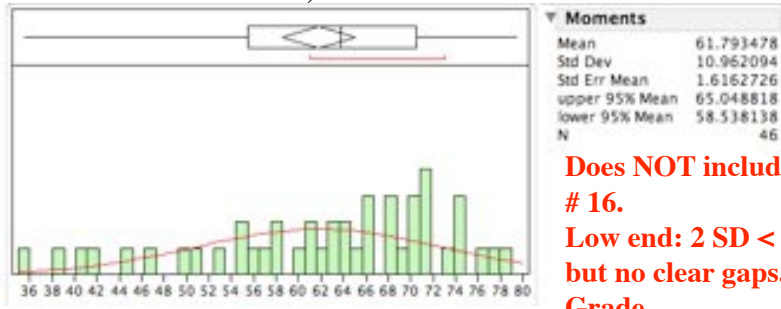


ANTH 42: Chimpanzees, bonobos; cognition

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.

Quiz clock

Minutes remaining: **ONE**

30 sec ...

5 4 3 2

<http://blogs.discovermagazine.com/intersection/2010/05/27/why-bonobos-will-save-the-world/>



Health & Medicine | Mind & Brain | Technology | Space | Human Origins | Living World | Envir

Blogs / The Intersection

« Bonobo Week at the Intersection Starts Today: Announcing Guest Blogger Vanessa Woods UVA Fights Back Against Coccolinelli »

Why Bonobos Will Save the World



Stumble! 1 Submit to

by Chris Mooney

This is a guest post from Vanessa Woods, author of the new book, *Bonobo Handshake*. Vanessa is a Research Scientist in Evolutionary Anthropology at Duke University and studies the cognition of chimpanzees and bonobos in Congo.

When I wake up this morning, someone might try to kill me. I live 10 minutes from a small town called Durham, NC, where according to the last statistics, 22 people were killed, 76 women were raped, and there were 682 cases of aggravated assault. When a chimpanzee wakes up in the morning, they probably have the same thought. In fact, if you're a male chimpanzee, you're more likely to be killed by another chimpanzee than anything else. If you're a female chimpanzee, expect to be beaten by every adolescent male who is making his way up through the ranks.

People often ask me why humans are so intelligent, as in, what is



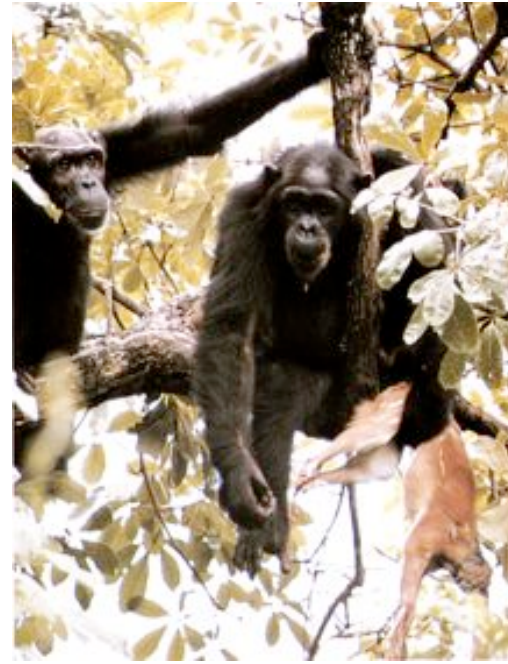
Bit of introduction ...

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

BBC
Cousins:
Apes



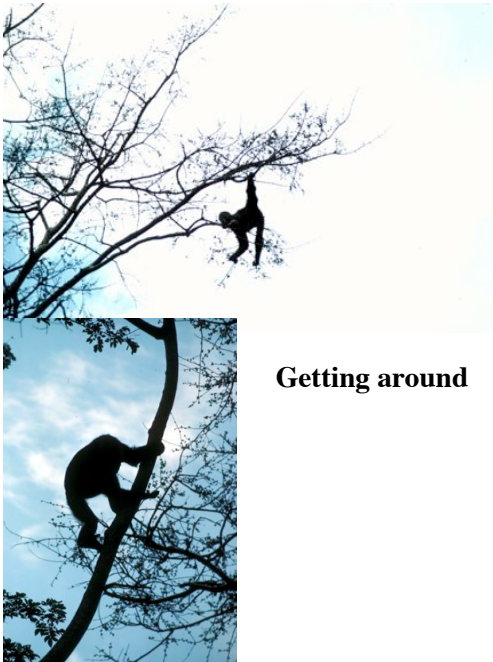
Diet: mainly (ripe) fruit & leaves; some animal protein (males more meat, females more insects)



Left: Athena stole this bushbuck fawn from an adult male baboon. The discovery that chimpanzees sometimes eat meat and may hunt cooperatively and share the kill was one of the early revelations of the research at Gombe. (L. Goldman)

Some reason to think this driven by difficulty of hunting with a baby on board; like meat when can get it.

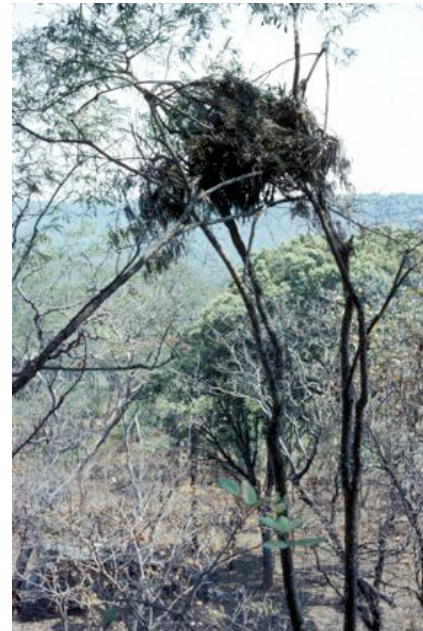
So is there an innate sex difference in predatory behavior?



Getting around

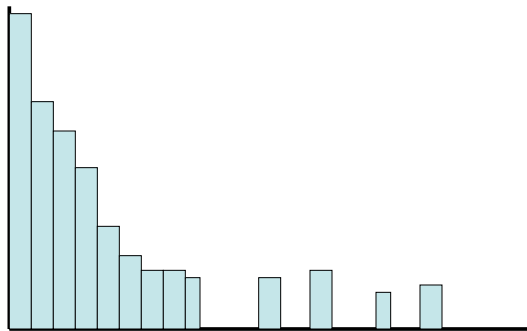


Gorillas walk on their knuckles, not their palms.



Chimpanzees build nests (almost) every night; sometimes it seems like they like a view

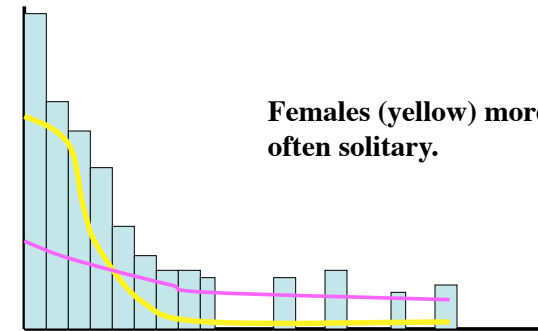
parties seen



of adults in the party

Chimpanzees spend a lot of time alone, but join up in “parties” - fission-fusion social system

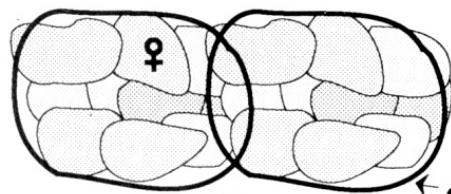
parties seen



of adults in the party

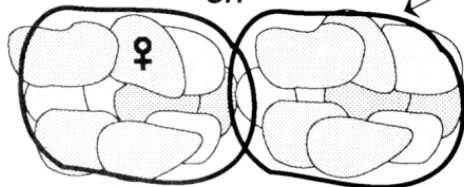
Chimpanzees spend a lot of time alone, but join up in “parties” - fission-fusion social system

Chimpanzee community structure



Female distribution not affected by males

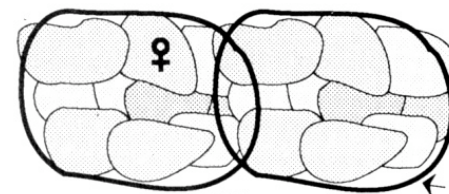
OR



Females avoid borders both sexes members of community

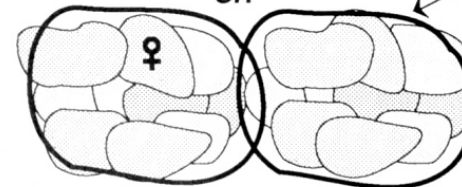
There is still debate about the “real” structure of chimpanzee society -- maybe it varies. At Tai, party size large, most of community may travel together fairly often. At Gombe, almost never get most together.

Chimpanzee community structure



Female distribution not affected by males

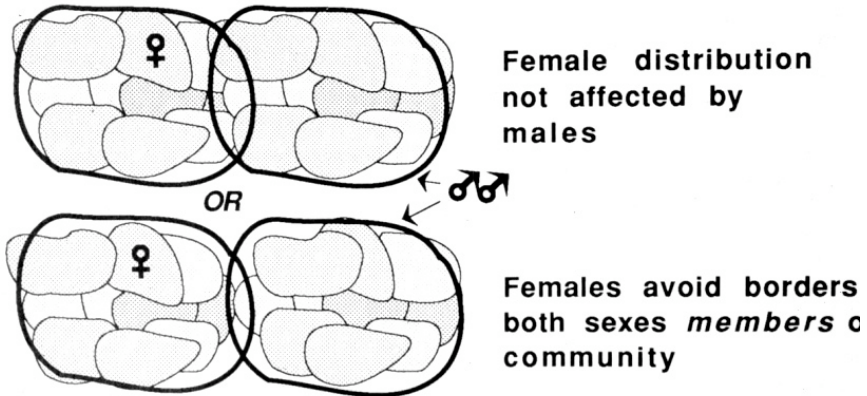
OR



Females avoid borders both sexes members of community

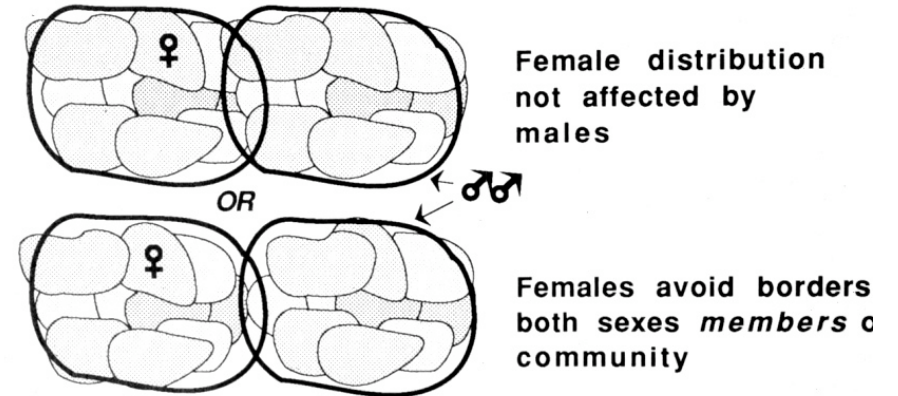
In some ways chimpanzees are less social than the majority of primates, spending more time alone; BUT their relationships are important, intense, and long-lasting. So - define ‘social’?

Chimpanzee community structure



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.

Chimpanzee community structure



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

Consequence
of **fission-
fusion** +
territoriality
= "imbalance of
power"
hypothesis



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).

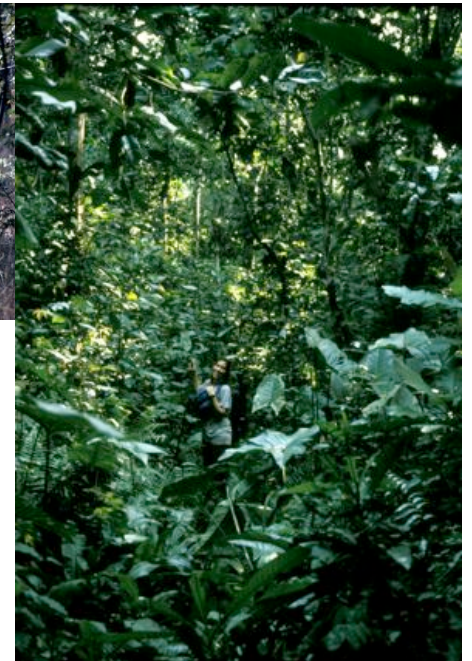
Chimps: The Dark Side

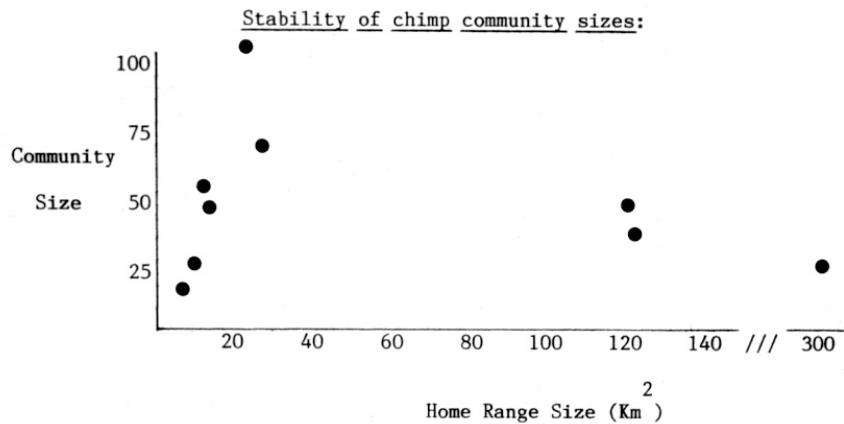


Open woodland

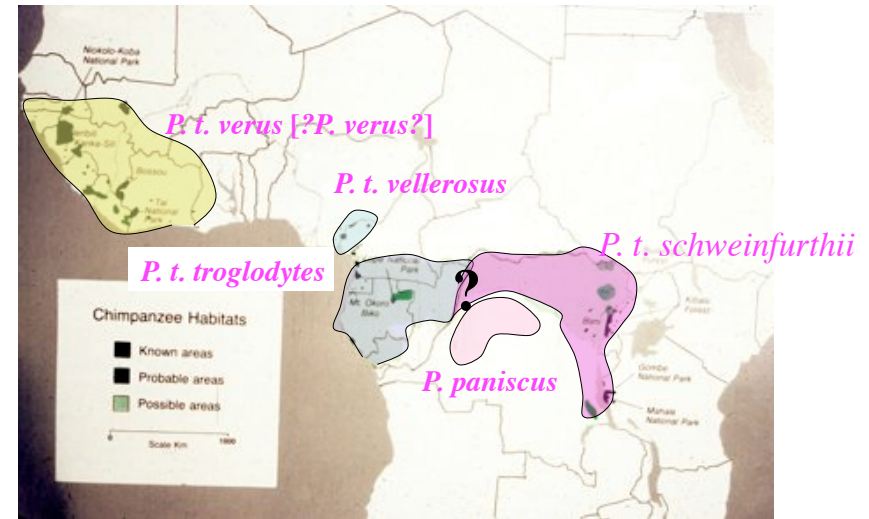
Density low (<1/km²)
in both of these; to
>5/km² in mixed.

Dense forest





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



Chimpanzees (1986)

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. vellerosus:

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.

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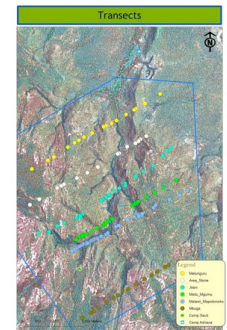
TOTAL:

173 -- 300,000



Measure distance D, line <-> nest

$(D1 + D2)/2 = X$, average sighting distance.



$X * \text{Length transect} = \text{area}$.

nests/area <formula> -->

population estimate

Chimpanzee conservation status

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Côte d'Ivoire had 8 - 12,000 - as much as 50% - based 1° on survey done in 1989-90.

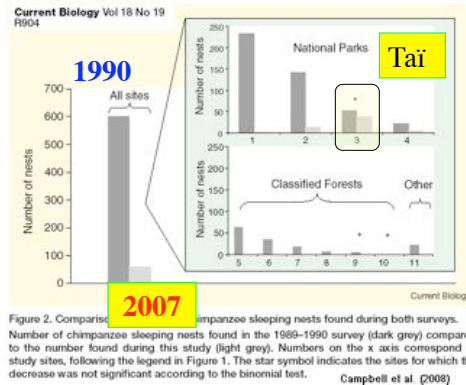
2008 report on repeat of that survey in 2007:

Human population increase in Côte d'Ivoire:

1990: 12 million

2008: 18 million

Civil unrest since 2002.



Chimpanzee conservation status

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