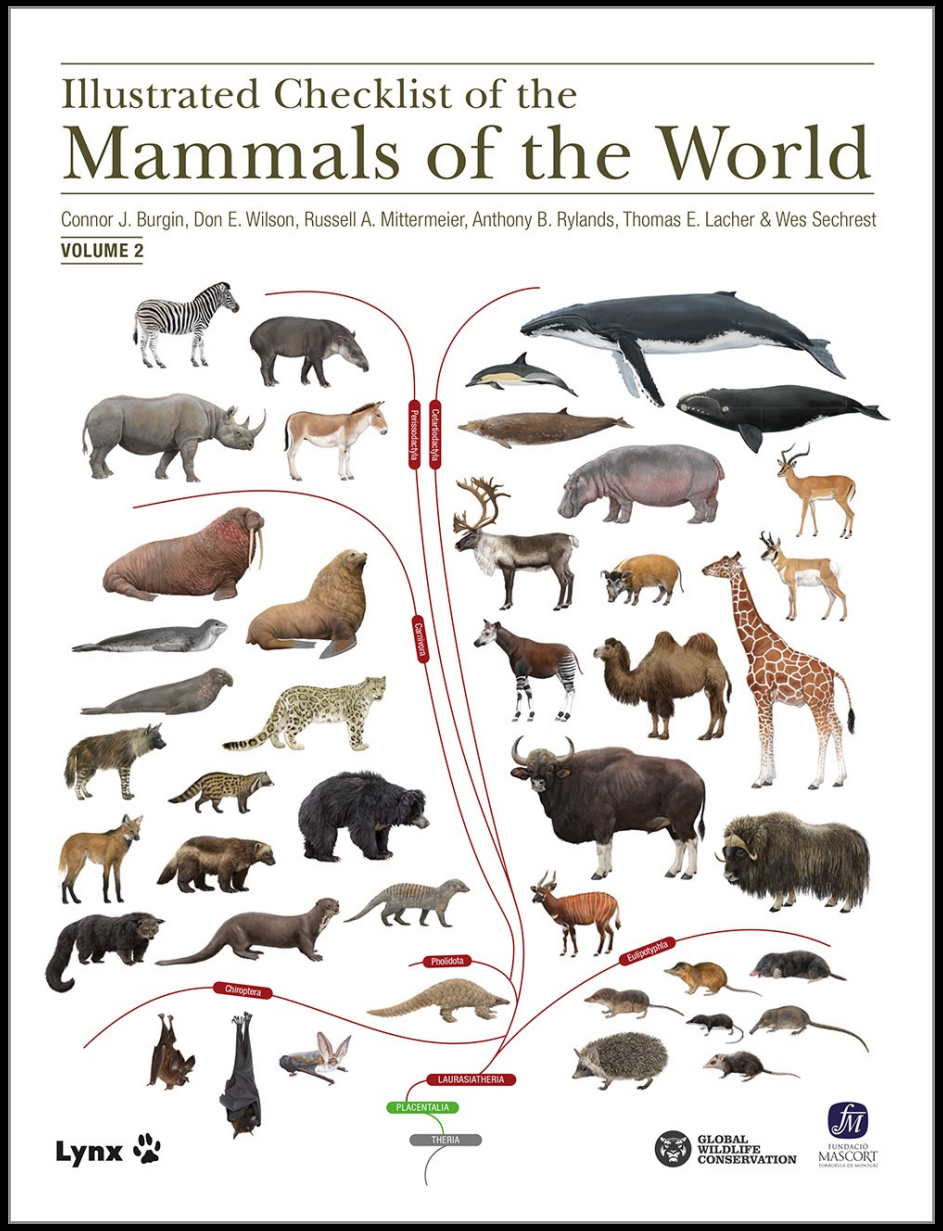
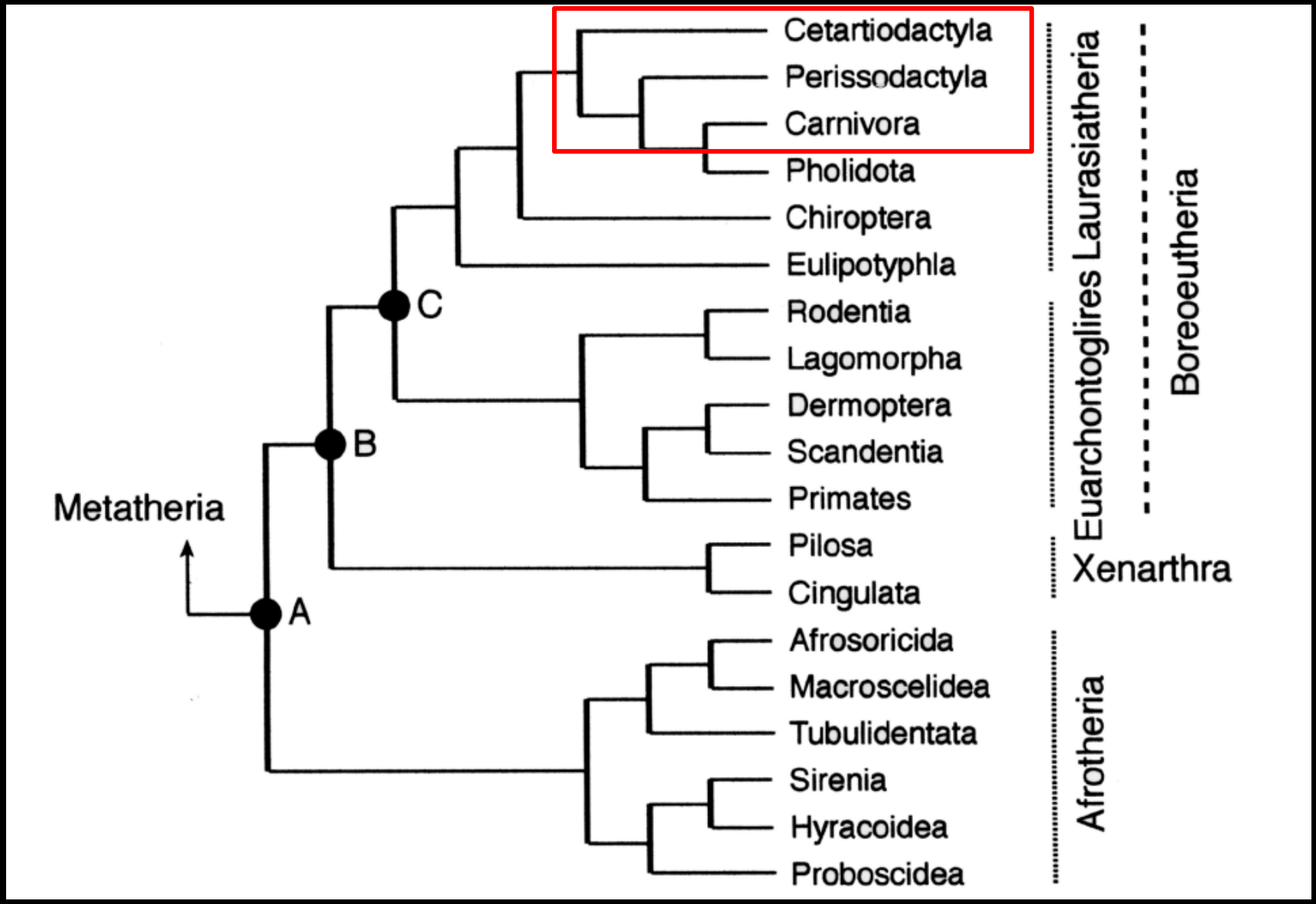
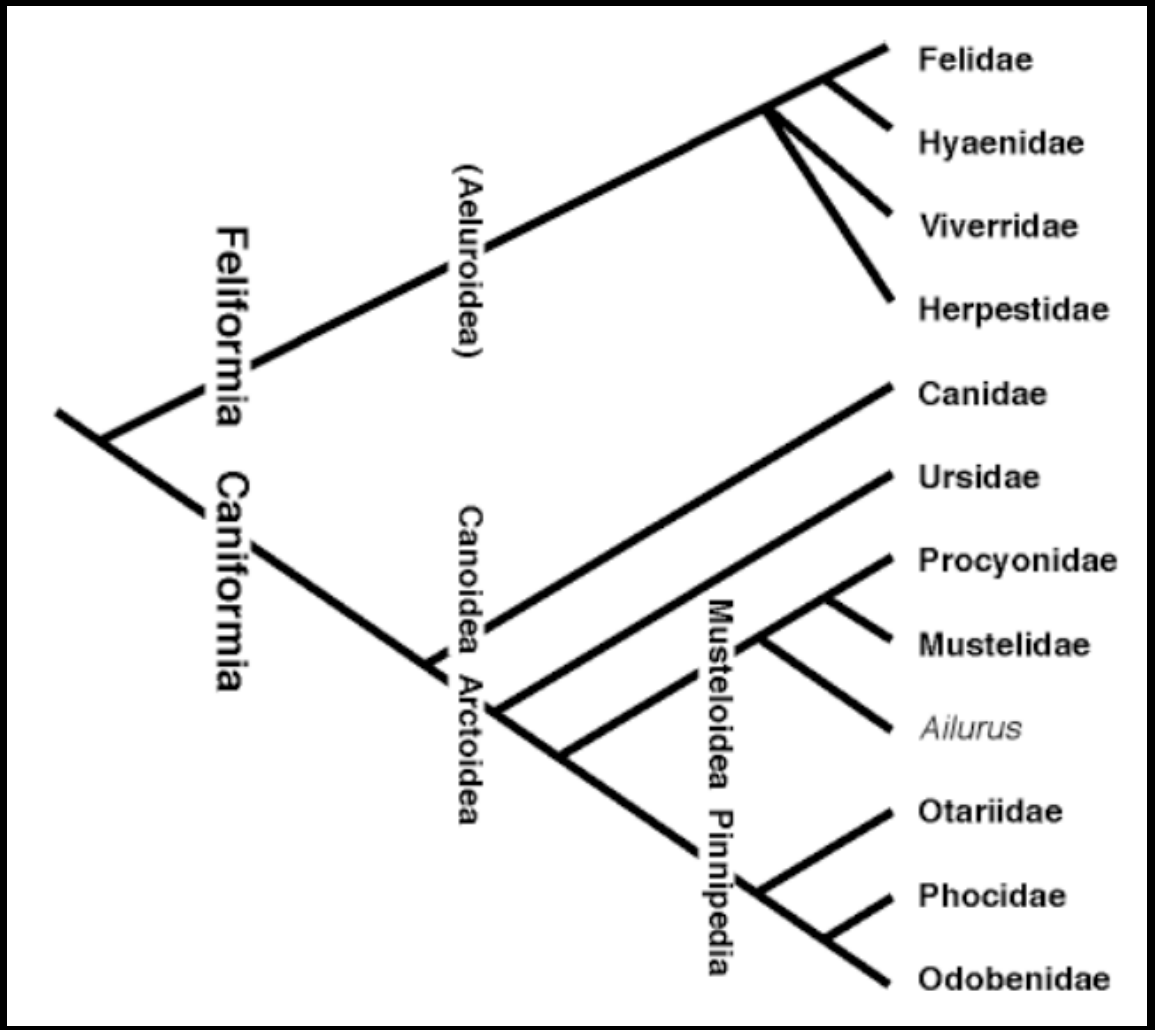


Diversidade e Classificação dos mamíferos recentes


Cetartiodactyla
Perissodactyla
Carnivora
Pholidota
Chiroptera
Eulipotyphla
Rodentia
Lagomorpha
Dermoptera
Scandentia
Primates
Pilosa
Cingulata
Afrosoricida
Macroscelidea
Tubulidentata
Sirenia
Hyracoidea
Proboscidea
C
B
A
Metatheria
Euarchontoglires Laurasiatheria
Boreoeutheria
Xenarthra
Afrotheria

Ordem Carnivora



15 famílias

126 gêneros

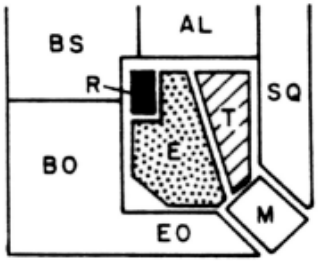
286 espécies

fissiped carnivores:

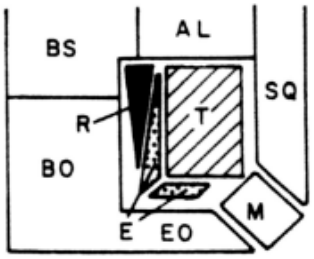
1. canines large, pointed, curved
2. cheekteeth secodont or bunodont, carnassial pair (PM4/m1) present (weakly developed in bears and most procyonids); molars usually with crushing surfaces (except lower first molar in most)
3. incisors 3/3 (3/2 in sea otter, *Enhydra* [Mustelidae]))
4. limbs variable in length but always with claws
5. feet either plantigrade or digitigrade
6. pinna prominent
7. eyes variable in position, usually well separated
8. post-orbital processes on frontal and zygomatic arch usually present
9. lacrimal foramen present

pinniped carnivores:

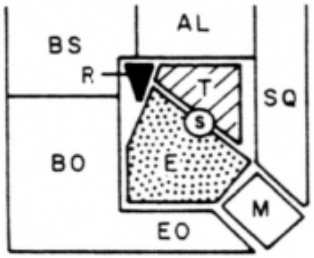
1. canines large (upper canine enormous in walrus), pointed, curved
2. cheekteeth relatively simple, conical or with secondary cusps anterior and posterior to main cusp, without crushing surfaces; no carnassial slicing pair
3. incisors 1-3/0-2
4. forelimbs and hind limbs modified into flippers
5. body streamlined, torpedo-shaped; hair very short
6. pinna reduced or absent
7. eyes positioned forward on face, close together
8. post-orbital process present only in sea lions
9. no lacrimal foramen



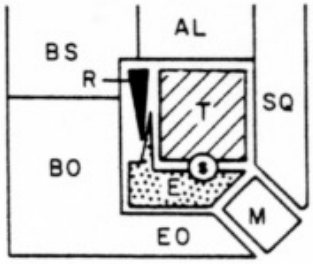
canid bulla



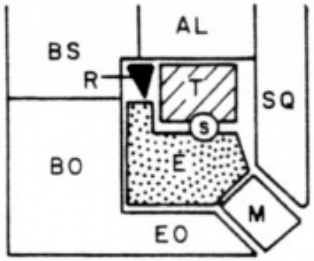
arctoid bulla (bears, weasels, raccoons, pinnipeds)



felid / viverrid bulla



hyaenid bulla



herpestid bulla

AL	alisphenoid
BO	basioccipital
BS	basisphenoid
E	caudal entotympanic
EO	exoccipital
M	mastoid
R	rostral entotympanic
S	septum bulla of aeluroids
SQ	squamosal
T	ectotympanic

ORDEM CARNIVORA

Subordem Feliformia

Família Felidae

general characters:

1. size medium to large (75-370 cm)
2. tail short to long, not bushy
3. foot posture digitigrade

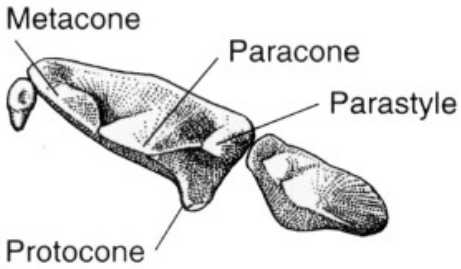
forefoot hindfoot

[note lack of claw marks]

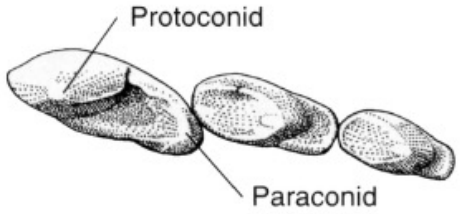
4. digits 5-4
5. claws sharp, strongly curved, retractile (only partly so in the cheetah, *Acinonyx*)
6. skull short, rounded dorsally; rostrum very short, blunt
7. mastoid process subequal in size to paroccipital process
8. division between ectotympanic and entotympanic diagonal; entotympanic dominant
9. no alisphenoid canal
10. carnassials very well developed
11. last upper molar tiny, round

dental formula:

$$\frac{3\ 1\ 2\text{-}3\ 1}{3\ 1\ 2\ 1} = 28\text{-}30$$



upper PM3, PM4, and M1 of a bobcat, *Lynx*

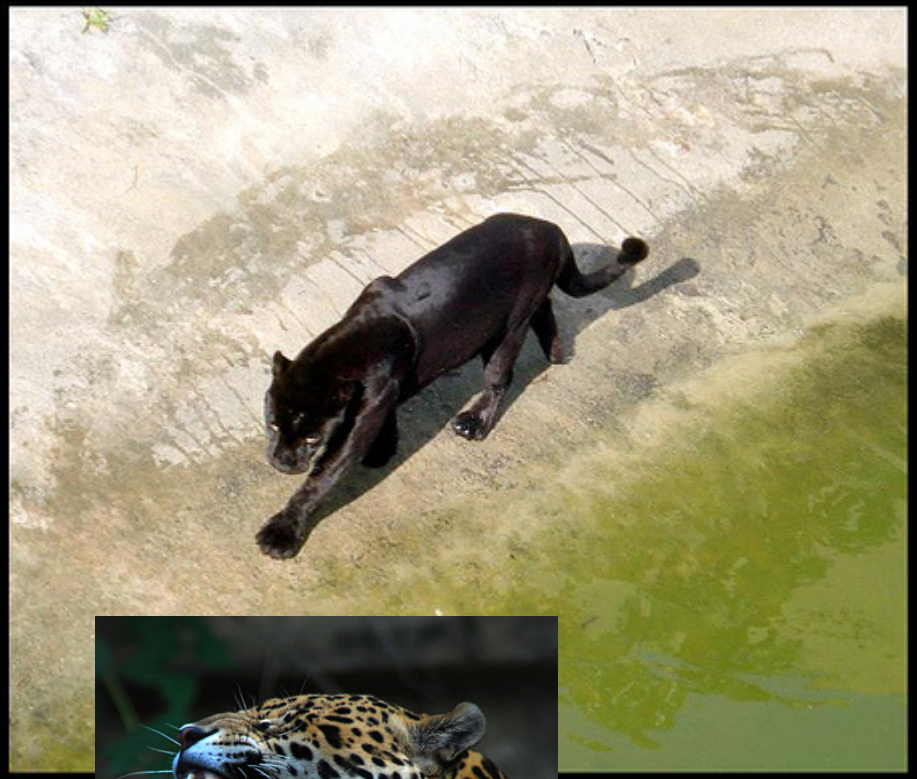


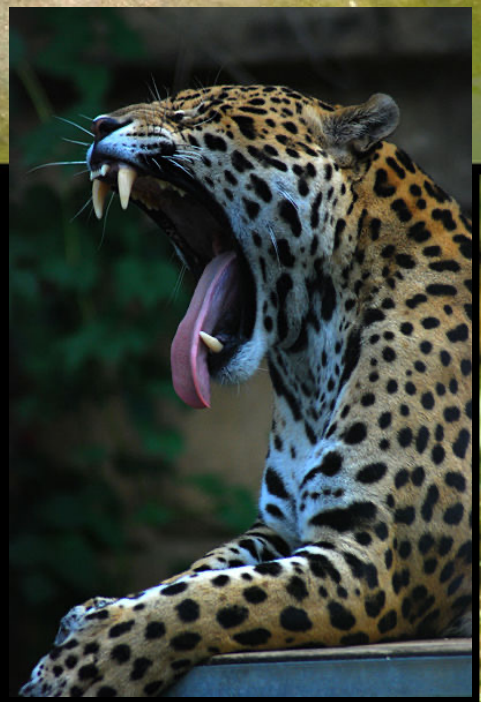
lower pm3, pm4, and m1 of a bobcat, *Lynx*

Wilson & Reeder 1994	Wilson & Reeder 2006	No. Species
Acinonychinae	**Felinae**	
Acinonyx	*Acinonyx* (cheetah)	1
Felinae		
Caracal	*Caracal* (caracal)	1
Catopuma	*Catopuma* (bay cat, Asian golden cat)	2
Felis	*Felis* (domestic cat, wildcat, black-footed cat, Pallas's cat, jungle cat, sand cat)	7
Herpailurus	Subsumed under *Puma*	
Leopardus	*Leopardus* (ocelot, margay, tiger cat, colocolo, Goeffroy's cat, Andean mountain cat)	9
Leptailurus	*Leptailurus* (serval)	1
Lynx	*Lynx* (bobcat, lynx)	4
Oncifelis (Subsumed under *Leopardus*		--
Oreailurus (Subsumed under *Leopardus*		--
Otocolobus (Subsumed under *Felis*		--
	Pardofelis (marbled cat)	1
Prionailurus	*Prionailurus* (leopard cat, flat-headed cat, fishing cat)	5
Profelis	*Profelis* (African golden cat)	1
Puma	*Puma* (mountain lion, jaguarondi)	2
Pantherinae	**Pantherinae**	
Neofelis	*Neofelis* (clouded leopard)	1
Panthera	*Panthera* (lion, tiger, jaguar, leopard)	4
Pardofelis (Transferred to Felinae)		
Uncia	*Uncia* (snow leopard)	1

14 gêneros (3)

40 espécies (12)






Family Felidae
Felis colocolo
K. Kotsinidis
ASM - MIL


♂
153455
♂
123702

ORDEM CARNIVORA

Subordem Caniformia

Família Canidae

general characters:

1. size medium (55-200 cm)
2. tail long, bushy
3. foot posture digitigrade

forefoot hind foot

4. digits 5-4 or 4-4
5. claws well developed, relatively straight, non-retractile
6. skull elongate; rostrum relatively long, narrow
7. mastoid process smaller than paroccipital process
8. alisphenoid canal present
9. diagonal division between ectotympanic and entotympanic, with entotympanic slightly larger
10. carnassials well developed
11. last upper molar relatively large, transversely elongate (peglike in *Speothos*)
12. well developed talonid on first lower molar

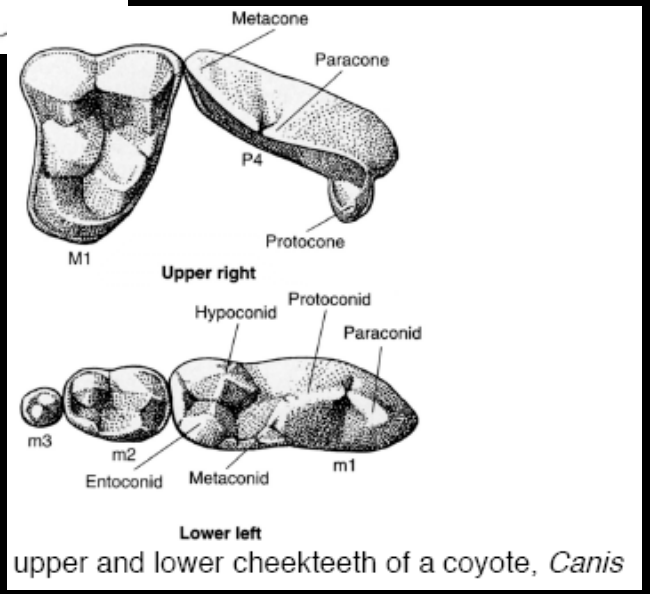
13 gêneros (6)

35 espécies (11)

dental formula:

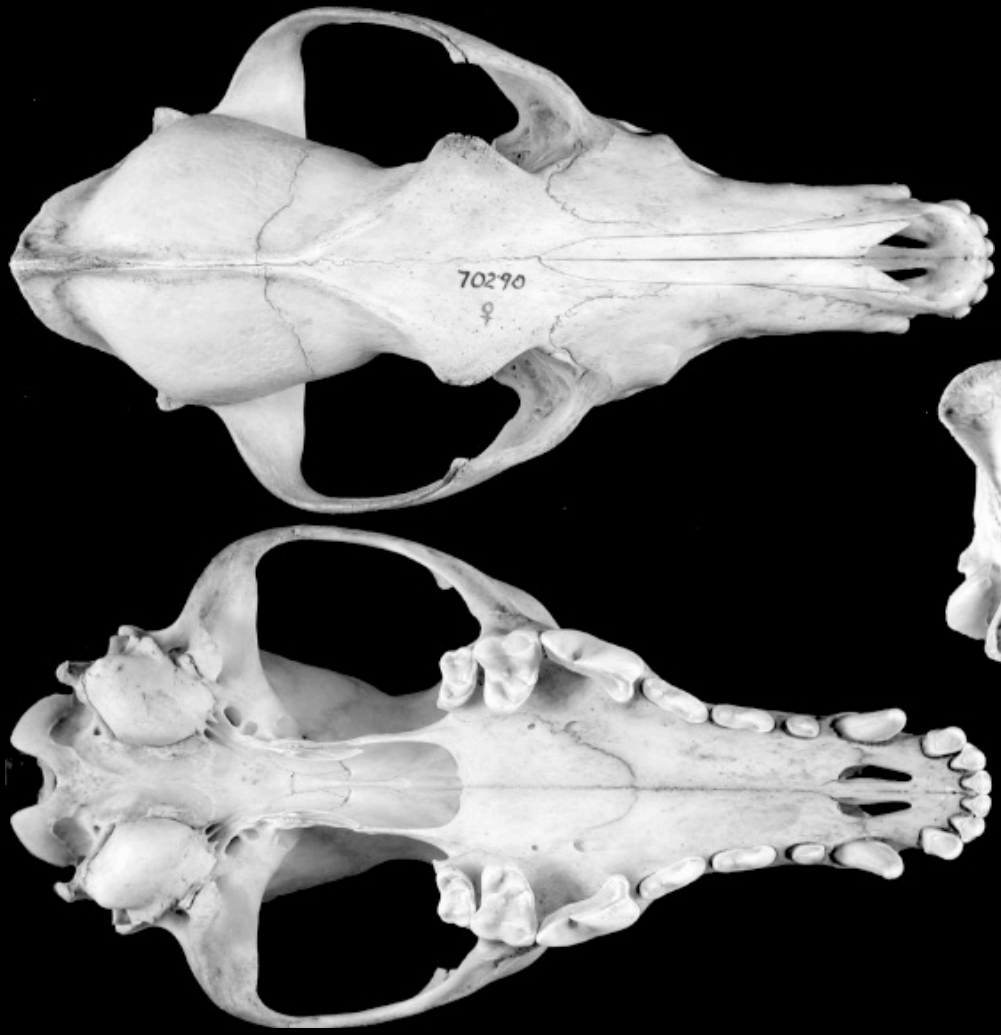
usually

$$\frac{3\ 1\ 4\ 2}{3\ 1\ 4\ 3} = 42$$



upper and lower cheekteeth of a coyote, *Canis*

© MARK JONES


70290
♀


70290 ♀

ORDEM CARNIVORA

Subordem Caniformia

Família Ursidae

general characters:

1. size large (110-260 cm)
2. tail short
3. foot posture plantigrade

forefoot hind foot

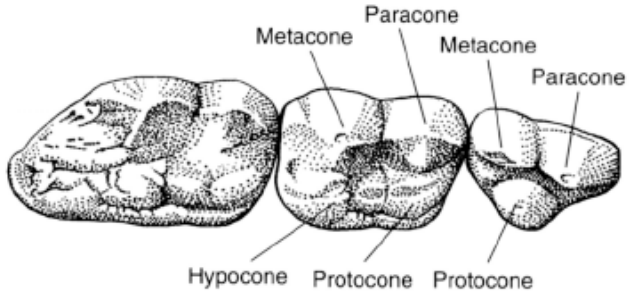
4. digits 5-5
5. claws large, curved, non-retractile
6. skull elongate; rostrum relatively long, narrow
7. mastoid process subequal in size to paroccipital process
8. alisphenoid canal present
9. division between ectotympanic and entotympanic both horizontal and vertical; ectotympanic very large
10. carnassials poorly developed; molars with flat, broad crowns
11. last upper molar very large, elongate anteroposteriorly

5 gêneros (1)

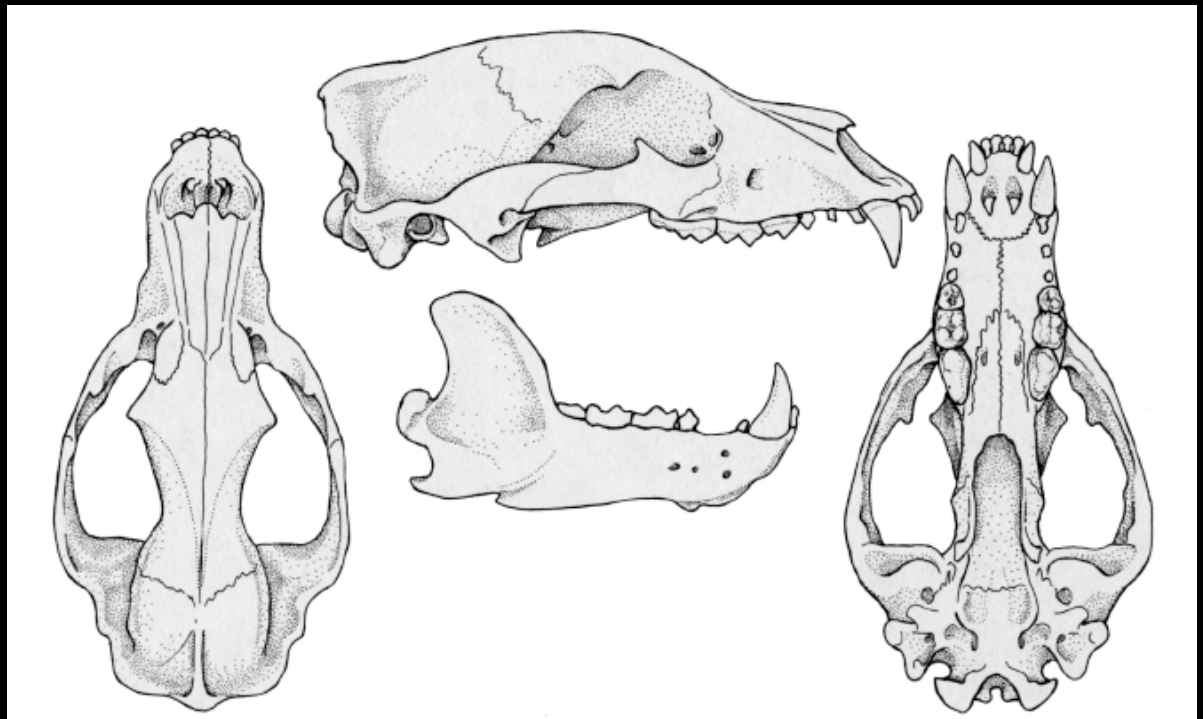
8 espécies (1)

dental formula:

$$\frac{3\ 1\ 4\ 2}{3\ 1\ 4\ 3} = 42$$



cheekteeth of a bear, *Ursus*



skull of a brown bear, genus *Ursus*

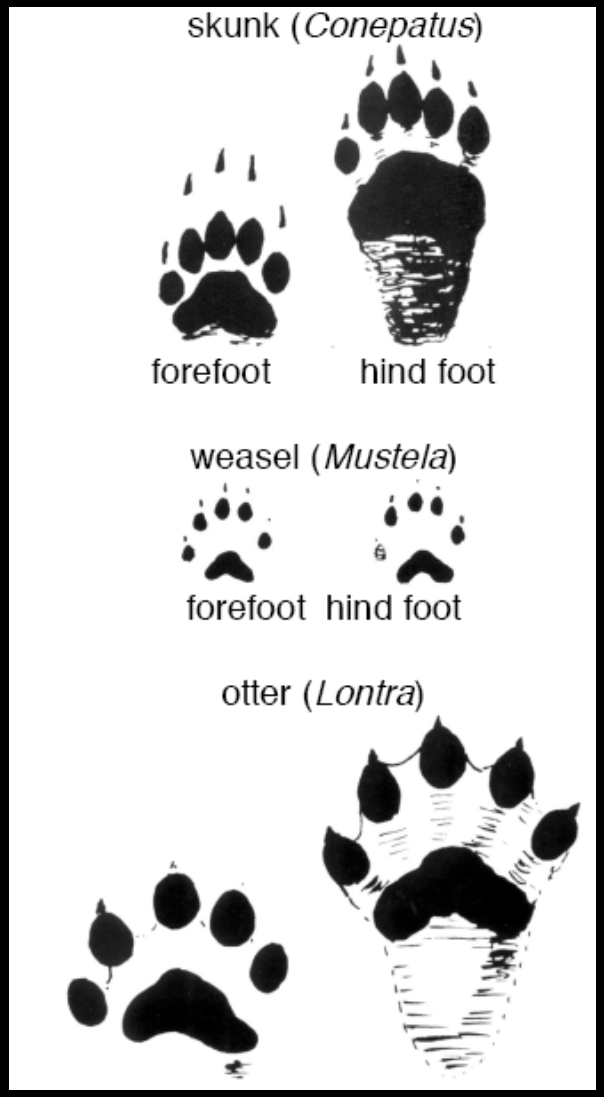
ORDEM CARNIVORA

Subordem Caniformia

Família Mustelidae

general characters:

1. postmandibular process often prominent and curved around mandibular fossa, often locking lower jaw into place
2. size small to medium (15-155 cm)
3. tail variable, but usually long
4. foot posture plantigrade (badgers, skunks) to digitigrade (weasels); partially webbed in otters



5. digits 5-5
6. claws well developed, semi-retractile

7. skull blocky, robust, often flattened; rostrum short
8. mastoid process absent or smaller than paroccipital process
9. no alisphenoid canal
10. both horizontal and vertical division between enlarged ectotympanic and small entotympanic
11. carnassials usually well developed
12. upper molar relatively large, usually dumbbell-shaped or squarish

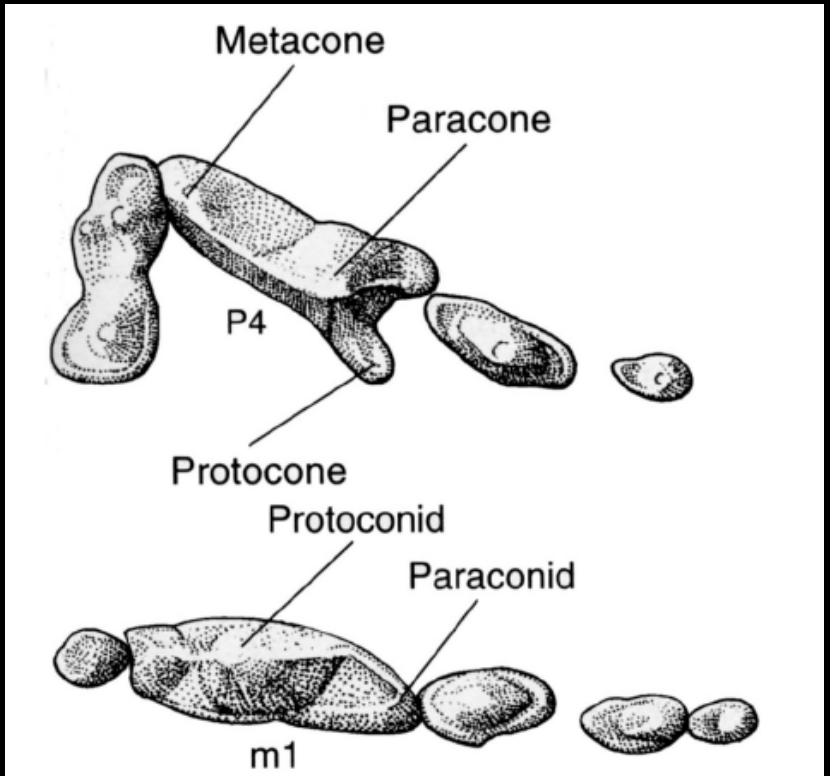
dental formula:

usually

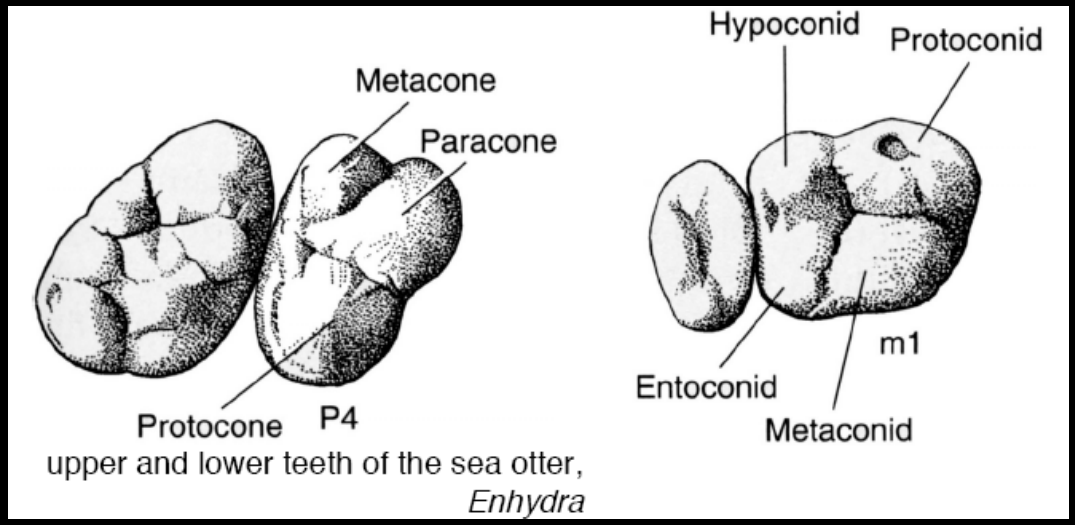
$$\frac{3\ 1\ 3\ 1}{3\ 1\ 3\ 2} = 34$$

may be as variable as:

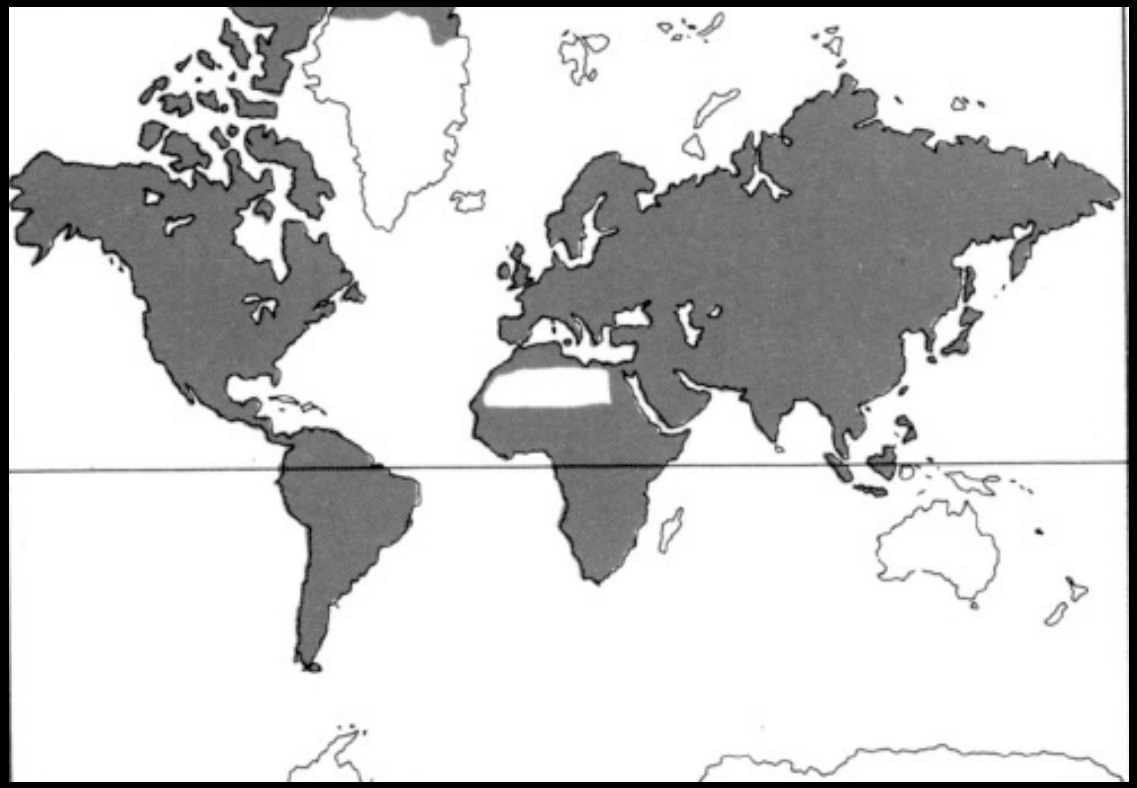
$$\frac{3\ 1\ 2\text{-}4\ 1}{2\text{-}3\ 1\ 2\text{-}4\ 1\text{-}2} = 30\text{-}38$$



upper and lower cheekteeth of a weasel, *Mustela*



upper and lower teeth of the sea otter, *Enhydra*



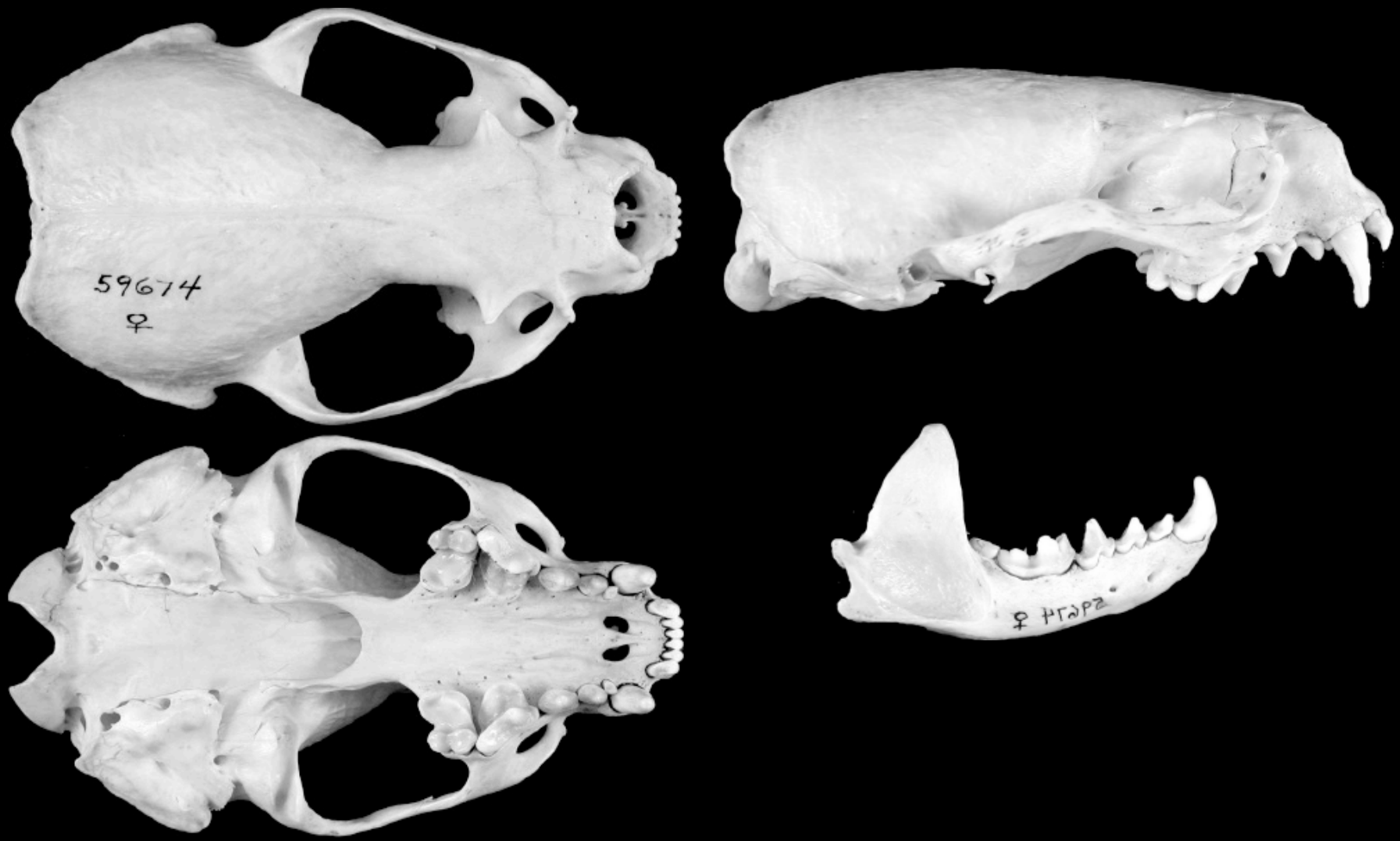
5 subfamílias

22 gêneros (6)

59 espécies (11)


Pteronura brasiliensis @ Nicole Duplaix


114508
♂
114208
♀


59674
♀

Ordem Carnivora

Subordem Caniformia

Família Mephitidae

general characters:

1. usually distinctively marked with black & white aposematic patterns
2. postmandibular process often prominent and curved around mandibular fossa, often locking lower jaw into place
3. size small to medium (15-155 cm)
4. tail variable, but usually long
5. foot plantigrade digits 5-5
6. claws well developed
7. skull somewhat delicate, rounded; rostrum usu. moderately long
8. palate usu. extends to ca. posterior edge of toothrow (extends further posterior in mustelids)

front (l) and rear (r) tracks of *Conepatus*

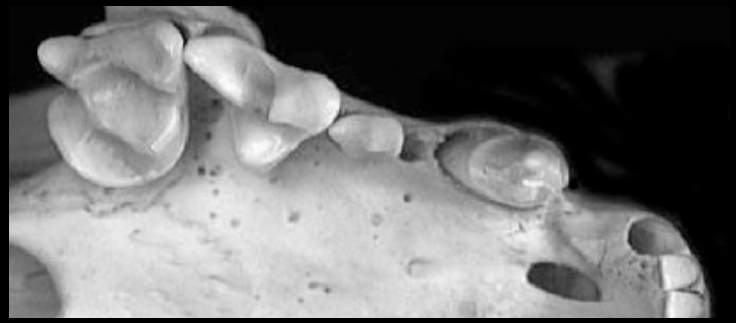
9. mastoid process absent or smaller than paroccipital process
10. no alisphenoid canal
11. both horizontal and vertical division between enlarged ectotympanic and small entotympanic
12. auditory bulla smaller than in mustelids, and not oriented anteroposteriorly
13. carnassials usually well developed
14. last upper molar notably square, not dumbbell-shaped

dental formula:

$$\frac{3\ 1\ 4\ 2}{3\ 1\ 4\ 3} = 42$$

4 gêneros (1)

12 espécies (3)



Ordem Carnivora

Subordem Caniformia

Família Procyonidae

general characters:

1. size medium (60-135 cm)
2. tail long, usually ringed with alternating black- and light-colored bands
3. foot posture plantigrade, or semi-plantigrade

forefoot hind foot

4. digits 5-5
5. claws prominent, non-retractile
6. skull robust, usually elongate, rostrum not particularly narrow
7. mastoid process equal to or larger in size than paroccipital process
8. no alisphenoid canal (except in *Ailurus*)

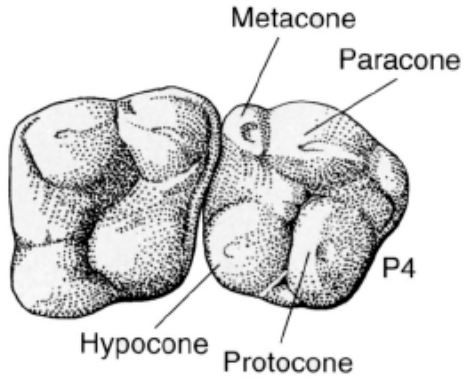
9. horizontal and vertical division between enlarged ectotympanic and small entotympanic
10. carnassials poorly developed (except *Bassariscus*), upper molars usually with hypocone
11. last upper molar relatively large, rounded

dental formula:

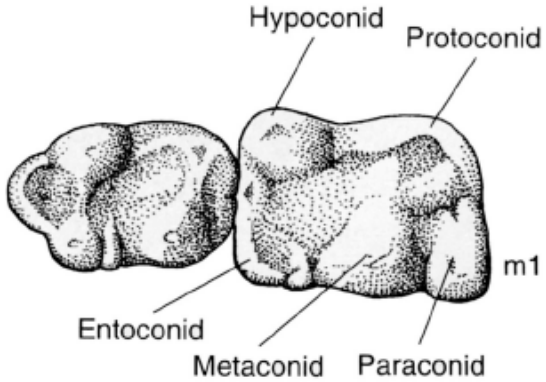
$$\frac{3\ 1\ 3\text{-}4\ 2}{3\ 1\ 3\text{-}4\ 2} = 36\text{-}40$$

6 gêneros (5)

14 espécies (8)



upper right PM4 and M1 of a raccoon

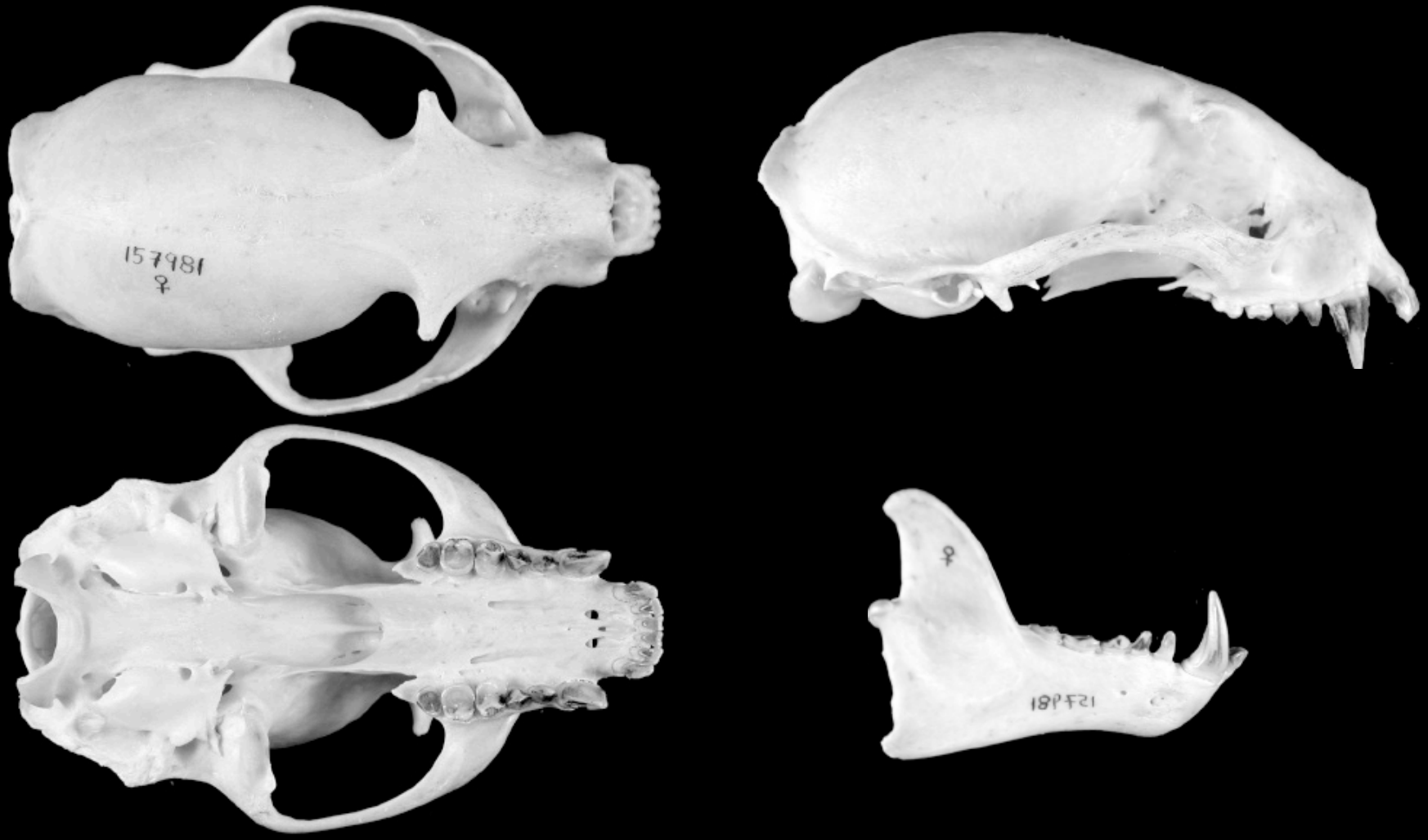


lower left m1 and m2 of a raccoon

132093
♂


MCH


125822


157981
♀
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ORDEM PERISSODACTYLA

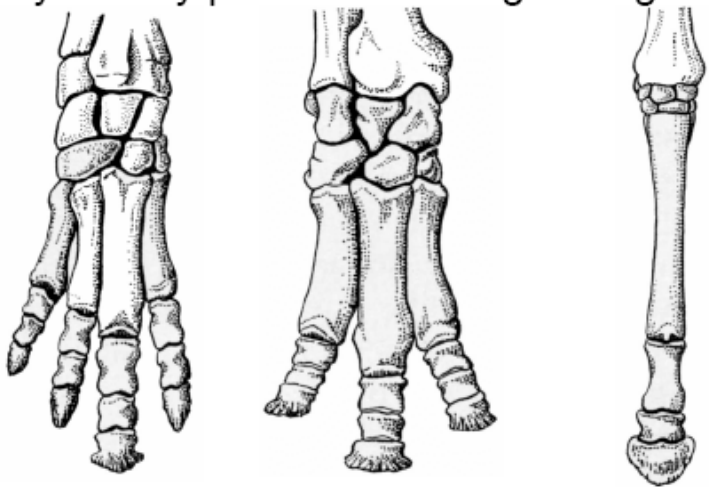
3 famílias

6 gêneros (1)

17 espécies (2-3)

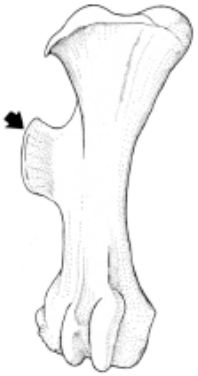
diagnostic characters:

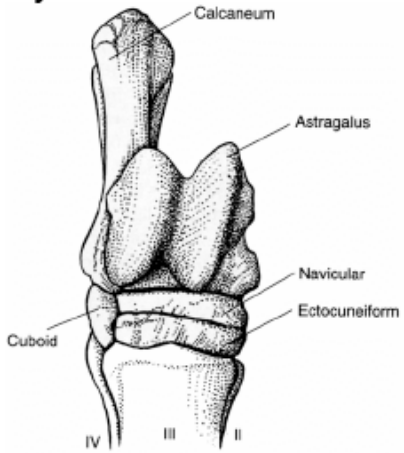
1. foot posture unguligrade
2. **mesaxonic** – middle (third) digit of both fore and hind feet larger than other digits (axis of symmetry passes down leg through third digit)



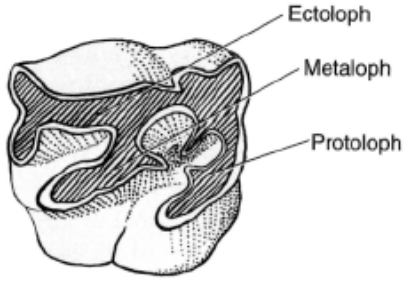
front feet of (left to right): tapir, rhinoceros, horse

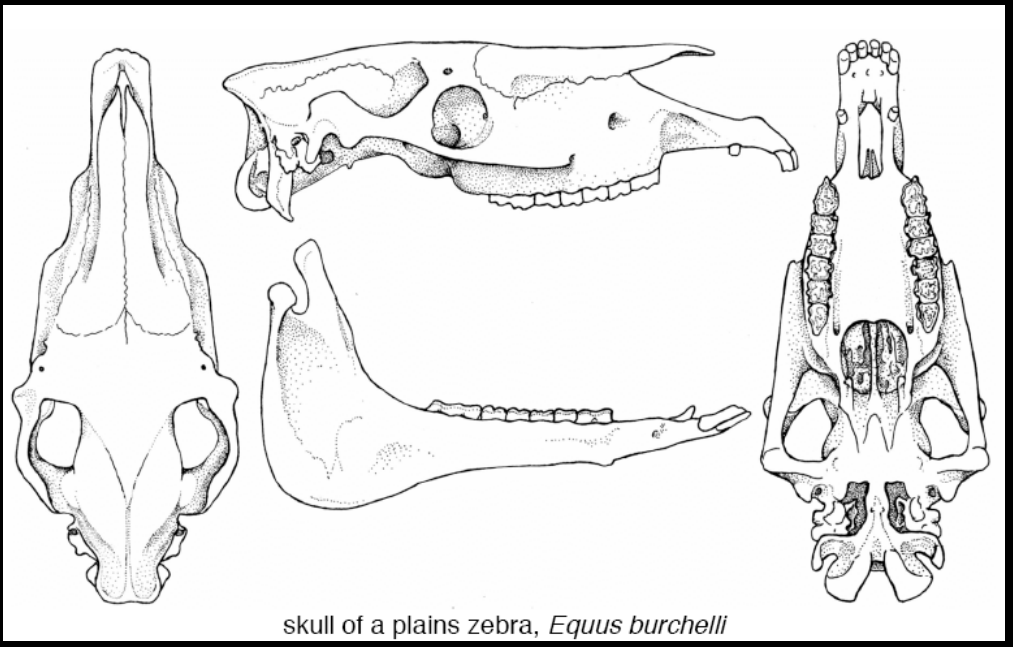
3. digits usually 1-1 or 3-3 (4-3 in tapirs, but 4th digit on forefoot is smaller than other three)
4. femur with a third trochanter (arrow)
5. calcaneus not articulating with fibula
6. astragalus with pulley-like surface above, flattened below



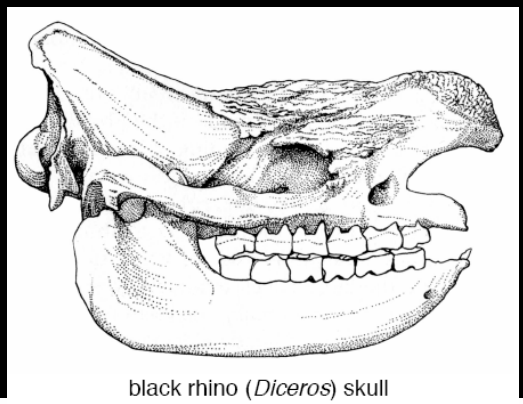


7. alisphenoid canal present
8. nasals wide posteriorly
9. cheekteeth lophodont, π-shaped with longitudinal ectoloph and transverse protoloph and metaloph

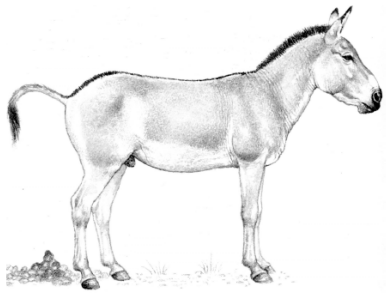




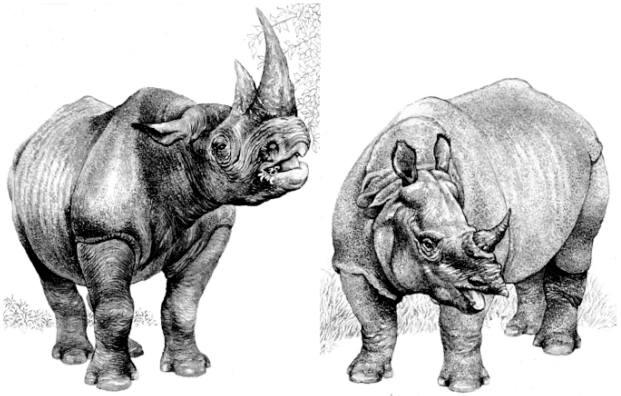
skull of a plains zebra, *Equus burchelli*



black rhino (*Diceros*) skull

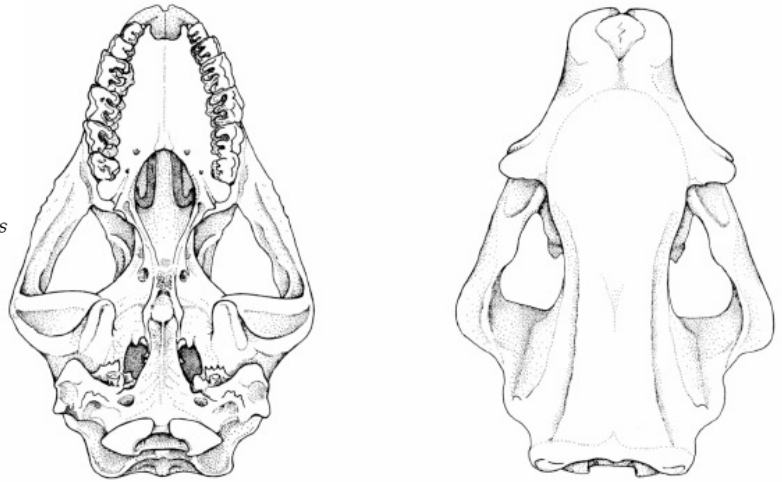


onager, or Asian ass, *Equus hemionus*



left – black rhino, *Diceros bicornis*; right – Javan rhino, *Rhinoceros sondaiacus*

Grevy's zebra, *Equus grevyi*



skull of a white rhino, *Ceratotherium*

ORDEM PERISSODACTYLA

Família Tapiridae

diagnostic characters:

1. **forefoot with four digits, hindfoot with three**
2. **snout modified into movable proboscis**
3. **nasal opening of skull very large and recessed**
4. body heavy, with short stout legs
5. skin smooth, sparsely haired
6. tail short
7. occipital crest small or absent
8. nasal short, triangular
9. cheekteeth not homodont (first premolars do not closely resemble other premolars and molars)
10. lophodont; ectoloph, protoloph, and metaloph with steep sides, providing primarily a crushing bite

dental formula:

$$\frac{3\ 1\ 4\ 3}{3\ 1\ 4\ 3} = 44$$

Ordem Artiodactyla

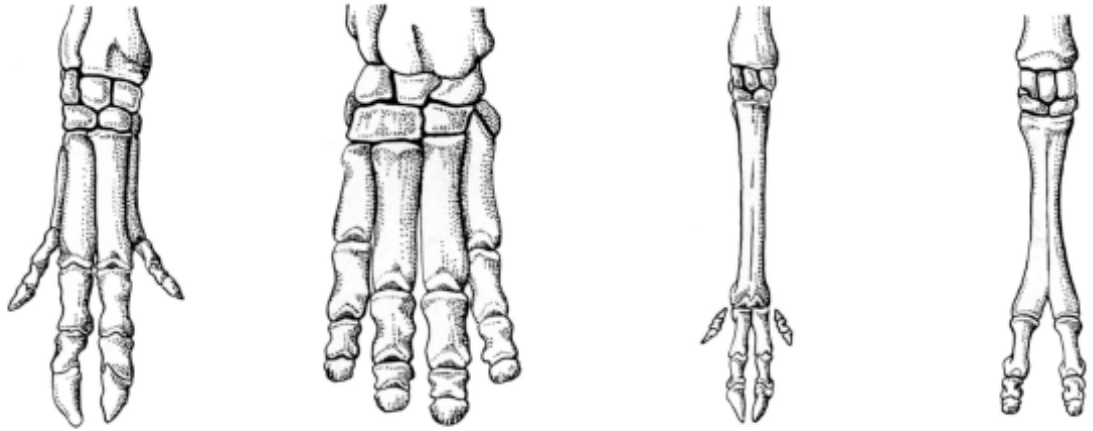
10 famílias (3)

89 gêneros (11)

240 espécies (20)

diagnostic characters:

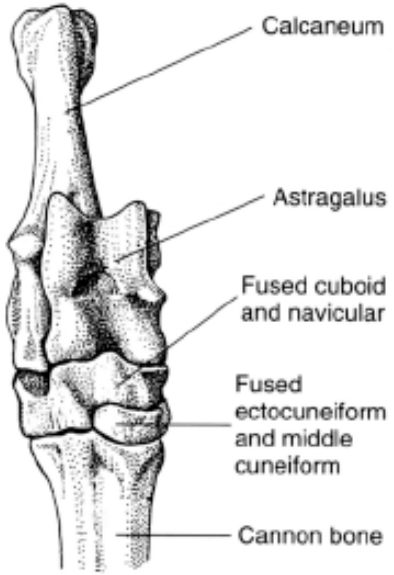
1. **foot posture digitigrade (camels) or unguligrade**
2. **paraxonic – two principle digits present, nearly equal in size, not symmetrical in shape (axis of symmetry passes between third and fourth digits)**



right front feet of a pig (*Sus*), hippo (*Hippopotamus*), elk (*Cervus*), and camel (*Camelus*)

3. two or four digits on all feet (three toes on hindfoot in peccaries)
4. femur without a third trochanter

5. calcaneus articulating with fibula
6. astragalus with pulley-like surface above and below

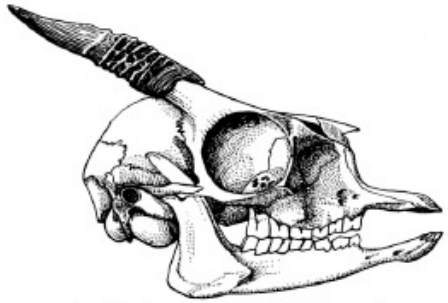


7. no alisphenoid canal
8. nasals usually not wide posteriorly
9. cheekteeth either bunodont (pigs, peccaries, hippos) or selenodont

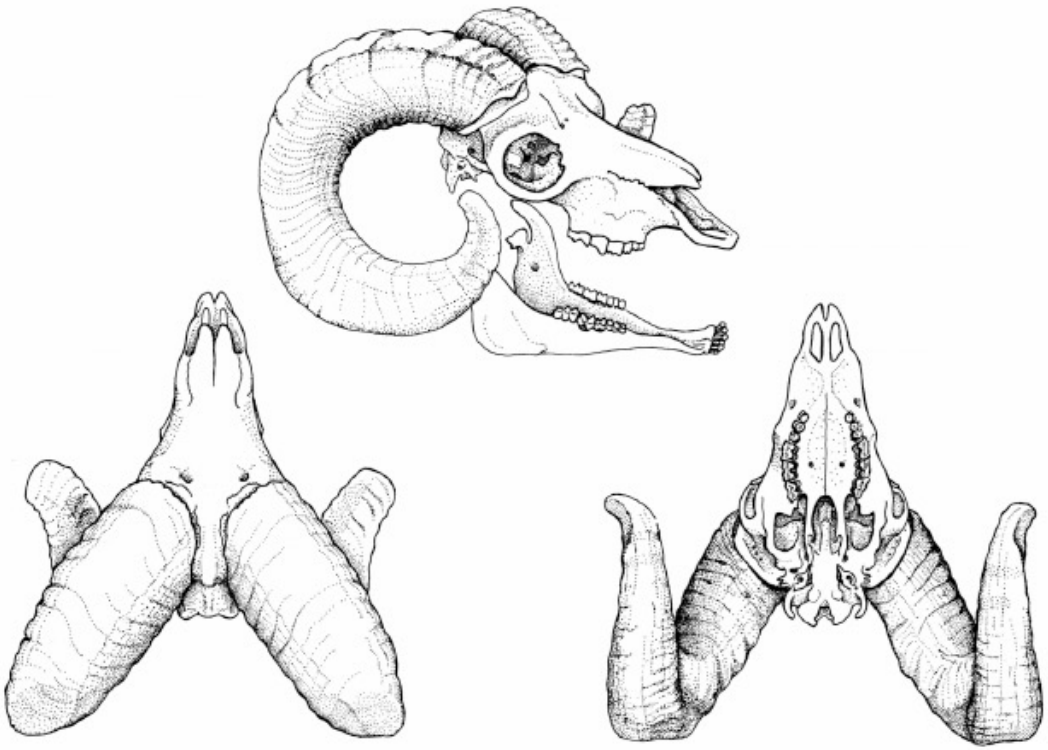
bunodont teeth of a pig, *Sus* (left); selenodont teeth of a deer, *Odocoileus* (right)

Order **Artiodactyla**

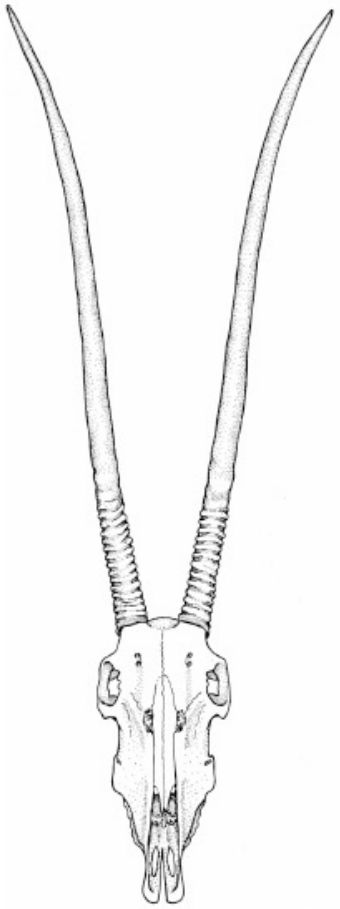
- Suborder **Suiformes**
  - Family Suidae - pigs
  - Family Tayassuidae - peccaries
  - Family Hippopotamidae - hippos
- Suborder **Tylopoda**
  - Family Camelidae - camels, vicuña, guanaco, llama, alpaca
- Suborder **Ruminantia**
  - Infraorder **Tragulina**
    - Family Tragulidae - chevrotain, mouse deer
  - Infraorder **Pecora**
    - Superfamily Cervoidea
      - Family Moschidae - musk deer
      - Family Cervidae - deer, elk, caribou, moose, reindeer
      - Family Antilocapridae - pronghorn
    - Superfamily Giraffoidea
      - Family Giraffidae - giraffes
    - Superfamily Bovoidea
      - Family Bovidae - bison, muskox, goats, sheep, antelope, cows



skull of a dik-dik (*Madoqua*)

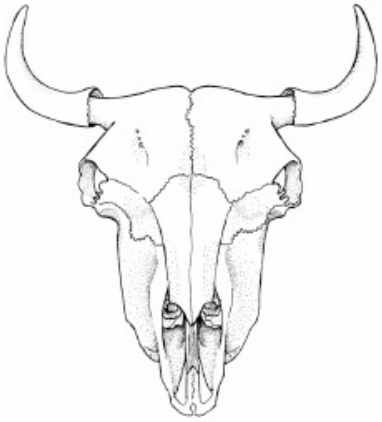


skull of a bighorn sheep, *Ovis canadensis*



skull of an oryx (*Oryx*)

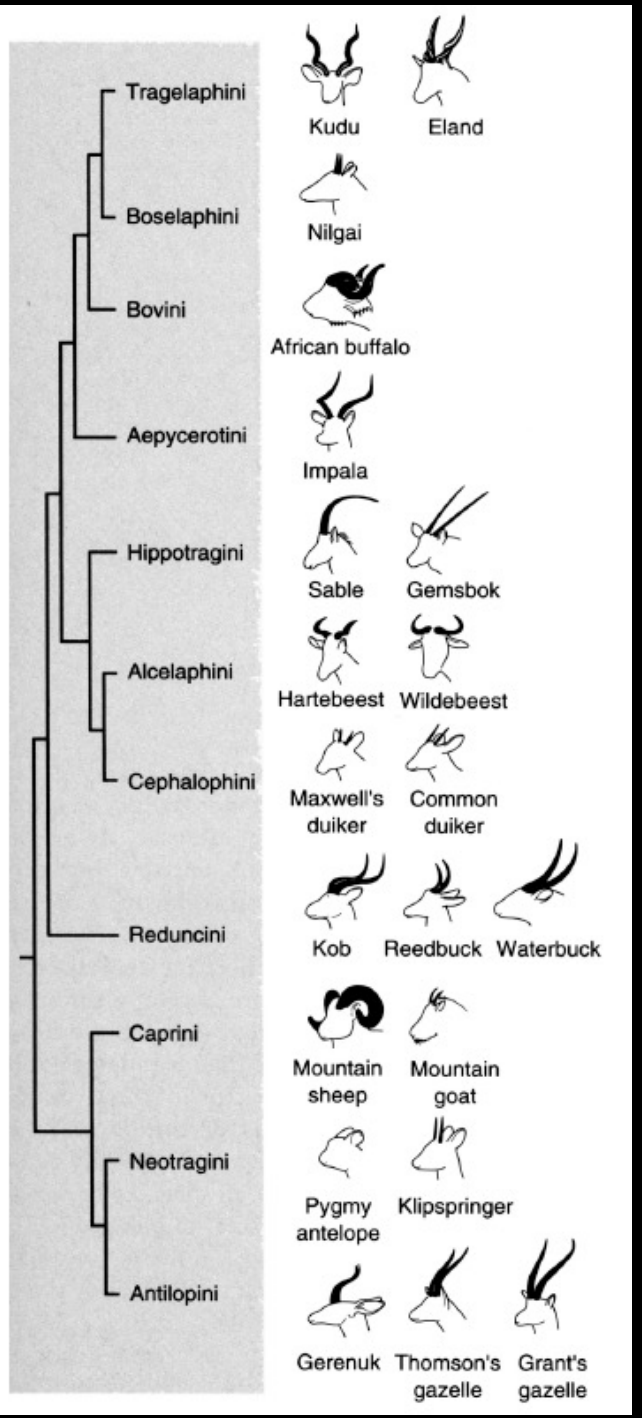
skull of a kob (*Kobus*)



skull of an American bison (*Bison*)

skull of a steinbuck (*Raphiceros*)

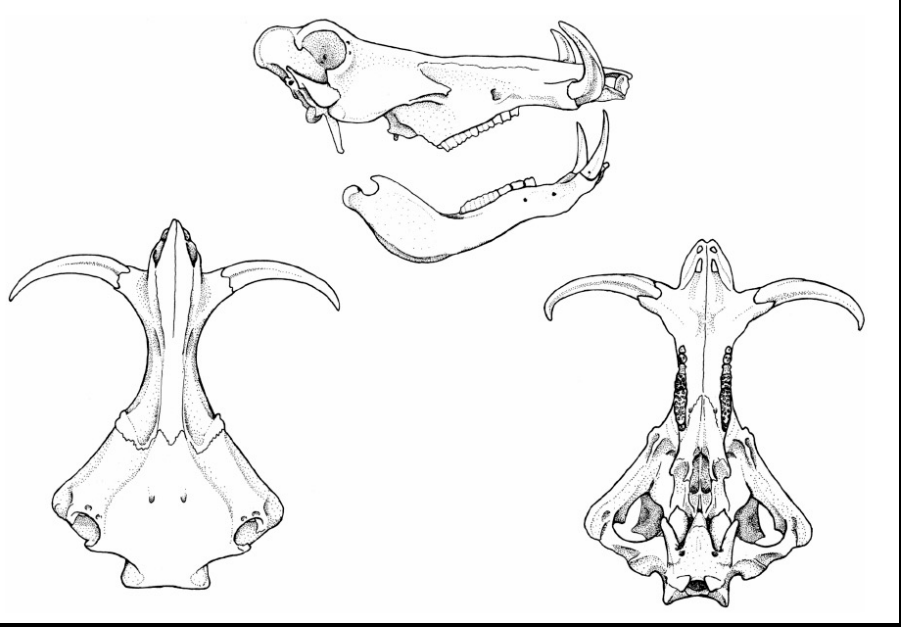
[skulls drawn proportionally]



SUBORDEM SUIFORMES

general characters:

1. foot posture unguligrade
2. digits 4-3 or 4-4
3. hoofs present
4. cannon bone lacking in all feet (partial fusion of metatarsals in Tayassuidae)
5. no horns or antlers
6. postorbital bar never complete
7. mastoid not exposed, obscured by broad contact of squamosal and occipital bones
8. one to three pairs of upper incisors present
9. canines tusk-like, sharp-edged
10. molars bunodont
11. stomach with two or three chambers



Ordem Artiodactyla

Família Tayassuidae

general characters:

1. size medium (75-105 cm)
2. body covered with stiff bristly hairs
3. digits 4-3, but only two functional in locomotion
4. snout elongate, mobile, flattened at end
5. nostrils opening anteriorly
6. middle two metatarsals fused proximally; metacarpals free
7. paroccipital process small
8. no ventral flange on angular process of lower jaw
9. canines with sharp cutting edges; upper canines approximately same size as lower canines, directed downward
10. cheekteeth bunodont, brachydont

dental formula:

$$\frac{2\ 1\ 3\ 3}{3\ 1\ 3\ 3} = 38$$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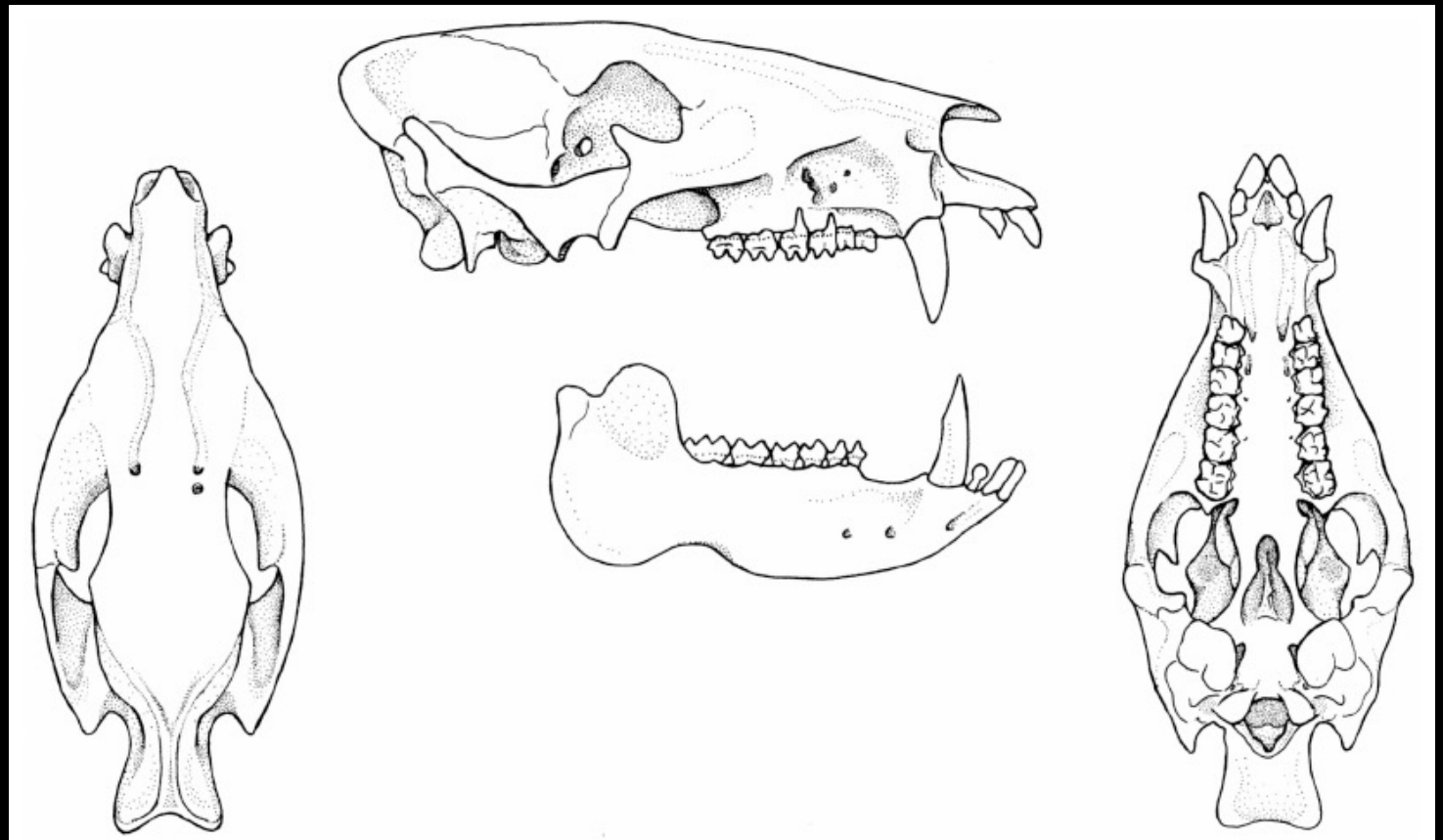


skull of a collared peccary, *Pecari tajacu*

Ordem Artiodactyla

Família Camelidae

general characters:

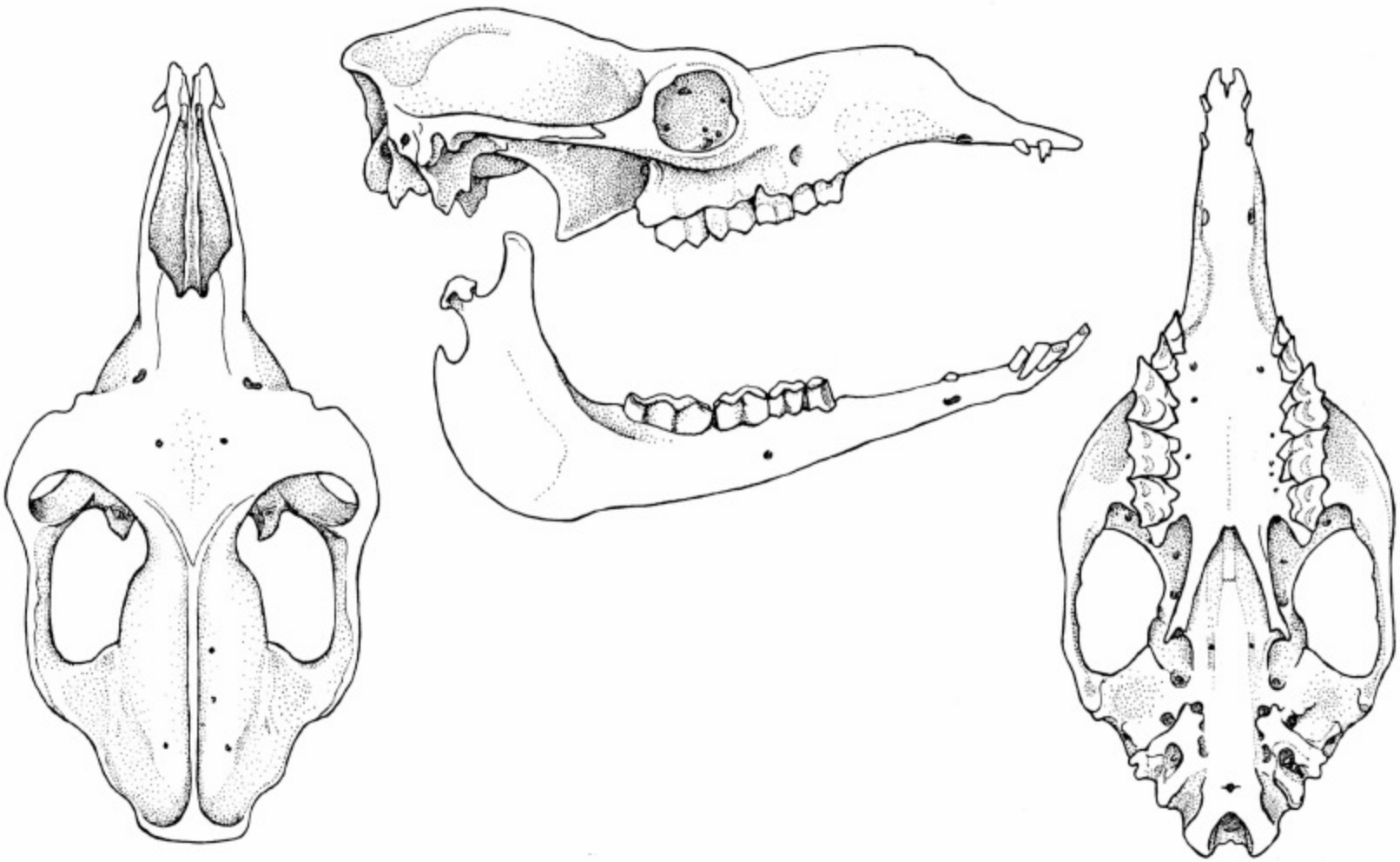
1. foot posture digitigrade (unique among living artiocadtyls)
2. digits 2-2
3. nails present (no hoofs)
4. canon bone in all feet, but fusion not complete at distal end
5. no horns or antlers
6. postorbital bar complete
7. mastoid exposed
8. one pair of upper incisors present in adults, caniniform
9. canines present, not sharp-edged
10. molars selenodont
11. stomach with three chambers
12. coronoid process very long, projecting above the superior border of the orbit

dental formula:

$$\frac{1 \quad 1 \quad 2\text{-}3 \quad 3}{3 \quad 0\text{-}1 \quad 2\text{-}3 \quad 3} = 30\text{-}34$$

upper toothrow of llama (*Lama glama*)


Hermes Justiniano

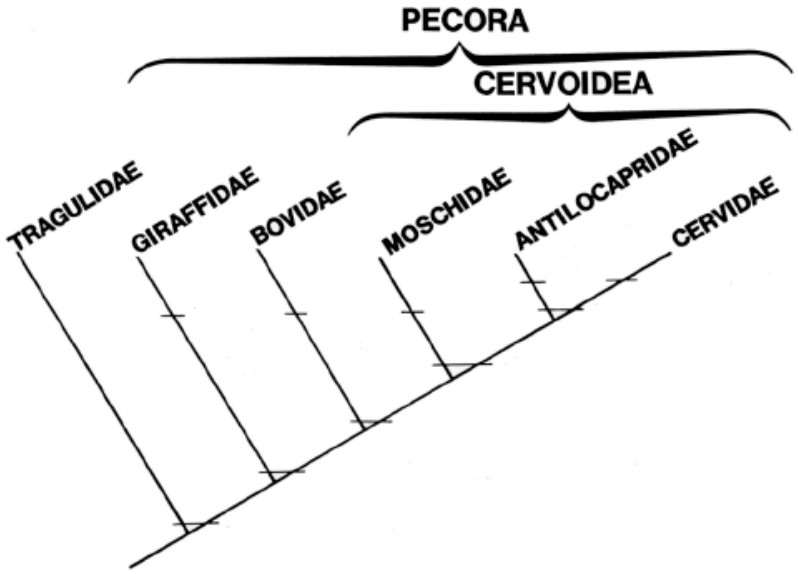


skull of the dromedary, *Camelus dromedarius*

SUBORDEM RUMINANTIA

general characters:

1. foot posture unguligrade
2. functional digits usually 2-2, side toes reduced or absent
3. hoofs present
4. cannon bone usually present in all feet (not in forelimbs of tragulids)
5. horns or antlers usually present, at least in males (not in tragulids)
6. postorbital bar complete
7. mastoid exposed
8. no upper incisors
9. if canines present, not sharp-edged
10. molars selenodont
11. stomach complex, usually 4-chambered (3-chambered in tragulids)

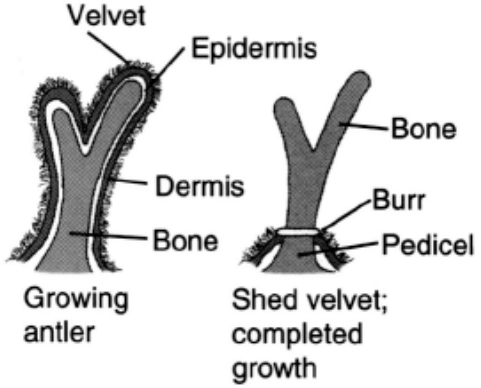


ORDEM ARTIODACTYLA

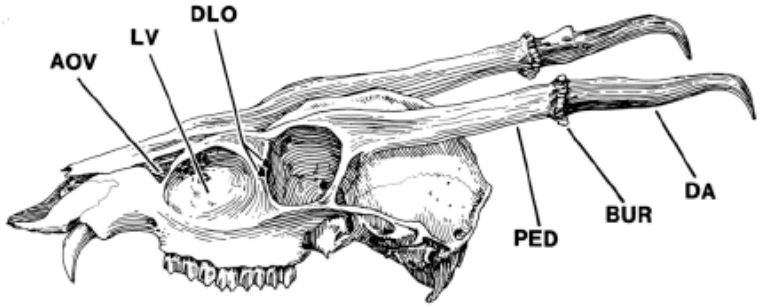
Família Cervidae

diagnostic characters:

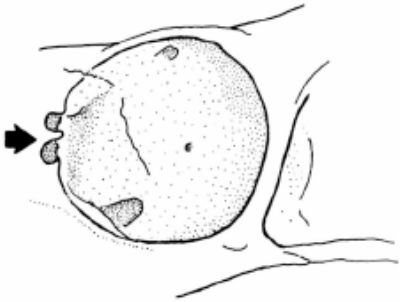
1. size small to large (height at shoulder 30-240 cm)
2. antlers found only in males (except *Rangifer*), usually complexly branched (spike-like in most small genera), bony core sheathed in skin and fur ("velvet") while growing; antler and velvet shed separately, usually annually



4. antlers grow from a pedicle ("ped" below), a non-deciduous projection off the frontal bone; shedding occurs at antler burr ("bur" below)



3. tail short
4. neck short (*Alces*) to moderately long
5. digits 4-4; side toes small and non-functional
6. lacrimal depression present (lacrimal vacuity – "LV" above)
7. nasal and lacrimal bones separated by large oblong opening or fenestra (antorbital vacuity – "AOV" above)
8. two lacrimal foramina present at front edge of or outside orbit ("DLO" above)

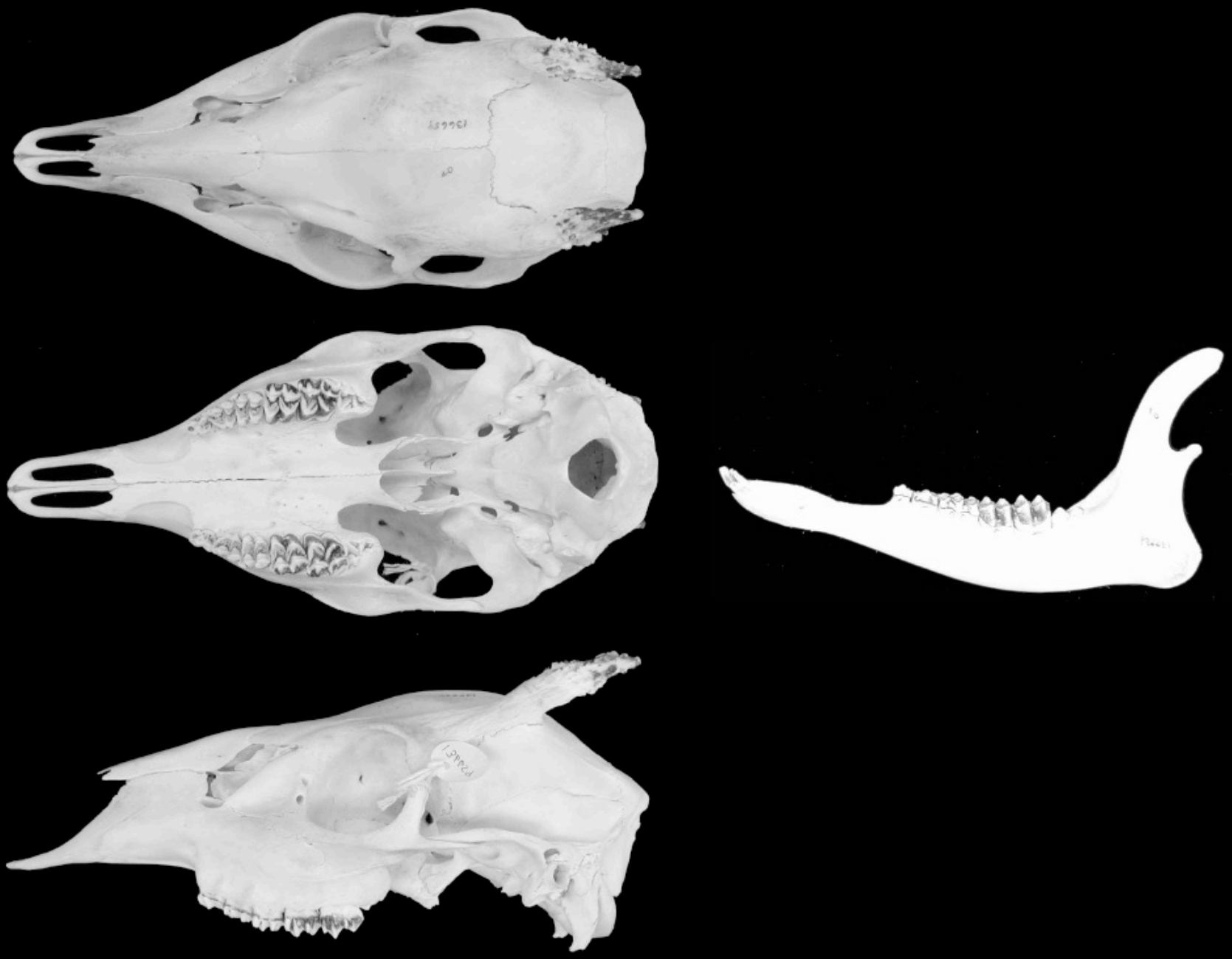


9. upper canines present in some taxa, either small and rounded or tusk-like
10. surfaces of molars smooth in texture
11. stomach with 4-chambers

dental formula:

$$\frac{0 \quad 0\text{-}1 \quad 3 \quad 3}{3 \quad 1 \quad 3 \quad 3} = 32\text{-}34$$


North Andean Huemel, Putre, Chile, February 2007
©Arthur Grosset

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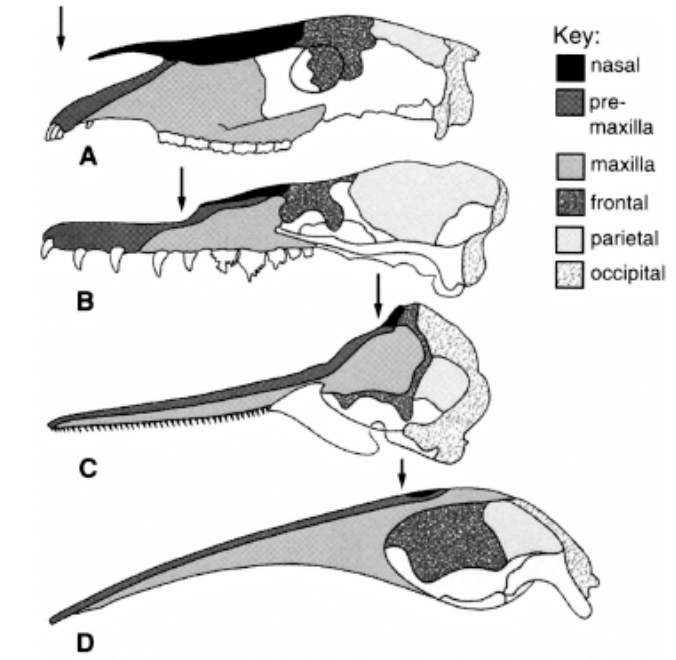
Ordem Cetacea

Telescoping of the skull in cetaceans (position of external nares indicated by arrows)

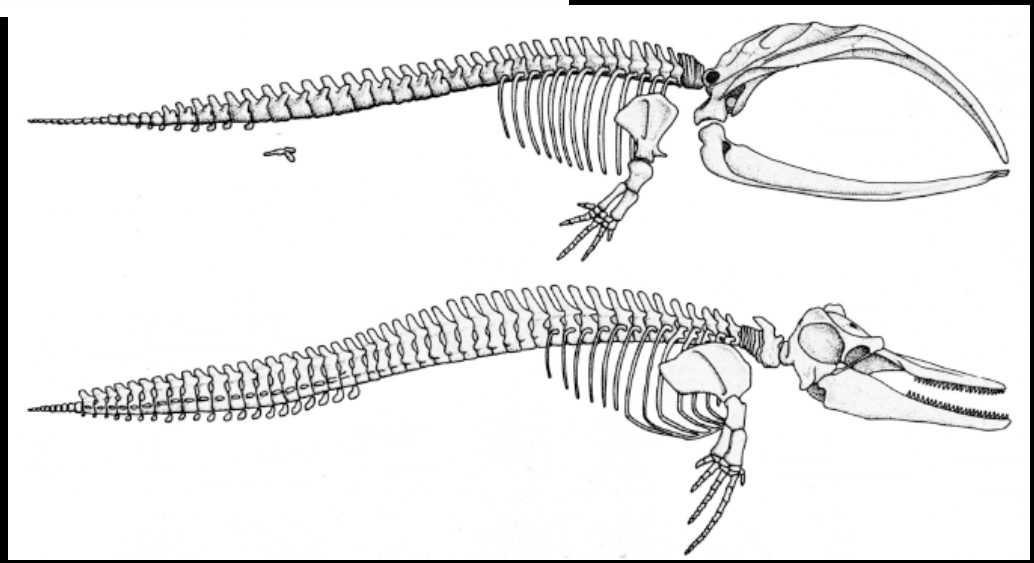
A. Terrestrial, non-cetacean mammal, the horse
B. a fossil archaeocete whale (*Basilosaurus*; note heterodont dentition)
C. a modern odontocete whale (*Delphinus*, the common dolphin)
D. a modern mysticete whale (*Balaenopterus*, fin whale)



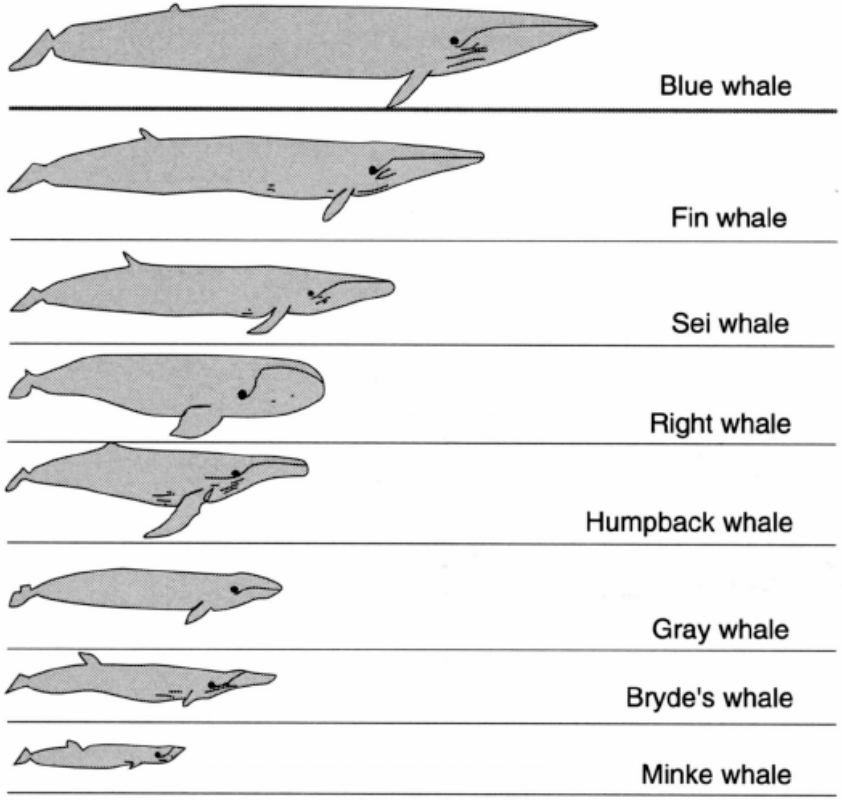
11 famílias

40 gêneros

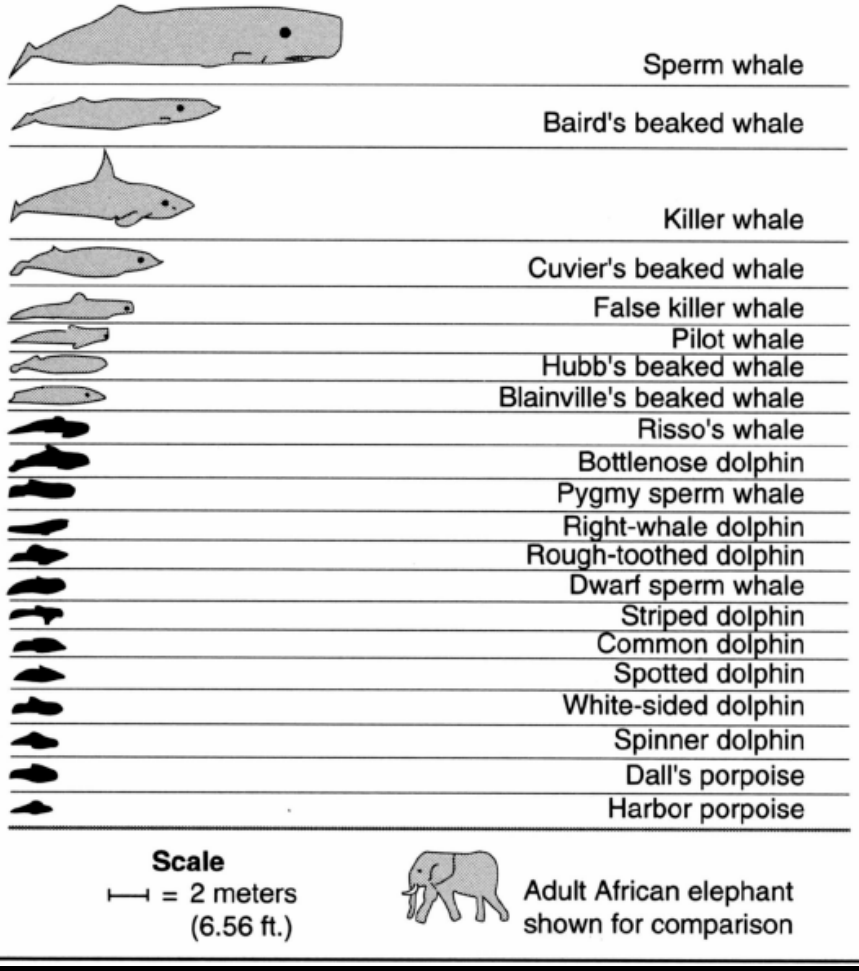
84 espécies



Baleen whales

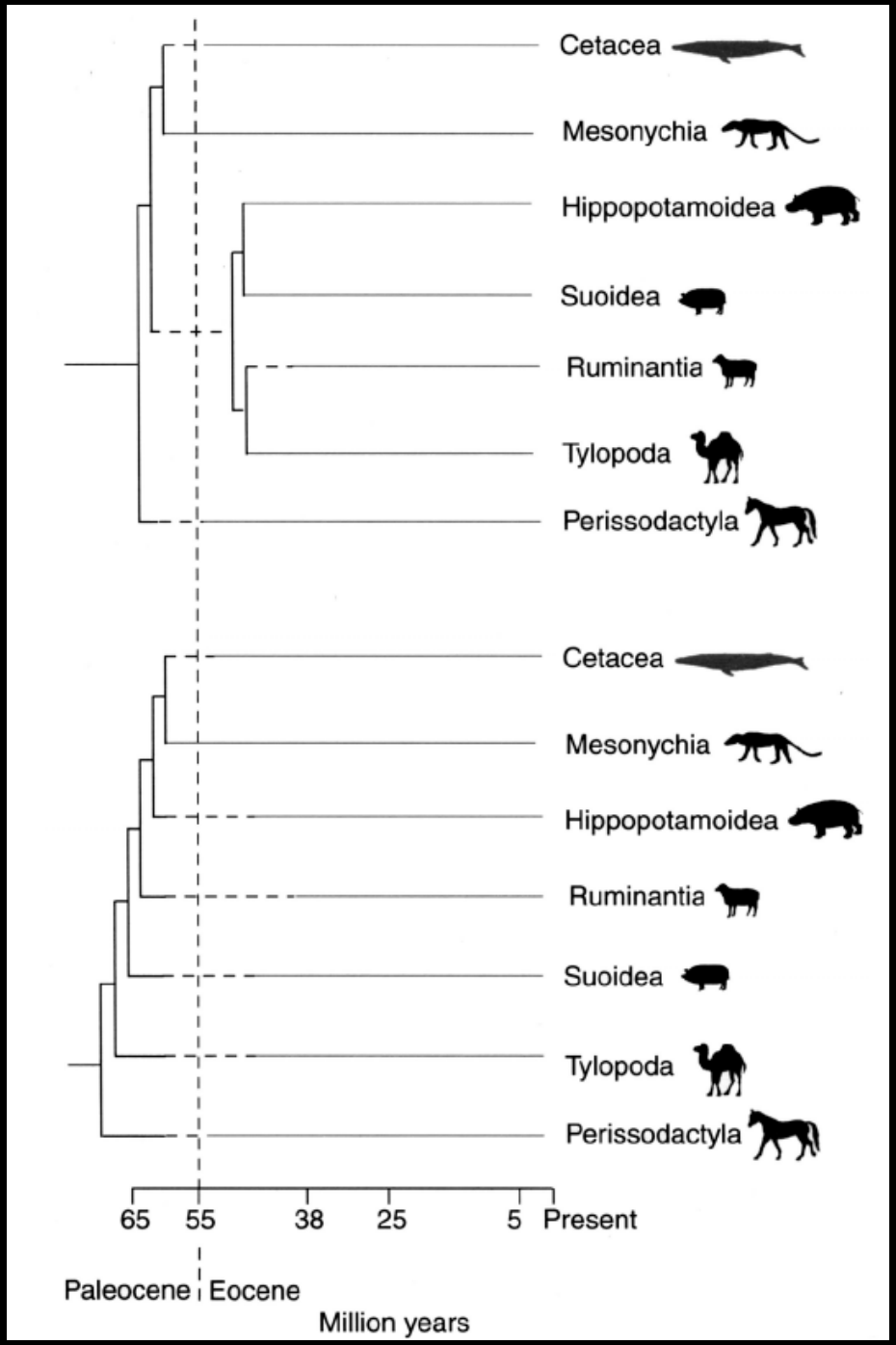


Toothed whales



Scale
⟼ = 2 meters
(6.56 ft.)

Adult African elephant shown for comparison


Cetacea
Mesonychia
Hippopotamoidea
Suoidea
Ruminantia
Tylopoda
Perissodactyla
Cetacea
Mesonychia
Hippopotamoidea
Ruminantia
Suoidea
Tylopoda
Perissodactyla
65
55
38
25
5
Present
Paleocene
Eocene
Million years

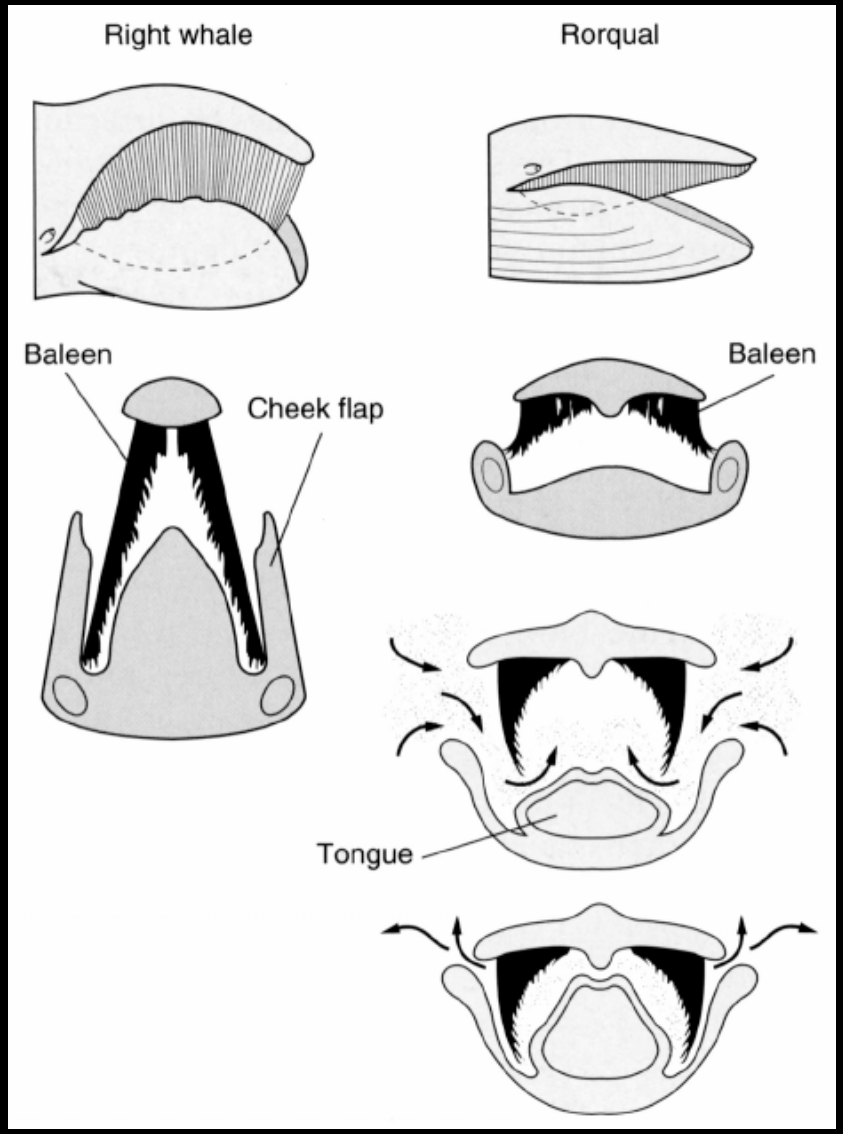
SUBORDEM MYSTICETI

diagnostic characters:

1. no teeth (teeth present in fetus lost before birth)
2. baleen present
3. two external nasal openings (blowholes) present, slit-like, located anterior to eye
4. facial profile of skull convex, with no fatty “melon” present
5. skull more or less symmetrical
6. nasals roofing part of the nasal passage
7. nasal passage simple
8. maxilla extending posteriorly as a long, narrow process, interlocking over frontal, not spread outward over supraorbital process
9. auditory bulla (tympanoperiotic bones) attached to skull
10. lower jaw loosely joined by ligaments at symphysis
11. mandibular condyle directed upwards
12. sternum consists of single bone
13. do not echolocate

6 gêneros

13 espécies


Right whale
Rorqual
Baleen
Cheek flap
Baleen
Tongue

SUBORDEM MYSTICETI

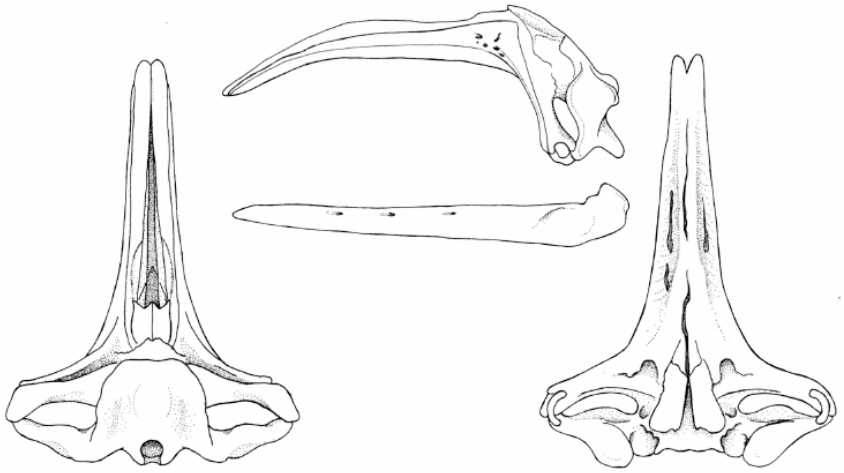
Família Balaenidae

diagnostic characters:

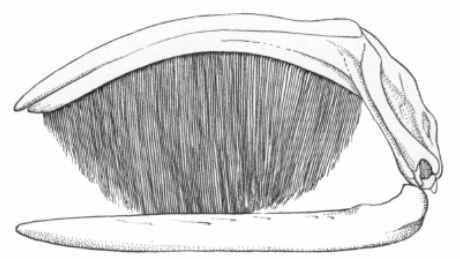
1. head huge, making up about one-third of total length
2. color dark gray to black (white patches often on chin)
3. body chunky, robust (up to18.5 m and 67 metric tons)
4. flippers short and rounded
5. dorsal fin absent
6. rostrum arched to accommodate long baleen plates
7. no longitudinal grooves, or furrows, in skin of throat
8. baleen plates long and narrow (up to 350 separate plates up to 4 m in length); fold on floor of mouth when jaws are closed
9. nasals small
10. posterior margins of nasal and premaxilla not extending beyond level of anterior margin of supraorbital process of frontal
11. frontal scarcely visible at crest of skull
12. maxilla without elongate process extending posteriorly
13. anterior margin of parietal behind posterior margins of premaxilla, maxilla, and nasal
14. supraoccipital extending anteriorly beyond zygomatic process of squamosal

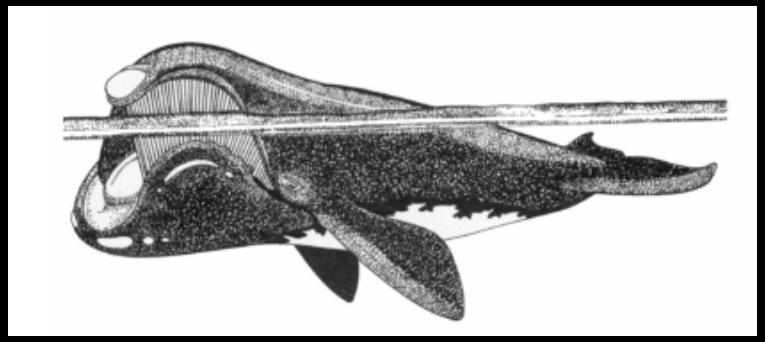
2 gêneros

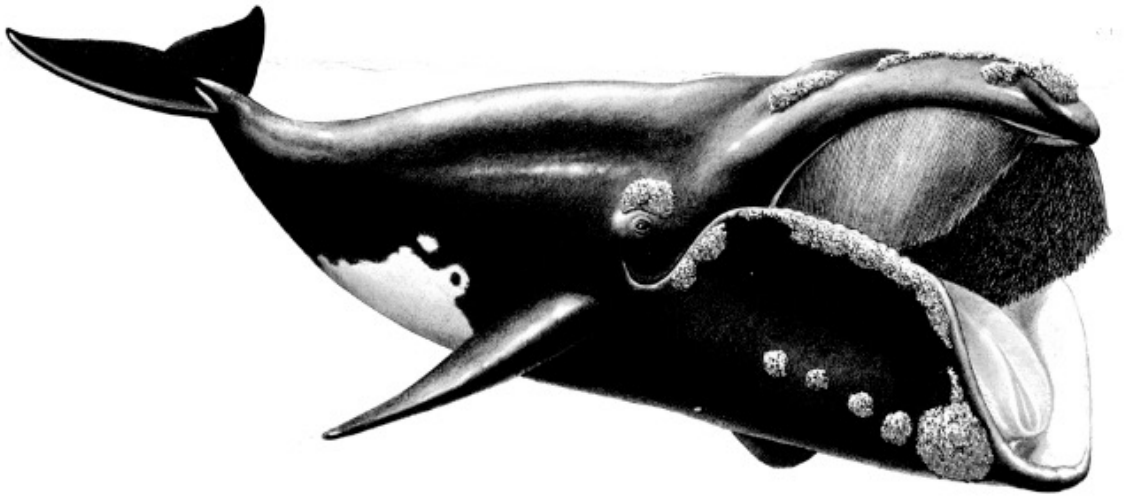
4 espécies



skull of a right whale, *Eubalaena*







northern right whale, *Eubalaena glacialis*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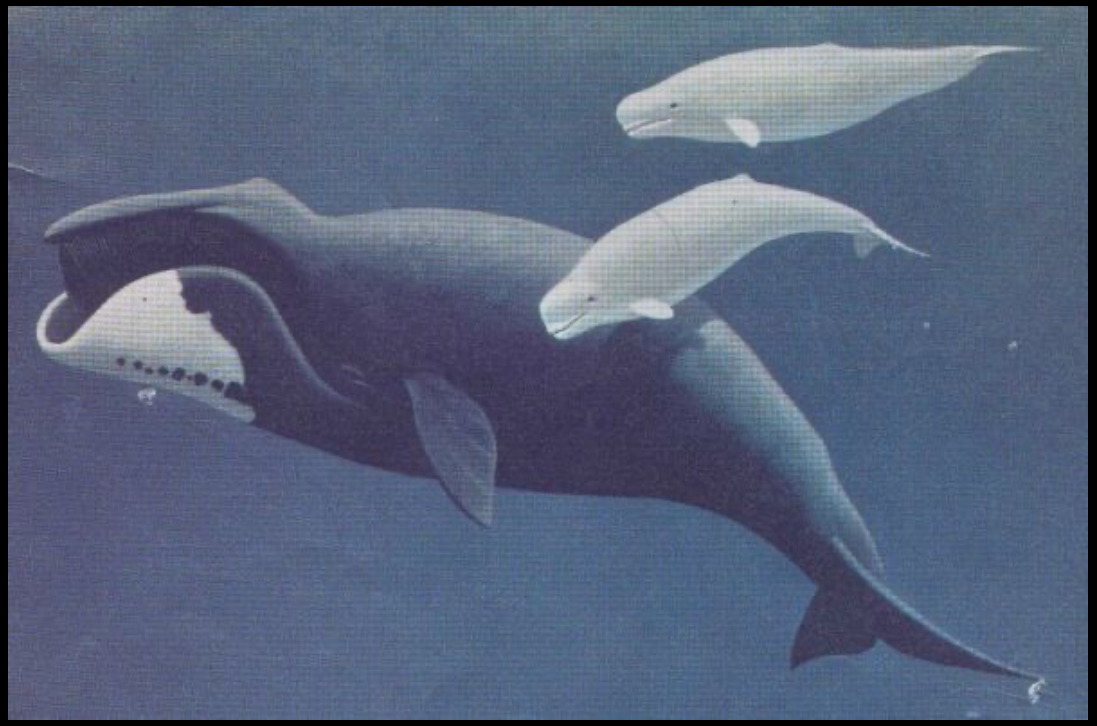


SUBORDEM MYSTICETI

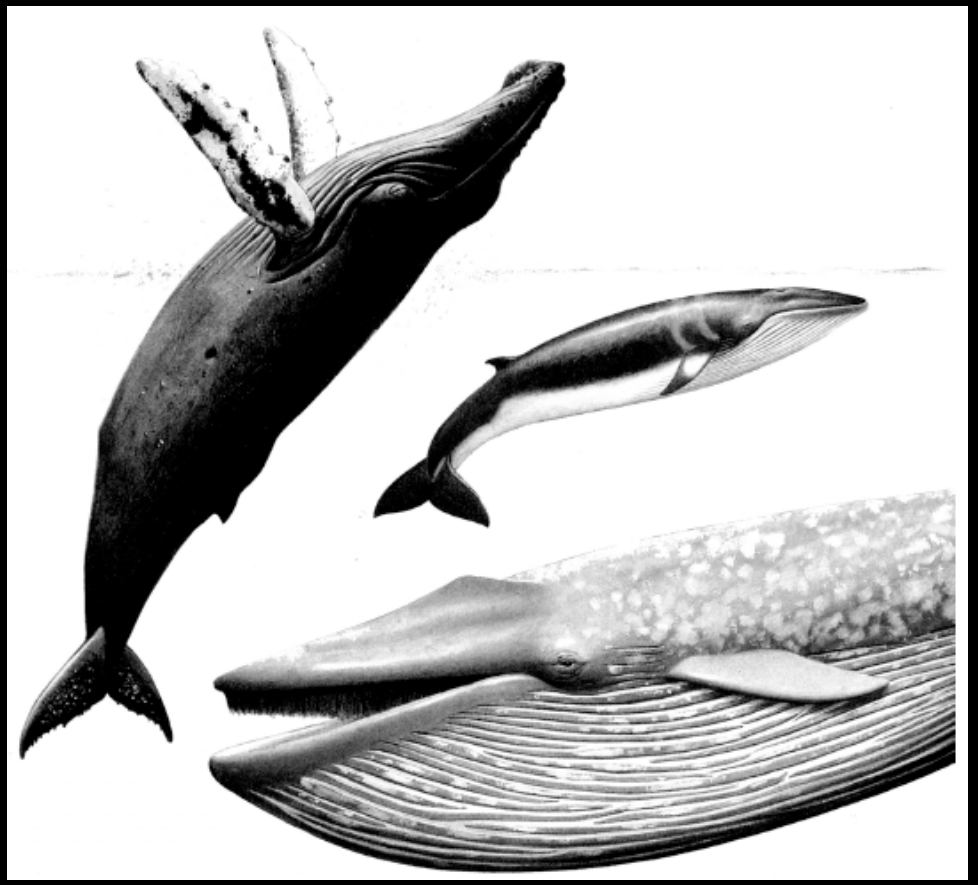
Família Balaenopteridae

diagnostic characters:

1. rows of baleen continuous anteriorly (separated at anterior end of mouth in other mysticetes)
2. lower jaw conspicuously bowed outward (more or less straight in other mysticetes)
3. body slender (10 to 31 m in length)
4. color gray or black above, with varying amounts of white below
5. dorsal fin present, sickle-shaped (*Balaenoptera*) or small (*Megaptera*)
6. numerous longitudinal grooves in skin of throat
7. baleen plates short, broad
8. rostrum relatively broad and flat
9. nasals small; either not exposed or only barely exposed on skull roof
10. nasal and premaxilla extending posteriorly beyond level of anterior margin of supraorbital process of frontal
11. frontals scarcely or not at all visible at crest of skull
12. maxilla with elongate posterior process
13. parietal extending anteriorly beyond posterior margins of premaxilla, maxilla, and nasal
14. supraoccipital extending anteriorly beyond zygomatic process of squamosal

2 gêneros

7 espécies

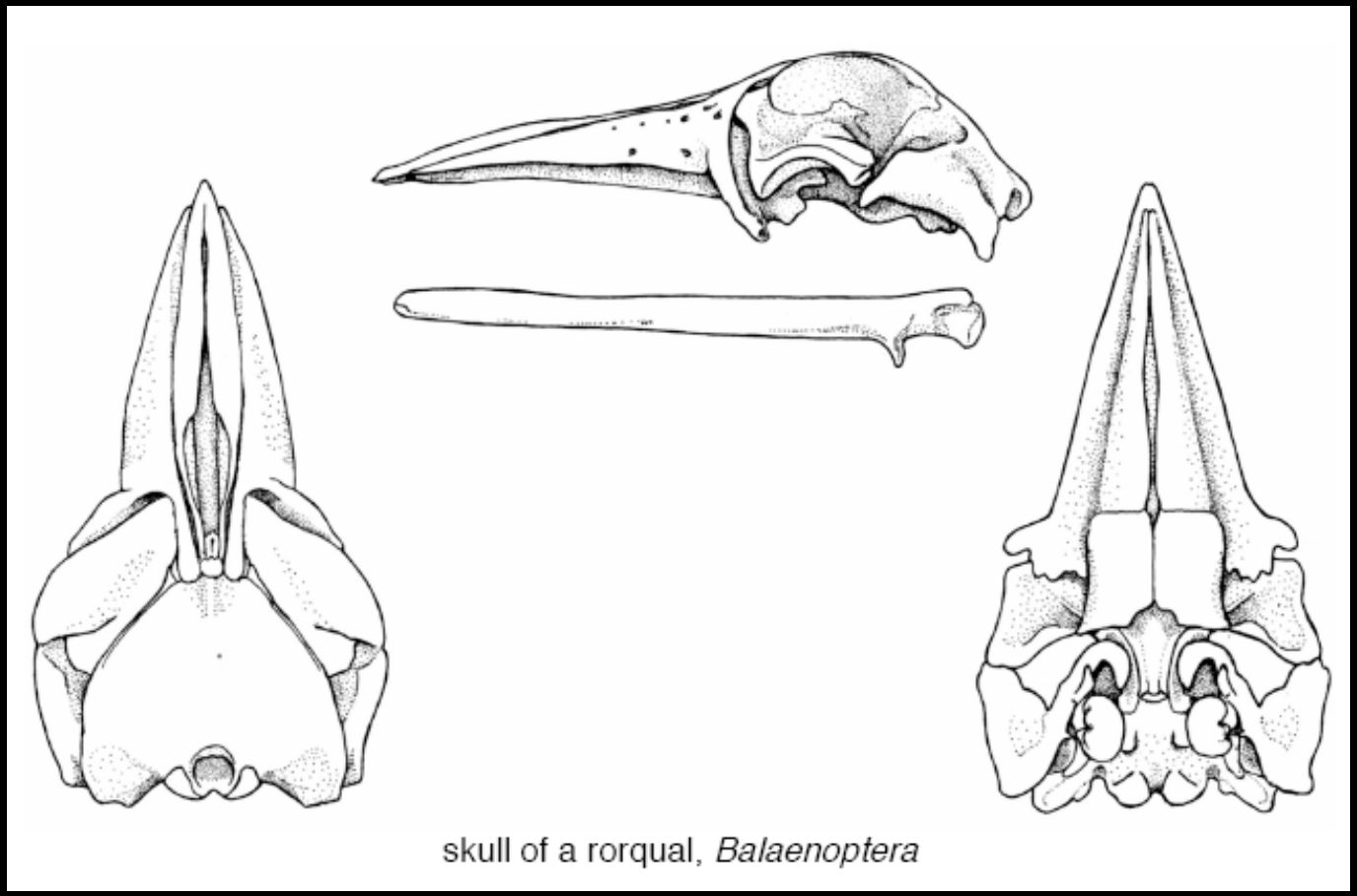



ARKive


NOAA NMFS SWFSC PRD


WWW.icrwhale.org


GREENPEACE



skull of a rorqual, *Balaenoptera*

SUBORDEM ODONTOCETI

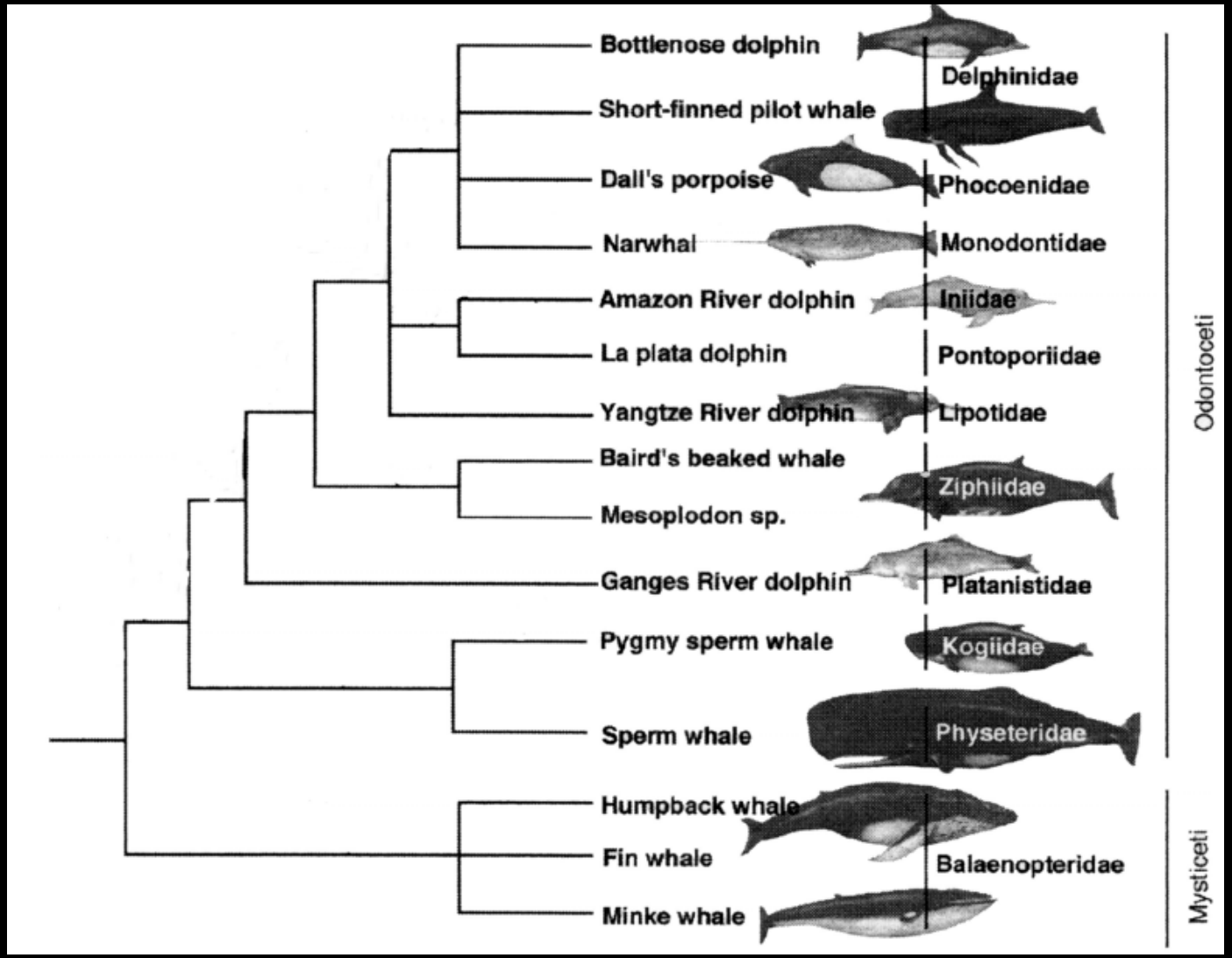
diagnostic characters:

1. teeth present, simple, homodont, monophyodont
2. no baleen
3. one nasal opening (blowhole) present, crescent-shaped, located posterior to eye (except in sperm whales)
4. facial profile of skull concave, with depression occupied by a “melon”, or fatty organ
5. skull usually asymmetrical
6. nasals reduced to nubbins, not roofing any part of nasal passage
7. nasal passage with a complex system of diverticula
8. maxilla extending posteriorly as a large broad process, not interlocking with frontal, instead spreading outward over portion of supraorbital process
9. auditory bulla (tympanoperiotic bones) not attached to skull
10. lower jaws firmly fused at symphysis
11. mandibular condyle directed posteriorly
12. sternum consists of three or more bones
13. echolocate

7 famílias

34 gêneros

71 espécies


Bottlenose dolphin
Short-finned pilot whale
Dall's porpoise
Narwhal
Amazon River dolphin
La plata dolphin
Yangtze River dolphin
Baird's beaked whale
Mesoplodon sp.
Ganges River dolphin
Pygmy sperm whale
Sperm whale
Humpback whale
Fin whale
Minke whale
Delphinidae
Phocoenidae
Monodontidae
Iniidae
Pontoporiidae
Lipotidae
Ziphiidae
Platanistidae
Kogiidae
Physeteridae
Balaenopteridae
Odontoceti
Mysticeti

Família Delphinidae

diagnostic characters:

1. body slender (length 1.5 - 9.5 m)
2. dorsal fin usually present (absent in *Lissodephis*)
3. no longitudinal grooves in skin of throat
4. snout variable; with a distinct beak sharply differentiated from forehead or with a bulging forehead and no beak; or with a long snout merging continuously with forehead
5. two to six of cervical vertebrae usually fused
6. skull only slightly asymmetrical
7. maxilla expanded posteriorly
8. occipital crest not particularly prominent
9. rostrum variable (short or long, narrow or broad)
10. no boss on premaxilla
11. pterygoid and palatine forming parallel shelves on each side of nasal passage
12. symphysis of lower jaw short to moderately long
13. teeth simple, conical; range from 0/2 to 65/58 in number

17 gêneros

34 espécies


© Leszek Karczmarski


Carlos Fierro / rrmm-MAPA

FAMÍLIA PHYSETERIDAE

diagnostic characters:

1. snout very large, broad, blunt, undifferentiated from rest of head
2. body robust (length 2-20 m)
3. dorsal fin present, sickle-shaped (*Kogia*) or reduced (*Physeter*)
4. throat with longitudinal grooves numerous and short (*Physeter*) or indistinct to absent (*Kogia*)
5. six to seven cervical vertebrae, all fused in *Kogia*, all but atlas in *Physeter*
6. skull strongly asymmetrical; left nasal passage much larger than right one; right premaxilla enlarged
7. maxilla expanded posteriorly
8. occipital crest prominent
9. rostrum short or long, broad
10. no boss on premaxilla
11. pterygoid and palatine not forming parallel shelves
12. symphysis of lower jaws long (comprising one-third of length of jaws in *Physeter*) or relatively short (*Kogia*)
13. teeth simple, conical (0 above, 9-30 below)

2 gêneros

3 espécies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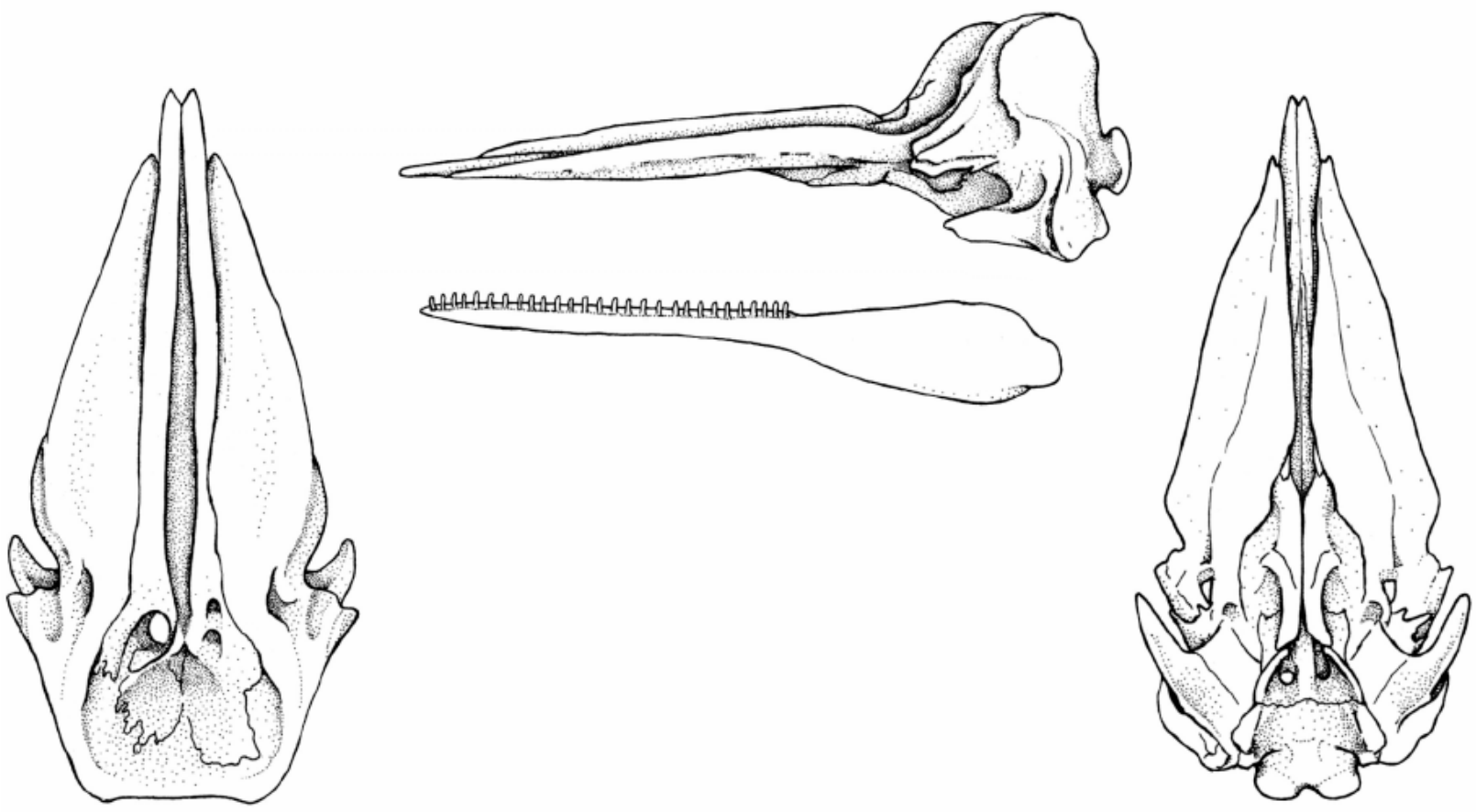


skull of the sperm whale, *Physeter*

Família Iniidae

diagnostic characters:

1. lateral margin of maxilla with prominent longitudinal crest
2. body slender (length 1.5-3 m)
3. dorsal fin present, low, obtuse
4. no longitudinal grooves in skin of throat
5. snout long, slender, sharply differentiated from bulging forehead
6. cervical vertebrae separate
7. skull only slightly asymmetrical (except in *Platanista*)
8. maxilla narrow, not greatly expanded posteriorly
9. occipital crest poorly developed
10. rostrum very narrow, long
11. premaxilla with prominent swelling (boss) anterior to nasal opening
12. pterygoid and palatine forming parallel shelves adjacent to nasal passage
13. symphysis of lower jaw long (comprising one-half length of jaws)
14. teeth simple, conical (with prominent ridge around teeth in *Inia*); range in number from 25/25 to 55/55

2 gêneros

3 espécies

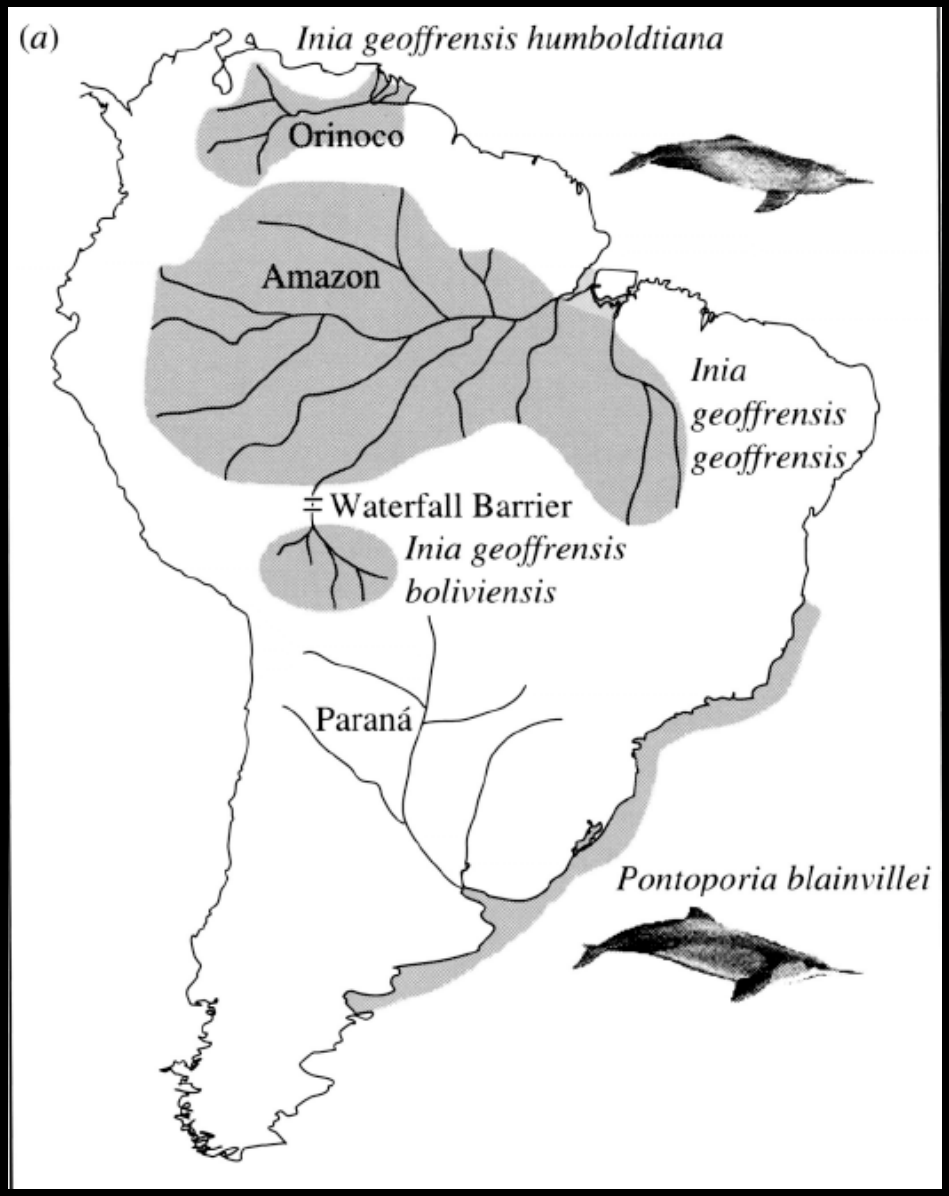
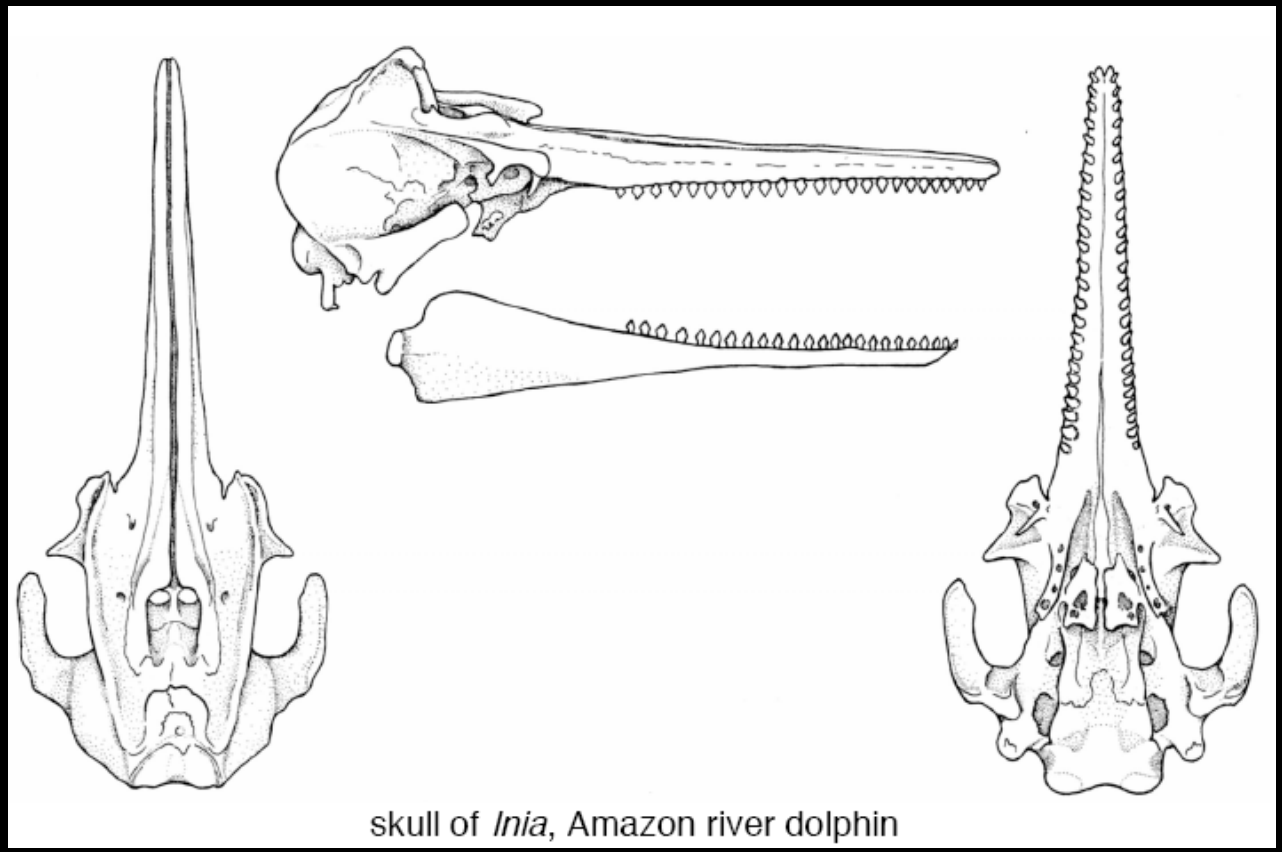

(a)
Inia geoffrensis humboldtiana
Orinoco
Amazon
Inia
geoffrensis
geoffrensis
Waterfall Barrier
Inia geoffrensis
boliviensis
Paraná
Pontoporia blainvillei

Foto: Lupércio Barbosa



skull of *Inia*, Amazon river dolphin