

Monteverde Cloud Forest

- " secondary forest (was cleared, now growing back)
- " was cleared for cattle and agriculture
- " reserve founded in 1972
- " resplendent quetzal and 3-waddled bellbird
- " quetzal now nesting in hollow trees, live in high mtn. forests
- " fig tree depends on wasp - symbiotic
 - " female wasp burrows into bulb - lays eggs - dies
 - " males hatch and fertilize female eggs - co-evolution
 - " wasp pollinates, tree gives home
- " light gaps - when a tree falls, it gives seeds light enough to grow and take advantage of the light
- " secondary forest - more difficult to go through, more light
- " cloud forest - humid, high altitude (after 4500 ft. above sea level), clouds
- " plants always wet from clouds
- " epiphytes - epi=plants phyte=over tree
 - " plants that grow on tree - not parasites
 - " nutrients from moisture and falling debris
 - " weight can harm host tree
 - " ferns, orchids, moss, lichens, bryophytes are most common
 - " bromeliads = water collectors, they water other plants
 - " mosquitos and flies leave eggs, frogs leave tadpoles, animals and birds drink water, insects pollinate flowers
 - " 80% of bromeliads and orchids grow epiphytically, 20% grow terrestrially
- " the quetzal
 - " wild avocado = aguacatillo = main food source of the quetzal
 - " genus = ocotea family=loraceae
 - " Guatemala's national bird, but more in CR because more food
 - " migrate down to Panama
 - " quetzal regurgitates tree seeds - quetzal gets food and spreads tree seeds
- " hot lips - member of the coffee family
 - " Psychotria elata
 - " family = Rubiaceae
 - " simple opposite with stipple
 - " attractive to hummingbirds
 - " red = hoja modnificada = modified leaf
 - " flower = little white
 - " bract = red and green
 - " Brazil - sells berries and eat for aphrodesiac
- " 25-35,000 species of orchids
 - " 15% of all land plants are orchids
 - " insects pollinate them esp. bees of the iglusine family
 - " mimic insects for defense and to help in pollination = biomimicry
 - " 14-16,000 species in CR

- " 400 species in Monteverde
- " one of the largest and most common= cattleyas
- " cattleyas skinnery = CR nat l flower (guaria morada = purple orchid)
 - " Costa Ricans like to have it in their homes/yards
- " fulgoridae family = crickets, cicadas
 - " order = homoptera
- " Poor Man s Umbrella
 - " Gunnera insignis
 - " found in Braulio Carrillo, cloud forest, Chirripo Mt, Volcan Irazu, Talamanca Mts.
 - " can get 6 ft. wide
 - " fungus provides oxygen for plant
 - " this type only in Cloud Forest
- " dwarf forest - winds from 50-93 mph Dec.-March
- " continental divide 1550m=4700ft
 - " from Canada to Argentina
- " orange, yellow, red, purple = poisonous