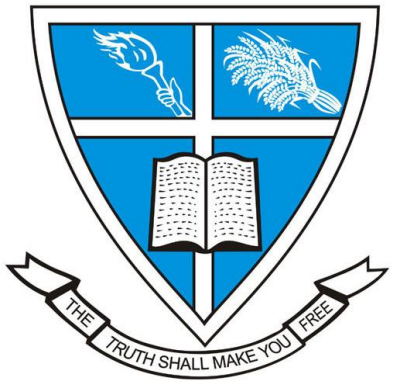


Union Christian College

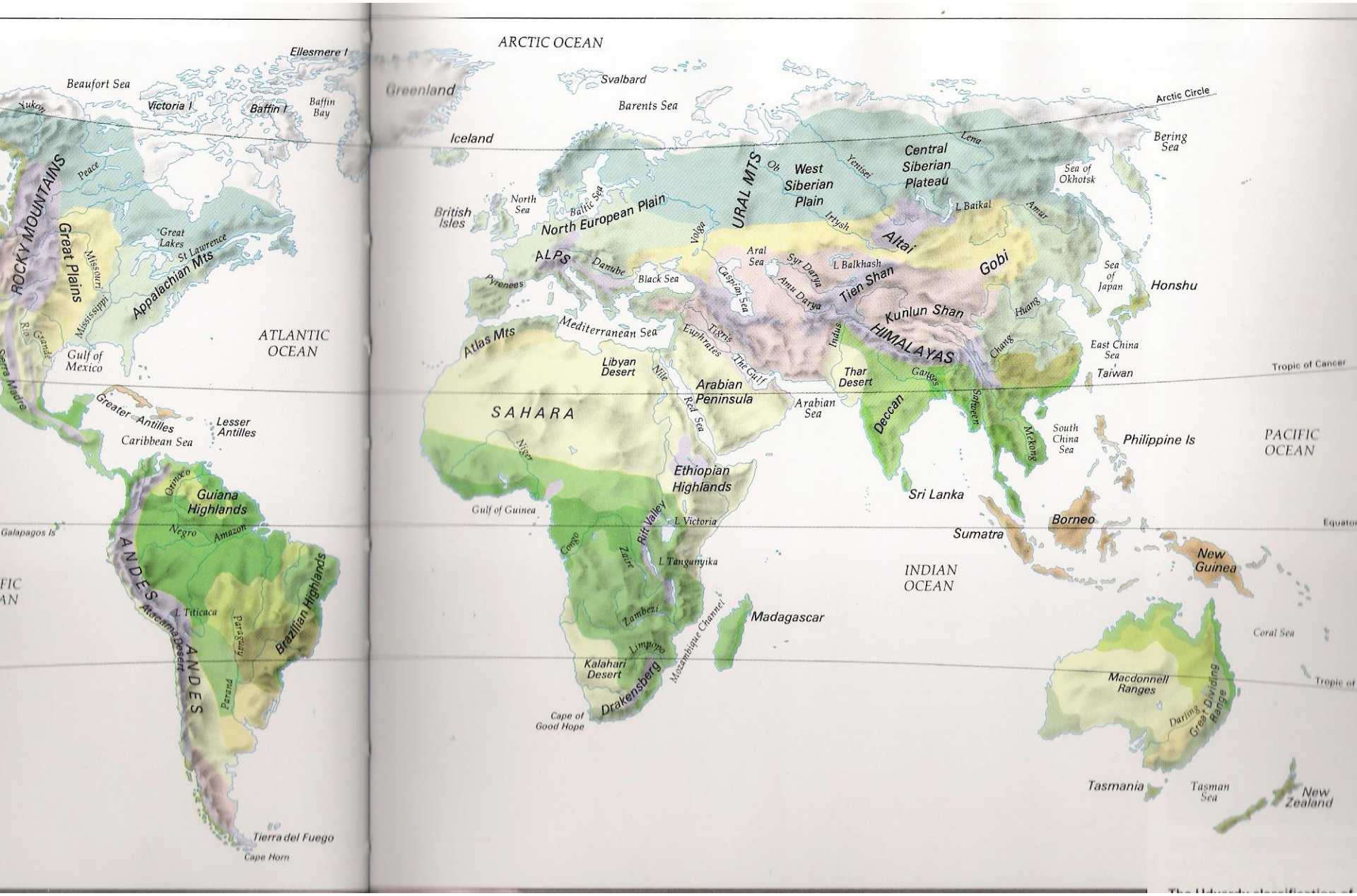
Welcomes you

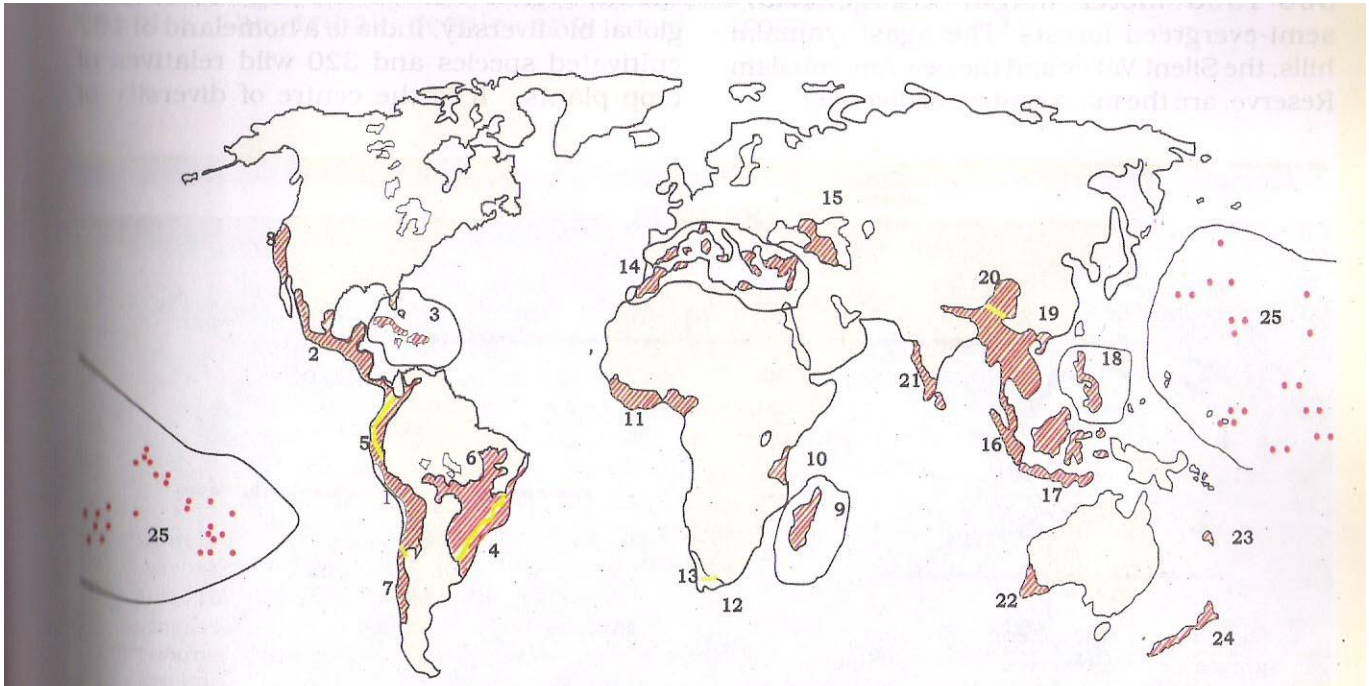
Dr Thara K Simon

Understanding Biodiversity : Acanthaceae A case study

Understanding Biodiversity

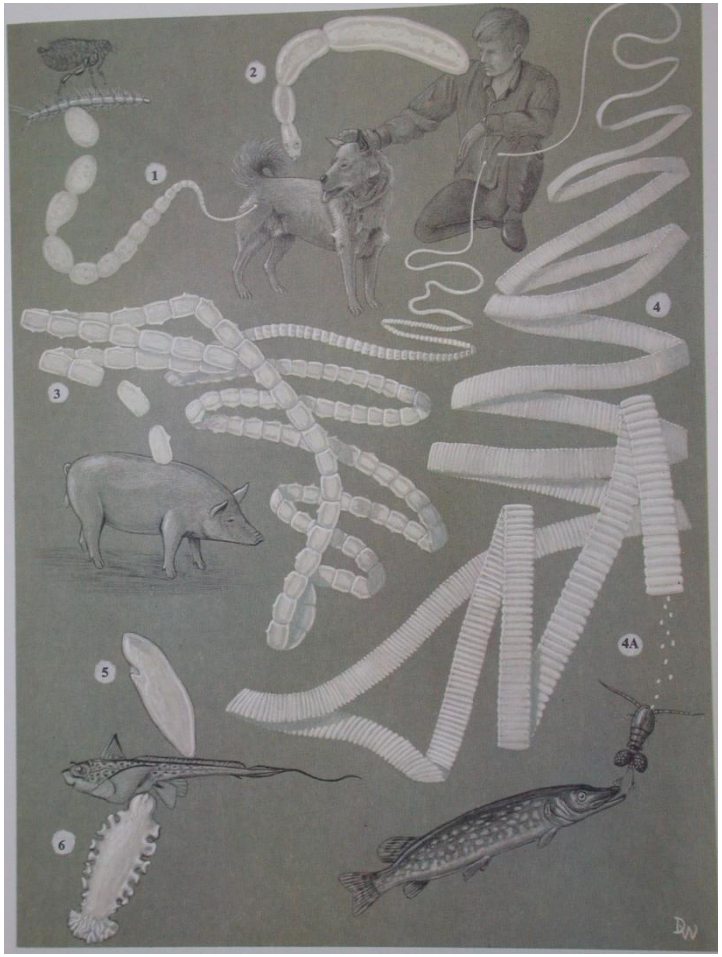
- Genetic diversity
- Species diversity
- Ecosystem diversity


ARCTIC OCEAN
Ellesmere I
Beaufort Sea
Yukon
Victoria I
Baffin I
Baffin Bay
Greenland
Svalbard
Barents Sea
Iceland
Arctic Circle
Bering Sea
Lena
Central Siberian Plateau
Yenisei
Ob
West Siberian Plain
URAL MTS
Sea of Okhotsk
L Baikal
Amur
Irtysh
Altai
Gobi
Sea of Japan
Honshu
British Isles
North Sea
Baltic Sea
North European Plain
Volga
ROCKY MOUNTAINS
Peace
Great Plains
Great Lakes
St Lawrence
Missouri
Mississippi
Appalachian Mts
ALPS
Danube
Black Sea
Pyrenees
Aral Sea
Syr Darya
Amu Darya
Caspian Sea
L Balkhash
Tien Shan
Kunlun Shan
HIMALAYAS
Huang
Chang
Indus
Tigris
Euphrates
Mediterranean Sea
Atlas Mts
Libyan Desert
Nile
Red Sea
The Gulf
Arabian Peninsula
Arabian Sea
Thar Desert
Ganges
Deccan
Satpura
Mekong
South China Sea
East China Sea
Taiwan
Philippine Is
PACIFIC OCEAN
Tropic of Cancer
Rio Grande
Sierra Madre
Gulf of Mexico
ATLANTIC OCEAN
Greater Antilles
Lesser Antilles
Caribbean Sea
SAHARA
Niger
Ethiopian Highlands
Gulf of Guinea
Sri Lanka
Orinoco
Guiana Highlands
Negro
Amazon
Galapagos Is
L Victoria
Rift Valley
Congo
Zaire
L Tanganyika
Sumatra
Borneo
Equator
New Guinea
INDIAN OCEAN
ANDES
Atacama Desert
L Titicaca
Paraguay
Parana
Brazilian Highlands
Zambezi
Limpopo
Madagascar
Coral Sea
Kalahari Desert
Drakensberg
Mozambique Channel
Macdonnell Ranges
Darling
Great Dividing Range
Tropic of
Cape of Good Hope
Tasmania
Tasman Sea
New Zealand
Tierra del Fuego
Cape Horn



1. Tropical Andes, 2. Mesoamerica, 3. Caribbean, 4. Brazil's Atlantic Forests, 5. Choco/Darien/Western Ecuador, 6. Brazil's Cerrado, 7. Central Chile, 8. California Floristic Province, 9. Madagascar, 10. Eastern Arc & Coastal Forests of Tanzania/Kenya, 11. West African Forests, 12. Cape Floristic Province, 13. Succulent Karoo, 14. Mediterranean Basin, 15. Caucasus, 16. Sundland, 17. Wallacea, 18. Philippines, 19. Indo-Burma, 20. South-Central China, 21. Western Ghats/Sri Lanka, 22. Southwest Australia, 23. New Caledonia, 24. New Zealand, 25. Polynesia/Micronesia.

The terrestrial biodiversity hot spots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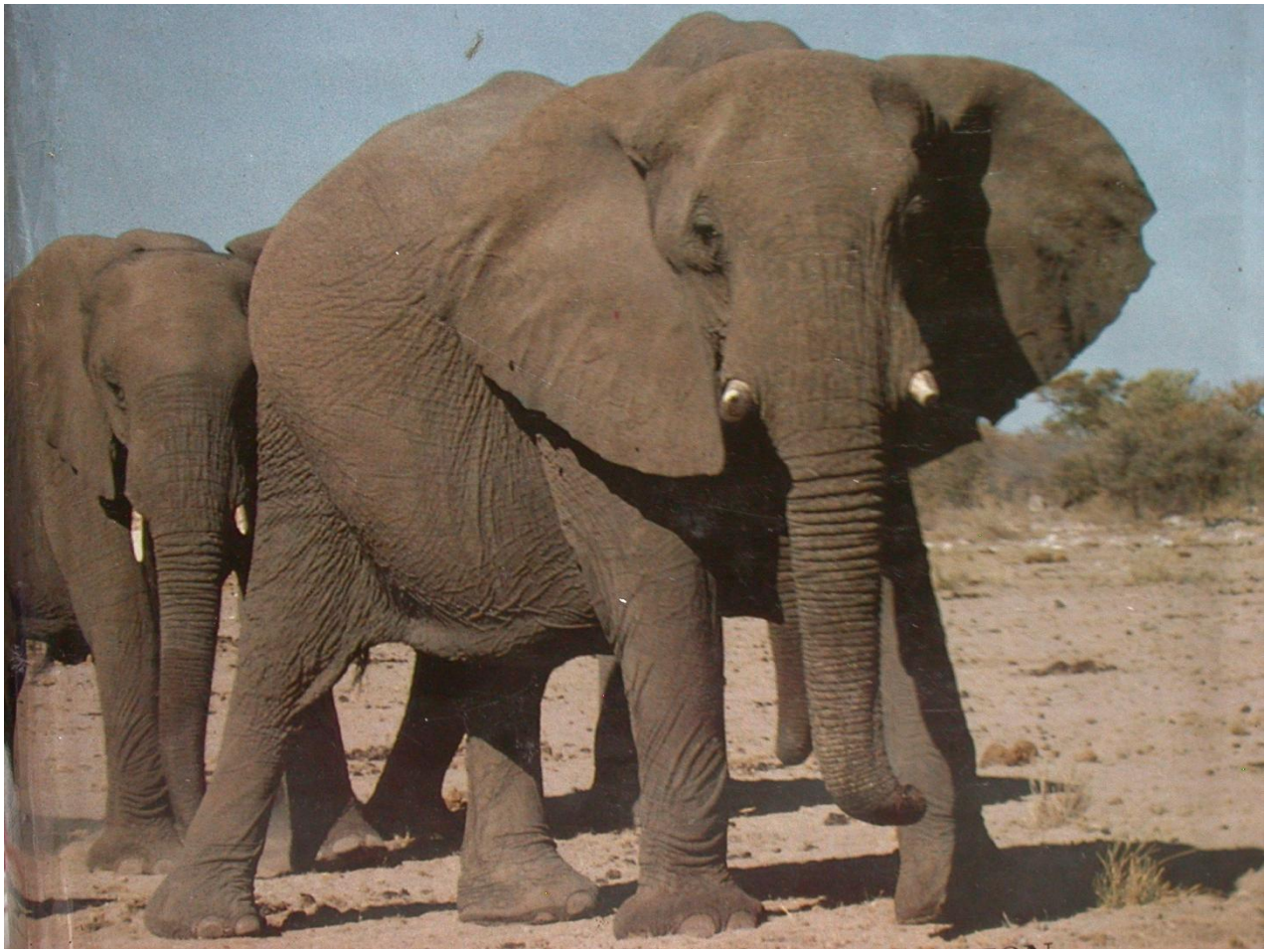
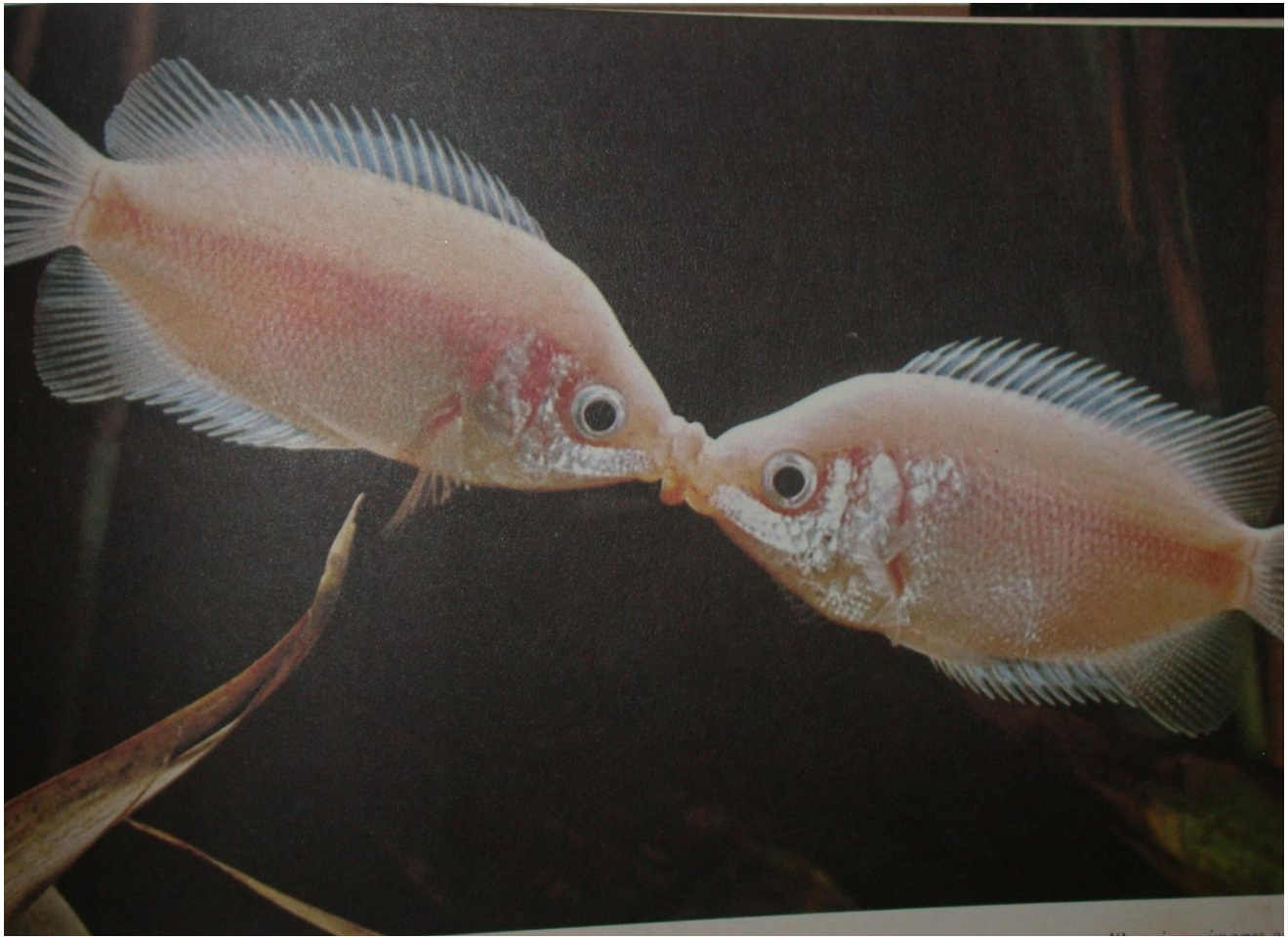
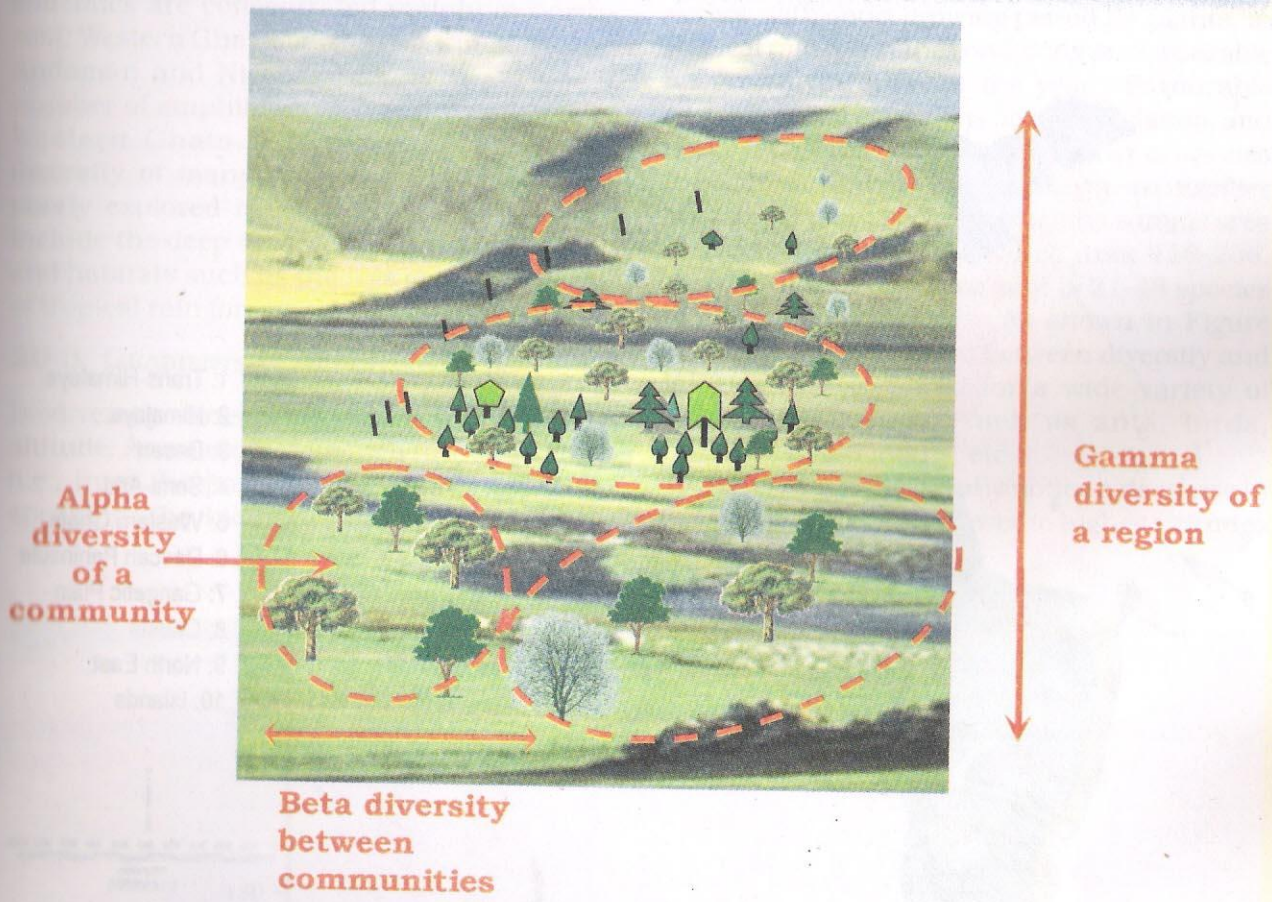
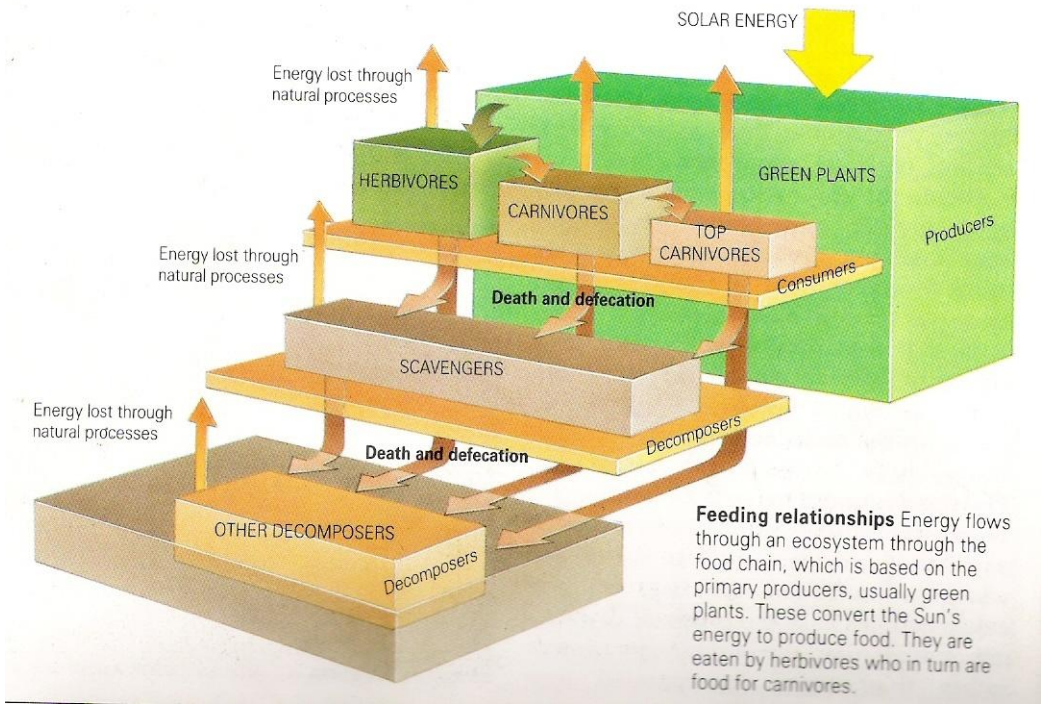


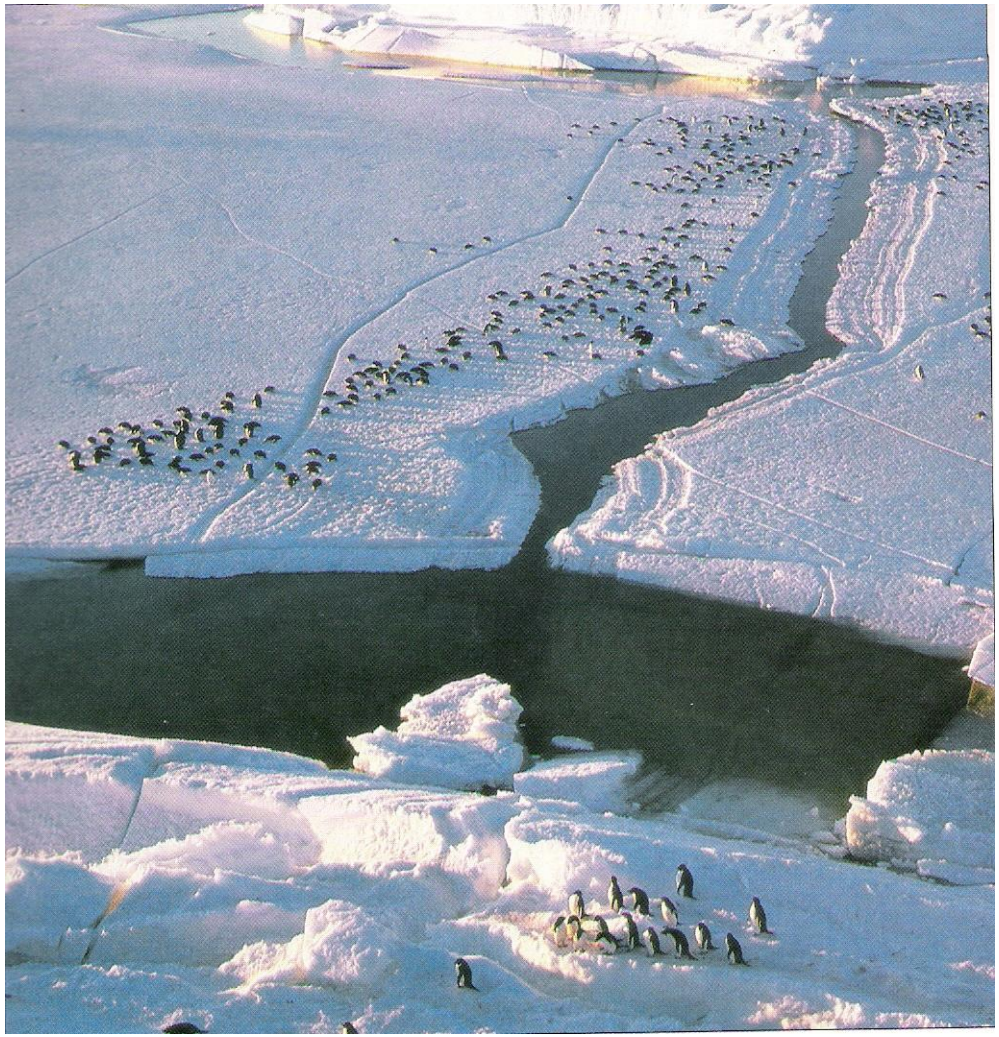


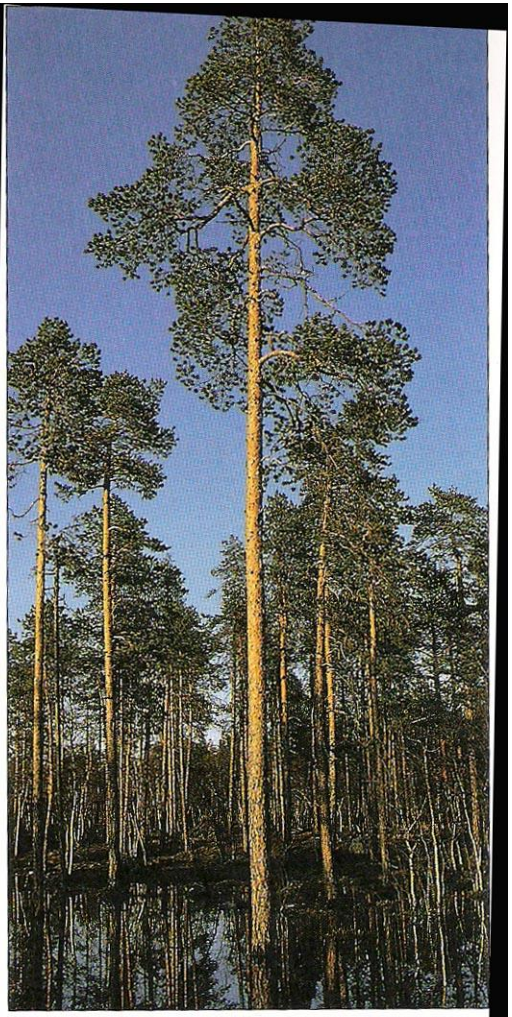


Three perspectives of diversity : alpha, beta and gamma diversity

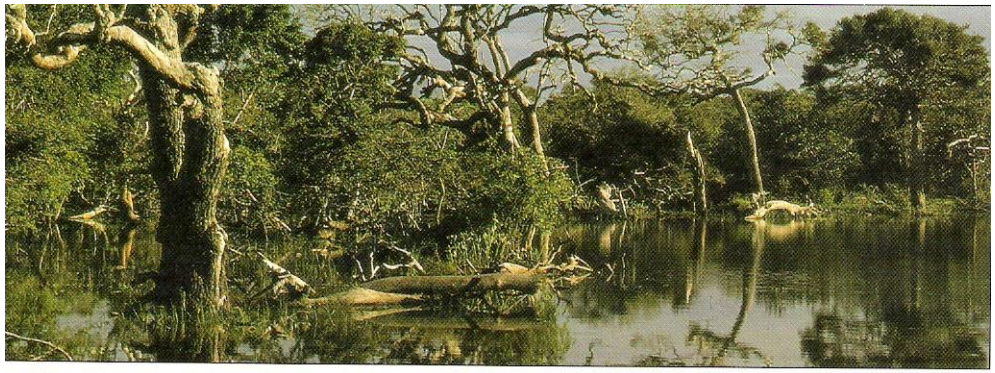


Feeding relationships Energy flows through an ecosystem through the food chain, which is based on the primary producers, usually green plants. These convert the Sun's energy to produce food. They are eaten by herbivores who in turn are food for carnivores.





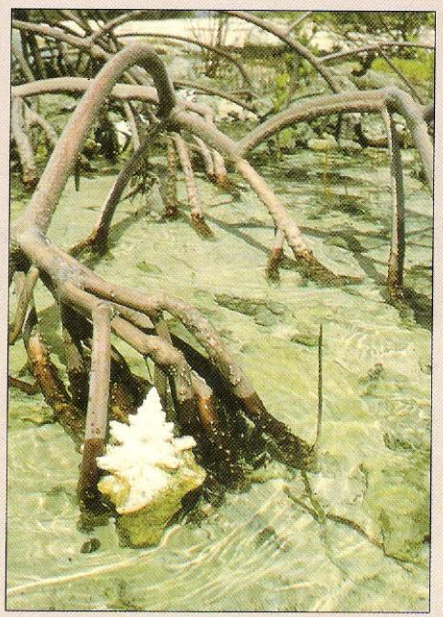
Coniferous forest, also known as boreal forest or taiga, is one of the world's major biomes. It extends in a broad belt across the high latitudes of the northern hemisphere, where the growing season is too short for deciduous trees.



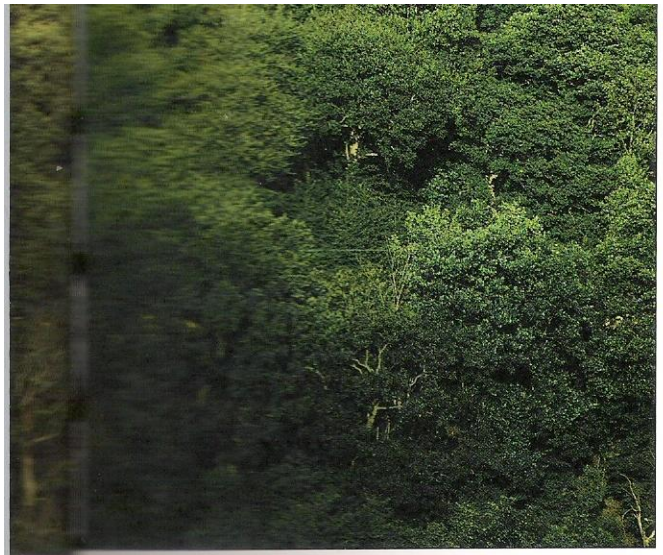
MANGROVES

A mangrove swamp is like a forest on stilts. Mangroves grow in tidal waters in the tropics; they thrive in waters where there is too much silt for coral reefs to form. Rotting leaves falling into the water and nutrients from the silt trapped by the mangrove roots feed the microscopic plankton that support a nursery for crustaceans, mollusks and fish. This abundance of food attracts numerous birds such as ibises, pelicans and frigatebirds. They nest in the mangroves, their droppings adding to its fertility.

Tropical coasts support millions of hectares of mangroves, but they are disappearing rapidly in many places. Large areas have been destroyed for building, rice-growing, charcoal burning and aquaculture, even though the fish farms themselves get their stock from mangroves. There is, however, a growing realization that mangroves provide a self-repairing coastal flood barrier, and they are increasingly being replanted and protected.



Storm barrier Mud trapped between mangrove roots gradually builds up the coast.



Changing habitats Landscapes and habitats chang through a process known as succession, when a community of plants and animals is gradually replac by a community of different species. The process continues over a long period of time until a climax community, such as tropical forest or deciduous oa forest, is reached. It remains virtually unchanged un there is a climate shift.

Acanthaceae : A case study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Justicia betonica
(c) Rob Nelson


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23 1 1:08

Eranthemum strictum


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Environmental Weeds
of Australia


©Kazuo Yamasaki


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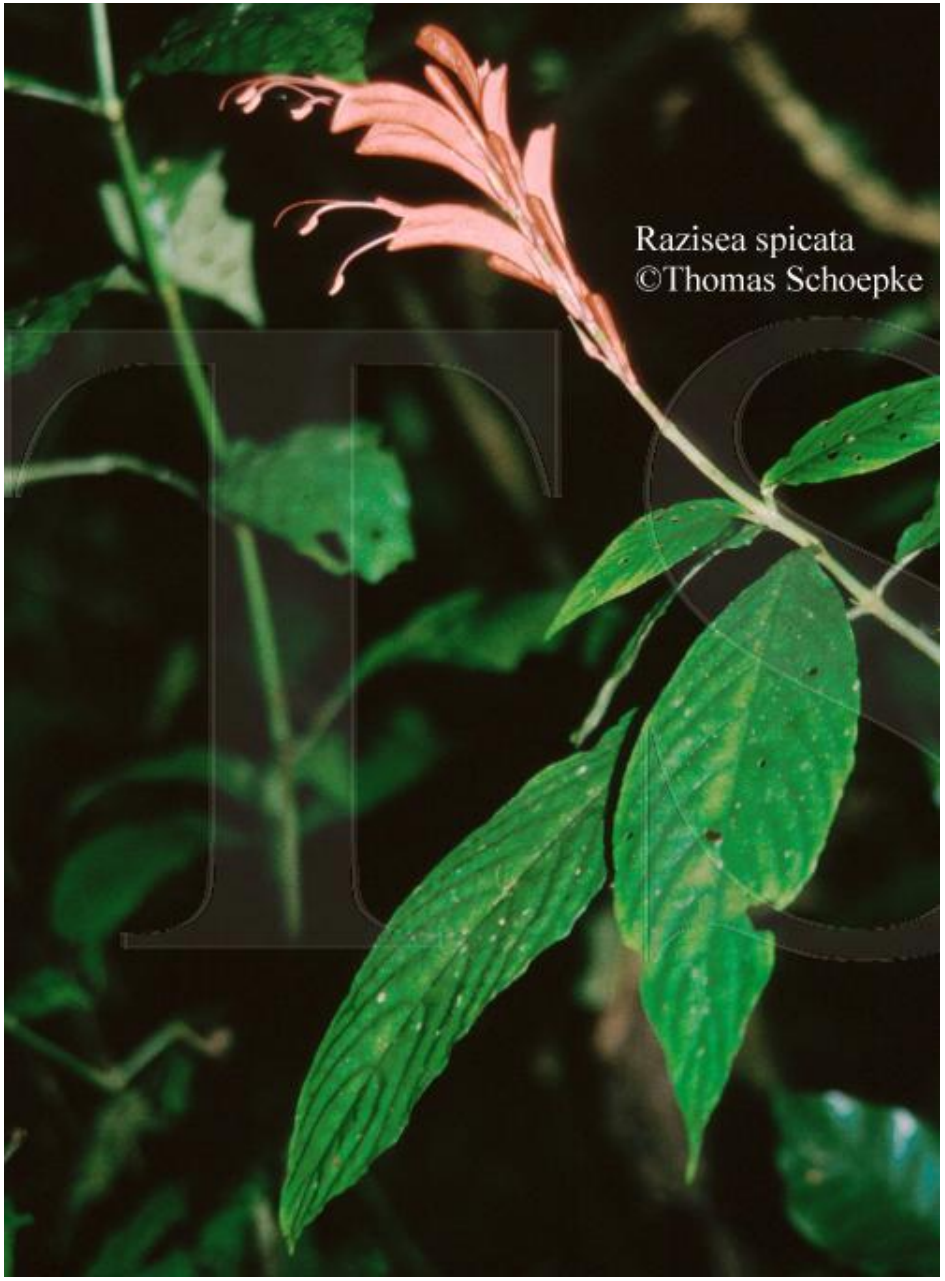
Pseuderanthemum
carruthersii
Acanthaceae
© G. D. Carr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