UNIVERSITEIT GENT

FACULTEIT WETENSCHAPPEN

TEREC Seminar

FWO-Research Network: Eco-Evolutionary dynamics of biotic interactions

Prof. dr. Klaas Vrieling

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The evolution of invasiveness: A case study in common ragwort

Prof. Vrieling is Professor at the Plant Ecology Group of the Insitute Biology Leiden (IBL) and the head of the DNAmarkerpoint, the joint molecular laboratory of IBL, National Center for Biodiversity Naturalis and the Faculty of Archeology.

Abstract: Due to increased human transportation in the past 200 years many plants (and animals) were introduced into new ranges. Some of these plants developed into pests causing biodiversity and economic losses and health problems. A number of theories have been put forward to explain why such plants do become pests. Here we will test the theories that focus on the fact that plants escape their natural enemies when they are introduced into a new range and consequently reallocate their resources away from defenses and into increased competitive ability and reproduction. By comparing the genotypes from the native area with multiple invasive origins of ragwort (*Jacobaea vulgaris*) differing in climatic conditions we can infer if changes are due to abiotic factors or due to the absence of their specialist herbivores. We found that invasive genotypes had a 35% increased seed production, had reduced defenses against its specialist herbivores, increased defenses against generalist herbivores and had an increased competitive ability compared to native genotypes. These changes were observed in all 4 invasive regions suggesting a parallel evolution in these traits due to the lack of their specialist herbivores.

Venue: Lecture room 11th floor, Campus Ledeganck, Ghent

Date and time: January 25th 2016; 1.30-2.15 PM

Convenor: Dries Bonte (dries.bonte@ugent.be)

Terrestrial Ecology

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