

# Identifying Mammal Skulls



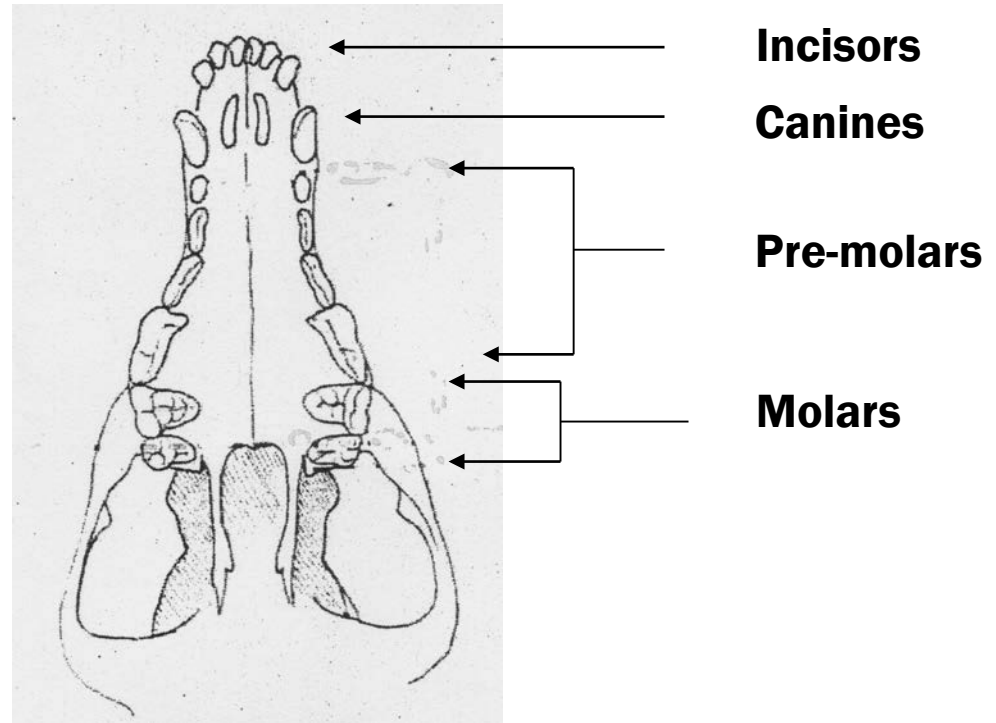
# Group Animals by skull traits

Carnivore

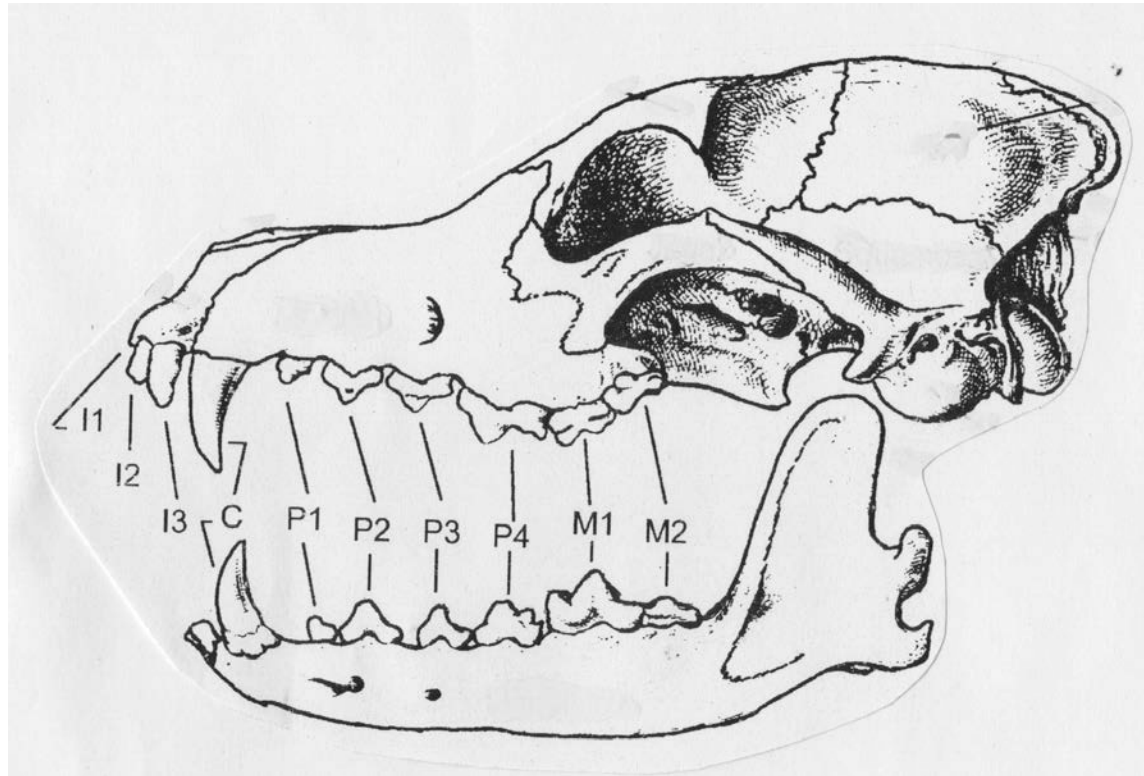
Herbivore

Omnivore

# Teeth



# Dental Formula



**I C P M**

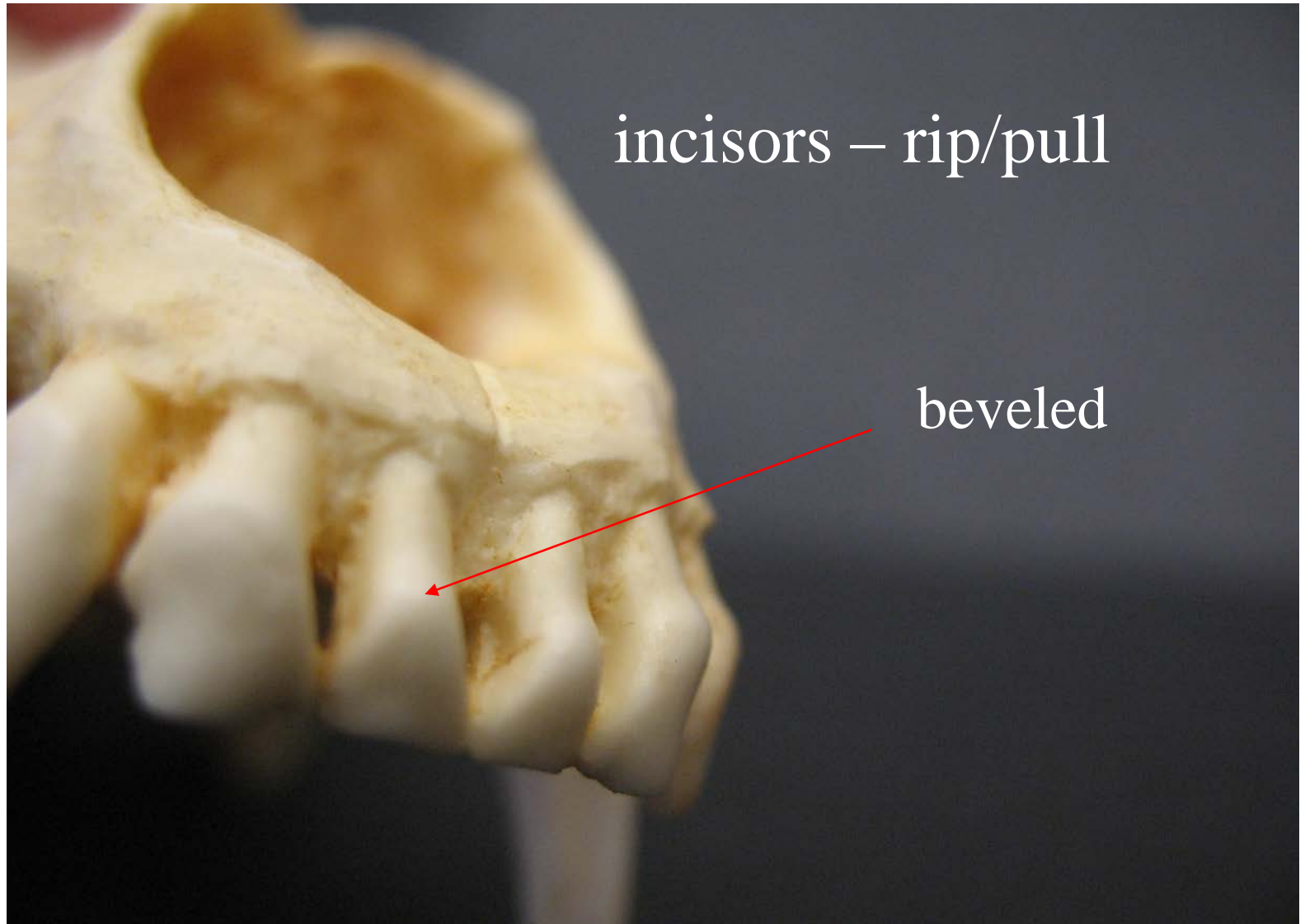
3 1 4 2 top one half of mouth

3 1 4 2 bottom one half of mouth

# Carnivore teeth

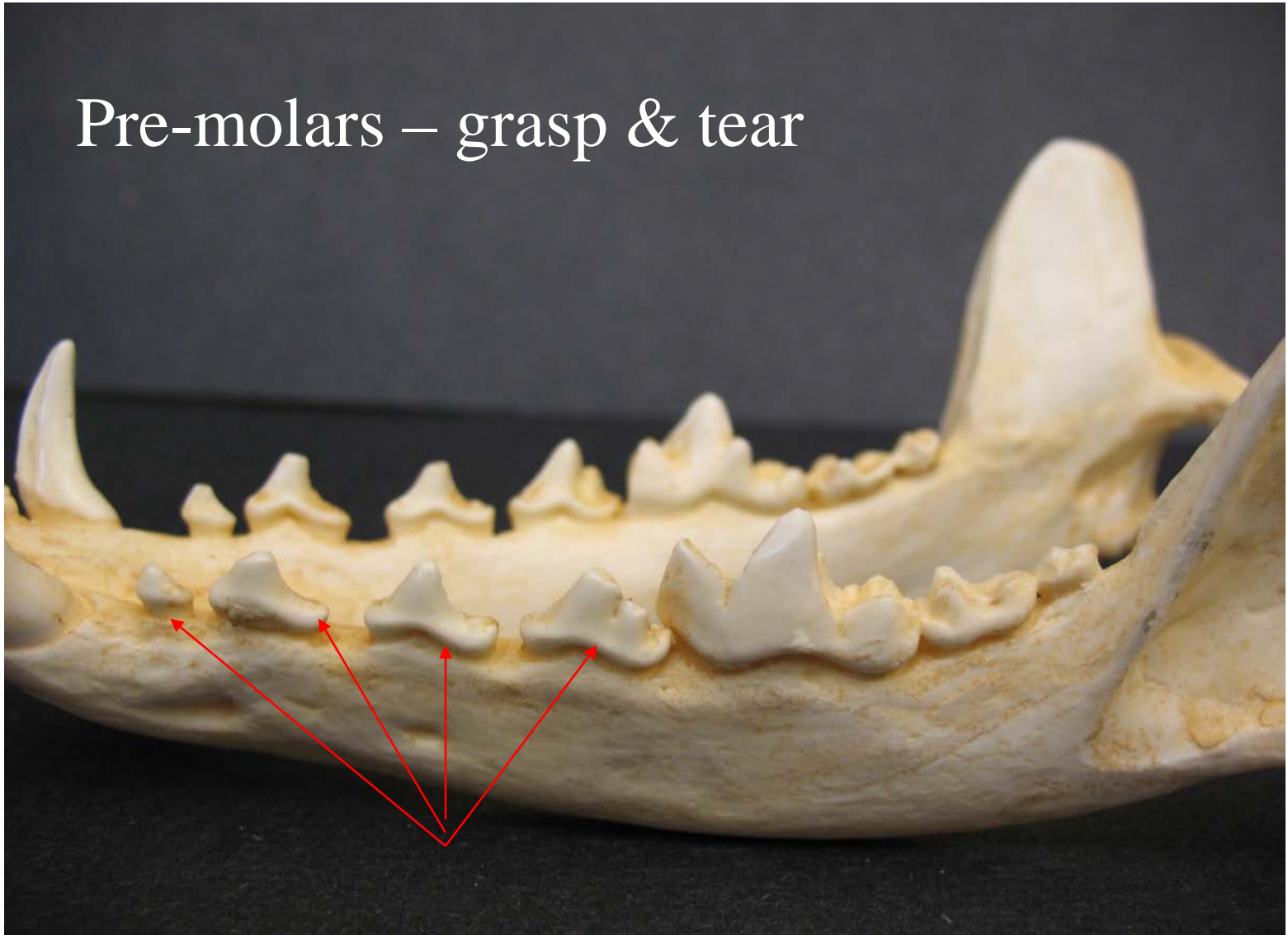


# Carnivore teeth

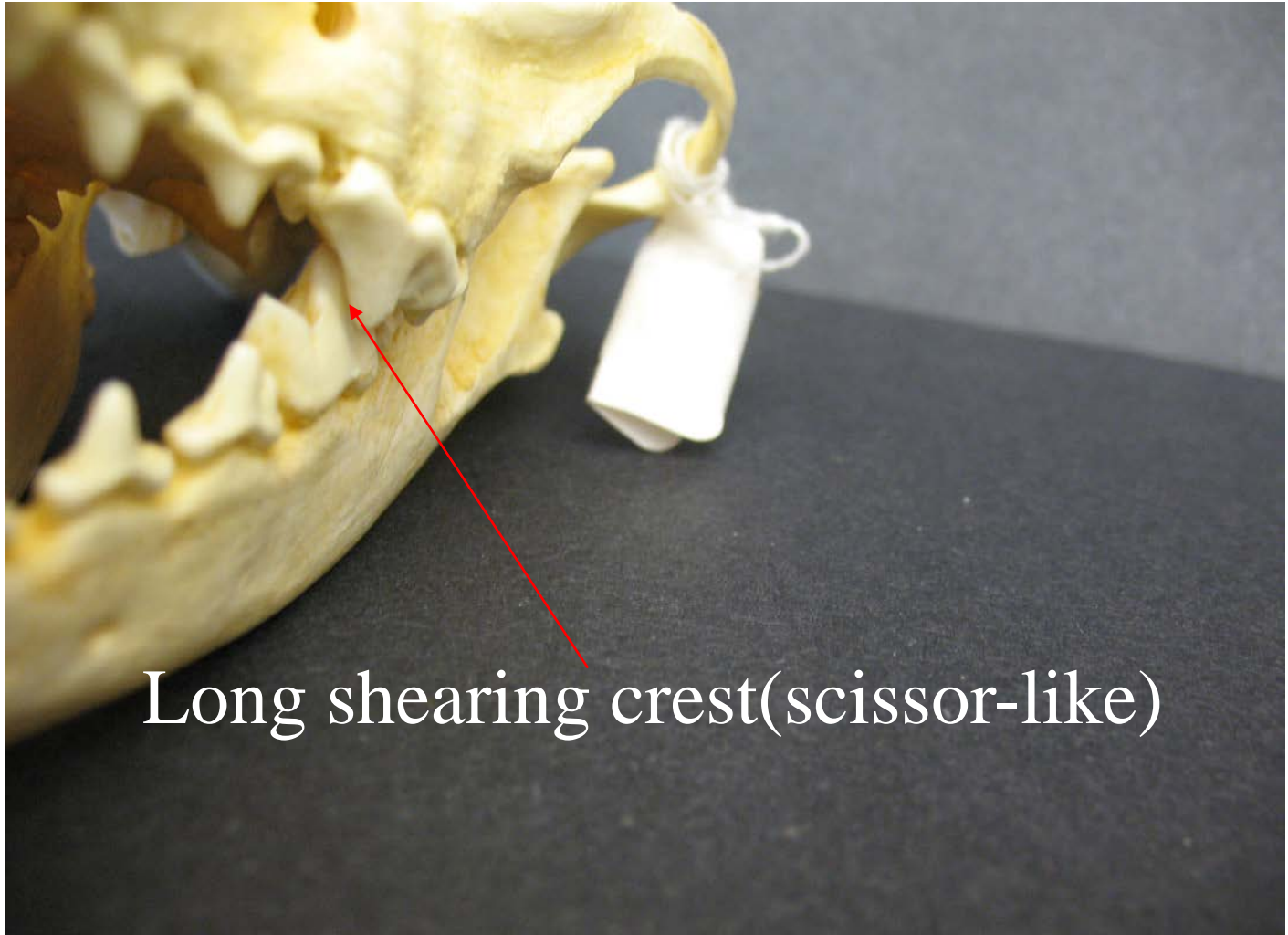


# Carnivore teeth

Pre-molars – grasp & tear



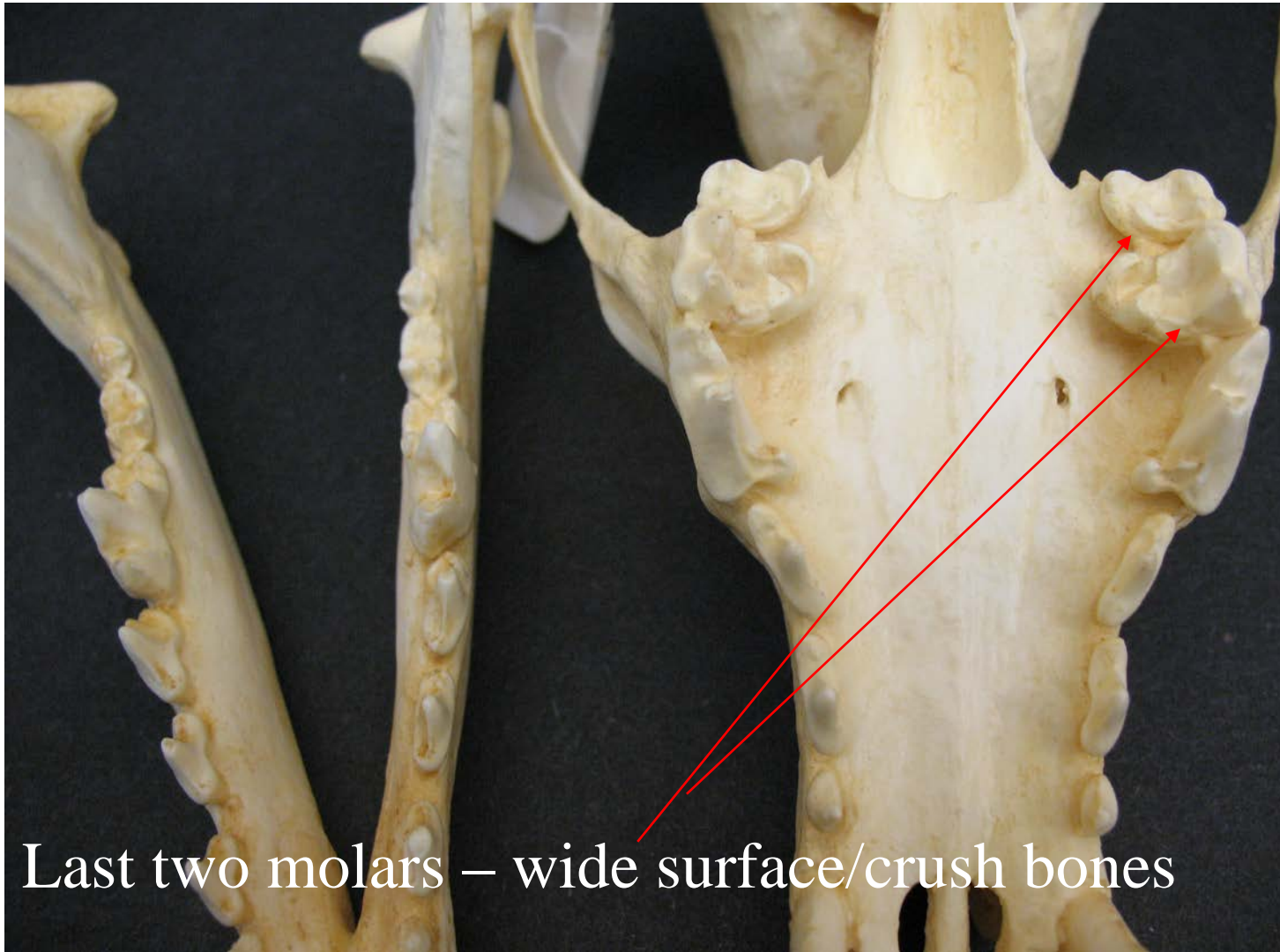
# Carnivore teeth



Long shearing crest(scissor-like)



# Carnivore teeth



Last two molars – wide surface/crush bones

# Carnivore teeth

**Incisors – rip & pull**

**Canines – piercing**

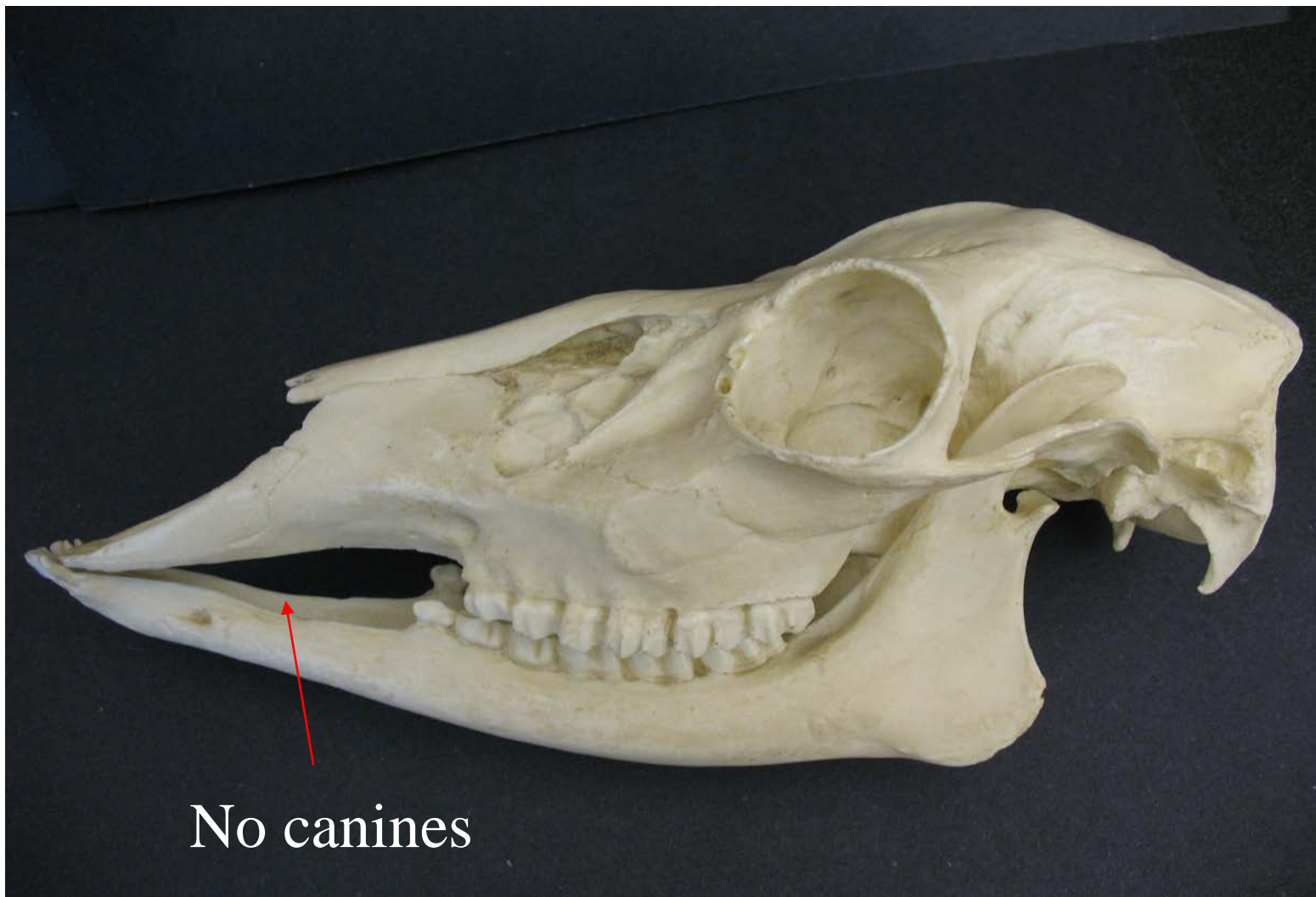
**Pre-molars – grasp & tear**

**4<sup>th</sup> pre-molar & lower 1<sup>st</sup> molar – scissor like**

**Last 2 molars – wide surfaces/crushing**



# Herbivore teeth



No canines



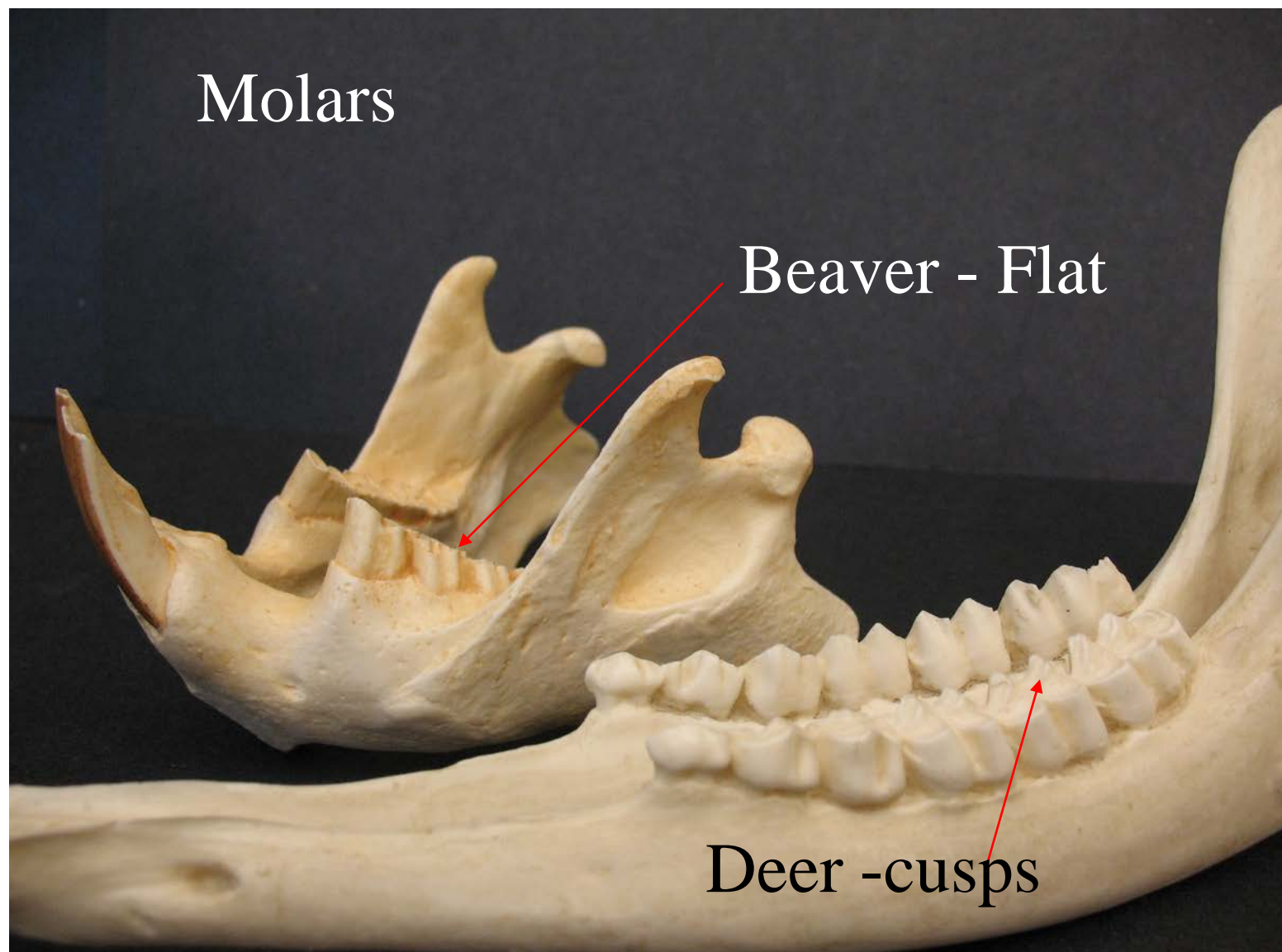
# Herbivore teeth

Incisors – wide/stripping vegetation





# Herbivore teeth





# Herbivore teeth

Process tough plant food

Incisors – wide

Canines – absent or small

Pre-molars & molars – mostly flat topped



# Omnivore teeth

**Combination of carnivore & herbivore**

**Long sharp canines**

**Pre-molars sharp**

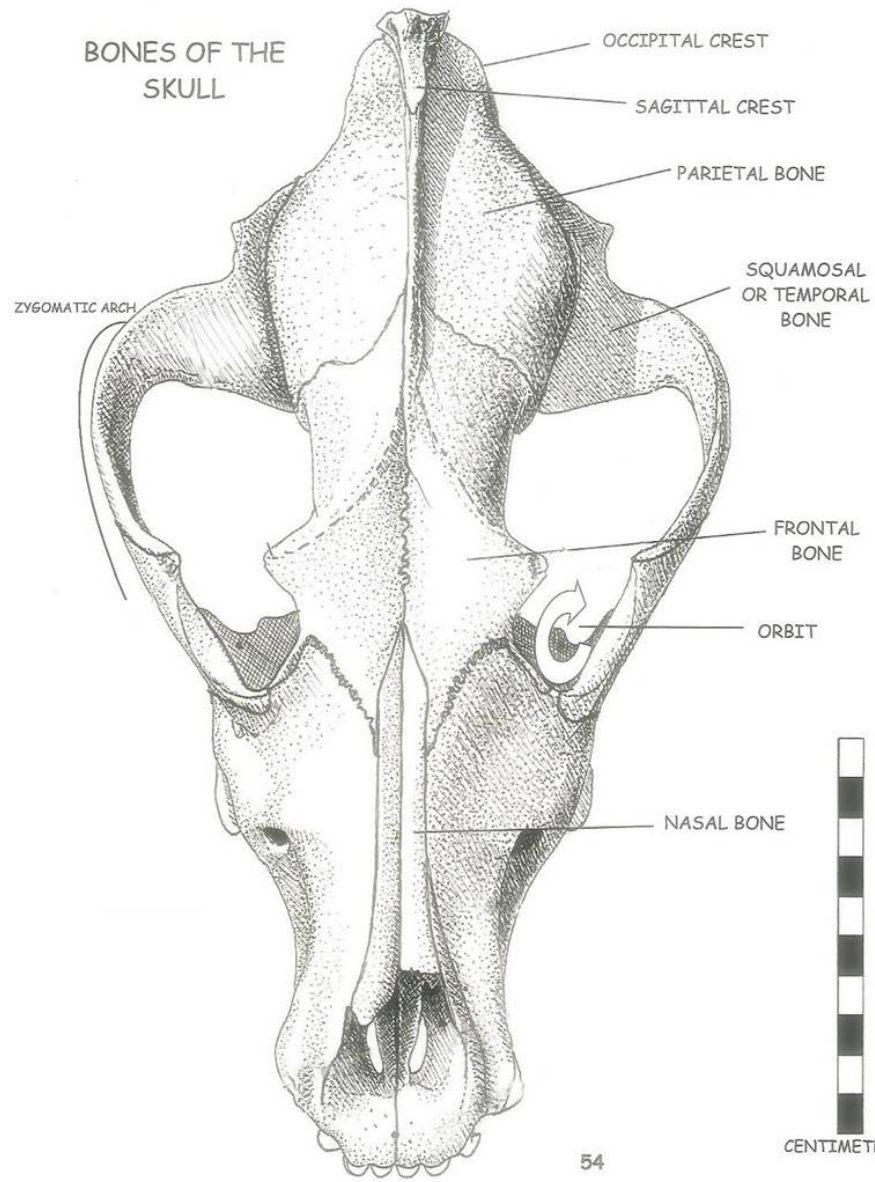
**Molars generally square, low & bumpy**



boneman@xyz.net

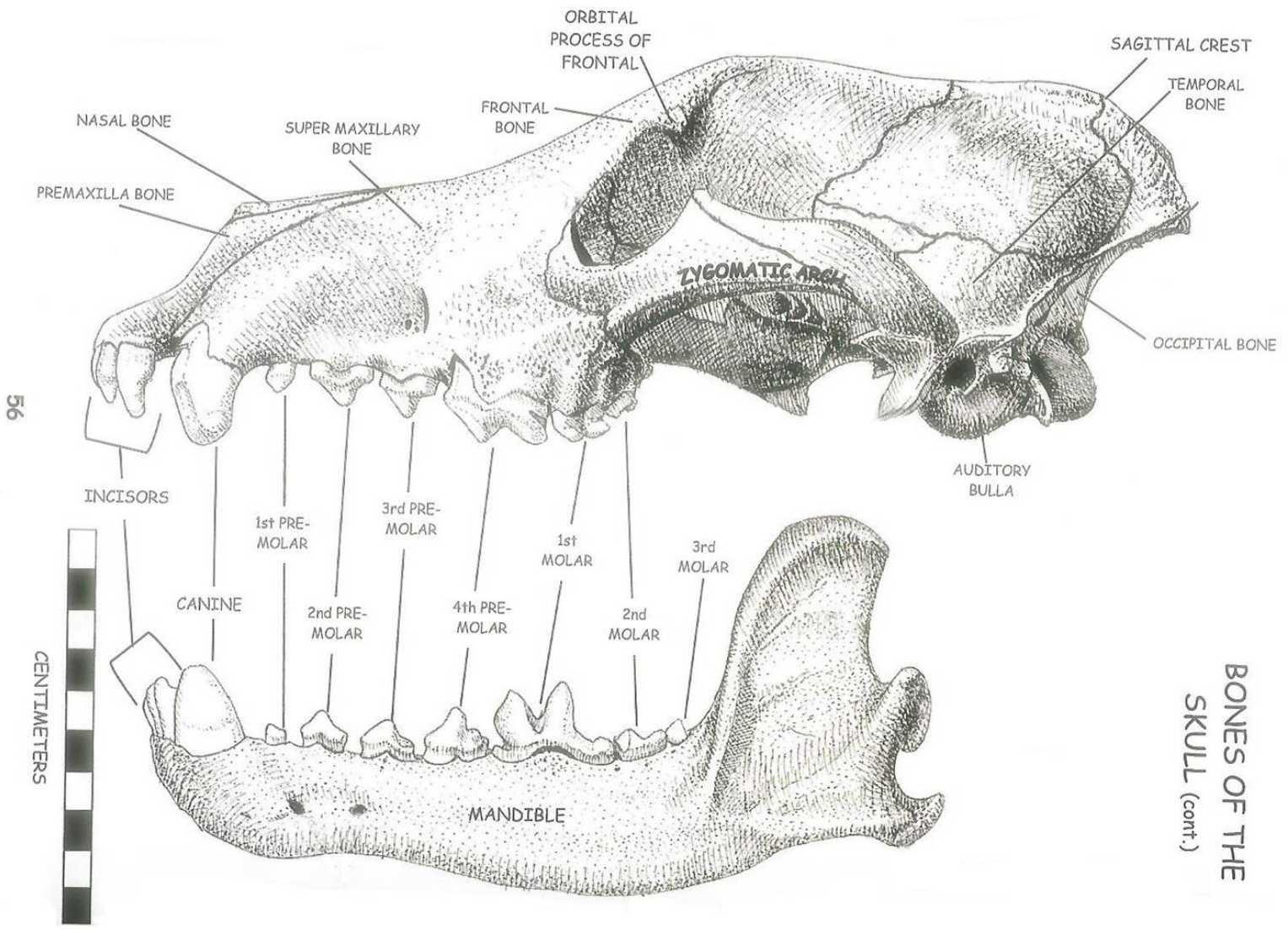
CANINE CONSTRUCTION

### BONES OF THE SKULL





# BONES OF THE SKULL (cont.)





# Canine Skulls



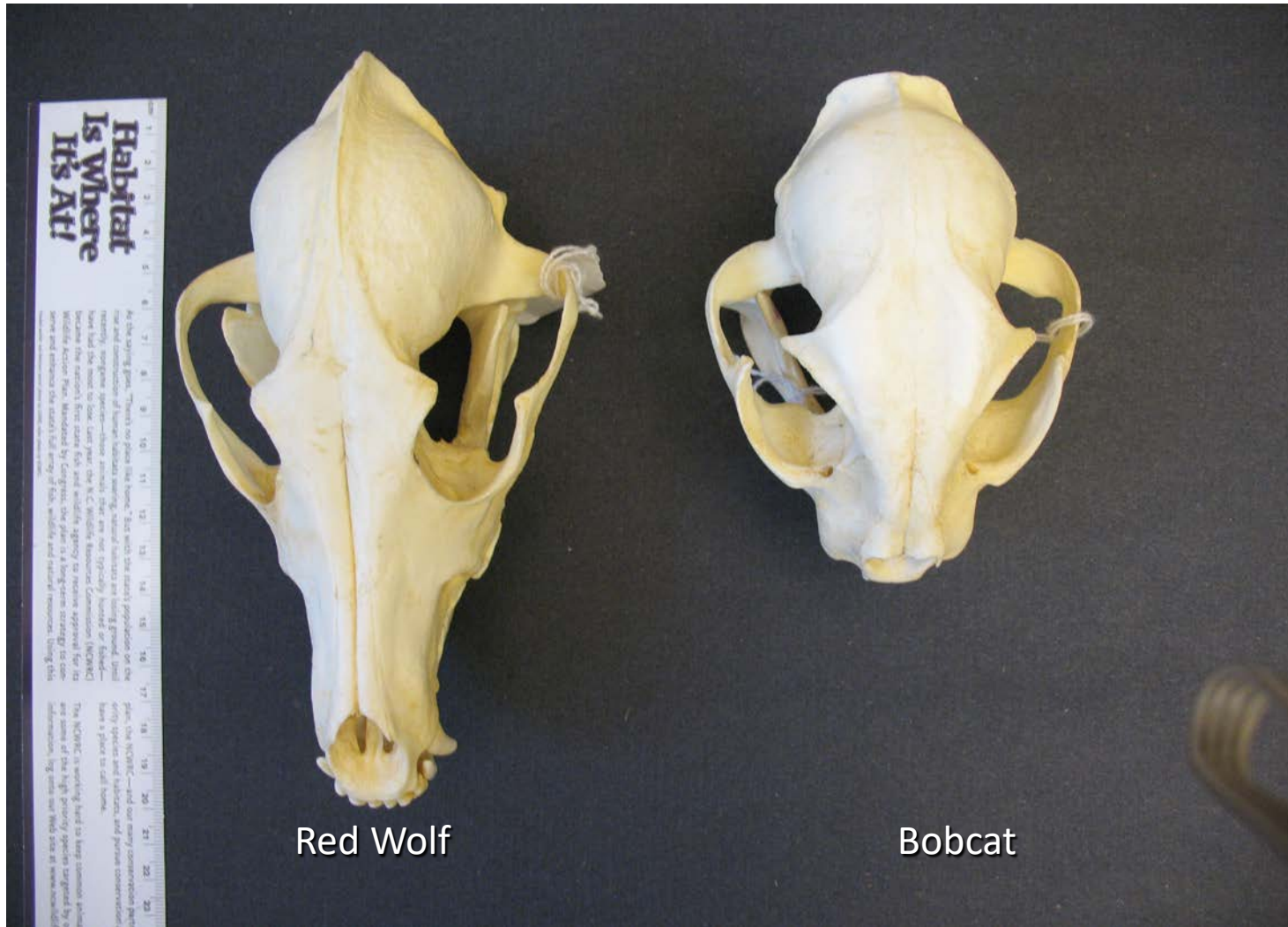
Red  
Wolf

Coyote

Red Fox

Gray Fox

# Canines: hunt using smell

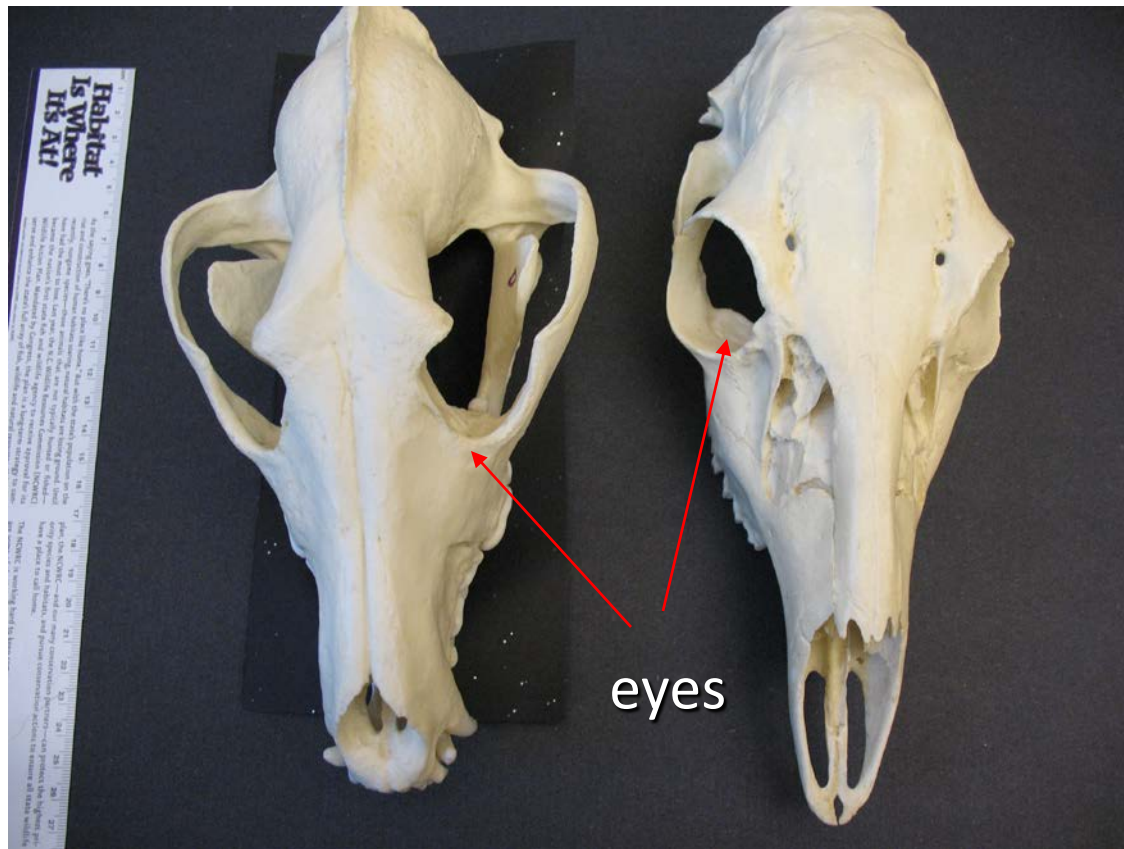


Red Wolf

Bobcat



# Canines: 3-D vision



Red wolf

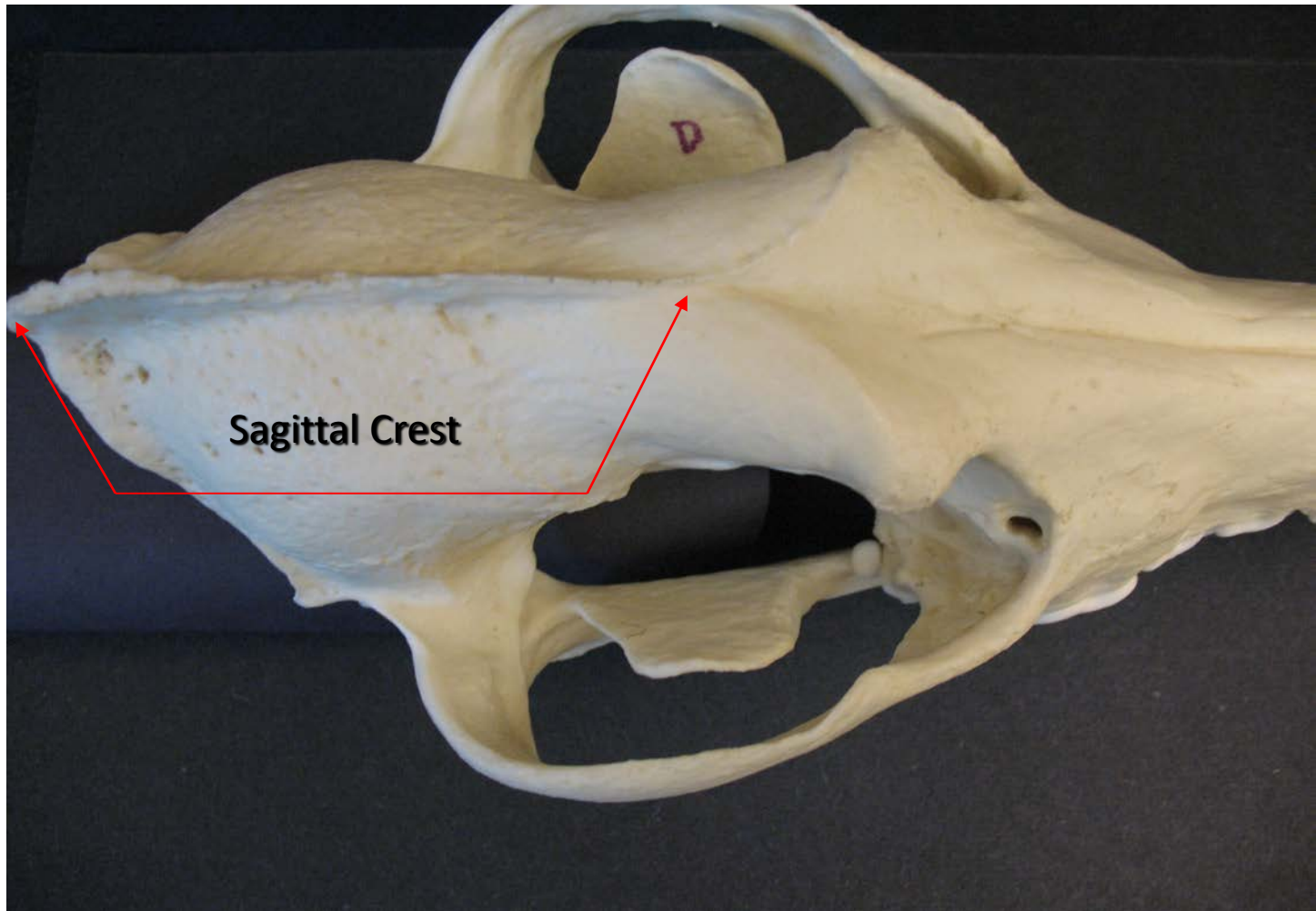
Deer

# Canine Skulls



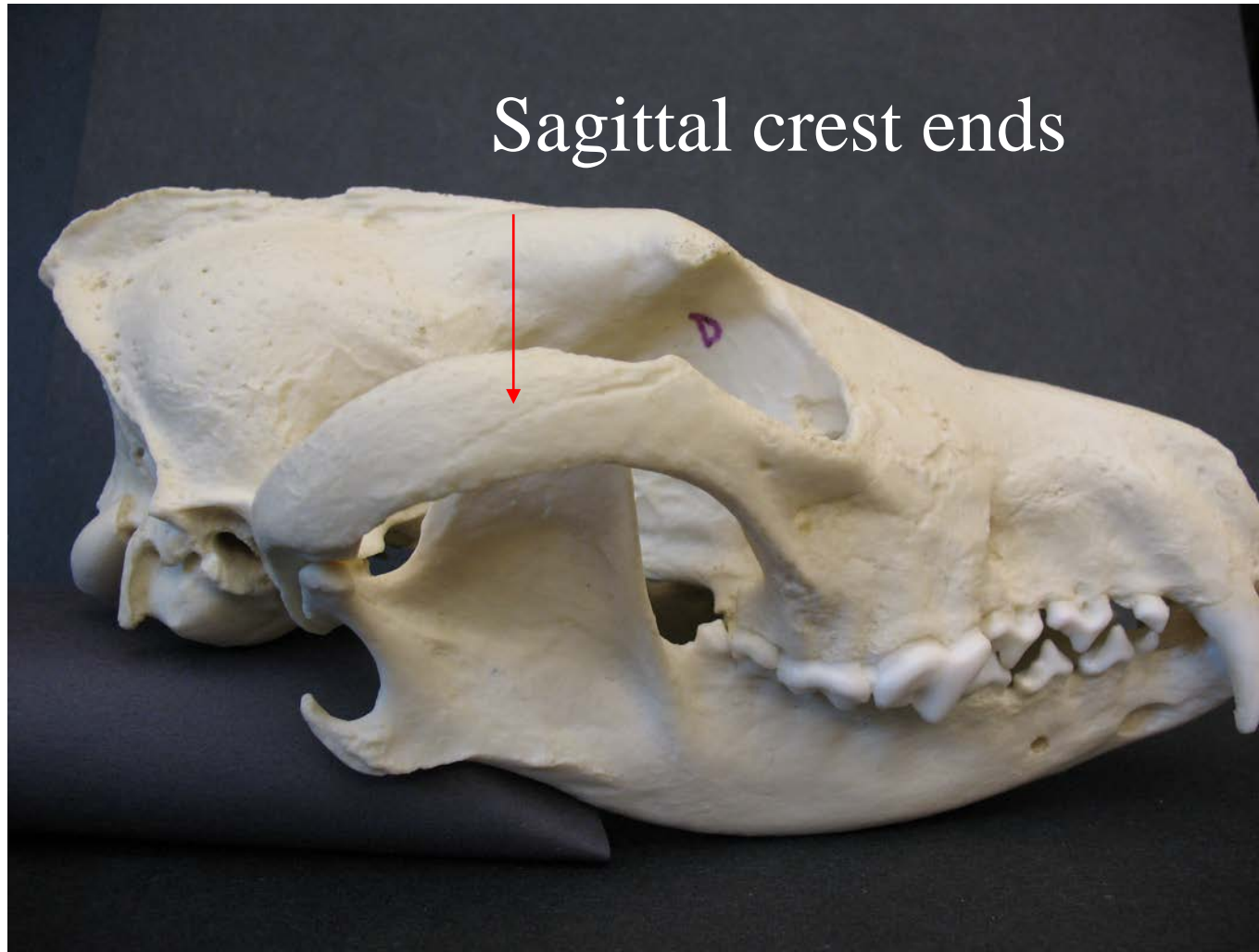


# Red Wolf

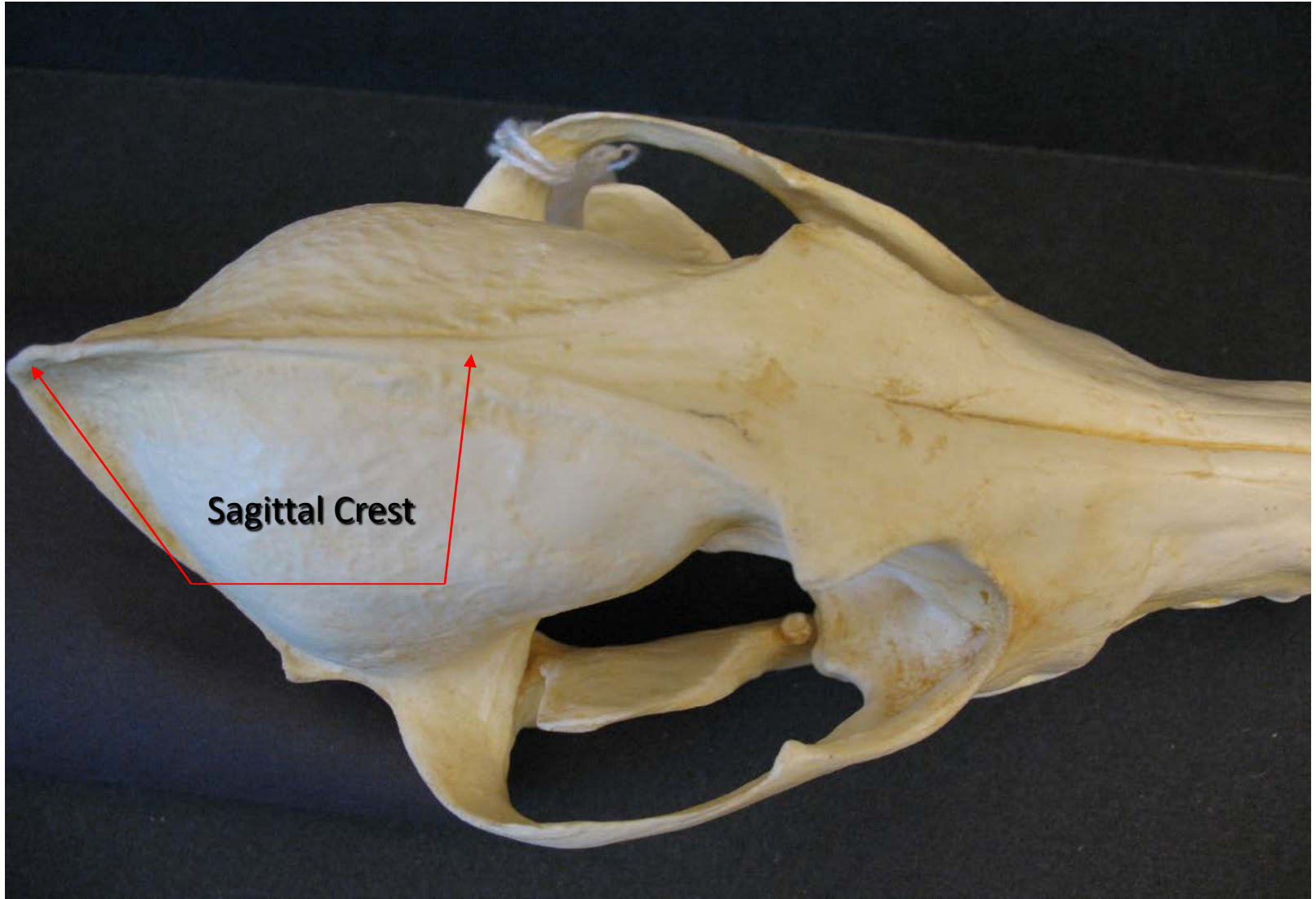




# Red Wolf

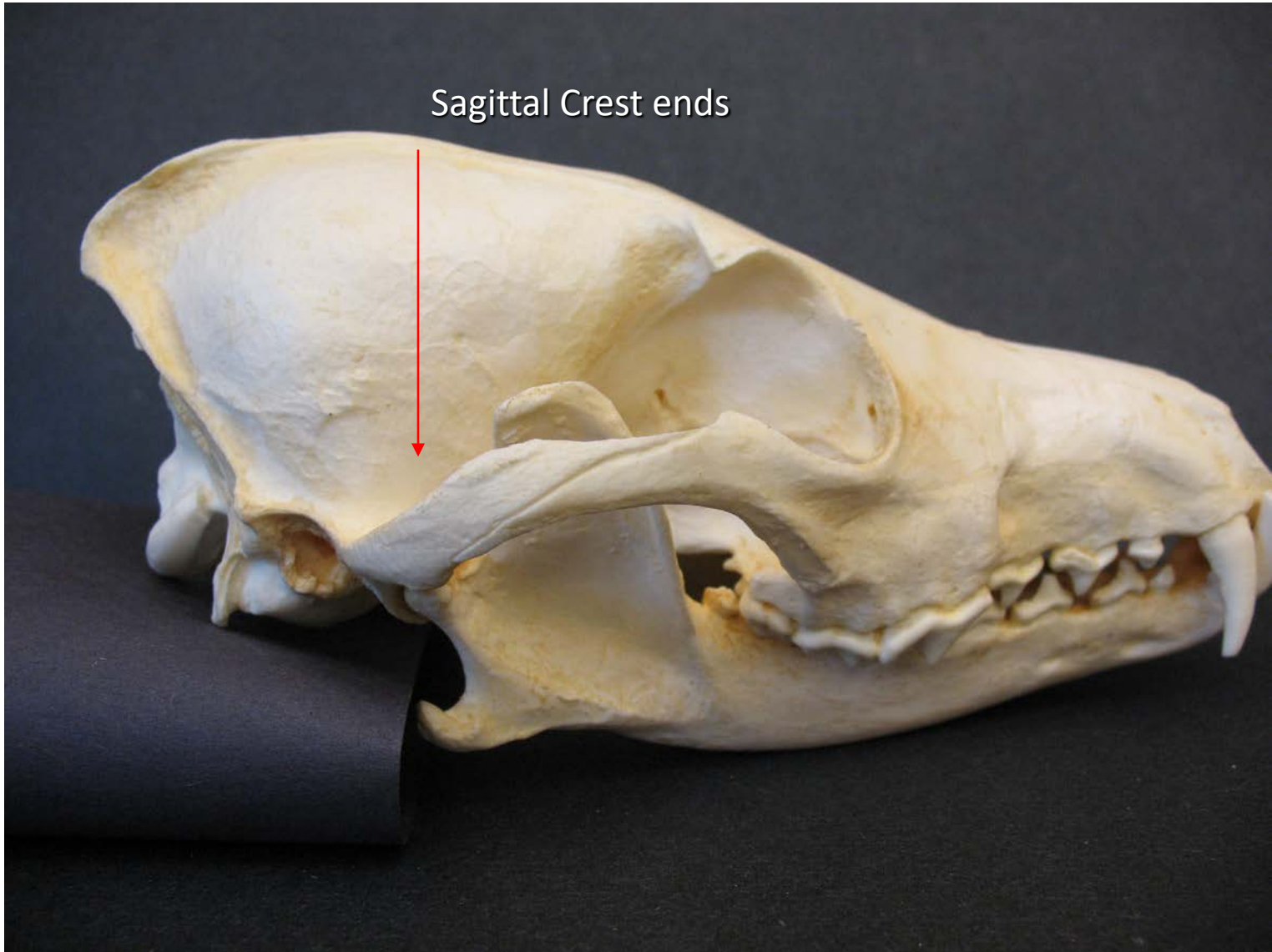


# Coyote





# Coyote





# Red Wolf



# Coyote



Red fox

Gray Fox



# Other Carnivores

# Bobcat

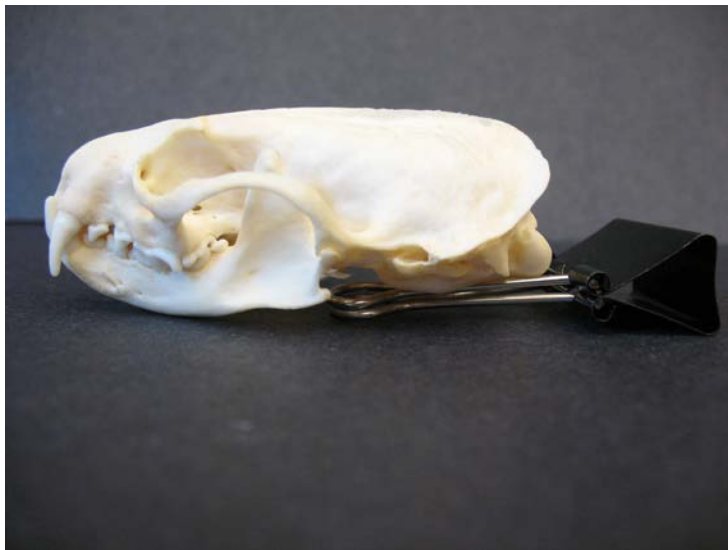


# River Otter



I 3/3, C 1/1, P 4/3, M 1/2

# Mink



Herbivores

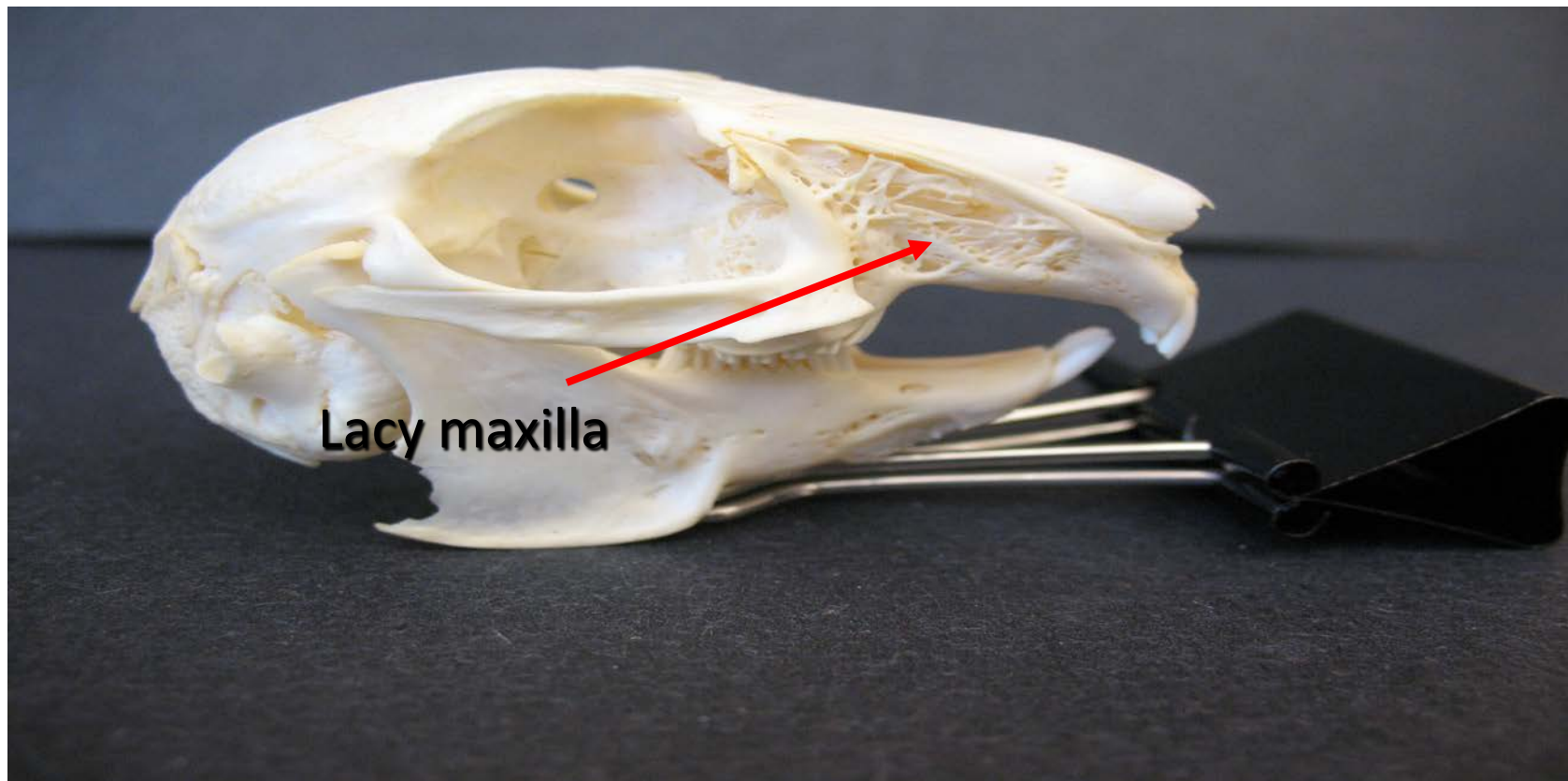


# Eastern Cottontail Rabbit





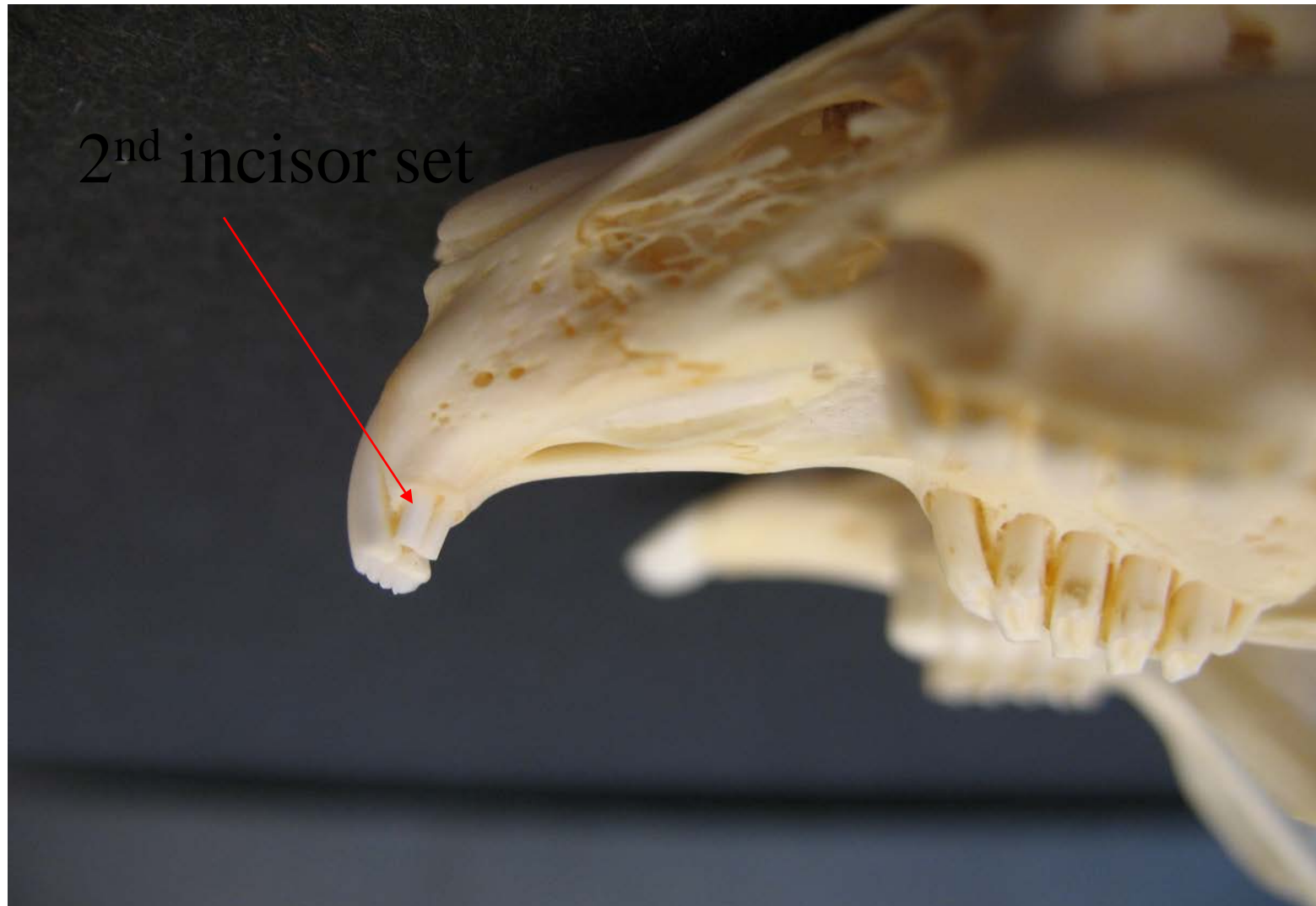
# Eastern Cottontail Rabbit



**Lacy maxilla**



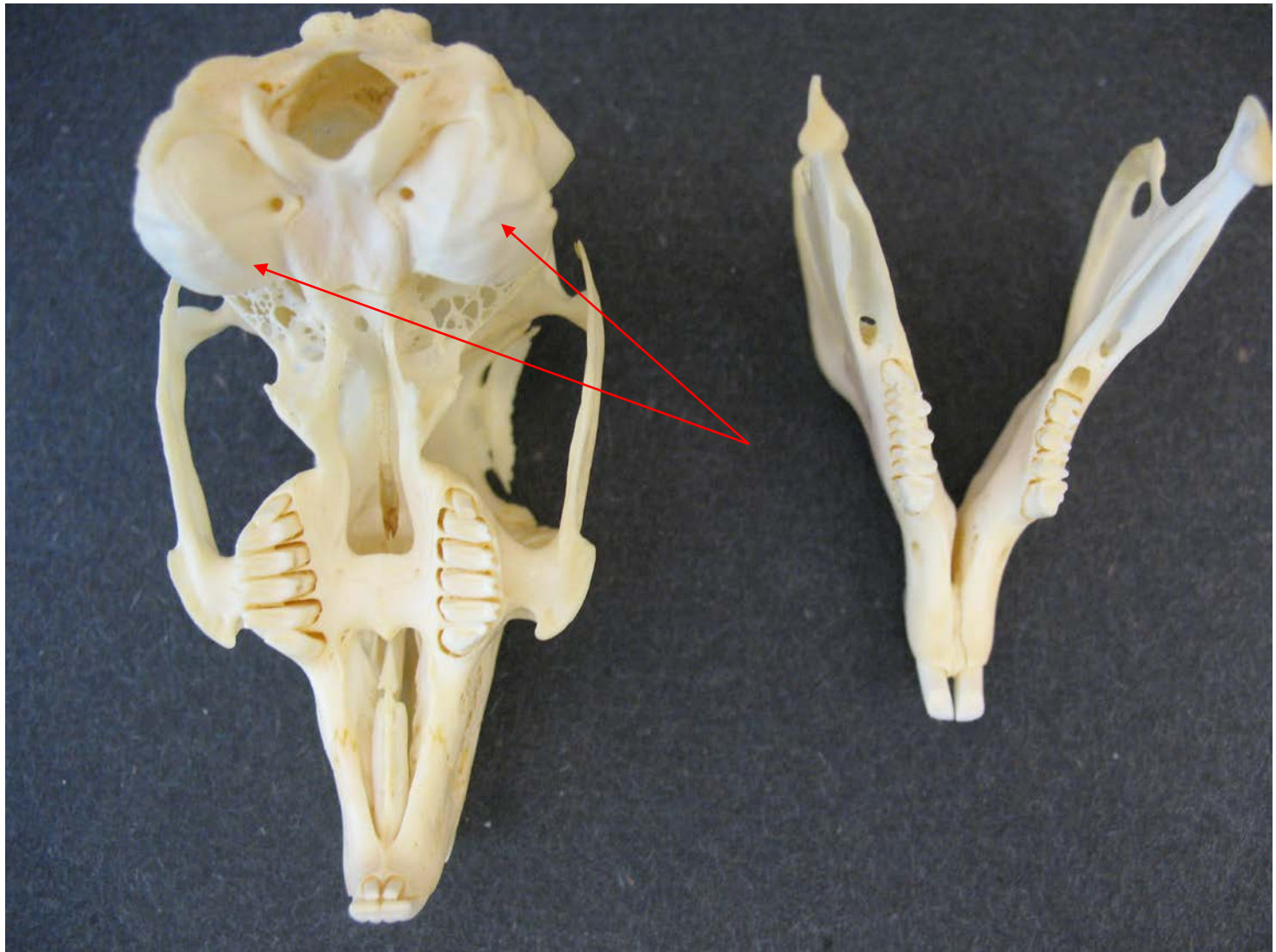
# Eastern Cottontail Rabbit



2<sup>nd</sup> incisor set



# Eastern Cottontail Rabbit



# Rodents



Beaver



Wood chuck



Muskrat



Squirrel



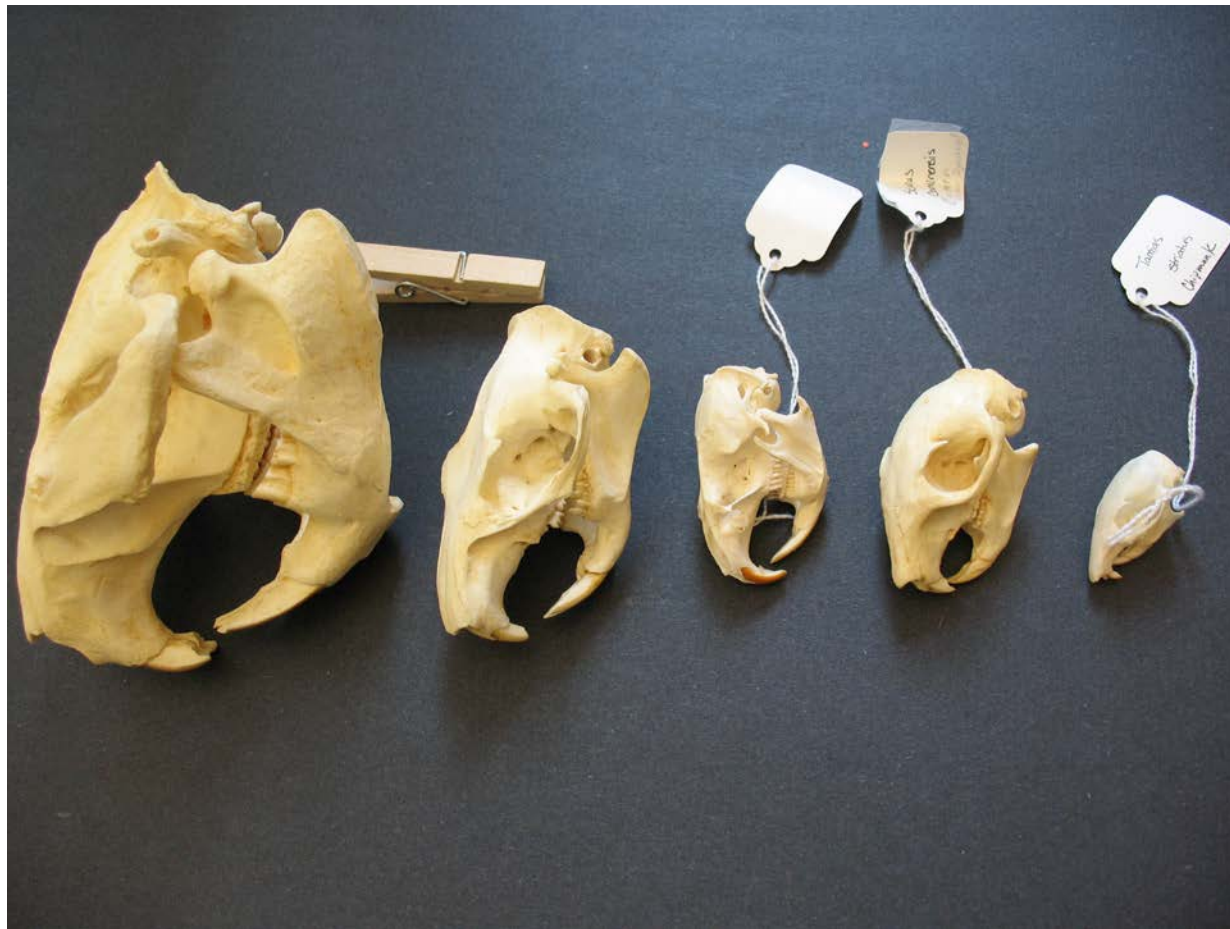
Chipmunk



Habitat  
As the supply of...  
...habits are being...  
...are not typically...  
...recently...  
...C. Wildlife Resources Commission (NCRWC)

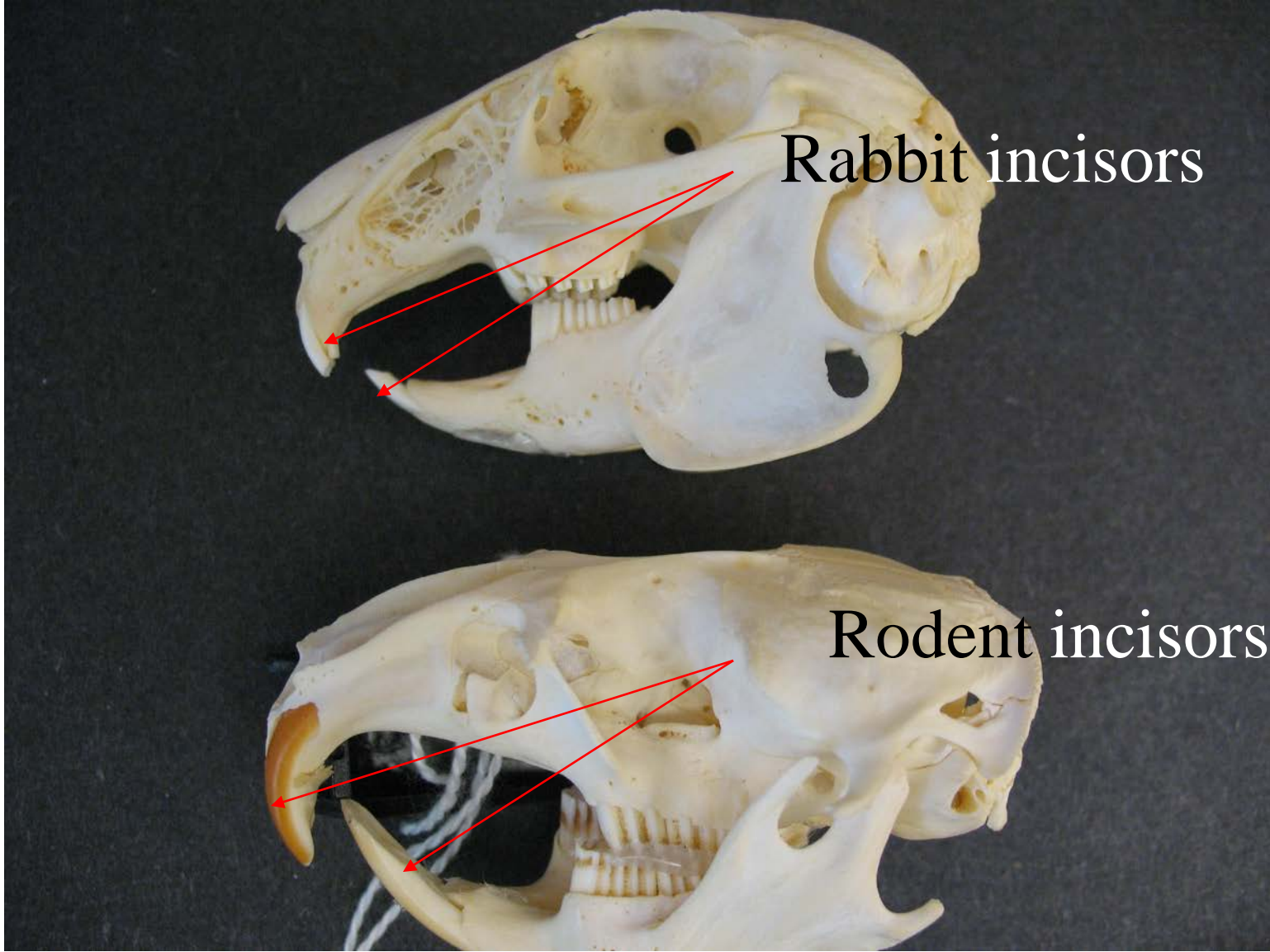


# Rodentia teeth





# Rodentia teeth vs Rabbit teeth



# Beaver

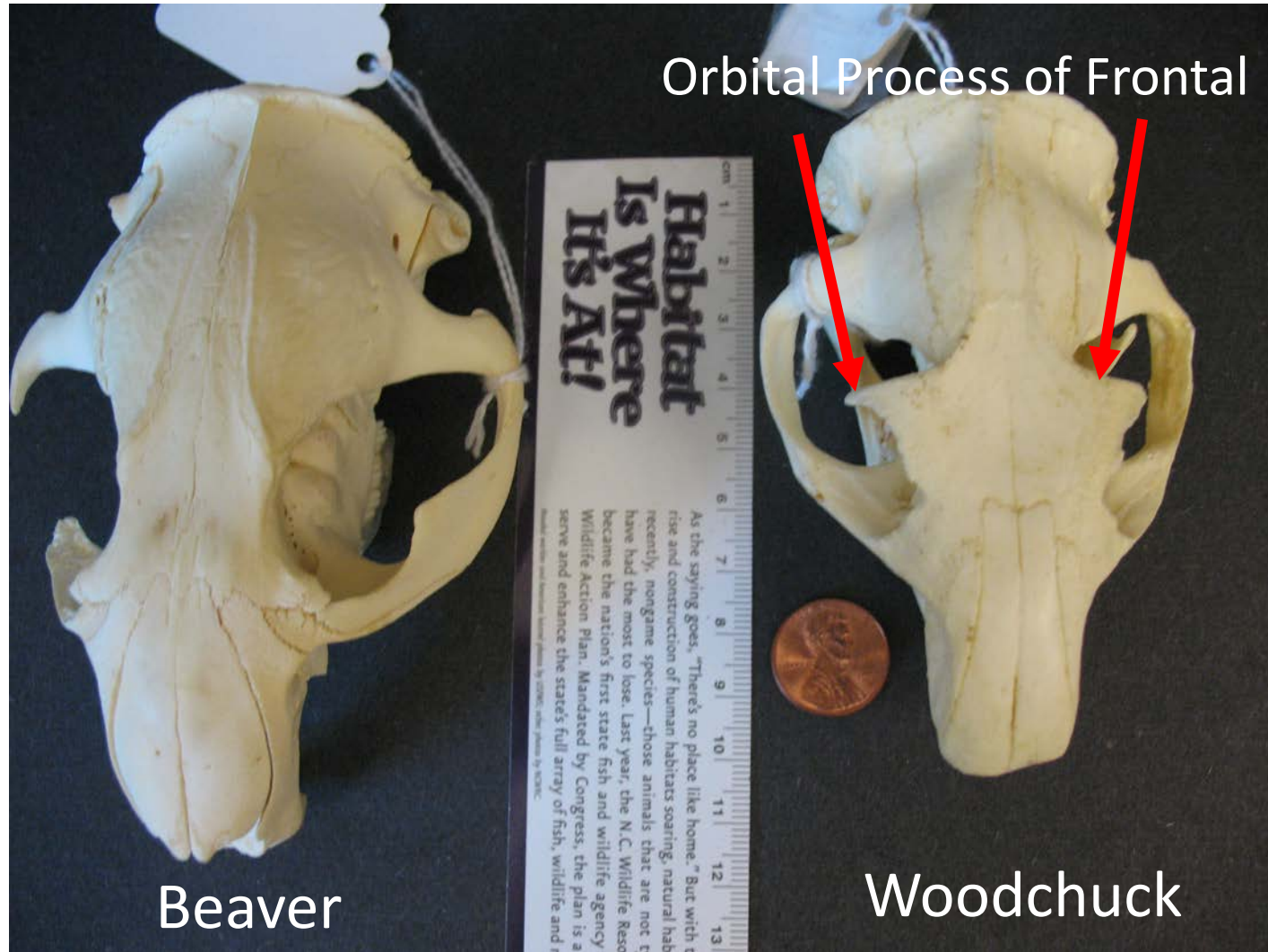


I 1/1, C 0/0, P 1/1, M 3/3





# Woodchuck





# Woodchuck





# Woodchuck



I 1/1, C 0/0, P 2/1, M 3/3



# Muskrat





# Muskrat





# Eastern Gray Squirrel



Squirrel



Muskrat



# Eastern Gray Squirrel



I 1/1, C 0/0, P 2/1, M 3/3

# Chipmunk



I 1/1, C 0/0, P 2/1, M 3/3



Omnivores

# Opossum





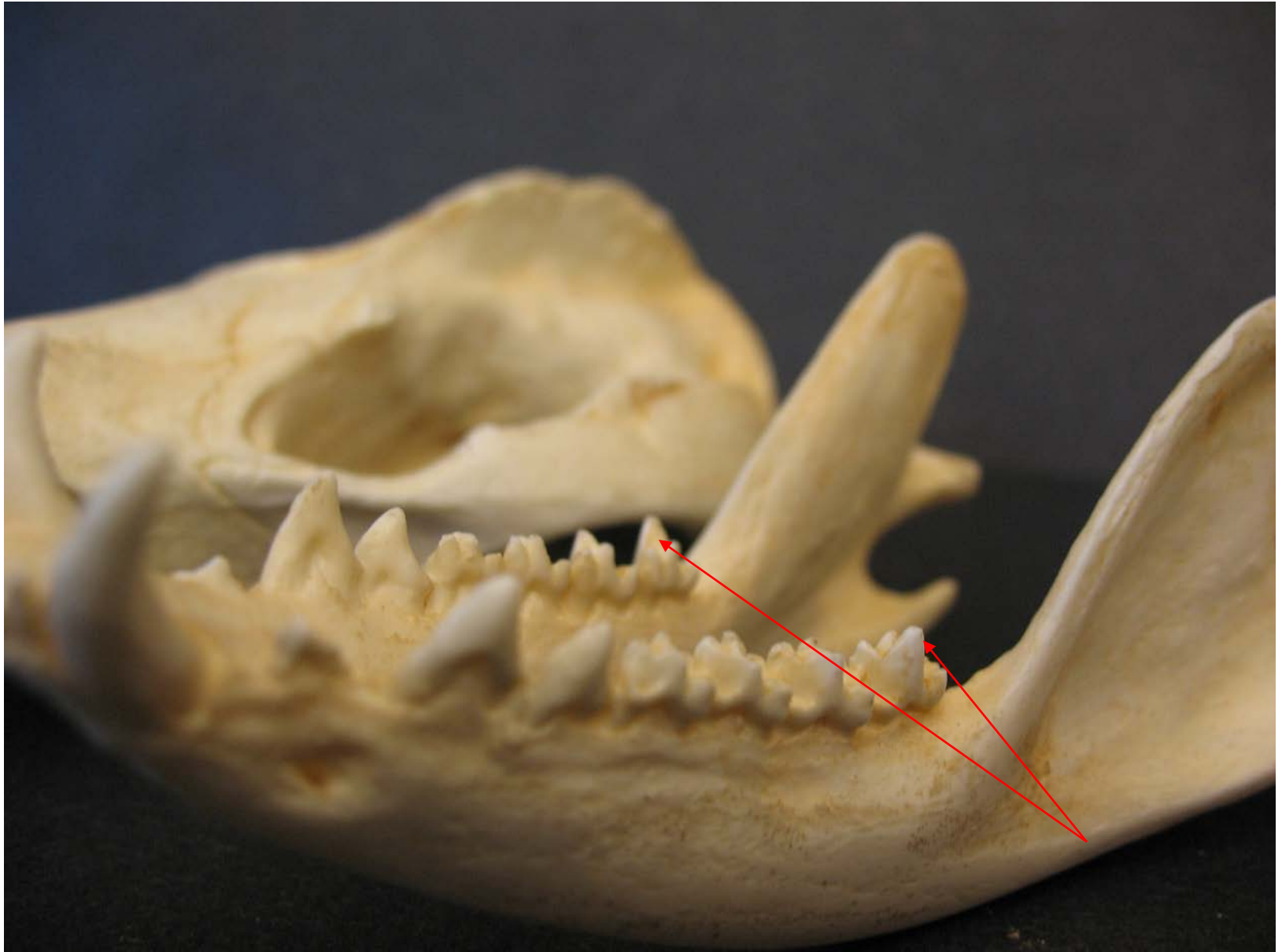
# Opossum

I 5/4, C 1/1, PM 3/3, M 4/4



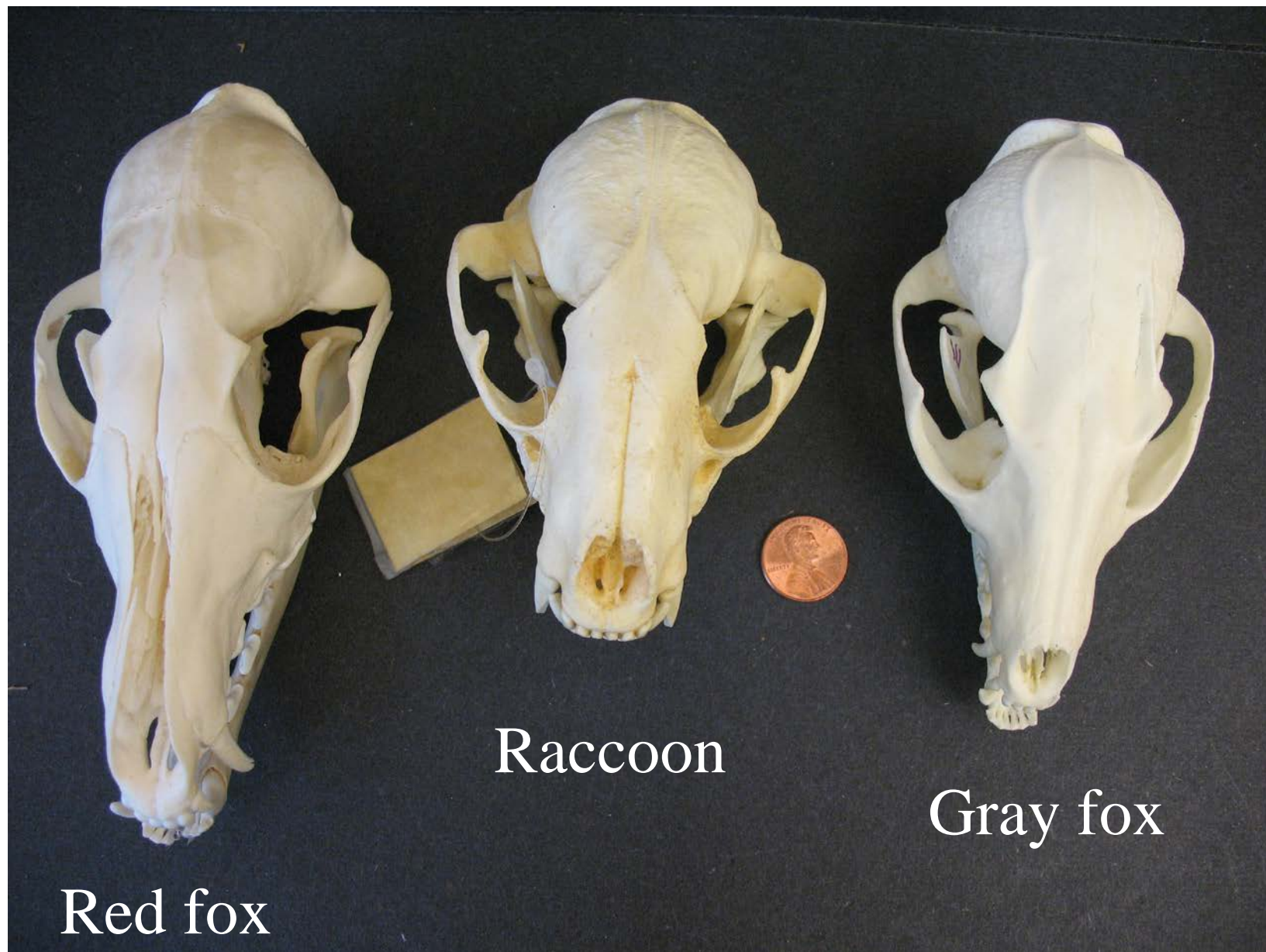


# Opossum





# Raccoon



Red fox

Raccoon

Gray fox



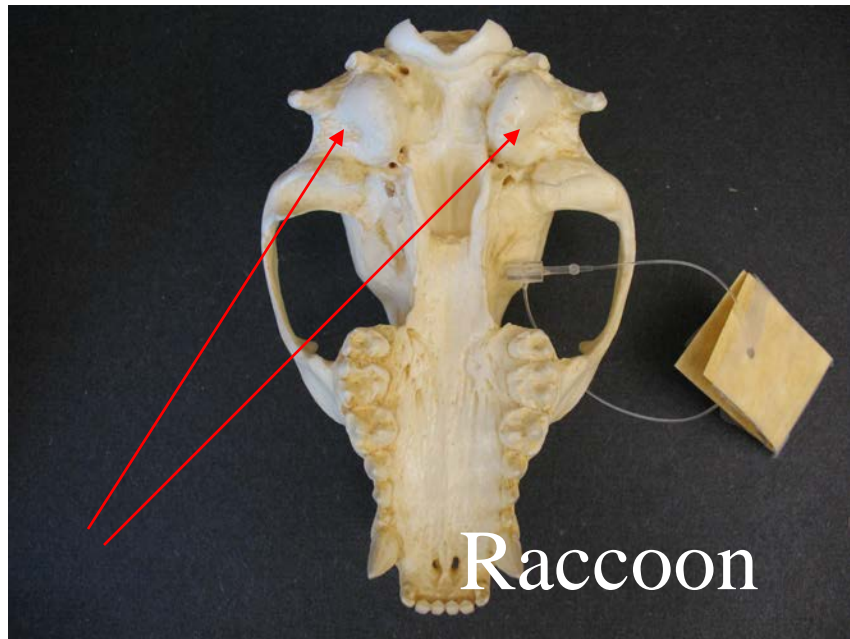
# Raccoon



$I\ 3/3, C\ 1/1, PM\ 3/3, M\ 2/2$



# Raccoon



# Striped skunk





# Black Bear



**Habitat's Where It's At!**

As the saying goes, "There's no place like home." But with the state's population on the rise and construction of human habitats soaring, natural habitats are losing ground. Until recently, nongame species—those animals that are not typically hunted or fished—have had the most to lose. Last year, the N.C. Wildlife Resources Commission (NCWRC) became the nation's first state fish and wildlife agency to receive approval for its Wildlife Action Plan. Mandated by Congress, the plan is a long-term strategy to conserve and enhance the state's full array of fish, wildlife and natural resources. Using this

plan, the NCWRC—and our many conservation partners—can protect priority species and habitats, and pursue conservation actions to ensure they have a place to call home.

The NCWRC is working hard to keep common animals common. We are some of the high priority species targeted by our Wildlife Action Plan. For more information, log onto our Web site at [www.ncwildlife.org](http://www.ncwildlife.org) or call



# Black Bear



# Summary

Think habitat and niche :

Carnivore, herbivore, omnivore?

Observe tooth structure, type, dental formula

Eye placement

Nose length

Auditory bulla

Pay attention to head