Agave Relatives

Asparagaceae (Family)

Agavoideae (Subfamily) – New World

Agave – c. 200 species

- Typically monocarpic; caespitose or solitary; usually acaulescent; usually succulent.
- Two major groups defined: Branching (*Agave*) and unbranching (*Littaea*) inflorescences
- Ranges from arid to mesic biomes.
- Commonly used for production of alcohol (Tequila, Mescal, etc.) and for fibers.
- Pre-Columbian cultures cultivated & bred different species for domestic use; this has led to description of many species of pre-Columbian origin, many in AZ (e.g., *A. delamateri, A. phillipsiana, A.verdensis, A. yavapaiensis , A. fourcroydes, A. hookeri, A. sanpedroensis*)
- North America through Andes of South America; mostly Mexico

Manfreda – 35 species

- Typically smaller than *Agave s.s.*; often tuberose; usually highly caespitose; occasionally somewhat drought deciduous; limited succulence/soft-leaved.
- Usually called "Tuberoses"
- Has been included in *Polianthes* and *Agave*.
- E and S US to Central America; most in Mexico

Polianthes – 18 species

- Typically smaller than *Agave s.s.*; usually tuberose; limited succulence/soft-leaved.
- Usually called "Tuberoses"
- Often in cooler temperate or semitropical biomes
- Has been included in *Agave*, and sometimes *Manfreda* is included here.
- Restricted to Mexico

Prochnyanthes – 1 species

- Usually included in *Agave*; *Prochnyanthes bulliana (=A. Mexicana)*.
- Very distinctive flowers; non-succulent leaves.
- Restricted to Mexico.

Beschorneria – 7/8 species

- Caespitose; non-succulent; acaulescent.
- Primarily semi-arid, often montane areas.
- Mexico to Central America.

Furcraea – 22 species

- Monocarpic; large size, tall inflorescences, small flowers; acaulescent or arborescent
- Usually arid biomes
- Mexico, Caribbean islands, Central and South America.

Yucca – 40-50 species

- Polycarpic; often highly branched
- Many have symbiotic relationships with pollinating moths (Yucca Moths: Prodoxidae)
- Most considered Stem Succulents (leaves not usually succulent)
- Usually arid biomes.
- A US National Park developed specifically to protect a yucca species (Joshua Tree National Park)
- Range from Canada to Central America and the Antilles.

Hesperoyucca – 1-3 species

- Formerly included in *Yucca*; however, recently found to be closer to *Hesperaloe* than *Yucca*
- Differences from *Yucca* are primarily minor morphological components (share of stigma, stickiness of pollen, etc.)
- Monocarpic with one form caespitose & polycarpic
- Range from the SW USA to Mexico

Hesperaloe – 8 species

- Closely related to *Yucca* and *Hesperoyucca*; not related to *Aloe* despite the name.
- Polycarpic and typically highly caespitose
- Diurnal and Nocturnal species
- Very popular landscape plants in the SW USA
- Range SW USA through North-central Mexico

Nolinoideae (Subfamily) – Almost Worldwide (New World genera below)

Beaucarnea – 10 species

- Arborescent; easily recognized by swollen base of trunk; flowers only with significant age
- Closely related to *Nolina*
- Usually more tropical or semi-tropical
- Range Mexico through Central America

Calibanus – 2 species

- Solitary caudex-forming (up to 2.5ft dia) with long grassy blades growing from clumps out of various places over caudex.
- Recent molecular studies have shown this to be imbedded within *Beaucarnea*, so now included there.
- Ranges in NE Mexico (Tamaulipas, San Luis Potosi).

Nolina – 28 species

- Often called Beargrasses; acaulescent to arborescent; small insect-pollinated yellow/whitish flowers.
- Range Southern USA through Mexico

Dasylirion – c. 15 species

- Usually acaulescent, but some robust arborescent species; only semi-succulent; plants are diecious.
- Often in the most arid of regions.
- Leaves often with sharp marginal teeth.
- Popular in SW landscapes.
- Range SW USA through Mexico

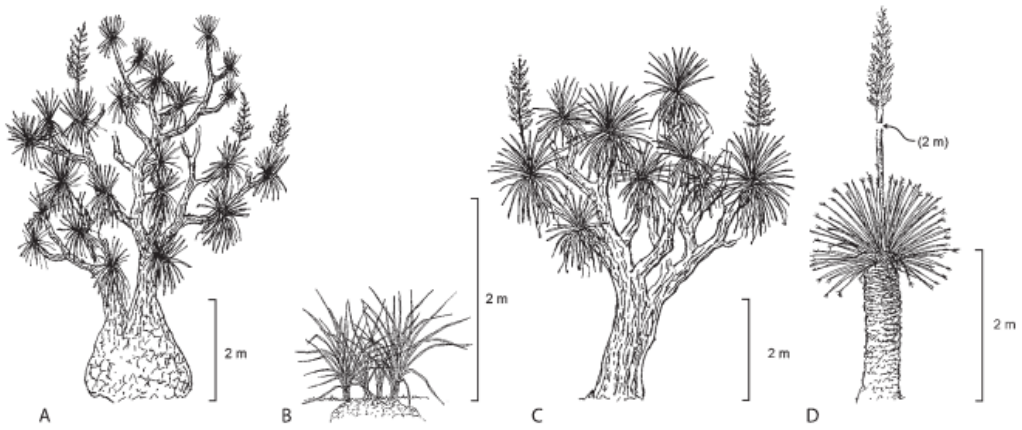

Fig. 4. Representative habits of **A,** *Beaucarnea*, **B,** *Calibanus*, **C,** *Nolina*, and **D,** *Dasylirion*.