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Sexual selection vs conflict: role in plant reproduction microevolution



A PhD project is available in the Plant Repro Evo Lab (<https://lab-alliance.natur.cuni.cz/plantreproevo>) at Charles University in Prague.

How sexual selection affects the evolution of sexual traits remains among the fundamental puzzles in evolution. The role of sexual conflict, which arises when the interest of one sex collides with the ones of the other sex, is similarly intriguing. Actually, sexual selection and sexual conflict, two sides of the same coin, are predicted to be responsible for the fast evolution of sexual traits and genes, under the famous “red queen hypothesis” evolutionary scenario. Plants present an excellent but unexplored opportunity to test and extend the theory. In particular, the traits affected by sexual selection and conflict, their variation in nature, and the genomic basis of sexual selection and conflict remains to be deciphered.

The PhD project will bridge these gaps in current knowledge by integrating research from developmental biology, transcriptomics and population genomics. Specifically, the student will evaluate the evolutionary forces driving genetic and phenotypic variation in sexual traits within several *Arabidopsis* species, using microscopy and bioinformatics techniques. By bridging several fields of plant biology, the project will produce an integrative perspective on sexual selection and conflict. In the process, it will equip the PhD student with theoretical and practical skills currently in high demand in academia and private sector (plant reproduction biology, genomic techniques, statistics, programming).



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We are looking for PhD student with interest in multidisciplinary approaches, involving plant reproduction, evolution and genomics. Previous experience in any of these fields is not required but will be beneficial. The project is supported by the Department of Botany (Charles University, Prague, Czech Republic) and will be under the supervision of Clément Lafon Placette (<https://lab-allience.natur.cuni.cz/plantreproevo>).

The project is expected to start on September 1st, 2019. It will be financed for four years. The salary together with the doctoral stipend provided by the university (starting \approx 800 EUR, with significant raise over the years) is equivalent to the average salary within Prague, which represents currently one of the most vibrant cities in Europe, with rich social life, large international community, and opportunities for collaborative research across multiple institutes and universities located in the city. If you are interested, please send us an email explaining your motivations and your CV at lafonplc@natur.cuni.cz before 15th of June.