fun with primates (again)

Primate Classes (old way v new way)

- **Prosimians** (*Strepsirhines*)
  - lemurs
  - lorises
  - galagos
- **Anthropoids** (*Haplorhines*)
  - monkeys and apes

**Strepsirhines**

- Have more more primitive traits than other primates
- Often lack one or more of the general characteristics of primates - like color vision
  - some have a single claw on each hand/foot
- Rely more heavily on the sense of smell
- Smaller brains (relative to body size)
Lemurs are the only primate native to Madagascar.

**Lemurs**
- Ominivores
- Male-dominated society
- Sun-warming resembles cultural activity
- Olfactory communication
- Spur marking
- Stink fighting

**SUBORBITAL BAR**

**EXTENDED SNOUT (PROGNATISM)**

** GAP BETWEEN CANINES & PREMOARS**
Rhinarium

- The naked, moist surface around the nostrils of most mammals (and all strepsirhines)
- Generally related to stronger olfactory senses
- “Wind detector”

Tapetum lucidum

- Layer of tissue behind the retina that reflects light
- pros - allows for better night vision
- cons - creates a more blurry image & allows humans to see them

Grooming claws

- Not just an unclipped fingernail!
Lorises

- SE Asia
- Insectivores
- Slow moving
- Practice infant parking
Galagos

- Africa
- Nocturnal
- Strong eyesight
- Infants are particularly helpless and are carried in mother's mouths
- Can jump 7-8 feet from a sitting position

Strepsirhines

- Curly noses
- Characteristics
  - Rhinarium
  - Tapedum lucidum
  - Grooming claw
  - Post-orbital bar
  - Large tooth gap

Haplorhines
S.’s versus H.’s

Haplorhines

Less prognatism

No tooth gap

Post-orbital closure

Strepsirhine

Haplorhine

Vibrissae

Lateral slit

Rhinarium

(snout, nose)

Philtrum

Howler monkey

Cappuchin monkey
- Haplorhine brains are also more complex, with more folds...which equals more surface area
Tarsiers

❖ The most difficult to classify.

❖ In the “old” way (e.g., your book) Tarsiers are considered prosimians and are lumped with lemurs.

❖ In the new way, they are considered haplorhines because they have MORE haplorhine traits than strepsirhine traits.

Tarsier traits

❖ Haplorhine traits
  ❖ Partial post-orbital enclosure
  ❖ No tapetum lucidum
  ❖ No rhinarium
  ❖ Fused frontal bone

❖ Strepsirhine traits
  ❖ Two grooming claws
  ❖ Insectivore
  ❖ Small-bodied

Tarsiers

❖ Sometimes eat birds or lizards - making them the only totally carnivorous primates.

❖ Have “meetings” with other adults every day, but sleep and eat alone.

❖ Do worse in captivity than any other primate.
Monkeys versus Apes

- Monkeys and Apes are often confused in popular imagination

- Monkeys have tails
- Apes and humans have no tails
  - Monkeys have smaller brains
  - Apes and humans have larger brains

- Monkeys are quadrapedal (all 4 legs are of equal size)
- Apes have longer arms; humans have longer legs

Haplorhine Infraorders

- **Platyrrhines**: New World Monkeys
- **Catarhines**
  - Cercopithecoidae: Old World Monkeys
  - Hominoidea: Apes (and humans)
Pangea (super-continent) existed 200 million years ago but has been spreading apart since 70 mya.

Platyrrhini (New World Monkeys)

- Platyrrhini means rounded-nose
- Characteristics
  - Four more premolar teeth than Old World monkeys
  - Completely arboreal
  - Partial color vision
Prehensile tails

❖ New World Monkeys have a “fifth limb” - a tail capable of grasping and holding onto items
❖ Old World Monkeys have tails but none are prehensile

Howler Monkeys

❖ Among the largest New World Monkeys (15 lbs)
❖ Have developed full-chromatic vision
❖ Loudest land animals in the world
Tamirins

- Among the smallest monkeys in the New World
- Tend to be great leapers
- Generally give birth to twins

**Catarrhines**

- Human 1350g
- Chimpanzee 400g
- Orangutan 400g
- Macaque 100g

**Catarrhine Distributions**

- Cercopithecoids
- Hominoids
Cercopithecoids (Old World Monkeys)

- More biochemically and physically similar to humans than New World Monkeys
- Occupy a wide range of environments
- Large range of social structures

Baboons

- One of the largest non-hominoid primates
- Live in large groups called troops (up to 250)
- Male-dominated
- Very aggressive
Homonoidae

- Apes & Humans
- Apes are more similar to humans than any other animal

- Broad noses
- Broad palates
- Larger brains
- Long arms (except humans)
- No tails
- Short trunk

Groups of hominoids

LESSER APES (gibbons)

HOMININS (humans & hominids)

GREAT APES (Chimps, Gorillas, Bonobos, Orangutans)
Videos

- Tool use: http://www.youtube.com/watch?v=xRN-fHdGzUY
- Ioris: http://www.youtube.com/watch?v=w89bFK3PvBA
- Howlers: http://www.youtube.com/watch?v=REPoVfN-Ij4