



# MEXICAN TREES AND FLOWERS

At VanDusen Botanical Garden

# MEXICO HAS DIVERSE LANDSCAPES, LOTS OF BIODIVERSITY

Centre of diversity for conifers, oaks and maples. Jalisco for maples (sugar maples *Acer skutchii* & *A. binzayedii*), and Chihuahua for conifers and oaks (sky islands). Most biodiversity is in the SE states (Oaxaca, Chiapas and Veracruz) getting near tropical rainforest.











# CLOUD FORESTS

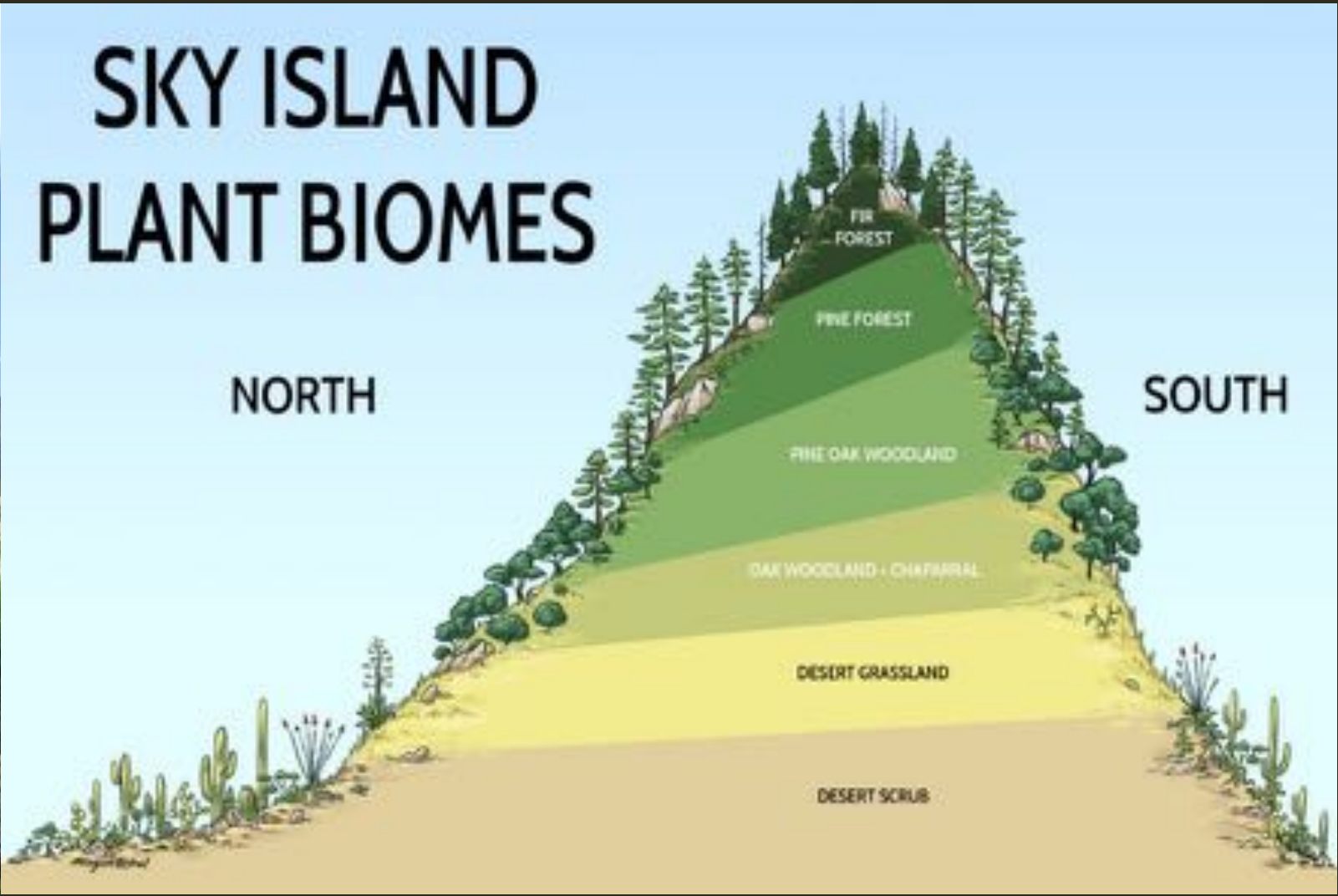
Subtropical montane forests with frequent and persistent cloud cover (sugar maples and tree ferns).





# SKY ISLANDS

Sky islands have a stack of biotic communities that allow seasonal vertical migration between highlands and lowlands but the valleys between them act as a barrier preventing species from crossing from one mountain range to another.







# CHIHUAHUAN SPRUCE

*Picea chihuahuana*



- Native to mountains of Sierra Madre Occidental in Chihuahua and Durango.
- Endangered, only 25 small populations known in the wild.
- Has very sharp needles.
- Fossil evidence suggests this species was widespread across Mexico during last ice age.
- Second most southerly spruce after *Picea morrisonicola* in the Central Mountains of Taiwan.



# CHIHUAHUAN SPRUCE

*Picea chihuahuana*



# PARROTS!

Guacamaya or thick-billed parrots (*Rhynchopsitta pachyrhyncha*) eat the seeds of pines and other conifers and nest in holes in trees.





# MAXIMINO MARTINEZ (1888-1964)



Most historically significant botanist where conifers are concerned.

Career ran from 1914 to 1958, did extensive field collections, publishing, founded herbarium at National Polytechnic Institute, taught at various universities, co-founded Botanical Society of Mexico.

*Picea martinezii*, *Pinus maximartinezii*, and *Pinus maximinoi* are named for him. First recorded *Picea chihuahuana* in 1942.

Also studied medicinal plants of Mexico (published a book called *Las Plantas Medicinales de México*.)

*Los Pinos Mexicanos*.





MEXICAN OAK, ENCINO COLORADO

*Quercus durifolia*





- Native to Sierra Madre Occidental (Chihuahua to Jalisco).
- Eastern slopes in pine-oak woodlands.
- 6 to 9 meters tall.
- Spanish common name means “reddish evergreen oak”, has reddish twigs.
- Doesn’t look at all like *Quercus robur*.
- Encino vs. Roble.

# MEXICAN OAK, ENCINO COLORADO

*Quercus durifolia*









# ARIZONA SYCAMORE

*Platanus wrightii*





- Found in sky islands of SE Arizona to NE Sonora and NW Chihuahua.
- Mature trees have mottled white bark.
- Needs steady supply of water, grows in canyons and along mountain streams.
- Gardener Tomas collected our trees near Sedona & Sycamore Canyon in Arizona.
- Mexico has 6 out of 10 species of *Platanus*.

# ARIZONA SYCAMORE

*Platanus wrightii*





# MATILIJA POPPY

*Romneya coulteri*



- Common name is from the Chumash People of SW California.
- Genus for Irish astronomer, species for Irish botanist.
- Occurs in Baja California (Mexico) and California (USA)
- Relies on forest fires (seeds need scarification and smoke treatment to germinate).
- If you buy seeds they will come pre-smoked or with a small disc that you can burn to treat them yourself.

# MATILIA POPPY

*Romneya coulteri*





CHOCOLATE COSMOS

*Cosmos atrosanguineus*



- Occurs in Guanajuato, Querétaro and San Luis Potosí in mixed pine and oak forests.
- Smell like vanillin, organic compound found in vanilla.
- Collected near Hidalgo in 1860 and introduced to British horticulture in 1885.
- By 1970s was thought to be extinct in the wild and only existing plants were male-sterile (no pollen) clones in cultivation in UK & NA.
- NZ geneticist Russell Poulter was trying to restore fertility in 1990, developed 'Pinot Noir'.
- Found in the wild by Aarón Rodríguez of the University of Guadalajara in 2007.

# CHOCOLATE COSMOS

*Cosmos atrosanguineus*





# MEXICAN SAGE

*Salvia x jamensis*



- Naturally-occurring hybrid of *Salvia greggii* and *S. microphylla* that happens where their ranges overlap in Coahuila & San Luis Potosí.
- Hybrid flower colours range from red, pink and orange to pale yellow or bicoloured, ideal for plant-breeders.
- First described in 1991 by English botanist James Compton.
- Named for the small town of Jame in Coahuila (near border with Nuevo León and Monterrey).
- Mexican common name for *Salvia microphylla* is mirto de montes (myrtle of the mountains).



# MEXICAN SAGE

*Salvia x jamensis*





# MEXICAN FEATHER GRASS

*Nassella tenuissima*





- Occurs from Colorado, New Mexico & Texas, USA, to Mexico with disjunct population in Argentina.
- Fine-textured leaves sway in the wind, little seeds that birds like.
- Drought-tolerant.
- Self-seeds enthusiastically in the right conditions.
- Produces up to 100,000 seeds per year, which can survive 7 years in soil.
- Low nutritional value, full of silica, not good for grazing.
- Invasive in California, New Zealand & South Africa.
- Australia trying to keep it from getting established.

# MEXICAN FEATHER GRASS

*Nassella tenuissima*



# IN 2008 BIG W SOLD MEXICAN FEATHER GRASS AS A MOTHER'S DAY PROMOTION

