Genetics of the *Calamagrostis stricta* (Poaceae) species complex in Europe, with special focus on the newly described *C. lonae*

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Discovery and description of *Calamagrostis lonae* Eggenberg & Leibundgut (Poaceae) as a new endemic species from the Pennine Alps in Switzerland is without a doubt one of the most extraordinary findings of the last decades. The taxon was discovered 2018 near Pas de Lona, close to the village of Grimentz. *Calamagrostis lonae* is an herbaceous plant. Morphologically and ecologically, the taxon shows similarities with the glacial relict *C. stricta* and especially with its Arctic subspecies *C. stricta* subsp. *groenlandica*. *Calamagrostis stricta* species complex is a circumpolar, boreo-arctic and montane element, well spread in the Arctic and Subarctic regions but much rarer the closer you get to Western and Central Europe. The phylogeny, biogeography and taxonomic division of this species complex is not fully understood.

The present research project is the first to investigate the genetics of the *C. stricta* species complex on a broad geographic scale, with special focus on the newly discovered *C. lonae*. The main topics of our study are (1) assessing *C. lonae* species status compared to European *C. stricta* populations, (2) understanding the origin of the taxon, (3) offering a guideline for conservation.

The poster will briefly introduce the newly discovered taxon and population in Switzerland. Key findings on the distribution and genetic structure of the *C. stricta* species complex across Europe will be presented and explained using maps and plots. The poster will end with a brief discussion about its recent evolutionary history, its dispersal across the European continent, and its conservation status.

Keywords: Population genetics, phylogeography, phylogeny, polyploidy, relicts, arctic-alpine species, conservation.