

Paleogene and Neogene




Paleogene and Neogene

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K/T Boundary 66 Ma

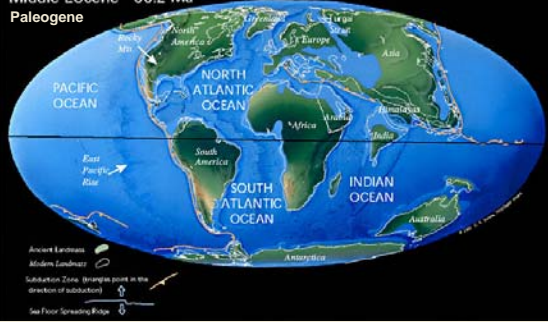


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Middle Eocene 50.2 Ma
Paleogene



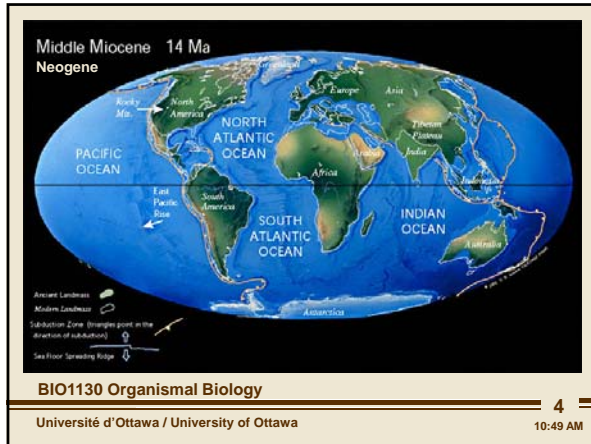
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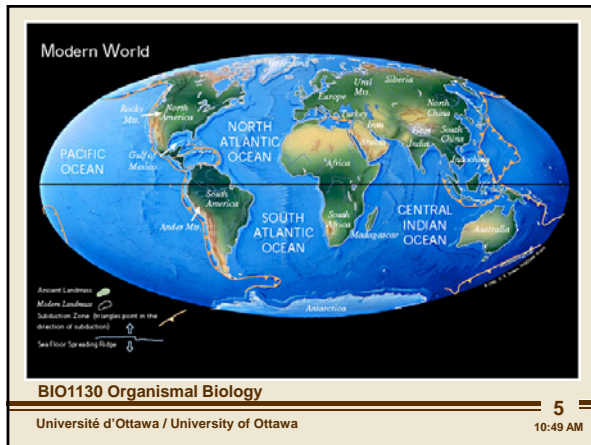
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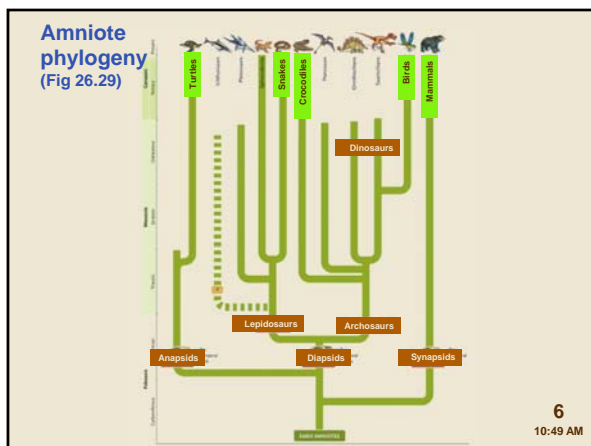
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earth moves into its final destination.

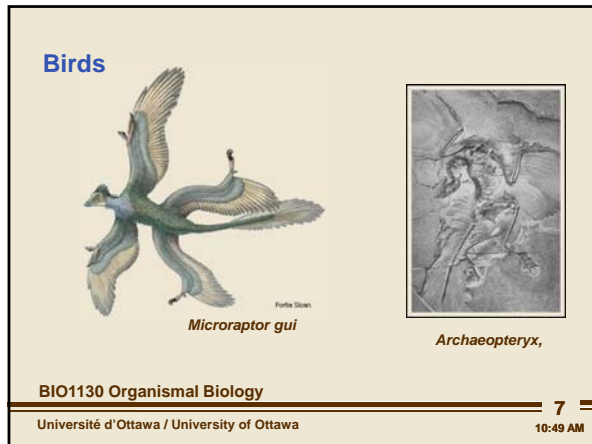
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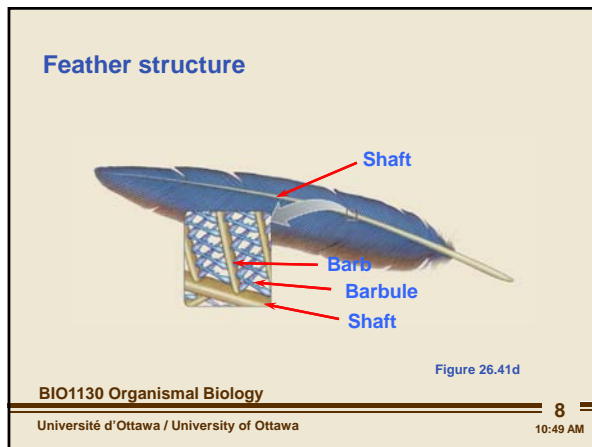


Paleogene and Neogene



feathers, prevent heat loss... same with hair. feathers were not new.

not unique to reptiles.



can increase surface area of body with lightweight medium.

quill: embeds in skin.

barbs: locked together with hooks to maintain shape of feather.

Keratinized protein.

Ground up theory: sweep arms through air to catch insects with

feathers and feed on them, avoid predator by sweeping arms quickly

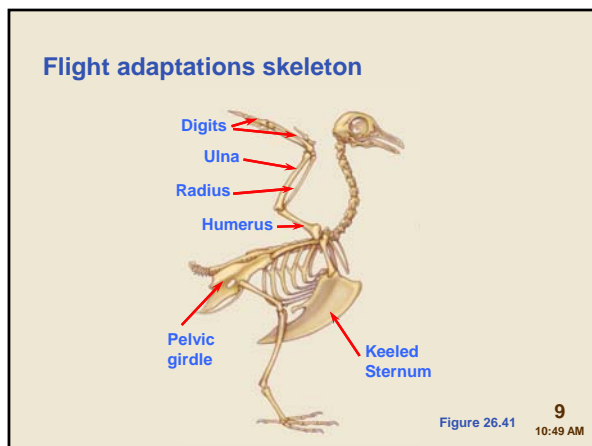
vertically causing flight.

Tree down theory: fell off trees and glided with mouths open and ate

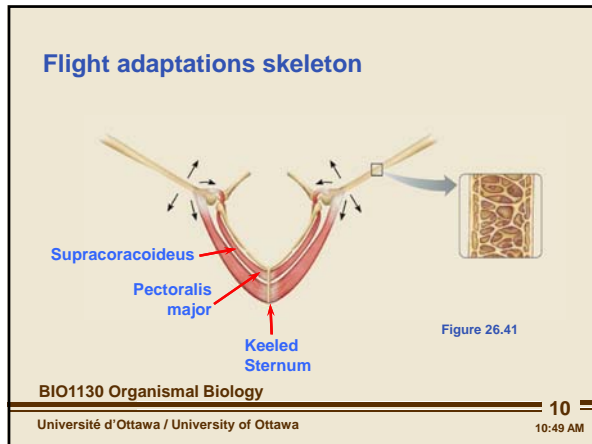
food .

reduction number of bones, the tail. it is lost.

must be light weight enough for wings to carry them.



Paleogene and Neogene

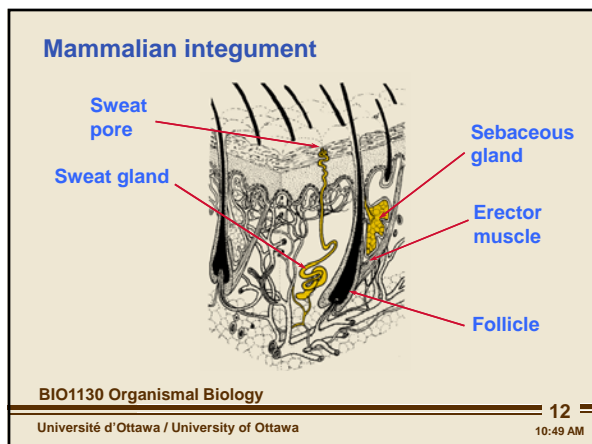


breastbone- attachment site for muscles to lift and lower wing.

bones become porous to become even more lighter.



take care of young unlike reptiles.



create glandular skin.

need to cool. they cool by sweat from sweat glands.



glands keep hair moist.


also have scent glands for communication.

mammary gland - secrete fats, oils, and other nutrients.

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Mammal jaws

Omnivore  **Herbivore** 

 **Carnivore**

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first group to go up and bite out of something.

have 1 set of teeth. once jaw grows to maximum. disregard baby teeth

and grow adult teeth.

Mammalian reproduction

- **Oviparous**
 - Monotremes
- **Viviparous**
 - Marsupials
 - Eutherians

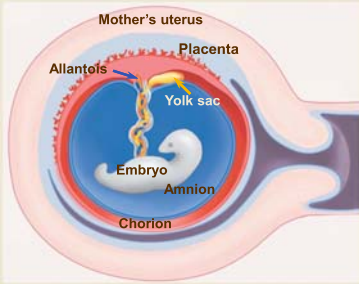


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monotremes- lay egg, when egg hatches, young feed on the mammary gland.

Marsupials: egg hatches inside mother, attaches to mammary gland until big enough to feed on its own.

Placental mammals



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developing embryos are foreign- immune system tries to remove it.

placenta: protects embryo from being recognized as foreign.

since the placenta is covered around with mothers blood, immune system will think its one of its own.

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Parental care



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Macroevolution

- Evolution above the level of species
- Includes
 - Adaptive radiations of taxa
 - Biodiversity changes over time (paleontology)
 - Extinctions
 - Speciation
 - Origins of novel structures

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