

## Contribution submission to the conference Berlin 2012

**Spatio-temporal dynamics of bumblebees foraging under predation risk** — FRIEDRICH LENZ<sup>1</sup>, THOMAS C. INGS<sup>2</sup>, LARS CHITTKA<sup>2</sup>, ALEKSEI V. CHECHKIN<sup>3</sup>, and •RAINER KLAGES<sup>1</sup> —

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We study bumblebees searching for nectar in a laboratory experiment with and without different types of artificial spiders as predators. We find that the flight velocities obey mixed probability distributions reflecting the access to the food sources while the threat posed by the spiders shows up only in the velocity correlations. This means that the bumblebees adjust their flight patterns spatially to the environment and temporally to predation risk. Key information on response to environmental changes is thus contained in temporal correlation functions and not in spatial distributions.

[1] preprint arXiv:1108.1278 (2011)

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