

SEMIOCHEMICALS AND COMMUNICATION IN SOCIAL SYSTEMS: FUTURE DIRECTIONS

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Chemical communication in social insects has evolved a complexity not found in solitary insects. As a consequence deciphering how this chemical communication works has been extremely difficult and challenging. This Symposium has attempted to approach the problem a little differently. Instead of looking at each social insect group, wasps, ants, termites and bees, separately, we have reduced chemical communication into its component parts and have addressed what is known across social insect groups. Thus, we look at the behaviors, sources, and chemistry of social insect semiochemicals and then how these chemical signals are controlled, detected, and processed into a measurable response. We will highlight key discoveries and areas where we have reached an impasse or resistance. In the latter areas we want to help stimulate researchers to tackle these very difficult problems. Once we have the puzzle pieces, we have to make an effort to put them back again into the whole organism. In doing so we will no doubt find that a number of pieces are missing. This last presentation will, with the help of all Symposium participants, put the known pieces together and outline possible future directions in the semiochemical communication of social insects.

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