

## THE USE OF FRUITING SYNCHRONY IN THE MOVEMENT DECISIONS OF FORAGING CHIMPANZEES: WHAT BOTANICAL KNOWLEDGE DOES IT REVEAL?

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The synchronous appearance of fruit is known to trigger monkeys to inspect trees of the same species. We investigated whether chimpanzees (*Pan troglodytes verus*), in the Taï National Park, Côte d'Ivoire, where many fruit species show high levels of synchrony, use a similar search strategy to find fruit. We followed 5 adult females for 27-29 consecutive days each and marked the geographical location of their daily travel route, the trees they fed in and those that were "inspected". The next days we determined the fruiting state and size of each of the marked trees. We questioned what inspections can tell us about a chimpanzee's long-term phenological knowledge and tested whether the number of trees that were inspected per day was correlated with the number of trees fed in, and whether the coefficient was influenced by the synchronicity and predictability levels of the concerned fruit species. We focussed our attention on "mistakes" or in other words, the inspection of empty trees, to exclude the possibility that the females approached and inspected more trees simply because they could see or smell more trees with unripe fruit as the season was progressing. We found that within species fruit can have a spatially clustered distribution. Hence, we further investigated whether inspections can reveal long-term knowledge on previous fruit locations and spatial clustering of fruit and tested whether the location of inspected trees is influenced by the distance to trees fed in recently or in years before.

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