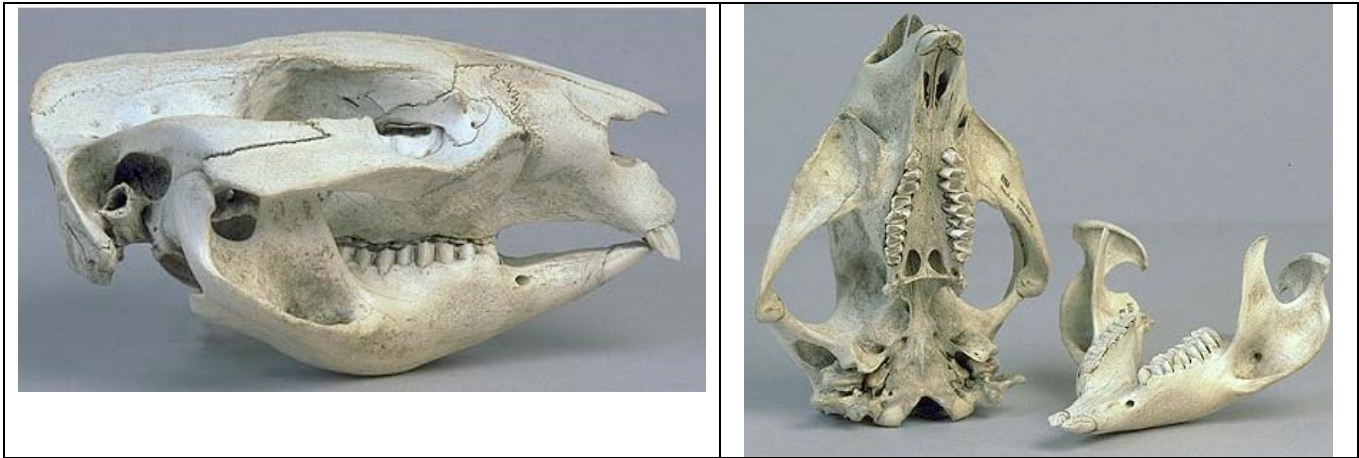


Biology 452 Section AA
Summer 2008
Quiz 6



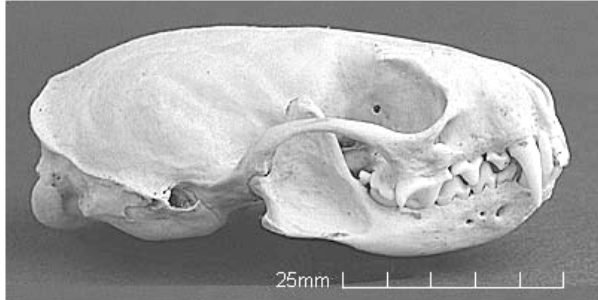
Key out the specimen above using this key (The 2 photos are from the same species):

1. Write out the steps you followed in the key to find your answer: 1B, 2B, 5B, 11A, 12B, 14A

What is the letter of the specimen that you identified? Specimen M

1A	Teeth absent, rows of baleen in palate instead of teeth	Specimen A
1B	Teeth present; no baleen	2
2A	Teeth homodont, not differentiated (not even enlarged canines)	3
2B	Teeth heterodont (differentiated into 2 or more types)	5
3A	Nasal bones telescoped posteriorly; external nares directed vertically upward	4
3B	Nasal bones in normal position over top of rostrum; external nares at tip of rostrum & directed forward	Specimen B
4A	Teeth few or many; teeth usually conical & extend to tip of jaw	Specimen C
4B	Teeth numerous but rarely > 6 in either jaw at 1 time, squarish in shape	Specimen D
5A	No conspicuous gap between the teeth in the front & back of the jaws	6
5B	Wide diastema present between the teeth in the front & back of jaws	11
6A	Canine teeth not larger than any of the teeth preceding them	7
6B	Canine teeth much larger and longer than any of the preceding teeth	8
7A	Teeth pigmented; zygomatic arch absent; tympanum ring like, no tympanic bulla	Specimen E
7B	Teeth unpigmented; zygomatic arch present; tympanic bulla present.	Specimen F
8A	Incisors 5/4, 50 teeth total	Specimen G
8B	Incisors never more than 3/3, teeth never exceeding 44 total	9
9A	Canine teeth triangular in cross-section; lambdoidal and sagittal crests form a high T-shaped ridge; jaw teeth bunodont	Specimen H
9B	Canine teeth round, oval or laterally compressed; occipital crests less prominent & not as T-shaped; jaw teeth vary	10
10A	Cheek teeth usually with high-pointed cusps that are united to form a W-shape; incisors never > 2 above	Specimen I
10B	Cheek teeth shearing, grasping or grinding, never with sharp W-shaped cusps; incisors 1-3 above	Specimen J
11A	Incisors 1/1 or 2/1 (2 nd upper incisor tiny & set behind 1 st); 1 st upper incisor enlarged	12
11B	Incisor number variable to absent; 1 st upper incisor if present, not enlarged	X
12A	Incisors 2/1; maxillary fenestration(s) present	13
12B	Incisors 1/1; no maxillary fenestration	14
13A	Maxilla with one large fenestration; jugal long projecting posteriorly; supraorbital process absent	Specimen K
13B	Maxilla with lattice-like fenestration; jugal short; supraorbital process present	Specimen L
14A	Jugal forms part of mandibular fossa	Specimen M
14B	Jugal does not form part of mandibular fossa	15
15A	Skull flattened, shallow; cheek teeth (except 1 st) rounded with distinctive points; auditory bulla flask-shaped	Specimen N
15B	Skull not noticeably flattened; no distinct labial projections on upper cheek teeth; auditory bulla not flask-shaped	16
16A	Infraorbital canal tiny, angled slit on rostrum; auditory canal of bulla long & directed out & up	Specimen O
16B	No basioccipital pit; auditory canal of bulla short & not directed upward	17
17A	Infraorbital foramen oval, > diameter of foramen magnum; moderately ridged cranium	Specimen P
17B	Infraorbital foramen < diameter of foramen magnum (in most)	18
18A	Mastoid part of bulla distinctly visible lateral to occipital region; infraorbital foramen on lateral surface of rostrum	Specimen Q
18B	Mastoid bone inconspicuous; infraorbital foramen not on lateral surface of rostrum	Specimen R

A (Long-tailed Weasel)



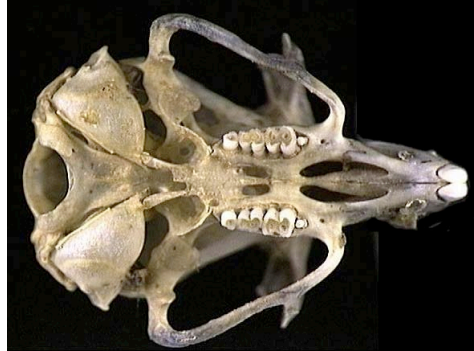
B (Muskrat)



C (Musk Ox)



D (rodent not found in N. America)



2. List the letter(s) of the specimens that are members of the Order Rodentia.

 B & D

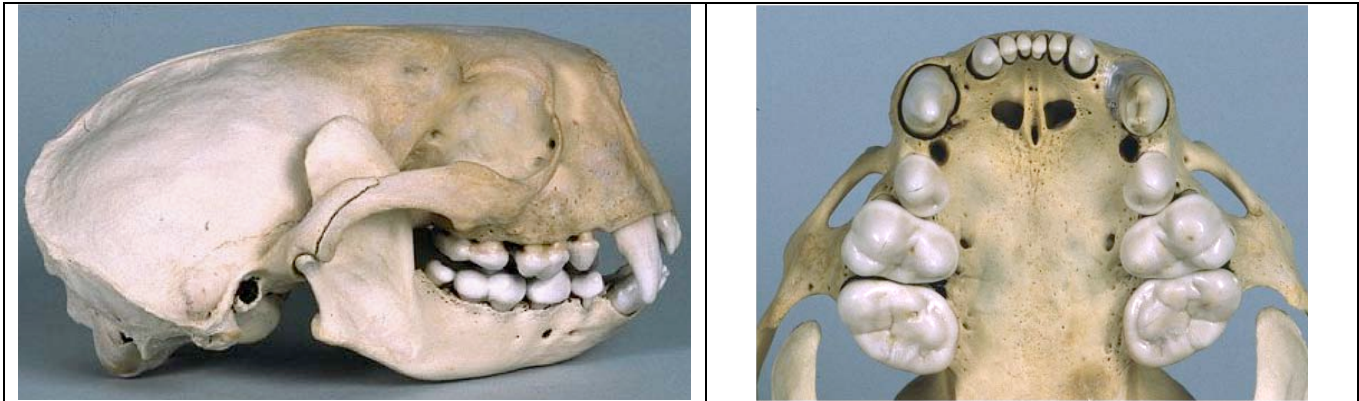
3. Does specimen C have horns or antlers? Say which it is & name the Order to which it belongs.

 Horns, Artiodactyla

4. List the letter(s) of the specimen(s) that have secodont teeth.

 A

Biology 452 Section AB
Summer 2008
Quiz 6

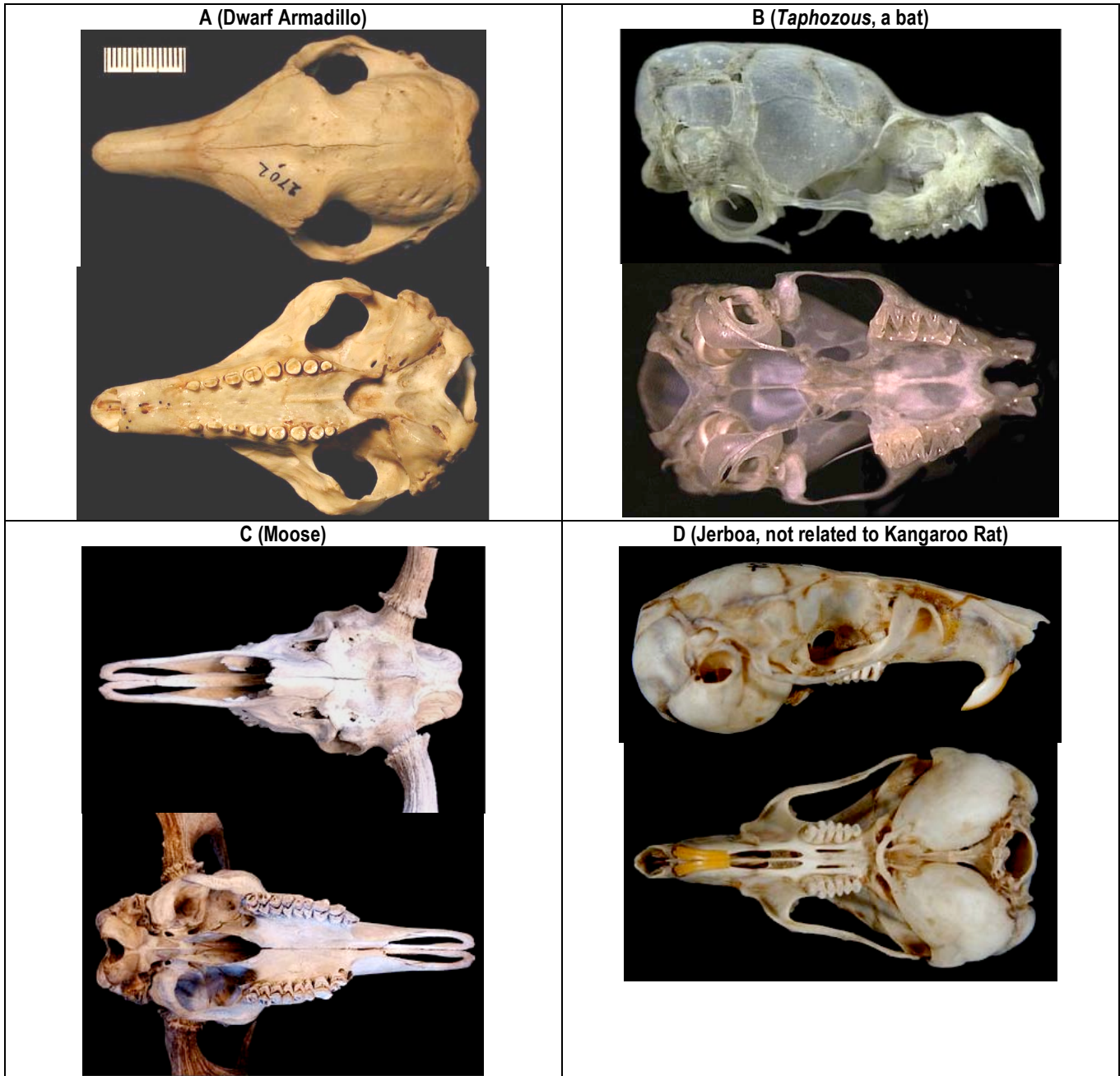


Key out the specimen above using this key (The 2 photos are from the same species):

1. Write out the steps you followed in the key to find your answer: 1B, 2B, 5A, 6B, 8B, 9B, 10B, 11B, 12B, 13B, 15A, 16B, 17B

What is the letter of the specimen that you identified? Specimen P

1A	Teeth absent, rows of baleen in palate instead of teeth	Specimen A
1B	Teeth present; no baleen	2
2A	Teeth homodont, not differentiated (not even enlarged canines)	3
2B	Teeth heterodont (differentiated into 2 or more types)	5
3A	Nasal bones telescoped posteriorly; external nares directed vertically upward	4
3B	Nasal bones in normal position over top of rostrum; external nares at tip of rostrum & directed forward	Specimen B
4A	Teeth few or many; teeth usually conical & extend to tip of jaw	Specimen C
4B	Teeth numerous but rarely > 6 in either jaw at 1 time, square in shape	Specimen D
5A	No conspicuous gap between the teeth in the front & back of the jaws	6
5B	Wide diastema present between the teeth in the front & back of jaws	11
6A	Canine teeth not larger than any of the teeth preceding them	7
6B	Canine teeth much larger and longer than any of the preceding teeth	8
7A	Teeth pigmented; zygomatic arch absent; tympanum ring like, no tympanic bulla	Specimen E
7B	Teeth unpigmented; zygomatic arch present; tympanic bulla present.	Specimen F
8A	Incisors 5/4, 50 teeth total	Specimen G
8B	Incisors never more than 3/3, teeth never exceeding 44 total	9
9A	Canine teeth triangular in cross-section; lambdoidal and sagittal crests form a high T-shaped ridge; jaw teeth bunodont	Specimen H
9B	Canine teeth round, oval or laterally compressed; occipital crests less prominent & not as T-shaped; jaw teeth vary	10
10A	Cheek teeth usually with high-pointed cusps that are united to form a W-shape; incisors never > 2 above	Specimen I
10B	Cheek teeth shearing, grasping or grinding, never with sharp W-shaped cusps; incisors 1-3 above	11
11A	Last molar is greatly reduced, tiny	Specimen J
11B	Last molar is not a tiny remnant	12
12A	Upper incisors are transversely grooved along tips	Specimen K
12B	Upper incisors are not transversely grooved along tips	13
13A	Cheek teeth simple & all very much alike, either simple cones, cones with accessory cusps in a row, or rounded	14
13B	Cheek teeth more variable	15
14A	Upper canines not tusk-like	Specimen L
14B	Upper canines large, tusk-like	Specimen M
15A	Carnassial pair is greatly reduced, not shearing teeth	16
15B	Large carnassial pair of shearing teeth present	18
16A	Long rostrum	Specimen N
16B	Short rostrum	17
17A	Cheek teeth small, with small pointed cusps	Specimen O
17B	Cheek teeth large, heavy, with rounded cusps	Specimen P
18A	Postorbital processes of frontal thin & depressed or concave above; sagittal crest runs in a V-shaped line	Specimen Q
18B	Postorbital processes of frontal thick & convex above; sagittal crest at midline of skull only	Specimen R



2. List the letter(s) of the specimen(s) that is/are member(s) of the Order Cingulata.

_____ **A** _____

3. List the letter(s) of the specimen(s) that have ever-growing incisors.

_____ **D** _____

4. Does specimen C have horns or antlers? Say which it is & name the Order to which it belongs.

_____ **Antlers, Artiodactyla** _____