000 species, cosmopolitan in distribution.

Dactylus glomerata L. - orchard grass)

(*Coix lachryma-jobi* L. - Job's tears)

(*Pariana* sp.)

Triticum aestivum L. (wheat)

(*Oryza sativa* L. - rice)

Zea mays L. (corn)

(*Z. mexicana* (Schrader) Reeves & Manglesdorf - teosinte)

Hordeum vulgare L. (barley)

(*Saccharum officinarum* L. - sugarcane)

(*Cymbopogon citratus* Stapf - lemon grass)

Cortaderia selloana Ascherson & Graebner (pampas grass)

Commelinales

Commelinaceae

Annual or perennial, **succulent herbs, stems swollen at nodes**; leaves spiral or 2-ranked, sheaths tubular, closed; **inflorescences cymose**, sometimes reduced to solitary flowers, **subtended by conspicuous boat-shaped bracts**; flowers regular or irregular, perfect; sepals 3, green; **petals 3**, usually blue, violet, or white, **ephemeral**; stamens 6, all fertile or some sterile, **anther locules separate, filaments usually pubescent**; pistil 3-carpelled; ovary superior, 2-3-loculed; ovules 1-many, placentation axile; **style 1; stigmas undivided**; fruit a 3-several-seeded loculicidal capsule. 40 genera and 652 species, mostly tropical and subtropical.

(*Tradescantia* sp. -setcreasea)

T. virginiana L. (spiderwort)

Commelina communis L. (day flower)

Pontederiaceae

Aquatic or marsh perennials, growing from creeping or floating rhizomes; leaves spiral or whorled, sheathing basally; flowers solitary to occurring in spikes, racemes, or panicles, regular or irregular, 3-merous, perfect, hypogynous, subtended by a spathe; **perianth segments 6, petaloid, connate basally into a tube, spreading above; stamens (1) 3 or 6, adnate to perianth tube**; pistil 3-carpelled; ovary superior, 1-loculed with 3 parietal placentas, 3-loculed with axile placentas, or with only 1 fertile locule; ovules 1-many per locule; nectaries present; style 1; stigma 3-6-lobed; fruit a capsule or achene, surrounded by base of perianth; seeds small. 9 genera and 33 species, tropical to temperate in distribution.

Pontederia cordata L. (pickerel weed)

Heteranthera dubia (Jacquin) MacMillan (mud plantain)

Eichhornia crassipes (Martius) Solms (water hyacinth)

Zingiberales

Musaceae

Large monoecious herbs, usually with a freely-branched rhizome from which many spiral, short-petioled leaves arise; leaf sheaths rolled around one another from below, forming what looks like an aerial stem; leaves large, oval, with a stout midrib, often easily torn from edge; inflorescence apical, with large bracts subtending recemelike branches; flowers irregular, unisexual or bisexual; perianth segments petaloid, 5 connate and 1 free; stamens 5 (6), often 1 a staminode; pistil 3-carpelled, 3-loculed; ovary inferior; ovules many, placentation axile; fruit a berry; seeds fewmany. 2 genera and 35 species, tropical Africa, Asia, and Australia.

(*Musa X paradisiaca* L. – banana)

Heliconiaceae

Large perennial herbs from rhizomes; leaves large, 2-ranked, long-petioled; inflorescence apical, with 2-ranked colored bracts bearing many-flowered cymes; flowers bisexual; perianth segments petaloid, 6, 1 large and free, 5 smaller and usually connate into a 5-toothed tube; stamens 5, basally adnate to perianth with 1 petaloid staminode opposite large perianth segment; ovary 3-loculed, inferior; ovules 1; fruit a globose blue schizocarp, splitting into 3 1-seeded mericarps, or a drupe. 1 genus and 100-200 species, tropical America.

(*Heliconia* spp. - heliconia)

Strelitziaceae

Perennial rhizomatous herbs, often arborescent and banana-like; “stems” made of sheathing leaf bases; leaves large, 2-ranked, long-petioled; flowers large, irregular, bisexual, in apical or lateral long-peduncled cymes, enclosed in large boat-shaped bracts; sepals 3, petaloid; petals 3, 2 laterals closely pressed together and forming a conspicuous arrow-shaped structure, middle 1 short and boat-shaped; stamens 5 (6); pistil 3-carpelled, 3-loculed; ovary inferior; ovules many, placentation axile; fruit a hard loculicidal capsule; seeds many, with brightly-colored arils. 3 genera and 7 species, occurring in tropical South America, southern Africa, and Madagascar.

(*Strelitzia reginae* Banks - bird-of-paradise)

(*S. augusta* Thunb. - bird-of-paradise tree)

(*Ravenala madagascariensis* J. F. Gmel. - traveller’s tree)

Cannaceae

Large perennial herbs, with tuberous rhizomes; leaves 2-ranked, sheathing stems, petioled; flowers large, irregular, bisexual, in apical racemelike inflorescences, but in pairs on short lateral peduncles; sepals 3, free, green or purple; petals 3, connate, 1 smaller than other 2; fertile stamens 1, large, petaloid, with half an anther on one edge, petaloid staminodes (1-) 3 (-5), connate, adnate to corolla; pistil 3-carpelled, 3-loculed; ovary inferior, with a petaloid style; ovules many, placentation axile; fruit a usually warty capsule; seeds many, large. 1 genus and 19 species, tropical America.

(*Canna* spp. - canna)

Zingiberaceae

Perennial aromatic herbs, usually with a fleshy rhizome, often with tuberous roots; leaf sheaths often rolled around one another to form an apparent aerial stem; leaves 2-ranked, petioles short, ligulate; flowers often large and showy, irregular, bisexual, in terminal racemes, spikes, or cymes, subtended by often sheathing bracts; sepals 3, connate, usually green; petals 3, free; fertile stamens 1, 2 staminodes connate to form a 3-lobed petal-like lip, 2 staminodes petal-like or absent; pistil 3-carpelled, (1-2) 3-loculed; ovary inferior; ovules 1-many, placentation axile or basal; fruit usually a berry or capsule. 46-52 genera and 1,075-1,300 species, tropical in distribution, most in Indomalaysia.

(*Zingiber spectabile* Griffith - ginger)

(*Hedychium* spp. - ginger lily)