




*Coelops robinsoni*  
Photo by Ridwan Rahman



*Tarsius bancanus*  
Photo by Wong Siew Fui



*Callosciurus notatus*  
Photo by Badiozaman



*Galeopterus variegates*  
Photo by Badiozaman

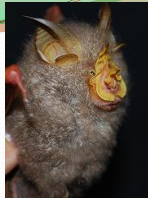
# Diversity of Mammals

M. T. Abdullah &  
Mammal Study Team  
Universiti Malaysia Sarawak


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## Outline


1. Diversity concept
2. Mammals of Malaysia
3. Chronology on the history of mammal studies in Malaysia
4. Endemic species of Malaysia
5. Problem statement
6. Case studies
7. Contributions of UNIMAS to DNA taxonomy
8. Challenges
9. Conclusion & Recommendation



*Rhinolophus trifoliatus*  
Photo by Faisal Ali



*Maxomys surifer*  
Photo by Faisal Ali



*Manis javanica*  
Photo by Anang Setiawan

# 1. Diversity Concept

Ecological diversity	Genetic diversity	Organismal diversity
Biomes		Kingdoms
Bioregions		Phyla
Landscapes		Families
Ecosystem		Genera
Habitat		Species
Niches		Subspecies
Populations	Population	Populations
	Individuals	Individuals
	Chromosomes	
	Genes	
	Nucleotides	

Gaston & Spicer (1998)

## Sources of genetic variation

1. Recombination & mutation
2. Natural selection
3. Inbreeding – increase homozygous genotypes
4. Random genetic drift – sampling error
5. Migration of successful breeding individuals @ gametes
6. Effective population – influence of sampling error depends on no. of individuals capable of breeding in the population
7. Hybridization – exchange of genes between different populations (gene pool)