



Seewiesen Colloquia

Speaker invited by: Dept. Wikelski, Radolfzell

Thursday, November 22, 2012, 13h, House 4, Lecture room
VIDEOCONFERENCE TO RADOLFZELL

Variable parasites - variable defences?

Prof. Dr. Paul Schmid-Hempel
ETH Zürich

The trypanosome *Crithidia bombi* infects several species of *Bombus* (bumblebees); here, we focus on *B. terrestris*. The parasite is spread by contacts on flowers and evidence shows that the infecting populations in the hosts are very prevalent and highly variable. At the same time, the presumably relevant genetic complements of the hosts are highly conserved. One alternative defence strategy is by variable gene expression and the synergistic actions of effector molecules. The concept and evidence for such a process are discussed.

Who is Paul Schmid-Hempel?

1982	PhD University of Zurich (R. Wehner), CH
1982/84	Royal Society postdoctoral fellowship Oxford University (J.R. Krebs), UK
1985/87	Assistant Zoological Institute (S.C. Stearns), University of Basel
1988/91	Research Professorship (START) of the Swiss National Science Foundation, University of Basel
1991-	Professor of Experimental Ecology, ETH Zurich
2007-	Permanent Fellow of the Wissenschaftskolleg zu Berlin

Selected publications:

- Schmid-Hempel P. 2005. Evolutionary ecology of insect immune defenses. *Annual Review of Entomology* 50: 529-551.
- Sadd B, Schmid-Hempel P. 2006. Insect immunity shows specificity in protection upon secondary pathogen exposure. *Current Biology* 16: 1206-1210.
- Schmid-Hempel P. 2011. *Evolutionary Parasitology*. Oxford: Oxford University Press.
- Ulrich Y, Sadd B, Schmid-Hempel P. 2011. Strain filtering and transmission of a mixed infection in a social insect. *Journal of Evolutionary Biology* 24: 354-362.