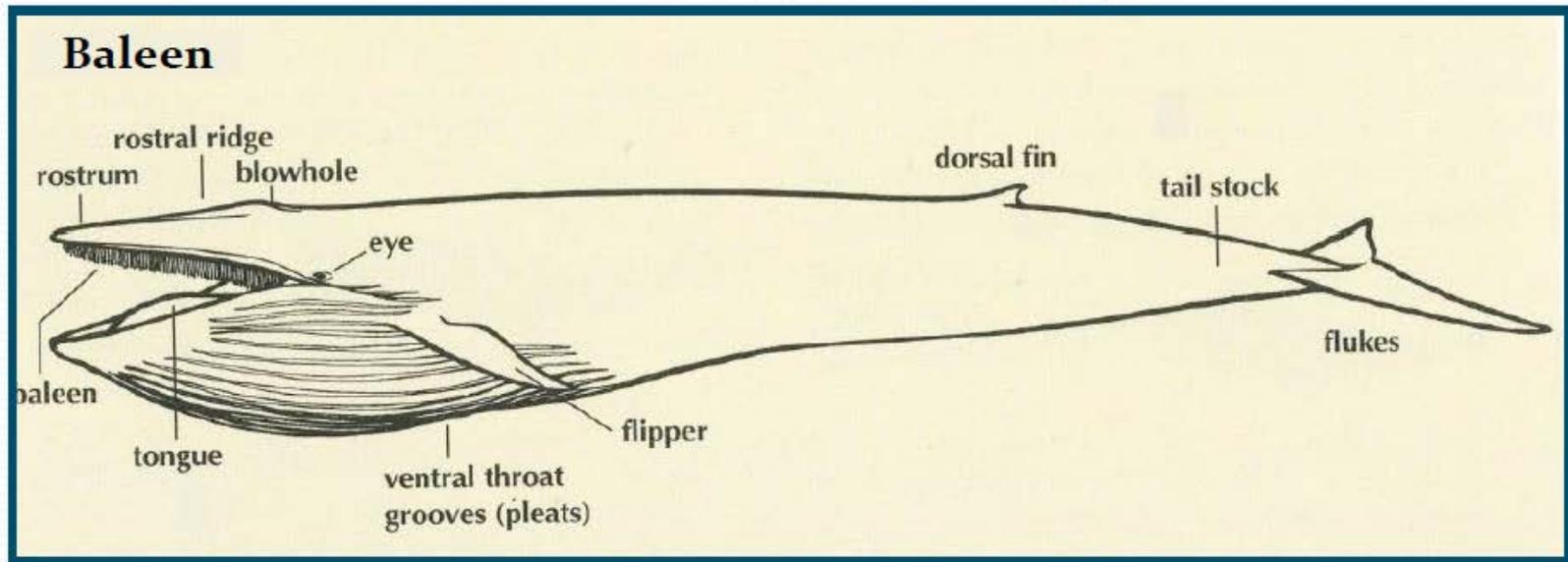


Study Guide:  
Cetacean, Pinniped, Sea Turtles and  
Sea Birds

# Cetacean Morphology/Traits



1. **Absence/presence of throat grooves**
2. **Absence/presence & shape of dorsal fin**
3. **Shape of pectoral fins/flukes**
4. **Coloration/patterns**

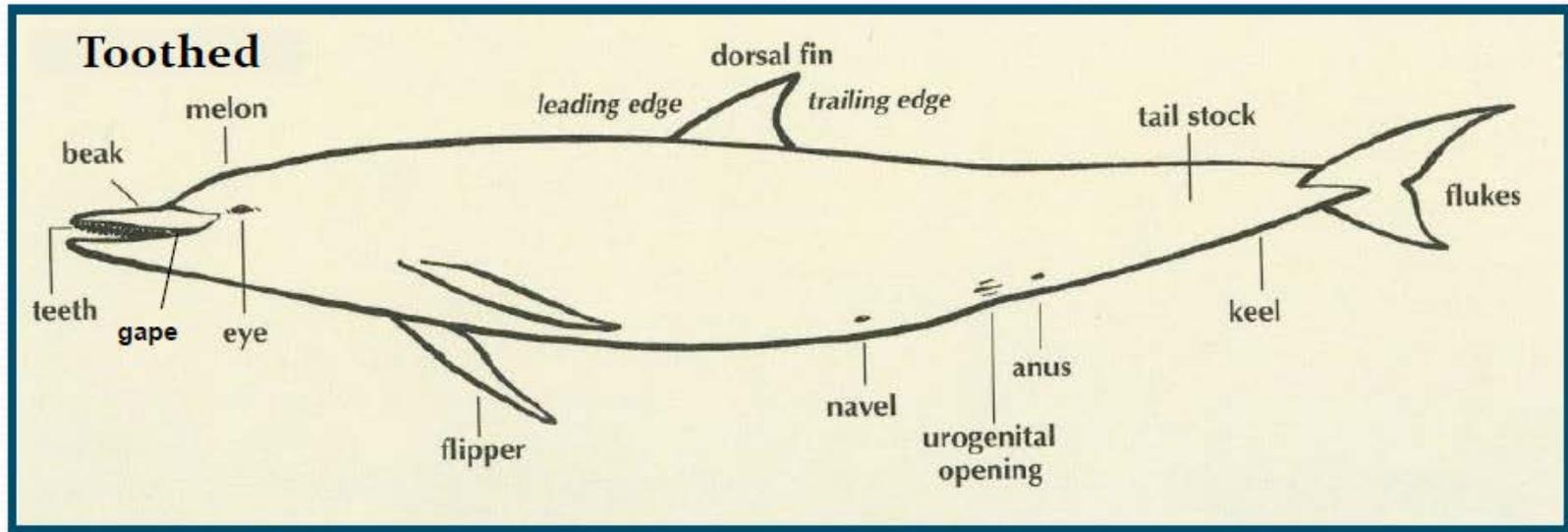
# HOW TO BEGIN IDENTIFYING LARGE WHALES...SUCCESSFULLY

## Characteristics for mental check list

1. Relative size of animal
2. Relative size and shape of dorsal fin
3. Flukes and flippers (size, shape, location, coloration)
4. Uniquely identifiable characteristics (coloration patterns, calosities, presence or lack of a characteristic)
5. Size and shape of blow (very deceiving, not very reliable)
6. Behaviors (can be deceiving)



# Cetacean Morphology/Traits



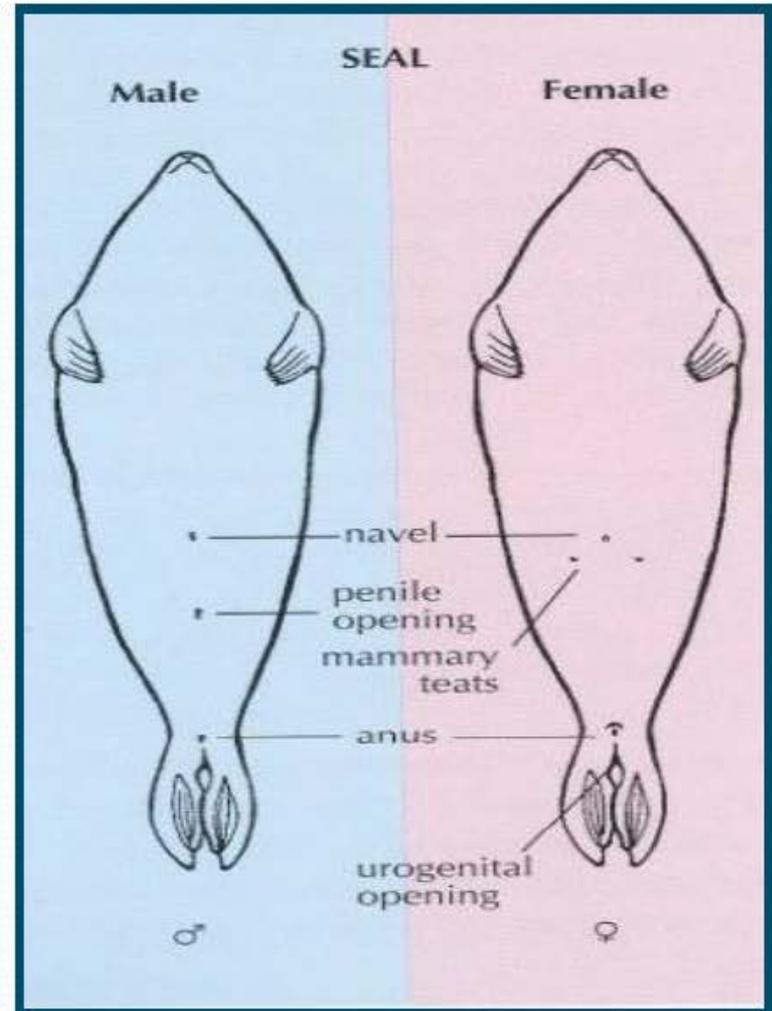
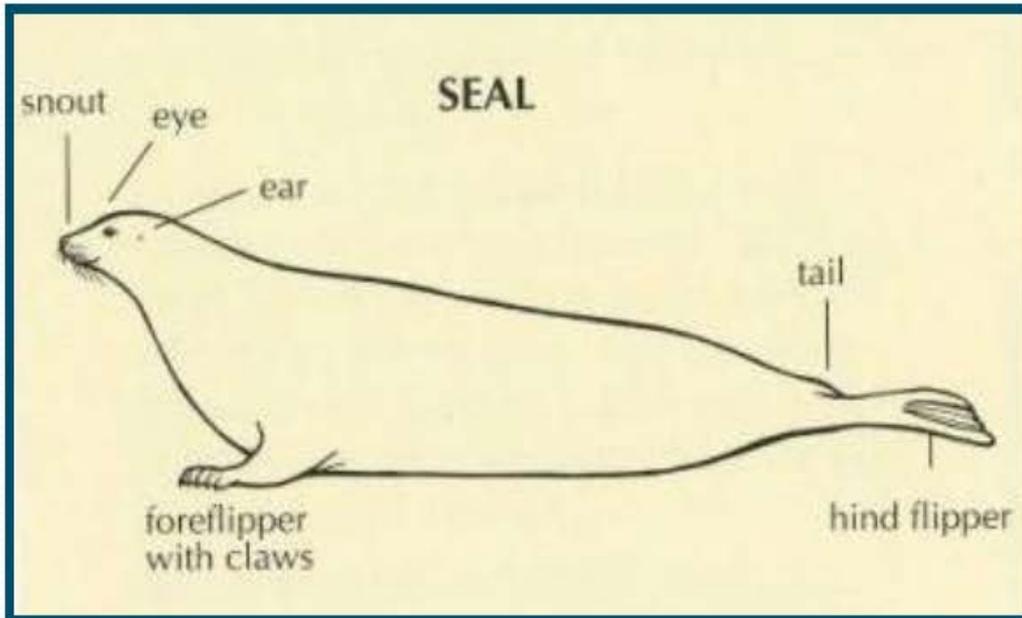
1. Shape of beak
2. Number, position & shape of teeth
3. Shape of dorsal & pectoral fins
4. Body markings
5. Size of animal

## KEY TRAITS FOR SMALL WHALES

1. **Body markings**
2. **Shape and length of beak (rostrum)**
3. **Number, position, and shape of teeth**
4. **Shape and size of dorsal fin**
5. **Overall size of animal**



# Pinniped Morphology



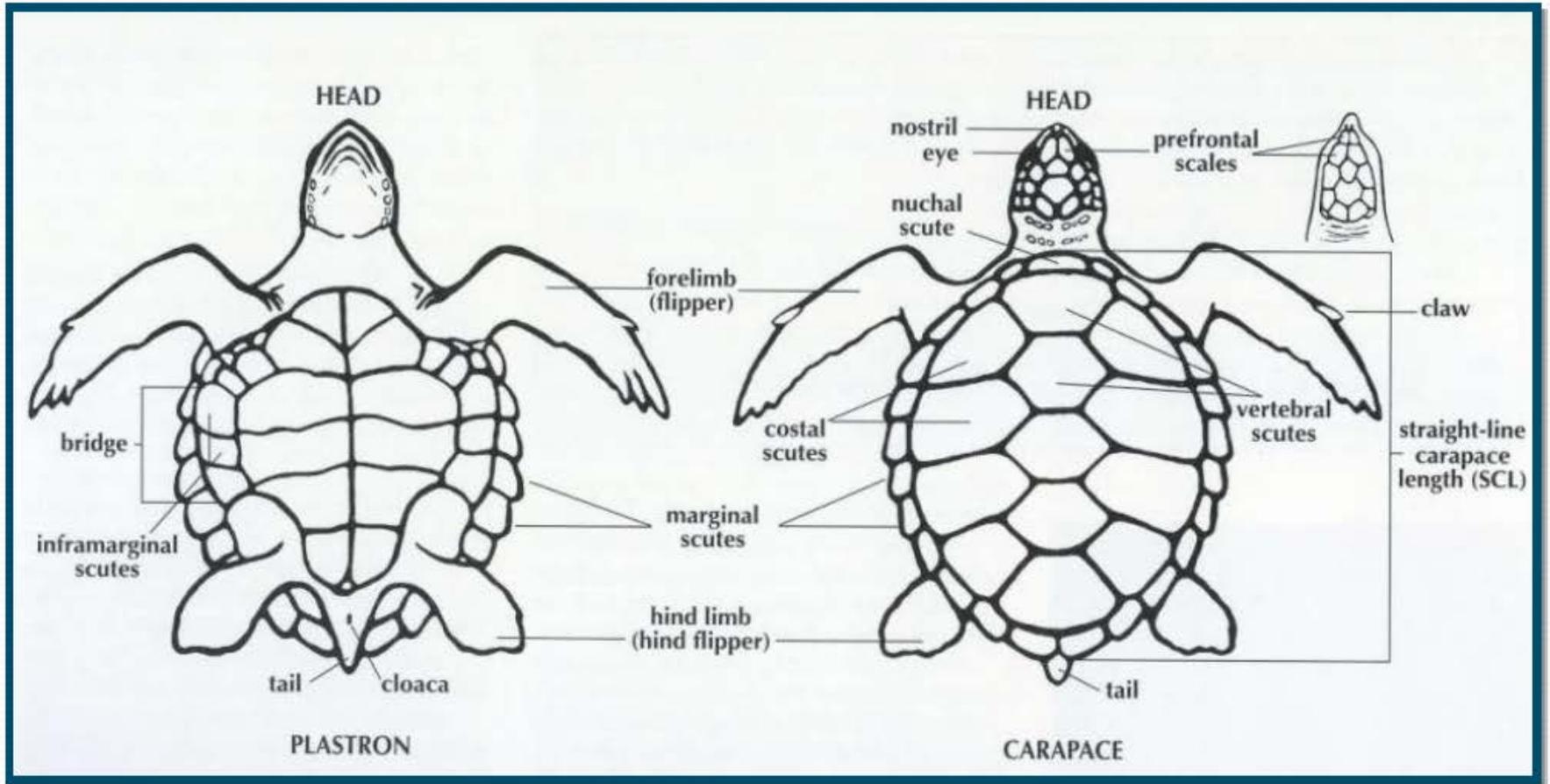
# Identifying Seals

- Shape and arrangement of teeth
- Head shape
- Coloration and patterns of coat

## Be careful....

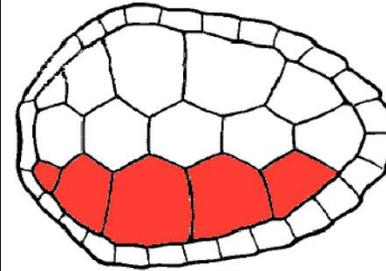
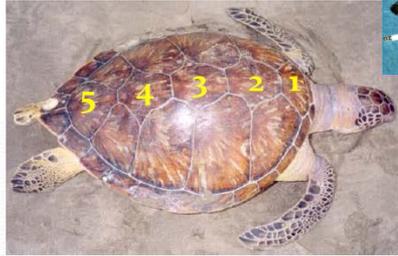
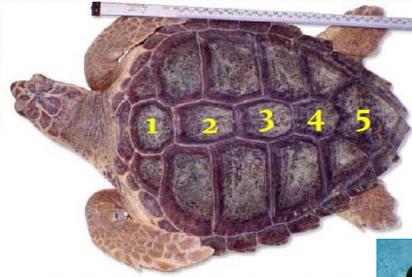
- Coat color and patterns are highly variable between individuals of the same species
- Juveniles of one species may look similar to adults or juveniles of another species
- All seals have canines, look past this

# Sea Turtle Morphology



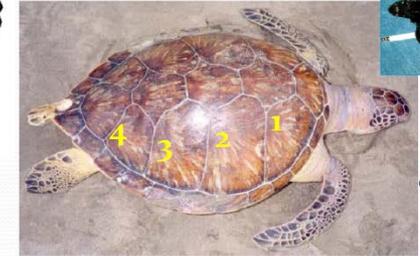
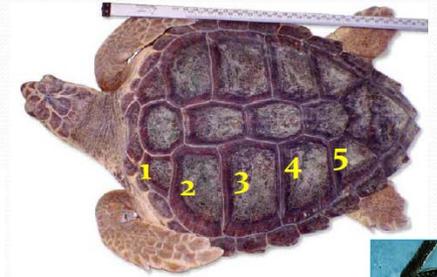
## Vertebral Scute Count

- Don't count the nuchal notch

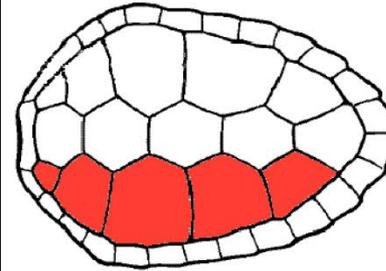


## Costal (Lateral) Scute Count

- The first small one can be tricky...
- Don't count the nuchal notch or the last vertebral scute.

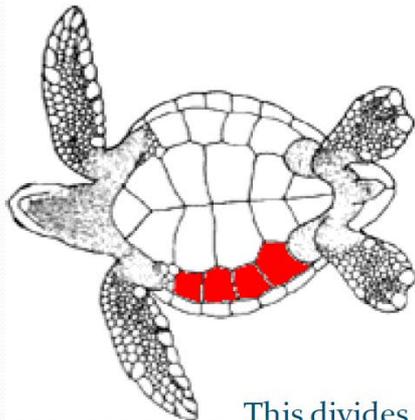


This divides greens from oggerheads & ridleys



## Inframarginal Scute Count

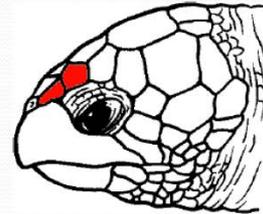
- Inframarginal scutes are the middle scutes on the underside
- Look for pores



This divides the Loggerheads and Kemp's ridleys.

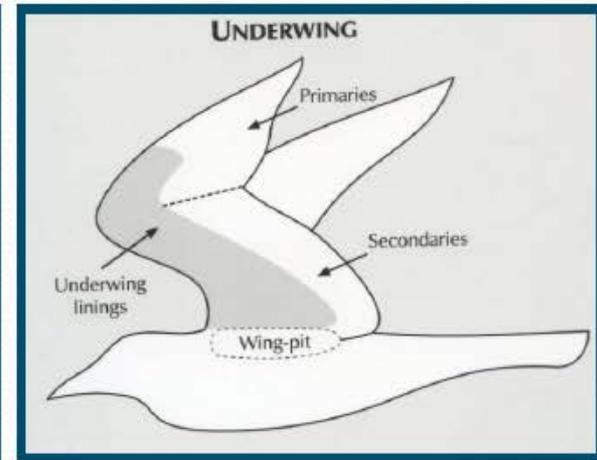
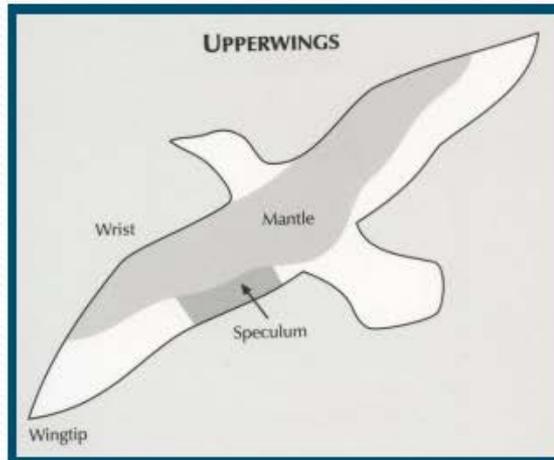
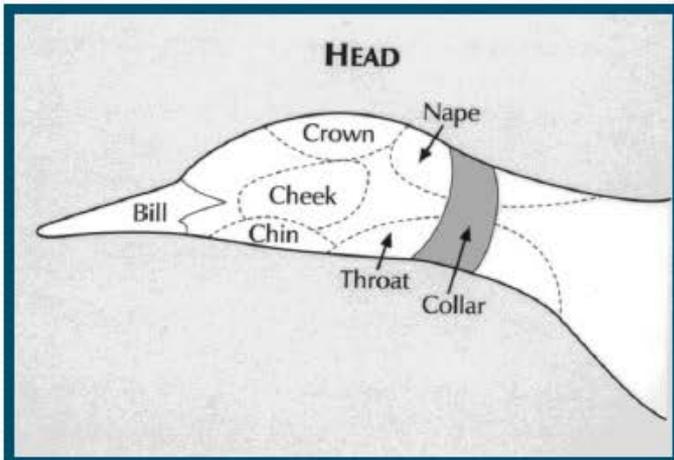
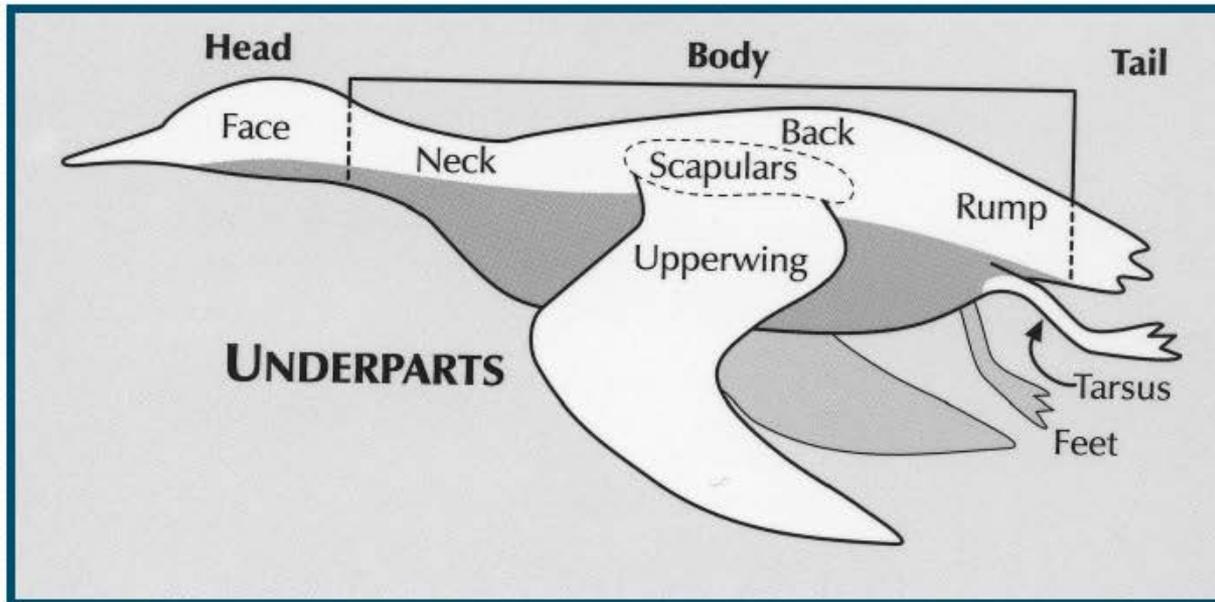
## Pre-frontal scales

Pre-frontal scales are the paired scales in front of eye sockets



This divides green turtles from rest of hardshells

# Bird Morphology



# Key Traits for Seabirds

- presence of tubes
- shape of bill
- shape of leg and # of toes
- plumage
- overall size



## Challenges...

- breeding vs. non-breeding plumage
- juvenile vs. adult plumage
- waterlogged birds
- take vs. not
- not always whole

