

## Major Plant Formations and Associations with the Dominant Species

### 1. Evergreen Tropical Rainforest -

Virola kosshnyi (banak)  
Rinorea spp. (wild coffee)  
Theobroma cacao (cacao)  
Anacardium occidentale (wild cashew)  
Alsophila spp. (tree fern)  
Castilla elastica (rubber tree)  
Dendrobium crumenatum (orchid)  
Ceiba pentandra (kapok)  
Musa spp. (banana)  
Carcia papaya (papaya)

\*Tropical montane communities

### 2. Seasonal Tropical and Subtropical Forests -

#### a. Tall Tree Deciduous Forest

#### b. Tropical Moist Hardwood Forest -

Bursera simaruba (gumbo limbo)  
Ficus aurea (Florida strangler fig)  
Swietenia mahogoni (West Indies mahogany)  
Roystonea elata (royal palm)  
Sabal palmetto (cabbage palm)  
Pinus clausa (sand pine)  
Serenoa repens (saw palmetto)  
Tillandsia usneoides (Spanish moss)

\*Mangrove communities -

Rhizophora mangle (red mangrove)  
Avicennia nitida or germinans (black mangrove)  
Laguncularia racemosa (white mangrove)  
Conocarpus erectus (buttonwood)

### 3. Tropical Savanna -

Bouteloua spp. (grama grass)  
Andropogon tener (bunch grass)  
Acacia spp.  
Cecropia spp.

#### 4. Temperate Deciduous Forest -

- a. Mixed Mesophytic Association -  
Fagus grandifolia (American beech)  
Liriodendron tulipifera (tulip tree)  
Tilia americana (basswood)  
Acer saccharum (sugar maple)  
Aesculus octandra (buckeye)  
Quercus borealis (red oak)  
Quercus alba (white oak)
- b. Western Mesophytic Association - (mix of a and c)  
\*Cedar glades community Juniperus virginiana (red cedar)
- c. Oak-Hickory Association - North  
Quercus alba (white oak)  
Q. borealis (red oak)  
Q. velutina (black oak)  
Q. macrocarpa (bur oak)  
Carya cordiformis (bitternut hickory)  
C. ovata (shagbark hickory)  
South  
Q. velutina (black oak)  
Q. alba (white oak)  
Q. marilandica (blackjack oak)  
Q. stellata (post oak)  
Q. nigra (water oak)  
Carya cordiformis (bitternut hickory)  
C. aquatica (water hickory)  
C. ovata (shagbark hickory)  
C. illinoensis (pecan)
- d. Oak-chestnut Association -  
Quercus alba (white oak)  
Q. prinus (chestnut oak)  
Q. falcata (S. red oak)  
Q. rubra (N. red oak)  
Liriodendron tulipifera (tulip tree)  
Castanea dentata (American chestnut)  
\*Montane communities

e. Oak-Pine Association -	<p>Quercus alba (white oak)  Q. falcata (S. red oak)  Q. velutina (black oak)  Carya glabra (pignut hickory)  Pinus taeda (loblolly pine)  Pinus echinata (short leaf pine)</p>
*Pine barrens communities	<p>Pinus rigida (pitch pine)  Quercus ilicifolia (bear oak)</p>
* Granitic outcrops	<p>Diamorpha smallii</p>
f. Southeastern Evergreen Association -	
(1) "Sand hills" community -	<p>Pinus palustris (long leaf pine)  Quercus laevis (turkey oak)</p>
(2) Swamp forest -	<p>Taxodium distichum (bald cypress)  Nyssa aquatica (water tupelo)  Chamaecyparis thyoides (A. white cedar)</p>
(3) Salt marsh -	<p>Spartina alterniflora (cord grass)  S. cynosuroides (salt reed grass)  Juncus roemerianus (black rush)</p>
(4) Beech-Magnolia forest -	<p>Fagus grandifolia (American beech)  Magnolia grandiflora (S. magnolia)</p>
(5) Evergreen oak forest -	<p>Quercus virginiana (live oak)  Tillandsia usneoides (Spanish moss)</p>
(6) Savannahs	<p>Pinus palustris (longleaf pine)  Sarracenia flava (yellow pitcher plant)  Dionaea muscipula (Venus fly trap)</p>
(7) Coastal dune communities	<p>Uniola paniculata (sea oats)  Ammophila breviligulata  Morella cerifera (wax myrtle)  Salicornia europea (glasswort)</p>
(8) Black belt prairie	
g. Beech-Maple Association -	<p>Fagus grandifolia (American beech)  Acer saccharum (sugar maple)</p>

h. Maple - Basswood Association -  
Tilia americana (basswood)  
Acer saccharum (sugar maple)  
Quercus borealis (red oak)

i. Hemlock - White Pine - Northern Hardwoods Association-  
Acer saccharum (sugar maple)  
Betula lutea (yellow birch)  
Betula papyifera (paper birch)  
Tsuga canadensis (hemlock)  
Pinus strobus (white pine)  
Pinus banksiana (jack pine)

## 5. Temperate Rainforest -

a. Douglas fir - Hemlock - Cedar forest -  
Pseudotsuga menziesii (Douglas fir)  
Thuja plicata (W. red cedar)  
Tsuga heterophylla (W. hemlock)  
Abies amabilis (Pacific silver fir)

b. Redwood forest -  
Sequoia sempervirens (coastal redwood)  
Picea sitchensis (Sitka spruce)

c. Western Hemlock - Sitka spruce forest -  
Tsuga heterophylla  
Picea sitchensis

\*Giant redwoods  
Sequoiadendron giganteum (giant redwood)

## 6. Broadleaf Sclerophyllous Woodlands -

a. Encinal Association -  
Lithocarpus densiflorus (tanoak)  
Quercus chrysolepis (canyon live oak)  
Q. agriflora (Cal. live oak)  
Q. lobata (Cal. white oak)  
Arbutus menziesii (madrone)

b. Woodland Association -  
Quercus douglasii (blue oak)  
Q. lobata (Cal. white oak)  
Pinus sabiniana (digger pine)

c. Chaparral -  
Quercus dumosa (scrub oak)  
Adenostoma fasciculatum (chamise)  
Arctostaphylos spp. (manzanita)

\*Western montane coniferous forests -

*Picea engelmannii* (Englemann spruce)  
*Abies lasiocarpa* (subalpine fir)  
*Pinus ponderosa* (ponderosa pine)  
*Pinus edulis* (pinyon pine)  
*Pinus aristata* (bristlecone pine)  
*Juniperus* spp. (juniper)  
*Pseudotsuga menziesii* (Douglas fir)  
*Populus tremuloides* (quaking aspen)

7. Boreal Forest (Taiga) -

*Picea glauca* (white spruce)  
*Picea mariana* (black spruce)  
*Larix laricina* (tamarack, larch)  
*Abies balsamea* (balsam fir)  
*Pinus banksiana* (jack pine)

8. Temperate Grassland -

a. Tall Grass Prairie -

*Andropogon gerardi* (big bluestem)  
*Schizachyrium* (*Andropogon*) *scoparius*  
(little bluestem)  
*Bouteloua curtipendula* (side oats grama)  
*Stipa* spp. (needle grass)  
*Sporobolus heterolepis* (prairie dropseed)

b. Mixed Grass Prairie -

(mix of a and c)

c. Short Grass Prairie -

*Bouteloua gracilis* (blue grama)  
*Buchloe dactyloides* (buffalo grass)  
*Stipa* spp. (needle grass)

d. Palouse Prairie (Bunch grass Prairie) -

*Agropyron spicatum* (wheatgrass)  
*Poa nevadensis* (bluegrass)  
*Festuca idahoensis* (fescue)  
*Stipa* spp. (needlegrass)  
*Artemesia tridentata* (sagebrush)

e. Desert grassland

*Bouteloua gracilis* (blue grama)  
*Bouteloua curtipendula* (side oats grama)  
*Prosopis* spp. (mesquite)

f. California grassland

9. Cold Desert (Great Basin Desert) -

a. Sagebrush

*Artemesia tridentata* (sagebrush)  
*Purshia tridentata* (bitterbrush)  
*Holodiscus discolor* (cream bush)

b. Saltbush

*Atriplex confertifolia* (saltbush, shadscale)  
*Sarcobatus baileyi* (greasewood)  
*Eurotia lanata* (winter-fat)  
*Tetradymia* spp. (horse brush)

10. Hot Desert -

a. Mojave Desert -

*Yucca brevifolia* (Joshua tree)  
*Dalea fremontii* (indigo bush)  
*Yucca schidigera* (Mojave yucca)  
*Larrea divaricata* (creosote bush)

b. Colorado Desert -

*Dalea spinosa* (smoke tree)  
*Olneya tesota* (desert ironwood)  
*Prosopis* spp. (mesquite)  
*Larrea divaricata* (creosote bush)

c. Vizcaino Desert -

*Fouquieria splendens* (ocotillo)  
*Pachycormus* spp. (elephant wood)  
*Simmondsia* spp. (goat nut)  
*Agave* spp.  
*Larrea divaricata*

d. Arizona - Sonoran Desert -

*Cereus giganteus* (saguaro cactus)  
*Fouquieria splendens* (ocotillo)  
*Cercidium* spp. (palo verde)  
*Larrea divaricata*  
*Opuntia* spp. (prickly pear cactus)

e. Chihuahuan Desert -

*Fouquieria splendens* (ocotillo)  
*Prosopis* spp. (mesquite)  
*Opuntia* spp. (prickly pear cactus)  
*Echinocactus* spp. (barrel cactus)  
*Agave* spp.  
*Yucca elata*  
*Larrea divaricata*

11. Tundra -

a. Arctic -

*Vaccinium* spp.

*Ledum* spp. (Labrador tea)

*Cassiope* spp. (heather)

*Rhododendron* spp.

*Betula michauxii* (dwarf birch)

*Betula minor* (dwarf birch)

*Salix glauca* (dwarf willow)

*Myosotis alpestris* (forget-me-not)

*Silene acaulis* (moss champion)

b. Alpine