

ZOOGEOGRAPHY

V Sem B.Sc. Zoology - Core Course VII -
Ethology, Evolution & Zoogeography

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MEANS OF ANIMAL DISTRIBUTION

INTRODUCTION

- ◉ NEED FOR DISPERSAL ARISES WHEN POPULATION SIZE INCREASES BEYOND CARRYING CAPACITY OF AN AREA
- ◉ PASSIVE & ACTIVE ANIMAL DISTRIBUTION
- ◉ ACTIVE - FISHES, BIRDS, ETC
- ◉ PASSIVE - SMALL AQUATIC ORGANISMS, SMALL INSECTS, ETC BY MEANS OF WATER CURRENTS, WIND ETC.

MEANS & MODES OF DISTRIBUTION

- ◉ MIGRATION OF ANIMALS
- ◉ LAND BRIDGES
- ◉ NATURAL RAFTS
- ◉ AIR CURRENTS
- ◉ TRANSPORTATION BY BIRDS
- ◉ DISPERSAL BY MAN
- ◉ DISPERSAL BY HOST PLANTS AND HOST ANIMALS

MIGRATION OF ANIMALS

- ◉ MAJOR MEANS OF DISTRIBUTION
- ◉ ALL ANIMALS DISTRIBUTED OVER WORLD BY MIGRATION
- ◉ MANKIND- FROM AFRICA TO ALL PARTS OF WORLD
- ◉ CAMELS- FROM N. AMERICA TO OTHER PARTS
- ◉ ELEPHANTS - FROM AFRICA TO OTHER REGIONS

REASONS

- ◉ CHANGES IN CLIAMTIC CONDITIONS
- ◉ PREDATION PRESSURE
- ◉ COMPETITION FOR FOOD
- ◉ SHELTER
- ◉ REPRODUCTION

MIGRATION



BIRD MIGRATION

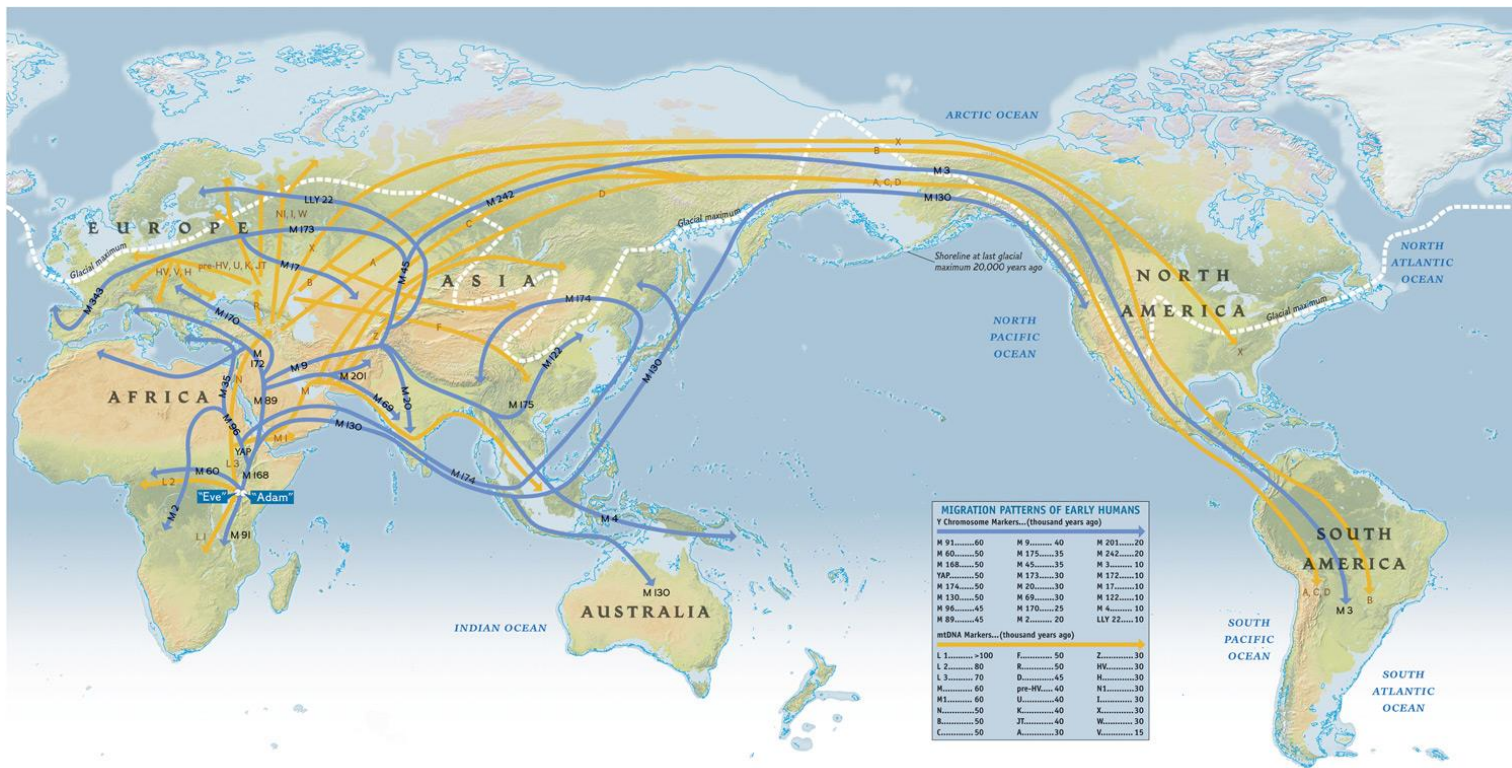


ANIMAL MIGRATION

MIGRATION



HUMAN MIGRATION MAP



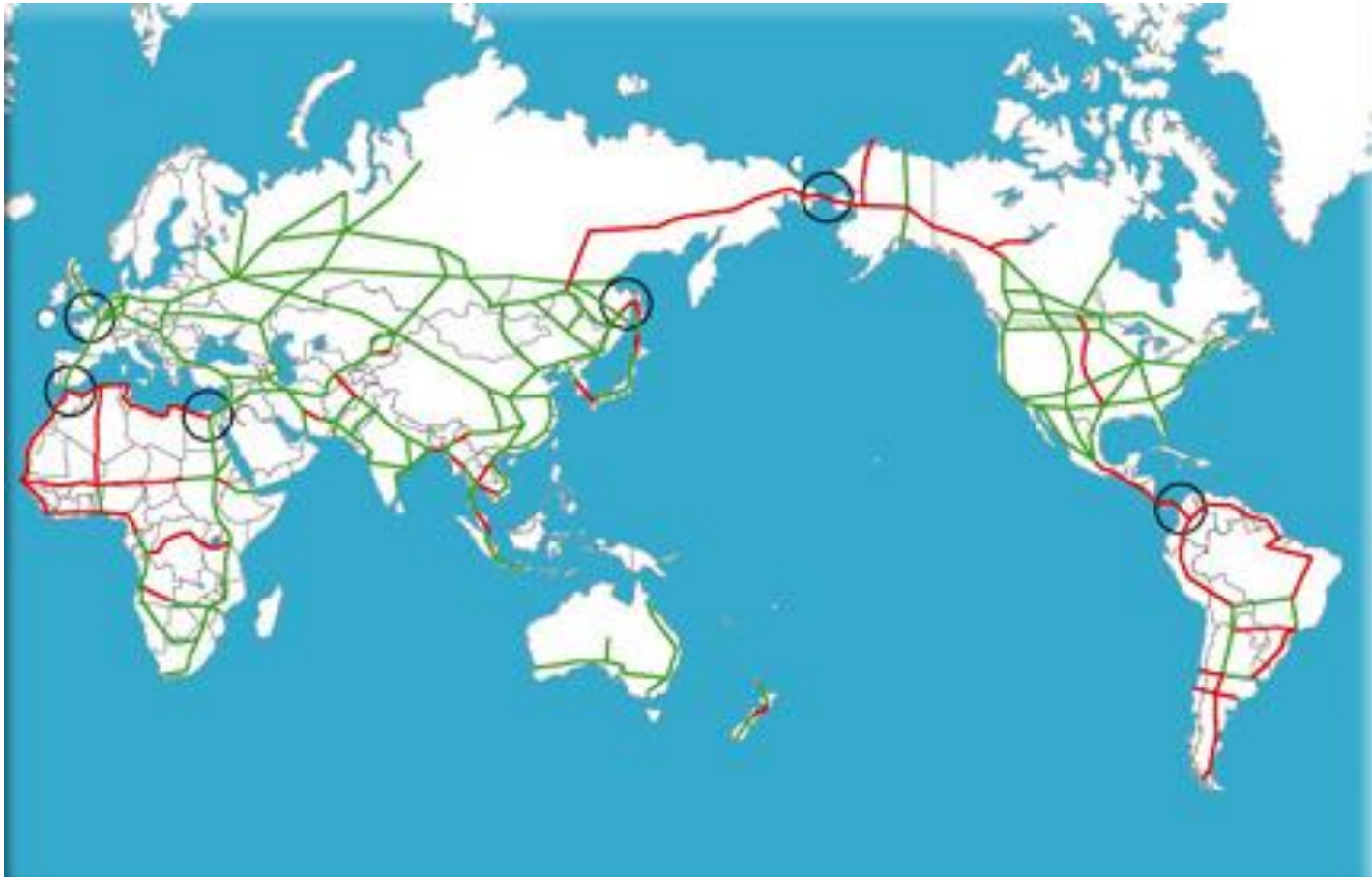
LAND BRIDGES

- BARRIERS FOR AQUATIC ANIMAL DISTRIBUTION
- CONVENIENT MEANS FOR DISPERSAL OF TERRESTRIAL ANIMALS
- INTERCONTINENTAL CONNECTIVITY

EXAMPLES

- ◉ ISTHUMUS OF PANAMA BETWEEN NORTH AND SOUTH AMERICA
- ◉ BERING STRAIT BETWEEN NORTH AMERICA AND EURASIA
- ◉ LAND CONNECTION BETWEEN ASIA & AUSTRALIA
- ◉ STRAITS OF GIBRALTER BETWEEN AFRICA AND EUROPE

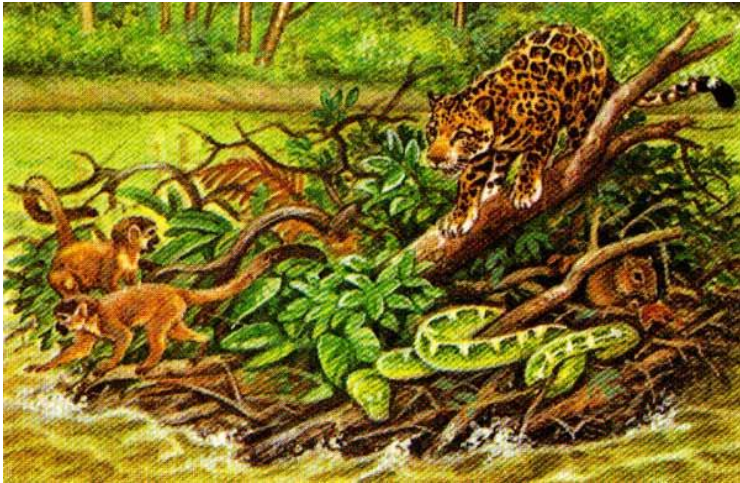
LAND BRIDGES



NATURAL RAFTS

- ◉ FLOATING AND DRIFTING OBJECTS IN WATER
- ◉ ASSIST TRANSPORTATION OF LAND ANIMALS ACROSS WATER BODIES
- ◉ RECORDS OF LARGE RAFT FORMATIONS OF SEVERAL KILOMETERS LONG - TIGERS, MONKEYS, MOLLUSCS, CATS , SQUIRRELS, REPTILES, ETC
- ◉ LARGE FLOAING ICE SHEETS USED BY ARCTIC ANIMALS LIKE REINDEER, POLAR BEAR ETC FOR TRANSPORT

EXAMPLES

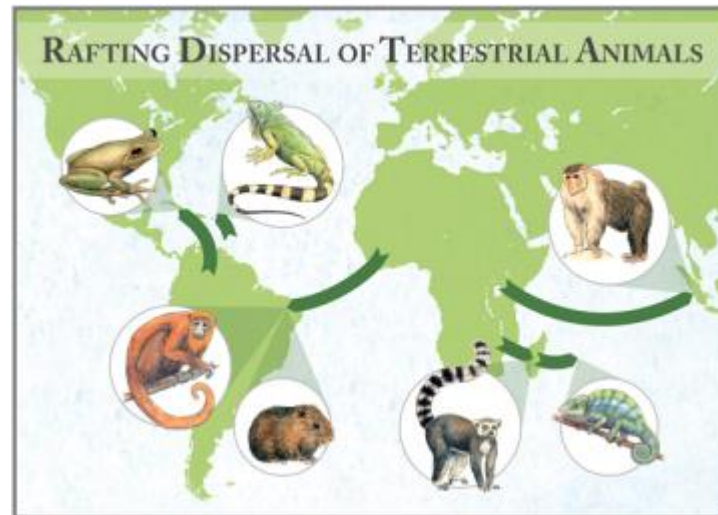


NATURAL RAFT



WOODEN RAFT

EXAMPLES



REED RAFT

RAFTING ROUTES

AIR CURRENTS

- SPORES AND SEEDS OF PLANTS, SPORES AND CYSTS OF MICRO ORGANISMS AND SMALL ANIMALS- SNAILS, INSECTS, MITES, ETC- EGG, LARVA, ETC
- BEETLES, BUTTERFLIES, GRASSHOPPERS CARRIED THOUSANDS OF KILOMETERS BY WINDS AND STORMS

TRANSPORTATION BY BIRDS

- ◉ SMALL INSECTS, MITES AND THEIR EGGS ATTACHED TO FEET AND FEATHERS OF MIGRATORY BIRDS

DISPERSAL BY MAN

- ◉ MIGRATION OF MAN ALSO FORMED A NEW MEANS OF DISTRIBUTION OF ANIMALS
- ◉ DOMESTIC ANIMALS DELIBERATELY
- ◉ PESTS LIKE RATS AND COCKROACHES ACCIDENTLY

DISPERSAL BY HOST PLANTS & ANIMALS

- ◉ ANIMALS AND PLANTS HOST TO PARASITIC, SYMBIOTIC OR COMMENSALIC ANIMALS
- ◉ INTRODUCTION OF SUCH ANIMALS AND PLANTS ALSO BRING NEWS ANIMALS AND PESTS
- ◉ EXAMPLE MALARIAL PARASITE DISTRIBUTED THROUGH OUT WORLD BY HUMAN HOSTS



THANK YOU

