

**Evolution of Flower Colours:
Choice Strategies of Pollinating Hymenoptera
as Selection Factors**

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Chapters of the dissertation are based on the following manuscripts:

- I. **Anna M. Wertlen, Rodrigo J. De Marco, Randolf Menzel, Natalie Hempel de Ibarra** *Apis mellifera* bees modulate their dance according to perceptual properties of a flower patch. To be submitted to *Behavioral Ecology and Sociobiology*.
- II. **Anna M. Wertlen, Werner F. Kreisch, Michael Ristow, Natalie Hempel de Ibarra** Sensory ecology of pollination: The distribution of floral colours and sugar rewards in the bee's natural environment. To be submitted to *Proceedings of the Royal Society London B*.
- III. **Anna M. Wertlen, Andrea A. Cocucci, Alicia Sérsic, Natalie Hempel de Ibarra** Studies on floral colouration and reward properties in Argentinean plants-pollinator communities. Prepared for *Naturwissenschaften*.
- IV. **Anna M. Wertlen, Claudia Niggebrügge, Misha Vorobyev, Natalie Hempel de Ibarra** Detectability of grouped colour targets for bees is enhanced through edge density. To be submitted to *Proceedings of the Royal Society London B*.
- V. **Santiago M. Benitez-Vieyra, Natalie Hempel de Ibarra, Anna M. Wertlen, Andrea A. Cocucci** A new floral mimicry system between Turneraceae and Malvaceae is Müllerian but not mutualistic. In review for *Proceedings of the Royal Society London B*.

I conducted the experimental work and all measurements and I wrote the manuscripts of the Chapters I-III. I collected and analysed data together with C. Niggebrügge, prepared parts of the manuscripts and participated in the discussion for Chapter IV. I performed spectral measurements and participated in the discussion for Chapter V.

Table of Contents

Introduction	11
Chapter I	19
<i>Apis mellifera</i> bees modulate their dance according to perceptual properties of a flower patch.	
Chapter II	39
Sensory ecology of pollination: The distribution of floral colours and sugar rewards in the bee's natural environment.	
Chapter III	79
Studies on floral colouration and reward properties in Argentinean plant-pollinator communities.	
Chapter IV	103
Detectability of grouped colour targets for bees is enhanced through edge density.	
Chapter V	113
A new floral mimicry system between Turneraceae and Malvaceae is Müllerian but not mutualistic.	
General Conclusions	125
Summary	133
Zusammenfassung	137
Danksagung	141
Curriculum Vitae	143
Appendices	145