

Pleistocene Biogeography

What were the biogeographic effects of transition from the last ice age to the current interglacial?

Words & short answers

Holocene

Packrat Middens

Pleistocene

How much lower was the ocean during the last full glacial

How much colder was the planet during the last full glacial

How did vegetation respond to postglacial warming

Latitudinally

Altitudinally

Current Distributions & Cladistics

Produce the most parsimonious cladogram for the following monophyletic group. Label apomorphies, sympomorphies, and nodes. Species 0 is the most primitive member of the group.

species 0	Red	tailed	horned	furry	hoofed	hands
species 1	Green	tailed	horned	furry	hoofed	hands
species 2	Green	tailless	horned	furry	clawed	hands
species 3	Green	tailless	hornless	feathered	hoofed	wings
species 4	Green	tailless	hornless	feathered	hoofed	hands

Explain and give an example of "simple progression."

Words & short answers

apomorphic

cladogram

Croizat

monophyletic

panbiogeography

plesiomorphic

polyphyletic

synapomorphic

Biotic Patterns & Biotic Exchange

After Pliocene Interchange Generic-level diversity of N. America Mammals _____

After Pliocene Interchange Generic-level diversity of S. America Mammals _____

As the number of native species increases the success of invading species _____

Bergman's Rule

Brown's Rule

K-selection

Large animals have _____ ranges

Local species richness increases at a _____ than regional species richness

Rapoport's Shape Rule

Rapoport's Size Rule

r-selection

Roots of Current Distributions

What are two differences between Mammal biotic regions and Flowering plant biotic regions, and what is one reason for each difference.

Why does the Cape Flora have so many endemics?

Why are there no great Apes in the New world (other than humans)

Why is the Australian Fauna depauperate ?

What happened to the mid-Tertiary land bridge between Greenland and Europe (two effects)

Extinction & Speciation

Allopatric Speciation

Aneuploidy

Background Extinction

Biological Species

Chronospecies

Cladogenesis

Disruptive Selection

Evolutionary Species

Examples of recent extinctions

Founder effect

Gradualistic

Mass Extinction

Parapatric Speciation

Phylogenetic Species

Polyploidy

Polytypic Species

Punctuated

Reticulate

Species Selection

Sympatric Speciation

Vicariant Isolation

Dispersal

Compare and contrast dispersalist and extensionist viewpoints of biogeography.

active dispersal

diffusion

jump dispersal

pagile

parthenogenetic

passive dispersal

phoresy

propagule

secular migration

vagile

volant

Human Biogeography

Where do humans originate as a species?

When did humans first leave Africa?

What are some evolutionary trends in humans during the last 2,000,000 years?

On isolated land masses or islands, what specific effect has the arrival of humans had on large animals?

For endangered species, where within the original range of the species are the last individuals found?

Australopithecus

Homo erectus

Homo habilis

Homo neanderthalensis

Homo sapiens

Little Ice Age

Medieval Warm Period

Paranthropus

Insular Biotas

Why are snails such effective migrators to oceanic islands?

Why do animals change size when they reach islands?

Large-island Onlies (island biotas)

Niche shift

Precintiveness

Predator Release

Supertramps (island biotas)

The Island Rule

Widespread Species (island biotas)

continental island

disharmonic biota (island-mainland comparison)

harmonic biota (island-mainland comparison)

immigrant pattern (continental island diversity pattern)

oceanic island

relaxation model (continental island diversity pattern)

relict pattern (continental island diversity pattern)

Island Biogeography

Reproduce a graph showing the effects of island size and distance from mainland on species diversity according to the theory of island biogeography. Label the axes and indicate the equilibrium species number.

On oceanic islands, as species number increase the rate of immigration _____ and the rate of extinction _____

equilibrium

relaxation

rescue effect

small island effect:

speciation vs. immigration

static assumption

target area effect

turnover rates

Restoration Biogeography

Among birds, mammals, mollusks and reptiles the extinction on islands has been least among _____

Among exotic species of plants the proportion of non-native species in islands is _____ the number on the mainland.

What is the effect of isolation on the extinction of endemic birds during the historic period.

What is the effect of island size on the extinction of endemic birds during the historic period?

For birds on Pacific Islands, as the number of introduced species goes up, the number of extinct endemics _____

What is the effect of habitat fragmentation on biodiversity?

What will be the effect on plant diversity of upward migration of vegetation zones due to global warming?

Marine Biogeography

Where is the diversity of whales greatest?

Where is the diversity of corals greatest?

Where is the diversity of mangroves greatest?

Where is the diversity of benthic organisms greatest?