

Literature Review 3

Topic Summary

Zoology 567

I have read all 10 of my articles and have 10 annotated bibliography entries.

Hunting Behaviours in Chimpanzees

Hunting behaviours in chimpanzees covers a wide range of behaviours which are observed in both groups and solitary, wild and captive environments. Hunting behaviour includes all behaviours observed during hunting patrols, the pursuit of prey, the catching and consuming the prey (Mitani and Watts, 1999). All these behaviours are studied through observations of multiple chimpanzee communities located throughout Africa, or in unique cases of captivity (Videan et al., 2007). Observational studies can last months, or years, observations and data are typically reduced in future studies for comparison to determine how hunting behaviours change through time (Watts and Mitani, 2015).

There are many different influential factors that determine the successfulness of the hunt that are seen throughout different chimpanzee communities. Some of the compounding factors including number of males participating, overall size of hunting party (Mitani & Watts, 1999), canopy structure (Watts & Mitani, 2002; Boesch, 2002) and even the use of tools which has only been observed in Fongoli chimpanzees (Pruetz et al., 2015). The most common prey among most chimpanzee communities is the red colobus monkey (Watts and Mitani, 2015). Chimpanzee hunting influences the red colobus population, many papers have studied these effects on their population ecology (Mitani and Watts, 1999 & Stern and Goldstone, 2005). Hunting prey through the tree canopy has many variables which involves an extreme level of cooperation of the individuals who are involved with the hunt, which may be why a substantial amount of variation is seen among chimpanzee communities (Watts and Mitani, 2002).

Most of the research that has been done on this behaviour is regarding why the chimpanzee's hunt. There are three main hypotheses explaining why chimpanzees hunt (Mitani & Watts, 2001), all these hypotheses are tied to the ecological influences on hunting behaviours because they all question the function and evolution of the behaviour. The first hypothesis states that chimpanzees hunt to gain access

to mates, which ultimately increases the reproductive success of select males (Watts & Mitani, 2015). The second hypothesis states that males use meat as a social tool to strengthen bonds through meat sharing (Watts and Mitani, 2015). Individuals who participate in hunts take on specific roles, not all roles acquire meat (Boesch, 2002). Meat acquisition involves multiple factors like hunting skill, meat sharing and theft which are all related to the overall rank of the chimpanzee (Mitani and Watts, 1999). The third hypothesis is composed of two hypotheses, the nutrient shortfall hypothesis and the nutrient surplus hypothesis, which states hunts happen more frequently when fruit availability is lower and hunts happen more frequently when fruit availability is high which allows for an increase of energy reserves, respectfully (Klein et al., 2021). Many studies have been done regarding this hypothesis through observations of seasonal hunting and recording seasonal fruit availability. Different communities of chimpanzees seem to follow different hypotheses (Watts & Mitani, 2002; Klein et al., 2021). This makes determining exact ecological influences of this behaviour difficult due to such a wide range of behaviours that are observed.

Many studies of chimpanzee hunting are focused on the ecological factors that are influence these behaviours, questioning how and why these behaviours evolved, as well as how culture influences these behaviours to differ between communities (Hobaiter et al., 2017). Genetic and neurological influences have not been intensively studied because there is much a of driving factors, since most of the research is regarding evolution in an anthropological sense. Proximate influences on this behaviour should be further studied; questioning how these behaviours are developed (in captivity and the wild) and learned through generations, do hormones trigger the beginning of a hunt, why do chimpanzees choose to continue to hunt when it is not necessary for their survival? Knowing the answers to these questions can help us further understand chimpanzee hunting from a scientific perspective, as well as an anthropological perspective.

References

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