



Deceptive wasps

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From a personal perspective, everyone is interested in honesty and deception in communication. Professionally, evolutionary biologists find the issue of honest communication even more perplexing. Dishonesty seems intuitively advantageous. If a weak animal could successfully convince others that it were strong, it could win a better territory, more mates, and higher status.

Despite their interest, researchers know remarkably little about natural levels of dishonesty. Inaccurate communicators have evolved to avoid detection, so it is a challenge for researchers to figure out which animals are signaling accurately vs. inaccurately.

Wasps have variable, black spots on their face that are a signal of strength. Wasp pictures are arranged from lowest strength (top) to highest strength (bottom). Wasps who signal that they are strong when they are actually weak are punished by other wasps. We will test why wasps become inaccurate signalers. How do genes and the environment influence the development of honest versus dishonest signals? In addition, we will test the long-term consequences of inaccurate signaling for social stability, group aggression, and parental care.

