

ANTH 42

The colobines: Ecological niches
Falk: Ch. 7 pp. 173 - 188


Quiz clock

Minutes remaining: **ONE**

30 sec ...

5 4 3 2

Loxodont teeth in rodents



Hydrochoerus

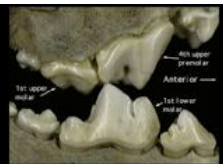
labial

anterior

Loxodont - extreme lophodont


So why loxodont?

Why?



view from side


Canis lupus carnassials



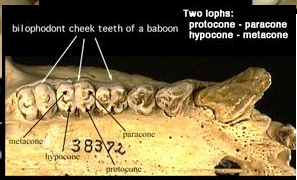
metacone paracone protocone

upper P4

Easy enough



Quadrates (quadrifurcular) upper molars (hedgehog)



Two lobes: protocone - paracone hypocone - metacone

bilophodont cheek teeth of a baboon

metacone hypocone protocone paracone

labial posterior lingual

Bug - crunchers

Generalized

Teeth as a life-history strategy



http://www.horsescience.com/HorseSlides1/Skulls_Teeth/pages/SK04B.jpg.htm



White uakari (*Cacajao calvus calvus*) & white-faced saki (*Pithecia pithecia*) (yes, he calls the uakari a saki...)

Specialists at seed predation.

BBC Life of Mammals:
Social Climbers



Gray-necked owl monkey or douroucoulí (*Aotus trivirgatus* [maybe; 1 split to 10+ in early 1980s])

Cathemeral populations; cryptic species

BBC Life of Mammals:
Social Climbers



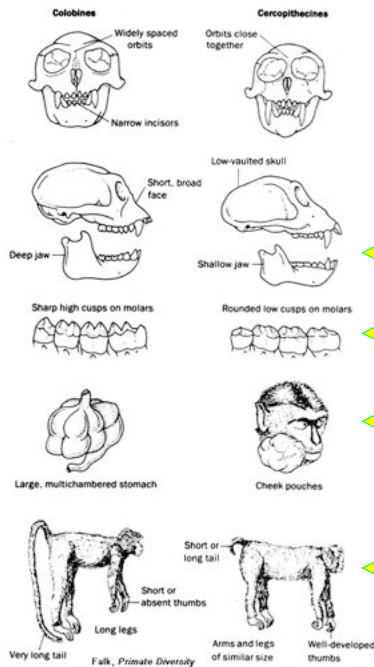
Howlers (*Alouatta ?pigra*) and spider monkeys (*Ateles* sp.)

BBC Cousins: *The monkeys*



Spider monkeys (*Ateles* sp.): ripe fruit specialists

BBC Life of Mammals:
The social climbers



Bringing us to Old World monkeys;
come in two flavors -
colobine and cercopithecine

What is significance of short broad face & deep jaw, vs. longer, narrower & shallower?

We talked about cusps last time

What do these say about food quality and scarcity?

Which group tends to be more arboreal?



Colobines: the OW howlers (?)

Life of mammals:
Social climbers

Diet

Colobine: caecum + complex stomach

FOLIVORE (Lepilemur)	FRUGIVORE (Cercopithecus)
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Stomach + Caecum + Colon
Small Intestine

Morphology:
unbiased correlate of key dietary adaptation

Chivers & Hladik 1980:
Index of Gut Differentiation

Empirically correlated with folivory.

African colobines come in 2 main flavors...



B&W (*Colobus*):
angolensis, satanas, guereza

Red (*Procolobus*):
pennantii, kirkii, badius [?]



Sample is small, but what's your impression of activity levels of the two species shown?

Compare 'medicinal' charcoal eating with *Cebus* fur rubbing. What's similar/different? African colobines

C. guereza (East Africa)
P. [pennantii] kirkii (Zanzibar)
 Cousins: Monkeys



Dusky leaf monkey (*Trachypithecus obscura*)



Maroon leaf monkey (*Presbytis rubicunda*)

ASIA:
 Leaf monkeys and langurs.

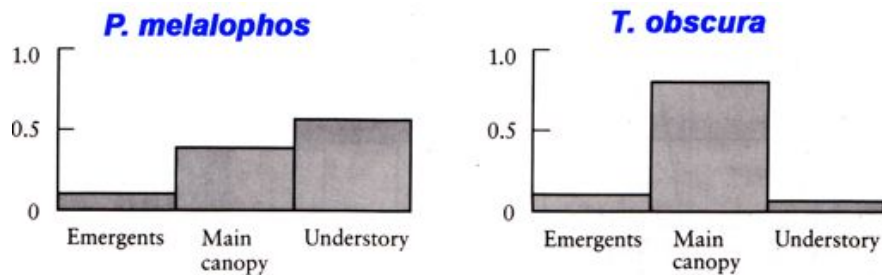


Mitered or banded leaf monkey (*Presbytis melalophos*)

Two-flavor theme in Asia as well, though less clear... [& not leaf v. langur]

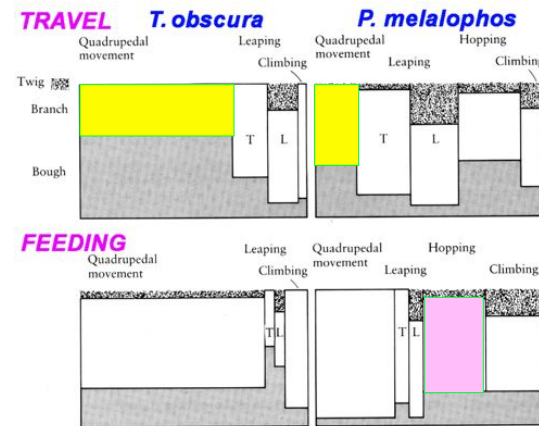
Explain the pattern?

Two leaf monkeys, compared



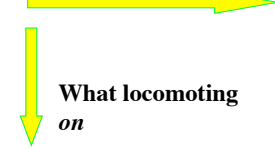
Distribution of feeding levels, Krau Game Reserve, Malasia (Richard, *Primates in Nature*)

Two leaf monkeys, compared



Complex diagram

Type of locomotion



What locomoting on

P. obscura much more quadrupedal movement, but given quadrupedal, not big difference in what they do it on

Figure 10.12 Distribution of locomotor patterns on different-sized supports during travel and feeding by *Presbytis obscura* and *P. melalophos*. Horizontal axis shows the contribution of different patterns in each kilometer of progression; vertical axis gives the proportion of that distance that is moved on different types of supports. (Adapted from Fleagle 1978a.)

T = tree, L = liana

Two leaf monkeys, compared

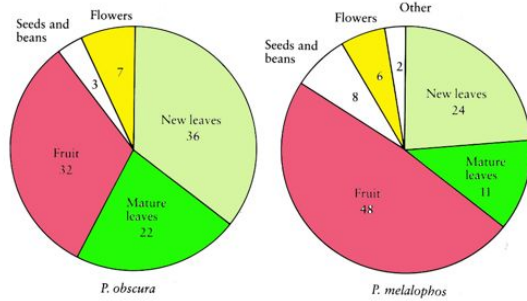


Figure 10.13 Proportions of food types in the diets of *Presbytis obscura* and *P. melalophos*. (Adapted from Curtin 1980.) A. Richard, *Primates in Nature*

Group structure

Both SM or MM

Group size

Dusky ~10

Mitered ~15

Dusky leaf monkey
(*Trachypithecus obscura*)

Mitered leaf monkey
(Sumatran surili)
(*Presbytis melalophos*)

As with B&W vs. red colobus, the mature leaf eater's group size is smaller



Silvered leaf monkey
(*Trachypithecus cristatus*)



Douc langur
(*Pygathrix nemaeus*)

Natal coats



Natal coats - change c. weaning. WHY??

Colobines: allomothering and infanticide.



Natal coats - not unique (or are they?)

Define "conspicuous"??

