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PROJECT OUTLOOK 17th November 2008

Alien invaders

Alien plants and their role in reconstructions of river banks - a neglected problem

LEADING INSTITUTION

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SCHOOLS INVOLVED

PORG Volders St. Karl, Tyrol



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Austrian Federal Ministry of
Science and Research

Eye restoration of river banks!

Alien invaders

Alien plants and their role in reconstructions of river banks - a neglected problem

Floral and climate change are currently discussed widely not only in research but also in public. Alien plants are regularly mentioned in the news and linked to “horror- scenarios” due to their ability to cause phototoxic affections, allergies or asthma.

Changes in the native flora and fauna are often mentioned in connection with climate change although a massive change in the flora has been happening continuously since the beginning of the new age.

Especially in areas strongly influenced by humans, alien plants sometimes dominate the flora and vegetation. River banks are affected in particular because of their natural dynamics of frequent disturbances. Native plants are often displaced by alien species because of their ability to make their way. This is accompanied with all the negative side effects concerning the dynamic stability of these particular habitats.

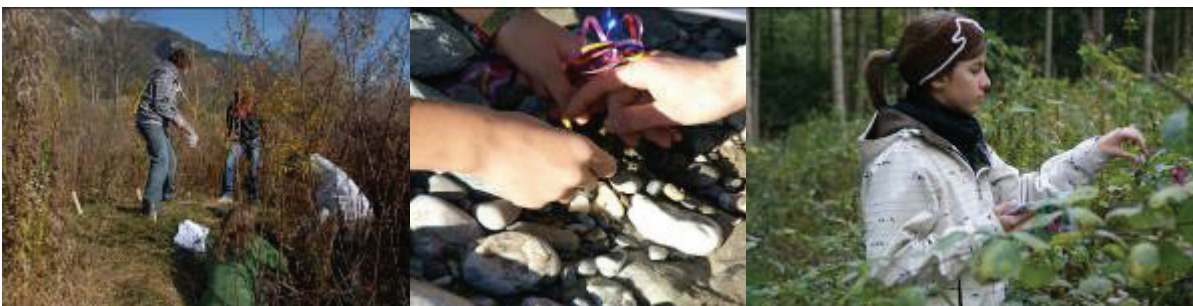
In course of this project, scientists and pupils want to find out whether it is generally possible to do reconstruction activities which could be called successful from a botanist point of view.

The central questions are:

- Is it actually possible to establish an autochthonous flora through a natural succession process?
- When and why is it possible for alien plants to dominate a particular habitat?
- How sustainable do alien plants settle in particular habitat?

“Alien Invaders” is done in tight connection between the participating researchers from the Institute of Botany from the University of Innsbruck and teachers and students from the PORG Volders St.Karl, a high school 20km from the Tyrolean capital.

Right from the start students are very enthusiastic and curious about working in this project. In particular they are now looking forward to do “hands on” work themselves. Working out of doors seems to be one of the special favourites, as one girl puts it: “I am looking forward for those days we will be working out of doors in particular and I do hope to get to know the names of many different plant species”.



Adaptations in the curriculum of these two participating classes terminate in a project based setting of priorities. This will enable students to be prepared in an optimal way when it comes to apply the theoretical background needed when participating actively in this project.


Activities at the selected sites are planned to define the particular species assemblage as well as the number of individuals of alien plants.

As environmental detectives students are asked to find out more about the reason why alien plants are so popular at the particular sites. They will search for evidence about which factors are supporting the appearance of alien plants at river bank restoration site. Students are collecting documentary evidence and make their own herbarium. Various skills like collecting data, scientific writing, basic knowledge in statistics, IT, graphic design etc as well as Latin are trained in interdisciplinary lessons.

First impressions gained in course of the first training day, done out of doors at a river bank site near Innsbruck resulted in many very distinct questions as one boy put it: "How will alien plant species develop at the research sites in particular?" Or "What can we do to put this development back?" or "What actions are needed to make a difference?"

In addition to the science work done in the project a progress evaluation is conducted. Students, scientists and teachers are equally asked to define their goals, expectations, notices, developments continuously right from the start. The main purpose of this progress evaluation is to assess progress in meeting the goals of the program as well as those of the project. Information is collected via semi structured interviews, questionnaires, videotaping of selected activities, and teachers-, students- and researchers diary to learn whether or not the benchmarks of participant progress are met or not. This progress evaluation enables project coordinators to put their finger on particular developments which need to be carried on or sat back if necessary.





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