



## Twelfth International Symposium on Pollination (ISPXII)



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### **EVOLUTIONARILY INSPIRED SOLUTIONS TO THE CROP POLLINATION CRISIS**

Prof T van der Niet<sup>1</sup>, Prof P Egan<sup>2</sup>, Prof P Schlüter<sup>3</sup>

<sup>1</sup>University of KwaZulu-Natal, Pietermaritzburg, South Africa, <sup>2</sup>Swedish University of Agricultural Sciences, Alnarp, Sweden, <sup>3</sup>University of Hohenheim, Hohenheim, Germany

### **ABSTRACT**

The field of pollination ecology is strongly divided between applied research on crop pollination, and fundamental research that aims at understanding the function of flowers and the role of pollinators in driving their evolution. In this presentation we will outline how applied research on crop pollination can benefit from findings of fundamental pollination research, an area of science that is particularly strongly represented in South Africa. In particular, I will argue that the crop pollination crisis, which is perceived as a major threat to human food production, should not only be approached from an ecological point of view, but can also benefit from an evolutionary perspective. Throughout their evolutionary history, plants have successfully dealt with pollination crises numerous times by adapting to different pollinators. Insight into these 'pollinator shifts' can be used to (genetically) modify crop flowers to make them more suitable for local assemblages of wild pollinator species. This Darwinian perspective on solving applied problems is already widespread in other areas of agriculture, such as making crops resilient against climate change, and holds great potential for pollination too.