

How do spiders smell?

Behavioural and/or Ultrastructural analysis of sensory organs in spiders

Background: Although there is ample behavioural evidence that spiders can smell it is yet unclear which structures are used to do so. In insects, multiporous sensilla are known to be used for olfaction whereas single pore sensilla are used for gustation. Spiders, however, only possess single pore sensilla (see below). Therefore, these sensilla are either able to perform both tasks, possibly depending on the position of the sensillum or other structures are responsible for olfaction.

Plans: In this project, you can perform behavioural experiments on olfaction and/or explore the ultrastructural world of sensilla. You can start any time with a morphological part. Behavioural experiments are limited to the mating season (July – August – September).

Scope: This project is part of a larger scale project on spider sensing in collaboration with researchers from Hamburg und Lund.

What you will learn:

- planning and conducting a scientific project
- troubleshooting
- presentation skills

Methods:

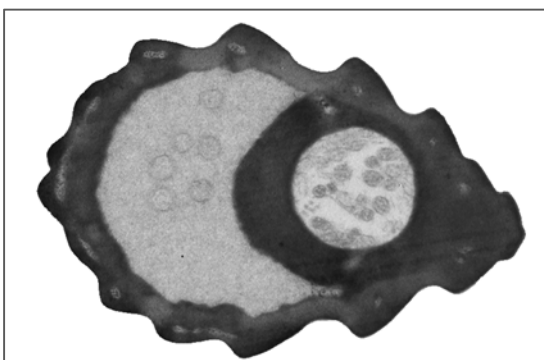
- behavioural analysis
- Transmission electron microscopy
- Scanning electron microscopy



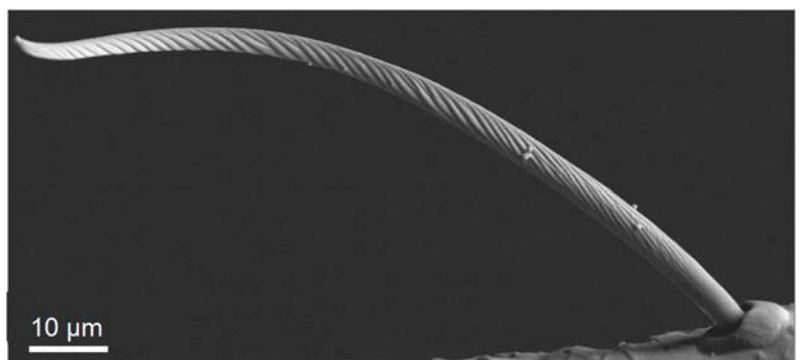
For a noncommittal meeting, please get in touch with:

PD Dr. Carsten Müller, carstmue@uni-greifswald.de

Prof. Dr. Gabriele Uhl, General and Systematic Zoology, gabriele.uhl@uni-greifswald.de



Tip pore sensillum in cross section



Tip pore sensillum of *Argiope bruennichi* (Ganske, Müller, Uhl 2018)

