

風霜、淬鍊—樹的心聲— 您感受到了嗎？

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Long



Glad to Meet You !



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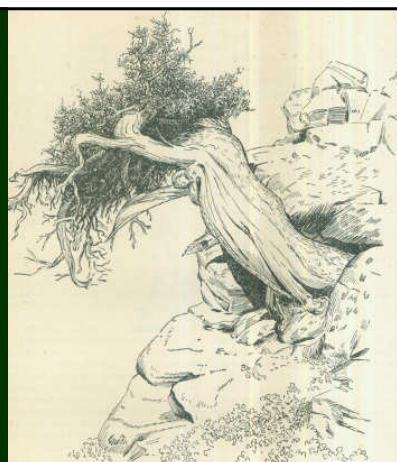
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- 「只要能身體力行、努力不懈，加上高尚無私的品德，便能將荒地變成沃土。」
- 布非耶，一位鄉下農夫，每天種一百顆種子，花了四十年的時間，默默的用雙手創造出一片森林，讓乾涸的河水重新流動、由死寂的土壤吐出綠芽。
- 法國大文豪尚紀沃諾，以詩意的筆調，刻畫這位平凡農夫的偉大心靈，和可與上帝媲美的善行，敲響全世界無數的心靈，成為自然文學的世紀經典，幾乎每一種語言都有譯本，為他贏得「自然散文詩人」的封號。

法國小說家尚紀沃諾
(Jean Giono, 1895-1970)
自然環保經典《種樹的男人》
Der Mann, Der Baume, Pflanze
(The man who Planted Trees)
一個平凡人熱愛大地」的精神，
更是教人感動，表現天人合一的
美麗境界。

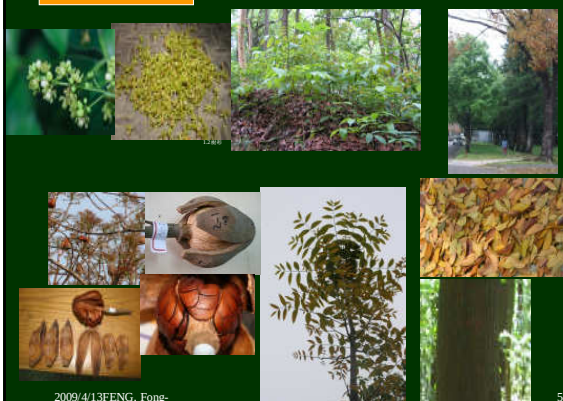


A juniper
centuries old :
"A man does
not plant a
tree for
himself, he
plants it for
posterity."



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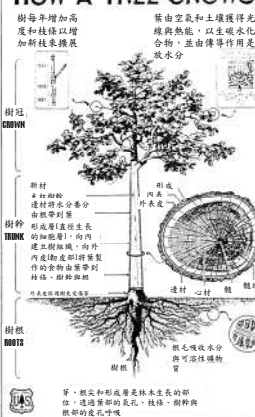
樹一生的生長與變化

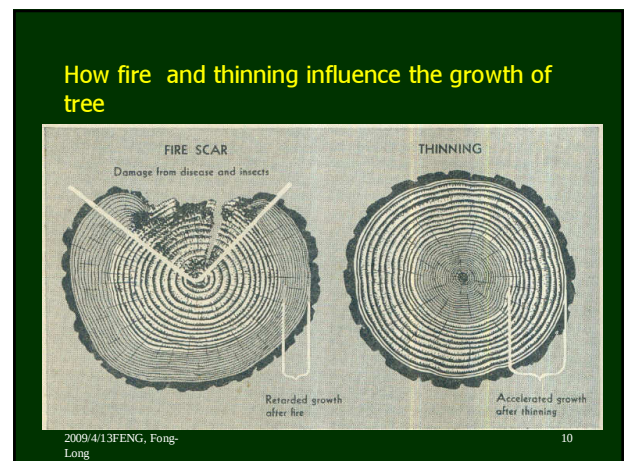
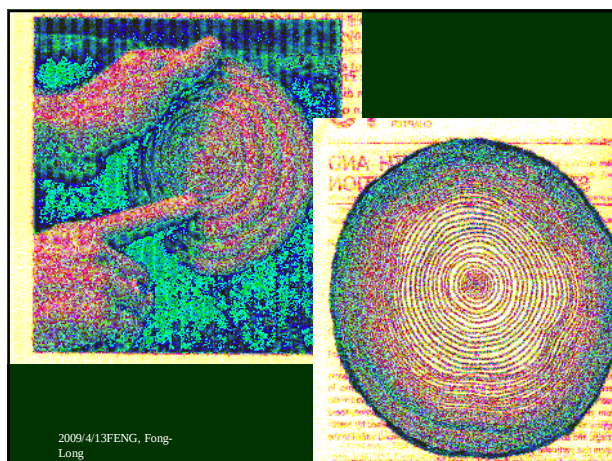
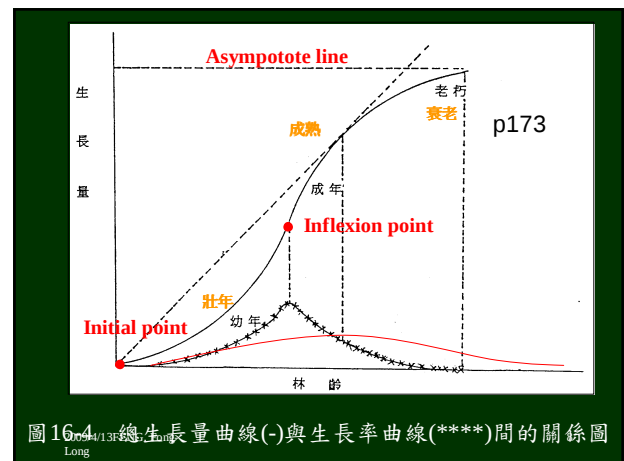
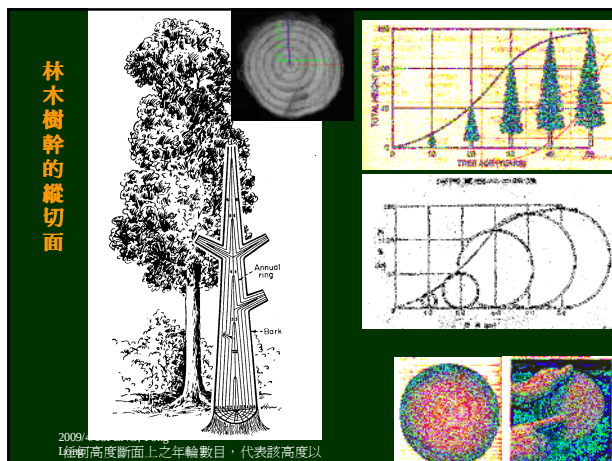


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HOW A TREE GROWS

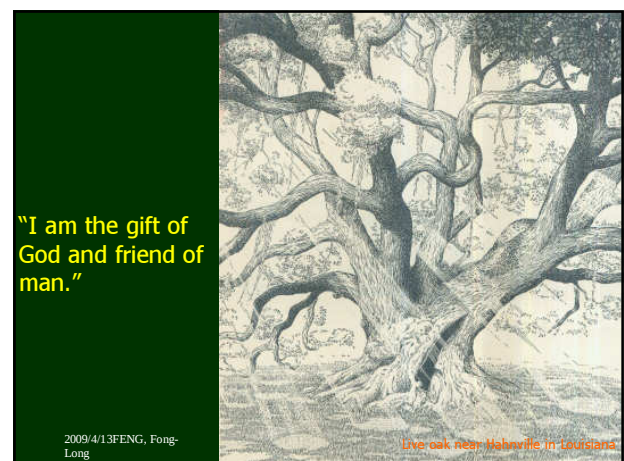




- "A tree is much more than a chunk of dead wood," exclaims Shigo.
- "Trees are alive; they live all year 'round, not just for a short time in the summer."
- "I could either go with the book (theories) or go with what I saw in the tree. Either the books were wrong or the trees were wrong. I chose to go with the trees," Shigo says.

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樹長得比地球上所有生物都來得高，來得大，來得久，分布來得廣，建立疆域來得穩!!

Trees: Super Survivors Some Champions

COASTAL REDWOOD (*Sequoia sempervirens*)
Some over 360 feet tall

GIANT SEQUOIA (*Sequoiadendron giganteum*)
Some over 2000 tons

SWAMP ASH (*Eucalyptus regnans*)
Some almost 300 feet tall

MONKEYPOD (*Samanea saman*)
Some trees with crown diameters of almost 200 feet

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Trees: Super Survivors Some Champions

BANYAN (*Ficus benghalensis*) It takes 10 minutes to walk around the perimeter of the crown of a giant banyan tree in Calcutta, India

BRISTLECONE PINE (*Pinus longaeva*)
Some are thought to be over 5000 years old

Trees are the tallest, most massive, longest-lived organisms ever to grow on earth.

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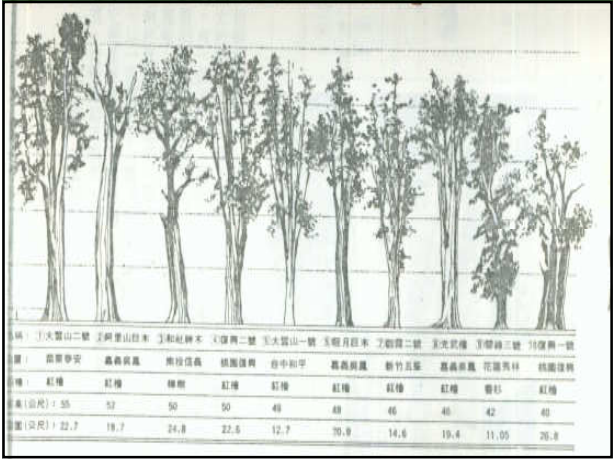
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The General Sherman Bigtree in the Sequoia National Park, California

COASTAL REDWOOD
Sequoia sempervirens
Some over 360 feet tall

(1 ft x 0.3048 m/ft = 109.728m)





台灣十大神木排行榜

- 排名 名稱 樹種 樹齡 樹高 樹胸圍 管理單位 林班地 別 稱
- 1 大安溪神木 紅檜 2500 55 25 林務局 大安溪75林班 台灣巨無霸神木
- 2 新中橫神木 紅檜 2000 40 22.5 台大實驗林管理處 阿里山219林班
- 3 眠月神木 紅檜 3500 48 21.6 林務局 阿里山45林班
- 4 司馬庫斯神木 紅檜 2500 35 20.5 林務局 大溪89林班 巨人神木
- 5 達觀18號神木 紅檜 1900 42 18.8 林務局 大溪33林班 浴火鳳凰神木
- 6 唐德山神木 紅檜 未測定 50 17.4 林務局 大溪61林班 嘎拉賀神木
- 7 檜山二號神木 紅檜 2000 34 17.2 林務局 竹東26林班 擎天神木
- 8 檜山一號神木 紅檜 2000 47.1 16.3 林務局 竹東26林班 樹爺爺神木
- 9 萬年樟公神木 樟樹 1500 43.6 16.2 台大實驗林管理處 阿里山222林班
- 10 達觀21號神木 紅檜 2700 55 14 林務局 大溪33林班 凌雲神木

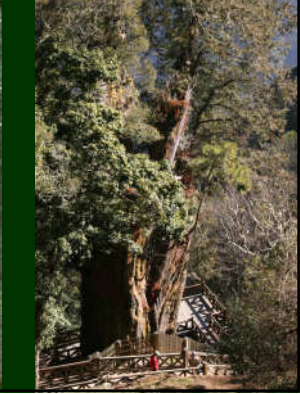
附註：樹齡以年計，為約數，樹高、樹胸圍：m 為單位

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大安溪神木(台灣巨無霸神木)
紅檜 (*Chamaecyparis formosensis*)
2500yrs. H:55m Cir.:25.1m 大安溪75cpt 2000 H:40 22.5 阿里山219cpt

新中橫神木





SWAMP ASH (*Eucalyptus regnans*)
almost 300 feet tall
(1 ft x 0.3048 m/ft = 91.44m)



08樟樹王神木

- 所在地：南投縣信義鄉神木村
- 樹種：樟樹
(*Cinnamomum camphora*)
- 樹高：43.6 m
- 胸圍：16.2 m
- 胸徑：5 m
- 樹齡：約1500年

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照片來源：<http://www.awem.com.tw/8000020.htm>



Trees: Super Survivors
MONKEYPOD *Sesbania saman*



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Trees: Super Survivors
BANYAN *Ficus benghalensis*



澎湖通梁老榕



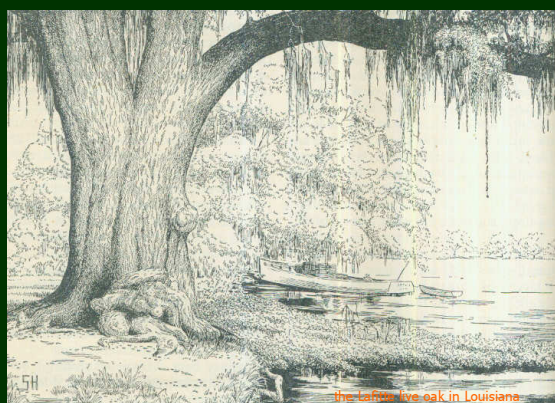


- "I started to see trees in a different way because a tree is a living thing," Shigo explains.
- (因為樹是活的生物，我們應以不同方式去看他們!!)
- "When you hit a living thing, it reacts. When YOU hit a tree, it does something. When a tree is threatened, it doesn't just stand there. It establishes boundaries."
- (當樹受到威脅時，樹會反應，他會建立疆域!!)

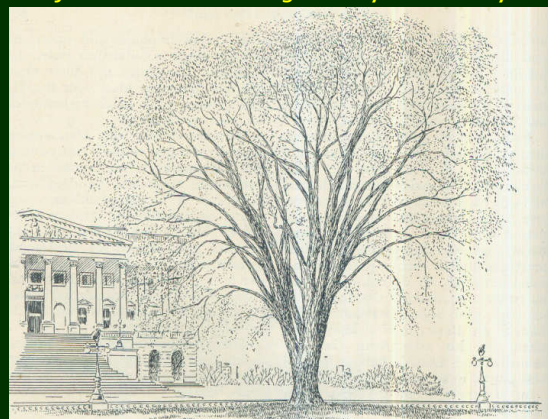
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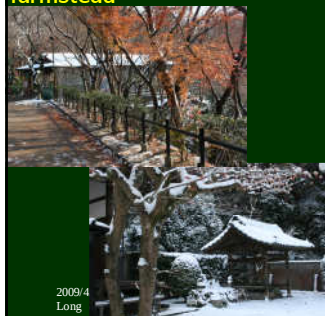
樹代表自然歷史與美 "A tree of history and beauty"



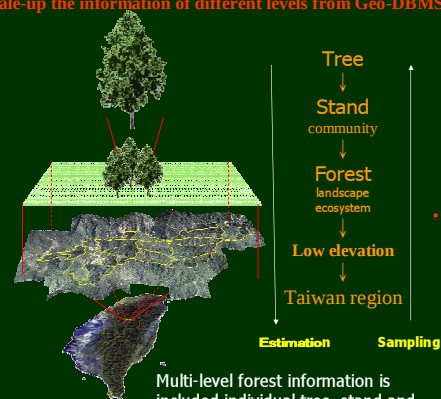
"Trees join earth and building and sky in harmony."



The artistic use of trees enhances the beauty and value of a well-designed farmstead

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To scale-up the information of different levels from Geo-DBMS.



Multi-level forest information is included individual tree, stand and forest landscape / ecosystem.

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- While humans put new cells in old places countless times during a lifetime, **trees continue to put new cells in new places**, Shigo explains.
- (樹生新細胞到新地方)
- Similarly, a tree doesn't heal, because it doesn't replace injured cells with new ones. (樹的受傷是無法治療!!)

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'You have to touch a tree and feel it,' is one of my favorite Shigoisms."



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On October 6, 2008 Alex died at home in Barrington

樹幹的構造

樹幹的構造予以剖析，則包括

- 外樹皮
- 內樹皮
- 形成層
- 邊材
- 心材

外表皮 Outer
內表皮 Inner

形成層 Cambium
邊材 Sapwood
心材 Heartwood

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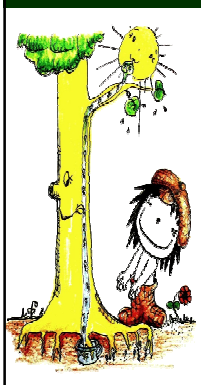
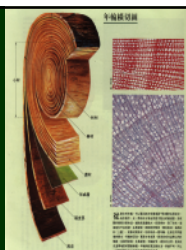
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樹木生理

樹幹由木質部(心材邊材)和韌皮部，形成層和樹皮

其組成。具備支撐

整個樹體的功能，木質部和韌皮部影響著葉子和根之間的水養分運輸。形成層幫助傷口癒合與促進生長；樹皮保護整個樹幹擋住細菌和害蟲的攻擊。



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- "Too many people are working in the field without an understanding of trees and grass," he observed.

- "People should know that trees are generating organisms, instead of re-generating organisms like human beings," Shigo explains.

- "Trees generate their own food from carbon dioxide, sunlight and water, while human beings must intake food from elsewhere.

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- "Alex is one of the most knowledgeable people about trees; he is an exciting lecturer. His enthusiasm is contagious."

- 我們發心祈求如Saigo一樣，
- 有對樹木的智慧與慈悲!!

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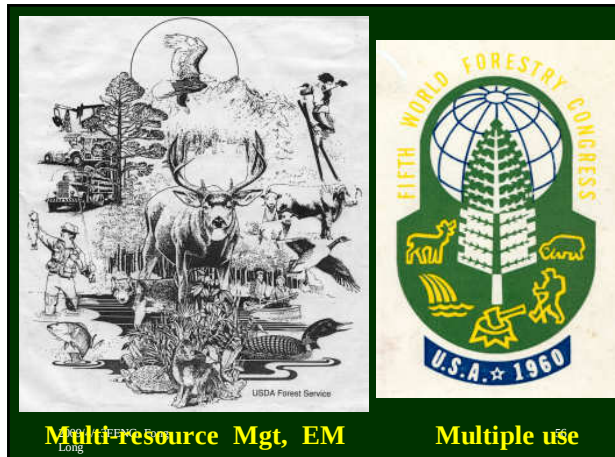
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森林是生育環境及動植物的綜合體

- 森林對於人類之主要貢獻(goods+services)
 - Fish and Wildlife Habitat 魚與野動棲地
 - Outdoor Recreation 戶外遊憩
 - Resource Preservation 資源保育
 - Esthetic Amenity 環境美質
 - Soil and Water Conservation 水土保持
 - Timber and byproduct 木材生產
 - Social Education 社會教育

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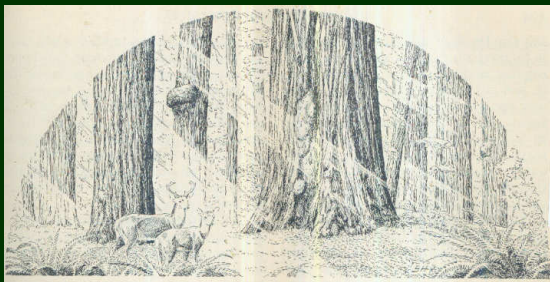
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Multi-resource Mgt, EM

Multiple use

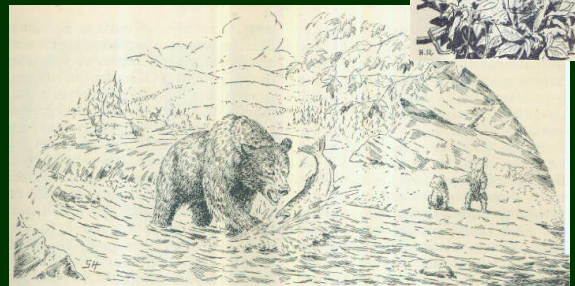
Trees Living Together



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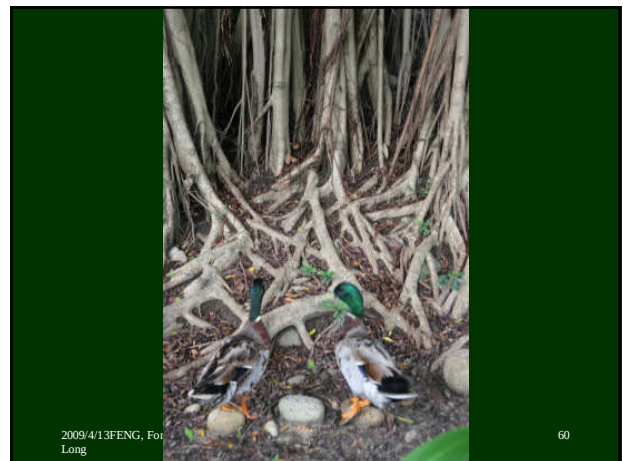
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Forests and Wildlife



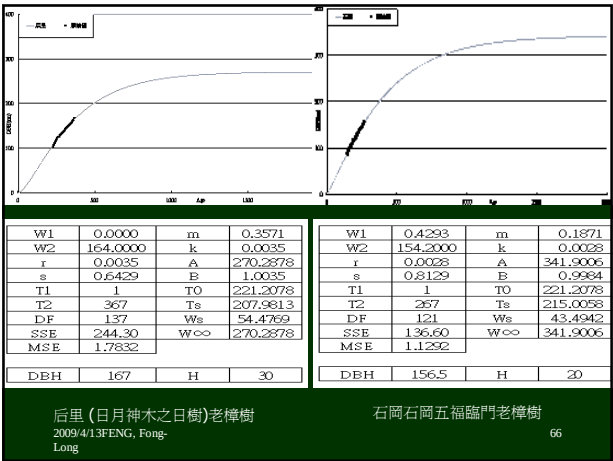
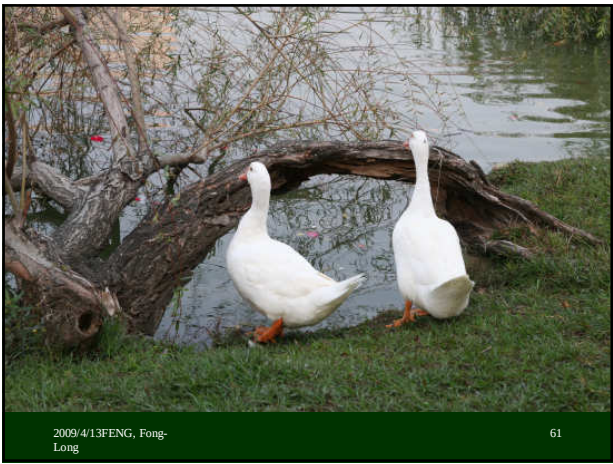
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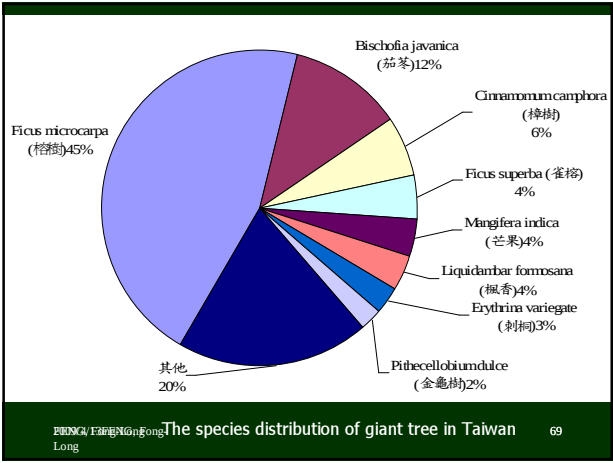
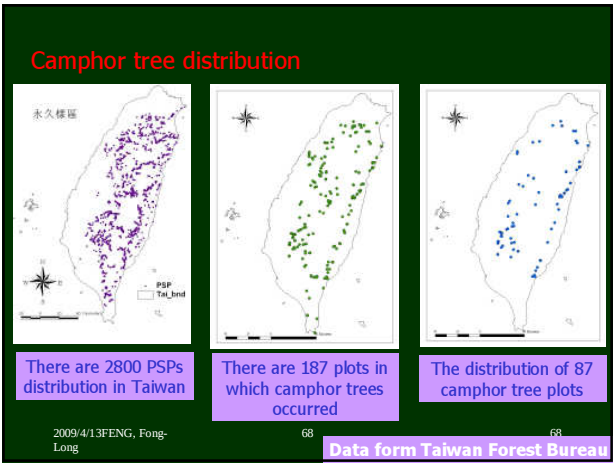
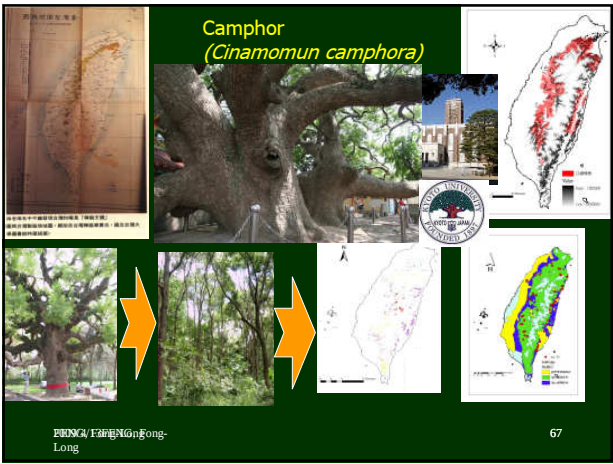
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樹種	株數	樹種	株數	樹種	株數
榕樹	511	芒果	46	欖果樹	18
茄苳	196	榕	41	九丁榕	15
樟樹	141	刺桐	28	鳥榕	13
楓香	57	龍眼	20	台灣朴樹	12
雀榕	49	大葉雀榕	19	朴樹	12

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