

Prof. Dr.

**Wolfgang Stephan**

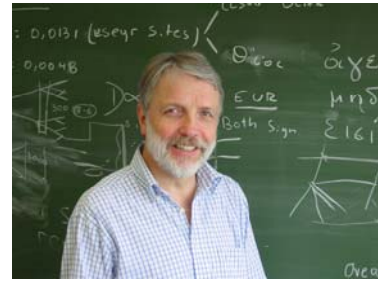
LMU Munich

Department of Biology

Grosshaderner Str. 2

82152 Planegg

E-Mail: Stephan [at] zi.biologie.uni-muenchen.de



---

### **Neutral non-equilibrium population genetics: a multilocus case study in wild tomatoes**

Multilocus sequencing studies assessing patterns of nucleotide polymorphism within and among closely related species provide valuable insights into the evolutionary processes involved in species divergence. We have employed the analytical framework of divergence population genetics in testing the isolation model of speciation in two self-incompatible species of wild tomatoes (clade *Lycopersicon*). However, all current implementations of divergence models assume panmixia within ancestral and extant species, which introduces biases of potentially large magnitude, depending on the sampling scheme employed in empirical studies. Moreover, our coalescent simulations of samples taken from subdivided expanding populations confirm that except at very high migration rates, sampling local populations is not equivalent to sampling from a panmictic population, with implications for studies spanning the range from *Drosophila* to humans. Within the constraints imposed by the complexities of the coalescent process in subdivided populations that are not accounted for in current divergence models, we obtained evidence for very recent speciation ( $\leq 0.55$  million years) of the two wild tomato species, which based on patterns of linkage disequilibrium appears to have occurred under residual gene flow.

#### **Short CV**

Study of physics and mathematics at University of Erlangen,

PhD in biophysics at Konstanz University

postdoctoral training in population genetics at University of Sussex and the National Institutes of Health (USA).

1989-2000 Assistant to Full Professor at University of Maryland and Rochester.

Since 2000 Professor of Evolutionary Biology at LMU Munich.