

Chemically Mediated Mate and Host Finding in Parasitic Wasps

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It is the little things that run the world

Edward O. Wilson

This thesis is based on the following manuscripts:

(1) Steiner, S., Steidle, J.L.M. and Ruther, J. (2005) Female sex pheromone in immature insect males – A case of pre-emergence chemical mimicry? *Behav. Ecol. Sociobiol.* 58:111-120.

(2) Steiner, S., Mumm, R. and Ruther, J. (subject of minor revision, *J. Chem. Ecol.*) Courtship pheromones in parasitic wasps: Comparison of bioactive and inactive hydrocarbon profiles by multivariate statistical methods.

(3) Steiner, S., Henrich, N., Erdmann, D. and Ruther, J. (submitted) Mating with sperm-depleted males does not increase female mating frequency in the parasitoid *Lariophagus distinguendus*.

(4) Steiner, S., Hermann, N. and Ruther, J. (2006) Characterization of a female-produced courtship pheromone in the parasitoid *Nasonia vitripennis*. *J. Chem. Ecol.* 32:1687–1702.

(5) Ruther, J., Stahl, L.M. and Steiner, S. (submitted) A male sex pheromone in a parasitic wasp and control of the olfactory response by the female mating status.

(6) Steiner, S., Steidle, J.L.M. and Ruther, J. (submitted) Host-associated kairomones used for host and mate finding in the parasitoid *Lariophagus distinguendus* (Hymenoptera: Pteromalidae).

(7) Steiner, S., Erdmann, D., Steidle, J.L.M. and Ruther, J. (submitted) Host habitat assessment by a parasitoid using fungal volatiles.

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