

# PlantLink Researcher in the spotlight

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### **-What is currently on top of your research agenda?**

Our research group is studying evolutionary diversification in interactions among plants and insects, which are two of the most species-rich organism groups on earth. Lately, we have become increasingly interested in the evolution of floral signals and in particularly floral scent, and we are discovering fantastic floral scent variation not only among different species, but also among populations and individuals within species. Now we are wondering why that is...

### **-Tell us about your latest publication?**

My latest publication was a study by a PhD-student that I am co-supervising, Elodie Chapurlat from Uppsala University. Elodie is interested in the selection pressures that are acting upon the fragrant orchid (*Gymadenia conopsea*), and in our recent paper (Editor's choice in *Annals of Botany*), we show that different populations of this orchid tailor their floral scent emission to different times of day. In southern Sweden, where they are mostly pollinated at night, they smell more intensively at night than in central Norway where day-active pollinators are more important.

### **-What led you into your particular field of research?**

I started out as a butterfly ecologist, interesting in how new species were formed and differentiated. Quite soon, I realized that the butterfly food (i.e. their host plants) was just as variable as the butterflies, and that I needed to understand both sides of the interaction to answer my research questions

### **-What are the implications of your research for the society?**

I like to think that I do no harm while smelling flowers and catching butterflies. I also like to think that it is very important in a longer term perspective to understand the scale and time-frame of the processes that maintain biodiversity and that adapt populations to novel conditions, especially at a time when anthropogenic change is altering ecosystems worldwide.

**-Finally, let's say you got unlimited research funds; where would your research be five years from now?**

That would depend on the results of the studies we are performing right now. But with unlimited funding, we would be able to launch the kind of long-term field experiments and longitudinal studies that are needed to understand how traits diversify across space and time. In evolutionary ecology, the largest obstacle is not necessarily the costs of novel machinery or techniques, but the consistency of resources to dare to initiate long-term field-based studies and experiments requiring multiple human resources.