A. Families to Know on Sight

1. Orchidaceae (orchid family) – p. 153

Diagnostic Summary: More or less succulent herbs often, often rosette in habit, with or without a pseudobulb, or sometimes with well-developed internodes; mostly epiphytic in the tropics, terrestrial in temperate zones; flowers irregular (monosymmetric) with lower petal modified into labellum, and single stamen plus pistil fused into column. Fruit a capsule.

Generalized Flora Formula:

\[ C_a^3, \text{petaloid but distinct from } C_o^{2+1} \text{ (labellum)} A^1, \text{pollinia } G^{[3]}, \text{column} \]

Strongly monosymmetric

2. Arecaceae or Palmae (palm family) – not in book

Diagnostic Summary: Trees or shrubs with unbranched aerial stems terminated by a rosette of large, sheathing, pinnately compound or palmately lobed, plicate leaves; flowers tiny, regular (polysymmetric), aggregated into large, showy panicles. Fruit a berry or drupe.

Generalized Flora Formula: \[ P^{3+3} A^6 G^{[3]} \]

Small, in large, showy panicles subtended by spathe

B. Genera to Know (you can write your own key to genera)

Orchidaceae – p. 153

1) Cattleya (succulent herbs)
2) Phalaenopsis (succulent herbs)

Agavaceae – p. 177 (included in Asparagaceae by APG III)

3) Agave (succulent herbs or shrubs)
4) Yucca (herbs, shrubs or small trees)

Bromeliaceae – not in book

5) Aechmea (herbs)
6) Ananas (herbs)

Strelitziaceae – not in book

7) Strelitzia (herbs to small trees)

Musaceae – not in book

8) Musa (rosette herbs to small “trees”)

Arecaceae or Palmæ – not in book

1) Chamaedorea (small trees)
2) Phoenix (shrubs to trees)
3) Serenoa (trailing rosette shrubs to small trees)
4) Trachycarpus (trees)

Asphodelaceae – not in book

5) Aloe (succulent herbs, shrubs or small trees)

C. Some Economic Botany

1) Agavaceae is the source of agave (Agave), the source of sap that leads both to the production of tequila and agave “nectar”, and of numerous ornamental plants.
2) Arecaçae is the source of coconuts (Cocos nucifera), dates (Phoenix dactylifera), and numerous ornamental trees.
3) Asphodelaceae is the source of Aloe Vera (from Aloe vera and other species such as Aloe feroxii) and numerous ornamentals protected under CITES.
4) Bromeliaceae is the source of numerous bromeliads of horticultural importance.
5) Musaceae is the source of cultivated bananas and plantains from the genus Musa.
6) Orchidaceae is the source of orchids, which are important ornamentals and, due to due to poaching, are protected under CITES. Fermented capsules of the Vanilla Orchid (Vanilla planifolia) are the source of vanilla flavoring.
7) Strelitziaceae is the source of numerous tropical ornamentals from the Bird-of-Paradise genus, Strelitzia.
8) Zingiberaceae (a relative of Musaceae) is the source of ginger (Zingiber officinale), cardamom (Elettaria cardamomum) and numerous tropical ornamentals.