

## TERMITARIES AND BUSH FIRES INDUCE A FRAGMENTATION OF MYOMYS POPULATIONS IN FALLOWS OF THE NAZINON FOREST (BURKINA FASO).

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Ecological and physiological data on pest allows to improve pest control and to develop strategies for landscape management. In the Nazinon forest which benefits of a reforestation project for protection of environment and wood production, termitaries are abundant as well in burned (non-protected) fallows than in non-burned (protected) fallows. According to some previous studies protected (non-burned) fallows are like unrestricted habitats in which rodents populations find abundant foods and protection all year round and do not show a sexual rest period. Conversely, non-protected fallows are like semi-arid habitats in which rodents populations experience a water-restricted foods period from November to June and show a sexual rest period from the beginning of the dry and cold season (December) to the end of the dry and hot season (May). In order to determine impacts of termitaries and bush fires on *Myomys daltoni*, which is the main rodent species living in the Nazinon fallows, we compare here some ecological data recorded from populations living in protected (non-burned) fallows (PF), in non-protected fallows with precocious fires (NPPF) and in non-protected fallows with late fires (NPLF). To obtain these data we used the catch-mark and release method (CMR) what allow recording of : trapping frequency (TF: number of catching animals/ number of nights x number of traps) ; percent of recaptures (R); percent of animals caught near of (< 30 m) a termitary (CNT) ; sex-ratio (SR) ; percent of juvenils (J). Animals are juvenile (15 < body weight < 20g) or adults (20g < body weight < 45 g). Two trapping sessions occurred during the dry and hot season (February and April). As compared to those from similar studies carried out in the Manding forest of Mali (were TF was ranged from 5% to 20%), results obtained here indicate that density of *Myomys daltoni* in the Nazinon forest are low in all fallows (1.4% < TF < 2.6%). Results obtained here indicate that influences of bush fires and termitaries on *Myomys daltoni* distribution depend on fallow types: (1) in PF, animals are adults (J=3D14%), mainly females (SR= 34/66) and constitute a resident population (R= .35%) with a distribution which is not influenced by termitaries (CNT= 15%); (2) in NPPF, animals are juvenils (J= .55%), with an equilibrated sex-ratio (SR= 50/50) and constitute a resident population (R= 35%) with a termitaries-dependent distribution (CNT= 80%). Indeed, conversely to what is observed in the two other fallows, all the termitaries that we have excavated were occupied by *Myomys* in NPPF; (3) in NPLF, animals are adults (J= 16%), with an equilibrated sex-ratio (SR= 48/50) and constitute a population (R= 13%) with a termitaries-independent distribution (CNT= 20%). These results drive us to think that the flux of *Myomys* between protected and non-protected fallows is very thick. Nevertheless, results indicates that it exists a flux of juvenils animals from NPPF to NPLF. In conclusion, in non-protected fallows, bush fires and termitaries induce a population fragmentation, but the ecological significance of a such intra-population distribution is not yet understood.

### Notes:

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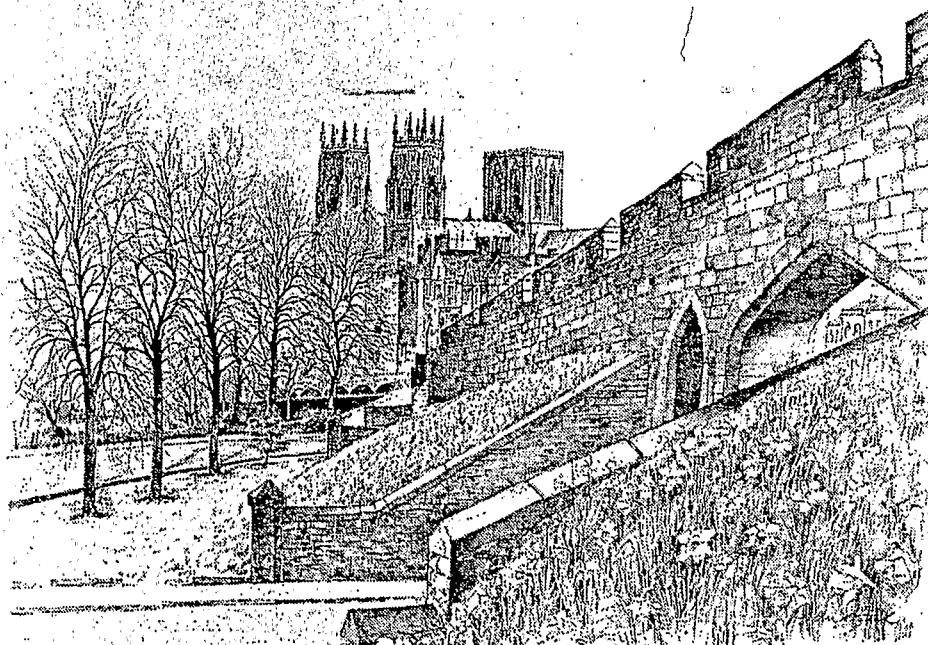
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