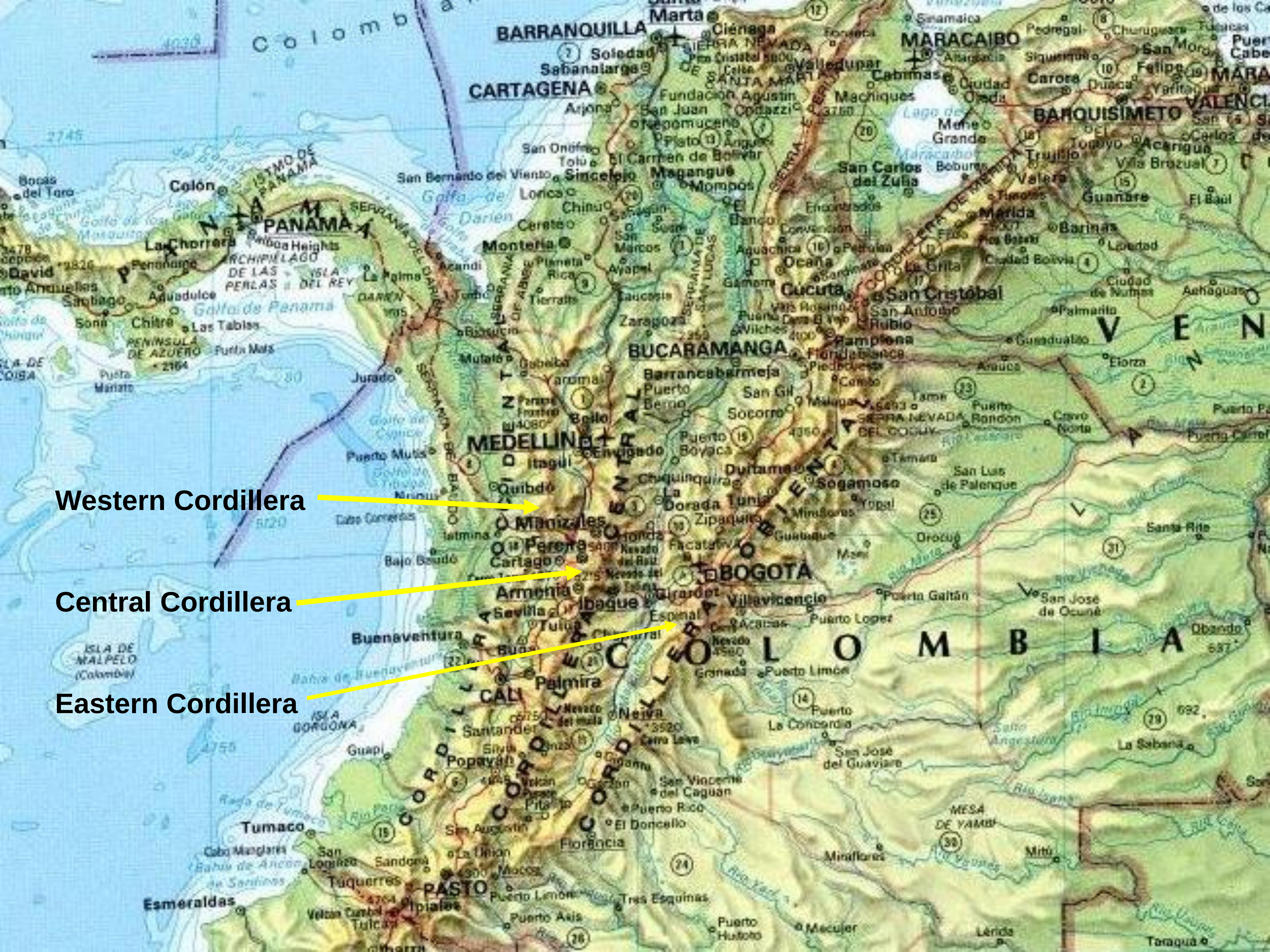
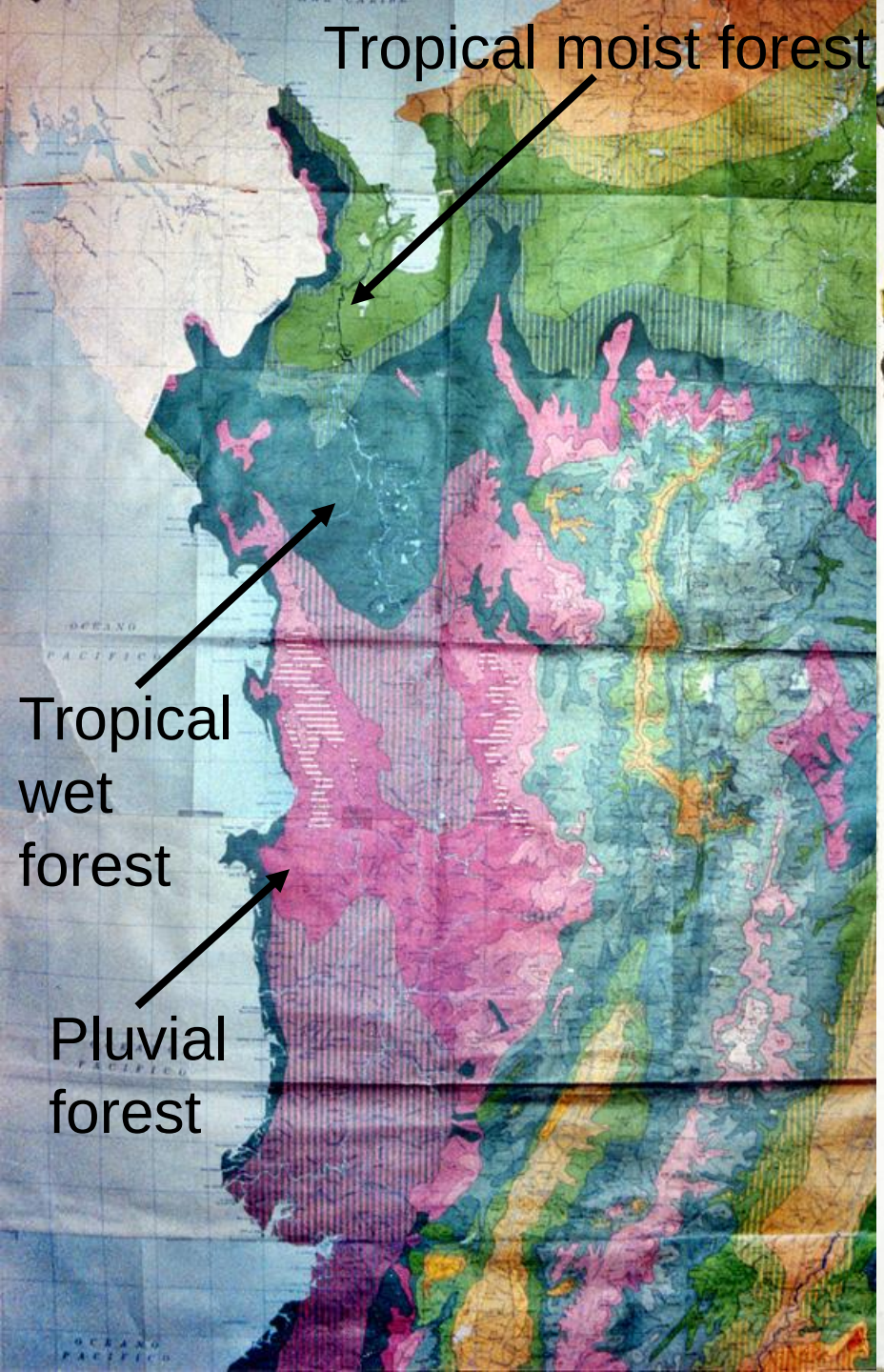
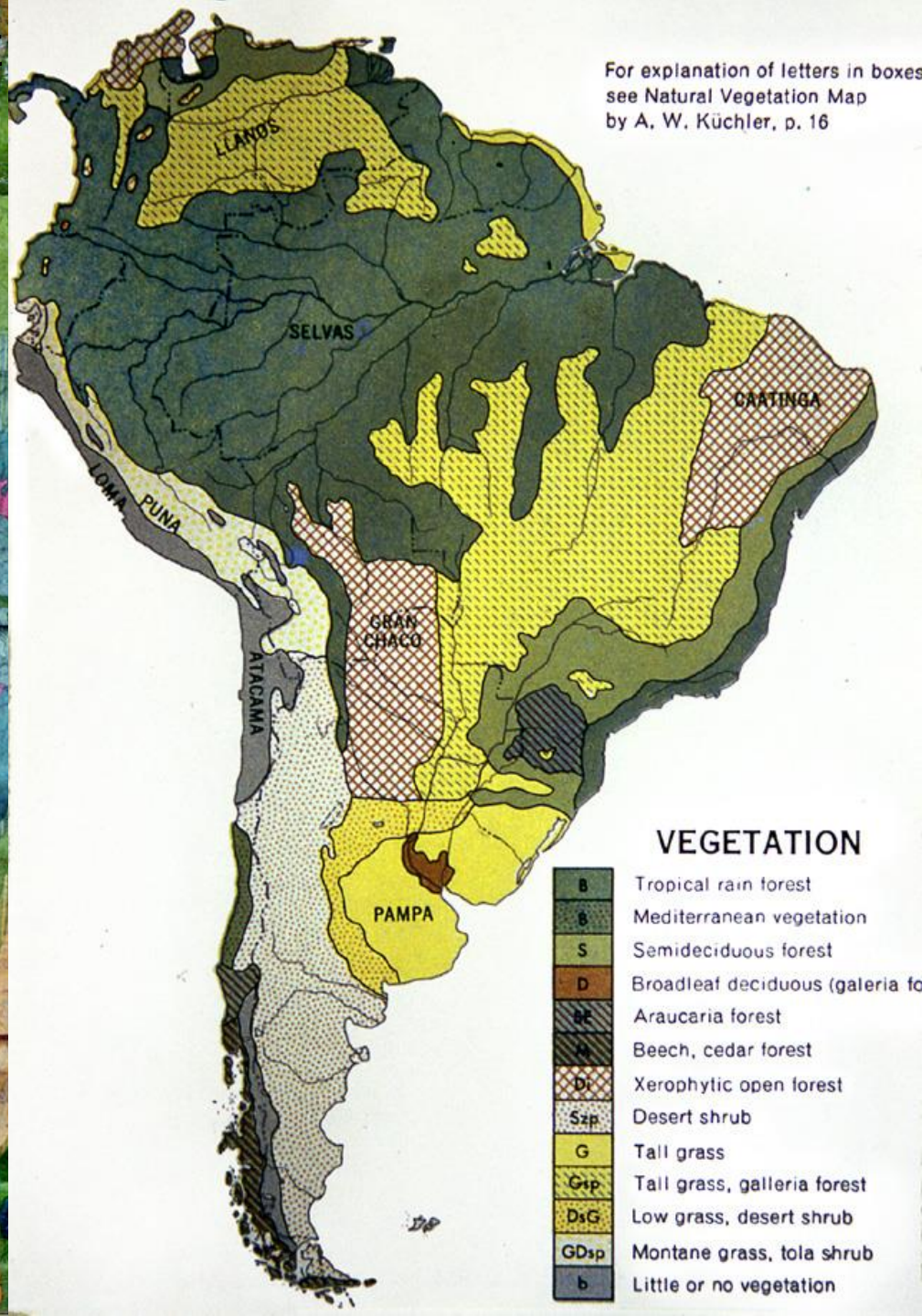
Aroid distribution in Colombia- the consequences of Climatic Change and Deforestation

Thomas B. Croat

Missouri Botanical Garden


Western Cordillera
Central Cordillera
Eastern Cordillera
BARRANQUILLA
CARTAGENA
MARACAIBO
BARQUISIMETO
PANAMA
MEDELLIN
BUCARAMANGA
BOGOTA
CALI
PASTO
COLOMBIA
Cucuta
Manizales
Pereira
Armenia
Ibague
Villavicencio
Neiva
Popayan
Buenaventura
Tumaco
Quibdo
Monteria
Sincelejo
Santa Marta
Valledupar
Barrancabermeja
Tunja
Sogamoso
Duitama
Palmira
Girardot
Florencia
Esmeraldas
Ipiales
Tulcan


Tropical moist forest
Tropical wet forest
Pluvial forest

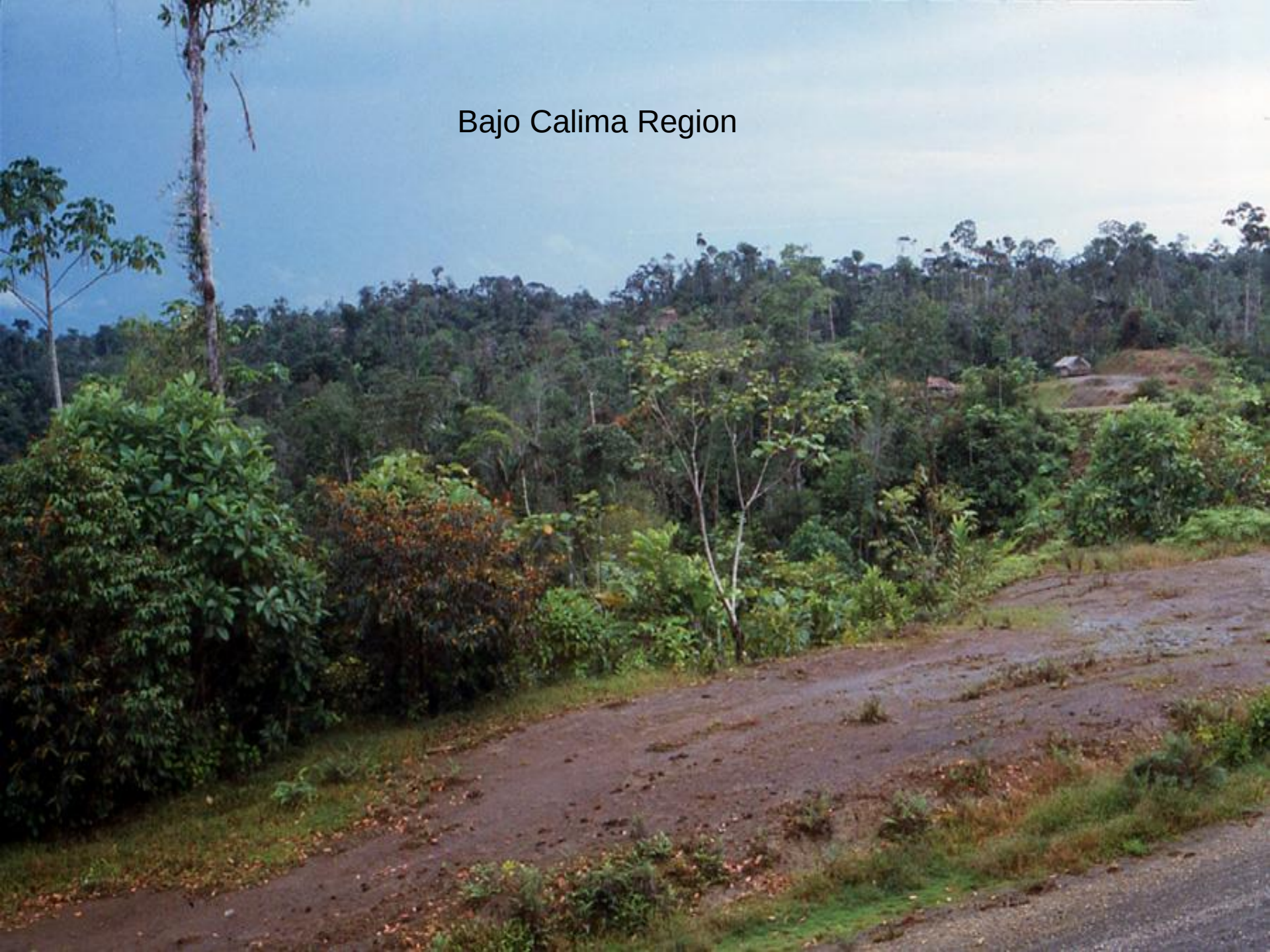

For explanation of letters in boxes see Natural Vegetation Map by A. W. Küchler, p. 16
LLANOS
SELVAS
CAATINGA
LOMA
PUNA
ATACAMA
GRAN CHACO
PAMPA
VEGETATION
B Tropical rain forest
B Mediterranean vegetation
S Semideciduous forest
D Broadleaf deciduous (galeria fo
BE Araucaria forest
Beech, cedar forest
Di Xerophytic open forest
Szp Desert shrub
G Tall grass
Gsp Tall grass, galleria forest
DsG Low grass, desert shrub
GDsp Montane grass, tola shrub
b Little or no vegetation

Areas of Interest
Western Cordillera


Curundo
San
Isidro
de
Caripato
RIO QUITO
Villaconto

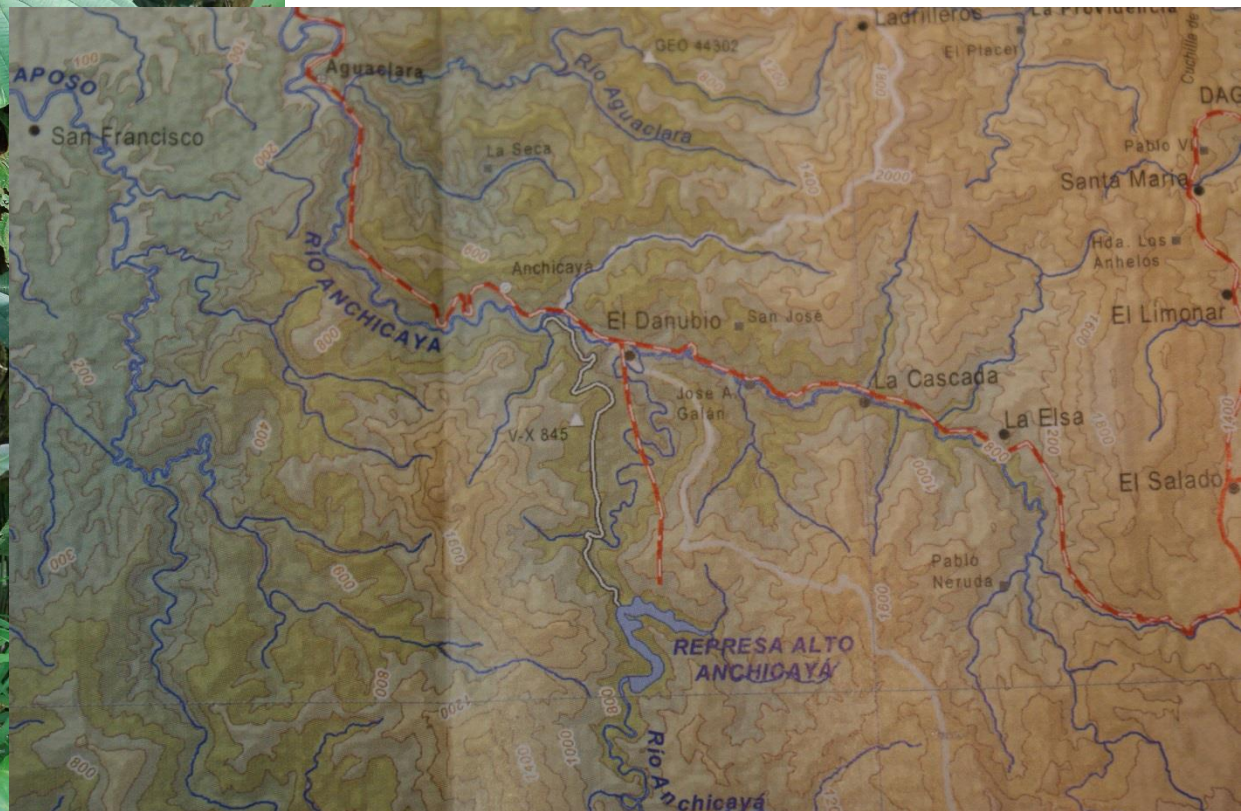
Road to Iro


NW Colombia
Chocó: Cabo Corrientes, El Amargal Field Station


Bajo Calima Region


Dagua
La Cumbre
Bitaco
El Carmen
Salado
Sn. Bernardo
Queremal
CALI

Queremal-Anchicaya Road, Valle del Cauca



Araceae of La Planada

A breviscapum

A protrudens

a. ricaurtense

Flora de las Araceae de La Planada

- 82 especies; 7 genera
- 1300-2100 m (1700-1900 m)
- 43% species nueva
- 9 especies endemica

Rio Imbi

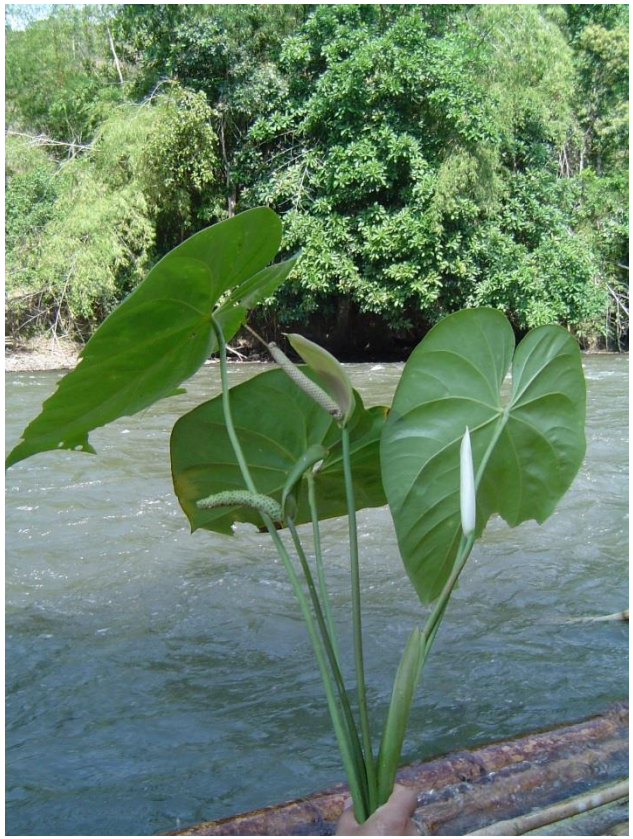
Get images taken there when I collected there, including some new specise

Rio Ñambí

Areas of Interest
Central Cordillera

Central cordillera

A. glaucospadix



A. morelianum

A. scandens


Cordillera Central-Valle
del Río Medelin, Vereda
de Santa Clara, Antioquia


Rio Claro,
Antioquia
21 4 2007

San Rapael-Guatepe Region

A. antioquense

A. (cardiolonchium)

Philodendron sp

Santa clara

Cordillera Central: Valley of Río Combeima


Valley of Río Combeima, Ibague, Tolima

Valley of Río Combeima

Areas of Interest
Eastern Cordillera

Santa Maria to Boyacá

a. formosum

p. Gloriosum

Xanthasoma sp.

Cordillera Oriental: Florencia-Neiva


Florencia-Huil
Eastern slope
Cordillera Orie

Cordillera Oriental above Florencia, ca. 1000 m.

Quebrada Caraño, Caquetá

P, caranoense

A. (belolonchium)

A. oxybelium

Quebrada Caraño

Philodendron edwinii

Villavicencio

Near Villavicencio, Meta Department

Cauca River Valley showing deforestation

Eastern slope of Cordillera Occidental South of Medellín

Cordillera Central Manizales-Rio Cauca

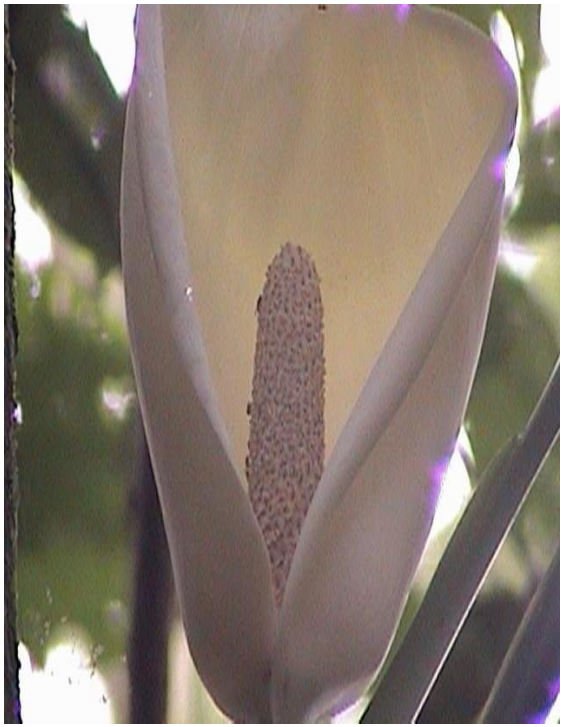
Eastern slope of Cordillera Occidentale between Medellín & Cali, Antioquia Department, Colombia

Conclusions

- Highly endemic areas are endangered owing to having unique sets of species
- Climate changes, even slight changes can create an increase of invading fires
- Extinction has already taken place in such areas as the Cordillera Central, the Cauca River valley and other areas.
- Special emphasis must be placed on more study of families such as Araceae which are so prone to extinction.

North American Basin
Sargasso Sea
BERMUDA ISLANDS
Blake Ridge
Blake Plateau
BAHAMAS
GRAND BAHAMA
ABACO ISLAND
ANDROS
Great Bahama Bank
GREAT INAGUA
CAICOS ISLANDS
Puerto Rico Trench
VIRGIN ISLANDS
LEEWARD ISLANDS
WINDWARD ISLANDS
LESSER ANTILLES
GREATER ANTILLES
CUBA
HISPANIOLA
PUERTO RICO
JAMAICA
CAYMAN ISLANDS
ISLA DE LA JUVENTUD
Caribbean Sea
Venezuelan Basin
Colombian Basin
PENINSULA DE LA GUAJIRA
GUIANA
CORDILLERA ORIENTAL
CORDILLERA CENTRAL
CORDILLERA OCCIDENTAL
ANDES
YUNGAS
ALTIPLANO
Peru-Chile Trench
Peru Basin
Gulf of Panama
ISLA DEL COCO
ISLA DE MALPELO
Cocos Ridge
Carnegie Ridge
ARCHIPIÉLAGO DE COLÓN
GALAPAGOS ISLANDS
FERNANDINA
ISABELA
SANTA CRUZ
SAN CRISTOBAL
SAN SALVADOR
Equator
Fracture Zone
Albatross Plateau
Guatemala Basin
Middle America Trench
Gulf of Mexico
Mexico Basin
Yucatan Channel
YUCATAN PENINSULA
Bahia de Campeche
Golfo de Tehuantepec
ISTMO DE TEHUANTEPEC
SIERRA MADRE DEL SUR
SIERRA MADRE ORIENTAL
SIERRA MADRE OCCIDENTAL
MESETA CENTRAL
PLATEAU OF MEXICO
BOLSON DE MAPIMI
Gulf of California
DESIERTO DE ALTAR
ISLAS MARIAS
Cabo Corrientes
LLANO ESTACADO
Edwards Plateau
PLAINS
Ozark Plateau
Ouachita Mountains
Sacramento Mountains
Sangre de Cristo Mountains
APPALACHIAN
ALLEGHENY
Cumberland Plateau
DELMARVA PENINSULA
FLORIDA
Cape Sable
Cape Canaveral
Cape Hatteras
Miami
Tampa
Jacksonville
Charleston
Norfolk
Washington
Philadelphia
Pittsburgh
Cleveland
Cincinnati
St. Louis
Memphis
New Orleans
Houston
Galveston Bay
Kansas City
Oklahoma City
Omaha
Denver
El Paso
Monterrey
Matamoros
Tampico
Veracruz
Mérida
Belize City
Cabo Catoche
Cabo San Antonio
La Habana
Nassau
Kingston
Santo Domingo
San Juan
Caracas
Cabo Gracias a Dios
COSTA DE MOSQUITOS
PENINSULA DE AZUERO
Guayaquil
Trujillo
Lima
La Paz

villavicencio



M. lechleriana

xanthasoma

A. longistrorsum

Eastern cordillera

A. fendleri

Tolima Colombia

A. crystalinumi

A. corrugatum

Philodendron sp

Valle, Colombia

Syngonium sagittatum

Anthurium sp.