

bank vole

REPRODUCTIVE BEHAVIOR OF MOTHERS FACING INFANTICIDE RISK

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SUMMARY

We investigate how infanticide risk affects the behavioral strategy of nursing bank voles (*Myodes glareolus*). As females can be concurrently lactating and pregnant, infanticide risk may shift their investment between current and future reproduction, and hence their behavioral strategy. Our findings point to increased nest defense behavior (i.e. increased investment towards current reproduction) under high infanticide risk.

By spreading the scent of either the sire of the litter (sire treatment) or of a strange male (stranger treatment), we simulated, respectively, low or high infanticide risk for the lactating female.

Using these measures we studied female behavior during 5 hrs following the scent treatment.

CURRENT REPRODUCTION
NEST PROTECTION

FUTURE REPRODUCTION
MATING

PROCEDURES

TRAITS

ITEROPAROUS

RAPID REPRODUCTIVE CYCLES

MATERNAL CARE

CONCURRENT LACTATION AND PREGNANCY

RECOGNITION OF MATE PARTNER



Myodes glareolus

ENERGY

INF. RISK

When outside, a female's distance from the nest was larger in the sire treatment.

FEMALE + LITTER WERE RELEASED IN A NEST BOX (NEST) IN LARGE OUTDOOR ENCLOSURES

MALE SCENT WAS SPREAD ON A 30 M STRAIGHT PATH STARTING FROM THE NEST (1 HR BEFORE SUNSET)



NEST

MEASURES



RFID STATION

ABSENCE / PRESENCE FROM NEST



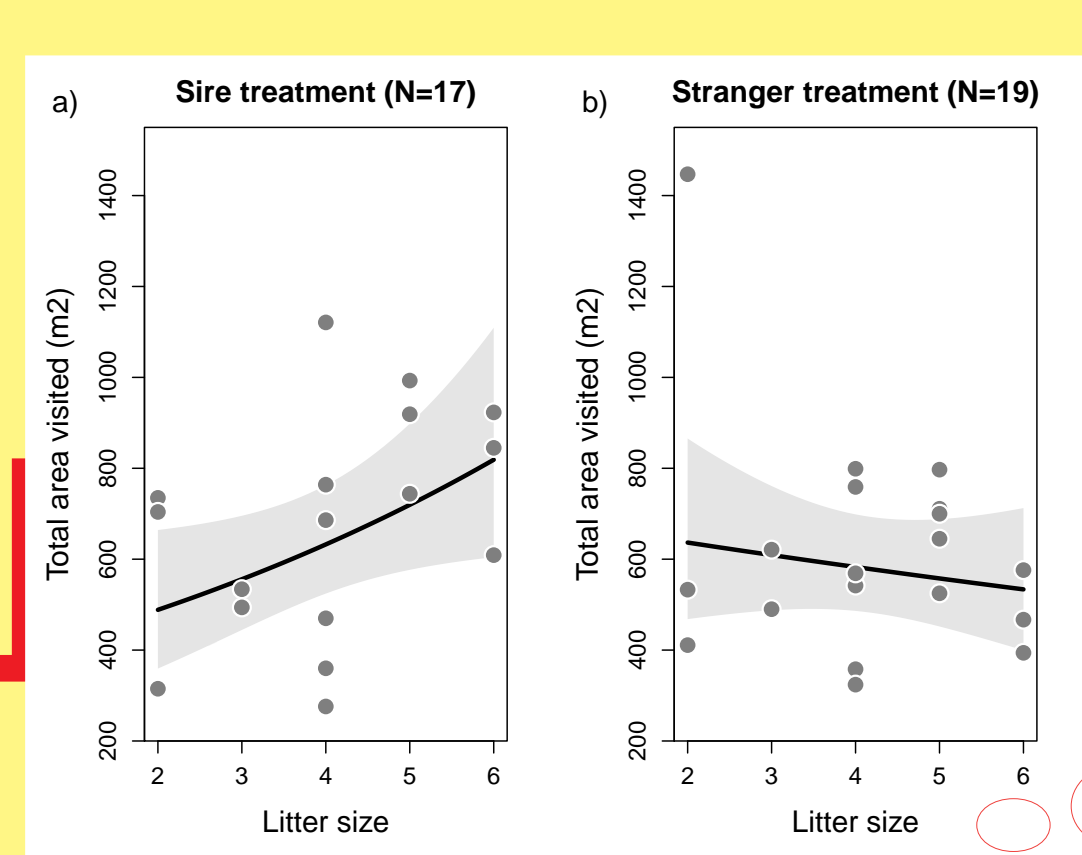
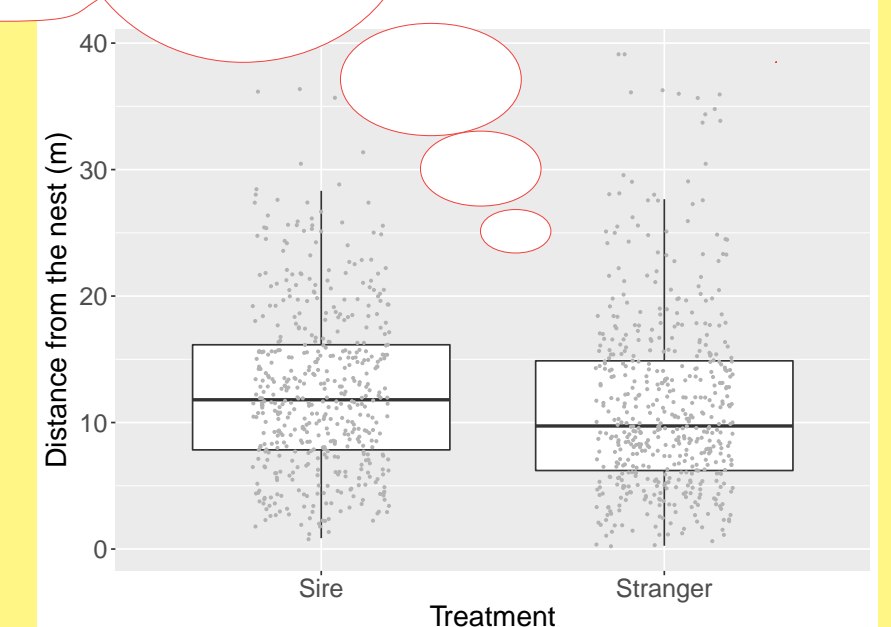
AUTOMATED RADIO TELEMETRY

SPACE USE AND ACTIVITY

BACKGROUND

METHODS

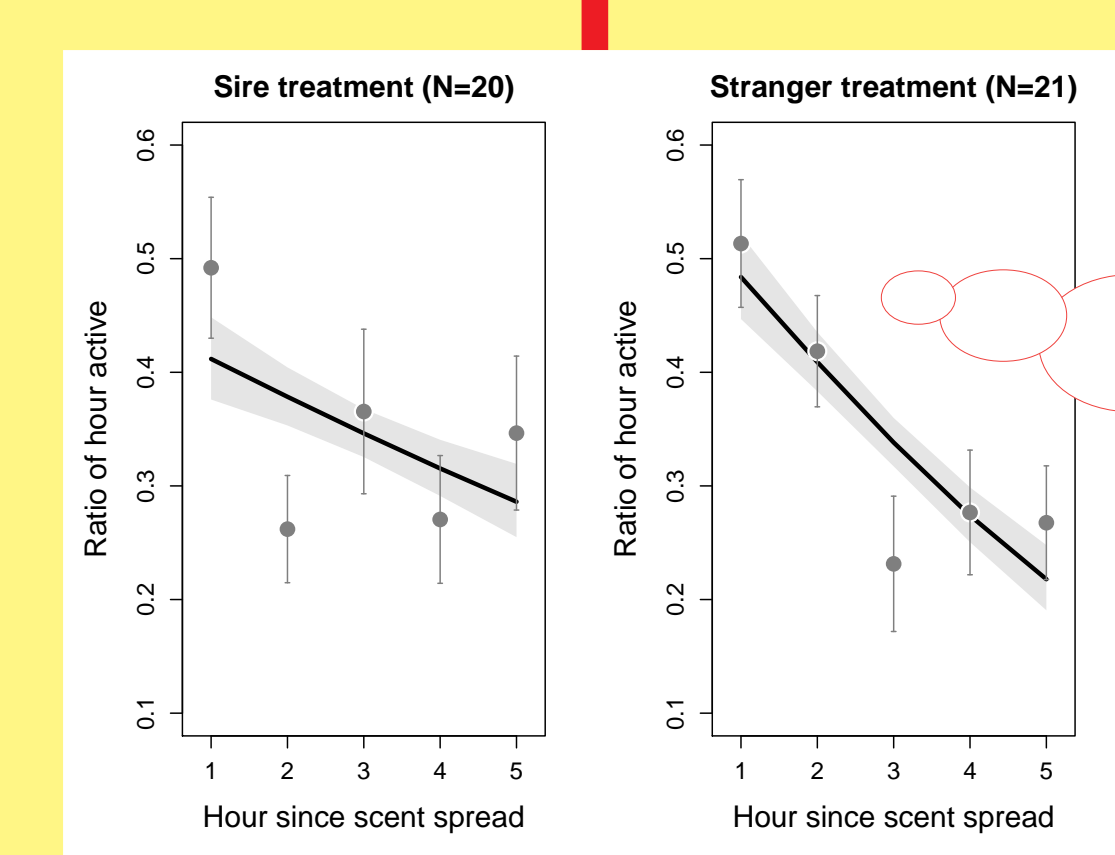
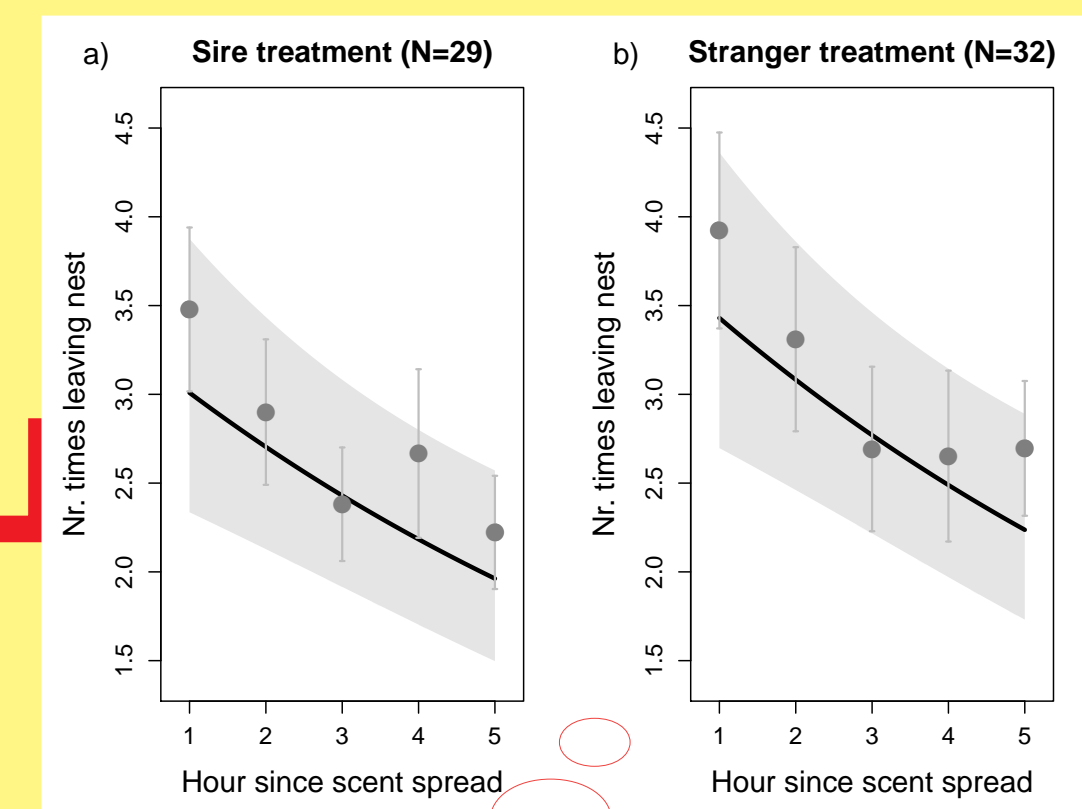
DISTANCE FROM THE NEST



The area visited was positively related to litter size in the sire scent treatment (a), but not in the stranger scent treatment (b).

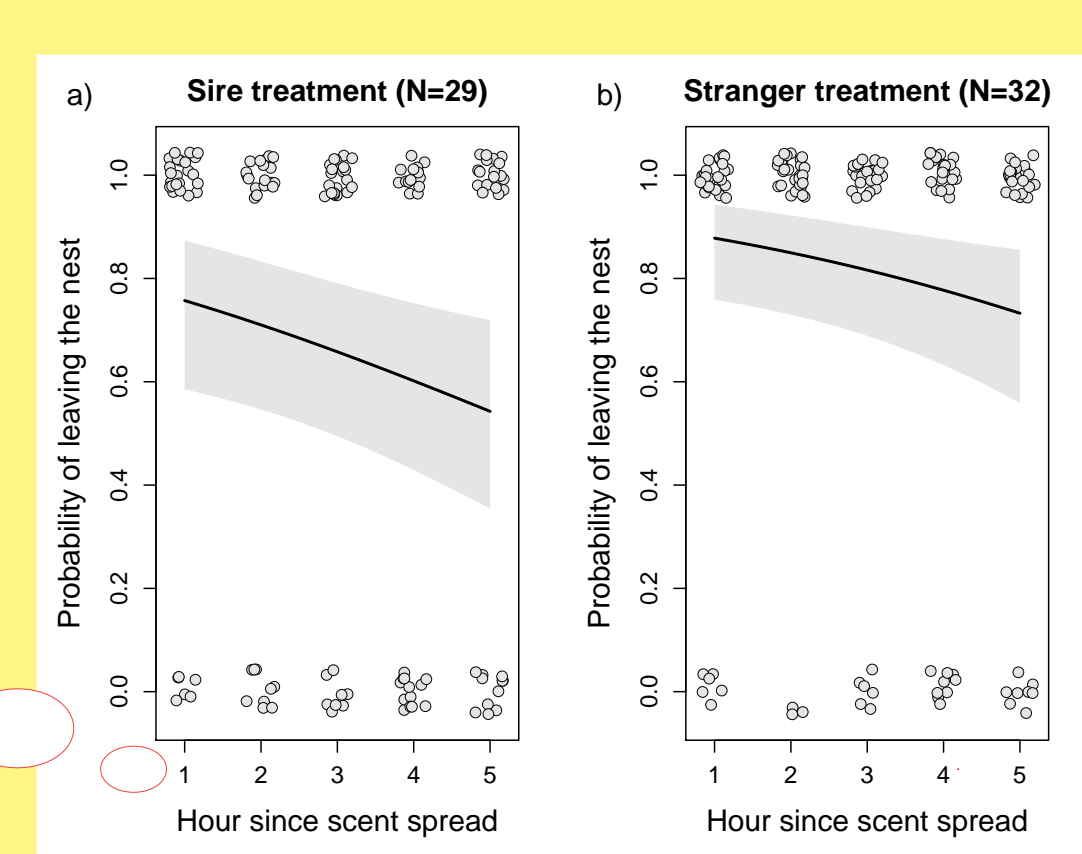
RESULTS

ACTIVITY LEVEL



Female activity was highest after scent spread, and remained high for longer in the stranger scent treatment (b).

ABSENCE FROM THE NEST



And, the number of times she left declined with hour since the male scent was spread.

The probability that a female left the nest was higher in the stranger scent treatment (b).

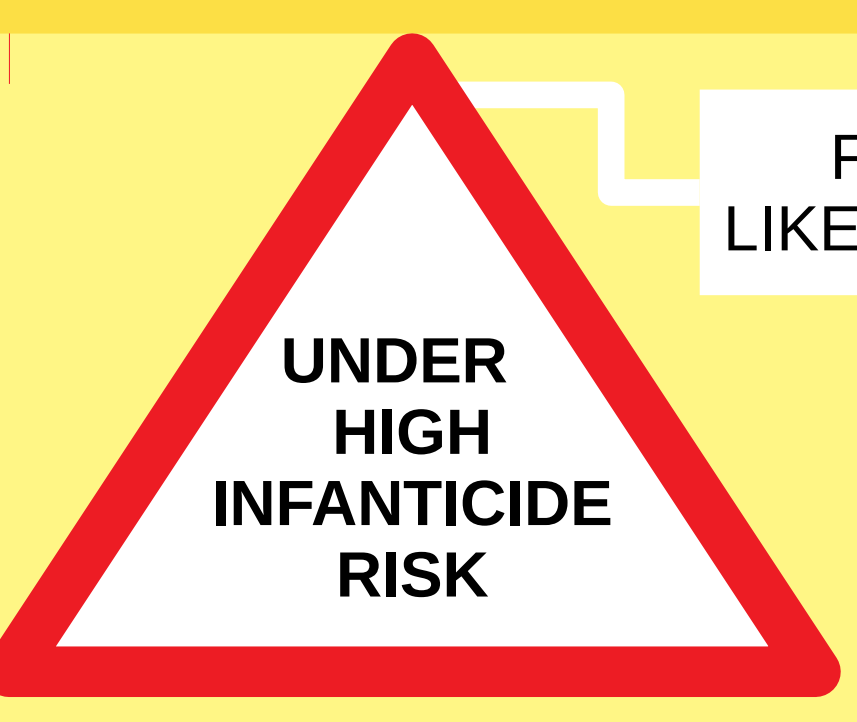
CONCLUSIONS

FEMALES ARE MORE LIKELY TO LEAVE THE NEST

FEMALES SHOW INCREASED ACTIVITY FOR A LONGER TIME

FEMALES STAY CLOSER TO THE NEST

FEMALES NO LONGER SHOW LITTER SIZE DEPENDENT RESOURCE ACQUISITION



The findings point to increased nest defense (protection of current reproduction) by females under infanticide risk; they go out more, but stay closer to their nest (more vigilance), are more active (increased alertness), and reduce time spent on other activities (e.g. resource acquisition).

