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Patterns of introgression in Veronica spicata in three regions of Eurasia

Initiative: Trilaterale Partnerschaften – Kooperationsvorhaben zwischen Wissenschaftler(inne)n aus der

Ukraine, Russland und Deutschland

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The impact of hybridization between two species has gained a substantial gain in interest with the ability to follow the fate of single genes or alleles after crossing through genomic techniques. For example, one is now able to detect introgression of single genes in crosses between two crop cultivars or between a crop and its wild relative for optimizing commercial breeding. However, by investigating introgression between species in natural settings one has come to appreciate the enormous extent of hybridization in nature and especially its impact on adaptation and evolution. Here, it is proposed to study introgression into Veronica spicata on a multiregional scale to infer differences in introgression between regions but also potentially parallel adaptations by means of introgression. To analyze the patterns of introgression in V. spicata the three partners weigh in their expertise in morphological, microscopical and molecular analyses. As the central task in the analysis a RADtag analysis of DNA will be employed using high-throughput sequencing and the data will be analyzed in a phylogeographical and a genome scan framework.

Projektbeteiligte

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Open Access-Publikationen

Hybridization among the species of Veronica subg. Pseudolysimachium from the Altai detected by SRAP markers.
DNA extraction from old herbarium material of Veronica subgen. Pseudolysimachium (Plantaginaceae)
Morphometric study of hybridogenic species in Veronica subgenus Pseudolysimachium (Plantaginaceae).