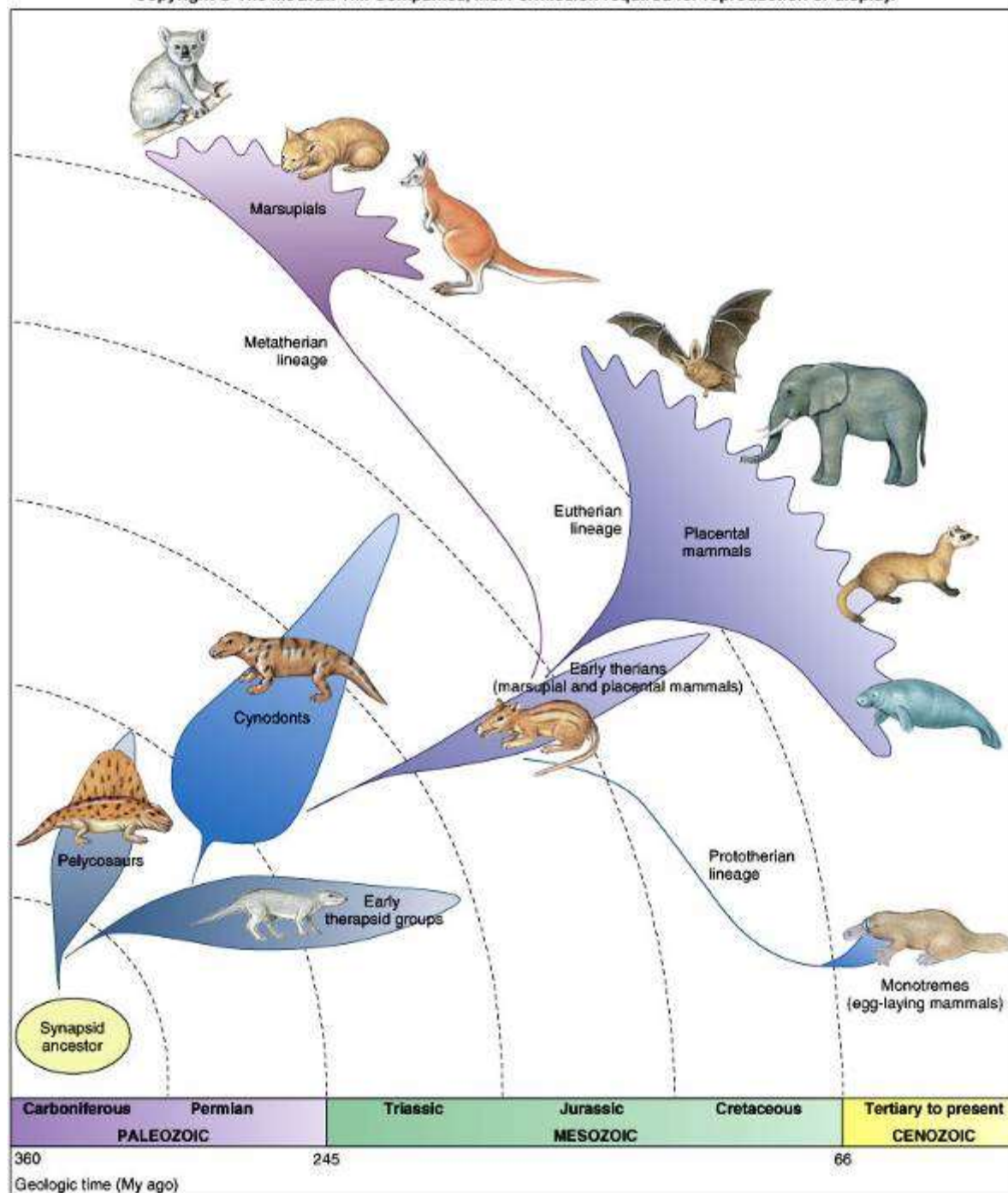


Class Mammalia





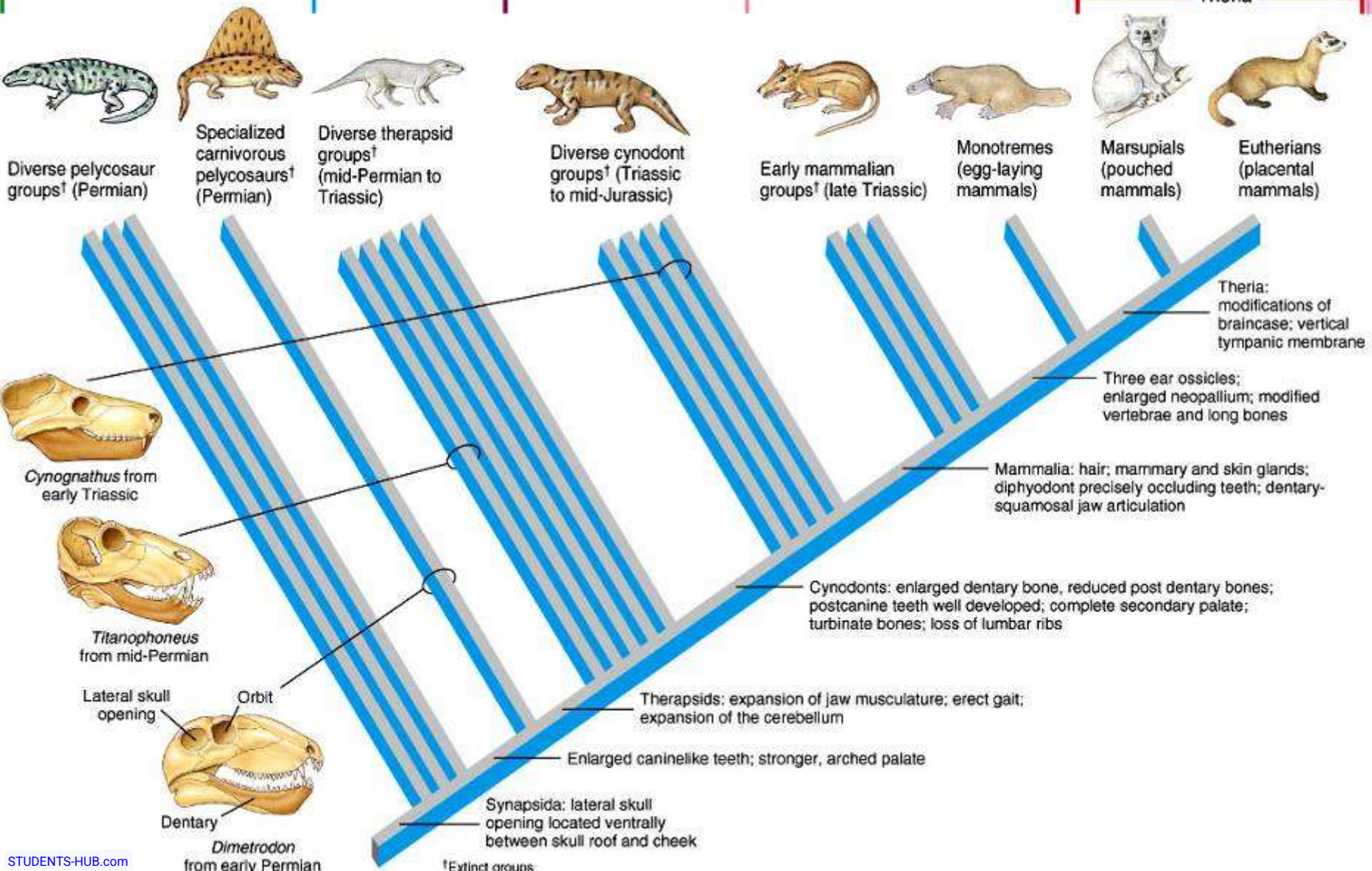
Synapsida

Therapsida

Cynodonta

Mammalia

Theria



Mammal Taxonomy

- Class Mammalia
 - Subclass Prototheria
 - Order Monotremata

spiny echidna
Tachyglossus aculeatus



duckbilled platypus
Ornithorhynchus anatinus



long beaked echidna
Zaglossus bruijnii

Mammal Taxonomy

- Class Mammalia
 - Subclass Theria
 - Infraclass Metatheria
 - Order Marsupialia

Koala



Possum

Didelphis virginiana



Kangaroo



Tasmanian Devil

Mammal Taxonomy

- Class Mammalia

- Subclass Theria

- Infraclass Eutheria

- Order Rodentia
 - Order Chiroptera
 - Order Insectivora
 - Order Carnivora
 - Order Primates
 - Order Artiodactyla
 - Order Lagomorpha
 - Order Cetacea
 - Order Perissodactyla
 - Order Sirenia
 - Order Proboscidea

Order Pholidota



Pangolin

Order Tubulidentata



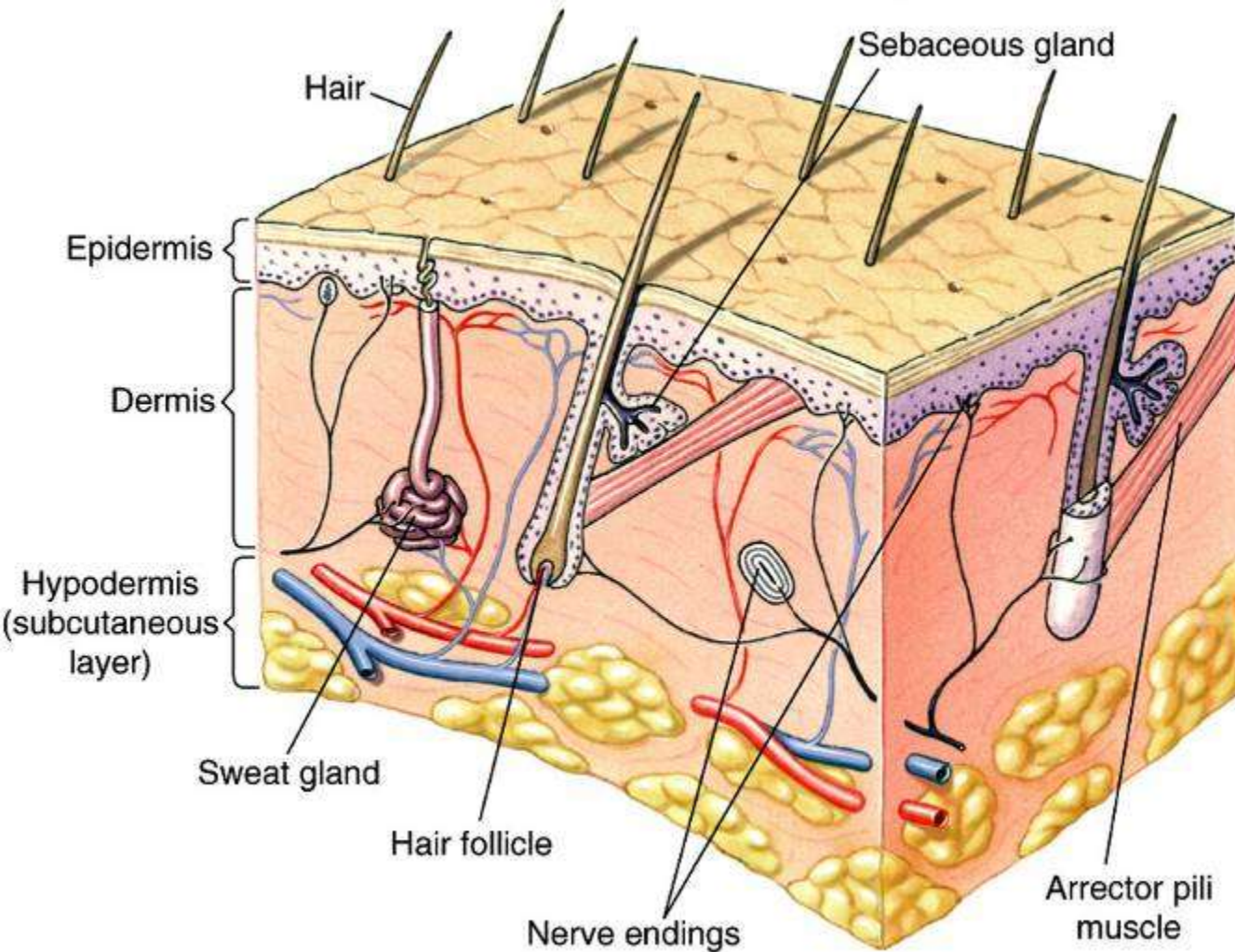
Hyrax



Order Xenartha

Order Hyracoidea

Mammalian Integument & Glands



- Sebaceous
- Sweat
- Scent
- Mammary

Mammary Glands



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Fur



- Pelage
 - Underhair
 - Guard hairs
- 1 or 2 molts/yr

Horns



Antlers



A



B



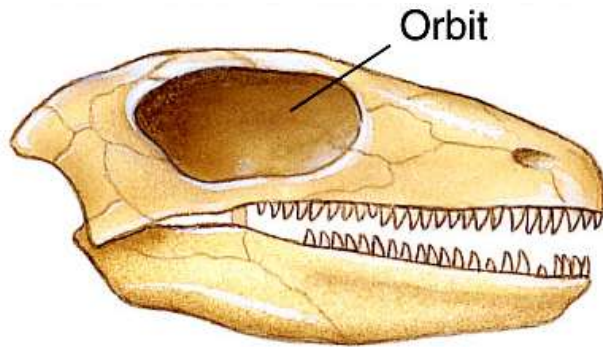
C



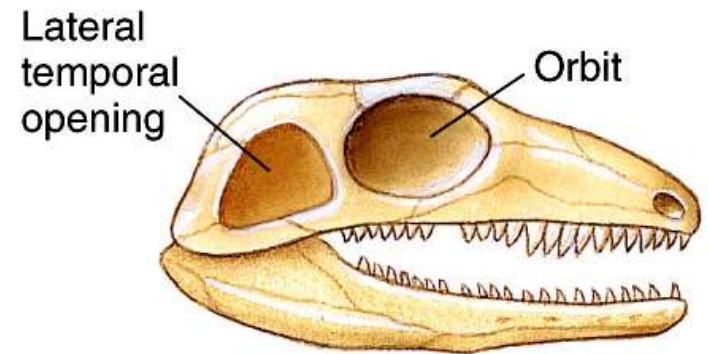
D



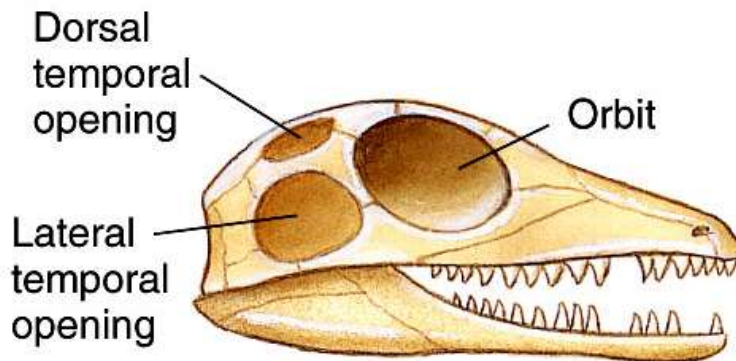
Mammal Skull



A Anapsid

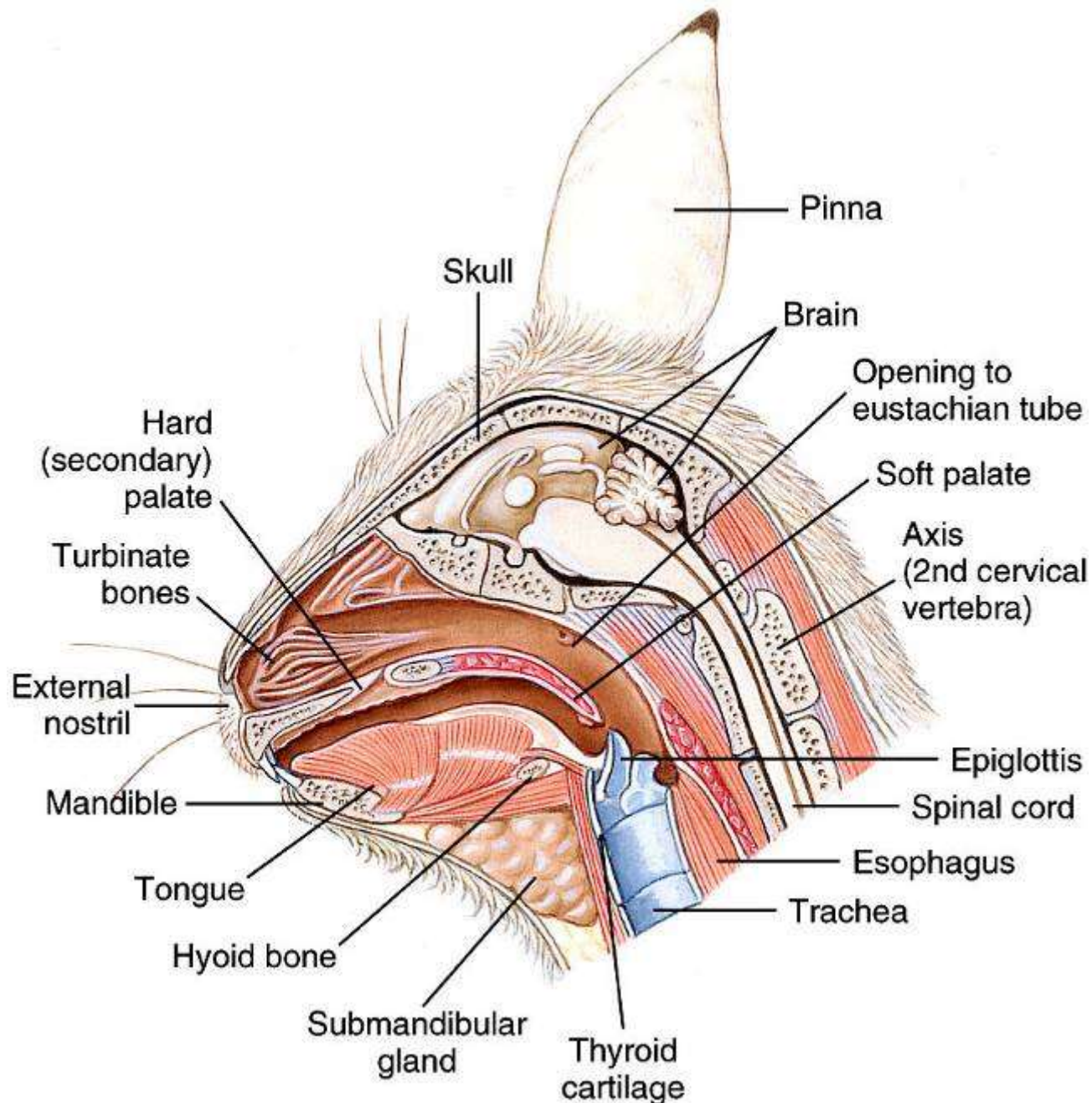


B Synapsid

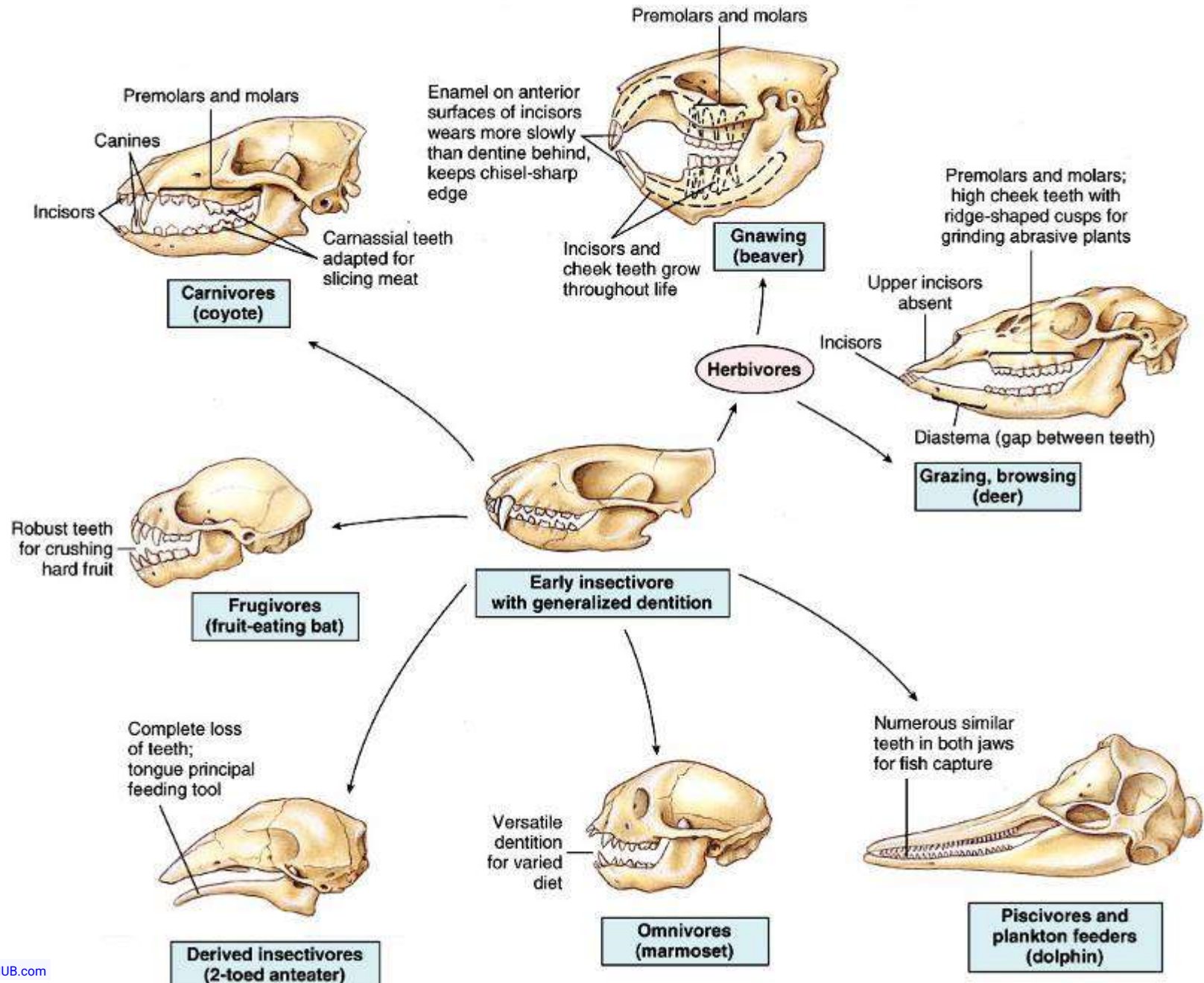


C Diapsid

Formation of a Hard Palate



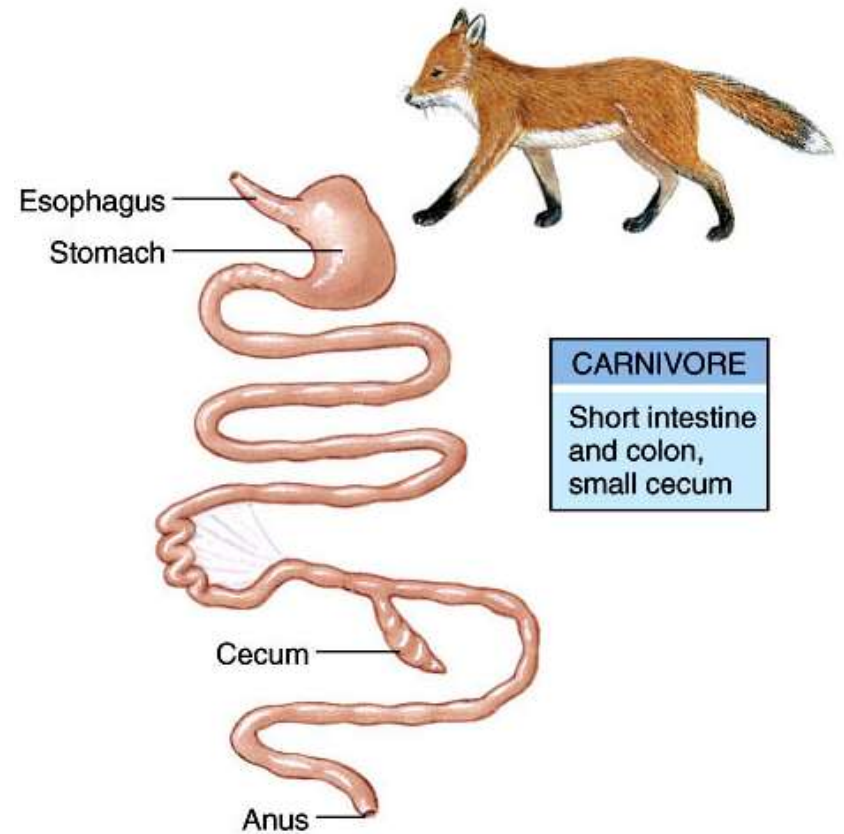
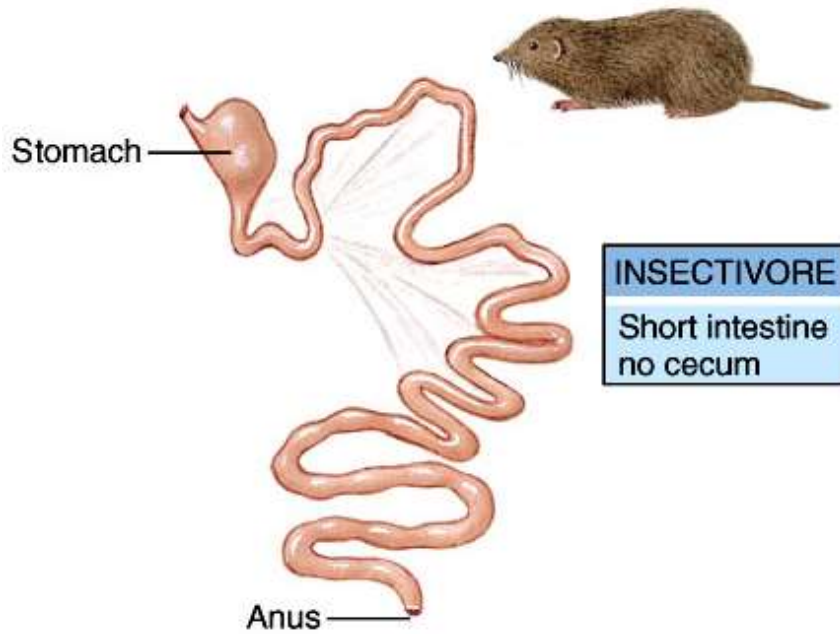
Skull Diversification



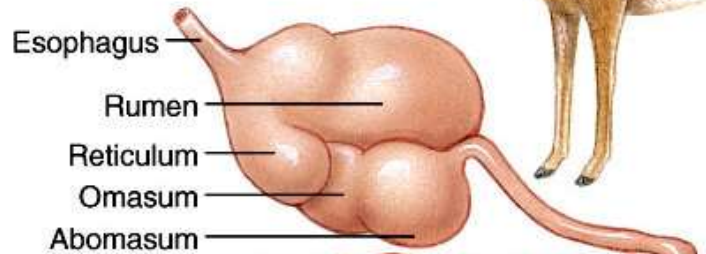
Dentition

- 2 sets
 - Milk teeth (deciduous)
 - Permanent teeth
- Rodents & lagomorphs
 - Teeth continuously grow

Carnivore Digestive Tracts

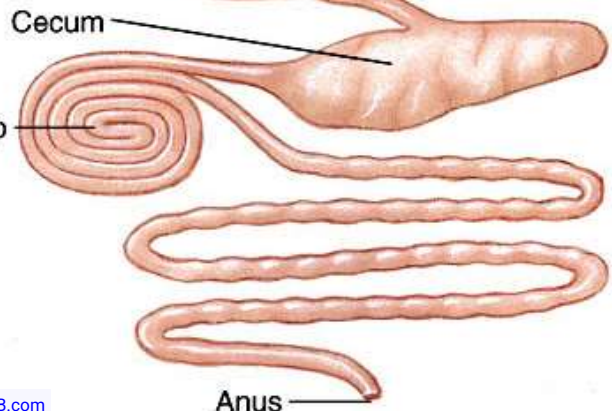


Herbivore Digestive Tracts



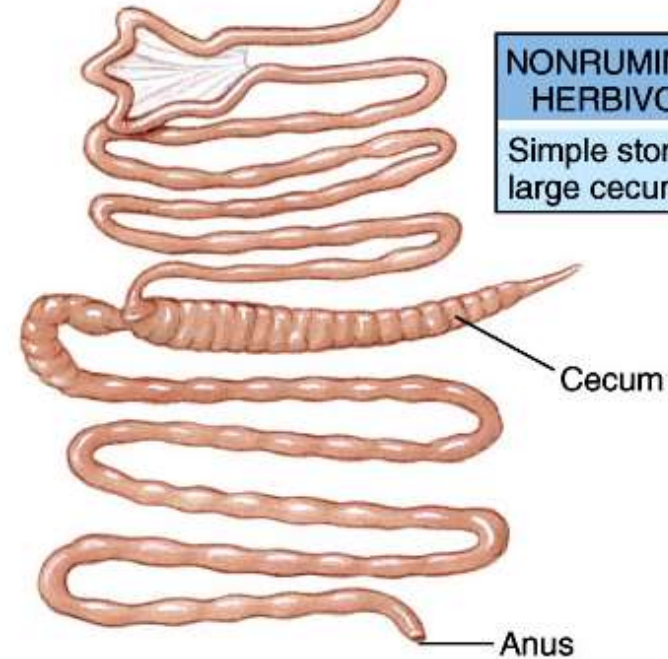
RUMINANT HERBIVORE

Four-chambered
stomach with
large rumen;
long small and
large intestine



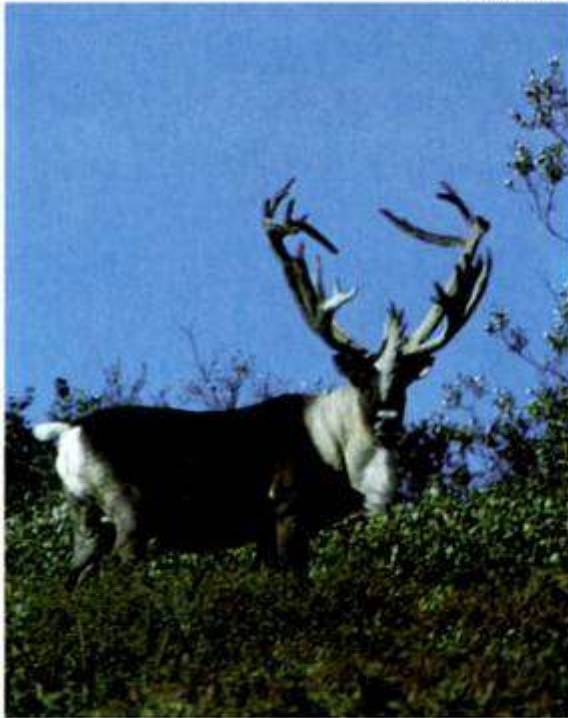
NONRUMINANT HERBIVORE

Simple stomach,
large cecum

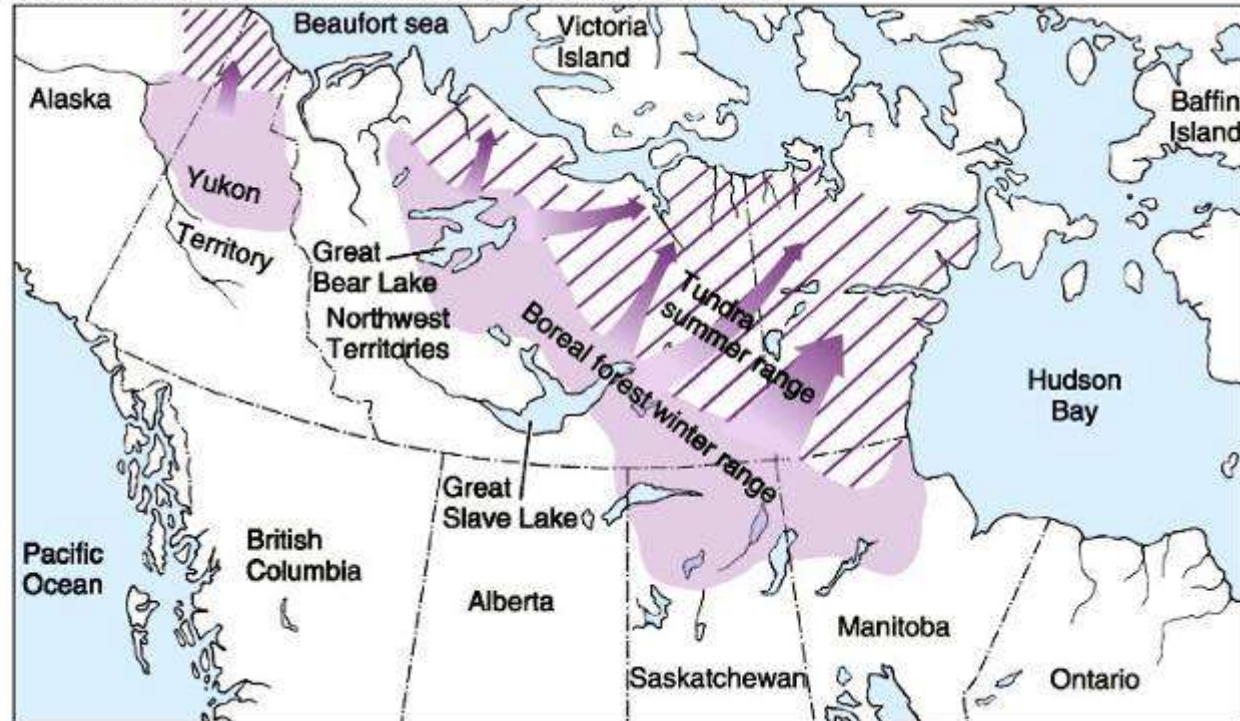


Migratory Land Mammals

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A



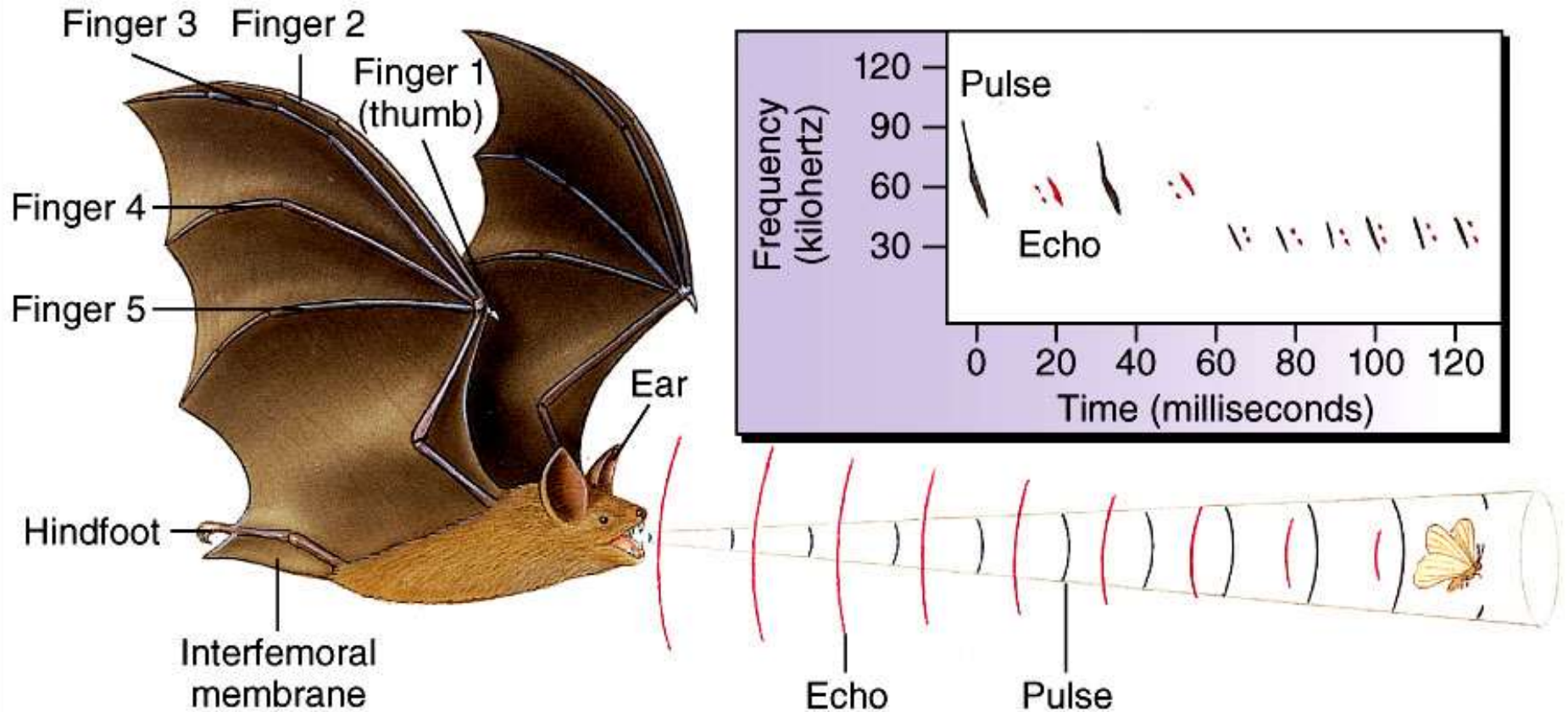
B

Migratory Sea Mammals



Sonar

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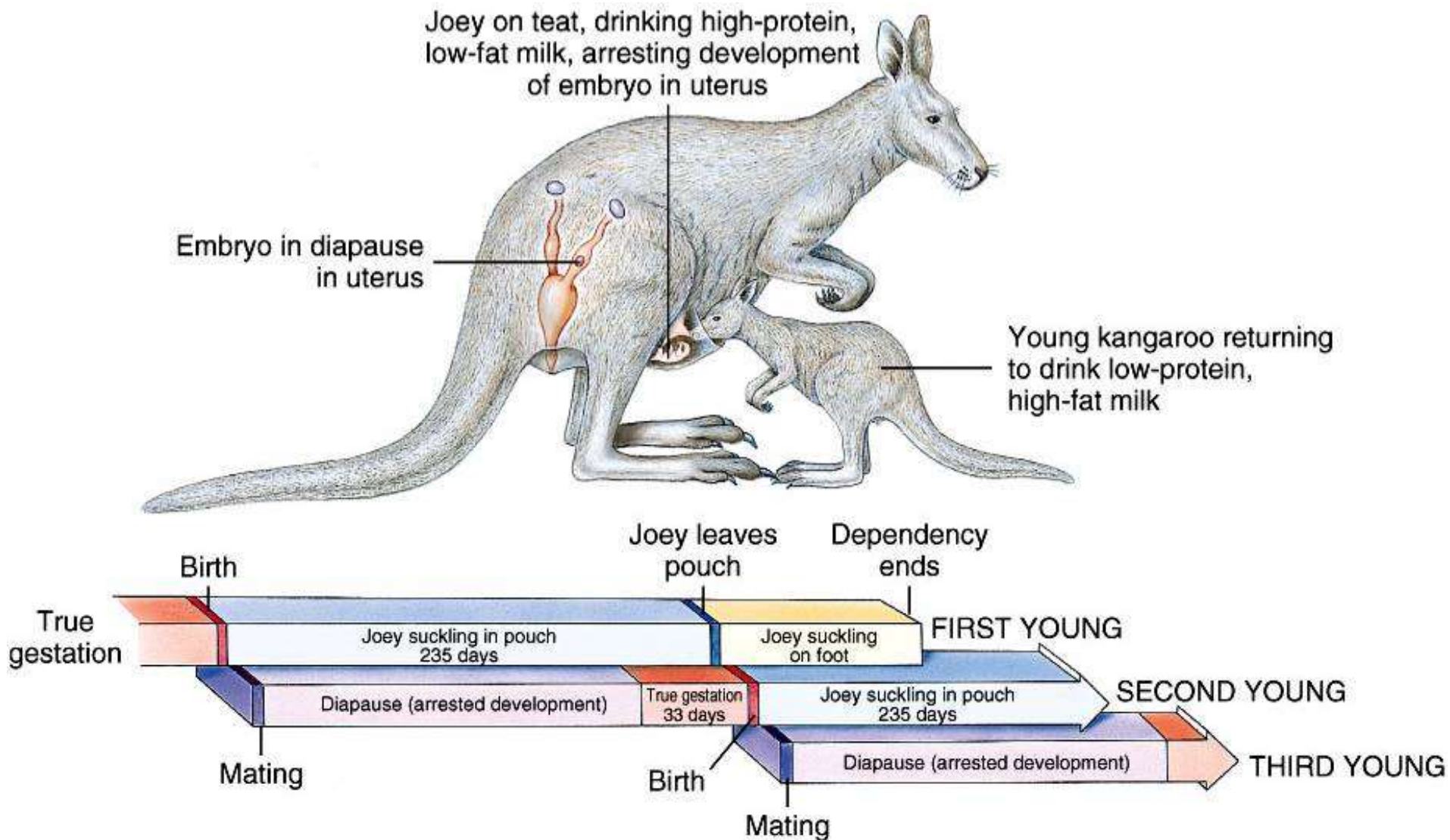
Mammalian Reproduction Modes

- Prototherians (monotremes)
 - Oviparous
 - Hatchlings mature in pouch and suckle from mammary gland
- Metatherians (marsupials)
 - Viviparous
 - Very immature young mature in pouch and suckle from mammary gland
- Eutherian (placentals)
 - Viviparous
 - Precocial & altricial young
 - Suckle young

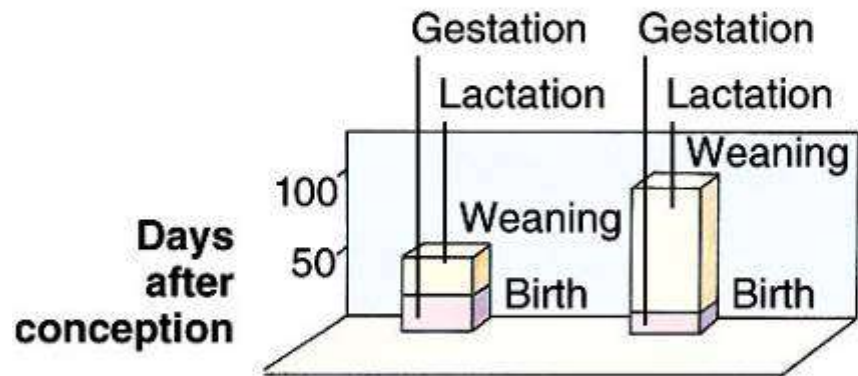
Reproductive Cycles

- Estrous cycle
 - Time of ovulation following a peak in estrogen production (estrus)
 - Monestrous
 - 1 ovulation period per year
 - Polyestrous
 - Multiple ovulation periods per year
- Menstrual cycle
 - Estrus followed by menstruation
 - Shedding of uterine lining
 - Only in humans, apes, & old world monkeys

Marsupial Reproductive Cycles



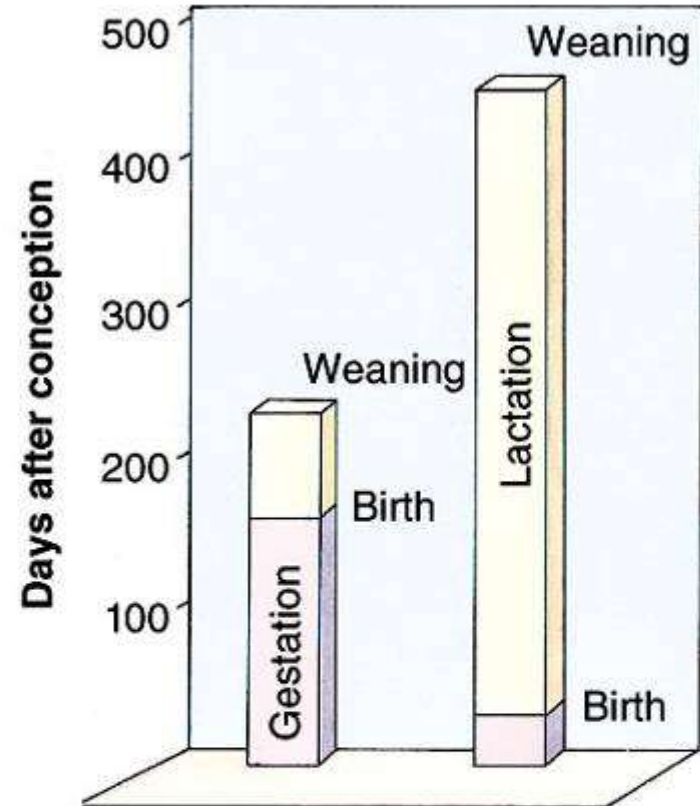
Gestational & Lactational Differences between Marsupials & Mammals



Southern grasshopper mouse



Marsupial mouse



Thompson gazelle



Wallaroo



Gestation Periods

- Large mammals (herbivores)
 - Longer gestations
 - Precocial newborns
- Small insectivores, rodents, carnivores
 - Shorter gestations
 - Altricial newborns
 - Sightless
 - Hairless

Domestication



Prosimian Primates



Hominidae



Human Taxonomy

Kingdom	Animalia
Phylum	Chordata
Subphylum	Vertebrata
Class	Mammalia
Order	Primates
Family	Hominidae
Genus	<i>Homo</i>
Species	<i>sapiens</i>

Human Ancestral Lineages

