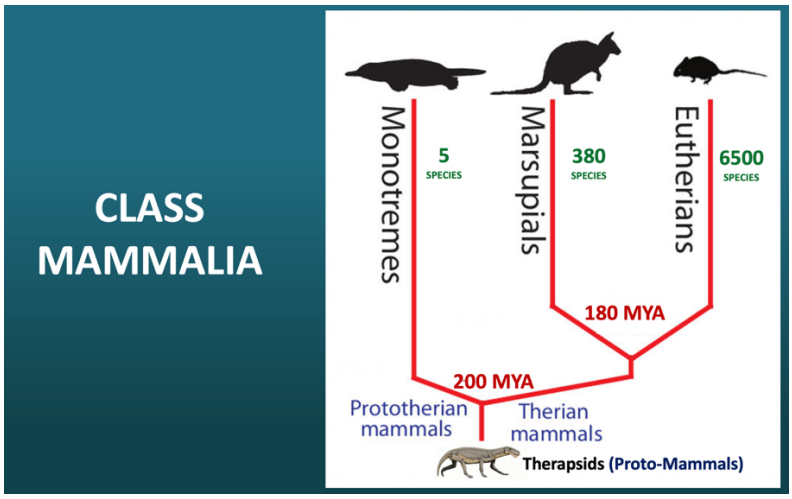
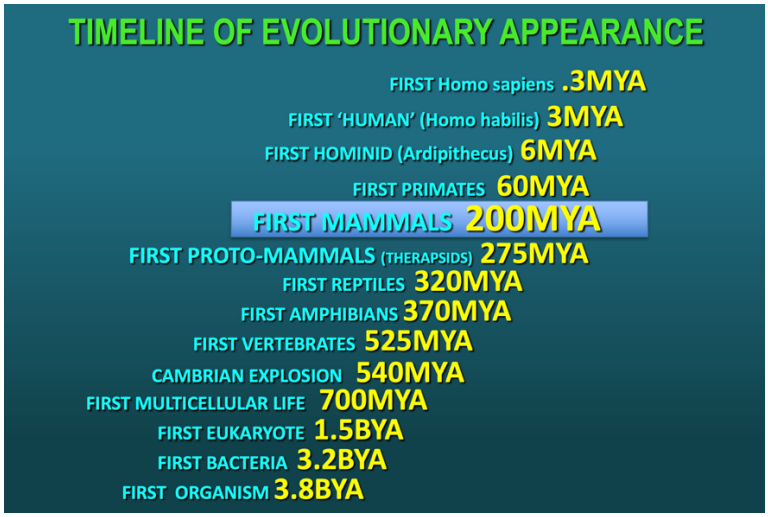
WHERE DID MARSUPIALS ORIGINATE (What Continent)? ©Dr. John Freedman

The first mammals evolved over 200 million years ago in the Late Triassic period from a reptilian ancestor in the sequence: Synapsids → Therapsids → Cynodonts → Mammaliaformes → True mammals. The earliest branch point in the true mammal line was the separation of the monotreme line (egg-laying mammals) approximately 200M yrs ago, followed by the separation of the marsupial and placental line approximately 180M yrs ago.



The Earth is 4.6 BILLION years old, but for scaling purposes: If the Earth was 24 hours old, mammals appeared just 3 minutes before midnight!





Mammals have defining characteristics - the first 3 shared by ALL mammals and the last (hair or fur) shared by almost all:

Class MAMMALIA		
PLACENTALIA	MARSUPIALIA	MONOTREMATA
PLACENTAL	POUCHED	EGG-LAYING
6500 SPECIES	380 SPECIES	5 SPECIES

DEFINING TRAITS of MAMMALS

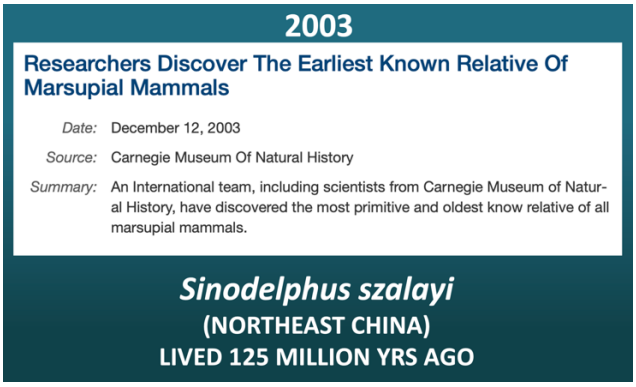
MAMMARY(MILK-PRODUCING) GLANDS

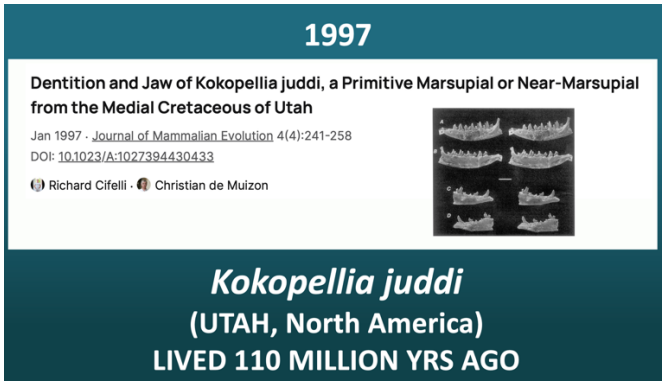
ENDOTHERMIC

3 MIDDLE EAR BONES

(HAIR/FUR)

All the continents were connected as one paleo-supercontinent of Pangea until it began to break up about 250 MYA. By 160M yrs ago, a southern supercontinent of Gondwana was completely separate - but it comprised a connected South America, Antarctica, and Australia-New Guinea (known as Sahul). Based on fossil evidence as of today, the oldest proto-marsupial fossils are 125M yrs old and are from northeastern China. The second oldest are about 110M yrs old and are from Utah in the USA.





Thus the likely origin continent of marsupials as of this writing is Asia, with subsequent migration to North America --> South America --> through a (then-tropical!) Antarctica --> to Australia/New Guinea.



Interestingly, DNA studies indicate that all Australian (and New Guinea) marsupials descended from one possum-like arboreal marsupial species in South America - with spectacular success as indicated by radiation that has given us over 300 marsupial species in Australia and New Guinea today. South America still has over 100 marsupial species, but North America has only 1 lonely (but highly successful!) surviving marsupial, the Virginia opossum.