

Comparative Embryology

- **Embryo** – early, pre-birth stage of development
- Vertebrate (have a backbone embryos have homologous structures
- They become different in adult forms
- Example: pharyngeal pouches
 - Fish – gills
 - Reptiles, birds, mammals – ears, jaws and throats
 - Suggests they came from common ancestor

Comparative Embryology

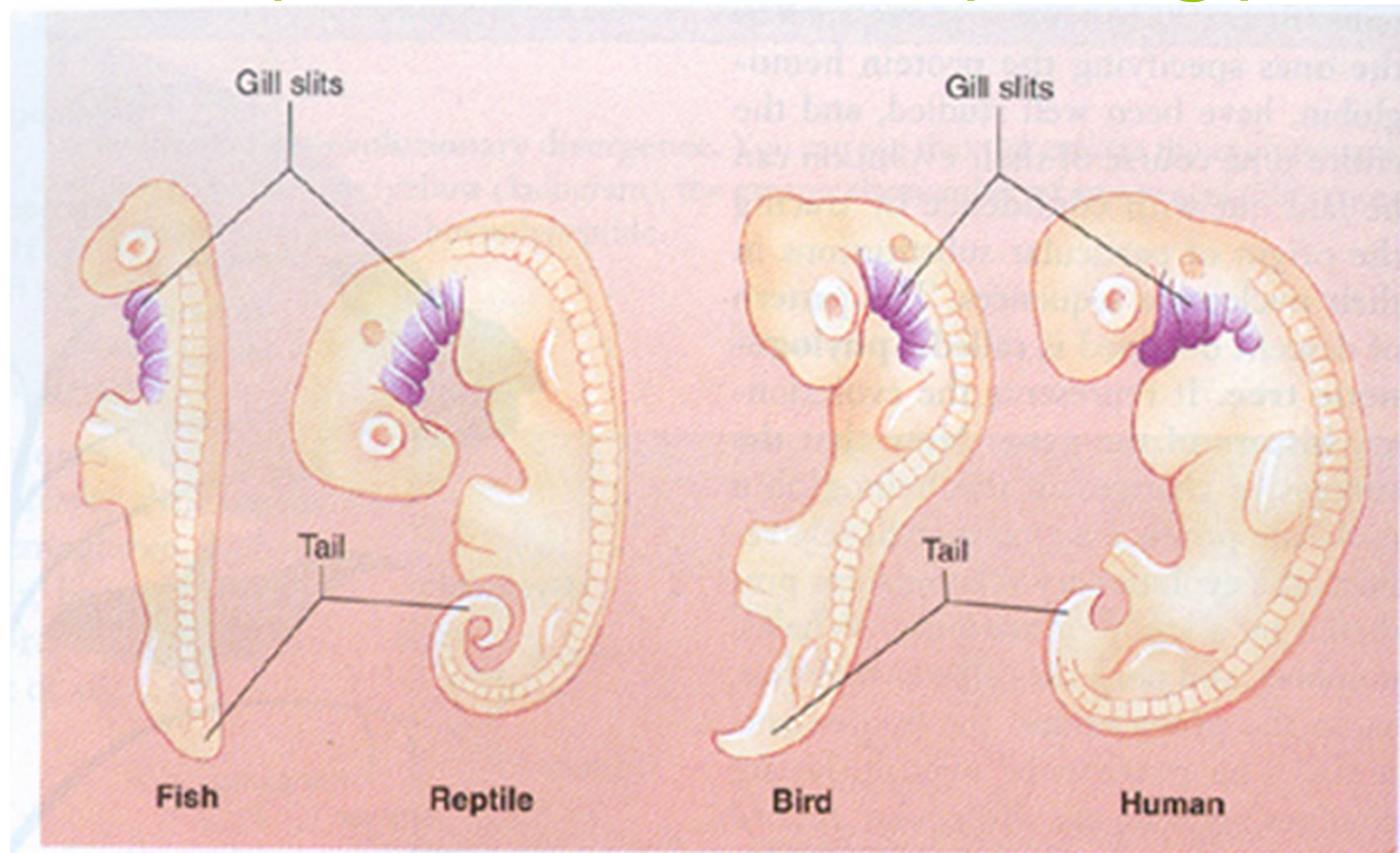


FIGURE 20.18

Adaptation

- Lies at the heart of Darwin's idea of evolution
- Adaptation – a trait shaped by natural selection
 - Increases an organisms' reproductive success
 - Measured using **fitness**
 - Fitness – measurement of reproductively “viable” offspring that an organisms produces

Adaptation



- **Camouflage**

- Allows species to blend into their environments
- They can become almost invisible to predators
- More of the camouflaged species will survive

Adaptation

- **Mimicry**

- One species evolves to resemble another species
- Harmless species looks like a harmful one
- Keeps predators away



Viceroy butterfly
(The mimic - palatable species)



Monarch butterfly
(The model - distasteful species)