

Chapter 10: Reproduction

Monotremes

Marsupials

Placentals



[http://en.wikipedia.org/wiki/Image:Wild\\_shortbeak\\_echidna.jpg](http://en.wikipedia.org/wiki/Image:Wild_shortbeak_echidna.jpg)



<http://en.wikipedia.org/wiki/Image:Platypus.jpg>

### Reproductive features of the monotremes

Soft-shelled eggs incubated for 11-12 days in platypus  
 Newly hatched young only 1 cm long (small eggs)  
 Milk secreted from pores to tuft of hair, not via nipple  
 Lactation lasts 16 weeks in platypus

In Echidna, not a nest, eggs are laid directly into pouch  
 In pouch for 12 weeks, weaned at 20 weeks

1 "clutch" per year -- low for small mammals

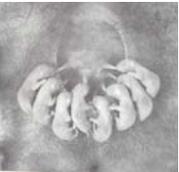




MOW

### Marsupials

2 to 27 nipples  
 Newborns attach  
 Newborns < 1 g

*Didelphis virginianus*



### Reproduction

Gestation short (8 to 43 days)  
 lactation long

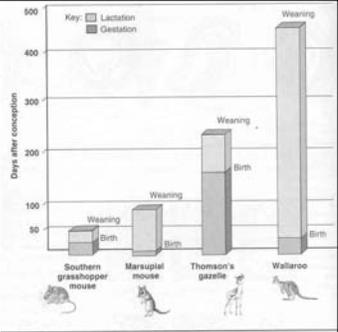
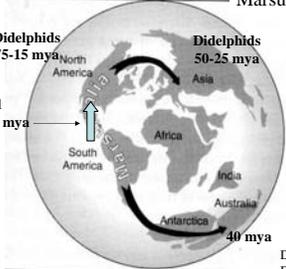


Figure 9.15 Gestation and lactation. Diagram comparing the periods of gestation and lactation for various mammals.

Vaughn 20.8

### Australian Faunal Region Mammals

Marsupials -- from Palearctic



Didelphids 75-15 mya  
 Didelphids 50-25 mya  
 Didelphid reinvasion 2.7 mya  
 40 mya  
 Radiation on Australia

- Dasyuromorphia
- Diprotodontia (Kangaroos, possums)
- Microbiotheria
- Monotremata (Monotremes)
- Notoryctemorphia
- Paucituberculata
- Peramelemorphia (Bandicoots)

### Metatherians vs. Eutherians

Metatherians have not equaled functional radiation of Eutherians  
 Marine, Flight, Aquatic

Metatherians more conservative in body plan -- retain primitive features

Size differences -- red kangaroo about 66 kg, elephant about 50 times as large. Whale comparison misleading

Metatherians are not social (wolves)

About 6% of extant mammal species are metatherians

