CodeMyPlant (2016-2018)

When high school students join scientists to barcode the flora of Geneva

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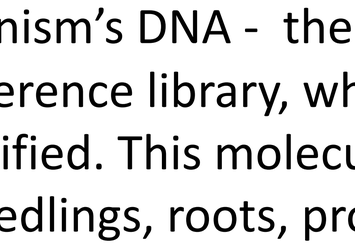
DNA barcoding is a method that uses a short fragment of an organism's DNA - the "barcode" - to identify it as belonging to a particular species. It is dependent upon a DNA reference library, which is a database containing DNA sequences generated from specimens already identified. This molecular technique is especially useful to study samples that are morphologicaly unrecognizable (seedlings, roots, processed products,…). What is also exciting is that building up the DNA reference library gives us insight into biodiversity at its most subtle level. Comparing millions of DNA sequences substantially enhances our understanding of kinship within and between species, which may eventually help us improve biodiversity management.

CodeMyPlant project mobilizes high school students and the general public alongside experts in drawing up a genetic inventory of Geneva's flora. The specimens collected are prepared and conserved in the Botanical garden's herbarium, while DNA samples are stored in a DNA bank. Floristic data are transmitted to the National data center *Info Flora* and genetic data are openly shared on the international DNA reference library "BOLD".

2016-2017

349 participants **245 DNA barcodes**

Plant Selection & Floristic data



Sample Collection

Herbarium

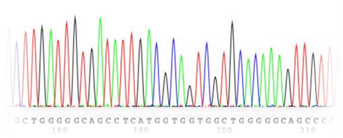
Info Flora

DNA Extraction

DNA Bank

DNA Reference library

DNA Analysis



Triggering curiosity and critical thinking among participants is another goal of the project, with a special focus on the concept of species and the Nature of Science. For that purpose, students are involved in several educational activities throughout the year and are asked to complete evaluation forms before and after hand.

codemyplant.bioscope.ch

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