

## Swarming Inducement of *Pseudocantotermes grandiceps* alates in Response to Food Security in Kenya

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### Abstract

The termite alates of *Pseudocanthotermes grandiceps* are eaten as a substitute dietary element in Kenya. Artificial inducement of the alates was evaluated based on a traditional method that has been used for decades. The idea is to imitate the natural weather conditions required by swarming alates. In natural situations, the most conducive weather is when rain is accompanied by thunderstorms and then stops for at least 2 days with intervals of clear and sunny skies. Such weather conditions stimulate the emergence of alates during day time. In artificial situation, producing the sound of rain by rhythmic beating of sticks at the termite mound to strengthen the impression of rain early in the morning before the actual harvesting in the afternoon was found to work with *Pseudocanthotermes* species. This was done by manipulating weather conditions and puffing of smoke in the emergence holes just before emergence of alates. The alates of *P. grandiceps* responded to external changes and were harvested. The following conditions were found necessary in stimulating nest activities and emergence of alates: a) hot and dry weather for a week prior to artificial inducement; b) sunny and hot afternoon at time of swarming; c) laying a long rod on the ground at the termite mound and knocking it with smaller rods to produce a rhythmic sound 6am in the morning for thirty minutes. The time taken from the onset of the experiment to the end of swarming was approximately 8 hours. The artificial inducement of alates was found to be effective, seasonal and limited only to the genus *Pseudocanthotermes*.

**Keywords:** *Pseudocanthotermes*, Artificial, Inducement, Termite Alates, Weather, Swarming