Cognitive aspects of risky foraging: great tits go for less

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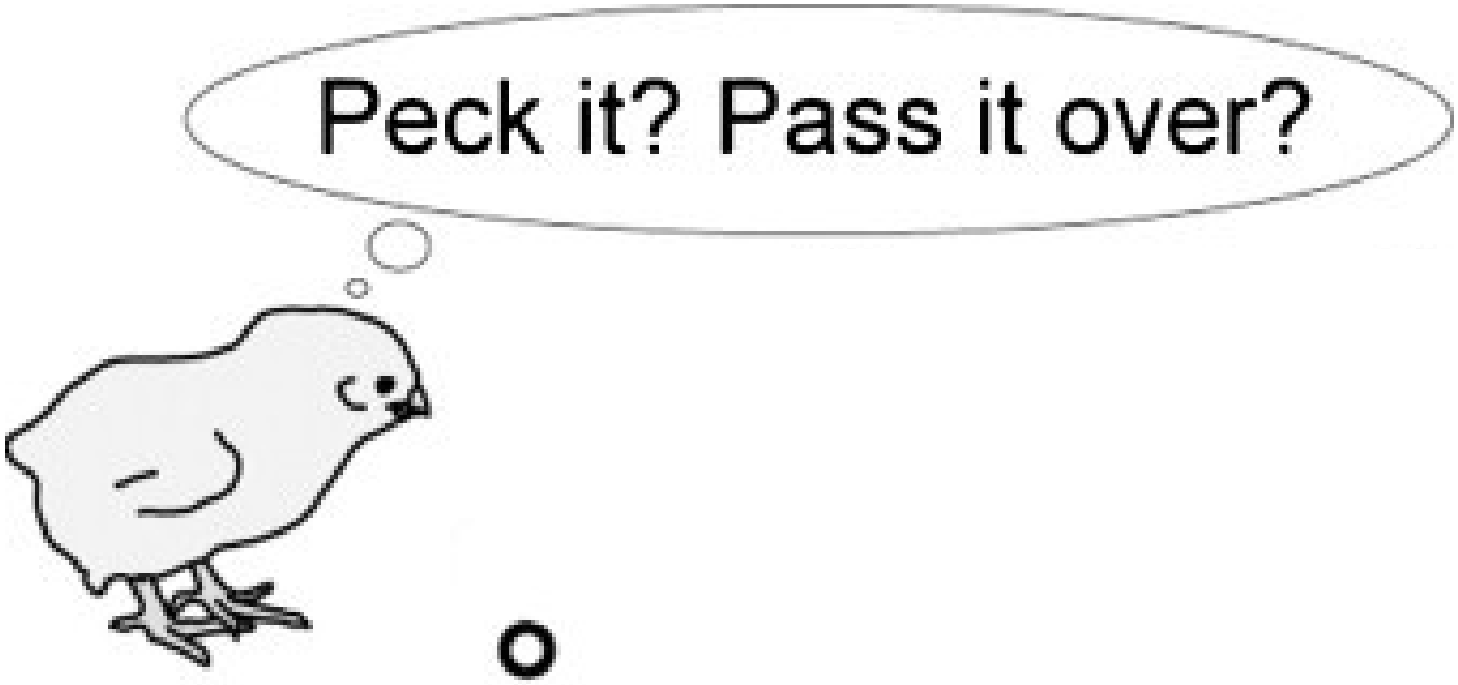
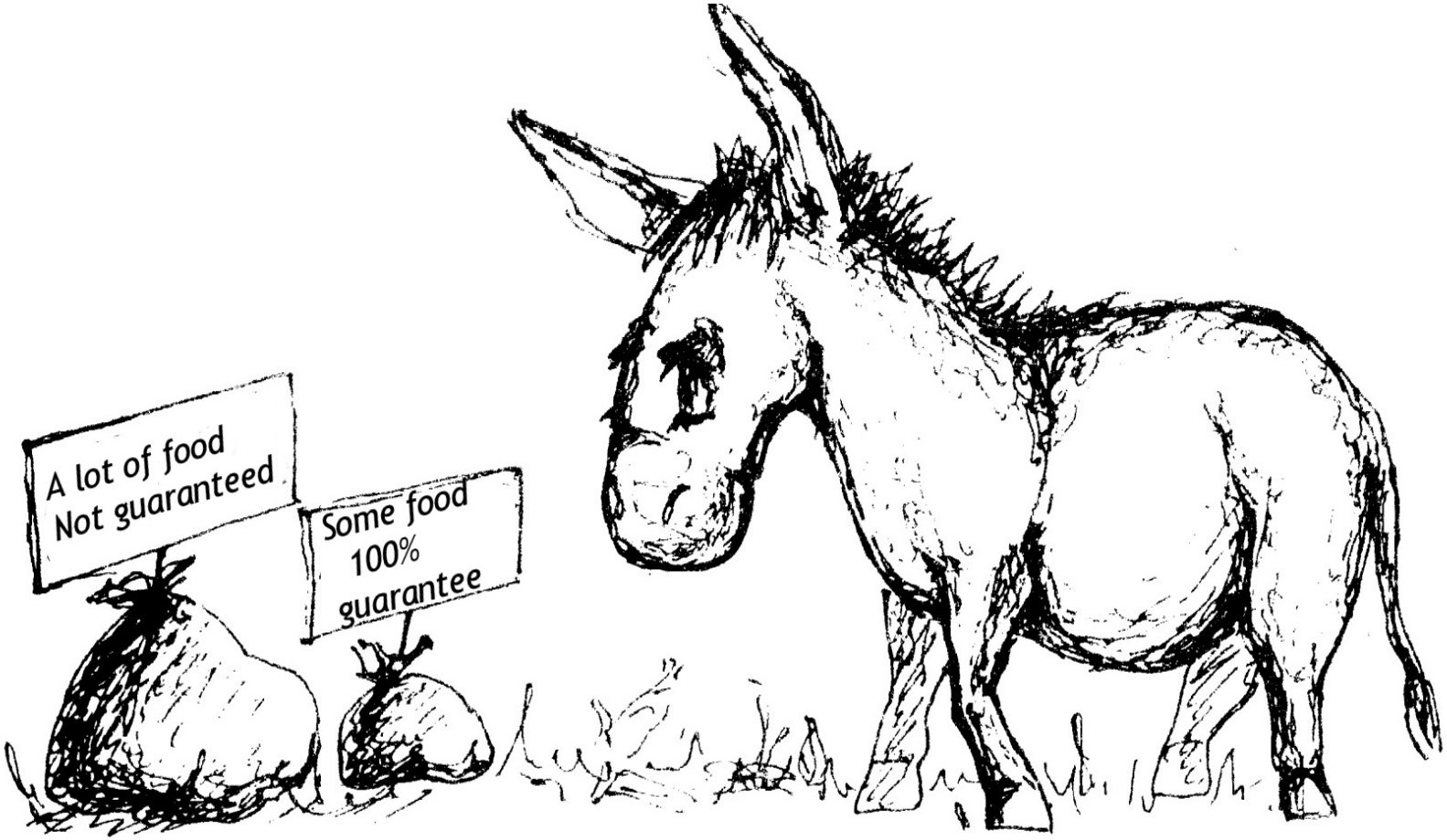
Optimal foraging theory



Risk-sensitive foraging

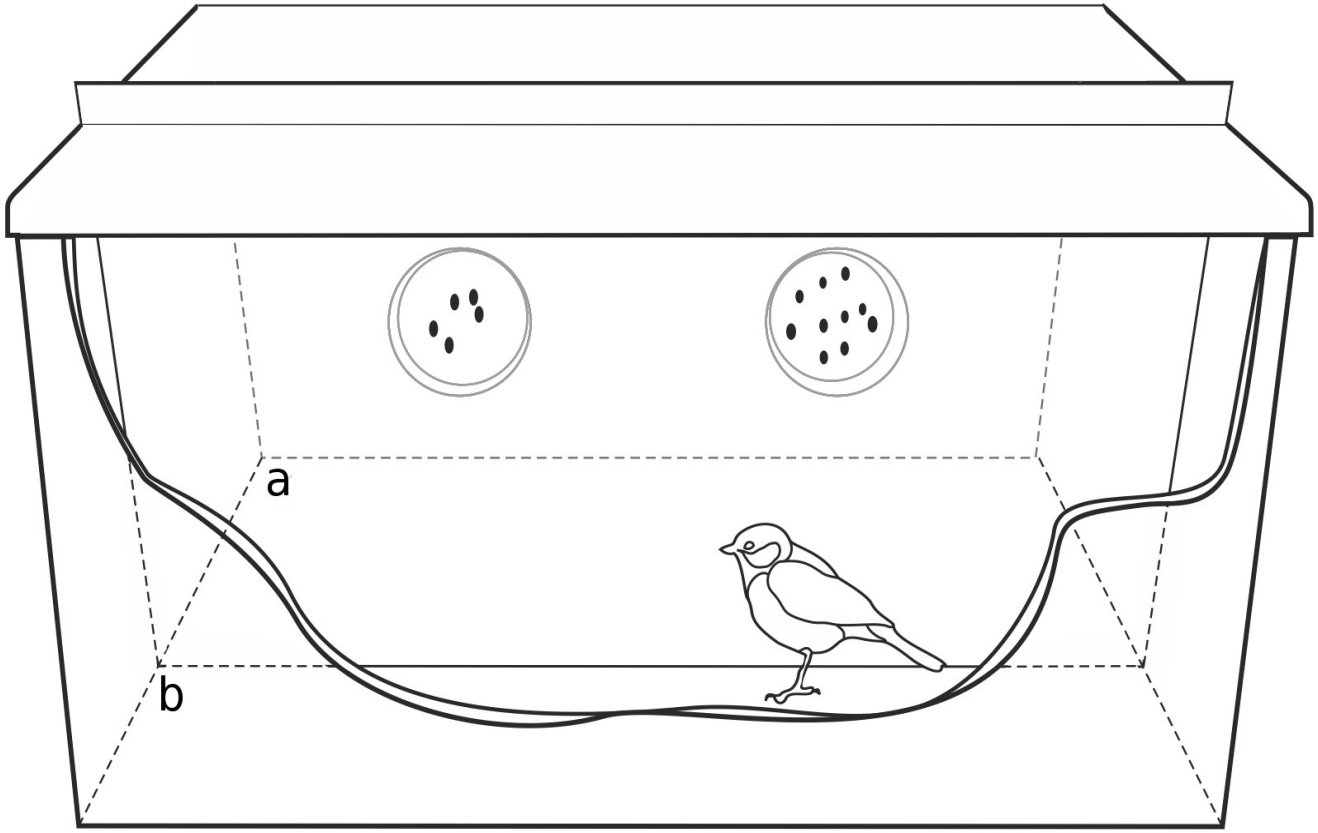


Feeding with a dangerous prey

Field striped mice always tend to prefer the smaller quantity of a dangerous prey.

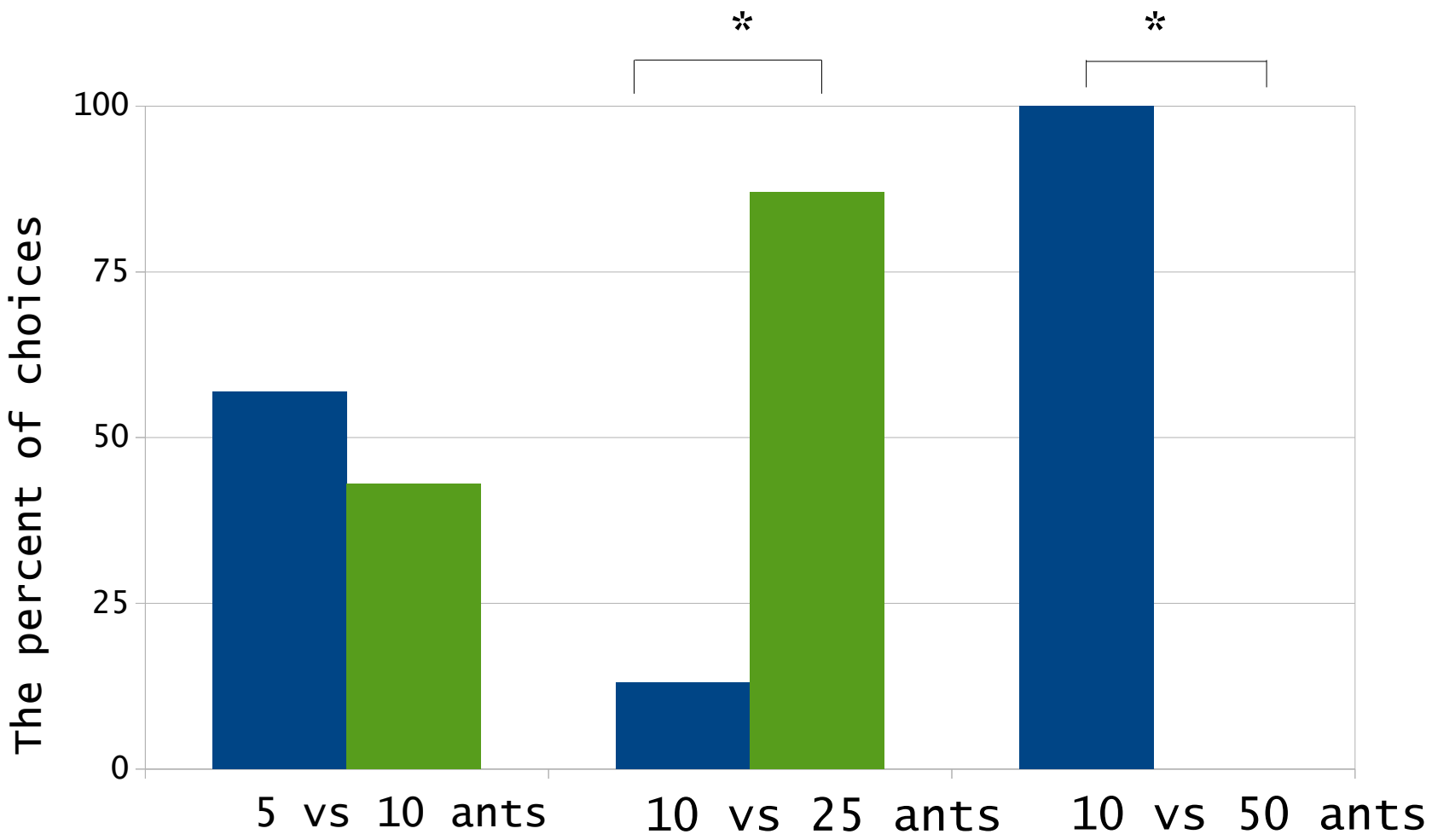
Pantelleva *et al*, 2013

Experimental design



1st experiment: 5 birds, 20 hours of video
2nd experiment: 8 birds, over 40 hours of video

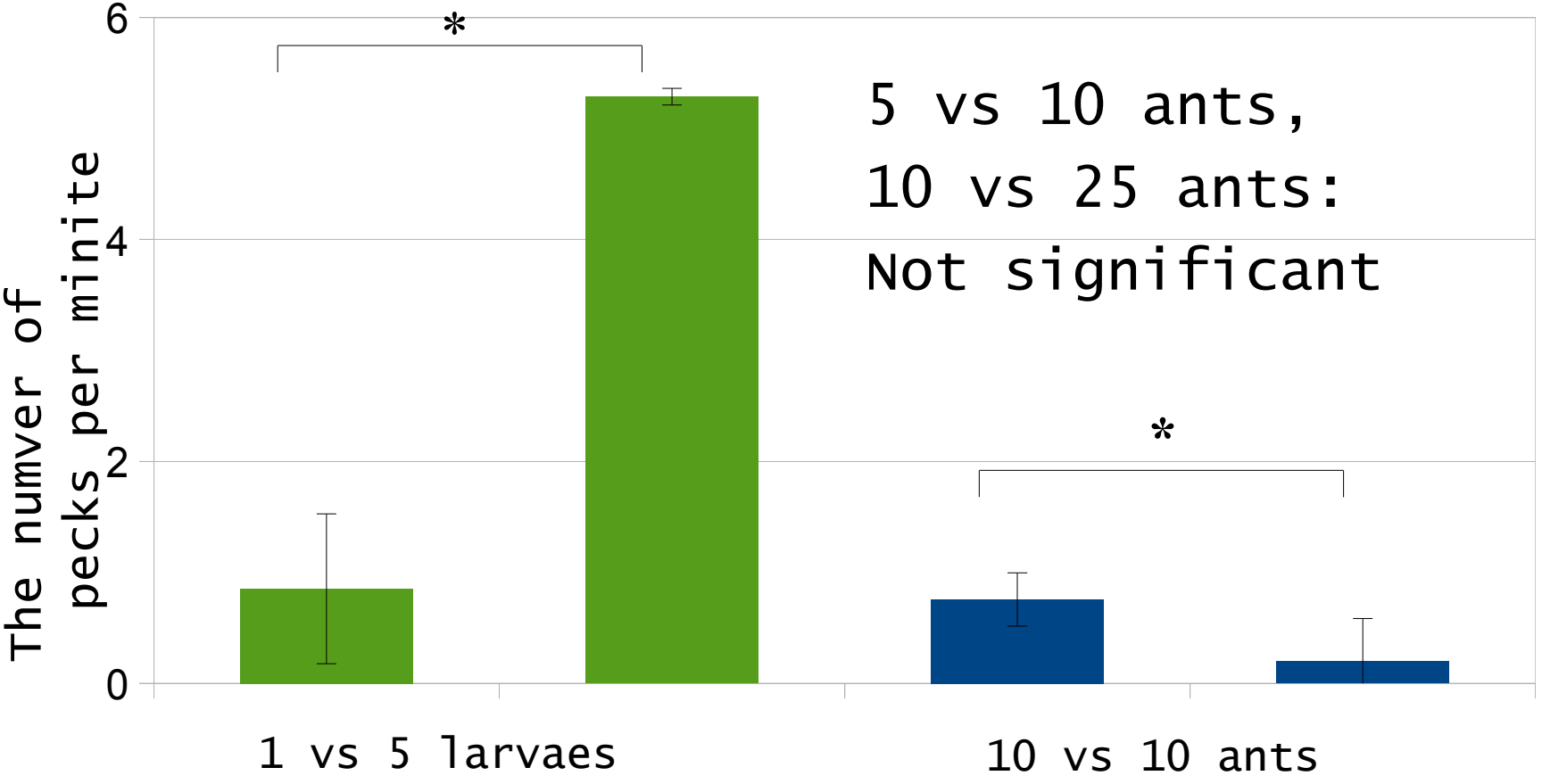
1st expreriment: great tits go for less



The percent of choices of the feeders by tit

(*P < 0.05 Pearson's chi-squared test)

2nd expreriment:
great tits peck the less one

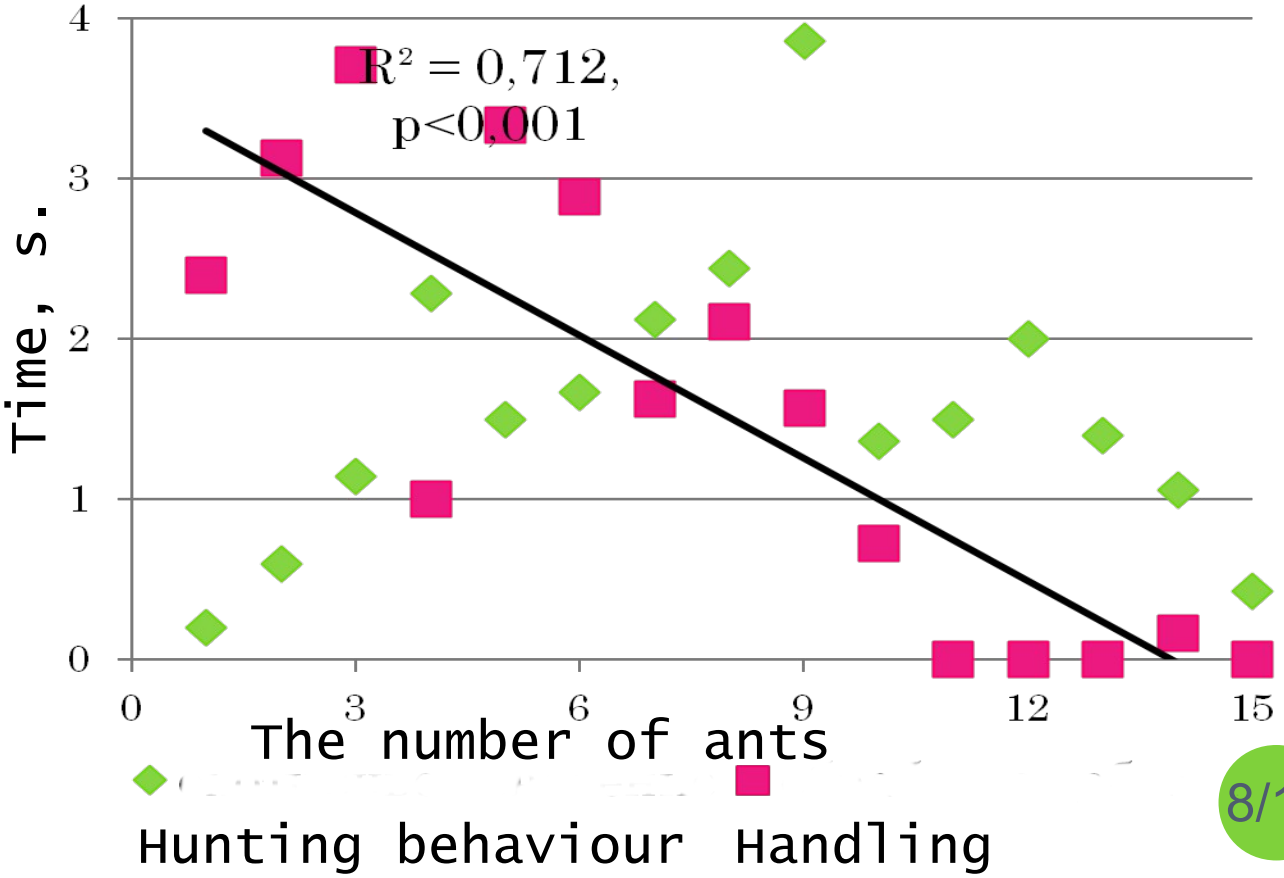


The number of pecks of the feeders cover per minite

(*P < 0.01 Mann-Whitney test).

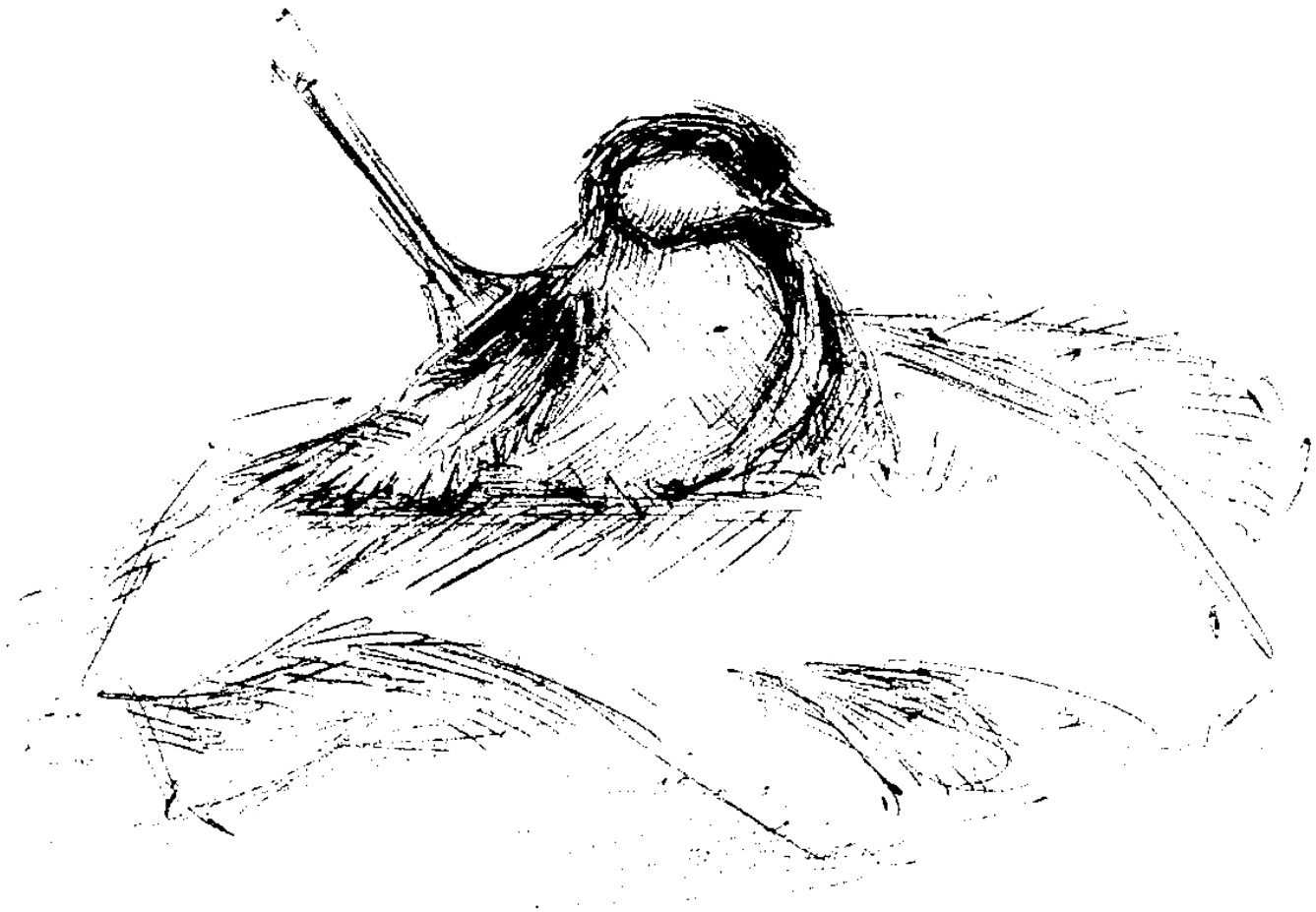
3rd expreriment: first neutralize then eat

Time spend on hunting behaviour and handling in relation to the number of ants in the section



Conclusions

- Feeding with a dangerous prey requires making choices by comparing the energy value and a danger level of prey.
- Great tits can distinguish between quantities of dangerous food items and make their decision cautiously basing on risk/reward evaluation, permitting a "reasonable violation" of optimal foraging laws.



The study was supported
by the Russian Science Foundation (grant 14-14-00603)
through the Institute of Systematics
and Ecology of Animals SibRAS