ANTH 42: Chimpanzees, bonobos; cognition

Review session Thursday 5-7pm
Will be question-driven.
Reminder, final is based on lectures.

Does NOT include quiz # 16.
Low end: 2 SD < mean, but no clear gaps. ?
Grade.


To go from “could” to “will” is a big step …

BBC Cousins: Apes
Diet: mainly (ripe) fruit & leaves; some animal protein (males more meat, females more insects)

Some reason to think this driven by difficulty of hunting with a baby on board; like meat when can get it. So is there an innate sex difference in predatory behavior?

Getting around

Chimpanzees build nests (almost) every night; sometimes it seems like they like a view.
Chimpanzees spend a lot of time alone, but join up in "parties" - fission-fusion social system.

Females (yellow) more often solitary.

There is still debate about the "real" structure of chimpanzee society -- maybe it varies. At Taï, party size large, most of community may travel together fairly often. At Gombe, almost never get most together.

In some ways chimpanzees are less social than the majority of primates, spending more time alone; BUT their relationships are important, intense, and long-lasting. So - define ‘social’?
Chimpanzee-bonobo difference driven by distribution of food; bonobos don’t have to fission so much, so parties larger, more stable; elaborated mechanisms for regulate tension.

How does this chimpanzee-bonobo difference remind you of orangutans?

Consequence of fission-fusion + territoriality

Best estimate is that about 30% of male chimpanzees are killed by other males.

This is about the same as for humans in traditional horticultural/pastoral societies.

Prediction: other ripe-fruit specialist, fission-fusion species should also practice lethal raiding. *Ateles* (maybe: no killings seen).

Chimps: The Dark Side
Chimpanzee communities are mostly about 50 individuals - maybe 8-12 adult males, 15± adult females, & all the kids.

### Chimpanzee conservation status

2004 IUCN Report on the status of West African chimpanzees (*P. t. verus*) summarized populations:

- *P. t. verus*:
  - 21 -- 56,000

- *P. t. velerosus*:
  - 5 -- 8,000

- *P. t. troglodytes*:
  - 70 -- 116,000

- *P. t. schweinfurthii*:
  - 76 -- 120,000

**TOTAL**: 173 -- 300,000

Where do these numbers come from?

Estimating ape populations in the field. Labor-intensive, so not done all that often over country-wide scales.

### Estimating ape populations

Measure distance D, line <-> nest

\[
\frac{(D1 + D2)}{2} = X, \quad \text{average sighting distance.}
\]

X * Length transect = area.

# nests/area <formula> --> population estimate
Chimpanzee conservation status

2004 IUCN Report on the status of West African chimpanzees (P. t. verus) summarized populations:

*P. t. verus:*

2007:

- 21 -- 56,000

2008 report on *repeat* of that survey in 2007:

Human population increase in Coté d’Ivoire:

- 1990: 12 million
- 2008: 18 million

Civil unrest since 2002.

Bonobos (P. paniscus):

Found only in Democratic Republic of Congo, which has been convulsed by one war after another since the mid-90s.

Estimates range 15 - 50,000, but the estimates date from ~ 2000, using data collected previously.

Nobody knows.

BEHAVIOR

Mating:

- promiscuous - majority of copulations
- competitive
- “safari” consortships - small % of copulations, but per-copulation much higher conception rate