

Uncovering behavior of long-dead insects

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What can you learn from the 120 year-old body of a parasitoid wasp? Using material from museum collections, researchers writing in the open access journal *BMC Evolutionary Biology* report that they can tell how males wasps court their females, based on dead specimens.

Parasitoid [wasps](#) are one of the most abundant groups of organisms on the planet. Their diversity makes it very hard to study behaviors across many species. Seraina Klopstein from the Natural History Museum of Bern, Switzerland, and co-workers have shown that males of many species coil their antennae around those of their mates, either once or in a more complex double coil. This peculiar courtship behavior is determined by antennal structures that bring male antennal glands into intimate contact with the female's [receptors](#). The coiling behavior has evolved slowly and, where lost, has never re-evolved.

The researchers amputated the antennae from specimen wasps of 56 different species and transferred them from an [ethanol](#) solution into pure water. The change in viscosity between the two liquids caused the antennae, where possible, to curl and was also reproducible on species where fresh material was available. Speaking about the results, Klopstein said: "Our method emphasizes the importance of natural history museum collections, even for areas of research that could never have been anticipated at the time those collections were built."

More information: The evolution of antennal courtship in diplazontine parasitoid wasps (Hymenoptera, Ichneumonidae, Diplazontinae), Seraina Klopstein, Donald L.J. Quicke and Christian

Kropf, BMC Evolutionary Biology (in press),
www.biomedcentral.com/bmcevolbiol/

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