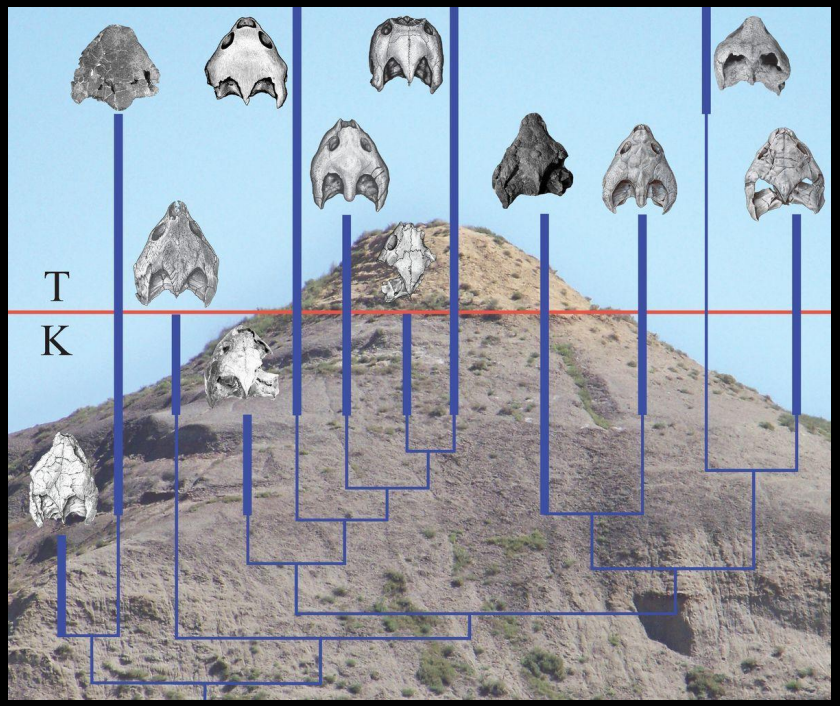
Evidence of Evolution

Learning Objectives

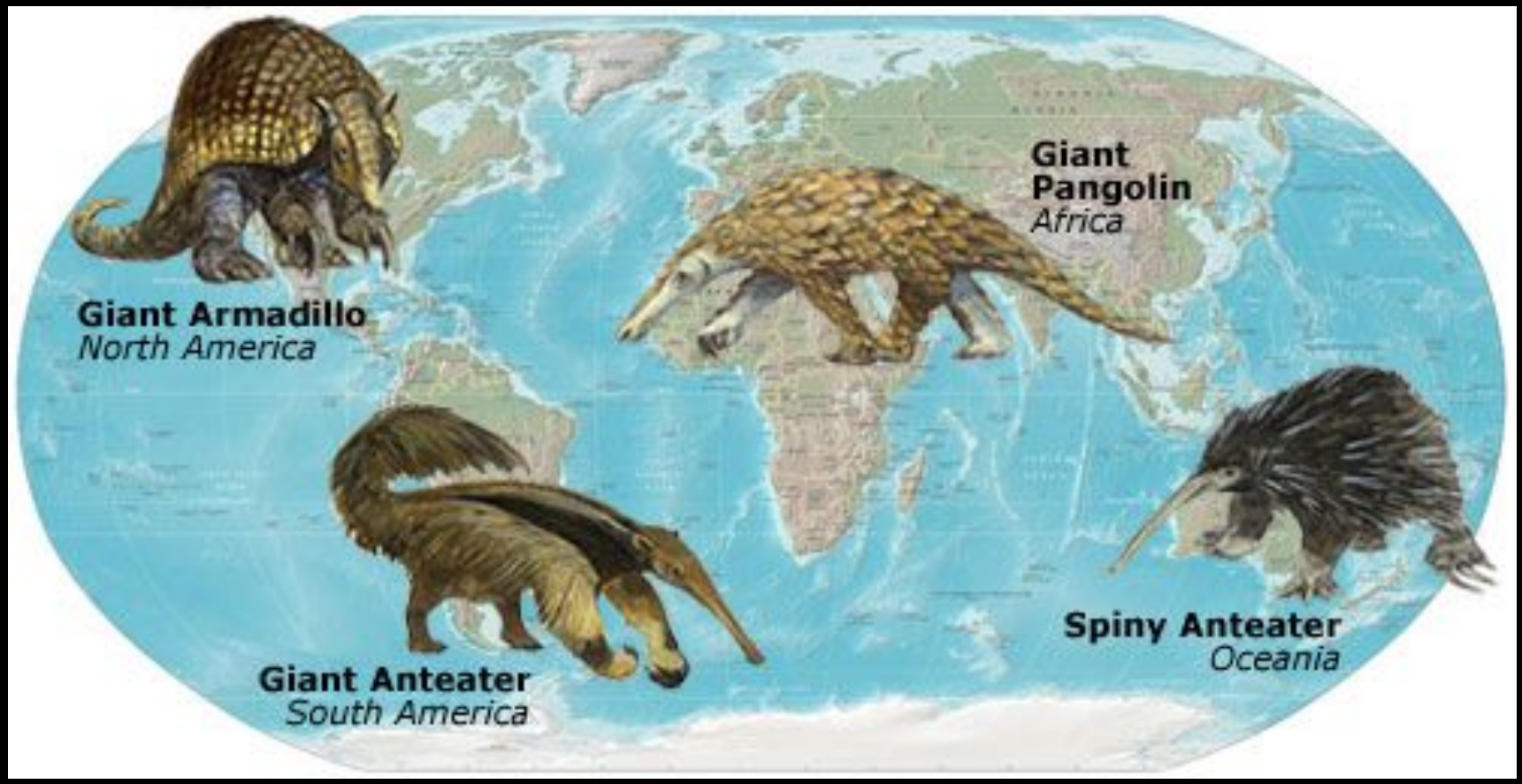
- Identify evidence (fossil record, geographic distribution, homologous structures, embryology) that Darwin used to present his case for evolution

Fossil Record



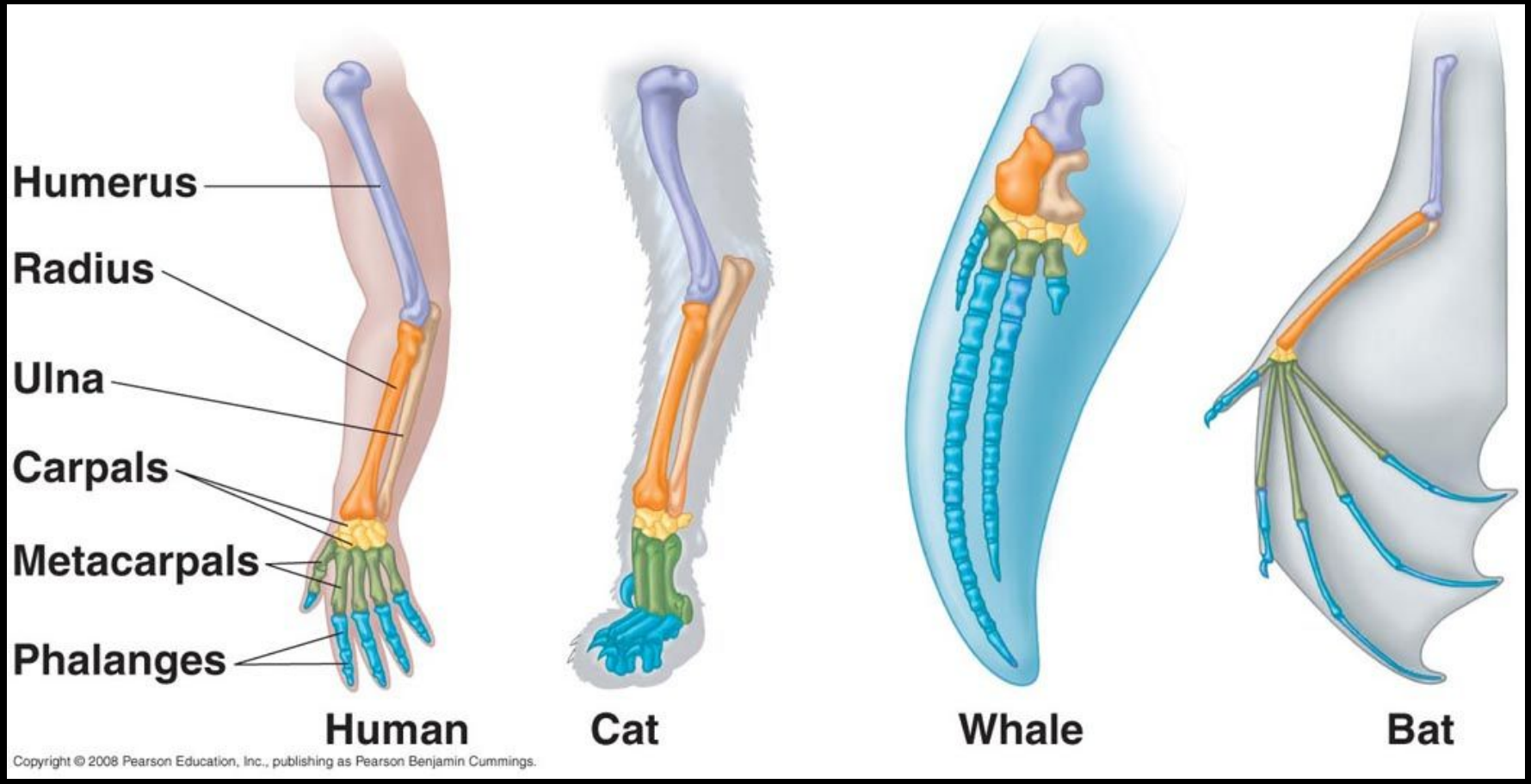
Comparing fossils from older rock layers with fossils from younger layers shows that life on Earth changed over long periods of time.

Geographic Distribution



Similar species living in different locations were products of evolutionary descent.

Homologous Body Structures

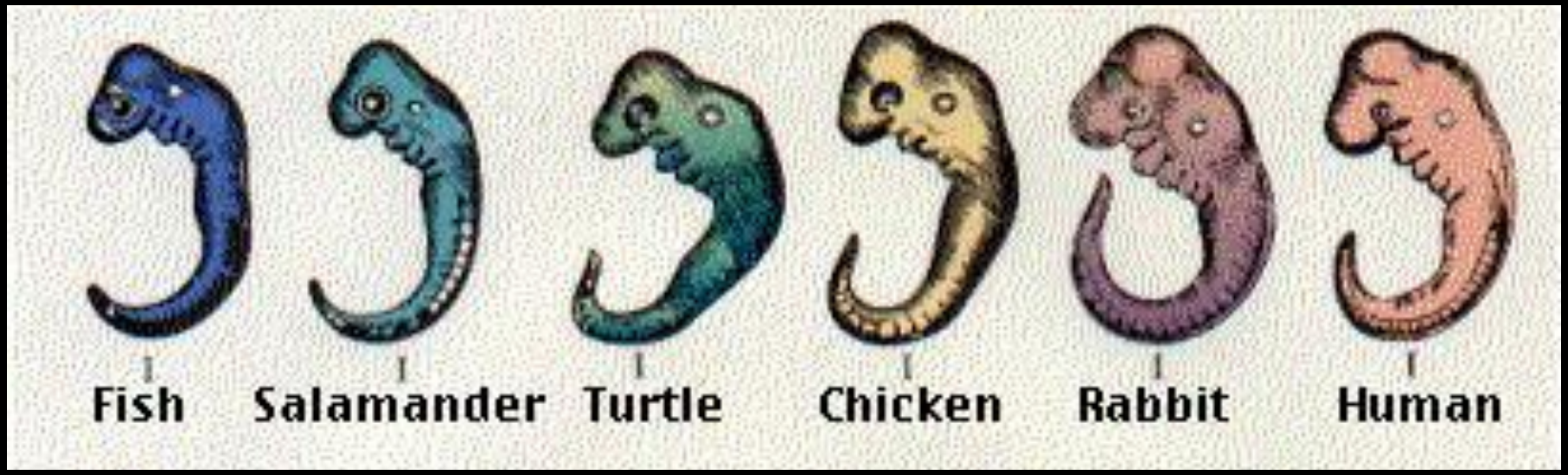


An organ, body part or body system that appears in different animals demonstrating descent from a common ancestor

Vestigial Organs

A structure that has lost all or most of its original function through the process of evolution.

Similarities in Embryology



The early stages, or embryos of animals with backbones are similar, providing evidence that they shared a common ancestor.

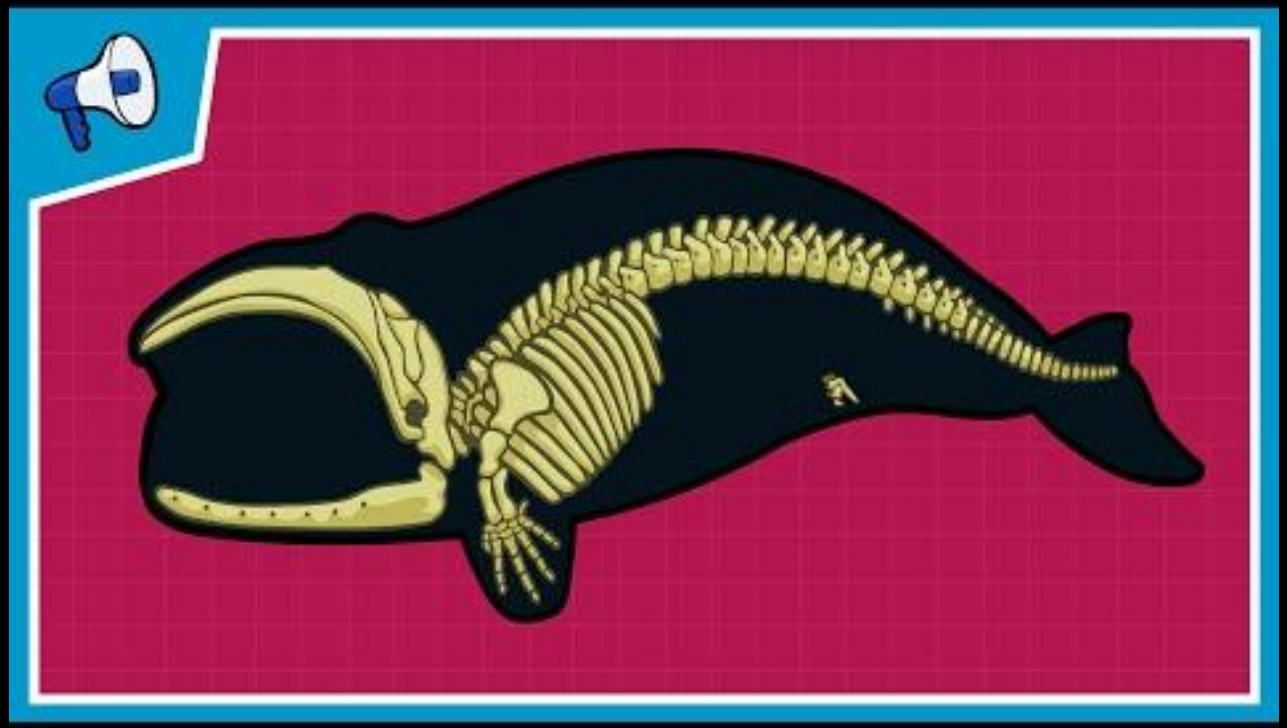
Biochemical/DNA Evidence

Amino Acid Sequences in Primates				
Baboon	Chimp	Lemur	Gorilla	Human
ASN	SER	ALA	SER	SER
THR	THR	THR	THR	THR
THR	ALA	SER	ALA	ALA
GLY	GLY	GLY	GLY	GLY
ASP	ASP	GLU	ASP	ASP
GLU	GLU	LYS	GLU	GLU
VAL	VAL	VAL	VAL	VAL
ASP	GLU	GLU	GLU	GLU
ASP	ASP	ASP	ASP	ASP
SER	THR	SER	THR	THR
PRO	PRO	PRO	PRO	PRO
GLY	GLY	GLY	GLY	GLY
GLY	GLY	SER	GLY	GLY
ASN	ALA	HIS	ALA	ALA
ASN	ASN	ASN	ASN	ASN

Comparison of genes, amino acid sequences and enzyme function indicate how closely related organisms are

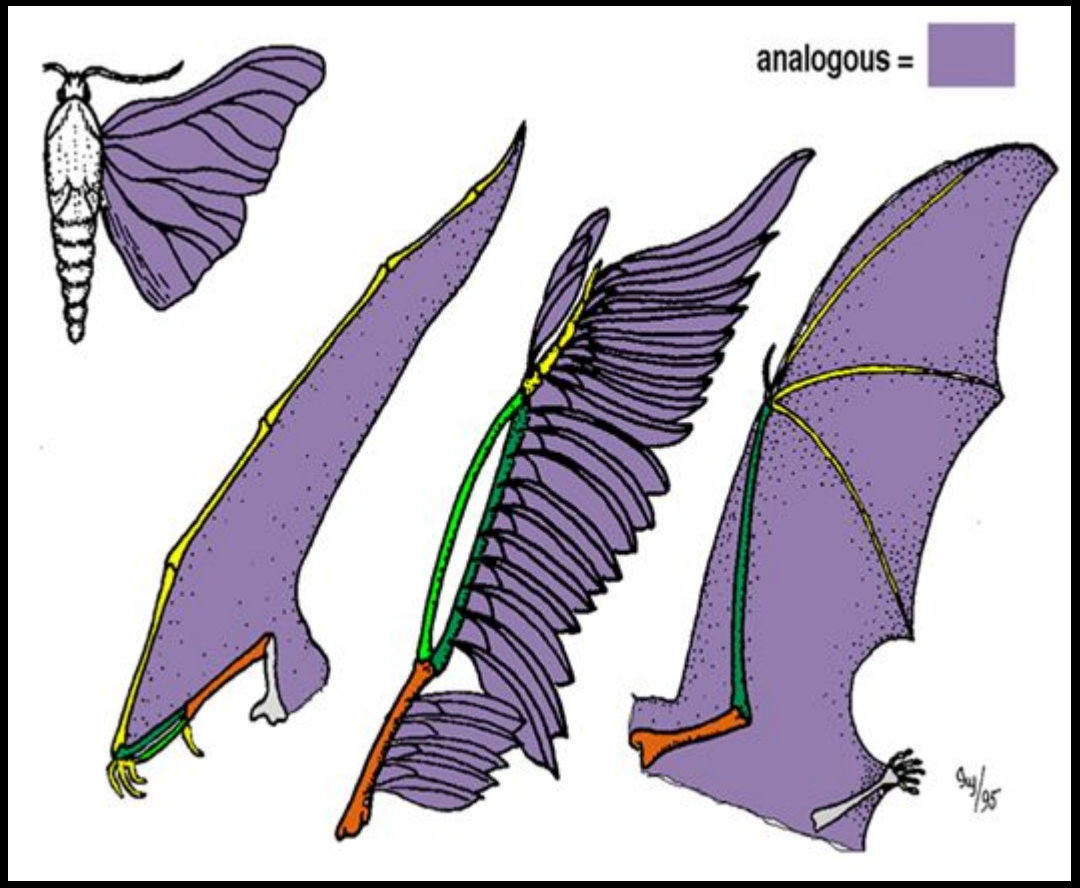
Evidence for Evolution

Clearly Stated



Stop Here

Analogous Structures



Structures that perform similar functions, but are very different in their structure and form.